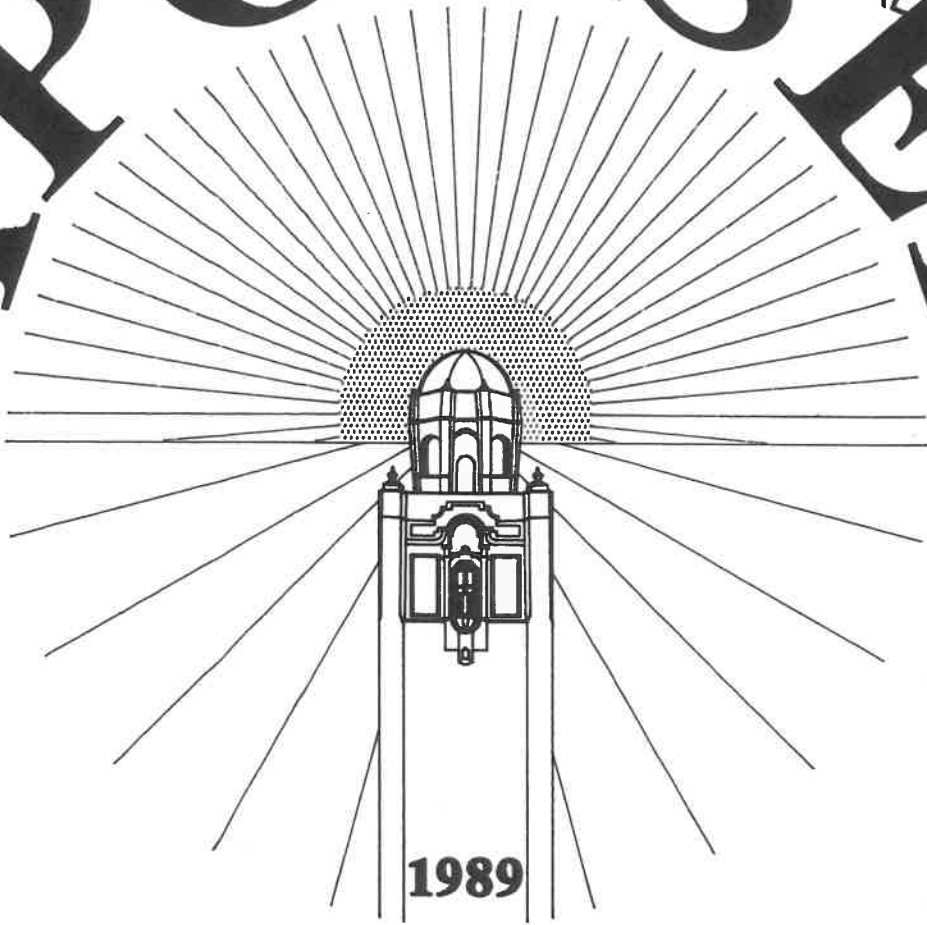


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THE REVISED AND UPDATED SARASOTA COUNTY COMPREHENSIVE PLAN

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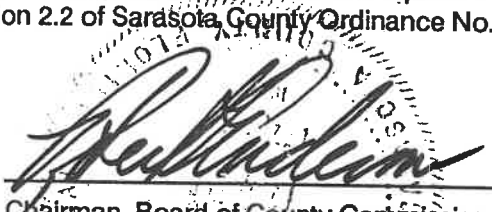
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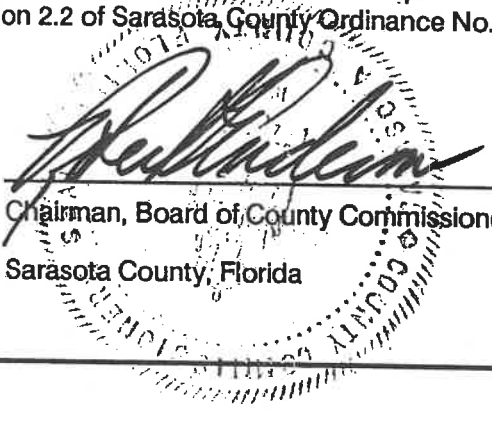
APOXSEE

The Revised And Updated Sarasota County Comprehensive Plan

This is to certify that this is the official copy of "ApoXsee, the Revised and Updated Sarasota County Comprehensive Plan" referred to in Section 2.2 of Sarasota County Ordinance No. 89-18.



Chairman, Board of County Commissioners
Sarasota County, Florida



*Compiled by the Sarasota County Planning Department under the direction of the
Sarasota County Board of County Commissioners and the Sarasota County Planning
Commission*

Appendix

Table of Contents

DEDICATION

"~~Apoxsee~~, the Revised and Updated Sarasota County Comprehensive Plan" is dedicated to the memory of:

T. Mabry Carlton, Jr.

Sarasota County Planning Commission, 1973 - 1980

Sarasota County Board of County Commissioners, District 3, 1980 - 1989

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

Members of the Sarasota County Board of County Commissioners

Robert L. Anderson, Chairman, District 5

Jim Greenwald, Vice-Chairman, District 2

Charley Richards, District 1

Mabry Carlton, Jr., District 3

Jeanne McElmurray, District 4

Richard L. Smith, Special Counsel

Guy Mintor, General Counsel

John Wesley White, County Administrator

C. Phillip McGuire, Deputy County Administrator

Jeanne A. Fuller, Deputy County Administrator

Robert L. Kirce, Deputy County Administrator

Members of the Sarasota County Planning Commission

John R. Penington, Chairman

James E. Pierce, Vice-Chairman

John M. Albritton

Georgia Bledsoe

Eugene H. Clay

A. Ferold Davis

Wayne Derr

Robert B. Patten

Robert H. Roembke

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

Sarasota County Planning Department

Jerry Gray, Planning Director

Dennis B. Wilkison, AICP, Deputy Planning Director

Long Range Planning Division

Rick Drummond, Chief Planner

Crystal Allred, Planner

Brian Beatty, Planner

Evangeline Diakis, Planner

Timothy K. Tilton, AICP, Planner

Sarah Blanchard, Associate Planner

Pamela Marlowe-Greene, Associate Planner

Current Planning Division

Louann Confer, AICP, Chief Planner

Alan Garrett, Senior Planner

Tate Taylor, Planner

Shelley Hamilton, Associate Planner

Robert Lincoln, Associate Planner

Development Review Division

James A. Paulmann, AICP, Chief Planner

Dana Pumphrey, Senior Planner

Anna Jali, Planner

Brian Lichterman, AICP, Planner

Anne McClung, Planner

Steve Cromer, Associate Planner

Tom Polk, Associate Planner

Ann Sheller, Associate Planner

Administrative Division

Karen Grassett, Office Supervisor

Karl Rhyne, Graphics Supervisor

Cindy Clark, Staff Assistant

Robin Leist, GIS Technician

Susan McCue, Staff Assistant

Agnes Munshower, Senior Staff Assistant

Frances L. Powers, Senior Staff Assistant

Patti Roach, Graphics Technician

Leigh Tharp, Staff Assistant

H.M. (Chuck) Place III, AICP, Chief Planner (City of Venice)

AN ORDINANCE OF THE COUNTY OF SARASOTA, FLORIDA, RELATING TO COMPREHENSIVE LAND USE PLANNING, PROVIDING FINDINGS; PROVIDING FOR DEFINITIONS; PROVIDING FOR THE ADOPTION OF A COMPREHENSIVE PLAN FOR SARASOTA COUNTY PURSUANT TO THE REQUIREMENTS OF THE LOCAL GOVERNMENT COMPREHENSIVE PLANNING AND LAND DEVELOPMENT REGULATION ACT; PROVIDING FOR RATIFICATION OF THE PROCEDURES FOLLOWED IN ADOPTING THE SARASOTA COUNTY COMPREHENSIVE PLAN; PROVIDING FOR THE LEGAL SIGNIFICANCE OF THE COMPREHENSIVE PLAN AND ITS VARIOUS COMPONENTS; PROVIDING FOR INTERPRETATION AND ADMINISTRATION OF THE COMPREHENSIVE PLAN; PROVIDING FOR THE PROTECTION OF PROPERTY RIGHTS AND THE PROTECTION OF VESTED RIGHTS; PROVIDING FOR APPLICABILITY; PROVIDING FOR THE EFFECT OF THIS ORDINANCE ON OTHER ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING AN EFFECTIVE DATE.

BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF SARASOTA COUNTY, FLORIDA:

Section 1. Findings. The Board of County Commissioners hereby makes the following legislative findings:

1. Pursuant to Article VIII, Section I(g) of the Constitution of the State of Florida, the Sarasota County Home Rule Charter, and the Local Government Comprehensive Planning and Land Development Regulation Act, Chapter 163, Part II, Florida Statutes, as amended, (the Act) Sarasota County is authorized and required to adopt a comprehensive plan.

2. Sarasota County Ordinance No. 76-51 designated the Sarasota County Planning Commission as the Local Planning Agency and provided for the preparation and recommendation of a comprehensive plan by the Sarasota County Planning Commission and the adoption of a comprehensive plan by the Board of County Commissioners in accordance with the provisions of the Act.

3. The Sarasota County Planning Department, the Sarasota County Planning Commission, and the Board of County Commissioners have provided for the broad dissemination of proposals for all elements of a comprehensive plan, and have held numerous public meetings and workshops to solicit public comment.

4. The Sarasota County Planning Commission held a two day public hearing on August 29, 1988, and August 31, 1988, to receive public comment on the proposed Sarasota County Comprehensive Plan entitled, "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan".

5. Following the public hearing, the Sarasota County Planning Commission made appropriate revisions to the proposed Sarasota County Comprehensive Plan and forwarded the proposed plan, as revised, together with supporting documentation including an Evaluation and Appraisal Report, to the Board of County Commissioners.

6. The Board of County Commissioners of Sarasota County held a two day public hearing on September 9, 1988, and September 16, 1988, on the proposed Sarasota County Comprehensive Plan, as revised and recommended by the Sarasota County Planning Commission, together with supporting documentation including an Evaluation and Appraisal Report.

STATE OF FLORIDA
 COUNTY OF SARASOTA
 I HEREBY CERTIFY THAT THE FOREGOING IS A
 TRUE AND CORRECT COPY OF THE ORIGINAL FILED
 IN THIS OFFICE WITH MY HAND AND OFFICIAL
 SEAL THIS DATE MAR 15 1989
 KAREN E. RUSHING, CLERK OF THE CIRCUIT COURT
 EX-OFFICIO CLERK TO THE BOARD OF COUNTY
 COMMISSIONERS, SARASOTA COUNTY, FLORIDA
 BY: Susan Kay Carahan
 DEPUTY CLERK

7. Following the public hearing, the Board of County Commissioners of Sarasota County made appropriate revisions to the proposed Sarasota County Comprehensive Plan and adopted the Evaluation and Appraisal Report.

8. The Board of County Commissioners of Sarasota County transmitted "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan", as amended by the Board of County Commissioners, together with the required supporting documents including the Evaluation and Appraisal Report, to the Florida Department of Community Affairs (the Department) pursuant to the requirements of the Act and Rule 9J-11.004, F.A.C.

9. The Board of County Commissioners of Sarasota County has held the required public hearing to consider the Department's objections, recommendations and comments on Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan.

Section 2. Definitions. For the purpose of this ordinance, the following definitions shall apply:

1. "Act" means the Local Government Comprehensive Planning and Land Development Regulation Act, Chapter 163, Part II, Florida Statutes, as amended.

2. "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan", or "Apoxsee" means the document adopted by the Board of County Commissioners and filed with the Clerk of said Board pursuant to this ordinance. Said document shall be identified by the signature of the Chairman of the Board of County Commissioners, and bear the seal of the County under the words:

This is to certify that this is the official copy of "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan" referred to in Section 2.2 of Sarasota County Ordinance No. 89-18.

3. "Board" means the Board of County Commissioners of Sarasota County, Florida.

4. "Consistent with the Sarasota County Comprehensive Plan" or "in conformity with the Sarasota County Comprehensive Plan" means that the land uses, densities or intensities and other aspects of development permitted by a development order are compatible with and further the goals, objectives, policies, land uses, and densities or intensities in the Sarasota County Comprehensive Plan pursuant to the provisions of this ordinance, as the Comprehensive Plan and this ordinance may be amended from time to time.

5. "Decision-making authority" means any state or local government commission, board, agency, department or official having authority to issue a development order as defined herein.

6. "Development order" means any action granting, denying, or granting with conditions, an application for a development permit.

7. "Development permit" means any building permit, zoning permit, preliminary subdivision plan, subdivision or other plat approval, site and development plan approval, rezoning, certification, special exception, variance, environmental permit or any other official action of Sarasota County or any other state or local government commission, board, agency, department or official having the effect of permitting development of land located within the geographic area subject to the provisions of this ordinance. Development shall include all activities set forth in Section 380.04, Florida Statutes.

STATE OF FLORIDA
COUNTY OF SARASOTA
I HEREBY CERTIFY THAT THE FOREGOING IS A
TRUE AND CORRECT COPY OF THE ORIGINAL FILED
IN THIS OFFICE, WITNESS MY HAND AND OFFICIAL
SEAL THIS DATE MAR 15 1989
KAREN E. BUSHNELL, CLERK OF THE CIRCUIT COURT
EX-OFFICIO CLERK TO THE BOARD OF COUNTY
COMMISSIONERS, SARASOTA COUNTY, FLORIDA
BY: William Kelly Crummett
DEPUTY CLERK

**Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan**

8. "Guiding Principles of Apoxsee" means the Guiding Principles section of the Environment Chapter of Apoxsee; the Urban Area Residential Checklist, Urban Area Residential Density Matrix, and the Functional Classification of Activity Centers sections of the Future Land Use Chapter of Apoxsee; the Guiding Principles (Guidelines) For Determining Desirable Business and Industry Section of the Economy Chapter of Apoxsee.

9. "Official Compilation of the Sarasota County Comprehensive Plan" means the document adopted by the Board of County Commissioners pursuant to this ordinance which includes the Primary Components of Apoxsee, the Guiding Principles of Apoxsee, the text of this ordinance, and explanatory material.

10. "Primary Components of Apoxsee" means the Goals, Objectives, and Policies of each chapter of "Apoxsee" including those objectives and policies which provide procedures for monitoring and evaluation of Apoxsee; Five Year Schedule of Capital Improvements (Table 80 in the Capital Improvements Chapter of Apoxsee; Designated Constrained and Backlogged Facilities in Sarasota County (Table 21 in the Traffic Circulation Chapter); Year 2010 Future Thoroughfare Plan (Appendix E, Section 3 of the Traffic Circulation Chapter of Apoxsee); and the following maps in Apoxsee:

A. Future Land Use Plan Map, Sarasota County - 2010 (consisting of a series of three maps);

B. Future Thoroughfare Plan (Functional Classification) Figure 42, Traffic Circulation Chapter);

C. Future Thoroughfare Plan (By Lanes) Figure 43, Traffic Circulation Chapter);

D. Proposed SCAT Transit Routes (1988-1994) (Figure 52, Mass Transit Chapter);

E. Improved Transit Service For Urban Transit Area (1988-1994) (Figure 53, Mass Transit Chapter);

F. Sarasota-Bradenton Airport Future Aviation Facilities, 2004 (Figure 57, Aviation, Port and Rail Chapter);

G. Venice Municipal Airport Future Aviation Facilities, 2004 (Figure 59, Aviation, Port and Rail Chapter)

H. Planned Future Recreation Sites, 2010 (Figure 16, Recreation and Open Space Chapter).

11. "Sarasota County Comprehensive Plan" means those portions of "Apoxsee" adopted by the Board of County Commissioners pursuant to this ordinance, as the Sarasota County Comprehensive Plan as required by Chapter 163, Part II, Florida Statutes (1987).

12. "Supportive Material" means those portions of "Apoxsee" which are not "Primary Components" or "Guiding Principles". Supportive Material includes the data required by Section 163.3177(8), Florida Statutes.

Section 3. Adoption of the Sarasota County Comprehensive Plan.

1. The Board of County Commissioners hereby adopts those portions of "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan", defined in this ordinance as the "Primary Components of Apoxsee" and the "Guiding Principles of Apoxsee" as the Sarasota County Comprehensive Plan pursuant to, and in compliance with, the provisions of the Local Government Comprehensive Planning and Land Development Regulation Act, Chapter 163, Part II, Florida Statutes (1987). Said portions of Apoxsee are incorporated herein by reference.

STATE OF FLORIDA
COUNTY OF SARASOTA
I HEREBY CERTIFY THAT THE FOREGOING IS A
TRUE AND CORRECT COPY OF THE ORIGINAL
IN THIS OFFICE. WITNESS MY HAND AND OFFICIAL
SEAL THIS DATE: MAR 15 1989
KAREN E. BURNING, CLERK OF THE CIRCUIT COURT
EX-OFFICIO CLERK TO THE BOARD OF COUNTY
COMMISSIONERS, SARASOTA COUNTY, FLORIDA
BY: Margaret Ray
DEPUTY CLERK

2. The Board of County Commissioners hereby ratifies and adopts all procedures utilized with regard to the Adoption of the Sarasota County Comprehensive Plan adopted by this ordinance, notwithstanding contrary or different provisions, if any, contained in any other ordinance.

Section 4. Legal Significance of the Primary Components, Guiding Principles, and Supportive Material.

1. The Primary Components of "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan" are intended to direct and achieve coordinated and harmonious development and land use in a manner which will permit the planning for adequate community facilities and protect the ecological balance of the environment, in order to protect and promote the public health, safety, convenience, prosperity and general welfare of Sarasota County's residents and visitors.

(A) All development orders entered by the Board of County Commissioners or any other state or local government commission, board, agency, department or official concerning development within the geographic area subject to the provisions of this ordinance shall be consistent with the Primary Components of "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan".

(B) In recognition that zoning has been and shall continue to be a major tool for the implementation of land use and development policies, petitioners seeking any rezoning or any special exception shall be required to affirmatively establish the manner in which the development proposal and requested change in land use is consistent with the Primary Components of "Apoxsee, the REvised and Updated Sarasota County Comprehensive Plan".

2. The Guiding Principles of "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan" are intended to assist the decision-making authority in determining whether a development order would be consistent with the Primary Components of the Sarasota County Comprehensive Plan. The Guiding Principles are intended to be applied in a flexible manner but failure of a proposed development or land use to comply with applicable portions of the Guiding Principles shall constitute sufficient grounds for denial of approval for a development permit.

3. Supportive Material may be utilized by the Board of County Commissioners and other governmental agencies as additional information in resolving development and land use decisions. Supportive Material shall not be used as the sole grounds for a decision on a development permit.

Section 5. Interpretation and Administration of the Comprehensive Plan.

1. The Board of County Commissioners shall have the authority and duty to weigh the relative importance and relevance of the various elements of the Sarasota County Comprehensive Plan, including the Primary Components of Apoxsee, as applied to specific development permits.

2. The decision of the Board of County Commissioners with respect to any development order shall be presumed to be consistent with the Sarasota County Comprehensive Plan. Formal, written findings by the Board of County Commissioners shall not be required with respect to whether a development order is consistent with the comprehensive plan. No decision of the Board of County Commissioners shall be overturned on the grounds of inconsistency with the comprehensive plan unless a court of competent jurisdiction determines that it is not at least fairly debatable that such decision is consistent with the Sarasota

STATE OF FLORIDA
COUNTY OF SARASOTA
I HEREBY CERTIFY THAT
TRUE AND CORRECT COPY OF THE ORIGINAL FILED
IN THIS OFFICE WITHIN THE OFFICE OF THE CLERK
MAR 15 1989
SEAL THIS DATE
MAKEN E. IRISHING, CLERK OF THE CIRCUIT COURT
EX OFFICIO CLERK TO THE BOARD OF COUNTY
COMMISSIONERS, SARASOTA COUNTY, FLORIDA
BY: Wanda Kay Garland
DEPUTY CLERK

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

County Comprehensive Plan.

3. The Board of County Commissioners may by resolution adopt and file with the Clerk of the Board Official Compilations of the Sarasota County Comprehensive Plan which shall be identified by the signature of the Chairman of the Board of County Commissioners, attested by the Clerk of the Board of County Commissioners, and bear the seal of the County under the words:

This is to certify that this is an official compilation approved by Resolution No. _____ on _____, 19____, pursuant to the provisions of Sarasota County Ordinance No. 89-18.

4. The Board of County Commissioners may by resolution replace for reasons of clarity or otherwise, any page, pages or portions of the official copy of Apoxsee, including the entire document on file with the Clerk of the Circuit Court, which shall supersede the prior page, pages or portions thereof; may correct drafting, typographical or other errors or omissions in the prior Apoxsee document, or page, pages or portions thereof; but no such correction shall amend the original Apoxsee document, or page, pages or portions thereof.

5. It shall be the duty of state and local government commissions, boards, agencies, departments, and officials to apply and carry out the Sarasota County Comprehensive Plan pursuant to the provisions of the Local Government Comprehensive Planning and Land Development Regulation Act.

6. The language and provisions of this ordinance, Apoxsee, and the Sarasota County Comprehensive Plan shall be construed in pari materia with Chapter 163, Part II, Florida Statutes, and Chapter 9J-5, F.A.C.

Section 6. No Taking or Abrogation of Vested Rights.

1. Nothing in this ordinance or the Sarasota County Comprehensive Plan shall be construed or applied to result in a temporary or permanent taking of private property without due process of law.

2. Nothing contained herein shall be construed as affecting validly existing vested rights. It shall be the duty and responsibility of the person alleging vested rights to demonstrate affirmatively the legal requisites of vested rights. Rights shall vest based upon a determination by the Board of County Commissioners that the person alleging vested rights:

(A) has relied in good faith,

(B) upon some act or omission of the government,
and

(C) has made such a substantial change in position or incurred such extensive obligations and expenses that it would be highly inequitable and unjust to destroy the rights he has acquired.

3. The Board shall adopt administrative procedures to afford due process to persons alleging vested rights.

4. The mere existence of zoning contrary to the Sarasota County Comprehensive Plan shall not be determined to ~~vest rights.~~

STATE OF FLORIDA
COUNTY OF SARASOTA
I HEREBY CERTIFY THAT THE ABOVE IS A TRUE AND CORRECT COPY OF THE ORIGINAL AS IN THIS OFFICE. WITNESS MY HAND AND OFFICIAL SEAL THIS DATE MAR 15 1989
KAREN E. HUSHING, CLERK OF THE CIRCUIT COURT
EX OFFICIO CLERK TO THE BOARD OF COUNTY COMMISSIONERS, SARASOTA COUNTY, FLORIDA
BY: William Ray Gorman
DEPUTY CLERK

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*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

5. Nothing contained herein shall limit or modify the rights of any person to complete any development that has been authorized as a development of regional impact pursuant to Chapter 380, Fla. Stat., or who has been issued a final local development order prior to the effective date of this ordinance and development has commenced and is continuing in good faith, as provided by Section 163.3167(8), Florida Statutes (1987). "Final local development order" means construction plans for subdivision improvements, site and development plan approval for other types of development, or building permits.

Section 7. Applicability

1. The Sarasota County Comprehensive Plan shall be applicable throughout the unincorporated area of Sarasota County, Florida, and as otherwise provided by law.

Section 8. Effect on Other Ordinances.

1. This ordinance is not intended to repeal any existing county ordinance, except as provided in Section 8.2 hereof. Where this ordinance conflicts with another county ordinance the provisions of this ordinance shall prevail to the extent of such conflict except as otherwise provided herein.

2. This ordinance and the Sarasota County Comprehensive Plan adopted herein shall supercede the provisions of Sarasota County Ordinance No. 81-30 and the comprehensive plan adopted therein, as amended, upon the effective date of this ordinance.

Section 9. Severability. It is declared to be the intent of the Board of County Commissioners that if any provision of this ordinance is for any reason finally held invalid or unconstitutional by any court of competent jurisdiction, such provision shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining provisions.

Section 10. Effective Date. This ordinance shall take effect ninety days after its adoption.

PASSED AND DULY ADOPTED BY THE BOARD OF COUNTY COMMISSIONERS OF SARASOTA COUNTY, FLORIDA, this 13th day of March, 1989.

BOARD OF COUNTY COMMISSIONERS OF SARASOTA COUNTY, FLORIDA

BY: [Signature]
Chairman

ATTEST:

KAREN E. RUSHING, Clerk of the Circuit Court and Ex-Officio Clerk of the Board of County Commissioners of Sarasota County, Florida

By: [Signature: Susan Kay Garland]
Deputy Clerk

STATE OF FLORIDA
COUNTY OF SARASOTA
I HEREBY CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT COPY OF THE ORIGINAL FILED IN THE OFFICE. WITNESS MY HAND AND OFFICIAL SEAL THIS DATE MAR 15 1989
KAREN E. RUSHING, CLERK OF THE CIRCUIT COURT
EX-OFFICIO CLERK TO THE BOARD OF COUNTY COMMISSIONERS, SARASOTA COUNTY, FLORIDA
BY: [Signature: Susan Kay Garland]
DEPUTY CLERK

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Appendices

- Inserts:**
- Future Land Use Plan Map, Sarasota County - 2010 (with adopted Year 2010 Future Thoroughfare Plan)
 - Future Land Use Plan Map, Sarasota County - 2010 Conservation/Preservation Areas with Existing and Planned Waterwells

Notes:

A detailed Table of Contents and a List of Illustrations (Tables and Figures) for individual Chapters are located at the beginning of each Chapter.

A detailed listing of the various Appendices precedes Appendix A, following Page 508.

***Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan***

INTRODUCTION

A quick glance at "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan" - an initial heft of this 700-plus page document - may prompt a certain amount of skepticism similar to that which is often leveled at such plans. Why do it? On what shelf is this plan going to collect dust? If there already exists a perfectly good plan, why go through all of these extensive changes?

Why do it? One part of the answer rests with the Florida Legislature. The 1985 and 1986 sessions of the Legislature passed the Local Government Comprehensive Planning and Land Development Regulation Act which mandated that every local government prepare a comprehensive plan. This sweeping legislation was prompted by the myriad problems being experienced throughout Florida because of rapid growth. The Act imposed extensive requirements on local governments, and was accompanied by sixty-seven pages of detailed regulations which provided minimum criteria for the preparation of local government comprehensive plans and for the determination of their compliance with the provisions and intent of the legislation.

Another set of questions is promptly formed. Has this document only been prepared to be in compliance with legislative requirements? Would Sarasota County have imposed such a monumental undertaking on itself if it had not been required to do so?

The answers to these questions are "no" and "yes", respectively. Sarasota County has a long history of planning, which has evolved to cope with and anticipate the problems associated with the rapid growth experienced by the County since the 1960's. The use of the adjectives "revised and updated" in the title of this document suggests that there was a framework, a foundation, upon which to build in order to meet the new legislative man-

dates. This Plan's predecessor, "Apoxsee, Sarasota County's Comprehensive Framework for the Future" was adopted in 1981 as the County's response to the first Statewide comprehensive planning legislation. In fact, Apoxsee has been characterized as "a major success in meeting the legislative intent of the Local Government Comprehensive Planning Act of 1975." (1)

Another look at the title of this document, however, provides the most complete answer to all of the questions that have been posed. One word-Apoxsee, the Seminole Indian word meaning tomorrow - fully explains the need for planning. Apoxsee. Tomorrow. The Future. Certainly this Plan has been prepared to be in full compliance with the legislative mandate, but most importantly, it has been formulated to meet the requirements of Sarasota County's future. "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan" examines the efficacy of current policies and growth management initiatives; it provides mechanisms to preserve and enhance existing strengths; and it identifies concerns and obstacles which need to be addressed if the quality of life which has attracted so many people to this paradoxical paradise is to be sustained into the twenty-first century.

In order to adequately plan for the future, there must be a solid understanding of the past and the present. The twelve Chapters that comprise the body of the Plan provide sufficiently detailed analyses as a solid base for policy development. The following sections of this Introduction provide an overview of Sarasota County - past and present - to serve an overall perspective for the planning needs of the future.

Sarasota County Yesterday

The natural environment is Sarasota County's greatest legacy from the past. Obviously, there are no mountains here, no raging white water rivers, nor even any rolling hills. The geography of Sarasota County is typically a flat coastal plain that encompasses its entire 620 square miles. But there are beaches, glistening white sand beaches that stretch along virtually the entire Gulf coast of the County. These beaches and the Barrier Islands on which they are located perform a dynamic and dramatic overture to the natural forces that have shaped Sarasota County. From Longboat Key in the northwest corner of the County, the string of Barrier Islands paralleling the coastline include Lido Key, Siesta Key, Casey Key, and Manasota Key. Together, these keys effectively absorb the brunt of the forces brought by waves, winds, and occasional storms. The configurations of the keys and their beaches are in perpetual motion, periodically opening and closing the passes that separate them. Behind the Barrier Islands are a series of shallow bays and brackish estuaries that serve as the life blood of the Gulf ecosystem. Seagrass beds and tangled roots of mangroves provide shelter and nutrition for the teeming lifeforms that begin their existence in these waters. The foliage that lines the margins of these waterways also provide sanctuary for the rookeries of numerous avian species.

The brackish state of estuarine waters, necessary to sustain the fecundity of marine nursery life, is maintained by the fresh waters of coastal creeks flowing lazily through the flat mainland terrain into the bays. It is a terrain derived from, and therefore particularly suited to, the exigent and extreme fluctuations of seasonal rainfalls. Lush hardwoods and sabal palm hammocks, swamps and marshes fringe the upland waterways. Hundreds upon hundreds of wet prairie depressions dot the landscape. Broad sloughs and flood plains cover large expanses of the County, intermittently flush with sheets of flowing water.

A natural focal point well inland from the Gulf is the Myakka River. From its headwaters in Hardee County, the Myakka runs north to south in a broad arc across eastern Sarasota County with eventual

outfall into Charlotte Harbor. Pine flatwoods, saw palmetto prairies and dense pockets of scrub are other significant habitats of the County's natural system; the combined diversity of these environmental components strike a necessary balance for the sustenance of the County's indigenous inhabitants, and form the roots for what has been termed the "quality of life" for the subsequent human immigrants with whom the natural amenities are shared.

Human habitation in the area now known as Sarasota County dates back to at least 10,000 B.C. The area's first inhabitants, the Paleo-Indians, were a nomadic people who lived in small groups and subsisted primarily on fish, large game, and wild plants.

The period of time from about 1,000 B.C. to 700 B.C. was marked by the change from the hunting and gathering cultures of earlier years to a more sedentary, regional culture. This formative culture flourished in the region from about 700 B.C. to 1,000 A.D. Plant cultivation eventually supplanted hunting and gathering, yet the area continued to rely on its coastal and marine resources as well. Evidence of this period in Sarasota County's history is reflected in the following passage:

"Massive shell middens, some up to a mile in length and 10 to 12 feet in height, gradually evolved as generation after generation of Indians returned seasonally to exploit the rich fishing and shell fishing resources of the bays and Gulf. As families camped, cooked, cleaned, ate, hunted, fished and buried their dead, shell middens composed of shell, bone, dirt, and discarded and lost artifacts grew."

The pages of Sarasota County's heritage now turn forward to historic times. Between 1513 and 1763, Spanish explorers visited the west coast of Florida and introduced the name "Sarasota", with variant spellings, into the geographical terminology of the region. When the British government occupied the area between 1763 and 1784, fishermen from Cuba, working from temporary fish camps or "ranchos", engaged in seasonal fishing activities in the Sarasota Bay area.

Shortly after the United States acquired Florida in 1819, a movement aimed at removing the Seminole Indians from the Florida Territory gained momentum. Twenty-three years and two wars later, the Seminoles retreated into the swamplands of south Florida. In 1842, the Federal Government passed the Armed Occupation Act to encourage the settlement of lands freed from Indian threat. The Act opened up the Sarasota area to settlement; township lines were drawn in 1843 and section lines drawn in 1847.

During the Civil War, cattle raised in Sarasota County, particularly in the area around present-day Miakka, fed both Confederate and Union troops. Three rural inland communities, Tatum Ridge, Bee Ridge, and Fruitville, were founded in the late 1870's. Other areas of the County began to develop as well. In 1883, modern settlement began on the north end of Siesta Key, then known as Little Sarasota or Sarasota Key. A post office called Venice was established in 1888 at the site of today's Nokomis and the community of Englewood was platted in 1896.

Significant growth occurred in the area around the turn of the century. Although rail service had reached the area in 1892, it was the advent of the Seaboard Air Line Railroad, connecting to Sarasota in 1903, which provided access for tourists, winter residents, hunters, and fishermen. As staunch patrons of the arts, these new residents and visitors, long accustomed to high quality in the fine arts, brought their love of culture to Sarasota.

Sarasota's image changed quickly as it continued to grow in the early years of the 20th Century. The Tamiami Trail traversed the County in 1918 and the County of Sarasota, formerly a part of Manatee County, came into existence in 1921. Like the rest of Florida, Sarasota County developed rapidly during the 1920's Boom Period. Agriculture continued to thrive as the cultivation of celery in the Fruitville area became a major local activity. While the Great Depression began in Florida three years ahead of the rest of the country, economic problems in Sarasota County were softened by the growth of tourism and an influx of winter residents and retirees.

By 1930, Sarasota County's population had reached 12,000. Bee Ridge and Fruitville continued to serve as social and economic centers for citrus and vegetable farming and Miakka remained a center for an area devoted essentially to stock raising. Communities such as Englewood, Osprey, and Nokomis continued to grow, supported in large measure by the fishing industry.

Sarasota County experienced phenomenal population growth in the post-World War II decades. By 1950, the County's population had grown to 28,827, by 1960, it was 76,895, and by 1970, the population reached 120,413.

Sarasota County Today

Amenities associated with the County's natural environment are still abundant, yet, somewhat tarnished compared with the optimal state of natural equilibrium. The beaches are still white, a factor which now contributes to the crowds that descend upon them even in the months not considered to be part of the tourist season. The Barrier Islands, still the recipients of a storm's first fury, have become tenuous habitats for beach cottages, stilt homes, and condominiums. The bays and estuarine waters have retained their function as marine nurseries, yet with somewhat less abundance than years past. Drainage canals, sewage outfalls, and coastal dredging have all contributed to this reduction in fertility. Even the Myakka River is not unscathed, yet it still provides nostalgic respite with its tannic waters flowing clean, beneath unbroken hammock canopies.

Despite the toll that human habitation has taken, the natural amenities of Sarasota County's environment remain prime attractions for permanent and seasonal residents and for tourists. The recognition that such an attractiveness exists and will continue into the foreseeable future is fundamental to the development of a sound comprehensive plan - to ensure that this paradise does not become its own worst enemy.

The scope of this comprehensive planning task is proportional to the County's population and to the demands that existing residents as well as future residents place on the natural environment and on the availability of public facilities and services.

By 1988, the population of Sarasota County had grown to an estimated 257,667 residents, with 177,944 people residing in the unincorporated areas. Approximately 20 to 25 percent additional people reside here on a part-time basis during the winter and spring "tourist season". The programs which were adopted in 1981 as part of "Apoxsee, Sarasota County's Comprehensive Framework for the Future" have provided the mechanisms for coping with the myriad problems associated with the rapid growth that has been experienced by Sarasota County.

The County has implemented a strong set of environmental protection policies to limit the direct impact of development on fragile or unique habitat systems. Sarasota County has also begun the process of meeting the needs of existing residents through the provision of adequate public facilities, which will at least indirectly impact the environment in a positive manner. For example, a comprehensive road improvement road program has been initiated to make up for years of neglect; a water improvement program has been started to provide County residents with potable water self-sufficiency; and planning is in the final stages for

the development of a Stormwater Environmental Utility and for the consolidation of sanitary sewer plants throughout the County.

Sarasota County Tomorrow

The challenge of comprehensive planning is not to accept the inevitability of continued rapid growth, but to recognize that the potential for growth exists, if only because of this area's geographic location and natural beauty. Thus, while continuing to implement programs that are necessary to meet the needs of today's population, it is incumbent upon the County to plan the contingencies that will meet the needs of future residents and limit the negative impacts that such potential growth could bring.

"Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan" is designed to meet that challenge. The ideals of Sarasota County's quality of life - its natural beauty, its history, its economy - are embraced in the twelve Chapters that comprise Apoxsee. The Goals, Objectives, and Policies contained in Apoxsee portray the visions of the Sarasota County of tomorrow. Without the foresight embodied in this Plan and continual diligence and perseverance applied to achieve those visions, tomorrow will always arrive too soon.

Endnotes

1. 1000 Friends of Florida, "1000 Friends Review of the Sarasota County Comprehensive Plan", Tallahassee, Florida, February, 1989, p. 1.

The portions of this Introduction relating to Sarasota County's history are partially excerpted from the draft Historic Preservation Element

prepared for Sarasota County by Historic Property Associates, Inc., St. Augustine, Florida, January, 1988.

CHAPTER 1

HISTORIC PRESERVATION

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CHAPTER 1

HISTORIC PRESERVATION

Introduction

Historic resources are the visible or tangible record of past human occupation of the land. They give the area in which they are found a sense of place, lending it singularity and distinction, while contributing to the variety of the physical environment. Historic resources establish social continuity through their links with the past. These resources include buildings, districts or groups of buildings, historic and prehistoric sites and archaeological materials.

The visible remnants of the past, buildings and historic neighborhoods, acquire over time a symbolic usefulness in the community by setting it apart from other locations. Archaeological materials are finite and nonrenewable and in most cases constitute the only source of information about that part of a locality's history for which there is no written record. Furthermore, they often increase our understanding of historic sites by providing information missing from historic documents.

Historic resources must be identified and evaluated if they are to be protected. Those which are judged significant deserve private and public consideration and effort to insure their preservation. The fundamental purpose of any preservation program, particularly the historic preservation element to a local comprehensive plan, is to promote the protection of historic resources that are considered, by responsible authorities and property owners, important to the community.

Florida's 1975 Local Government Comprehensive Planning Act (LCGPA) laid the foundation for local preservation planning in the State. The Act lists mandatory elements for inclusion in the local government comprehensive plans, and includes a "historic preservation and scenic" element as one of the options. The 1985 Local Government Comprehensive Planning and Land Development Regulation Act, which amended a portion of the 1975 legislation, requires coastal communities to address the preservation of archaeological and historical resources in their planning efforts. Although communities can fulfill the requirement by addressing the issue of preservation in the land use, housing, and coastal management elements, Sarasota County determined that the preparation of a separate element would be the most effective way to comply with the statutory directive. Sarasota County is one of the first counties in Florida to develop a separate Historic Preservation Chapter for its updated Comprehensive Plan.

Public participation is crucial in any planning effort, especially historic preservation planning. In order to be successful, historic preservation must enlist the support of the community. To this end, the Sarasota County Historical Commission and the County Planning Department sponsored a series of Town Meetings designed to allow interested citizens the opportunity to identify those issues relating to the preservation of the County's historic resources which they felt should be addressed in the Historic Preservation Chapter. The four meetings, held in December of 1987 in Miakka, Sarasota, Englewood and Venice, provided an unique forum for interaction among members of the Historical Commission, Planning Department

staff, and the general public. Many of the suggestions voiced at the Town Meetings have been incorporated into the Chapter. An overview of the private organizations involved in the historic preservation process at the federal, State, and local levels is provided in Appendix A, Section 6.

The following sections of this Chapter provide a review of the historical and archaeological resources found in Sarasota County, an analysis of the existing procedures employed by the County for protecting those resources, and an examination of preservation measures and incentives. The last section, the Historic Preservation Plan, sets forth specific programs that Sarasota County should pursue in order to protect and preserve its cultural resources.

Several appendices to accompany the Historic Preservation Chapter are included within Apoxsee. To facilitate the reading of this Chapter, a glossary of historic preservation definitions is provided in Appendix A, Section 1. For further reading on historic preservation refer to Appendix A, Section 7, Selected Bibliography. The remaining Appendices are referenced in the subsequent sections of the Chapter.

Inventory

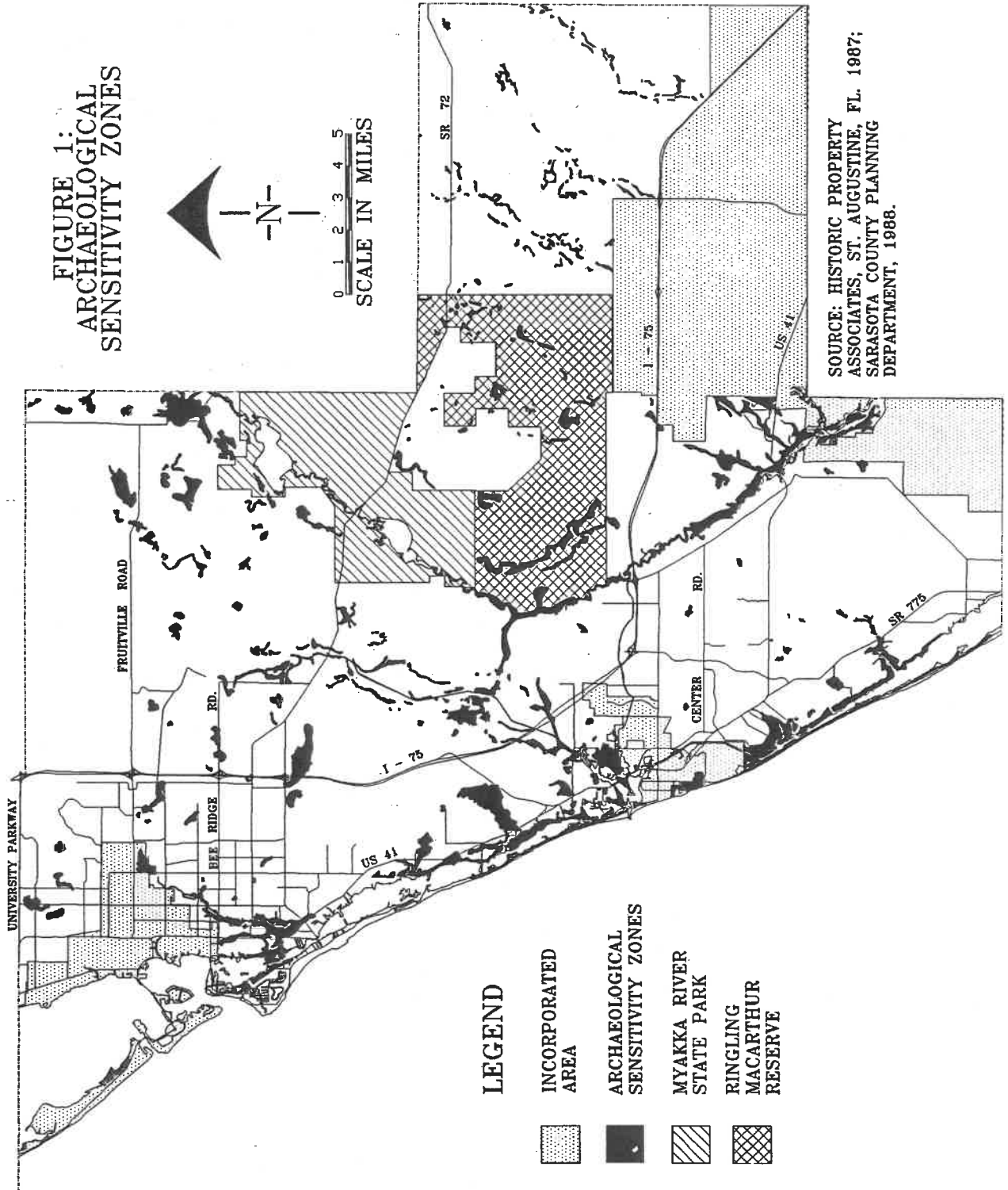
The following description of the archaeological and architectural resources found in Sarasota County is not based on a definitive or comprehensive survey of either resource. The description of the archaeological resources has been developed from evidence and findings accumulated as a result of individual site investigations performed by individuals and organizations over a number of years. Most, though not all, of that information is included in individual site reports in the Florida Master Site File, a computerized listing maintained by the Division of Historical Resources in Tallahassee. Other individual site information has been gathered from archaeologists familiar with the resources by virtue of work they have performed in Sarasota County.

The architectural information is the result of a reconnaissance or windshield survey of the County that was conducted expressly for the purpose of preparing this Inventory. Using 1943 topographic maps and a 1936 Florida Department of Transportation road map, both of which show structures present along represented roads when the maps were prepared, the surveyors inspected locations that revealed significant concentrations of such structures. The structures were not individually inventoried or described. Their number was counted and their general characteristics, such as style, condition, integrity, and size, summarized.

The U.S. Geological Survey (USGS) topographic maps on which the following discussion of historic resources is based and an accompanying set of USDA Soil Conservation Service Soil Survey maps on which areas containing potential for archaeological resources are delineated may be employed by County regulatory staff to identify known sites and potential areas for site location. Also, a scaled map showing the general location of known archaeological sites and areas of potential site occurrence is provided in Figure 1. The "sensitivity zones" depicted on the map include a spectrum of site types, culture periods, and levels of significance. The areas were selected by means of a predictive model established essentially on the basis of empirical data, such as vegetation, soil type, elevation, proximity to fresh water and marine food supply and other factors. The maps are a general guide to historic preservation planning. In addition to these maps, a historic resource review manual and model historic preservation ordinance for Sarasota County have been drafted.

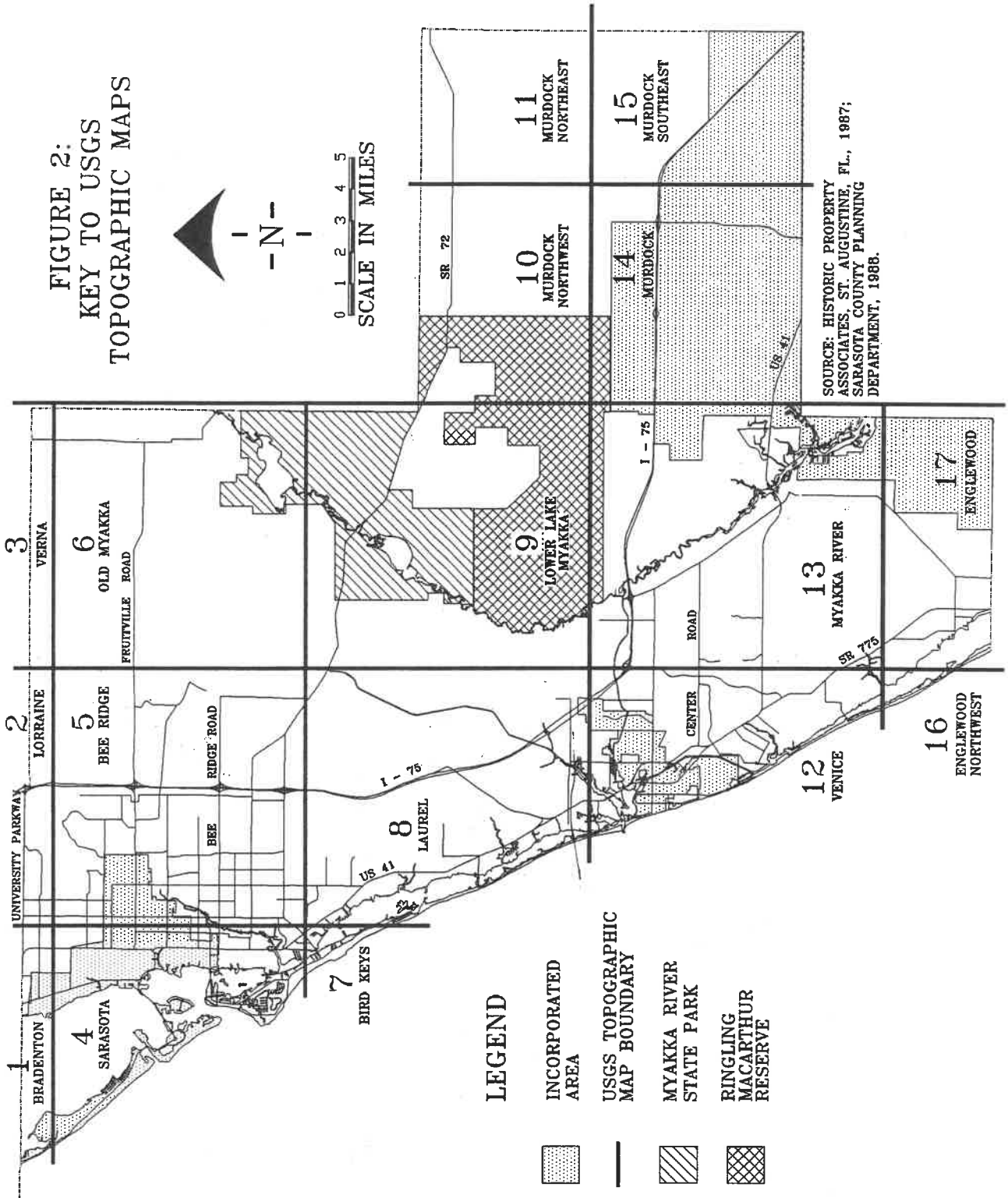
For the purposes of identifying the general locations of historic resources, the County has been divided into three areas: the Northwest Area, the Southwest Area and the Eastern Area. Each area is defined by a set of U.S. Geological Survey topographic maps, the locations of which are provided on Figure 2. The specific maps, referred to as Quadrangles, which comprise each area are identified in the pertinent section which follows.

FIGURE 1:
ARCHAEOLOGICAL
SENSITIVITY ZONES



SOURCE: HISTORIC PROPERTY ASSOCIATES, ST. AUGUSTINE, FL. 1987; SARASOTA COUNTY PLANNING DEPARTMENT, 1988.

FIGURE 2:
KEY TO USGS
TOPOGRAPHIC MAPS



Northwest Area

Geographic Description: The Northwest Area includes those parts of Sarasota County shown on the Bradenton, Sarasota, Bee Ridge, Bird Keys, and Laurel Quadrangles (see Figure 2). Since the City of Sarasota and its environs are in this area, it is by far the most heavily urbanized. Longboat Key, Lido Key and Siesta Key flank Sarasota Bay and Roberts Bay. The barrier islands consist of coastal beach ridges once covered with cabbage palms, saw palmetto, and slash pine. The now-urbanized mainland once supported pine-palmetto flatwoods with mangroves along the marshy shores and scrub oak on higher ground. The suburban areas of Fruitville, Bee Ridge, and the South Sarasota area are found within the Sarasota and Bee Ridge quadrangles.

The Laurel Quadrangle covers the coastal area of the County from Vamo to Laurel. Little Sarasota Bay, Dryman Bay, and Blackburn Bay constitute the coastal bodies of water, flanked by Casey Key on the west. North Creek, South Creek, and Shakett Creek are the main streams. Flowing into Shakett Creek are the longer tributaries of Salt Creek, Fox Creek, and Cow Pen Slough which has been diverted to form a canal.

Within the latter area are a number of small depressions, lakes, and wet areas inland from the shore. Vegetation is rich, especially around Cow Pen Slough, and Catfish, North, and South Creeks. The area north of Vamo contains some undeveloped dense hammock and scrub oak lands.

Archaeological Sites: A survey was conducted in 1977 for the City of Sarasota that included historical, architectural, and archaeological resources. A total of thirty sites were found in coastal areas and beaches near bayous, creeks, and springs. Most of the sites within the Sarasota Quadrangle date after 1,000 B.C. and include shell middens and sand mounds.

The Bee Ridge Quadrangle includes essentially rural, interior lands that feature low, wet depressions occasionally interspersed with well-drained lands planted in groves. One large tract in this area has been subjected to an archaeological survey.

Limited survey of lands within the Laurel and Bird Keys quadrangles have been conducted. A stretch along the Cow Pen Slough Canal, the Palmer Oaks Tract, and part of the area at Spanish Point at the Oaks have been subjected to professionally-directed surveys. A small area at Osprey has also been reviewed. Significant archaeological sites are located within the Laurel and Bird Keys quadrangles at Spanish Point at the Oaks (also referred to as the Palmer site). Aboriginal sites include shell middens and sand mounds. There are also homestead structures on the site dating from the 19th Century and later. The Spanish Point site is listed in the National Register of Historic Places.

Architectural Resources: The Northwest Area of Sarasota County contains by far the greatest number of structures that are eligible for survey under present criteria; that is, they are at least fifty years old and retain their architectural integrity. The proximity of the area to the incorporated City of Sarasota accounts for the large number of comparatively older structures found there.

On the northeast corner of the City of Sarasota lies the historic community of Fruitville. There are approximately ninety structures in its vicinity, including a school, church, commercial buildings, and numerous residences. The residences are generally simple frame vernacular buildings. Some exhibit features of the Bungalow Style which was popular in the 1900-1920 period. The residences are generally constructed of wood and sheathed with variations of wood siding. The roofs display gable or pyramidal shapes and the buildings often have large open or screened porches. Only two of the residences observed in Fruitville exhibited elements of the Mediterranean style that typified construction during the Florida Boom Period of the 1920's. There is no concentration of older structures in the Fruitville area.

Another group of older structures can be found east of Fruitville along Fruitville Road and Palmer Boulevard and west of Interstate 75. They include several stucco-covered warehouses near the intersection of Palmer Boulevard and Cattlemen Road. The remainder generally consist of small frame vernacular residences and a scattering of farm

houses and small barns. The barns are often sheathed with corrugated metal roofs and siding. The structures are scattered throughout the area and are generally in good condition.

The largest concentration of older structures in the unincorporated area of Sarasota County appears to be in the Bee Ridge area. The approximately 270 structures observed in the area include residences, two commercial structures, one school, two churches, and two farm houses and adjacent barns. Although most of the structures are frame vernacular, a number of stylistic variations appear including elements of Colonial Revival and Mediterranean Revival styles. Scattered groups of such structures can be found along the roads that intersect Bee Ridge Road including some that exhibit comparatively elaborate or classical Victorian design elements.

South of the City of Sarasota lies the community of Vamo, established in the early 1920's. Approximately thirty structures are found there, generally vernacular residences scattered among newer wood or concrete block buildings. Like the older buildings in other areas, most have been altered, often with such elements as awnings, additional porches, metal windows, and asbestos siding and roofing material. One concentration of thirteen Mediterranean style residences was observed along Vamo Drive.

A brief "windshield" survey found at least sixty-one older structures in the vicinity of Osprey, south of Vamo and along the coast within the Laurel Quadrangle. They include several waterfront "estate" residences, small frame vernacular buildings, and a school. The structures located on the west side of U.S. 41 appear larger and more elaborate than those on the east side and include several with classical Mediterranean style features.

Southwest Area

Geographic Description: The Southwest Area embraces that part of the County included within the Venice, Englewood Northwest, and Englewood Quadrangles. The Venice area consists of a large coastal section that reaches from Nokomis to Manasota Key. The Englewood area

comprises the southernmost coastal portions of the County bordering on Charlotte County. Development in the area occurs for about a mile and a half inland from the Gulf. Beyond that point the land begins to take on the characteristic features of southwest Florida -- small, wet depressions amid vast expanses of open land, cut through by numerous thin creeks.

Archaeological Sites: A number of archaeological site investigations have been carried out in the area located within the Venice Quadrangle, the most fruitful of them within the City of Venice itself. There are nineteen known prehistoric sites in that area, thirteen of which are within the corporate limits of the City of Venice. Another seven are found in the unincorporated section of the area.

More than a dozen sites within the Englewood and Englewood Northwest Quadrangles are recorded on the Florida Master Site File. All are prehistoric sites and consist of sand mounds and shell middens. A shell midden at Indian Mound Park in Englewood was professionally studied and documented in the 1950's and 1960's. The site is now a County-owned park.

The Englewood and Venice vicinity, like the rest of Sarasota County's coastline, was a favorite area for prehistoric habitation. This area is important for future study and may yield important information about the adaptation of ancient societies to marine and estuarine life. Activities such as dredging, shore stabilization, and dock and bulkhead construction have undoubtedly destroyed many sites, particularly at Lemon Bay and along the coast of the City of Venice.

Architectural Resources: There are relatively few older structures in the unincorporated vicinity of Venice, all of which are widely scattered. A small number represent traditional farm houses and associated structures. The older buildings are generally frame vernacular residences, constructed on a simple plan, though in relatively good condition. A number of examples of 1920's Florida Boom architecture can be found in the Nokomis area, including commercial structures along U.S. 41. There are substantial residences in that vicinity

including the personal residence constructed by the principal developer of the area in the 1920's, Dr. Fred H. Albee.

There are at least fifteen structures in the Englewood vicinity constructed at the turn of the century or shortly thereafter that retain much of their original character. They include residences and commercial structures, one to one-and-a-half stories, wood frame, and built on a simple plan. In addition, the area's oldest church built in 1928 is being restored by the Lemon Bay Historical Society. The Lemon Bay Women's Club, an outstanding community oriented building constructed in 1926, has been nominated to the National Register of Historic Places.

Eastern Area

Geographic Description: The Eastern Area comprises that part of the County shown on the remaining quadrangles which include the Old Myakka, Lower Myakka Lake, Myakka River, Murdock Northwest, Murdock Southeast, Murdock Northeast, and Murdock Quadrangles. Only portions of the latter four quadrangles lie within Sarasota County. The area is, except for a large development along the southeast boundary of the County, primarily rural and sparsely populated. There are few concentrations of buildings. The land throughout the area is relatively flat, dotted with numerous ponds and wet depressions. Typical vegetative communities include pine and saw palmetto flatwoods, mesic oak hammocks, and freshwater hardwood swamps. The Myakka River Quadrangle is dominated by the river, which is flanked by black needle rush marsh in the wetter areas and some live oak, saw palmetto, longleaf and slash pine stands.

Archaeological Sites: While the vast expanse of land residing in the Eastern Area, probably about two-thirds of the County, has not been subjected to the extensive systematic survey, some significant sites have received limited professional attention.

In addition to prehistoric Indian sites, the area also contains a few historic period sites from the nineteenth and early twentieth centuries that

derive from the presence of naval stores activity. Further south near the Myakka River is Warm Mineral Springs which is listed on the National Register of Historic Places. Discovered in 1957, the now submerged site has yielded human skeletal remains thought to be about 10,000 years old. In March, 1988, a representative of the National Park Service inspected Warm Mineral Springs for possible nomination as a National Historic Landmark, the highest possible designation in the United States.

The eastern segment of the County lying within parts of the four quadrangles bearing the name Murdock have been subjected to intermittent professional investigations. Much of the Murdock Southeast Quadrangle is occupied by the incorporated City of North Port. Within the same city, though in the Murdock Quadrangle, is Little Salt Spring, a rare and significant site located on property owned by the University of Miami. One large portion of the Murdock Northwest Quadrangle, the Ringling MacArthur Reserve, has been purchased by Sarasota County and a professional survey has identified several significant sites. The report entitled, "An Archaeological and Historical Study of the Ringling MacArthur Reserve, Sarasota County, Florida" contains recommendations for the management of these sites as well as utilization of the sites for public display and education purposes.

Architectural Resources: The eastern, rural part of the County is far more distinguished by its archaeological potential than by the architectural resources that are present, although a small but noteworthy collection of buildings is found in the community of Myakka. They include a church, a vacant store, four farm houses, and a schoolhouse that is listed in the National Register of Historic Places. Despite the addition of several modern residences, the area retains the sense of a nineteenth century ranching community.

Analysis

The ultimate governmental responsibility for preserving the cultural heritage of Sarasota County rests with local government. The departments and divisions of Sarasota County government that exercise roles which potentially involve historic resources include the Departments and Divisions of Planning, Natural Resources, Transportation, Building and Zoning, Parks and Recreation, Forestry, Environmental Services, the Real Property Office, and the Department of Historical Resources. Their impact is registered through participation in the review and approval of applications for permits to engage in land altering activities. In some cases, the County is directly involved in activities that similarly have a physical impact on potential historical resources. These activities include improvements to County property, such as construction of buildings, highways or parks, and management of historic resources, which include buildings like the County Courthouse and the County Administration Center and parks or recreation areas that may contain historic resources.

The following provides an analysis of these County Departments and their current role in the land development review process which impacts the protection of historical and archaeological resources. Also included in this review are recommended administrative and procedural changes which should be explored in order to ensure the protection of these resources.

Department of Historical Resources

The Board of County Commissioners adopted Ordinance No. 87-92 in September, 1987, creating a Department of Historical Resources, formerly named the Division of Historical Archives. The Ordinance authorizes the County Administrator to appoint a Director of Historical Resources to serve as the department head. The Department's responsibilities include the organization and management of activities supporting the identification, evaluation, preservation, development, and interpretation of historic resources; cooperation with other departments to disseminate information

about such resources and develop preservation plans; maintenance of a public archives and historical collection; organization of public educational programs; and the development and maintenance of a Countywide inventory of historic sites listed in the National Register of Historic Places and the Florida Master Site File.

The creation of a departmental level office within the County administrative system provides an essential element for implementing a historic preservation program in Sarasota County. The Department of Historical Resources is the logical instrument for carrying out the various preservation responsibilities of the County and for monitoring the effectiveness of other County administrative units in adhering to the requirements of Ordinances and plans respecting historic resources. The Department should maintain and expand a complete base of current information on the location and significance of historical resources that will permit informed and judicious participation in the permitting process. This will require the updating of maps, documents, files, and site inventories reflecting the accumulation of information and data about historical resources.

As stated above, the Department of Historical Resources is responsible for the maintenance of the County's Archives and historical collection. Created by the Board of County Commissioners in 1975, the mission of the Archives is to collect, preserve, and present to the public the history of Sarasota County. The Archives contains a wide variety of items including photographs of the Sarasota area from the 1880's to the 1940's; maps of Florida, Sarasota County, and the City of Sarasota; copies of the Sarasota Times newspaper from 1920 to 1923 and the Sarasota Herald-Tribune from 1925 to the present; City and County directories from 1897 to the present; Census records for the years 1850, 1860, 1870, 1880, and 1910; Manatee County deeds from 1885 to 1921; Sarasota County Commission Minute Books from 1921 to 1959; genealogy and subject files, and books on Florida and local history. Also housed within the Archives are displays of skeletal remains of pleistocene mammal bones, Indian artifacts, pioneer tools, and other items. The lectures, slide presentations, walking tours, and oral

history programs offered by the Historical Archives/Department of Historical Resources should be continued as a means of educating residents and visitors alike about Sarasota's colorful history.

Permitting Process

Land development projects are subject to varying levels of review and permitting, depending upon the proposed development's size and type and the nature of its impact on the land. Generally, the complexity of the review and permitting process is related to the geographic scope of the proposed development. A project classified as a Development of Regional Impact (DRI), for example, is currently subject to review at State, regional and local governmental levels. At each of these levels, the historical resources component of the project is reviewed. The DRI application requires a description of historical and archaeological sites within the proposed development and suggested mitigation measures for such resources. Activity that occurs on State or federal land or that requires a State or federal permit necessitates review by the State Historic Preservation Office. That task is performed by the Compliance and Review section in the Florida Department of State's Division of Historical Resources. Relatively few projects in Sarasota County undergo such review.

Most land development projects in Sarasota County are reviewed by the County itself. For certain types of projects the County review process routinely has included the Sarasota County Department of Historical Resources. The kinds of projects reviewed by that Department include Developments of Regional Impact, rezoning and special exception requests, and Sector Plans. For the review of rezone and special exception petitions, a representative of that Department joined the County Development Review Committee (DRC), which is composed of representatives from the Planning; Health; Transportation; Natural Resources; Building and Zoning; and Utilities Departments. For Sector Plans and DRI's, the DRC is composed of representatives from these Departments as well as the School Board; Soil and Water Conservation District; Sheriff's Department; Legal Services Department; Forestry; Mosquito Control

District; Sarasota-Manatee Metropolitan Planning Organization; and the County Parks and Recreation and Emergency Management Departments. The Department of Historical Resources provides comment on whether there appears to be archaeologically or historically significant sites on the property and, based on further assessment, whether preservation or mitigative action is warranted.

There are, however, numerous projects that are not offered for review or comment regarding their impact upon historical resources. Among the kinds of projects that might affect such resources, yet are not subject to review by the Department of Historical Resources, are approvals for parking lots, issued by the Transportation Department's Engineering Division; grading, earth moving, excavation and fill, drainage, and utilities placement; permits issued by the Department of Natural Resources for coastal zone dredge and fill activity and dock construction; Division of Forestry permits for tree removal; park and recreation area construction; solid waste management permits issued by the Environmental Services Department; and plats approved by the Building and Zoning Department. Site and Development Plan reviews and Comprehensive Plan amendments, which often contain a variety of land-altering activities that may exert an adverse impact on historic resources similarly require no approval by the Department of Historical Resources. Historical resources located on County lands enjoy no prescribed protection. Examples of County property that may harbor archaeological or architectural sites are highway right-of-ways, parks, and recreation areas.

CONCERN 1

There are numerous land-altering activities that are not reviewed for their impact on historical resources.

The maps described in the Inventory section of this Chapter may serve as a temporary working tool to augment the existing data base maintained in the

County's Department of Historical Resources. Until such time as a survey is completed and a definite procedure for managing the preservation of historic resources is fashioned, the maps may be employed to assist County officials in making decisions about the presence or potential presence of historic resources.

Land Recording Systems

Land records and map series maintained by the County and employed by its departments should reflect the presence of known historic sites and areas of potential site location. The maps described in the Inventory section should be incorporated into the official series of maps employed by the County in its review and permitting activities. The feasibility of recording information about historic resources in the official land records of the County should be explored.

County Land Management

Sarasota County owns property that contains significant historic resources including buildings and archaeological materials. Examples of these are the County Administration Center and the Courthouse, both of which were designed by an important architect and which reflect a popular style of architecture of the Florida Boom Period; the Keith-Prodie Mansion and the property on which it rests; Indian Mound Park; the Hermitage on Manasota Key; the Walton Tract and the Ringling MacArthur Reserve which contains historical and archaeological resources. The County should institute administrative procedures to subject such properties to a review process that will ensure the protection and preservation of eligible historical resources. This would include a professional survey of County-owned lands and buildings to identify and evaluate their significance. The alteration of any building owned by the County that is eligible for recording in the Florida Master Site File should be done in conformance with the Secretary of the Interior's Standards for Rehabilitation. The preservation of significant archaeological resources that rest on open lands owned by the County can be promoted through sympathetic use, such as reserves for parks and recreation.

Historical Commission

The Sarasota County Historical Commission was established by the Board of County Commissioners in 1958 to provide for the collection and maintenance of historical materials. As presently constituted, the Commission consists of fifteen members appointed by the Board of County Commissioners. The Historical Commission may make recommendations to the Board regarding the structure of the Department of Historical Resources and the qualifications of its director; recommend to the County Commission the placement of historical markers; review the budget of the Director of Historical Resources; and provide advice to the Department of Historical Resources regarding the collection of historical materials. The role of the Historical Commission could be expanded to include advice and assistance regarding survey objectives and procedures, utilization of County-owned historical resources, formulation of a historic preservation ordinance, and other preservation-related issues and procedures.

Preservation Measures

The preceding Analysis section presented a description of the Sarasota County governmental agencies that are involved in the land development review process which impacts the preservation of historical and archaeological resources. A variety of legal, financial, and educational measures and incentives are available to governmental agencies and to private organizations and individuals. This section provides a summary of such measures. To accompany this summary, an overview of laws regarding historic preservation is provided in Appendix A, Section 5.

Comprehensive Survey

A program to preserve historic resources in a community must begin with an identification of those resources. To date, a comprehensive survey to identify historical and archaeological resources has not been conducted for the unincorporated area of Sarasota County, although many individual site investigations have been performed. A comprehensive survey is a professionally

directed and systematic effort to locate, identify and evaluate historic resources in a prescribed geographic area. Resources that could be identified in a comprehensive survey would include historical sites, buildings, structures, districts, objects and corridors. The survey provides a base of information that permits authorities and residents to make informed judgments about the preservation or protection of historic resources. The survey information would also be useful in the preparation of nominations to the National Register of Historic Places or to designate historic resources for protection under local ordinance. Sarasota County would benefit from an architectural and archaeological survey.

CONCERN 2

While many individual site investigations have been performed, a comprehensive survey of historical and archaeological resources in the unincorporated areas of the County has not been performed.

Architectural Survey

An architectural survey of the unincorporated areas of Sarasota County would consist of a thorough examination of all structures that are fifty years of age or more. The nature of the architectural resources in the County, consisting principally of vernacular structures, would particularly demand experienced professional attention for the structures are not easily apparent by the nature of their design. A limited survey has identified a minimum of three hundred buildings that, by current criteria, are eligible for listing in the Florida Master Site File. The architectural survey results in the production of an architectural description, historical summary, photograph, and location map for each property that is identified as eligible for listing. Architectural surveys conducted through funding provided by the Florida Department of State additionally require completion of a historical analysis of the survey area focusing particularly on the people and events associated with

the area's physical development. Any architectural survey conducted in Sarasota County would benefit from the inclusion of such an analysis.

Archaeological Survey

An archaeological survey is more difficult and costly than an architectural survey for the reason that most archaeological resources are not readily apparent on the landscape. For the purposes of implementing the recommendations contained in this Chapter for protecting archaeological sites, a preliminary predictive model based essentially on individual investigations conducted in the past has been prepared and the sites identified in those investigations located on maps. This effort should be expanded through systematic survey of high probability areas in order to provide for the preservation or permit appropriate mitigation measures.

The Department of Historical Resources would be the appropriate County agency to coordinate the surveys. Financial grant assistance and professional advice is provided for this purpose by the Division of Historical Resources of the Florida Department of State.

Florida Master Site File

The Florida Master Site File is a standardized list of architectural and archaeological resources throughout the State which is maintained by the Florida Department of State, Bureau of Archaeological Research, Division of Historical Resources. As of 1986, there were 568 recorded sites in Sarasota County, 78 of which are located in the unincorporated areas of the County. A listing of the sites in the unincorporated area is provided in Appendix A, Section 3. Once sites have been located, they should be included in this central archive. To assist in this process, the Division of Historical Resources issues guidelines, financial assistance, and professional advice to local governments and non-profit organizations that undertake surveys to locate, identify, and evaluate properties for inclusion on the Florida Master Site File.

National Register Nominations

Upon completion of a survey, information will be available for decisions regarding the eligibility of individual historic resources for listing in the National Register of Historic Places, a list of culturally significant properties maintained by the U.S. Department of Interior. The National Register program is greatly misunderstood. Inclusion in the National Register of Historic Places does not restrict private use of a property; that is, listing does not come packaged with a set of architectural or land use controls. Legally, it only protects the property against the consequences of adverse federal activity. On the other hand, financial incentives for improving listed structures are available under the federal tax code. There are, additionally, many other incentives under federal and State law and regulatory authority that apply to listed properties. Nominations of a property can be made by any person; however, owner consent to the nomination is required. For districts that contain a stipulated number of buildings, a majority of property owners must express disapproval of the nomination to prevent its acceptance. A further explanation of the National Register program is provided in Appendix A, Section 2. There are currently four sites in unincorporated Sarasota County listed on the National Register. A map showing the location of these National Register sites is provided in Figure 3.

Historic Preservation Ordinance

The exercise of governmental controls over land use is essentially the prerogative of local government and, accordingly, the protection of historic resources must rely upon County and municipal enforcement. Through the review and permitting processes, County officials may exercise some degree of persuasion to protect historic resources. However, it is the Historic Preservation Ordinance that has evolved as the most effective legal tool available for the protection of historic resources. The 1980 amendments to the National Historic Preservation Act encouraged local governments to strengthen their legislation for the designation

and protection of historic properties. In Florida, the home-rule law permits local government to exercise such authority.

Hundreds of communities throughout the nation in recent years have adopted historic preservation ordinances contributing to the development of a sizeable body of legal precedent for such instruments. Ordinances of this kind should include standard features that have through experience proved useful in the preservation process and legally acceptable. The American Planning Association's Planning Advisory Service Report Number 374, "Preparing a Historic Preservation Ordinance" lists the following ten components contained in most historic preservation ordinances:

- Purpose of the Ordinance;
- A statement of the powers and authorities;
- Creation of a historic preservation commission;
- Criteria for designation of landmarks and/or historic districts;
- Procedures and criteria for nomination and designation of landmarks;
- Types of actions that are reviewable by the preservation commission and the legal effect of the review;
- The criteria applied by the commission to the action reviewed;
- Consideration of the economic effect of designation or review of an action;
- Procedures for appeals from a preservation commission decision; and
- Fines and penalties for violation of ordinance provisions.

Legal and Financial Incentives

A variety of legal and financial incentives and instruments are available for use by government and its citizens to assist in these preservation efforts. Some are already provided through federal or State law or regulations; others must be adopted by the local government. In most cases, the instruments that local government and the community's residents can employ in the preservation process

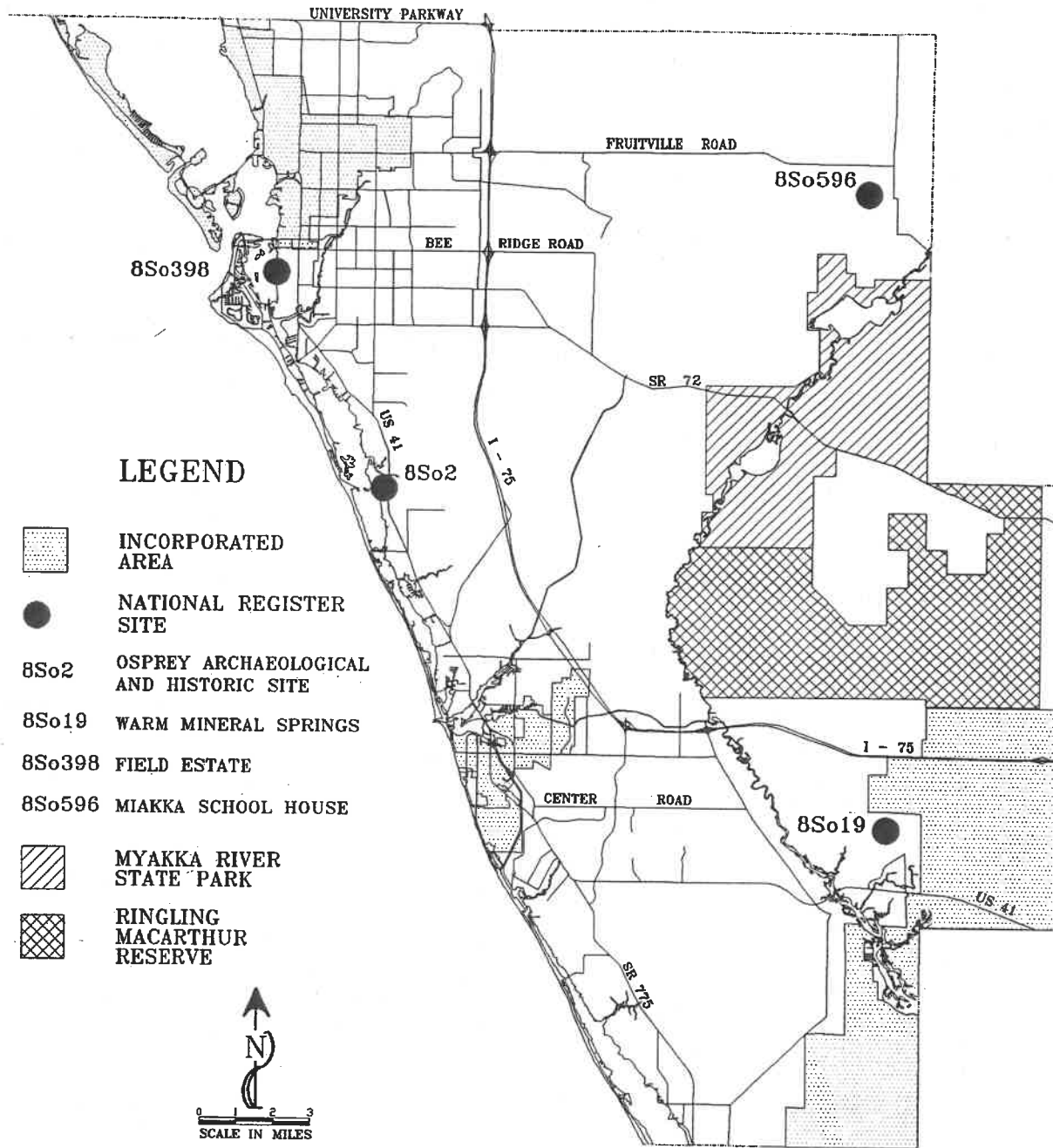


Figure 3: National Register Sites In Unincorporated Sarasota County

Source: Historic Property Associates, Inc., St. Augustine, Florida, 1988; and Sarasota County Planning Department, 1988.

ApoXsee - The Revised and Updated Sarasota County Comprehensive Plan

are similar to devices found in real estate and tax law. Many of these incentives have not been utilized by the County.

CONCERN 3

There are numerous legal and financial incentives available for the preservation of significant historical and archaeological resources that Sarasota County has not employed.

Easements

An easement is a restriction placed against the future development of a property. In use as a historic preservation instrument, the easement is usually placed with a non-profit organization that is qualified to maintain it over a period of time. Tax advantages are available for some easements. Federal law permits, for example, the donation of a facade easement for the purpose of preserving the exterior integrity of a qualified historic building. Scenic or open space easements are used to preserve archaeological sites.

Restrictive Covenants

Restrictive covenants are prohibitions against particular uses of a property. A covenant attached to a deed, for example, might prohibit subdivision of the property or demolition of a structure.

Purchase of Development Rights

This device, equivalent to an easement, involves the acquisition of certain rights to a property. The value of the development right is defined as the difference between the property's market value and its useful value.

Rehabilitation Tax Credits

Federal tax credits upon the expenses incurred in the rehabilitation of a qualified historic structure have been present for a decade. Present law (the 1986 Tax Reform Act) provides for a twenty percent credit for certified historic structures and a ten percent credit for structures more than fifty years old.

Ad Valorem Tax Relief

Chapter 193.505, Florida Statutes, provides for an owner of a historically significant property to enter into a covenant with the local government to maintain the assessed value at a reduced level in return for preservation of the property's historic features. The program has not been administratively implemented at the state level, however.

Community Development Block Grant Funds

The Federal Community Development Block Grant Program permits the use of funds distributed as community block grants for historic preservation purposes, such as survey of historic resources.

Transfer of Development Rights

This legal instrument is employed to protect historic resources, such as archaeological sites, by permitting the right to develop a property to be transferred to another location, sparing the original property from destruction or alteration.

Tax Increment Financing

This measure provides for use of the tax upon an increased valuation of an improved property to amortize the cost of the bond issue floated to finance the improvement.

Revolving Fund

A revolving fund, normally administered by a non-profit or governmental unit, establishes a monetary basis on which property can be bought, improved, maintained, and sold. Revolving fund monies are subsequently returned and reused. The funds act to create a new economic and social force in the community.

Certified Local Government (CLG) Program

Since its establishment by Congress in 1966, the National Historic Preservation Program has operated as a decentralized partnership between the federal government and the states. The federal government set up a program of identification, evaluation, and protection of historic properties

based on the National Register of Historic Places. The program is carried out by the states, under the direction of the National Park Service. Participating states receive funding assistance in the form of annual grants from the Federal Historic Preservation Trust Fund to support the staff of the State Historic Preservation Office. A portion of the funds may be re-granted in the form of sub-grants for survey and planning activities.

The success of this working relationship has prompted Congress to extend the partnership to provide for direct participation by qualified local governments. The National Historic Preservation Act Amendments of 1980 (P.L. 96-515) provide the legal basis for the new federal-state-local preservation partnership commonly referred to as the Certified Local Government Program (CLG). The amendments direct the State Historic Preservation Officer and the Secretary of the Interior to establish procedures for the certification of local governments to participate in this partnership. The Certified Local Government Program permits the states to delegate limited responsibilities to local government that meet specific qualifications for certification and provide limited grant-in-aid funding to assist them in that process.

To become a CLG participant, Sarasota County must adopt a historic preservation ordinance that includes a qualified review authority; maintain a system of survey and inventory of historic resources; and encourage public participation in the historic preservation program.

Building Code, Zoning Code, and Land Development Regulations Relief

Building Code

By ordinance, Sarasota County has adopted the Southern Standard Building Code to govern the physical specifications for new or rehabilitated structures. Modern requirements relating to such elements as plumbing, electrical appurtenances, air conditioning, access, insulation, material type (particularly roofing material) and others, if adopted or used in the rehabilitation or improve-

ment of a qualified historic structure, may jeopardize the architectural integrity of the structure. Section 101.5 of the Code therefore specifies the following:

Special Historic Buildings and Districts

The provisions of this code relating to the construction, alteration, repair, enlargement, restoration, relocation, or moving of buildings or structures shall not be mandatory for existing buildings or structures identified and classified by the state or local jurisdiction as Historic Buildings when such buildings or structures are judged by the building official to be safe and in the public interest of health, safety and welfare regarding any proposed construction, alteration, repair, enlargement, restoration, relocation or moving of buildings within fire districts. The applicant must submit complete architectural and engineering plans and specifications bearing the seal of a registered professional engineer or architect.

It is important to note that such exceptions are granted only to those buildings or structures designated under state or local jurisdiction as "historic." Although Sarasota County has, by its adoption of the Code containing the above provision, subscribed to such exception for "historic" buildings, it has not established by ordinance any procedure for conferring such a designation.

Zoning Code (Sarasota County Ordinance No. 75-38, as amended)

The introduction of unharmonious elements within a historic setting may destroy the integrity of a historic resource. Historic architectural controls are a special kind of zoning and should be considered a reasonable regulation of property applied in the interest of the community. Zoning is the most common historic preservation tool and one that at the same time presents significant dangers to historic resources if it is wrongfully applied. The introduction of commercial buildings in a residential neighborhood, for example, may lead to the neighborhood's destruction. The term zoning applies to land use controls that can exert a positive or negative effect on historic resources. Lot size, density, and permitted uses are all examples of land use controls which fall under the

rubric of zoning and that have an impact on historic resources. An historic preservation ordinance, which may include requirements for review of activity that will alter a property, is generally considered a zoning issue and defended as such in cases where legal challenges have been presented.

Zoning can also be used to protect archaeological resources. Special agricultural zoning, for example, can be employed to protect or preserve areas and sites in rural parts of the County containing significant historic resources. Alternatives such as intensive horticulture, specialty agriculture, aquaculture, or nurseries are suggested alternative uses to intensive development.

Land Development Regulations

The Sarasota County Land Development Regulations (Ordinance No. 81-12, as amended) are designed to ensure the safe, orderly, efficient, and environmentally sound development of new subdivisions upon County lands. The Regulations prohibit the development of land where such development would contribute to injure the general welfare of the County's residents. The destruction of historic resources through development should be considered in and appropriate amendments to the Land Development Regulations instituted to protect such resources.

Other Incentives

Marker Program

The Sarasota County Historical Commission is presently authorized to conduct a program to create appropriate historic markers identifying the location of significant sites. The Board of County Commissioners approved guidelines for the Marker Program in 1978. To further this program, the County should examine the possibility of creating a Local Register of Historic Places, similar to the National Register for those resources that have played a significant role in the history of Sarasota County.

Awards Programs

Programs such as this include the awarding of plaques or certificates of historical significance to the owners of buildings that meet specific criteria established for the program. Awards of this kind are often employed to encourage preservation by recognizing outstanding efforts by property owners as well as to identify important sites and buildings.

Information and Education Programs

Through its various offices and departments, the County should promote historic resources. Studies of tourist preferences have consistently placed historic sites high among the litany of tourist preferences. The production of brochures and other informational material designed to acquaint visitors and residents with the County and its resources should include material on historic resources. Educational programs such as lectures and exhibits regarding cultural resources are also useful in promoting preservation. County Departments that are engaged in such programs should consult with the Department of Historical Resources for advice and assistance in developing and employing such materials.

Opportunities and Constraints

Opportunities

- A Department of Historical Resources within the County governmental structure has been created by the adoption of Ordinance 87-92.
- A set of USGS topographic maps and an accompanying set of USDA Soil Conservation Service Soil Survey maps on which areas containing potential for archaeological resources have been delineated may be employed by County regulatory staff to identify known sites and potential areas for site location.
- A historic resource review manual and model historic preservation ordinance for Sarasota County have been drafted.
- Grant-in-aid assistance funds are available for the performance of a comprehensive architectural and archaeological survey and other preservation-related activities.

Constraints

- There are numerous land-altering activities that are not reviewed by the County for their impact on historical and archaeological resources.
- A comprehensive survey of historical and archaeological resources in the unincorporated areas of the County has not been performed.
- Many legal and financial incentives for the preservation of significant historical and archaeological resources have not been employed by the County.

Historic Preservation Plan

Intent

The fundamental purpose of any historic preservation program, particularly the historic preservation element to a local comprehensive plan, is to protect the historic resources within the local government's jurisdiction against adverse impact and to promote awareness among residents and government officials of the wisdom of preserving such resources.

The Historic Preservation Plan of Apoxsee sets forth a comprehensive program for the identification and protection of the historical and archaeological resources located in the unincorporated portions of Sarasota County. The Plan provides for the establishment of administrative procedures to review and mitigate the impact of future development on prehistoric and historic resources. To augment this, the Plan calls for a survey of historical and archaeological resources in order to locate buildings, sites, structures, districts, and objects significant to the history of Sarasota County. Furthermore, the Historic Preservation Plan encourages the preservation of the County's historic resources by providing legal and financial incentives for preservation, as well as educational and informational programs designed to inform citizens and visitors of Sarasota County's unique and diverse cultural heritage. Finally, the Plan promotes communication and cooperation among federal, State, and local governmental agencies and private organizations involved in the historic preservation process.

Goal 1

It shall be the Goal of Sarasota County to identify, document, and preserve its prehistoric and historic resources.

Objective 1.1

To establish appropriate administrative guidelines by 1990 that will ensure the review of the impact of excavation, building, moving, or demolition activities on prehistoric and historic resources.

Policy 1.1.1.

Develop and implement a review procedure triggered by applications for permits and land development petitions (for example, plats, site and development plans, solid waste management permits, dredge and fill permits, tree removal permits, dock construction permits, earth moving permits, etc.) similar to the current procedures utilized for the review of rezone, special exception, Sector Plan, and Development of Regional Impact applications. The review procedure shall be designed so as to avoid the duplication of reviews.

Policy 1.1.2.

Develop and implement mechanisms for monitoring the status of prehistoric and historic resources.

Policy 1.1.3.

Maintain and expand the data base in the Sarasota County Department of Historical Resources to include a set of base maps, a complete set of Florida Master Site File forms for all recorded sites, all site reports filed by professional historians and archaeologists working in the County, and archival materials that relate to Sarasota County's heritage.

Policy 1.1.4.

Adopt the USGS topographic maps that have been marked to indicate the presence of known or potential resources as the official series of maps employed by the County in its review and permitting activities, and maintain and update the maps as necessary.

Policy 1.1.5.

Examine the possibility of adopting a Historic Preservation Ordinance.

Policy 1.1.6.

Petition to become a member of the Certified Local Government Program if a historic preservation ordinance is ultimately adopted.

Policy 1.1.7.

Provide guidelines to the Sarasota County Departments and Divisions of Planning, Natural Resources, Transportation, Building and Zoning, Parks and Recreation, Forestry, Environmental Services, and the Real Property Office in the development and implementation of review and monitoring procedures and educate County regulatory staff regarding the County's prehistoric and historic resources.

Policy 1.1.8.

Promote efficient and effective communication among local, regional, State, and federal government agencies and private organizations involved in preservation activities.

Objective 1.2

To conduct a comprehensive Countywide survey of archaeological and historical resources in order to locate buildings, sites, structures, districts, and objects significant to the prehistory and history of Sarasota County.

Policy 1.2.1.

Explore funding methods, such as grant-in-aid assistance and public-private sector partnerships, for the performance of a Countywide survey and other preservation activities.

Policy 1.2.2.

Maintain an automated listing of identified archaeological and historical resources.

Policy 1.2.3.

Maintain documentation files and periodically update files with information regarding the status of archaeological and historical resources.

Policy 1.2.4.

Provide survey data and archival materials relating to the prehistorical and historical resources of Sarasota County in a public access depository.

Policy 1.2.5.

Educate the public about the performance of a Countywide survey and other preservation activities.

Policy 1.2.6.

Register identified sites on the Florida Master Site File.

Objective 1.3

To establish specific mechanisms designed to promote the preservation of Sarasota County's prehistorical and historical resources.

Policy 1.3.1.

Nominate all eligible public archaeological and historical resources to the National Register of Historic Places.

Policy 1.3.2.

Encourage the nomination of all eligible private sector archaeological and historical resources to the National Register of Historic Places by providing assistance to the private sector in the nomination process.

Policy 1.3.3.

Examine the possibility of creating a local register of historic places for those archaeological and historical resources which have played a significant role in the history of Sarasota County as an incentive for preservation.

Policy 1.3.4.

Investigate the feasibility of providing incentives for preservation such as Building Code relief, Zoning Ordinance relief, Land Development Regulations relief, tax relief, easements, lot coverage, transfer of development rights, etc. and adopt those deemed appropriate.

Policy 1.3.5.

Encourage the preservation of prehistoric and historic resources by providing incentives for preservation through such programs as the Sarasota County Marker Program, plaque programs, and awards programs which recognize outstanding preservation efforts.

Policy 1.3.6.

Continue to recognize the importance of the Historical Archives and the programs that it offers.

Policy 1.3.7.

Educate the public about Sarasota's unique and diverse heritage by providing brochures, lectures, exhibits, etc. regarding historical resources, thereby promoting preservation and tourism and strengthening the local economy and provide for the utilization of County-owned prehistoric and historic resources for educational purposes.

Policy 1.3.8.

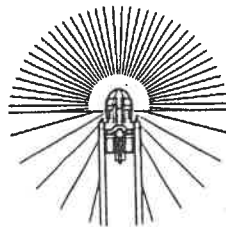
Provide for the preservation and management of prehistoric and historic sites owned by the County (such as the Ringling MacArthur Reserve, the Walton Tract, the Keith-Prodie property, the Hermitage at Blind Pass, Indian Mound Park, the Courthouse, and the County Administration Center) as well as those sites purchased by the County in the future.

Policy 1.3.9.

Encourage the identification and protection of historical corridors including trails and railroad lines, such as the Atlantic Coastline Railroad, the Gulf Coast Railway, Pine Level Trail, Knight's Trail and portions of the Old Tamiami Trail, etc.

Policy 1.3.10.

Coordinate with the State Bureau of Historic Preservation and Archaeological Research for the listing of sites on the Florida Master Site File and for the nomination of sites to the National Register of Historic Places.



CHAPTER 2

ENVIRONMENT

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CHAPTER 2

ENVIRONMENT

Introduction

The history of Sarasota County is marked by the efforts to conserve the County's unique environmental heritage and to preserve important ecological functions. This continuing concern for environmental quality is a Sarasota County tradition. In the past two decades, a number of County Resolutions and Ordinances have been adopted to address environmental issues. Numerous studies relating to the County's environmental resources have been, and continue to be, undertaken.

The Apoxsee Environment Chapter provides the basis to maintain and improve the environmental quality in Sarasota County, as the County continues to seek a balance between man-made and natural systems. The Chapter has been developed within the context of the County's strong tradition as well as the legislative mandate provided by the State. This Chapter is not a new study so much as a reflection of public priorities and a continuation of strong planning precedents.

The County's environmental goal continues to set the framework for guiding planning and development efforts and it shall remain the Goal of Sarasota County to conserve, maintain, and where necessary, restore the natural environment of Sarasota County, both because the natural environment is valuable in and of itself, and because it is such a critical part of Sarasota County's identity. The outline of the Chapter follows the 1981 Apoxsee Environment Chapter format as much as possible, while incorporating new data and

analysis consistent with the State requirements for Coastal Zone Management and Conservation Elements.

Earth

Sediments

Sediment is material deposited by wind or water (and glaciers in more northern latitudes). The subsurface geology and subsurface features of Sarasota County are directly related to historic sea level fluctuations. Marine organisms living in the shallow seas that periodically inundated the area produced the sediments composing the geologic formations that underlie Sarasota County. These sediments range in age from the Oligocene Period (22.5 to 38 million years ago) to the Holocene Period (10,000 years ago to present).

Surface and near surface sediments consist of quartz sand, consolidated and unconsolidated shell beds, clays, limestone, and dolomite. Stratified sediments of relatively pure limestones and phosphatic clays (clays rich in phosphate, salts of phosphoric acid) developed gradually in Sarasota County. Quartz sands eroded from exposed higher land were also deposited.⁽¹⁾ These sediments, occurring within approximately 1,500 feet of the land surfaces, were of major importance to settlement because of their capacity to store and/or contain potable water. In addition to supplying water, the marine sediments provide phosphate and other natural resources.

Mineral Development

There are several commercial sand and gravel mining operations in Sarasota County. Virtually the entire area east and north of I-75 in the County contains sand and gravel deposits. Known phosphate deposits in Sarasota County are relatively small and phosphate mining has focused on the extensive deposits in Polk County. Phosphate mining operations are scheduled to begin in the Manatee County portion of the Myakka River watershed in 1989. Plans for a mining operation in the Manatee County portion of the Big Slough watershed have not yet been finalized.

These existing and future operations may adversely impact not only Sarasota County's environment, but its tourist/retirement economy as well. However, State mining regulations including provisions for reclamation, were strengthened in 1985. As a result, the impacts of phosphate mining have been reduced although dangers to the environment remain. Local governments may mitigate the risks of phosphate mining by enacting ordinances more stringent than the State's regulations, by ensuring that the conditions that led to permitting are upheld, and by incorporating state of the art advances into the permitting requirements.(2)

The County adopted an ordinance in 1982 which limits mining activities to areas designated as Rural on the "Future Land Use Plan Map". Mining activities are however prohibited within designated areas of special environmental significance and/or sensitivity. The watersheds of Cow Pen Slough and the Myakka River are designated areas of special environmental significance.

CONCERN 1

Underregulated phosphate mining may adversely impact both the natural environment and the economic base of Sarasota County.

Surface Features

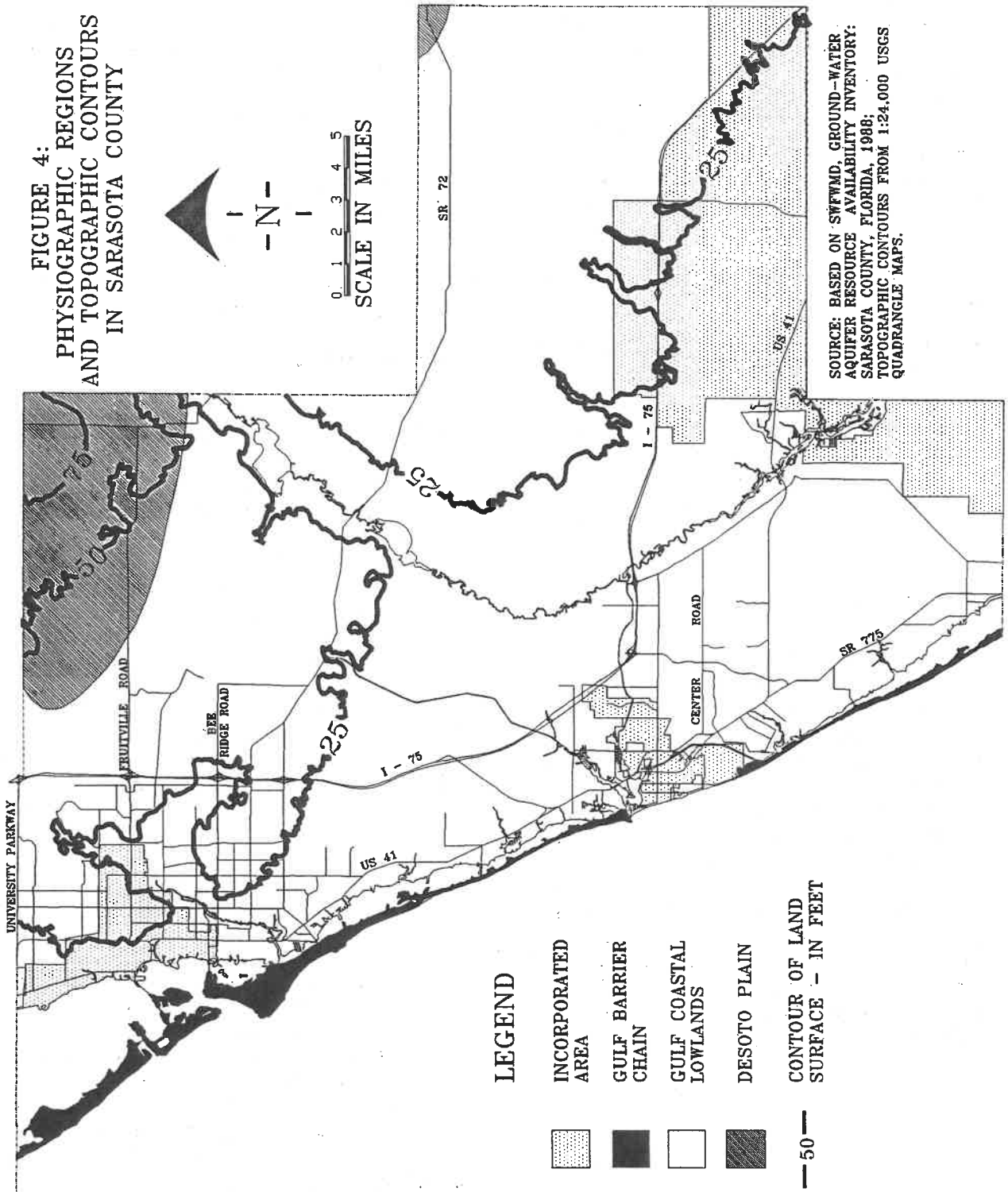
Sarasota County is physiographically defined by a series of marine scarps and terraces that developed during the Pleistocene era. These terraces, combined with the underlying marine sediments, are responsible for Sarasota County's topography which ranges in elevation from mean sea level along the coast and the lower Myakka River to a height of 95 feet in the northeast corner of the County near Verna.

The County's generally flat topography is characterized by isolated swamps and marshes connecting into sloughs and meandering streams. Depressions in the landscape seasonally fill with water and form intermittent ponds. Series of ponds often link together during heavy rains to create shallow and slow-moving waterways, while streams may form when flow, volume, and velocity increases. This topography results in a very slow rate of stormwater runoff. For a more detailed discussion on drainage, refer to the Drainage section in the Public Facilities Chapter.

According to White's classification (3), the County is delineated into three physiographic provinces: the Gulf Coastal Lowlands, the Desoto Plain, and the Barrier Island Chain.(4) (See Figure 4 for these Generalized Physiographic Regions). The majority of the County is in the Gulf Coastal Lowlands region which ranges in elevation from sea level to approximately 40 feet. The Myakka River is the principal feature of the coastal lowlands. The Myakka, along with its tributaries, is the County's largest drainage system and flows into Charlotte Harbor to the south. Several small creeks, which empty into the County's bays and estuaries, drain the coastal portion of the County. Soils in the Gulf Coastal Lowlands are generally unconsolidated sands which increase in clay content with depth. Organic soils are found overlying wetland areas.(5)

A small portion of the northeastern County lies within the Desoto Plain. Elevations in this region range from 40 to 75 feet. Soils in the Desoto Plain are somewhat poorly drained with shallow sediments overlying organic hardpans.(6)

FIGURE 4:
PHYSIOGRAPHIC REGIONS
AND TOPOGRAPHIC CONTOURS
IN SARASOTA COUNTY



The Barrier Island Chain includes a dynamic system of barrier islands, inlets, and lagoons and consists of marine and estuarine terrace deposits which were laid down at the same time as receding water created Tampa Bay and Charlotte Harbor. River valleys were eroded during the periods of receding seas and vast quantities of sediments were transported offshore. The riverine sediments, combined with shells and other materials, gradually washed landward to form the Barrier Islands.(7) The bay waters shaped by these dynamic features include Sarasota Bay, Little Sarasota Bay, Dona/Roberts Bays, and Lemon Bay. Elevations on the Barrier Islands are generally less than 15 feet.

Changes in barrier island shorelines are the direct result of the energy associated with winds, waves, currents and tides. The action of wind and waves can create a flow of water with sand in suspension parallel to the shoreline. This parallel flow is referred to as littoral drift.(8) An active beach area has a cycle of erosion and accretion caused by wave action and littoral drift. These dynamics and trends of the Barrier Island system in Sarasota County are discussed in the Coastal Zone Management section of this Chapter.

Soils

Soil characteristics are determined by climate, composition of parent materials, topography, biological activity, and the duration of soil development. Sarasota's warm, humid climate causes rapid chemical and biological reactions within the soil which eventually deplete soil fertility. Because the ground rarely freezes these reactions continue year-round resulting in continual depletion of soil fertility. Further losses occur due to abundant seasonal rains which cause leaching (downward movement of soluble materials by a percolating liquid).(9) This depletion of soil nutrients, essential to plant growth, and the overall reduction of soil fertility, together have limited the development and distribution of intensive agriculture.(10)

CONCERN 2

The low fertility of most of Sarasota's soils requires improvements for farming and large acreage of land to support livestock.

There are no widespread soil erosion problems in Sarasota County. Due to the relatively flat terrain, soils are generally stable. Under normal volumes of precipitation, the slow moving rivers of Sarasota County create few erosional changes. Erosion does occur, though, when the rate of runoff is increased by improper or poorly designed drainage modifications which carry away topsoils. Soil erosion is also a problem during the construction activities of development. Topsoils, end-products of thousands of years of natural build-up, are important to vegetation. Once carried off, not only are they lost to the vegetation, they often create siltation and sedimentation problems in the receiving estuaries. To mitigate soil erosion problems created during agricultural and urban development activities, the County's Department of Natural Resources requires developers to follow the Soil and Water Conservation District's Best Management Practices.

Many soils have characteristics which limit their ability to be developed in their natural state. While poor drainage is perhaps the major limitation, others include wetness (amount of water in the soil at various times of the year), effective depth (to water and plant nutrients), depth of rock, shrink and swell behavior (changes in soil volume due to the amount of moisture), presumptive bearing value (ability of soil to sustain dead weight), and corrosion.

As a result of these limitations, major soil modifications (draining, excavating) are frequently necessary before areas can be developed. Such modifications often destroy the valuable habitats that have evolved in response to the natural characteristics of the soil. An example of this would be the destruction of wetland vegetation when naturally wet soils are subjected to improperly designed artificial drainage.

CONCERN 3

Many of Sarasota's soils possess characteristics that limit their development potential. The modifications necessary to overcome these natural limitations may destroy valuable soil, vegetation, and native habitat.

Due to the fact that well-drained soils have little surface runoff and allow fairly easy water movement, they may serve as important recharge areas for groundwater systems. With the limited extent of these soils in Sarasota County and the degree to which they have experienced urban development, undisturbed habitats associated with these soils are rare.

Riverine soils and coastal soils also serve valuable environmental functions. Riverine soils are important in water table recharge, flood control (by storing excess water), filtering stormwater runoff, acting as transition areas along riverbanks and supporting hammock and freshwater marsh vegetation. Coastal soils, in turn, are important stabilizers of shorelines, act to filter runoff, and support coastal strand vegetation, including mangroves and salt marshes.

Table 1 identifies the characteristics for five broad soil categories: Coastal Islands, Hammocks, Flatwoods, Depressions and Sloughs, and Floodplains. Figure 5 presents a generalized soil map for Sarasota County. Due to the generalized scale, the soils map is not suitable for specific planning purposes. Refer to the detailed soil map in the United States Department of Agriculture Soil Conservation Service publication, "Soil Survey, Sarasota County, Florida," for a detailed description of soil types.

Air

Climate

The obvious importance of climate to both natural and built systems led to the development of various techniques of analysis and classification. Most methods of classification are based upon the average precipitation and temperature of a region. As climate represents the average condition of weather over extended periods of time, time records are necessary to determine an area's true climate. Table 2 outlines the average temperature and average rainfall by month for Sarasota County from 1975 to 1985.

The climate of Sarasota County is sub-tropical and characterized by high mean annual rainfall and temperature. The area experiences warm, humid summers and mild, relatively dry winters. Mean daily temperatures range from 84 degrees fahrenheit in the summer to 61 degrees in the winter. From 1975 to 1985 the average annual rainfall was 60.2 inches, an increase of 12 inches compared to the previous decade. Approximately 60 to 65 percent of this average rainfall occurs during the summer months, between June and September.(11)

Air Quality

The Sarasota County Environmental Laboratory has been monitoring air quality since 1978.

Four air quality parameters have been measured at various monitoring sites. Two of these parameters, ozone and sulfur dioxide, are monitored on a continuous basis for twenty-four hours a day, seven days a week. The other two parameters, particulate matter and fluoride, are monitored every six days for twenty-four hours. As a result of County population growth and the state approval of the air program, a new monitoring plan for ambient air was approved by the Board of County Commissioners in January 1987. This plan provides for the relocation of air sampling stations and the addition of a new air quality parameter, carbon monoxide. In general, monitoring sites are chosen based on known or suspected sites of maximum pollutant concentration and/or popula-

Table 1: Soil Characteristics By Category

Coastal Islands

Slope	Nearly level to gently sloping
Drainage	Moderately well to very poor
Soil Associations	Canaveral, Beaches, Kesson
Location	Sandy beaches, coastal dunes, low mangrove areas
Comments	Sandy, contain shell fragments

Hammocks

Slope	Nearly level
Drainage	Poor to very poor
Soil Associations	Wabasso, EauGallie, Felda
Location	Generally both sides of Myakka in a narrow strip
Comments	Dark colored subsoil, upper part sandy, lower part loamy

Flatwoods

Slope	Nearly level
Drainage	Moderately well to very poor
Soil Associations	EauGallie, Myakka, Holopaw, Pineda, Pomello
Location	Throughout Sarasota County (except Barrier Islands, floodplains, mangrove swamps)
Comments	Largest category in County (approximately 83%)

Depressions and Sloughs

Slope	Nearly level
Drainage	Very poor
Soil Association	Floridana, Felda, Holopaw, Delray
Location	In depressions in eastern part of County
Comments	Sandy Soils, Floridana used for improved pasture and truck farming

Floodplains

Slope	Nearly level
Drainage	Poor to very poor
Soil Associations	Delray, Felda, Pompano, Kesson, Wulfert
Location	Mangrove swamps at mouth of Myakka River and Roberts Bay
Comments	Very poorly drained

Source: U.S. Dept. of Agriculture, Soil Conservation Service, Gainesville, FL., March, 1985.

FIGURE 5:
GENERAL SOIL ASSOCIATIONS
IN SARASOTA COUNTY

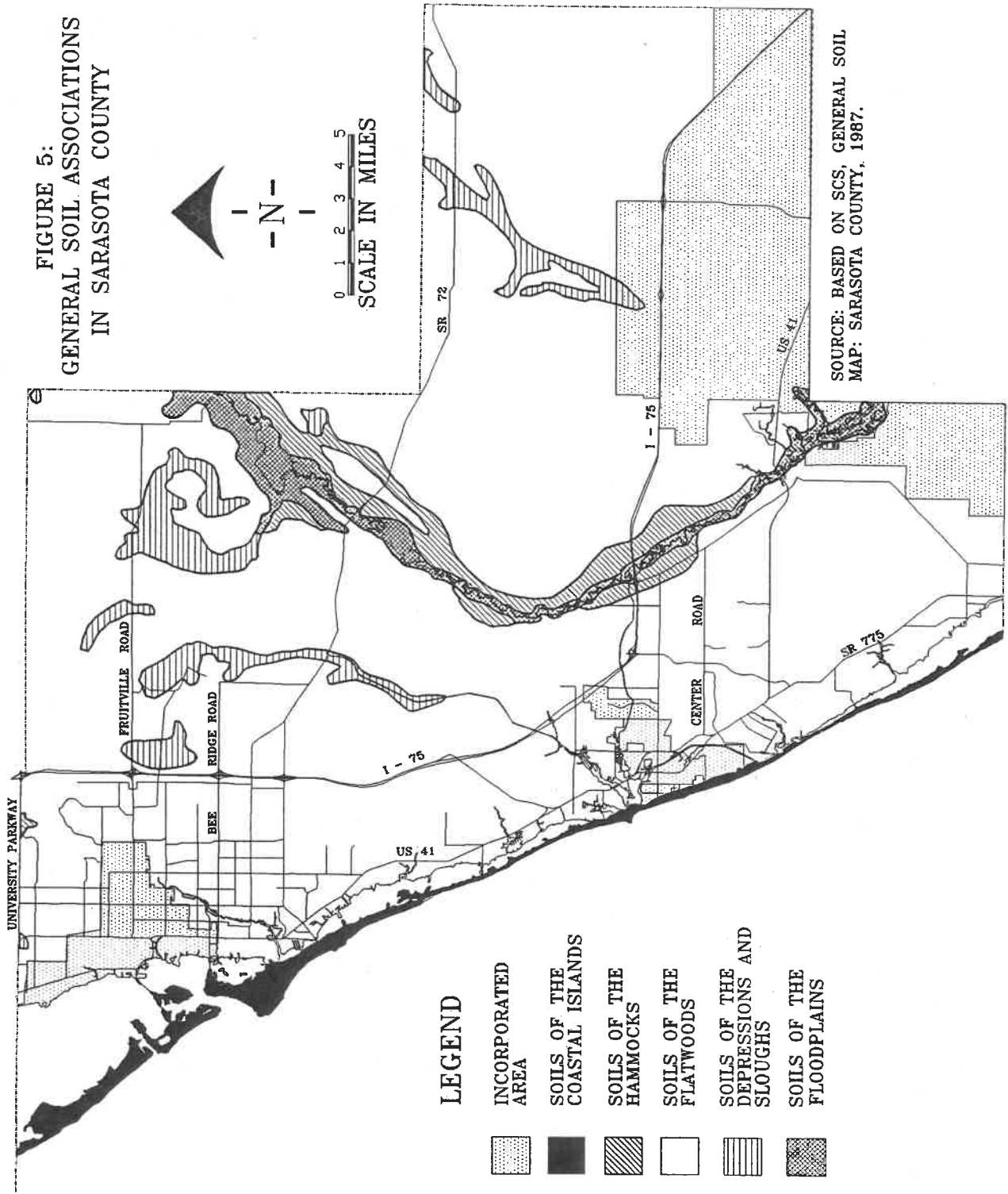


Table 2: Average Temperature and Rainfall by Month in Sarasota County, 1975-1985

<i>Average Temperature By Month In Sarasota County 1975-1985</i>		<i>Average Rainfall By Month In Sarasota County 1975-1985</i>	
Month	Fahrenheit	Month	Inches
January	59.4	January	2.48
February	62.9	February	3.36
March	68.4	March	2.91
April	72.2	April	1.88
May	77.2	May	3.76
June	80.6	June	8.60
July	81.7	July	10.15
August	82.2	August	10.17
September	80.9	September	9.17
October	76.2	October	2.11
November	69.1	November	2.58
December	63.5	December	2.50
		Annual Total	60.21

Source: National Oceanic and Atmospheric Administration (NOAA), "Climatological Data: Florida, Annual Summary," Asheville, North Carolina, NOAA, 1975-1985.

tion exposure. Presently, monitoring sites are located at Shade Avenue at Brookside Middle School, the Venice Police Station, Bee Ridge Park, the Verna Wellfield, and at the City of Sarasota's reverse osmosis plant.

The air quality in the County is considered good and has not exceeded the Environmental Protection Agency's (EPA) and Florida Department of Environmental Regulation's (FDER) established standards to date. In the future, meeting these standards maybe more difficult due to ozone pollution associated with the increasing number of automobiles in Sarasota County. The impact, extent, and form of future growth should be considered to determine what effect it would have on local air quality. Land use patterns and transportation systems should be compatible with the desired level of air quality. The Air Quality Monitor-

ing Program plans to measure the correlations between heavy traffic flows and air quality in Sarasota County.

The provisions of air quality were initially addressed in County Ordinance 72-37 which was repealed by County Ordinance 85-37. Ordinance No. 85-63 was adopted to achieve compatibility between the air pollution control regulation of the State and County. The intent of this Ordinance was to achieve compliance with the current requirements of the local air program approved by the FDER. Sarasota County's Local Air Pollution Control Program complies with the Florida Air and Water Pollution Control Act, Chapter 403 Florida Statutes.

Water

Water is one of Sarasota County's most important natural resources. It is found throughout the natural environment in a variety of "interconnections". These interconnections are collectively called the hydrologic cycle, and include regional precipitation patterns, groundwater resources and surface water systems as their components.

There are four freshwater-bearing aquifers in Sarasota County: the surficial aquifer; two intermediate aquifers (Tamiami-upper Hawthorn and Lower Hawthorn-upper Tampa); and the Floridan aquifer. Most of the County's consumptive water use is derived from these aquifers. These groundwater resources are extremely valuable to Sarasota County residents and must be protected. For a more detailed discussion on the County's groundwater resources, refer to the Natural Groundwater Aquifer Recharge section in the Public Facilities Chapter.

Surface Water Systems

Surface water is collected by streams and lakes, numerous sloughs, ponds, and swampy areas. Rainfall accounts for the majority of surface water in the County, however, due to the flat terrain typical in Sarasota County, there is little gravitational impetus for streamflow and not all of the rainfall is retained as part of the surface water system. According to the Southwest Florida Water Management District (SWFWMD), only 30-35 percent of the rainfall contributes to that system through surface water runoff. The balance is lost to evapotranspiration (65-70 percent) with a small amount (5 percent) recharged into the groundwater system.

The Myakka River, the largest drainage system in Sarasota County, drains approximately 540 square miles. Several creeks and shallow sloughs, including Phillippi and Howard Creeks, and Cow Pen, Deer Prairie, and Big Sloughs, drain the County's lowlands. The Upper and Lower Myakka Lakes are the County's two largest bodies of freshwater. Together the two lakes cover approximately 1,380 acres.⁽¹²⁾ Potentially, the surface of these

waterbodies could be tapped for consumptive water use. However, according to the Southwest Florida Water Management District's Groundwater Basin Resource Availability Inventory" the development of a reservoir will result in reduced overall flows and seasonal fluctuations in flow in the Myakka River which generally could affect salinity levels in the river and impact vegetation and animal species present."⁽¹³⁾ As described in the Potable Water section of the Public Facilities Chapter, the County is investigating the possibility of using surface water from the Myakka River as a potential source of potable water. Ongoing ecological, biological, and hydrological studies and monitoring of wellfields on the Ringling MacArthur Reserve (RMR) will provide the necessary information with which to compare existing baseline data with the impacts of ground and surface water withdrawal on the Myakka River and the surrounding area.

Floodplains

There are four major floodplains in the County: Phillippi Creek; Cow Pen Slough; the Myakka River; and Big Slough (also known as the Myakkahatchee Creek). While some development has occurred within each of these floodplains, the Phillippi Creek floodplain is the most urbanized. Since much of the County's settlement occurs in the coastal lowlands (the majority of population is located within the 100-year floodplain) many residential and agricultural areas have experienced flooding. Excess volumes of water entering the County's meandering channels and wide floodplains create flooding due to low elevations and flat terrain. The Drainage section of the Public Facilities Chapter discusses the regulatory aspects of development in the floodplain and contains a generalized map of the 100-year floodprone area in Sarasota County (see Figure 27). Policies related to development in floodplains and floodprone areas are located in the Future Land Use Plan.

In 1962, severe flooding of the County's urban and agricultural areas spurred a series of structural modifications to drainage systems (for example Phillippi Creek, Cow Pen Slough and Big Slough). These natural meandering streams were replaced with straight, boxcut channels. During periods of

Intense and prolonged rainfall, stormwater rapidly drains through the channelized streams into the County's bays and estuaries. This rapid runoff increases sediment loading, pollution, and freshwater influxes into the bays, and can result in severe damage to the estuarine waters. Nutrients, pesticides, solid wastes, bacteria, heavy metals, and petroleum products have been found in stormwater runoff.(14)

For example, "Cow Pen Slough exerts the greatest single influence on the salinity of Dona Bay during periods of heavy rainfall. This freshwater influx disrupts the normal dynamics of the estuary which results in heavy loads of freshwater weeds and sediments accumulating in, what is already, a very shallow estuary. The concentration of dissolved nutrients in Cow Pen Slough water is low probably because rapidly growing exotic weeds are taking them up as quickly as they become available. However, the massive transfer of freshwater, freshwater weeds and sediments occurs at a rate which exceeds the ability of the estuary to handle it...The impact of this runoff (and its contents) is magnified because the normal "buffering effect" of an estuary, fed by meandering streams has been circumvented by an upstream box-cut channel fed by lateral channels, specifically designed to increase runoff rate." (15)

Channellization also reduces the capacity for natural water storage, placing greater stress on existing drainage systems and increasing the potential for downstream flooding. In the natural drainage system, when a heavy rainfall generates large volumes of runoff, excess surface water is stored in the floodplain and is gradually drained by the natural wetland waterways. Development can also produce flooding in areas not normally flood prone. When fill and/or impermeable surfaces are placed within the floodplain, flooding occurs because natural stormwater retention areas have been displaced. The "Freshwater Wetlands" section of the Environment Chapter discusses management guidelines for buffering wetlands. Vegetation buffers along the shore and adjacent to wetlands are at least partially intended to protect the natural function of floodplains and floodprone areas. A shoreline protection ordinance would further protect these functions.

CONCERN 4

Floodplain development has several negative consequences. Urban development increases runoff by enhancing the velocity of flow from impervious surfaces. The runoff decreases estuarine salinity and increases the amount of pollutants that drain into the County's bays and estuaries. Also, increased flooding can result from fill placed within the floodplain. In addition, stream modification, such as straight box-cut channelization, could generate negative impacts downstream and should be monitored.

Water Consumption

The Potable Water section of the Public Facilities Chapter analyses the current and projected domestic water consumption in the County. This section, using the best available data from SWFWMD, discusses the general trends and projections for agricultural water consumption. SWFWMD is currently working on detailed water use projections which should be available for the next update of this plan.

Groundwater supplies most of the County's needs for agricultural, industrial and domestic uses. Consumptive use permit data indicates that the average water use estimates for agriculture between 1977 and 1986 have ranged from a high of 34 million gallons per day (mgd) in 1978 to a low of 19 (mgd) in 1981. The past five year period has indicated a leveling off in use between 20 (mgd) and 24 (mgd).

In 1986, field crops constituted approximately eighty-eight percent of the agricultural water consumption in Sarasota County.(16) Included in these are turf and ornamental, truck farming (primarily celery and tomatoes), corn and melons. The balance of the agricultural water demand came from citrus groves and pasture lands. As identified in Table 3, the vast majority of agricultural acreage in the County is pasture, which has been slightly decreasing along with its associated water usage.

Table 3: Agricultural Acreage and Water Consumption

Type	Acres	Water Consumption (MGD)	Water Consumption (per Acre Per Day)
Pasture	168,794	1.4	8.3
Groves	2,121	1.5	707.2
Field Crops	2,851	20.8	7,295.7
Total	173,766	23.7	136.4

Source: John Mikos, Sarasota County Property Appraisal Report, 1987; Southwest Florida Water Management District, Water Use Estimates, 1986.

While the acreage of citrus has increased approximately 13 percent since 1983, permit data reveals that the water demand for this type of crop has more than tripled. Turf and ornamental farming, which basically serve the local market, has become the largest single agricultural water consumer in the County, and continues to increase in acreage. According to SWFWMD, it is expected that through the year 2000 agricultural water use in the County will range from between 22 (mgd) and 40 (mgd).

Industrial water use in the unincorporated County is roughly 150,000 gallons per day according to the County Utilities Department.

The ongoing water conservation planning efforts in Sarasota County are discussed in the Potable Water and Drainage sections of the Public Facilities Chapter.

Surface Water Quality

Several waterbodies in Sarasota County have been designated Outstanding Florida Waters (OFW). "The Outstanding Florida Water designation was developed to provide additional protection to special waters recognized for their ecological and recreational significance."⁽¹⁷⁾ OFW's in the County include Sarasota Bay, Little Sarasota Bay, Lemon Bay and the Myakka River. The exceptions within these waters include two areas of degradation at the mouth of Whitaker Bayou and Phillippi Creek. Sarasota Bay, Little

Sarasota Bay, and Lemon Bay were designated OFW's in February 1987. In 1988, the OFW designation for the Myakka River was extended to cover its entire length within the County. This designation provides them with the highest degree of protection under the DER permitting policy. "In general, direct discharges into an OFW cannot lower ambient water quality in the year prior to designation, while direct discharges cannot significantly degrade the OFW. These provisions are predicated on the antidegradation concept that degradation should not occur except after full consideration of the consequences and then only to the extent necessitated by desirable economic and social development."⁽¹⁸⁾ Designation as an Aquatic Preserve by the FDER provides additional water quality protection to Lemon Bay.

According to County Ordinance 72-37 as amended, surface waters in the County fall into three classes. Class I: Potable water supply; Class II: Shellfish propagation or harvesting; and Class III: Recreation, propagation and maintenance of a healthy, well-balanced population of fish and wildlife. The Class I waters include Big Slough Canal to US 41, the Myakka River south to I-75, and the Upper and Lower Myakka Lakes. Class II waters include the western half of Sarasota Bay in the County, Lemon Bay from Forked Creek south to the County line, and a portion of the Myakka River between US 41 and the south County line. The remaining surface waters in Sarasota County are Class III Surface Waters.

Coastal Zone Management

Coastal Area Inventory and Analysis

Sarasota County has been designated by the State as a coastal county; technically the entire County could be included in the inventory and analysis of the coastal area. However, in order to more completely address the dynamic interrelationships between human endeavors and natural processes in coastal areas, it was determined that a narrower definition of the immediate coastal area was needed. For the purposes of this inventory and analysis section, the Coastal Area will be defined as the area that encompasses the Barrier Islands, bayfront mainland, Gulf and bay waters, and all other areas affected by tidal waters including mangrove swamps and tidal marsh habitats. Generally, the Coastal Area is defined as the area west of US 41 and SR 775, but it also includes all areas below and including the five foot contour line supporting salt tolerant vegetation within the tidal reaches of the coastal creeks and the Myakka River.

The designated coastal area of unincorporated Sarasota County contains roughly 765 acres of commercial development, 10,610 acres of residential, and 200 acres of recreational development, which does not include beaches. Also, there are approximately 4,544 acres of seagrass beds, 131 acres of oyster bars, 845 acres of mangroves, 45 acres of tidal marsh, and 13,988 acres of open water. In addition to the 5,565 acres of estuarine and marine habitats, there are approximately 2,045 acres of uplands including coastal hammock, freshwater wetlands, pine prairie and scrub which remain in the coastal area. Both estuarine and coastal habitats support numerous wildlife species including endangered, threatened, and

species of special concern. Figure 6 shows the general area of living marine resources in Sarasota County. Artificial reefs shown in Figure 6 are only those within three miles of shore. Appendix B, Section 3 contains a list that locates artificial reefs further off the coast.

Barrier Island System

Sarasota County has 35 miles of Gulf beach shoreline. Approximately 31 of these miles stretch along several Barrier Islands, including the southern portion of Longboat Key and the northern portion of Manasota Key. The other 4 miles, from Tarpon Center Drive in the City of Venice south to Red Lake, are part of the mainland. The County's barrier islands, in addition to those within the Town of Longboat Key and the City of Sarasota, will likely reach maximum development capacity during the 1990's at which time minimal additional growth is expected.

Three active tidal passes provide access for boaters and marine species between Gulf and bay waters in the County. New Pass separates south Longboat Key from Lido Key which is separated from north Siesta Key by Big Sarasota Pass. Venice Inlet separates south Casey Key from Manasota Key.

Beaches and Dunes

Sarasota County beaches are generally narrow, although the public beaches on Lido Key have been widened by artificial beach renourishment. As a recreational amenity, the beaches are vital to the County's economic base. Recreational and visual access to the beaches and waters of the Gulf of Mexico are major factors in attracting tourists and residents to Sarasota County.

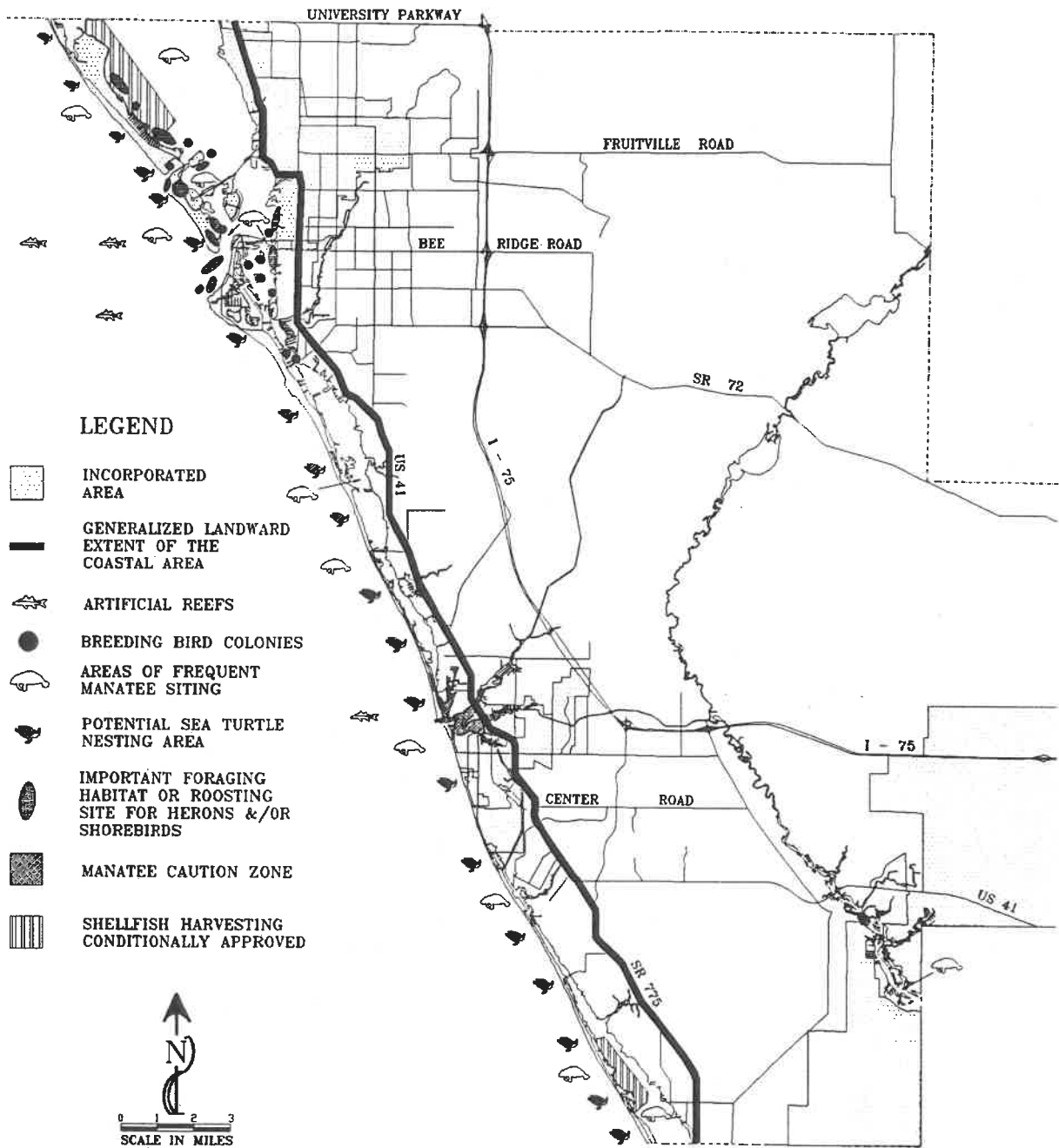


Figure 6: Coastal Area Marine Resources

Source: Sarasota County Department of Natural Resources, 1988; Florida Department of Natural Resources; 1987; Beeler and O'Shea, 1988.

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CONCERN 5

The County's coastal resources are essential to the tourism and retirement focus of the local economy. Any adverse effects upon the resources could have a detrimental impact on the area's economic base.

The interrelationships of the various local economic sectors are addressed in the Economy Chapter, specifically the concentration of the economic base in the coastal area.

The County's white, sandy beaches also protect upland property against flooding and storm damage and contribute to wildlife habitat. The gently sloping form of a natural beach dissipates wave energy; the vegetated areas behind the high energy beach act as an additional buffer and a repository for drifting sands.(19) Numerous species, including the endangered loggerhead sea turtle, several threatened wading bird species, and the snowy plover, use the sandy beaches and dunes for nesting and feeding.

Natural beaches are dynamic systems that erode and accrete in response to wave action, wind, currents, sea level rise, and periodic storms. The amount and location of erosion is a result of:

- the size of the waves;
- the rate of sea level rise;
- the amount and type of sand; and
- the shape of the beach.(20)

This complexity makes shoreline changes difficult to predict. Yet the dynamics of an active beach and man's response to these forces potentially impact development along the entire coast.

The visible sandy shore is only a small part of the total beach system; in reality, the beach is a large and dynamic system most of which is underwater. The offshore portion is the zone of active sand movement...The degree of sand movement is related to the size of the waves striking the beach and the steepness of the underwater section of the beach. What happens on the part of the beach we see depends in large measure upon processes

that go on in the offshore portion that we cannot see and that we do not normally think of as part of the beach.(21)

Often, when private structures and public infrastructure are threatened by erosion, shorelines are stabilized. A 1983 study of beach conditions in Manatee and Sarasota Counties reported that approximately 40 percent (13.1 miles) of the Gulf beach shoreline in Sarasota County was stabilized with either seawalls, revetment, or groins.(22) Between 1983 and 1987 an additional 578 feet were hardened in unincorporated Sarasota County and the City of Venice (see Table 4). County Ordinance 79-03 as amended, has served to restrict development including shoreline hardening seaward of the Coastal Construction Control Line (CCCL) and Barrier Island Pass 20 Year Hazard Line.

Structural alterations to the Gulf shoreline interfere with offshore coastal processes and accentuate shoreline erosion. Seawalls, revetments, groins, and jetties can interrupt the littoral movement of sands and cause erosion on adjacent properties. Seawalls interfere with the formation of sandbars and cause the beach profile to steepen. Groins and jetties block littoral drift and cause sand to accumulate on beaches upcurrent of the structure. In both cases, erosion occurs on the downdrift properties.(23) When erosion threatens their property, downdrift property owners often respond to increased erosion by hardening the shoreline.

Table 4: Gulf Shore Stabilization

Location	Stabilized Shoreline		Natural Beach		Natural Rock Outcrop	
	Miles	%	Miles	%	Miles	%
Longboat Key*	2.8	53.6	2.4	44.6	.04	.8
Lido Key*	.9	39.7	1.4	60.3		
Siesta Key	2.5	40.8	3.3	52.2	.37	5.9
Casey Key	2.9	41.7	4.0	58.3		
Venice Headland	2.4	58.1	1.4	34.2	.30	7.6
Caspersen Beach	0.3	7.1	3.4	92.9		
North Manasota Key	1.4	26.7	3.7	73.2		
Sarasota County	13.1	39.0	19.6	58.0	.73	2.0

*1983 data only

Source: Grover Champion, "Beach Conditions in Manatee and Sarasota Counties, FL.", January 1983; Sarasota County Planning Department, 1988.

CONCERN 6

Shoreline stabilization has several negative effects, not the least of which is the loss of valuable public beach. Man-made structures built too close to the sea interfere with natural coastal processes; shoreline stabilization can cause erosion on downdrift properties and, thus, further shoreline hardening. In many cases, the beach in front of seawalls and revetments has disappeared or is disappearing. Structural shoreline stabilization is detrimental to the shoreline, to the community, and to the long-range best interests of the development itself.

Although erosion has been caused by many human and natural events or activities, recent studies predict a sea level that is 2-3 inches greater than present by the year 2000, and 7-9 inches above present by the year 2025.(24)

If we assume that no new sediment is supplied to the barrier systems, a 2 inch rise should result in a coastal retreat of 60-150 feet. The actual amount of retreat depends on the gradient of the coastal plain, with rapid retreat on flat coastal plains and slower retreat on steeper coastal plains. Considering that most shoreline structures have less than

100 feet of sand between their foundations and the water's edge, the significance of these predictions for the future cannot be overlooked in the present. Several areas of public policy and planning must acknowledge an increasing rate of sea level rise.

Inlets

Tidal inlets, or passes, can be classified within the extremes of "tide-dominated" or "wave-dominated". Tide-dominated inlets have a large tidal prism (total amount of water that flows into the bay with movement of the tide) in relation to the longshore transport (material transported by currents that run along the shore). Wave-dominated inlets have a small tidal prism in relation to the longshore transport. A continuum of various relationships exist between these two types and are known as "mixed-energy" inlets.

Big Sarasota Pass is classified as a mixed energy, offset pass.(25) This type of pass is characterized by one shoreline being distinctly offset from the other. This particular configuration is the result of the migration onshore of swash bars. The swash bars often form discernible sand ridges upland as the downdrift side of the pass continues to accrete by the addition of more offshore bars. The migration of these bars is driven by wave refraction around the ebb tidal shoal.

The migration of tidal passes can also negatively impact adjacent shorelines. For example, by 1953, the main channel of Big Sarasota Pass migrated to the south enough to cause the south bank of the pass, Sarasota Point on Siesta Key, to erode 1,000 feet. At present, most of this section of the shoreline is artificially stabilized. In 1987, the Florida Department of Natural Resources (FDNR) considered but rejected Sarasota County's proposal that Sarasota Point receive federal and state funds for beach renourishment.

New Pass is classified as being a mixed-energy, straight pass.(26) This type of pass is often characterized by an arcuate (arc-shaped) ebb tidal delta and migrating swash bars downdrift of the pass.

Midnight Pass closed inadvertently in 1983 during an attempt to divert the northerly migration of the pass which was threatening houses situated along the south end of Siesta Key.

The Pass was a mixed-energy pass that evolved into a wave- dominated pass. A combination of dredging and filling projects from 1920 to 1983 reduced tidal flow through the pass resulting in a change in its stability. The reduced flow allowed sediment to accumulate into the inlet. The pass became increasingly unstable and, in 1983, the pass migrated north, threatening private property on the south end of Siesta Key. As stated previously, the pass was artificially closed in November, 1983. Several attempts to reopen the pass have proven inadequate and have failed. In March, 1988, permits for reopening Midnight Pass were submitted to the appropriate state and federal agencies.

The gradual closure of Midnight Pass has resulted in the slow reduction of tidal flushing in the immediate area of the former inlet channel. One of the effects of the reduction in tidal flow and mixing has been a metamorphosis in the character of Little Sarasota Bay from a more saline environment to a more brackish water environment. The metamorphosis has been accompanied by corresponding changes in the floral and faunal communities.

The closure of Midnight Pass also led to changes in the adjacent beach shorelines. The shoreline north of Midnight Pass has eroded and some accretion has occurred at north Casey Key.

Venice Inlet was stabilized by jetties in 1937-1938. Since installation of the jetties, the area downdrift of the inlet has experience moderate to severe erosion. In 1987, Congress authorized a beach renourishment project for the downdrift area because of erosion caused by the Venice jetties.

Erosion and Accretion Trends

The shoreline dynamics along Sarasota County's Gulf Coast have contributed to a mixture of erosion and accretion. In some locations, these forces have balanced over time. Other locations, such as areas adjacent to unprotected inlets, are especially prone to significant changes in shoreline morphology. Of prime importance in the study of shoreline dynamics is the identification of the areas that have exhibited an overall erosion trend.

County Ordinance No. 86-24 amended Ordinance No. 79-03 to further the restrictions on development seaward of the Coastal Construction Control Line (CCCL) and includes regulations which control development along the passes in the County. The objective of the ordinance is to protect the unincorporated coastal areas which are directly exposed to the Gulf and those areas along the barrier island passes from erosion and flooding through the establishment of a Gulf Beach Setback Line and a Barrier Island Pass 20 Year Hazard Line for construction and excavation.

The following discussion identifies the erosion and accretion trends that have been observed. This discussion is based on information gathered from the Florida Department of Natural Resource's (FDNR), Sarasota County Beach Restoration Management Plan and from the County's emergency permits.

LONGBOAT KEY

All of Longboat Key is within the Town of Longboat which is situated in both Sarasota and Manatee Counties. In Sarasota County, Longboat Key is intensively developed on the gulfside, with bayside residential finger canals along the southern portion. While the northern area of Longboat Key has experienced accretion, the central and southern sections have demonstrated significant erosion.

Historically, the southern portion of the Key, the portion within Sarasota County, has experienced erosion at twice the rate of the central part. Since 1964, when the Army Corps of Engineers (COE) first dredged New Pass, portions of the southern part of the Key have eroded at a rate of approximately five feet per year. FDNR identified a 6.5 mile section of southern Longboat Key (3 miles in Sarasota County) as a potential beach renourishment project. The Longboat Key project, however, failed to gain the state's support due to lack of adequate public beach access. The Town of Longboat is considering a special taxing district to raise funds for renourishing the southern shoreline of the key.

LIDO KEY

Lido Key is located in the City of Sarasota. The key was formed in the 1920's, when the open water between several small mangrove islands was filled with spoil from the New Pass dredging project. Lido Key has substantial residential development on the bay. Commercial development has taken place at St. Armand's Circle and along the Gulf south of the circle.

Between 1939 and 1953, approximately 750 feet of shoreline accreted on North Lido Key; over 200 feet accreted on the southern end of the Key. During the same time period, the central section eroded approximately 200 feet. North Lido Key remained stable until 1966, two years after New Pass was dredged by the Corps of Engineers (COE). Between May 1982 and April 1983, approximately 200 feet of erosion occurred on North Lido. In 1985, the COE redredged the pass in an attempt to reduce the trend. Later, in 1986, a

seawall was constructed by residents of Lido Shores along the south side of the pass which resulted in some loss of public beach.

SIESTA KEY

The majority of Siesta Key is in the unincorporated portion of Sarasota County. It is the most densely developed barrier island in the County, and has commercial, residential, and tourist development on both bay and gulf shores. There are two large public beaches and several beach access points on the island.

Like all dynamic barrier islands, Siesta Key has experienced erosion. As mentioned in the Tidal Inlets section, Sarasota Point is subject to severe erosion. In the past, tropical storms and hurricanes have heavily impacted the area. Portions of Beach Road on Siesta Key washed out during the 1982 "No-Name Storm" and again in 1986. Subsequent to the 1986 storm, a section of Beach Road west of Ocean Boulevard was left as one lane.

From 1883 to 1967, the area immediately north of Siesta Key Public Beach accreted approximately 600 feet; the shoreline along Point of Rocks, naturally revetted by coquina rocks, has remained relatively stable. Historically, the south end of Siesta Key fluctuated as much as 1,500 feet north and south in response to the migration of Midnight Pass. Since Midnight Pass was closed in 1983, and south Siesta Key was connected to North Casey Key, the Gulf shoreline profile has straightened.

CASEY KEY

Casey Key is long and narrow with low density residential development. There are a few small motels near the southern end of the key. Between 1883 and 1953, the shoreline at the north end of Casey Key receded approximately 274 feet. This erosional trend continued until 1974 when Midnight Pass began to migrate northward.

FDNR identified but rejected a 2.65 mile section on north Casey Key as a potential beach renourishment project. All but the southern 1,200 feet of this section are artificially stabilized. Along this 2.65 mile section, portions of Casey Key Road, two

sections north of Blackburn Point Road and one south of Blackburn Point, have repeatedly washed out during storm events. All three portions of the road require regular maintenance; even after minor rain storms, the County places fill on these portions of Casey Key Road. These road sections are maintained for public health and safety. In the event of a major storm, Blackburn Point Road is the only exit for the north Casey Key residents. South Key residents can leave the key from both Blackburn Point Road and Albee Road. The beaches on south Casey Key, immediately north of Venice Inlet, have benefited from the North Jetty which acts as a barrier to drifting sands.

VENICE

North of Red Lake in Venice, the beaches are part of the mainland. High rise condominiums and hotels have been constructed along the Tarpon Center Drive and Esplanade portion of the shoreline. From 1883 to 1953, Venice's coastal shoreline retreated approximately 175 feet, although the shoreline along a rock outcrop in the central portion remained relatively stable.

Venice beach erosion is particularly severe just south of the inlet. Coastal erosion in the Tarpon Center Drive and Esplanade area is attributed to the North Jetty which acts as a barrier to the southward drifting littoral sands. In the past, spoil from periodic Intracoastal Waterway dredging was placed along the beaches south of the inlet to mitigate erosion.

FDNR identified and is supporting a beach renourishment project along a 3.3 mile section south of the Venice jetties and north of Caspersen Beach. The majority of the developed portions of this section, which consist of multi-family and mixed residential structures, are artificially hardened with either seawalls or revetments. Widening the beach will protect these developments and extend the area of public beach access. The project will also provide some protection to the City of Venice Sewage Treatment Plant which will benefit from the placement of beach fill.

MANASOTA KEY

Technically, Manasota Key is a peninsula which begins just south of Red Lake. The key is narrow with residential development on both gulf and bay sides.

Manasota Key is split between Sarasota and Charlotte Counties. The following discussion will refer only to that portion in Sarasota County. Between 1883 and 1939, gains and losses from erosion and accretion were fairly well balanced. From 1939 to 1953, however, erosion predominated. South of Manasota Key Beach Road, general erosion and storm damage have impacted shore protection structures and undermined private residences.

A portion of Manasota Key Road along the County-owned Blind Pass Park washed out during both the "No-Name" Storm and Hurricane Elena. While road washout presents a major problem in terms of the financial expense, a road washout at this point is not a threat to public health and safety. Residents north of Blind Pass Park can leave the island from Manasota Beach Road. Residents south of the park can exit through Charlotte County.

FDNR identified a potential beach renourishment project along a 1.05 mile section of the key just north of Blind Pass Park. Approval of this project is pending until more information is gained regarding sand source.

Analysis

Protection of the County's remaining natural beaches and dunes is essential to public beach access and wildlife. There are several ways to protect these resources in the face of current erosion patterns: 1) landward relocation of structures which allows the beach to migrate and erode naturally; 2) structural or passive restoration of the beaches and dunes; or 3) a combination of these two methods. Whichever form it takes, protection of the County's beaches will be expensive.

Depending on the cause and severity of erosion, a variety of mitigation measures might be pursued. Threatened structures can be relocated, shoreline protection structures removed, and the

beach/dune system revegetated. Another alternative is to directly nourish the beach with compatible sand. Such renourishment is not a permanent solution and must be performed periodically. Shoreline stabilization with hardened structures such as a vertical seawall or revetment should only be attempted as a last resort.

In the previous section, roads subject to repeated storm damage were identified at five areas in unincorporated Sarasota County: one segment of Beach Road west of Ocean Boulevard; three segments on Casey Key Road, two north and one south of Blackburn Point Road; and one segment of Manasota Key Road at Blind Pass Beach. The potential for relocating the road segments on Siesta and Casey Keys is limited due to existing residential development. In both cases, alternative action has been taken to reduce the public cost of rebuilding the damaged road segments. The segment of Beach Road has officially been reduced to one lane for northbound traffic only. Presently, the County maintains the road surface, but has no plans to reconstruct the roadbase. In 1988, north Casey Key residents agreed to a special taxing district to provide needed improvements including shore protection structures.

The potential exists for relocating Manasota Key Road at Blind Pass. As noted in the "Blind Pass Beach General Development Plan", Manasota Beach Road, at Blind Pass Beach, "is in direct conflict with the processes of the beach ecosystem." A new road alignment through the County-owned property would have to work in concert with the natural features of the area: habitat; soils; and hydrology. The plan calls for turning Manasota Key Road landward towards the bay at the site's north and south boundaries, and constructing a new road on the stable soil that extends into the mangrove swamp on the north, across the lagoon on pilings, and onto Alexander Island to the south. This plan is conceptual only. The potential for relocating roads in areas with existing residential development is best addressed as part of a hurricane mitigation/post-disaster planning strategy discussed later in this Chapter.

Structural beach/dune restoration includes the construction of jetties, breakwaters, and piers designed to slow wave action so that sands transported by littoral currents are dropped in the erosion area. Such structural changes to the shoreline require site specific engineering and are not necessarily the best solution. In many cases, structural attempts to solve problems of beach erosion merely displace the problem to downdrift properties.(27)

Non-structural, passive, beach/dune restoration programs include dune revegetation and beach renourishment. Dune revegetation can be accomplished through natural revegetation and/or replanting. While there are a number of groins and jetties in Sarasota County, the County's current management guidelines discourage shoreline stabilization techniques that interrupt natural beach processes. Non-structural approaches to beach/dune restoration are preferred.

Both the County Parks and Recreation Department and the County Department of Natural Resources encourage dune protection and restoration. In County-owned beachfront parks, the Department of Parks and Recreation implements a dune restoration and protection program that includes revegetation and dune protection with beach walkovers and sand fences. Currently, a number of the projects involved in this ten year program, ending in 1989, have fallen under financial constraint. It is important that this program is renewed and that adequate funds to complete the planned projects be allocated.

The Department of Parks and Recreation's restoration program is not the County's only effort to protect and restore valuable dune systems. Ordinance 79-03 includes a beach cleaning and grooming permit requirement. In order to groom a beach front, property owners must obtain a permit from the County Department of Natural Resources. The Department has determined the historic dune vegetation line and beach grooming should be prohibited in this dune area. If dune vegetation has been destroyed, property owners should be required to revegetate the dune either through passive revegetation or replanting efforts. In many cases, structures have been built upon the historic

dune area. To re-establish the dune, relocation of private structures and public infrastructure might be pursued. Beach renourishment and dune creation is another solution.

Beach renourishment is another alternative measure to protect the County's beaches and dunes. In September 1987, FDNR sent a proposed Beach Restoration Management Plan for Sarasota County to the County Department of Natural Resources. This plan identified six specific areas in Sarasota County that have experienced severe coastal erosion. Of these six areas, State funding for beach renourishment has been approved in only one case: the Gulf shoreline south of the Venice Inlet.

The remaining areas did not meet State criteria for funding. The State recommended that the County consider alternative methods to mitigate the erosion problem at Sarasota Point Beach, South Siesta Key Beach, and Casey Key Beach.

Estuaries

"An estuarine ecosystem includes the coastal water basin, the adjacent shorelands and water flowing into the estuary. The estuary is a zone of transition between freshwater and saltwater systems and an important nursery for numerous marine animals. Historically, estuaries have fostered many important commercial and recreational activities such as ports, marinas, and commercial and recreational fisheries. Balancing the diverse environmental, economic, and social interests in estuarine areas is essential to coastal management."(28)

Bay and creek shorelines are important transitional areas between uplands and bay waters; they buffer estuaries from upland development and are the location of important tidal wetlands. Development activities in the bays and creeks (dredging and filling), along the shorelines (artificial stabilization), and in the uplands (sewage effluent and stormwater runoff) can negatively impact these resources.(29) The challenge of coastal management involves addressing the interrelationships of

the complex estuarine ecosystem so that development, including the development of recreational facilities, is consistent with bay protection.

The quality of water in the estuaries is a growing concern as development pressures increase. Because these waters naturally receive large amounts of organic matter, the biological competition for available oxygen to assimilate these nutrients often leads to depletion of dissolved oxygen. The introduction of urban and agriculture runoff, sewage effluent, and septic tank seepage, aggravates the competition for oxygen. "The pollutants resulting from agricultural activities include sediment, nutrients, pesticides, salt loads, organic loads, and pathogens."(30)

Basins

Sarasota County contains a portion of three regional drainage basins as identified by the FDER in their 1986 Technical Report on Water Quality Assessment. A fourth, Charlotte Harbor Basin, receives drainage from the Myakka River and estuarine influences from Lemon Bay. Included in these general basins are inland and bay waters which extend from Tampa Bay to Charlotte Harbor. These basins, including the Manatee River Basin, the Sarasota Bays Basin, the Myakka River Basin, and the Charlotte Harbor Basin, are shown on Figure 7.

The overall water quality in the three basins (as identified in the 1986 FDER Water Quality Assessment Report) is considered fair to good. In the Sarasota Bays Basin, however, Whitaker Bayou is considered to be in poor condition. The water quality in each basin will be dealt with individually in order to identify any problem areas based upon the results from the FDER Report and other regional and local studies. Further analysis within the section will focus on the sources of pollution within the bays and streams of Sarasota County.

MANATEE RIVER BASIN

The portion of the Manatee River Basin that is contained within Sarasota County is the southern extreme of the Braden River Watershed. Cooper Creek, which is one of the primary tributaries of the Braden River and Evers Reservoir (the City of

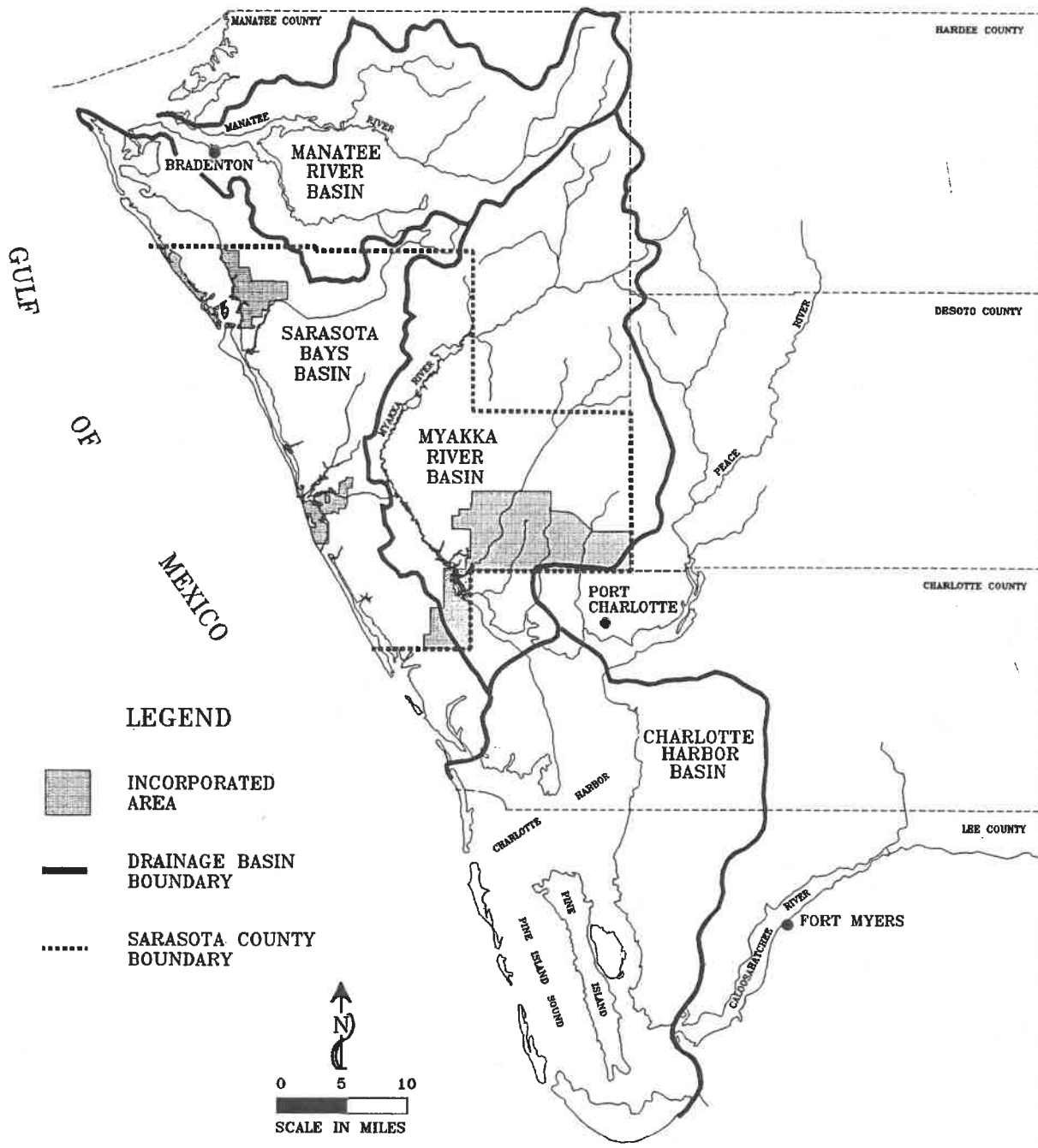


Figure 7: Regional Drainage Basins

Source: Florida Department of Environmental Regulation, 1986; Southwest Florida Water Management District, 1985.

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Bradenton's potable water supply), has its headwaters in Sarasota County. Cooper Creek originates in Long Swamp and is ditched from I-75 until it reaches Manatee County. Existing land use designations under the 1981 Apoxsee are Semi-Rural and Rural for the Sarasota County portion of the watershed. This updated Plan contains Major Employment Center (MEC) designated acreage on the southwest and southeast quadrants of the I-75/University Parkway Interchange. Areas adjacent to these quadrants are designated Urban and Rural, respectively. According to the FDER Technical Report and Tampa Bay Regional Planning Council's study in 1986, the current water quality of the Braden River is generally good and consistent with its designated uses. However, the widespread nutrient and coliform loading from agricultural runoff in the watershed poses a major threat. Future land use development, particularly in the University Parkway/I-75 area of the County, will require specific recognition of this area's sensitivity and the potential negative impacts of stormwater runoff on surface and groundwater quality in this watershed.

CHARLOTTE HARBOR BASIN

According to the Charlotte Harbor Management Plan, the Charlotte Harbor area is a series of distinct, but related bays and estuaries including Lemon Bay, Charlotte Harbor, Pine Island Sound, Matlacha Pass, San Carlos Bay and Estero Bay. Together they form the largest estuarine system in the state.

Since Sarasota County is a member of the tri-county Charlotte Harbor Resource and Management Committee, which approved the Management Plan for the Harbor in 1981, pertinent environmental considerations in the plan have been incorporated into the updated Chapters of Apoxsee. The goal, objectives, and programs of the Management Plan have been listed in Appendix B, Section 1.

Water quality in the estuary is generally good, however, one problem in Charlotte Harbor stems from exceptionally high concentrations of phosphorus originating from phosphate mining activities in the upper Peace River basin.(31) The greatest direct threats to the waters of the Harbor

area are inadequately treated and improperly disposed domestic wastes, in addition to the accidental release of phosphate sludge. As the population of the area rapidly increases, the need for effective waste treatment increases correspondingly. Increases in non-point and point source pollution problems are likely in the future as additional acreage are converted from agricultural to urban land uses. This will result in the need for a coordinated stormwater management plan in order to maintain and improve estuarine water quality.

MYAKKA RIVER BASIN

The Myakka River system is an extremely valuable resource for the County in terms of its natural beauty/recreational significance, vegetation and wildlife habitat area, possible source of potable water, and natural purification system for surface water and groundwater.

The Myakka River is roughly 54 miles long and drains 540 square miles before entering Charlotte Harbor. The River's headwaters are located to the northeast in the nearby swamps of Manatee and Hardee Counties. The City of North Port is located adjacent to the River on the east, while the City of Sarasota is situated just west of the drainage basin. Ranching and agriculture are the major land uses in this relatively undeveloped basin. According to the FDER, the majority of the basin has good water quality which supports productive freshwater and estuarine habitats. Approximately 20 miles of the southern reaches of the River are influenced by tidal flows, as evidenced by the abundance of mangrove swamps and islands. The Myakka River Basin contains the only Class I surface waters designated in the County.

Big Slough, a major tributary of the Myakka River which is also designated Class I, is currently being utilized as a source of potable water by the City of North Port. Nutrient loading from nearby agricultural operations into the Big Slough, in addition to increased urban development in the area of North Port, have contributed to higher volumes of stormwater runoff and have impacted water quality.

DER considers the Myakka River and Lower Myakka Lake to be in generally good condition while the Upper Myakka Lake is considered to be in poor condition. Dense hydrilla and hyacinth growth in the upper lake area have caused depressed levels of dissolved oxygen (DO). The report has indicated increased nutrient levels within the river itself over the past four years.

SARASOTA BAYS BASIN

There are nine embayments in the Sarasota Bays Basin: Sarasota Bay, Roberts Bay, Little Sarasota Bay, Dryman Bay, Blackburn Bay, Lyons Bay, Dona Bay, Roberts Bay (South), and Lemon Bay. Small creeks enter these estuaries and form independent sub-basins. Rapid urban development in the North County area has increased stormwater runoff from non-point sources of pollution which has lowered the DO levels within a number of these sub-basins. According to the FDER, the water quality of surface drainage from the adjacent coastal basins is considered fair, although in some cases it is poor. Agricultural drainage within the basin occurs primarily from citrus groves located west of I-75, and from rangelands situated at the headwaters of Phillippi Creek and Cow Pen Slough. (32) The Dona/Roberts Bay estuarine area has received sediment loading from the upland Cow Pen Slough watershed which has caused a reduction in freshwater and estuarine plants and fish.

The assessment report has indicated that the majority of bay waters and creeks in this basin are in fair to good condition with the exception of Whitaker Bayou which is in poor condition. The City of Sarasota sewage treatment plant (STP), which discharges into Whitaker Bayou, is a major point source of pollution in this basin. This has helped generate conditions which have resulted in the nutrient, DO and coliform problems. (33) Table 5 identifies point source discharges in the basin.

Bayfront Development Trends

There are six bay groupings in Sarasota County: Sarasota Bay; Roberts Bay; Little Sarasota Bay; Dryman/Blackburn Bays; Lyons, Dona, and Roberts Bay; and Lemon Bay (See Figure 8). For

Table 5: Point Source Discharges

<u>Sewage Treatment Plant</u>	<u>Receiving Water</u>
City of Venice, Venice	Red Lake
Sorrento Utilities, Nokomis	South Creek
Siesta Key Utilities Authority, Sarasota	Grand Canal
Florida Cities Water Co. Gulf Gate, Sarasota	Matheny Creek
Florida Cities Water Co. South Gate, Sarasota	Phillippi Creek
Dolomite Utilities, Sarasota	Whitaker Bayou

Source: 1986 Florida Water Quality Assessment 305(b) Technical Report, Bureau of Water Quality Management, Division of Environmental Programs, June 1986.

the purposes of the following discussion, Dryman/Blackburn and Lyons/Dona/Roberts Bays will be grouped together.

Bayfront development in Sarasota County is predominantly residential which varies according to the following densities established for the existing land use cover map: low (less than 2 dwelling units per acre), medium (2-5 dwelling units per acre), and moderate densities (6 or more dwelling units per acre) occur around the bays on both the barrier islands and the mainland. The majority of this development occurred between 1948 and 1978, although Sarasota Bay had already experienced significant development prior to 1948.

According to a February, 1988 update of the County bay shoreline survey, bayfront development has involved considerable shoreline and bay modification. By 1978, approximately 60 miles of bay shoreline were added through dredge and fill projects. Since 1978, there has been a net increase

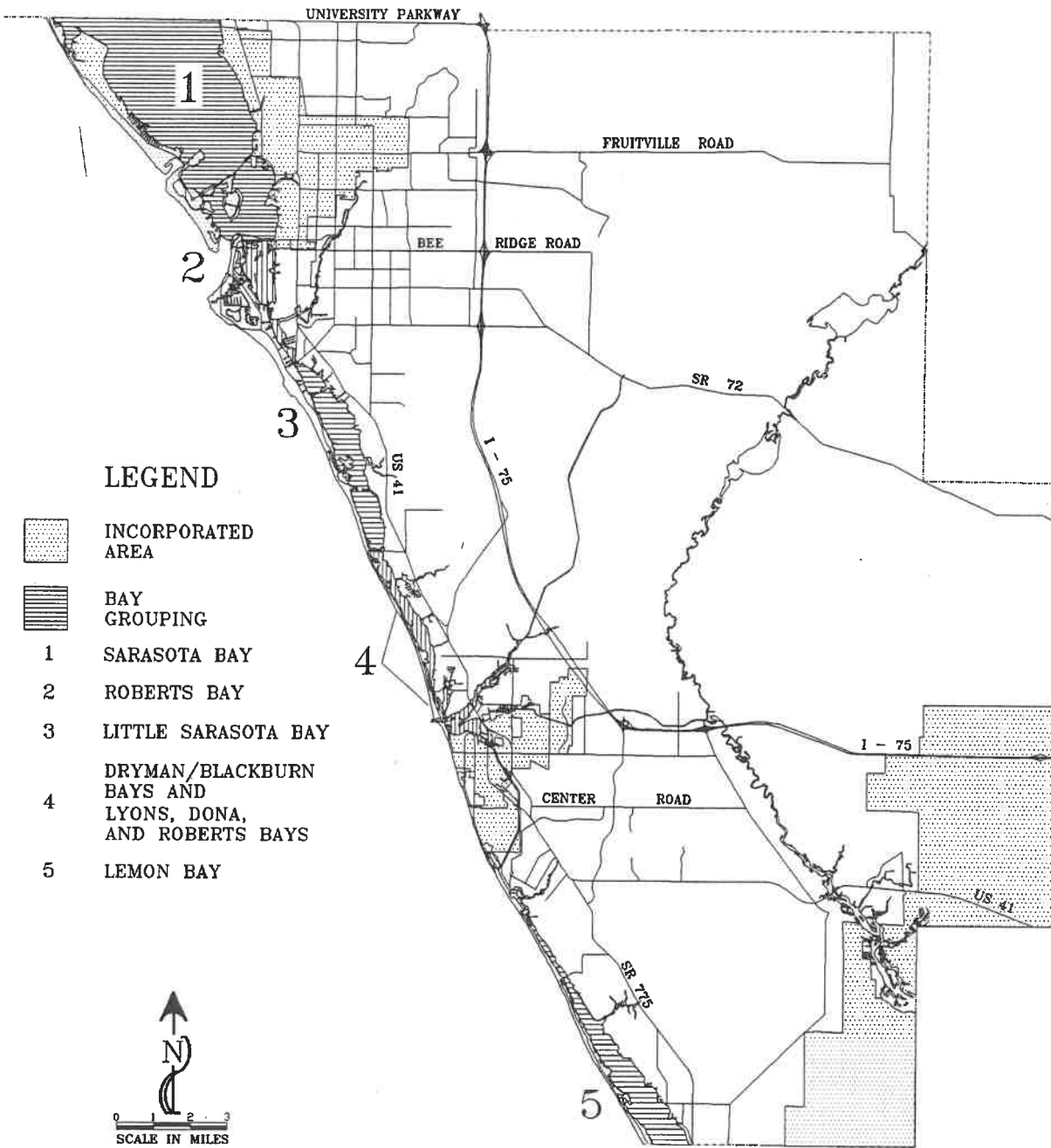


Figure 8: Designated Bay Groupings In Sarasota County

Source: Sarasota County Planning Department, 1988.

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of 2.7 miles. The decrease in the rate of shoreline creation is primarily due to the effectiveness of County and state regulations governing dredge and fill activities. As of 1988, 53 percent of the County's bay shorelines are artificially stabilized with bulkheads (vertical seawalls and retaining walls) or revetment (rip-rap). While the amount of stabilized shoreline increased 5 percent between 1978 and 1987, the overall rate of shoreline stabilization has decreased since 1978.

In 1948, 86 percent or 125.7 miles of the County's bay shoreline was in a natural state, either as beach (38.5 miles) or vegetated with mangroves (87.2 miles). By 1978, the amount of beach had decreased to 33.8 miles and mangrove shorelines to 73.5 miles. Since then, mangrove shorelines have increased approximately 4 miles while an additional 9 miles of beach has been lost. Another representatively small, but important shoreline type is the marshgrass shoreline. This shoreline type has steadily decreased since 1948 with the most significant reduction from 7 miles to 4.2 miles between 1978 and 1987.

The Sarasota County portion of Sarasota Bay has medium to moderate density residential development on both the mainland and the barrier islands. There are very few parcels of undeveloped land and property in native habitat is rare. Approximately 67 percent or 43.4 miles of Sarasota Bay's shoreline was artificially stabilized in 1987 which represents a 9 percent increase from 1978. This same time period indicates a 5 mile reduction in beach (from 13.2 to 8.2) as well as relatively stable mileage of mangrove shoreline.

Roberts Bay has medium to moderate density residential development on the barrier island side and medium density residential development on the mainland. Moderate density development is also located on both sides of Phillippi Creek. Very few properties along the bay remain in native habitat. In 1987, there was 48 percent or roughly 20 miles of bay shoreline that was artificially stabilized which represents a 4 percent increase from 1978. Despite the high degree of development which has taken place during this time period, 44

percent or 18 miles of shoreline remains as mangrove vegetation with another 3.8 miles as beach.

Little Sarasota Bay has low to medium density residential development on both the barrier island and the mainland shoreline. Moderate density development is situated along the bay adjacent to the Turtle Beach area. By 1987, an estimated 45 percent or 13.4 miles of Little Sarasota Bay was mangrove shoreline while approximately 42 percent or 12.6 miles has been stabilized. The extent of primary beach shoreline decreased from 5.7 miles to 4.4 miles during this period.

The Dryman, Blackburn, Lyons, Dona, and Roberts Bay grouping includes bayfront lands which extend from the Laurel area on the north to Venice on the south. Dryman and Blackburn Bays have medium residential density along both barrier island and mainland shorelines. Low to medium residential density occurs along the shorelines of Lyons, Dona, and Roberts Bays, while moderate density development is located along the Gulf side from Venice Inlet south to Venice Avenue. After Sarasota Bay, this bay grouping has the greatest amount of shoreline stabilization at 60 percent or 26 miles. The amount of beach decreased by 1.7 miles between 1978 and 1987 while native shoreline vegetation increased by roughly 2 miles for a total of 16.2 miles.

Lemon Bay is the least developed bay in Sarasota County. The majority of development along the bay's shoreline is low density residential development with some medium density development in the Englewood area. Several large parcels remain in a variety of native habitats: coastal hammock on the barrier islands and coastal hammock, pine flatwoods, and scrub habitats on the mainland. Approximately 9 miles or 29 percent of the shoreline is hardened which represents a 3 percent increase since 1978. Beach shorelines have decreased by 1.7 miles during the same time period. An estimated 45 percent or 14.5 miles of the bay has a mangrove shoreline.

Substantial reductions in native shoreline occurred along the County's bays from 1948 to 1978, and indications over the past ten years show a

continuing trend, however at a much slower rate. Increased shoreline hardening and the subsequent loss of native vegetation has resulted in increased turbidity affecting seagrass production and limiting recreational access and use.

CONCERN 7

The trend toward shoreline hardening and loss of native vegetation will continue as a major issue which needs to be addressed through an overall bay management plan.

A Bay Management Plan could provide strategies for habitat preservation and restoration including the creation of a funding mechanism for the restoration and/or acquisition of wetland and upland habitats; the integration of stormwater management and wetland management/restoration programs; and the adoption of specific goals for habitat restoration. Information regarding the historic and predicted sea level rise and projected shoreline changes should also be considered in the development of a Bay Management Plan and in the adoption of management guidelines. Issues concerning public access to the County's bays and waterways will be discussed in the Water-Dependent/Water-Related Uses section of this Chapter.

Point and Non-Point Sources of Pollution

The identification of non-point pollution sources is far more difficult than determining point discharges since numerous factors are involved. The amount of runoff, patterns and types of land uses, types of street debris, time period since the last rain, amount of street cleaning, and other factors all influence the quality of stormwater runoff.

It is possible that the North County, with its larger proportion of urban land uses, will generate increasing amounts of stormwater pollutant runoff in comparison to the South County where the rural to urban transition is occurring more slowly. Large

basins which receive high nutrient loading from agricultural operations can also have detrimental impacts on the water quality of estuaries.

"An example of this can be found in the receiving waters of Shakett Creek/Dona Bay in the Cow Pen Slough watershed. A reduction in the rate, amount, and duration of impact of fresh water, freshwater weeds, suspended solids and sediment entering the estuary will also minimize the extremes in chemical and physical conditions present in the estuary." (34)

The Sarasota County Environmental Services Laboratory has been monitoring ambient water quality since 1978. The purpose of the monitoring program is to locate sites of environmental stress in the County which may indicate potential or present problems. This goal is accomplished through a monthly surveillance of waterways and drainage basins. Water quality monitoring stations have been established to provide data and documentation for use in water quality trends.

The forty-two Bay Run Stations are sampled for various parameters including water temperature, pH, conductivity, dissolved oxygen, turbidity, true color, transparency, salinity, and total and fecal coliform bacteria. The forty-two Stream Run Stations are sampled for water temperature, pH, conductivity, dissolved oxygen, turbidity, true color and salinity, total and fecal coliform, and fecal streptococcus bacteria. Quarterly, these Bay Run and Stream Stations are analyzed for nutrient parameters, including nitrate, nitrite, nitrate + nitrite, ammonia, total Kjeldahl Nitrogen (TKN), orthophosphate and total phosphorus. (35)

A Countywide non-point source pollution assessment was completed in February, 1988 by the Pollution Control Division of the County Department of Natural Resources. The quantitative assessments are based primarily on the data generated by the monitoring program from 1980 to 1987; qualitative assessments or "professional judgement" decisions were also applied from personal knowledge of the waterbodies and non-point pollution sources. The impairment ratings which were established ranged from "threatened" to "severe" with the majority of creeks and bays

receiving a "moderate" assessment. Figure 9 identifies the surface water quality of the County's waterways and bays according to these ratings. Additional information pertaining to Surface Water Quality data can be found in Appendix B, Section 2.

Whitaker Bayou, Hudson Bayou, Matheny Creek, and Clowers Creek have received "severe" ratings over the time period. Impairment ratings may increase in the future at Phillippi Creek, Hatchett Creek, Alligator Creek, and Forked Creek. Impairment rating definitions and specific information regarding pollutant monitoring and non-point assessment evaluations for drainage basins in the County have been outlined in Appendix B, Section 2. The need to perform trend analysis on the data collected from this monitoring program has been identified in a policy later in this Chapter.

The extent of urban development in the Sarasota Bay basin directly impacts the overall volume of stormwater runoff which drains into estuarine waters. Nonpoint source pollution in the basin can be attributed to agricultural and urban stormwater runoff and to the impacts of septic tank seepage into adjacent creeks and streams. The County's Environmental Laboratory has indicated that a number of small sewage treatment plants (STP's) have also been operating ineffectively. These discharges contribute to overall bay degradation. Nutrient loading into the bay systems is a likely factor causing the reduction of seagrass beds in Sarasota Bay. Higher algae concentrations and turbidity cause reductions in transparency limiting plant growth.

CONCERN 8

The key contributors to the degradation of bay water quality are stormwater runoff and sewage treatment effluent. Shoreline stabilization and dredging also negatively impact these waters.

Whitaker Bayou has been identified as a degraded waterbody that receives treated wastewater effluent from the City. Even though the Sarasota STP

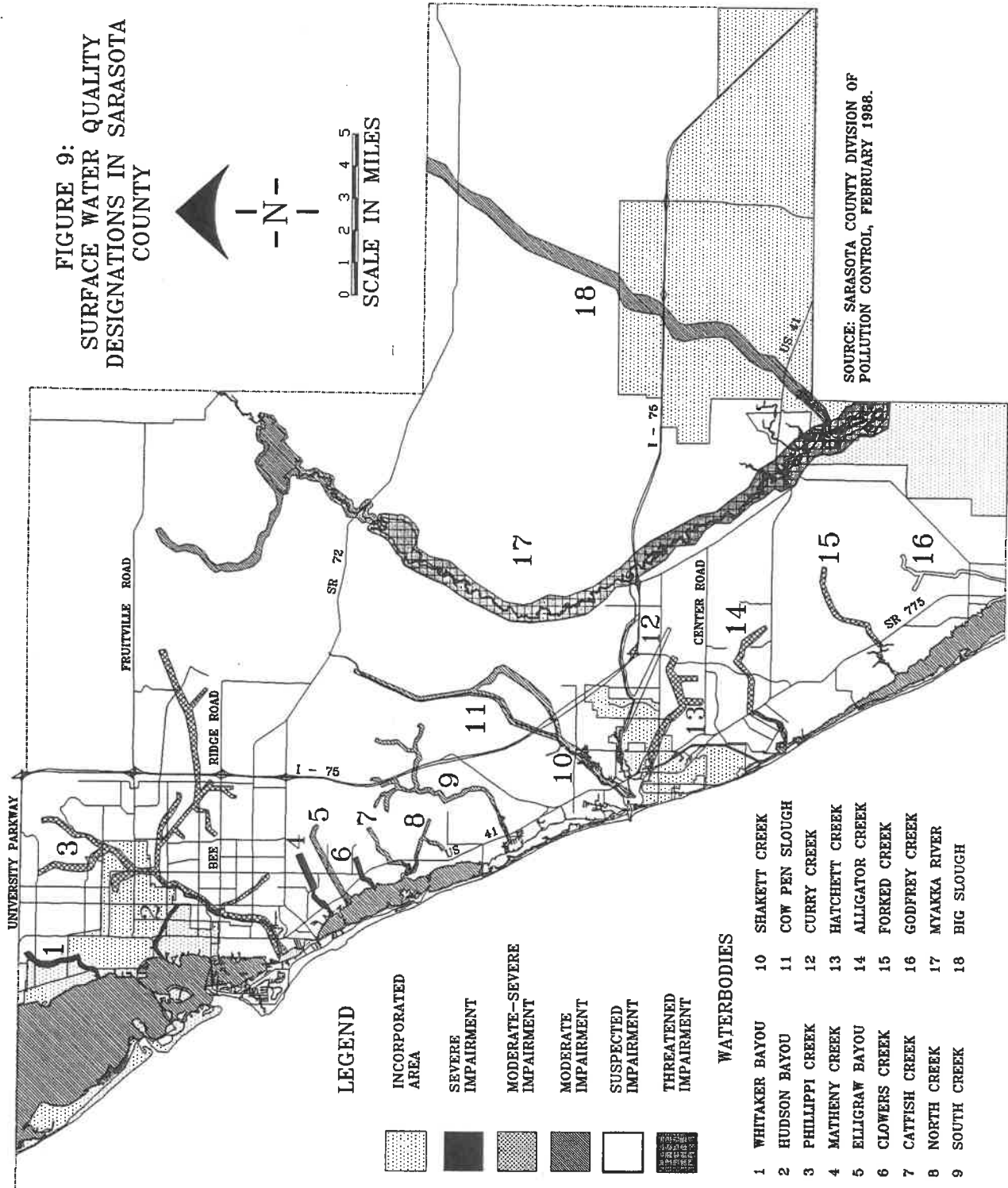
discharges contribute to the poor water quality, the bayou would not attain its designation because of the widespread non-point sources within the sub-basin. This has caused a worsening trend in the water quality within a 1,500 foot zone of influence in Sarasota Bay. Also, the portion of the bayou "area drained within Sarasota County is highly urbanized. Many of the area's developments occurred some time ago, and thus provided for only minimal stormwater retention and detention."(36) Remedial actions which address the water quality problems in this sub-basin will require a multi-jurisdictional approach since the drainage basin crosses three political boundaries. Lands which are now vacant in the Manatee County portion of the basin presently have commercial/industrial zoning which could impact the water quality in the future if developed in these uses.

Impacts of Proposed Land Use and Facilities on Estuaries

Present urban development in the County occurs primarily along the Gulf coast with the heaviest concentrations around the Cities of Sarasota, and Venice, and in the Englewood area. To the east, Interstate 75 marks the furthest extent of significant urban land use with the exception of scattered pockets of residential subdivision development. There have been no specific sites identified in the unincorporated County's coastal area which are in need of redevelopment.

Thousands of residential dwelling units have currently been approved in the County through the Development of Regional Impact (DRI) process. This represents substantial land use conversions which require the developer, as part of the DRI process, to "describe in terms of appropriate water quality parameters the existing ground and surface water quality conditions on and abutting the site which will be influenced by this development."(37) Developments with long-term buildout will require careful monitoring of the impacts on water quality and estuarine conditions. Englewood is one of the few remaining coastal areas of the County with vacant, unplatted land. The impacts of development on the sensitive estuarine waters of Lemon Bay and Charlotte Harbor can be significant. Since the homes in the area currently use

**FIGURE 9:
SURFACE WATER QUALITY
DESIGNATIONS IN SARASOTA
COUNTY**



septic tanks, a centralized sewerage system and stormwater management plan will be required to control domestic wastes and urban runoff in the future. Without this plan, the only remaining shellfish harvesting grounds in the South County could be threatened. Historically, marinas have been considered point sources of pollution since they have generated water quality problems from petroleum spills, bottom deposits of heavy metals, and raw sewage discharge.

The need for an expansion of the urban designated area west of I-75 and east of US 41 between the Cities of Sarasota and Venice is discussed in the Future Land Use Chapter. The urban designation of this area is consistent with County efforts to provide centralized water and sewer services and roads in the future. Appropriate measures will be required to protect environmentally sensitive streams and estuarine areas from the negative impacts of stormwater runoff.

The need for additional boat docking facilities through the year 2010 has been identified in the "Water Dependent/Water Related" subsection of this Chapter. The potential impacts of these facilities can be significant to estuarine waters. The health of sensitive grass beds depend upon sunlight and nutrients for growth which in turn provide nursery grounds for an abundance of fresh and saltwater species of invertebrates and fish. Boating activities can cause water turbulence and cut trenches which disrupt the circulation patterns and further degrade the overall ecosystem.

Remedial Actions

Stormwater runoff and sewage treatment plant effluent are recognized as two of the leading factors inhibiting the improvement of estuarine water quality at present. However, a number of interrelated issues should be addressed in order that long term improvements can be realized. The ongoing effort in the County to study and implement a Master Drainage Plan and Stormwater Environmental Utility will improve water quality by identifying current deficiencies in the drainage and sewerage systems and help to manage stormwater quantities entering the urbanized coastal drainage basins.

Centralized wastewater treatment systems should provide additional relief to these basins and receiving bay waters once implemented. The addition of advanced treatment requirements for sewage facilities in the future should help to provide greater efficiency, cost savings, and lead to improvements in estuarine water quality. The use of natural wetland systems for the detention and recycling of treated stormwater runoff should be encouraged in order to help reduce the volume of direct upland flow into the basins. These improvements would lead to an increase in the salinity concentrations in the bay through increased circulation, and provide greater transparency for seagrass production. Refer to the Planning Studies and Efforts subsections contained in the Drainage and Sanitary Sewer sections of the Public Facilities Chapter for a more indepth discussion of these management plans.

The application of Best Management Practices (BMP's) can be effective in controlling non-point source pollution, especially from agricultural activities. The runoff from agricultural drainage systems could be routed in such a way as to provide natural filtration prior to discharge. Vegetative buffer strips between pasture and creeks will help to regulate direct runoff. Educational programs for farming interests would improve local perception and understanding of these practices and their effects on water management. (38)

The designation of Sarasota Bay, under the Environmental Protection Agency's (EPA) National Estuary Program in 1988, will help to provide the funds necessary to conduct an overall comprehensive management plan for the Bay which will extend over the next five years. Federal contributions to the study will be 75 percent of the approximate two million total cost over the period. Local governments adjacent to the bay are responsible for the balance of the cost. The Manasota Basin Board, a subunit of the SWFWMD, has budgeted \$66,667 in fiscal year 1989 to pay for half of the required local matching contribution. Similar contributions are expected to be made over the life of the program. The management plan may include the development of policies to protect bay waters from stormwater and agricultural runoff and treated sewage discharges. The

findings of the study will be instrumental in establishing directives to bay management that will serve to improve the estuarine ecosystem.

Regulatory Programs to Reduce Estuarine Pollution

The Florida Department of Environmental Regulation (FDER) is responsible for regulating dredging and filling in State waters. The FDER regulates discharges into waterbodies; establishes and implements the State water quality standards; sets minimum treatment requirements; issues permits; licenses operations of wastewater treatment plants; administers construction grants for sewage treatment plants; and regulates both discharges of stormwater and mangrove pruning.

The FDER and regional water management districts regulate the withdrawal, diversion, storage, and consumption of water with the water management districts having primary responsibility for most of the permitting and operations. In Sarasota County, the Southwest Florida Water Management District (SWFWMD) has this responsibility.

The Florida Department of Natural Resources (FDNR) is responsible for selling or leasing State-owned submerged lands which are judged to be in the public interest and which do not interfere with natural resources. The FDNR has responsibility for the prevention and control of pollutants spilled into coastal waters, estuaries, tidal flats, beaches, and lands adjoining the seacoasts. It is the chief land purchasing agent and land manager for environmentally sensitive property, essential for the maintenance of estuarine water quality.

The Department of Health and Rehabilitative Services regulates a mosquito control program which limits the type and amount of oil and chemicals used to control mosquitoes.

The regional water management district regulates the quantity and quality of stormwater discharges from certain new developments through the rules contained in Chapters 40D-4 and 40D-40, Florida Administrative Code.

In 1984, under the Warren Henderson Act, the water management districts were also assigned responsibility for regulating agricultural activities in wetlands. The land acquisition program at the regional level allows the districts to purchase environmentally sensitive lands in order to improve the water quality entering the estuary (example, Save Our Rivers (SOR) Program).

Both SWFWMD and the Florida Department of Community Affairs (DCA) have some control over the land use and development regulations in the County through the comprehensive plan review process and the Development of Regional Impact (DRI) process. Consistency requirements have been established for local and regional long range plan preparation, whereas the DRI program involves the review of the impacts of large developments on resources such as the designated Outstanding Florida Waters (OFW's) in the County.

The Soil and Water Conservation Districts control soil erosion through efforts which help to maintain estuarine water quality by reducing sediment runoff into waters effecting estuaries.

The County regulates a number of activities which impact estuarine water quality. It monitors ambient water quality, regulates stormwater and drainage through Land Development Regulations (LDR), controls the disposal of domestic solid waste, controls land use through zoning and comprehensive planning, and enforces site planning and subdivision requirements through the LDR. Sarasota County Ordinance 72-84, as amended, authorized the creation of the Water and Navigation Control Authority to oversee dredge and fill permits and to regulate and exercise control over the alteration of all water, water courses, waterways, inlets, bays, and bayous in Sarasota County. Dredge and fill activities are limited to maintenance dredging and new County approved navigation channels and beach renourishment projects. Also, all construction activities within 20 feet of the Mean High Water Line are reviewed by the County's Coastal Zone Division. Permits are required for shoreline alterations that regrade and/or revegetate shorelines, repair, replace, or build new shoreline structures including rock revetments and seawalls.

Water-Dependent/Water-Related Uses

Water-dependent uses represent those activities that require direct access and utilization of the County's Gulf, bays, and rivers. Swimming, fishing, and boating are the primary water-dependent activities. Water-dependant facilities include marinas, docks, piers, boatyards, boat ramps, waterfront parks including beaches and other direct access facilities, fish houses and commercial fishing establishments. Scenic vistas overlooking the County's waterways are also important considerations.

Water-related uses are associated with water-dependent uses and include accessory parking, related concessions, and resort development. The major water-dependent/water-related uses are shown on Figures 13 and 14 in the Recreation and Open Space Chapter and are listed in Appendix B, Section 3. Policies relating to the protection of fisheries are located in the Economy Plan.

Saltwater beach recreation is the most popular form of outdoor recreation in the State. In southwest Florida, more than fifty percent of the residents use the beach for recreational purposes.(39)

In November 1986, the County purchased (through a bond referendum) three additional public beach areas and two properties with the potential for Gulf beach access once developed. With the exception of the Palmer and Prodie sites, the remaining five acquired parcels are located in the south County. Figure 13 in the Recreation and Open Space Chapter identifies the location of beach access points. Currently, there are 31 public beach access points to almost seven and a half miles of public beach for saltwater bathing and recreation. The majority of beach access is provided in the north County from Longboat Key to Turtle Beach on Siesta Key. Approximately 70 percent, or 20 of the 28, total access points are situated north while a cluster exists in the south County at Venice.

Saltwater boatfishing is a popular recreational activity in southwest Florida. The Region has the highest per capita participation rate in the State for

this activity.(40) In Sarasota County, 15,542 boats were registered in 1987, and over 8 percent, twice the state average, were larger than 16 feet in length. Two municipal saltwater fishing piers are located in the County, Venice Pier and Sapprito Pier, as well as several publicly owned saltwater catwalks used for fishing. In addition, the County's many public beaches, waterfront parks, and recreation areas provide ample opportunity for shorefishing.

Twenty-three public and 3 private boat ramp lanes with public access, located at 13 different sites provide access to the Gulf and bay waters for saltwater fishing and boat recreation. Four of these are located in the City of Sarasota, one in Venice, and one in North Port. The remainder are scattered along the coast in the unincorporated County including two on the Myakka River.

Figure 14 in the Recreation and Open Space Chapter identifies the boat ramp and marina locations in the County. Marinas are situated throughout the County with 35 or 58 percent of the 60 total located in the unincorporated area. There are ten in the City of Sarasota, nine in Venice, and six on Longboat Key. According to a marina siting survey conducted by the Southwest Florida Regional Planning Council in 1984, the projected need for marina storage/docking spaces in the year 2010 is an additional 1,720 units in the County. Based upon current ratios, 1,170 spaces will be required for dry storage with the remaining 550 provided through wet slip docking facilities.

Analysis

Water-dependent, water-related uses are important to the quality of life and the economic base of Sarasota County. They attract residents, tourists, and provide a mark of distinction to the County. Existing facilities generally meet the current demand for water-dependent activities. However, increased demand for outdoor, water-dependent recreational resources will be spurred by population growth and the expansion of tourism. If the number and/or capacity of water-dependent facilities are not increased in the future, opportunities for participation will diminish and come into conflict with other land uses in the coastal area. Current capacity and projected needs for

beaches, boat ramps, and fishing areas are listed in Table 6. Appendix B, Section 3 identifies all water-dependent/water-related facilities in the County including beach access points, boat ramps, shore fishing areas, and marinas.

Developing new facilities or expanding existing facilities for water-dependent activities can be both expensive and difficult. Future development in the coastal area might further limit the County's ability to provide water-dependent facilities such as boat ramps, beach access points, and fishing docks and piers. Gulf coast property is expensive and in short supply. In addition, any development along the bay or Gulf shoreline is potentially damaging to the sensitive estuarine and beach/dune habitats. Strict attention must continue to be paid to environmental guidelines and regulations during the development of water-dependent facilities.

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The current capacity of water dependent facilities in the County will be reached over the next decade. Future expansion will be necessary to meet growing demands while attempting to minimize potential land use conflicts.

Table 6: Current Capacity and Projected Needs for Water-Dependent/Water-Related Facilities

Coastal Facility	Current Capacity (Persons Per Day)	Current Demand (1)	Projected Need		
			1987	1995	2010
<i>Beach Access</i>					
Public	75.8				
Private	14.8				
Total	90.6 acres	39,467(2)	27,680	40,951	43,615
<i>Boat Ramps</i>					
Public	23				
Private	8				
Total	31 lanes	1,044(3)	835	1,076	1,272
<i>Shore Fishing Areas</i>					
Public	11,875				
Private	150				
Total	12,025 linear feet	2,405(4)	2,157	3,032	3,355

1. Based on DNR, Division of Parks and Recreation, Citizen Participation Rates for Sarasota County, 1987.
 2. Based on 100 square feet per person per day.
 3. Based on available parking accommodations.
 4. Based on 5 linear feet per person per day.

Source: Sarasota County Planning Department, 1988.

As beach environments are sensitive areas in terms of shoreline dynamics and plant and wildlife habitat, any beach access program must work in concert with a beach preservation program. The County's Department of Parks and Recreation recognizes the conflict between access and environmental concerns and has developed a beach/dune protection and restoration program designed to maintain and restore the natural dune system at the County's beaches. The Sarasota County Area Transit (SCAT), will work in coordination with the Department of Parks and Recreation, to ensure that such facilities, if developed, will have public transit access. Likewise, future public beach acquisition should be coordinated with hurricane mitigation planning. Protection of dunes on private property is more difficult to accomplish. However, the County requires permits for construction and beach cleaning and grooming to ensure that existing dunes are protected.

A solution to the increasing demand for boat ramp lanes and marina slips is more difficult because of the shortage of suitable vacant sites and the amount of acreage needed to provide parking facilities. Boat size plays an important part in the carrying capacity of boat ramp facilities. Larger boats with deeper drafts require launching facilities with immediate access to deep waters. Also, the larger boats require longer parking spaces. Shallow water and parking accommodations at some of the boat ramps in Sarasota County further limit the total capacity.

Within the unincorporated areas, marinas have been developed exclusively by the private sector. Marina facilities and boat traffic can have severe negative impacts on estuarine water quality, wetlands, submerged lands, and related wildlife populations. For these reasons, the State regulates marina development and the County reviews marina permit applications. The most appropriate location for the expansion of dry dock storage facilities, especially for the storage of smaller craft, may be upland of the water-dependant marina sites due to the availability of land, the damage caused to the facilities located on Barrier Islands by hurricanes, and the general incompatibility with adjacent land uses in many cases.

In order to encourage the development of water-dependent facilities while minimizing the impacts on estuarine water quality, wetlands, and submerged lands, techniques can be developed to direct marina development to preferred locations such as those adjacent to existing channels, passes, and popular boating destinations; to encourage the continued operation and/or expansion of marinas in the appropriate locations; and to direct the development of dry dock facilities upland of water-dependent marina sites. Additional protection can be attained by requiring sewage pump-out facilities at all marinas and adequate spill containment facilities at those marina sites which sell petroleum products.

A coastal shorefront policy established within the land development regulations and zoning legislation, which provides development criteria and guidelines can be an effective mechanism for promoting the use of shorefront areas for marine/estuarine related uses such as commercial and recreational fishing, boating and other water-dependant uses and activities. Future Gulf and bayfront development/redevelopment should be encouraged to provide for water-dependent uses and/or secondary facilities. The conversion of existing water-dependent uses should be discouraged. An additional technique for preserving/promoting access to water-dependent facilities is through the acquisition of easements to Gulf and bay shorelines by the County.

Coastal Hazards and Mitigation Planning

A major storm event carries with it potential costs. Depending on the severity of the storm, the threat to human life and the costs to public, private, financial, and natural resources can be substantial. While Sarasota County has been fortunate that no major hurricane has severely impacted the area for decades, the potential does exist. The Department of Community Affairs' damage assessment reports for Sarasota County indicate that damage from a devastating storm could run in the tens of millions of dollars.(41) In the event of a destructive storm, the County is financially responsible for a number of costs including evacuation and shelter, clean-up, rebuilding damaged infrastructure, and a share of federal insurance payments. Recent federal policies have shifted construction costs and risk loss to the private sector and to state and local governments. Local governments are now responsible for contributing 15 percent to the National Flood Insurance Program (NFIP) for repair and construction of public facilities.(42) Minimizing the County's costs can be accomplished by a well thought out hurricane-disaster plan.

Pre-hurricane disaster planning involves planning for evacuation, hazard mitigation, and post-hurricane redevelopment. These topics are addressed in the following section.

Coastal High Hazard Area

The Department of Community Affairs has defined the Coastal High Hazard Area (CHHA) to include "areas which have historically experienced destruction or severe damage, or are scientifically predicted to experience destruction or severe damage from storm surge, waves, erosion, or other manifestations of rapidly moving or storm driven water. These areas shall include all areas within the local government's jurisdiction where public facilities have been damaged or undermined by coastal storms, Federal Emergency Management Agency (FEMA) designated Velocity (V)-Zones, areas seaward of the Coastal Construction Control Line (CCCL) established by Florida

Department of Natural Resources (FDNR) pursuant to Chapter 161, F.S., and inlets which are not structurally controlled."

FEMA V Zone designations do not adequately address the dangers from hurricane surge in the Southwest Florida Region. Actually, "High Velocity" zones on barrier islands are not limited to the FEMA Velocity "V" Zones. This designation accounts only for Gulf-side storms. Hurricanes from the east create similar but unrecognized "V" zones on the bay side. Hurricane driven wind and water from the Myakka River, coastal streams, and bays will also impact the mainland.

As indicated in the inventory, the Gulf coast is subject to hurricane impact. In the more recent past, structural damage has been caused by relatively minor hurricanes, tropical storms, and near miss situations. Hurricanes of larger magnitude in the future, based on past storm events and the level of development that has occurred since these previous events, will have greater destructive impact.

For the purposes of establishing coastal policies, a two-tiered approach to designation of the hazard area may be considered. A Coastal Hazard Area (CHA) represents the barrier islands and the land within the five foot contour along the bays, coastal streams, and the Myakka River. A Coastal High-Hazard Area (CHHA) designation includes the seaward extent of the CCCL, areas within the FEMA Velocity (V)-zones, and inlets (to include the lands seaward of the Barrier Island Pass 20 Year Hazard Line) and areas of known and/or potential breach. This CHHA represents those areas in which potential property damage and loss of life during a severe coastal storm is the greatest, and where the probability of repeated storm damage is the highest. Both public and private sectors would gain from hazard mitigation and post-hurricane redevelopment planning in the CHHA.

The landward extent of the CHHA in unincorporated Sarasota County varies with the FEMA designated V zones in some locations and the CCCL in others. Small portions of roadway on Siesta, Casey, and Manasota Keys fall within this area; yet for the most part the CHHA is situated to

the west of Beach Road, Midnight Pass Road, Casey Key Road, and Manasota Key Road, as you move north to south along the coast. Exceptions include approximately 5,000 feet of Beach Road on Siesta Key and short segments of Casey Key and Manasota Beach Roads where the V zone and/or CCCL moves across these roads and areas of erosion have been identified. In addition, County roads to some of the beach access points are also within the CHHA. Other infrastructure situated in the CHHA include segments of the Siesta Key Utility water and sewer lines and Casey Key Water Association lines.

The designated coastal area of unincorporated Sarasota County has been outlined on a number of Figures in the Public Facilities Chapter. As stated previously, this general area is located to the west of U.S. 41 and S.R. 775. The existing infrastructure situated within this area includes potable water and sanitary sewer franchises, portions of the north and south County Utility Service areas, segments of major drainage canals and associated facilities, waterwells, and a portion of the RMR transmission network. This infrastructure has been identified in Figures 18, 19, 28, 29, 30, 31, 33, and 35 of the Public Facilities Chapter. The service areas, current capacities, existing and projected demand for infrastructure located in the coastal area have been identified in the Public Facilities Chapter.

Coastal area roadways are identified in Figure 10 of this Chapter while bridge locations include the following: Stickney Point Bridge; Phillippi Creek Bridge at U.S. 41; Blackburn Point Road Bridge; Albee Road Bridge; Dona Bay Bridge at U.S. 41; Roberts Bay Bridge at U.S. 41; Alligator Creek Bridge at U.S. 41; Forked Creek Bridge at SR 775; and Manasota Key Bridge.

HURRICANE EVACUATION

Like all coastal counties in Florida, Sarasota County has developed a hurricane evacuation plan. Details of this plan are found in the County's Department of Emergency Management Peacetime Emergency Plan while analysis is provided in this section. The Emergency Plan identifies the specific responsibilities and activities of

various County departments before, during, and after a storm event. The hurricane evacuation chapter of the plan is updated every three years and uses local and regional planning data supplied by the County Planning Department and Southwest Florida Regional Planning Council's Sarasota County Natural Disaster Plan, respectively.

HURRICANE VULNERABILITY ZONES

Due to its geographic location in the subtropics, adjacent to the Gulf of Mexico, the entire County is vulnerable to damage caused by hurricane-force winds and related flooding. Vulnerability to hurricane-related flooding is dependent upon the severity of storm surge, a general rise in sea level caused by the low pressure and strong winds around a hurricane's eye, and the amount of rain carried by the hurricane. Storm surge is related to the hurricane's velocity, and "can rise twenty feet or more above normal sea level and cause massive flooding and destruction along shorelines in its path."⁽⁴³⁾ Flooding due to heavy rainfall may extend over widespread areas of the County as identified in the floodprone area on Figure 27 in the Drainage section of the Public Facilities Chapter.

Figure 10 identifies the zones of predicted Sea, Lake and Overland Surge from Hurricanes (SLOSH) in Sarasota County that accompany the five hurricane categories according to the Saffir/Simpson hurricane scale. The scale is based upon storm frequency and the larger the category number, the greater the geographic area affected; yet smaller storms occur more frequently than larger storms. Therefore, the areas of the County most likely affected by every hurricane surge are situated in the storm category 1 zone. Category 5 zones are the least vulnerable, though the potential for evacuation does exist. According to the SLOSH model, a landfall storm category 1 hurricane is projected to create a 4-7 foot storm surge. A storm category 3 hurricane on the same perpendicular track would generate a 9-14 foot storm surge. Neither projection incorporates storm wave height. This wave action would be in addition to any storm surge which happens to be generated.

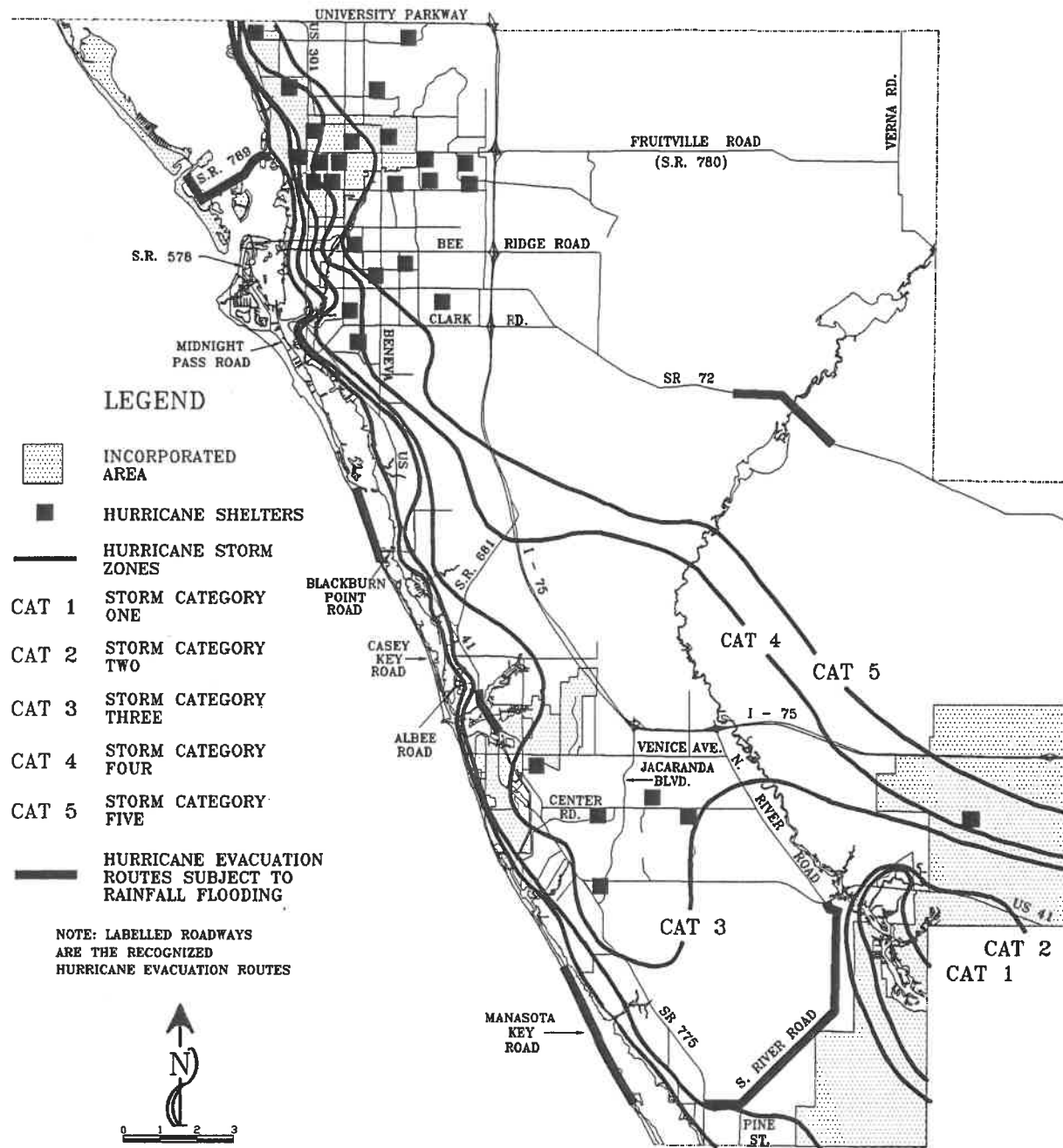


Figure 10: Hurricane Vulnerability Zones

Source: Southwest Florida Regional Planning Council, 1988.

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STORM DAMAGE HISTORY

Tropical storms and hurricanes present the most serious natural threat to residents living in Sarasota County. Due to warm summer Gulf temperatures, the greatest probability for hurricanes is from the beginning of June to the end of October. Although the entire state of Florida is vulnerable to hurricanes and tropical storms, some areas are more susceptible than others. Since 1900, at least 37 hurricanes and tropical storms have passed within fifty miles of Sarasota County's shoreline.

Each year, the County faces a one in twenty-five chance of being impacted by a hurricane.(44) In the past, the threat of damage to coastal structures and potential for loss of human life, was not the problem that it is now. Until recently, the County's barrier islands were relatively undeveloped. Today, over 20,000 persons live on the County's barrier islands.(45) The islands' residents, private structures, and public infrastructure are all vulnerable to hurricane impact. As Sarasota County has not experienced a severe hurricane for several decades, the full impact of a destructive storm, for example, a landfall category three hurricane, remains unknown. Information on impacts of less severe storms are known, however, and are briefly summarized below. A more detailed discussion can be found in the "Erosion and Accretion Trends" section of this Chapter.

During past storm events, private and public structures, shoreline protection structures, and public roads and facilities in Sarasota County have been damaged, sometimes repeatedly. Most recently, in 1985, shoreline protection structures and sections of certain roads were seriously damaged during two consecutive storms: Hurricane Elena and Tropical Storm Juan. Together, these two storms caused major damage to 1,655 feet of bulkheads, and 3,800 feet of paved roads. One single family dwelling was destroyed.(46)

The June 1982, "No-Name" sub-tropical storm, caused hundreds of thousands of dollars worth of private and public property damage.(47) This case is mentioned to illustrate the financial impact

of a minor storm. Damage caused by a major hurricane could exceed hundreds of millions of dollars.

In 1960, Hurricane Donna, a category three storm, severely affected certain areas of the County. Six to ten inches of rain preceded the September storm, which was accompanied by 5"-7" of rain, and resulted in widespread flooding. Due to low tidal surge, the storm caused little structural damage.

To date, the worst storm event to have impacted Sarasota County was the September 1926 hurricane. During that storm, Gulf waters washed over the barrier islands causing substantial erosion along the shoreline.(48) The hurricane also blew a sand bar into the middle of Little Sarasota Pass. A later hurricane completely closed the pass. In 1921, a less severe, although significant hurricane, opened the former Midnight Pass.(49)

PERSONS REQUIRING EVACUATION AND SHELTER

According to the Southwest Florida Regional Planning Council (SWFRPC), there are an estimated 36,659 dwelling units in the storm Category 1 zone of Sarasota County. This estimate includes hotel/motel rooms, recreational vehicles, and mobile homes as well as single and multi-family units. The figure represents about 29 percent of the dwelling units in the County and an estimated 53,960 to 62,540 people. The variation is due to a seasonal fluctuation since more people inhabit the coastal area in November than in July. Population evacuation estimates by storm category are outlined in Table 7. Shown are the number of persons that will be evacuated in each different storm event. Because mobile home residents living in all storm surge zones of the County are vulnerable to every hurricane and are required to evacuate in each storm event, evacuation figures are actually higher than the number of people living in each storm category.

According to County population projections, the number of people requiring evacuation will increase in the future, making hurricane evacuation and public safety a greater liability. Future condi-

Table 7: County Population Estimates By Storm Category

Storm Category	Evacuation Area (* Zone)	Population Estimate	
		July	November
1	Barrier Islands and Bayfront areas	53,960	62,540
	Mobile Homes (Zones 2-5)	14,735	26,059
	Total Evacuees, Category 1	68,695	88,599
	<hr/>		
2	Zone 2		
	Myakka Flood Plain/ Inland, Less Mobile Homes	12,321	13,590
	Total Evacuees, Category 1-2	81,016	102,189
<hr/>			
3	Zone 3		
	South Myakka/North Port Inland, Less Mobile Homes	24,559	26,716
	Total Evacuees, Category 1-3	105,575	128,905
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4	Zone 4		
	Less Mobile Homes	20,060	21,383
	Total Evacuees, Category 1-4	125,635	150,288
<hr/>			
5	Zone 5		
	Less Mobile Homes	77,446	79,805
	Total Evacuees, Category 1-5	203,081	230,093
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* See Storm Category Zone Map			
Source: SWFRPC, Hurricane Evacuation Plan, Update 1988.			

tions affecting hurricane shelter needs and evacuation times are discussed later in this section.

PERSONS WITH SPECIAL NEEDS

Hurricane evacuation has the potential for being a traumatic experience for everyone involved. This is especially true for those requiring special medical attention and/or those having no personal transportation. The County anticipates the needs of these people; the elderly, handicapped and others with special medical needs may register (through a physician), with the County Special

Needs Coordinator in the Department of Emergency Management. Persons who might need transportation during a hurricane evacuation may also register.

As of December 1987, there were 1,076 registered people with special needs. Of this number, 486 live in the Category 1 zone, and 276 in the Category 2 zone. Registrations are tied into the County 9-1-1 system and screened by the County's Special Needs Coordinator. Each entry is separated into one of three categories:

- no medical screening required, shelter only;

- medical triage required prior to assignment to hospital or nursing home;
- ongoing medical care and hospitalization required.

Persons on the special needs registry are responsible for re-registering each year on or before June 1st and for providing the County with updated information such as changes in health status and address. Prior to an imminent hurricane evacuation, registered persons are telephoned with a computer auto-dialer to verify need for assistance. Transportation is provided, via county bus, school bus, lift gate vehicles, and contract vehicles, for those who have no other way to get to a public shelter. Persons going to a hospital or nursing home are responsible for the cost. All citizens are advised to make their own arrangements for transportation to shelter during an evacuation order. Finding that these preparations cannot be made, the County will attempt to shuttle persons to shelter.

Each member county in the SWFRPC has a mutual aid agreement for disaster situations which may occur throughout the region. This agreement provides for the joint sharing of facilities during times of emergency. Group home facilities and hospitals are charged by Health and Rehabilitative Services (HRS) with administering an aid/health care agreement. It is recommended in the Environment Plan that these types of facilities establish a Mutual Aid Contract with a facility located in a non-evacuation zone in order to help ease the strain on emergency services and resources.

AVAILABLE HURRICANE SHELTER

While every person living, or visiting, in an evacuated zone needs hurricane shelter, not every person needing shelter will use public facilities. According to surveys performed by the SWFRPC in 1979 and 1981, 24 percent indicated that they preferred to go to public shelters, 21 percent to "other" locations, and 21 percent were undecided. The remainder stated that they would leave the County.⁽⁵⁰⁾ While these figures are helpful in estimating the potential need for shelter, actual need is dependent upon the storm category and affected population, traffic circulation constraints, individual decisions made at the time of evacua-

tion, and the number of people from adjacent counties with inadequate shelter space seeking shelter within Sarasota County.

There are thirty public shelters in Sarasota County. One of these, the Sarasota Vocational Center, is a designated special care facility for disabled, handicapped, and rehabilitation stabilization. Using a twenty square foot per person minimum, these thirty shelters provide enough space for 20,095 persons including 700 of which can be accommodated in the Sarasota Vocational Center Special Care Facility.

Hotel/Motel rooms provide another source of hurricane shelter space. SWFRPC has estimated that there are 3,697 hotel/motel rooms in Sarasota County. Of these rooms, 38 percent are located in the storm Category 1 surge zone and, therefore, cannot be utilized as hurricane shelter. The remaining hotel/motel spaces, according to storm category, include: 2,285 rooms available during a Category 1 storm, 1,864 in a Category 2 storm, 1,343 in a Category 3 storm, and 213 in a Category 4 storm. As indicated by the shelter capacity figures, shelter availability diminishes with storm category intensification due to the larger area affected by the storms of greater magnitude. During a Category 1, 2, or 3 storm, the demand for public and commercial hotel/motel shelter space is not as great as it is during a Category 4 storm or above. At the same time public shelter space availability diminishes, population displacement ratios increase. Only as long as upland areas are not threatened by a major storm, are inland friends and relatives able to supply shelter space to coastal residents. For instance, according to the SWFRPC's population displacement ratio for Sarasota County, approximately 13 percent of the County's evacuated residents will be able to find shelter with friends and relatives during a Category 1 or 2 hurricane. However, during a Category 5 storm, only 3.9 percent of the population could find shelter with friends and relatives. Table 8 identifies the percentage of shelter supplied by public shelters and commercial hotel/motel spaces.

Table 8: Estimated Hurricane Shelter Capacity, 1986

	Storm Category			
	1	2	3	4
<i>July</i>				
Number of Evacuees	68,695	81,016	105,575	125,635
Available Shelter (%)				
Public	29.3	24.8	18.9	16.0
Hotel/Motel	7.3	5.1	2.8	---
Private Residence	13.0	13.0	11.7	8.1
Total Needs Met (%)	49.6	42.9	33.4	24.1
<i>November</i>				
Number of Evacuees	88,599	102,189	128,905	150,288
Available Shelter (%)				
Public	22.7	19.7	15.6	13.4
Hotel/Motel	5.7	4.0	2.3	---
Private Residence	20.8	16.2	10.2	6.7
Total Needs Met (%)	49.2	39.9	28.1	20.1

Source: Southwest Florida Regional Planning Council, 1988.

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Estimates of hurricane shelter capacity indicate a lack of available space, especially in the storm category 3 and greater zones for November. Population growth in the future will place further strain on these facilities and their ability to meet the required demands.

A comparison of evacuee estimates and shelter space availability show a shortage of hurricane shelter space in Sarasota County. County residents not willing or unable to obtain shelter within Sarasota County, will evacuate out-of-county. For that reason, transportation considerations play a vital role in hurricane evacuation.

TRANSPORTATION CONSTRAINTS AND EVACUATION TIMES

Evacuation route capacity and road constraints can seriously impact hurricane evacuation times. Since several barrier island/coastal mainland evacuation routes serve as collectors and tie into US 41 and SR 775, smooth evacuation is impaired

at points where bottlenecks occur along these routes. Siesta and Longboat Keys, with their higher densities, generate the longest evacuation times. Both Keys require, at minimum, a little over five and a half hours. This figure is calculated for the "best case" hurricane evacuation scenario, a storm Category 1 hurricane during July when population is at its lowest on the barrier islands in relation to the hurricane season.

Evacuation measures taken during Hurricane Elena, reflect this estimate. However, evacuation during Elena coincided with optimal conditions: nighttime evacuation, rapid evacuee response, and no pre-landfall evacuation route flooding. Adverse conditions, such as a daytime evacuation with high non-evacuation traffic circulation, pre-landfall evacuation route flooding, slow evacuee response, and greater numbers of evacuees because of a late season storm, would increase evacuation times dramatically. A worse case scenario for the same storm event, a November storm and a slow evacuee response, projects a nine hour plus evacuation time for Siesta Key. Figure 10 identifies hurricane evacuation routes subject to rainfall flooding.

In the traffic circulation analysis section it has been determined that a number of road segments have a peak hour LOS lower than the generally accepted Countywide standard, particularly in the coastal area (see Figure 40). This does not in itself indicate that these segments provide constraints during evacuation periods. However, they should be evaluated in relation to hurricane evacuation needs in order to identify strategies for improvement. The road segments that need improvement and have the right-of-way necessary for expansion can be identified along with those constrained segments with limited improvement potential in order to access the amount of outbound traffic from the coastal area.

It will be important to amend the hurricane evacuation section of the County's Peacetime Emergency Plan in order to incorporate this type of analysis. The analysis should address the impacts of land use development on evacuation routes as well as restrictions in the evacuation system which have already been identified in the Emergency Plan. For example, during evacuation periods heavy equipment is placed at "critical locations" throughout the County in order to keep these intersections and bridges free from obstruction. All bridges over navigable waterways are ordered closed to boat traffic an estimated two days in advance of the assessed landfall of the hurricane. Coordination of these study efforts must take place between County departments, the SWFRPC and other appropriate agencies in order to continue to update the pertinent sections of the Peacetime Emergency and Comprehensive Plans and to develop a post-hurricane disaster strategy.

Total County hurricane evacuation times range from fifteen hours in July during a storm Category 1 hurricane, in which hurricane evacuation orders are urgent and evacuee response is almost immediate, to twenty-two hours during a November Category 3 hurricane. Hurricane evacuation times could be as slow as seventeen hours during a storm Category 1 hurricane if evacuee response to a hurricane evacuation order is less immediate.(51)

Total evacuation times are a function of several interrelated factors; storm category, clearance time, destination, and weather.(52) The SWFRPC has established three scenarios for clearance time including "slow, intermediate, and quick" response to storm events in July and November. The factors contributing to the clearance time calculations are the strength of the storm, number of vehicles evacuating, roadway capacity/restricting points, distance to shelters, and evacuee response. An improvement in any one of these factors should lead to a reduction in hurricane evacuation times. The destination variable considers the greatest travel time to either public shelter or the County line (ranging between 1.2 and 1.5 hours). The weather factor is measured as an eight hour constant representing the average amount of time between the first storm warning and the onset of severe weather. The summary results for total evacuation time identifies a variation which ranges from 15 hours for a "quick" evacuation in July to a "slow" evacuation time of about 22 hours in November.

Although not included in the evacuation time calculations, inter-regional traffic circulation patterns pose an additional constraint on hurricane evacuation times. On a daily basis, within Southwest Florida, Sarasota County receives the greatest numbers of inter-regional and inter-county travel. A daytime evacuation against the background of inter and intra-regional traffic circulation could lengthen County evacuation times. Also, out-of-county residents evacuating to public shelters in Sarasota County could further reduce shelter opportunities for County residents.

ANALYSIS OF FUTURE CONDITIONS

Based on 1991 SWFRPC projected housing units, population and motor vehicle estimates, and revised evacuation route capacities, County shelter and evacuation routes will continue to be under stress. In spite of increased shelter space and road improvements, shelter satisfaction is expected to drop and evacuation times are expected to increase.

Several road improvements outlined in the 1987 County Capital Improvements Program (CIP) might positively affect hurricane evacuation times. Most importantly are the widening of both Jacaranda Boulevard and University Parkway from two to four lanes. Also, the widening of Lockwood Ridge Road to four lanes and connection to Beneva Road via Twelfth Street, could provide the County with another hurricane evacuation route. In addition, the widening of Fruitville Road will be completed by 1990. Other state road improvements include widening sections of US 41 and Clark Road.

These improvements should help alleviate overall County evacuation pressures. However, even with road improvements, population increases are expected to lead to increased route and evacuation times. SWFRPC calculates that by 1991 a "quick" evacuation of Siesta and Longboat Keys will require almost seven hours for a July hurricane. Total County evacuation times will range from sixteen hours in July during a Category 1 hurricane to twenty-five hours in November during a Category 3 hurricane.

As evidenced by a comparison of shelter space opportunities and numbers of residents requiring evacuation, there is a current deficit of shelter space in Sarasota County. Projected population growth will lead to greater shelter space deficiencies. As Sarasota County's population increases, so will the demand for shelter space accompanied by a coincident reduction of shelter space opportunities.

The construction of additional school facilities by 1991, two elementary and one middle school, should offset some of the increased demand for shelter space. These facilities, will be constructed in the storm Category 3 zone or further inland. In addition, approved sector plans for Commercial Highway Interchanges (CHI) at I-75 contain hotel/motel type components which can be expected to provide some relief for shelter demand. In spite of these facilities, the planned shelter space growth (roughly 10 percent) will have difficulty in meeting the projected population growth of approximately 13 percent through 1992. Inadequate shelter space will continue to be a problem in Sarasota County.

REMEDIAL ACTIONS

One of the key problems in evacuating Sarasota County in a Category 3 hurricane is the time required to clear I-75. This problem may be alleviated by the construction of a third north-south road through the County. The widening of Third and Tenth Streets in the City of Sarasota over the next five years, should help to reduce the clearance times for Longboat and Lido Keys and provide improved access through the City and County to I-75. This in turn will help to ease some of the pressure currently experienced by US41.

It has been identified that the mitigation of transportation constraints combined with an increase in the availability and capacity of hurricane shelters are important strategies which can be employed to meet the objective of reducing evacuation times in the County. Included in these strategies could be the analysis and assessment of development impacts on evacuation routes and other critical locations in the low-lying coastal areas (less than 14 foot tidal surge level), resulting in the requirement for on-site shelter provisions, and coordinated design and development review for new shelter construction.

Post-Disaster Planning

Sarasota County updated its Local Peacetime Emergency Plan in 1987. The Hurricane Plan, one section within the larger Peacetime Emergency Plan, specifies direction for hurricane evacuation and immediate repair and clean-up activities. This plan is updated, in coordination with the Southwest Florida Regional Planning Council, every three years in accordance with state regulation.

The Local Peacetime Emergency Plan is essential to proper hurricane evacuation and post-hurricane recovery. However, the Hurricane Plan addresses only the short-term aspects of post-hurricane planning. A long term post-hurricane disaster plan is also an important document for any coastal county to develop and should address two aspects of disaster planning: hazard mitigation and post-hurricane redevelopment. Public safety, financial, and natural resource concerns need to be considered. Due to the current coastal densities and the related amounts of public investment, hurricanes pose

potentially expensive costs to the community, including loss of life, damage to private structures and public infrastructure, loss of employment, tax base and shelter. A long-term hurricane disaster plan provides an opportunity to avoid some of the problems associated with storm events by preparing the community in advance.

For the purposes of the Sarasota County Comprehensive Plan, general Goals, Objectives, and Policies will be outlined for a post-hurricane disaster plan. These statements will set the direction for a more specific post-hurricane mitigation/redevelopment plan and identify a procedure for its implementation.

Mitigation planning seeks to improve conditions before a storm disaster occurs, thus helping to reduce the level of risk and stress to the affected populations. In the previous Hurricane Evacuation section, certain factors have been discussed which play an important part in any hazard mitigation scenario. These factors include: the number of persons requiring evacuation and shelter; the availability of shelter spaces; evacuation times; transportation constraints; and improvement measures.

Relocation of public infrastructure and facilities subject to repeated storm damage is another method of minimizing future storm damage and reducing public costs for road construction. The relocation of roads in areas of existing development pose a unique problem. Such relocation efforts would require substantial expense for public right-of-way acquisition due to coastal proximity and should be coordinated with hurricane mitigation planning.

The primary components of mitigation planning involve a combination of coastal planning and growth management and in many cases will be controversial. Post-hurricane redevelopment planning can work to incorporate and further specific Chapters of the Comprehensive Plan including Environment, Future Land Use, Recreation and Open Space, and Public Facilities. Post-disaster planning serves to reinforce the Goals, Objectives, and Policies of these Chapters, especially as they relate to the coastal area.

"As we progress beyond basic evacuation and emergency response planning to more integrated approaches to dealing with the somewhat predictable hurricane emergency, mitigation becomes a key element in planning. Good mitigation can improve the efficiency and effectiveness of disaster aid, help reduce the probability of both personal injury and economic loss, shorten the "out of action" period of the local economy, and guide reconstruction in such a way that the next hurricane will have even less opportunity to injure and destroy."(53)

POST-DISASTER REDEVELOPMENT ALTERNATIVES

Rebuild to Present Density

According to the County's Department of Emergency Management, population densities in the coastal area are too high for consistently safe evacuation. The reason for this is based upon the uncertain nature of hurricanes, the problems of early warning, and the fact that certain low lying roads have a propensity to flood several hours before storm landfall. Increased populations living within this area could further exacerbate hurricane evacuation times, require additional expenditures for infrastructure, and generate unnecessary risk and hardship.

Rebuilding to existing densities within the Coastal Hazard Area (CHA) encourages repeated storm damage and generates a number of negative impacts. Coastal construction often requires shoreline stabilization in an attempt to mitigate hurricane forces. This structural hardening can inhibit the natural beach/dune dynamics; cause erosion on downdrift properties; disrupt lateral public beach access; preclude the protection afforded by the natural beach/dune system; and destroy important coastal vegetation and habitat for shore birds and marine fauna such as nesting turtles. Seawall construction standards should be adopted as part of the land development regulations in an effort to help control these impacts.

The storm surge which is funneled into bays and inlets can be very destructive to property and associated infrastructure built adjacent to Barrier Islands and bayfronts. The importance of conser-

vation, protection, and preservation of these natural areas is imperative to responsible planning and growth management along the coast.

Rebuild at Lower Density

Rebuilding at lower densities has the potential for improving the County's image and relationship with its barrier island system by expanding beach access through public acquisition, enhancing the condition of the natural Gulf and bay shoreline, and preserving coastal habitats. The preparation of a post-disaster plan may consider a two-tiered approach to redevelopment in hazard areas. The first tier is the larger Coastal Hazard Area (CHA) which recognizes underlying zoning densities or pre-existing use, whichever is less intensive, and to encourage the vacating of platted lots. The density reductions can lead to improvements in hurricane evacuation times as a result of fewer constraints in the transportation system, lessened public expenditure required for repeated infrastructure repair, and improved public access. The second tier is the Coastal High Hazard Area (CHHA) and it is suggested that no redevelopment would take place, other than through the existing variance procedures, and that density transfers be provided through the transfer of development rights (TDR) process and the designation of the barrier islands as a sending zone. However, this level of regulation would require significant public acquisition initiatives by the County.

This alternative will also consider prior acquisition of development rights and specific structural design standards.

Legislation Affecting Post-Hurricane Planning

Several federal, state, and local regulations address the problems of development in coastal areas, especially on barrier islands. The National Flood Insurance Program (NFIP) and the Coastal Barrier Resources Act (CBRA) are the two most significant pieces of federal legislation dealing with coastal regulation. The NFIP, administered by the Federal Insurance Administration of the Federal Emergency Management Agency, sets flood insurance policies contingent upon specific building

construction codes and minimum floor elevations in flood prone and coastal hazard areas. The CBRA prohibits federal financial assistance for new or expanded development on undeveloped coastal barriers which are members of the Coastal Barrier Resources System. The purpose of these regulations is to minimize the loss of human life, wasteful federal spending, damage to fish, wildlife, and other natural resources associated with coastal barriers.(54)

While certain federal legislation sets restrictions and guidelines for building in coastal hazard areas, other legislation provides for the relocation of damaged and threatened structures. Sections 401 and 402 of the Disaster Relief Act of 1974 (42 USC 5171-2) permit and provide funds for repair and replacement of flood-damaged federal and local public infrastructure to 90 percent of the original value. These funds can be used to relocate public facilities elsewhere. Section 201 of the Disaster Relief Act authorizes funds for disaster preparation plans including land use measures to minimize disaster risks.(55)

In addition to the above federal programs, the State of Florida has adopted legislation that also address the issue of coastal development. Regulated by the Department of Natural Resources (DNR), Chapter 161.053, F.S., adopted a Coastal Construction Control Line (CCCL) in 1971 to administer regulations which reduce structural damage and beach erosion within the zone several hundred feet landward of the mean high water line. Location of the CCCL is a function of predicted storm surge, erosion, existing topography, and changes in physical conditions since the establishment of the previous line.(56) The CCCL is re-established periodically on a county-by-county basis and was re-evaluated in Sarasota County in 1988.

Other state legislation includes the establishment of a 30-year erosion hazard line and a coastal building zone. The 30-year erosion line was adopted under the 1985 Omnibus Growth Management Act and prohibits the Florida Department of Natural Resources (FDNR) from issuing permits for most major structures in any area that is projected to be seaward of mean high water in

thirty years. Excluded from this restriction are shoreline protection structures and other minor structures. (57)

A Coastal Building Zone was established by the Coastal Zone Protection Act of 1985, Chapter 161.53-161.56. New structures in the coastal building zone, the area 1,500 to 5,000 feet landward of the state's Coastal Construction Control Line (CCCL), are required to meet certain construction standards to withstand hurricane wind velocities and tidal inundation. On Barrier islands the Coastal Building Zone is within the area 5,000 feet from the CCCL or the width of the island, whichever is less.(58)

Local ordinances that address land use in the coastal area include Sarasota County Ordinances 72-84, 79-03, 86-24, and 87- 44. Ordinance 79-03 adopted the State's Coastal Construction Control Line as the Gulf Setback Line and prohibits con-

struction and excavation seaward of the said line. Construction variances seaward of the CCCL may be granted through the public hearing process where undue hardship by strict prohibition is determined. Ordinance 86-24 expanded the Gulf Setback Line to include areas, based upon a twenty year barrier island pass hazard line along the unincorporated barrier islands. Ordinance 87-44 was adopted in order that Sarasota County be eligible for, and participation in, the NFIP which sets floor elevation requirements and floodplain management regulations in areas subject to flooding including areas in the coastal zone. In addition to minimum floor elevations in FEMA velocity zones, Ordinance 87-44 prohibits the use of fill for structural support, prohibits man-made alterations to existing grades, dunes and mangrove stands that would alter flood potential, and prohibits the construction of new mobile home parks.

Native Habitats

As a coastal County with a major riverine system and a substantial upland area, Sarasota possesses a variety of environmental habitats. These habitats are an important resource which perform a number of functions for wildlife. Coastal wetlands, mangroves and tidal marshes, improve water quality, act as storm buffers, provide shelter for coastal wading birds, and perform a vital role in the important and complex estuarine food chain. (59) The County's gently sloping beaches dissipate wave energy and the low dunes act as a repository for shifting sands which, in a storm event, further buffer the uplands from erosion and flooding by providing an additional source of sand. The denser coastal vegetation behind the front and back beaches also protects uplands from destructive coastal processes. The bays and related estuaries are nursery areas for many economically valuable species of marine life such as shrimp, stone crab, oysters and mullet, in addition to sportfish species including tarpon and snook. Upland habitats also provide habitat for a number of endangered species, including the bald eagle, Audubon's caracara, and the sandhill crane. Upland habitats also perform flood control functions and buffer the County's rivers, creeks, and tributaries from pollutants in stormwater runoff.

The Sarasota County land use/land cover maps, illustrate the extent of both vegetative cover and developed features. Land cover codes were designated according to the Apoxsee habitat classification system and include upland, wetland, estuarine, and marine habitats. The "Future Land Use Plan Map, Sarasota County - 2010 Conservation/Preservation Areas with Existing and Planned Waterwells Map" is intended to illustrate general locations only and should not be used as a substitute for detailed site plans, that indicate the specific location of native habitat areas. Habitat functions and values are discussed in the "Habitat

Inventory and Analysis" section. Management Guidelines are discussed in the "Guiding Principles" section.

Definitions

- **Preservation** shall be defined as the perpetual maintenance of habitats in their existing (or restored) native condition. Certain habitats, identified in the Management Guidelines in the Guiding Principles section, shall be preserved due to their intrinsic environmental values and functions. Preserves are afforded the highest degree of protection within Sarasota County.
- **Conservation** shall be defined as the wise use of native habitats other than those required to be preserved. Conservation areas often consist of native habitat that has been set aside to fulfill open space requirements rather than specific management guidelines. Native habitat should be used whenever possible to fulfill open space requirements.
- **Native Habitats** shall be defined as those areas of Sarasota County described in the Habitat Inventory and Analysis section, with the exception of Intensive Agricultural Areas and Developed Features.
- **Wetlands** shall be defined as those areas that are inundated by surface or groundwater with a frequency sufficient to support, and under normal circumstances do support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, sloughs, marshes, wet prairies and heads.

- **A swale** shall be defined as a man-made trench which a) has a top width-to-depth ratio of the cross section equal to or greater than 6:1, or side slopes equal to or greater than 3 feet horizontal to one foot vertical; and b) contains contiguous areas of standing or flowing water only following a rainfall event; and c) is planted with or has stabilized vegetation suitable for soil stabilization, stormwater treatment and uptake; and d) is designed to take into account the soil erodibility, soil percolation, slope, slope length and drainage area so as to prevent erosion and reduce pollutant concentration of any discharge.
- **Best Agricultural Conservation Management Guidelines** shall be defined as those conservation management guidelines contained in the latest edition of the Soil Conservation Service's National Conservation Planning Manual.

Endangered Species and Critical Habitats

In the past few decades, it became obvious both nation-wide and state-wide that there were dwindling numbers of certain animal and plant populations. In Florida, native species such as the wood stork, the West Indian manatee, the burrowing owl, and the Florida panther have suffered serious population reductions. These species are not the only ones that have suffered, however. The Florida Game and Freshwater Fish Commission lists ninety-one species of wildlife as endangered, threatened, or species of special concern (see Appendix B, Section 4). Sixteen species of fish and four species of invertebrates are included in these listings. Forty-one of these declining species can be found in Sarasota County. (60) Appendix B, Section 4, lists endangered, threatened, and species of special concern by primary habitat.

There are three basic reasons for the decline of wildlife populations in Florida. Habitat destruction is cited in a US Fish and Wildlife Service Report as the foremost cause; the resultant loss of feeding

and nesting sites has severely impacted bird and animal populations. Direct exploitation and human disturbances are cited as the two remaining factors.

Direct exploitation refers to the use of a wildlife or plant species; for example, hunting the threatened gopher tortoise for food. Human disturbances include shooting and harassment of nesting sites. Nest site disturbance threatens the viability of several species of birds, including the endangered bald eagle. Other human disturbances include water table reduction, a serious threat to wading-bird species such as the wood stork that depend on marshes and seasonal ponds for feeding; fire suppression in habitats such as the scrubby flatwood, the only habitat in which the threatened Florida scrub jay lives; timber management of pinelands that support the red cockaded woodpecker; and boating in the rivers, bays, and estuaries in which the endangered West Indian manatee dwells. (61)

The effort to maintain endangered and threatened species such as the wood stork, the bald eagle, the West Indian manatee, and the Florida scrub jay depend on conservation, preservation, and management of the habitats in which the species nest and feed. Coastal habitats along the County's Gulf shorelines and estuarine edges provide habitat for several federally listed species. The endangered loggerhead sea turtle is a regular visitor to Sarasota County's Gulf shoreline. Annually, female loggerhead sea turtles crawl onto the County's beaches to lay their eggs in the loose dune sands. Several types of human activities can interfere with sea turtle nesting activity and the ability of hatchlings to find their way into the Gulf. Artificial lighting can disorient the hatchlings who depend on the illuminated horizon for direction. Night pedestrian traffic can cause the turtles to return to the ocean without nesting. Beach renourishment activities that compact the sands can be equally detrimental. (62)

Another endangered species, the West Indian Manatee, lives in County waters including the Gulf, coastal streams, and the Myakka River. Between 1974 and 1985, manatees were most frequently

sighted in the Gulf and in the County's bay waters between Coon Key and City Island (including Pansy Bayou), Roberts Bay, Little Sarasota Bay, and Blackburn Bay. (63) Manatees are herbivorous mammals that feed upon seagrasses and fresh water aquatic plants such as water hyacinth. Seagrass habitats are also essential to a number of other marine species and should be protected and restored where possible. To many, the water hyacinth is a nuisance aquatic weed that blocks the County's waterways, impedes boating access and contributes to downstream flooding. For these reasons, aquatic plant growth is occasionally reduced with herbicides and is a necessary preventive measure. However, County aquatic plant control activities need to consider manatee food requirements and should be coordinated with the Florida Department of Natural Resources. (64)

Presently, human-induced mortality and habitat perturbation are the major causes of manatee death. Between July 1977 and December 1985, nine dead manatees were recovered from Sarasota County. Four were dependent calves, four died due to undetermined causes, and one to natural causes. (65) FDNR research officials indicate that more than 80 dead manatees have been found in Florida waters through the first half of 1988; at least 25 of these died from boat-related injuries. Last year, 113 were found dead and 39 were the result of boat collisions. The current 1988 rate is the highest it has ever been according to the state. (66) Boat facility siting is an important consideration in reducing the number of boat-related deaths of manatees. Boating studies that assess boat density, destination, and utilization could be conducted as part of a marina siting study. From these studies, boat facility siting requirements and regulations can be achieved. Facility siting can address siting for marinas and boat ramps and restrictions on multi-family and single family docking facilities. Boat regulations can address boat speed zones and recreational boating activities such as water skiing in manatee habitat and other sensitive areas such as wading bird rookeries. (67)

The coastal strand provides primary habitat for several endangered, threatened, and species of special concern including the American oyster catcher, piping plover, snowy plover, roseate tern,

peregrine falcon, and the least tern. Mangroves and marsh habitats provide shelter for species such as the brown pelican, great white heron, little blue heron, reddish egret, snowy egret, tri-colored heron, wood ibis, roseate spoonbill, marsh hawk, and bald eagle.

Uplands also provide habitat for a number of rare species. Endangered plant species can be found in coastal hammocks, a highly coveted habitat. In 1987, approximately 225 acres of coastal hammock remained in Sarasota County and, each year, more of what little remains is developed. Although not scarce, pine flatwoods provide primary habitat for the red cockaded woodpecker and secondary habitat for the gopher tortoise, the American kestrel, and Sherman's fox squirrel. Grassy dry prairies provide primary habitat for the marsh hawk, Audubon's caracara, the sandhill crane, and the burrowing owl. Pine flatwoods and prairies are also used by the Florida black bear and the Florida panther and bobcat. (68)

Florida is the primary location for bald eagle nesting in the continental United States. There are approximately 350 pairs, 10 of which nest in Sarasota County. Rapid urbanization and the resulting loss and/or degradation of suitable habitat is possibly the greatest threat to the bald eagle in Florida. Bald eagles generally nest in mangroves or in the tallest tree near a waterbody in pine flatwoods, but can also be found in other habitats. Also, development activities and human disturbances, including seemingly harmless actions such as repeated visits to a nest site, can cause a pair of eagles to vacate a nest. (69)

Wetland habitats associated with uplands are vital habitats for many species of wading birds. The County has a strong program to protect wetlands and requires at least a 1:1 mitigation for unavoidable destruction of wetland habitat. However, wetland preservation is complicated by cumulative impacts from development. Also, current mitigation practices do not preserve all of the values and functions of a natural wetland.

Scrubby flatwoods, a rare habitat in Sarasota County, are essential to several endangered, threatened, and species of special concern includ-

ing the Florida scrub jay, gopher tortoise, east indigo snake, the gopher frog, the sand skink, the Florida mouse, and the Florida coontie. Florida is one of the few areas in the U.S. in which the scrub jay lives. There are approximately 8,000 pairs of scrub jays left in the state. Populations of these birds have declined in recent years due to habitat destruction and habitat mismanagement.

In 1987, there were approximately 2,075 acres of scrub jay habitat left in unincorporated Sarasota County. Not all of this is suitable for scrub jay populations which require several hundred acres of low, open scrub canopy. Periodic fire keeps the scrub canopy in the necessary low and open condition; fire suppression allows the oaks to develop a canopy which provides perches for predatory birds and other species.

According to the Florida Department of Natural Resources, "Scrub outside the Ocala National Forest and other publicly owned lands should be considered to be highly endangered." (70) Sand pine scrub, a habitat of low growing oaks and scattered sand pines, is considered as the "most distinct habitat in Florida and maybe one of the rarest habitats in North America." (71) Sand pine scrub is especially rare in Sarasota County. Less than thirty acres of this unique habitat remain in the Englewood water-district area. Sand pine, sage, numerous asters, and the threatened Florida coontie can be found amongst patches of white sand that were once ancient dune ridges.

The Importance of Fire as a Management Tool

Very serious degradation of native plant and animal communities occur when fire is suppressed in fire dependent habitats. Because frequent fire is essential to most native plant communities in Sarasota County, prescribed burning is now used, and has been used for generations by both preserve managers and ranchers to maintain pine flatwoods, prairies and marshes. These plant communities are flammable by nature. When fire is intentionally excluded, fuels in the form of live and dead plant materials buildup, setting the stage for unintentional, often uncontrollable fires. Naturally occurring wildfires potentially threaten

homes built in these areas. This is especially true as subdivisions are occurring in the rural and semi-rural areas.

Although residential destruction by wildfire in Florida is not as serious a problem as it is in western states, it is a reality. Since 1980, hundreds of Florida homes have been destroyed by wildfire. As in the recent history of North Port wildfires, these fires frequently start under conditions which are difficult to control; for example, during severe drought years. (72) Measures such as adequate buffers and building construction codes specifically designed for wildfire protection can be adopted to address this concern. Also, prescribed ecological burning could be encouraged to maintain native plant communities and reduce hazardous fuel accumulations.

Although an essential practice, prescribed burning must be regulated to minimize the impacts on surrounding land uses and residents. Burning impacts air quality as it releases particulates and carbonmonoxide into the air. These impacts can be minimized through proper coordination with the Sarasota County Air Quality Monitoring Program which regulates open burning through Ordinance 72-37 as amended. The County is currently redeveloping its agricultural and ecological burning permit criteria. These changes are consistent with state criteria and are being added to minimize the impacts of burning on air quality.

There is a growing conflict between rural land practices and suburban land uses. Recent development pressures in the rural areas of Sarasota County seriously threaten the continuance of prescribed burning and, thus, the maintenance of natural areas.

In the past, areas of sparse rural development inhabited by people who understood the role of fire in Florida's natural areas posed no threat to burning practices. However people from urban and suburban areas often have difficulty understanding or tolerating nearby fire and smoke. Environmental education efforts should help to inform the public of the fact that prescribed burn-

ing is both part of the character of Southwest Florida and Sarasota County, and essential to maintaining native plant communities.

To encourage the practice of prescribed burning and minimize its impacts on surrounding land uses, the County could recognize the concept of smoke management buffer zones; especially in the eastern portions of the County near Myakka River State Park, the Ringling MacArthur Reserve, Walton Tract, and surrounding ranchlands. A suggested smoke management zone would extend approximately two miles from the boundaries of areas that depend on prescribed burning for land and wildlife management practices. After smoke management zones are outlined, all development proposals (rezoning, DRI, and special exceptions) within these zones would include acceptance of occasional smoke, a pre-existing condition or character of the area, as a condition for approval. Care taken to plan compatible development in smoke management zones and implementation of the above policy will help insure the future of the County's natural areas which are threatened by encroaching development restricting the necessary management practice of prescribed burning. As part of the management of conservation and preservation areas in urban and semi-rural settings, alternatives to prescribed fire should be researched and encouraged to maintain fire dependent communities.

Habitat Inventory and Analysis

Images are included in each of the habitats identified in the County. These are general features representative of the habitat which, while not as scientific as indicator species or taxonomies, provide a mental image of the habitat.

I. Sandy Coasts

Specific Habitats: beaches, and dunes

Images: shorebirds, sands, sea oats

Characteristics

Almost all examples of the County's beach and dune habitats front the Gulf of Mexico. The few beaches or dunes found on shoals, spoil islands, and along passes and bays are called estuarine (as opposed to Gulf) beaches.

The open sandy beaches, bordered on the west by the Gulf and on the east by sea oat-covered dunes, are familiar and welcome sights to most residents and visitors. The beaches and dunes form a long narrow playground for people, and a dynamic habitat for plants and animals.

Although the Gulf usually appears as a relatively placid body of water--tropical storms notwithstanding--the sandy beaches are in a state of almost constant change, continually adjusting to changes in sea level, wave size, beach shape, shore currents, and sand supply. Consequently, they are so dynamic that rooted plants cannot establish on them. Even the salt-tolerant mangrove cannot gain a foothold on the shifting beach sands.

Close-Up

Beaches. The unvegetated area of the beaches, where most waves break, is referred to as the foreshore. Most of the unvegetated beach lies offshore, to depths of 40 feet. This submerged, offshore beach can erode or grow just as the exposed foreshore grows. Since attempts are seldom made to stabilize the submerged offshore beach, changes in the offshore beach can sometimes depict long-term erosional or accretional trends not visible onshore.

The unvegetated foreshore is bordered on the upland side by the ephemerally vegetated backshore and the more-established dunes. The wave-washed foreshore is a stress-filled, seemingly barren environment. The Coastal Beach soil type is characterized by wave-worked sand and shell. Beneath the sand and shell, coquina clams (*Donax variabilis*) and sand fleas or mole crabs (*Emerita talpoida*) adjust their positions and filter sea water for microscopic prey species. Shorebirds and wading birds stalk the foreshore searching for the invertebrates and fish.

The beach is a major habitat for several rare and endangered species. Least Terns search the waters for small fish. American Oystercatchers, a species of special concern, can be found wading along the shore. The Cuban Snowy Plover frequents the beach while other birds, including gulls and skimmers, use the exposed beach as resting or loafing spots.

Dunes. The vegetated portions of the barrier islands, that lie immediately landward of the bare sand beaches and are dominated by sea oats (*Uniola paniculata*), constitute Sarasota's dunes. These dunes are generally low lying repositories for wind blown sand trapped around the roots of the many salt tolerant species of plants that grow in the dry, nutrient-sparse habitat. Although the conspicuous sea oat is the most common dune plant, many other species are adapted to the salt spray and burying overwash. Beach elder (*Iva imbricata* beach berry (*Scaevola plumieri*), railroad vine (*Ipomea pescaprae*), and even sand spurs (*Cenchrus spp.*) are typical of the dunes. Two threatened species of plants, Sanibel lovegrass and beach creeper (*Ernodea littoralis*) might also be found growing among the more common species of dune vegetation.

The more seaward backshore portion of the dunes is good habitat for ghost crabs (*Ocypode quad-rata*), which along with raccoons (*Procyon lotor*), occasionally feed on eggs of the threatened loggerhead sea turtles (*Caretta caretta*). Manasota, Casey, and Longboat Keys remain important sea turtle egg-laying areas. Other threatened dune-inhabiting animals include the Eastern Indigo Snake and, in some areas, gopher tortoises (*Gopherus polyphemus*).

Values

Recreation. The open beach is an uncluttered area where people may gather to rest or play without being encumbered by dense vegetation. The juxtaposition of the sun-baked beaches to the refreshing Gulf imbues the beaches with unique recreational (and real estate) values. Few would argue with the Florida Department of Natural Resources' conclusion that beaches are the natural recreational resource most in demand.

Habitat. In addition to serving human needs, the sandy coast provides habitat for a number of plant and animal species that thrive nowhere else. Even if the County's total of roughly 35 miles of sandy coast was assumed to be one-eighth of a mile wide, there would still be less than five square miles of beach and dune habitat, or less than 1 percent of Sarasota County. This most valuable smidgen of land, increasingly used--and abused--by people, included all of the County's loggerhead sea turtle nesting habitat, much of Sarasota's nesting and resting habitat for gulls and terns, and feeding habitat for many other shorebird species. The competition for the Gulf beaches is increasing the demand for suitable habitat and thus the ecological values of the estuarine beaches.

Resilient Protection. In addition to irreplaceable recreational and ecological functions, the natural sandy beach and dune system is remarkably persistent in the face of repeated erosive onslaughts. Like the familiar anole lizards ("chameleons") that will part with their tails in order to survive, the beaches and dunes periodically surrender vast quantities of sand to the Gulf. And again like the anole, that grows a new tail, the sandy coast is repaired by its ability to collect and store sand.

Threats

Removal of Vegetation. Whenever dune plants are removed by people, either by driving or walking over them, or collecting them, the ability of the dune system to collect and hold sand is reduced and erosion results. Total habitat destruction may occur. Dune vegetation also acts as a buffer to the more landward, less salt tolerant plants, and removal of seaward vegetation can cause saltspray damage to the less resilient species.

Dune Destruction. When a dune or dune system is leveled, covered, or artificially isolated from the Gulf, its ability to contribute to the formation of a wavebreaking offshore bar during storms is reduced.

Beach Stabilization. Attempts to stabilize (example, rock revetment, groins) the exposed and submerged portions of beaches limit the ability of the beach/dune system to adapt continuously to changing conditions. Sand or stabilized beach is

not free to be moved and stored under favorable conditions and may remain vulnerable to loss under storm conditions. Some attempts at stabilization actually increase erosion while impeding public enjoyment of the wet sandy beach.

Development. These three threats as discussed above indicate that development in beach and dune areas is seldom, if ever, appropriate. In addition to interfering with the natural beach maintenance processes, development all too frequently reduces public access to the beach.

Recreational Use. In addition to causing stress to dunes and dune plants, recreational uses of beaches frequently displace the shorebirds and wading birds that, to various extents, rely upon beach habitat. The human demand for beaches is so great that people even encroach upon isolated estuarine beaches which causes wildlife displacement.

Exotic Vegetation. Man-induced changes to the dune system are not the only causes of dune destruction. Quick invaders of disturbed areas, Australian Pines (*Casuarina equisetifolia*) overtake the native dune vegetation that stabilize the beach sands and protect the secondary dune from storm erosion.

II. Barrier Backbones

Specific Habitats: coastal hammocks, Indian mounds.

Images: sea grape and cedar, wild coffee and gumbo limbo

Characteristics

These islands are typically fronted on the east by mangroves and on the west by beaches and dunes. The highest "spine" of the islands was originally vegetated with coastal hammock and Indian mound vegetation found on the Shell Phase of Arzell Fine Sand and Coastal Beach Ridge soils.

Although coastal hammocks and Indian mounds are sometimes found across the bays on the mainland shores, they appear to be more varied, tropical, and maritime on the islands themselves.

The coastal hammocks and Indian mounds support vegetation that is rare or nonexistent in other parts of the County. Sea grapes, cedars, gumbo limbos, and stoppers are common on the barrier background; cabbage palms and live oaks are also common.

Coastal hammocks, unlike many mainland hammocks, are not always inviting. Isolated from beach breezes and frequently a tangle of vines, shrubs, and cactus, the coastal hammocks and Indian mounds can seem "jungle-like" at times yet these remnants of the barrier backbones are worthy of exploration and appreciation.

Close-up

Coastal Hammock. As a general rule, any hammock immediately adjacent to, or surrounded by, saltwater could be considered a coastal hammock. Because of the wide variation found in them, Sarasota County coastal hammocks might most simply be defined as the original forested areas between the dunes and the mangroves on the barrier islands.

In some places coastal hammocks look like traditional mainland hammocks--cabbage palms (*Sabal palmetto*) and live oaks (*Quercus virginiana*) covered with orchids and bromeliads. Elsewhere, they seem more a crossroads for dune, tropical, and temperate species. Southern red cedar (*Juniperus silicicola*) is quite conspicuous in the coastal hammocks of Sarasota County, but is rarely found south of the County. On the other hand, exotic-sounding tropical plants like saffron plum (*Dodonaea viscosa*), beach creeper (*Eriocaulon littoralis*), and white indigo berry (*Chicococca alba*), all found in Sarasota County, are rare to the County's north. Sea grape (*Coccoloba uvifera*) is a common coastal hammock species, particularly in areas close to the Gulf. Less common are the threatened prickly-apple (*Cereus*) and Florida coontie (*Zamia floridana*).

Sarasota's coastal hammocks support unique mixtures of plants that, in turn, support migrating birds, eastern indigo snakes, and in some places, gopher tortoises (*Gopherus polyphemus*).

Indian Mounds. For frequently identical reasons, the early Indians of Sarasota and the earliest America homesteaders tended to settle along waterways. The remains of their sites are scattered across the County. Indian mounds and other sites—for example, Little Salt Springs and Venice Beach area—form the basis of Sarasota's archaeological record.

In coastal areas, Indians used large amounts of shell. The discarded shells created mounds. The mounds became unique well-drained, calcereous micro-habitats. Typically, these have been colonized by tropical species—gumbo limbo (*Bursera simaruba*) and stoppers (*Eugenia*), for example. For a more detailed discussion of Indian Mounds see the Historic Preservation Chapter.

Values

Education. The unique vegetation and archaeological sites of the barrier backbones are essentially irreplaceable. Just as snow cannot be explained satisfactorily to Florida children who have never seen it, and as people who have never left the Great Plains must wonder about the oceans, a coastal hammock cannot be adequately conveyed in mere words or pictures. One must stand surrounded by strange sub-tropical vegetation, and peer out through the heat to a distant glimpse of water, in order to "experience" the ecological and historical role of the barrier islands. Indian mounds, sometimes dismissed as primitive dredge and fill projects or garbage dumps, are similarly unique.

Habitat. The coastal hammocks play key roles in the migration of many birds that summer further north. They rely upon the fruits and berries of the hammock species in their biennial trips along the coast.

Landscaping. The abilities of barrier backbone species to survive—or even to thrive—on the relatively poor, dry soils characteristic of those areas, ensures their value as coastal landscape plants. Adapted to high temperatures, drought, and occasional storms, they impart a subtropical feeling to the barrier islands.

Threats

Development. Little attention was given in the past to the coastal hammock species in many areas as island tracts were cleared to provide housing for tourists and residents alike. Outright elimination of coastal hammocks has been a long-term trend. In contrast, there has always been, and continues to be, a development contingency that recognizes the shade, privacy, and aesthetic value of the natural coastal hammock.

While undeniably better than outright clearing, selective clearing can open the canopy and expose the hammock to wind, predation, increased drying, and other debilitating factors.

Invasion. The few coastal hammocks remaining in Sarasota are threatened by Australian pine (*Casuarina sp.*) and Brazilian pepper (*Schinus terebinthifolius*).

Desecration. The activities of the so-called individual "amateur archaeologists" or pot hunters and other organized groups, looking for fill or fortune, have desecrated Indian mounds throughout the State of Florida and damage the value of mounds for scientific archaeology.

III. Estuaries

Specific Habitats: mangrove swamps, tidal marshes

Images: mangroves, rookeries, rushes, rails

Characteristics

Mangrove swamps and tidal marshes occupy low-energy shores between the uplands and salty bay waters. They occur along the edges of bays and extend up the mouths of coastal salt water streams.

Often they form islands in the County's bays and estuaries. Estuarine edges are also found along the Myakka River from the southern County line upstream to Snook Haven.

Historically the bayward edges of the mangrove swamps and tidal marshes were regarded as the shore—the edge of the land. But studies show that the estuarine edges belong to the bay and the

shore is their landward edge. Mangroves and tidal marshes are now protected at federal, state and local levels.

Mangroves are considered protected trees both by County Ordinance 83-44 as amended, and state legislation, Chapter 17-27. In addition to regulating the clearing of mangroves, state legislation regulates mangrove trimming. This is particularly important for the red mangrove which can be killed by excessive pruning. The County should consider adopting a mangrove protection ordinance that not only regulates mangrove clearing but also regulates trimming and provides for their restoration.

From the water, mangroves are an even rounded evergreen curtain drawn between the bay and the shore. The dense canopy shades tangled prop roots or a carpet of pencil-like pneumatophores. The peaty soil is usually either wet or underwater.

Tidal marshes look completely different, although they share many of the same functions. This specific habitat is a treeless expanse of gray-green grasses and rushes.

Both mangrove swamps and tidal marshes are areas of high primary productivity in which grazing on live plant material is minimal and there is no direct harvest by man. Dead plant material is stored as peat, recycled in the community or exported to the estuaries as detritus. This detritus--bits of fallen vegetation coated with microorganisms--is the basis for much of the estuarine food web.

Close Up

Mangrove Swamp. Mangroves have many special adaptations which allow them to grow in salt water on shifting, anaerobic substrates. Since mangroves are sensitive to frost, their geographic distribution is limited to tropical climates.

The four species that grow in North America are found only in Florida. Two are intertidal: red mangrove (Rhizophora mangle) and black mangrove (Avicennia nitida). White mangrove (Laguncularia racemosa) and the buttonwood mangrove (Conocarpus erecta), grow adjacent to

those two species, but on higher ground. Two succulents found with mangroves include saltwort (Batis maritima) and glasswort (Salicornia virginica).

In the bays, marine life that feed on detritus from mangrove leaf litter support much of the estuarine food web, including such game-fish as snook, tarpon, and spotted sea trout. Mangroves are underlain by Tidal Swamp soils.

Most of the County's colonial water birds nest in mangroves. The tall trees and dense vegetation form an ideal habitat for these birds. Rare and endangered species that nest in the mangroves and feed in the bay and Gulf waters include Eastern brown pelicans, wood storks, bald eagles, Rothchild's magnificent frigate bird, ospreys; roseate spoon bills; and peregrine falcons. Species of special concern, (for example, Louisiana herons, snowy egrets, and little blue herons) can be found roosting in the mangroves and feeding along the shores of the bay waters.

Tidal Marsh. Tidal marshes are most apparent in the County along the tidal reaches of streams and rivers. Black rush (Juncus roemerianus) is the dominant plant, sometimes mixed with smooth cordgrass (Spartina alterniflora).

The nutrient and sediment-trapping function of tidal marshes on this Coast may be more important than their production of detritus and peat. Tidal marshes also serve to buffer high river or tidal flow pulses. Tidal Marsh soils underlie tidal marshes.

Values

Primary Production/Shoreline Protection. Situated along the land-water interface, the mangroves and marshes depend heavily upon primary nutrients from upland sources and estuarine tides for flushing. In exchange marshes and swamps protect the shore by dissipating wind and waves, and converting upland nutrients into food that fuels the estuary.

Fisheries. Indirectly, seafood that is harvested from the County's coastal waters depends upon the detritus produced by the estuarine edges.

Habitat. Estuarine edges provide important habitat to birds and invertebrates. With few exceptions, all of the occasional breeding colonies of heron, ibis, cormorant and pelican nest in mangroves. In addition, rails, ducks, and numerous other shorebirds rely upon marsh habitat.

Threats

Shoreline Stabilization. When the highly productive estuarine edges are replaced by seawalls and riprap, there is a direct loss in the amount of detritus produced and available to bay organisms. Between 1948 and 1978 there was a 21 percent loss in miles of mangrove shoreline in Sarasota County. Since 1978, the amount of mangrove shoreline has increased by 2 percent.

Dredging and Filling. Filling encroaches on the edges of the bays and tidal streams by replacing productive mangrove swamp or tidal marsh with upland habitat. Because the tides distribute the productivity of the estuarine edges throughout the estuary, filling of small areas can affect the total productivity of a bay.

Mosquito Control. Mangrove swamps and tidal marshes are good breeding sites for saltwater mosquitoes. Urban populations view swamps and saltwater mosquitoes as a nuisance and a potential health threat. Yet mosquitoes have an important role in the complex estuarine food web. Several species of commercially valuable fish depend on mosquito larvae for nourishment. Shallow ditching of coastal swamps and marshes for mosquito control was performed in Sarasota County during the 1950s and 1960s. These measures may not have been successful because evidence exists that mangrove ditching may have actually created mosquito habitat. Mosquito ditching has greatly impacted coastal marshes and swamps. Fill from ditch excavation has been deposited in the estuary, clogging natural tidal channels.

Invasion by Exotic Plants. Among the nuisance exotic plants, Brazilian pepper has proven to be an efficient invader of tidal marshes and small berms within marshes and mangrove swamps. Spoil

piles from mosquito ditching in estuarine edge areas are also prime habitats for Brazilian pepper and Australian pine growing sites.

IV. Brackish Bays

Specific Habitats: seagrass beds, oyster beds, bay waters

Images: black mullet and pink shrimp

Characteristics

Protected from the Gulf by the barrier islands are the bays themselves. Except for the 4 mile width of Sarasota Bay, the bays of the County are long and linear, with estuarine edges clearly visible to the east and west. The bay is an area of great diversity and a unique underwater habitat. Submergent vegetation consists of several species of seagrasses and hundreds of species of algae. Wander out of a boat channel, taking care to protect marine grass beds from propeller damage, and discover the life of the estuary. Find an oyster bar or explore a grassflat. The bays, shallow and turbid compared to Gulf waters, are teeming with life. They are an important habitat for resident migratory birds and the endangered West Indian manatee who also live in the state's rivers and near-shore Gulf waters.

The passes, connecting bay waters to the Gulf, and the coastal creeks, are the lifelines of the estuary. They deliver the raw materials that fuel its tremendous productivity such as flushing and circulation of the tides sediments and nutrients, and salinity dilution from the influx of freshwater from creeks. High summer freshwater flows dilute the salinity of the bays in a seasonal cycle. These cyclic and sometime drastic changes in salinity, together with the changing tides, make the bays a stressful habitat. They do, however, provide refuge to those organism adapted to their cycles.

In addition to the detritus produced by the estuarine edges, the primary producers in the bays are phytoplankton and seagrasses.

Values

Nutrient Transport. In their original condition, waterways rhythmically collected water, nutrients, and sediments from upland runoff and distributed these to contiguous wetlands and bays in a manner that supported productive biological communities. The timing and quantities of flow suited the complex biological cycles of the bays. The water collected and delivered by the waterways and its dissolved and suspended load were and are a major portion of the raw materials that fuel the productivity of the contiguous wetlands and bays.

Diverse Landscape. The waterways of the County have cut through the flatwoods and shaped lowlands along their stream courses. These lowlands support hammocks and wetlands that diversify the County's landscape and habitats.

Myakka Park. The only two large natural lakes in the County are features of the Myakka River. Their combined attributes provide a large share of the great scenic and habitat values of Myakka River State Park.

Scenic Recreation. The coastal streams and the Myakka River provide scenic and recreational values of a different quality than the beaches and bays. These include fishing, canoeing, camping, nature study, photography, and exploring.

Habitat. Waterways provide habitats for freshwater fish, otters, and waterfowl, and some are federally designated critical habitats for the endangered West Indian manatee.

Threats

Pollution. Excess nutrient loads rearrange biological communities in the water, resulting in high numbers of animals that are less useful and sometimes even noxious to man.

Encroaching Development. Residential development too close to streams often results in flood control and shoreline stabilization efforts that permanently damage waterways and their related habitats. Channels and seawalls cut off waterways from their watercleaning wetlands and introduce

urban runoff--this removes the waterway's ability to clean water and simultaneously adds more pollutants.

Mining. Phosphate strip mining within the Upper Myakka watershed could permanently change the surface hydrology of the basin. Downstream effects are unknown; but increased algae blooms, reduction of freshwater flows, and occasional slime spills have all been suffered by the nearby Peace River.

Aquatic Weed Infestations. Channelization and an excess of nutrients can encourage infestations of the exotic aquatic weeds--the water hyacinth (*Elchornia crassipes*), and the hydrilla (*Hydrilla verticillata*). These two plants decrease the diversity of waterway habitats, clog channels, and are detrimental to the scenic and recreational values of waterways. Herbicide control is costly and an added source of waterway pollution.

Channelization. Stream channelization dries out the adjacent water table aquifer, and in the coastal streams allows salt water to intrude farther inland. Channelization also adversely affects the estuaries by shocking them with faster, more silt-laden deliveries of freshwater.

VI. Freshwater Wetlands

Specific Habitats: swamps, marshes, sloughs, wet prairies and heads.

Images: popash, flooding, Florida ducks, wood storks, sandhill cranes, and St. John's wort.

Characteristics

Wetlands adjacent to waterways, and in some cases, wetlands that lack a defined stream channel but serve as wet season waterways, are called "contiguous wetlands." Examples include swamps, marshes, and sloughs.

Contiguous wetlands are again a feature of a flat landscape with seasonal high rainfall. During the rainy season water spreads out in a plain adjacent to streams and flows broadly over the landscape. These plains are either occupied by trees (in which case they are called "swamps"), or are dominated by herbs (in which case they are called "marshes").

"Sloughs" are marshy floodplains lacking defined stream channels but serving as drainageways during the rainy season.

Periodic flooding is a dominant factor for contiguous wetlands. Floodwaters bring nutrients and sediment to these wetlands as well as increased faunal diversity and productivity. Contiguous wetlands are characterized by a high species diversity, with most species adapted to tolerate or escape the arrival of high water levels.

Contiguous wetlands are usually sandy mineral soils with high organic matter in the surface, or they are organic soils. The greater the organic matter content, the more readily they burn. These wetlands are inundated for greater than 6 months annually in most years.

Isolated wetlands (e.g., wet prairies and heads) occur on flatland where the lack of slope and poor soil drainage causes a portion of the rainwater to collect in shallow ponds isolated from surface drainage features. Pine prairies often surround them and, except close to streams and canals, the water table under the wetland is above the ground surface for more than 6 months, in most years. Throughout Sarasota County east of the developed coastal strip, isolated wetlands are common. They are found in their greatest density on the Ringling MacArthur Reserve, in the "heart" of the County. Water reaches wetlands as runoff from surrounding uplands, seepage from the adjacent water table aquifer, and directly from rainfall. Water leaves them only by evapotranspiration, and seepage to a seasonally lowered water table.

Hydroperiod (amount of time underwater) and fire play dominant roles in the vegetative character of the isolated wetlands. These wetlands are usually inundated completely for more than 6 months each year, in most years. Typically, their edges dry out before their central areas. Water may remain in the central zone for 9 to 12 months each year. Because of their earlier drying, the edges burn much more frequently.

The line marking the edge of an isolated wetland is virtually distinct. There is a dramatic change from upland shrubs or hammock trees to wetland grasses or shrubs.

Close-up

Swamps. Swamps in Sarasota County are vegetated by deciduous hardwood trees, or trees that shed their leaves annually. Popash (*Fraxinus caroliniana*) forms monotypic stands in some floodplains, and other swamps have a mixture of wetland hardwoods, including red maple (*Acer rubrum*), black tupelo (*Nyssa sylvatica*), water oak (*Quercus nigra*), and Florida elm (*Ulmus floridana*). Popash is common in wetland pockets along the Myakka River, and mixed hardwood swamps are found along smaller creeks and streams. In Sarasota County swamps are usually found on the Floridana, Delray, Gator, Pompano, Kesson, or Wulfert soils.

Marshes and Sloughs. Sloughs and marshes are open and inviting areas, good routes for traversing scrubby flatwoods country during the dry season. Travel during the wet season can be a thigh or ankle-deep affair. Scrubs are widely scattered. The dominant plant cover is herbaceous: grasses like cordgrass (*Spartina bakeri*) and maidencane (*Panicum hemitomon*) combine with pickerelweed (*Pontederia lanceolata*), arrowhead (*Sagittaria sp.*), cattail (*Typha sp.*), and sawgrass (*Cladium jamaicense*).

Associated soils tend to all be inundated by the wettest season water table. The associated soils for marshes are the same as those for swamps, while slough soils include the Malabar, Pople, and Pineda types.

Wet Prairies. Wet prairies are herbaceous wetlands usually with concentric bands of vegetation marking zones of different hydroperiod. The character of the plant community can vary widely from one isolated wetland to another. The outermost band is composed of grasses and St. John's wort (*Hypericum sp.*). The innermost bands are dominated by taller grasses and flags, notably pickerelweed (*Pontederia lanceolata*) and the arrowhead (*Sagittaria sp.*). Sometimes cowillies (*Nuphar luteum*) and bladderworts (*Utricularia sp.*)

grow in a central pond. Generally the central portions of these wetlands have a longer hydroperiod and a greater organic content to their soils than do the outermost portions. Soils underlying wet prairies in Sarasota County can be Delray, Felda, Pompano, Floridana, Gator, or Holopaw.

Heads. Heads of willow (*Salix caroliniana*) and buttonbrush (*Cephalanthus occidentalis*) are often found in the center or along an edge of otherwise herbaceous isolated wetlands. A "head" used in this context is a monotypic clump of woody wetland plants surrounded by some other association of plants. Willow heads and buttonbrush heads establish themselves in portions of isolated wetlands where fire and drought are excluded to the point where a buildup of organic soils raises the ground surface. Heads are used heavily as rookery sites by herons and egrets. "Bayheads" are broadleaf evergreen wetlands that usually occur surrounded by pine prairies. Bay trees, like mangroves, are a diverse group that all display a common habit of growing in acid, isolated wetlands and having aromatic leaves. Locally they include sweet bay (*Magnolia virginiana*), swamp bay (*Persea palustris*), red bay (*Persea borbonia*), and loblolly bay (*Gordonia lasianthus*). Although it is abundant in all neighboring counties, cypress is uncommon in Sarasota County.

Values

Water Quality. Wetlands, especially marshes and swamps, are well-known for their ability to filter and improve the quality of water flowing through them. Nutrients and sediments in the floodwaters are captured by the life cycles of the wetlands, then flow downstream in a cleaner, less turbid state.

Flood Storage. Water can also be trapped and stored in wetlands, buffering high runoff peaks. A large wetland basin like the one that occurs along the Myakka River in Myakka River State Park and on the contiguous Ringling MacArthur Reserve can significantly absorb floodwaters from upstream rainfall.

Habitat. Wintering birds, particularly waterfowl, utilize marsh and swamp habitat heavily. Bobcats, deer, otters, turkeys, hawks, owls, and ospreys also utilize this habitat throughout the year. The

threatened sandhill crane and the endangered wood stork depend on wetlands for feeding and nesting. Species diversity in contiguous wetlands is greater than any other inland habitat.

Isolated wetlands function as watering holes in an upland landscape, serving the habitat needs of both upland and wetland species. An important habitat attribute is the seasonal drying of isolated wetlands, which concentrates fish and invertebrates in central pools. Wading birds, particularly wood storks, depend upon this concentrated food source for their successful reproduction. Florida sandhill cranes build their nests in mounds of marsh plants in the center of isolated wetlands, thus securing their eggs from predators with watery barriers or mounds. Herons, particularly night herons, utilize heads as rookery sites. Cattle can find valuable winter forage in isolated wetlands.

Cattle Grazing. Especially during the dry months, freshwater wetlands sometimes provide the only opportunity for cattle grazing.

Water Tables. On a flat landscape with seasonal rain and drought, wetlands may seep water collected during the rainy season back to the water table aquifer during times of drought. In areas like the Ringling MacArthur Reserve, a high density of isolated wetlands is synonymous with a high water table aquifer, which is good for native habitats.

Threats

Impoundment, Drainage, Channelization. Wetlands are highly vulnerable to changes in the water table or the flooding character of its adjacent waterway. Prolonged inundation can kill swamp trees; shortening of the hydroperiod reduces habitat diversity and productivity and invites the invasion of weedy tree species. Impoundment, drainage, and channelization can damage wetlands significantly. Human activities have substantially changed the character of contiguous and isolated wetlands in Sarasota County.

Soil Subsidence. When organic wetland soils are exposed to the air by drainage for agriculture or any other purpose, they tend to oxidize, resulting in subsidence of a soil resource that has taken

thousands of years to develop. Special agricultural techniques are required to prevent subsidence. Large acreages of organic soils occur only in Phillippi Creek, Cow Pen Slough, and Howard Creek basins of Sarasota County. Of these, only the mucklands east of Fruitville are being used for intensive agriculture.

Conversion to Pasture. Portions of three major slough systems in Sarasota have been converted to improved or semi-improved pasture. These are Cow Pen Slough, Deer Prairie Slough, and Big Slough. The change from slough to pasture is accomplished by cutting a drainage canal down the middle of the slough and speeding the drainage of heavy rainfall out of the area. Flood-water storage and water quality improvement normally accomplished by the slough are lost, as is habitat value. Water control structures, placed in the canal, can alleviate some of these losses.

Agricultural Drainage. Many isolated wetlands on agricultural lands have been connected to each other and to surface drainage features by shallow ditches dug to improve drainage. This common practice lowers water levels and shortens the hydroperiod of isolated wetlands. Such activities make land easier to ranch; and they also increase the amount of winter forage available on native ranch land. However, this can result in a greater reduction in both the numbers and diversity of wildlife.

Lowering the Water Table Aquifer. Drainage or groundwater pumping activities that result in a lowering of the water table may threaten wetlands and may disrupt the habitat functions which they provide.

VII. Shady Hammocks

Specific Habitats: Mesic hammocks and xeric hammocks

Images: live oaks, cabbage palms, and Spanish moss

Characteristics

Sarasota's hammocks are found scattered throughout the County in close proximity to a wide variety of other habitats. They are readily identi-

able by their relatively dense canopy of cabbage palms and/or oaks. In old, well-established hammocks the leafy canopy is frequently so dense that little light reaches what would elsewhere be called the "forest floor." The result is a relatively open understory that people can move through easily.

Mesic hammocks are subject to flooding in most areas. Xeric hammocks are usually dry. Having characteristics of being open and shady, hammocks are very attractive to people. Spanish moss-draped oaks and slender, skyward-reaching cabbage palms somehow seem to impart a feeling of both the Tropics and the Deep South that is unique to hammocks.

Close-up

Of all plant associations in Florida, the hammocks may well be the most confusing and variable. Originally islands of broad-leafed trees in oceans of pine prairie, hammocks have come to be thought of as broad-leafed forests that are not generally susceptible to burning. Many authorities recognize the existence of "low" or "hydric" hammocks, but since these are similar to heads and swamps, they are covered under the freshwater wetland section of this analysis.

Mesic Hammocks. Mesic hammocks often fringe wetlands and are frequently found between relatively high prairies and lower and wetter sloughs, wet prairies and other wetlands. Typical canopy species include live oak (*Quercus virginiana*), laurel oak (*Q. laurifolia*), and cabbage palm (*Sabal palmetto*), while the understory species include American beautyberry (*Callicarpa americana*), the saw palmetto (*Serenoa repens*), and vines like poison ivy (*Toxicodendron radicans*) and Virginia creeper (*Parthenocissus quinquefolia*). The dominant soil that typifies the mesic hammocks is Bradenton fine sand. Myakka River State Park is a good place to see mesic hammocks, although other examples are scattered throughout the County near sloughs, wetlands and waterbodies.

Xeric Hammocks. Xeric hammocks, developing away from wetlands, usually possess a more open canopy. Xeric hammocks can occur almost anywhere in uplands—for example, in pine prairies-

-where fire is excluded for long periods of time. In the absence of fire, pine prairies are invaded by shrubby wax myrtles (*Myrica cerifera*) heaths (*Ericaceae* family) and oaks (*Quercus* sp.). These invading species are not as fire-tolerant as the pine prairie species; but in the absence of fire they can replace the pine prairies with an upland hammock. Sand live oak (*Quercus virginiana geminata*) is a common upland hammock indicator. Bradenton fine sand supports the xeric hammocks of Sarasota County.

Values

Microclimate. The hammock canopy creates a microclimate--a localized area with a unique climate. The cooler, moister, shadier conditions within hammocks are not only attractive to people, but are also essential for some plant species. People utilize hammocks both for temporary recreational use and for more permanent residential use. Cattle often rest in hammocks and use them as shelter from the elements. The low sunlight condition and "rain" of palm fronds and oak leaves make the hammock floor a difficult place for many plants to survive. But on the trees themselves vines and epiphytes are abundant. Without the hammock microclimate, the overhead world of butterfly orchids, shoestring ferns, and bromeliads would face a difficult struggle for survival with the Florida sun.

Habitat. Oak buds, acorns, cabbage palm berries and other small fruits and nuts provide food for many animals, including wintering and migratory songbirds, turkeys, squirrels, and deer. The hammock also provides shelter for animals and in some cases (particularly along waterways) serves as travel corridors for wide-ranging species like the black bear and the Florida panther.

Transition. Hammocks contribute a great deal of diversity to the landscape, occurring as they frequently do in patches or wetland-hugging stands. Hammocks are common along many of the major streams, sloughs and other wetlands, where they increase the number of habitats and provide an "edge" or ecotone that further diversifies the environment.

Threats

Fire. The moister soils and relatively open understory of the hammocks confer some degree of fire immunity. But fires that manage to take hold in hammocks can do significant damage, particularly to oaks. Because upland hammocks owe their existence to the exclusion of fire, they are naturally quite vulnerable to fire in their early stages of development. The mesic hammocks have somewhat less trouble with fire; but the larger canopied trees are sometimes eliminated by lightning strikes.

Selective Clearing. Magnificent oak hammocks are seldom bulldozed; but the understory is frequently cleared in the process of developing prized residential homesites. Many of the habitat values of the canopy trees remain; but if the hammock's sides or canopy are opened, the unique hammock microclimate is endangered and may be destroyed.

VIII. Pine Prairies

Specific Habitats: pine flatwoods, dry prairie

Images: pines and palmettos, frequent fires

Characteristics

If Sarasota County could be said to have a "background" habitat against which other less extensive habitats stand out, that one would be the pine prairie. From the Gulf of Mexico near the Venice Airport to the northern, eastern, and southern boundaries of the County, pine flatwoods and dry prairies (collectively called "pine prairies") remain the County's most extensive natural habitat.

Located on nearly level, acidic, and poorly drained beds of sand left by receding seas, the pine prairies are characterized by slash pine and saw palmetto. Once almost limitless, extensive areas of pine prairie remain, if somewhat altered by timbering, turpentine production and cattle ranching. Barbed wire fences and cattle are common sights today on the pine prairies, which ranchers call "native range." Covered by predominately sandy soils with moderate permeability and a seasonal high water table within the upper 1 foot, the pine prairie soils limit downward percolation in the wet

season and restrict upward movement in the dry season. The result is a habitat that may be very wet at times, droughty at others.

The pine prairies are perpetuated and rejuvenated by fires. Saw palmettos sprout green leaves with seemingly undiminishing vigor just a few days after a fire. When fires do not occur, shrubby hardwoods invade and ultimately "take over" the habitat by creating upland hammocks.

Close-up

Pine Flatwoods of various types cover between one-third and one-half of the entire State of Florida. Though it occurs, the longleaf pine (*Pinus palustris*) approaches the southern limit of its range in Sarasota. Knowledge of the original and current extent of longleaf pines in the County is incomplete; but the remaining longleaf pines may be found on undisturbed (unlogged), relatively dry flatwood ridges. Further north, longleaf pine and turkey oak characterize a habitat known as high pineland. "Slash pine flatwoods" are typically dominated by such well-known plants as slash pine (*Pinus ellioti*), saw palmetto (*Serenoa repens*), and wax myrtle (*Myrica cerifera*). Eau-Gallie fine sand, Ona fine sand, Smyrna fine sand, Wabasso fine sand, Myakka fine sand, and Ft. Green fine sand frequently support slash pine flatwoods. In the South County cabbage palms (*Sabal palmetto*) are more frequently encountered in the flatwoods. Pople, Bradenton, and Malabar soils support this variant that is sometimes referred to as "cabbage palm flatwood."

Dry Prairies are now commonly and widely thought of as flatwoods without the trees, many original dry prairies were at one time true prairies of grasses and other herbs, notably wire grass (*Aristida stricta*). The current status of grassy dry prairies in Sarasota County is unknown. The Florida Department of Natural Resources regards dry prairies as "highly endangered," due to the Statewide trend of conversion to improved pasture. Because the dry grassy prairies are easier to clear than saw palmetto prairie, any remaining dry grass prairies may be very severely threatened. Saw palmetto prairies are still common in parts of the County, however. They generally include

many flatwood species (but no pines), as well as many members of the heath family (*Ericaceae*), including blueberries, staggerbush, and fetterbush. Dry prairies are frequently found on Myakka fine sand, Wabasso fine sand, Ona fine sand, Eau-Gallie fine sand, Smyrna fine sand, and Ft. Green fine sand.

Values

Agricultural. Most cattle-raising operations in Sarasota County appear to rely heavily upon native range. Pine prairies can be costly to remove and replace with improved pasture. Many ranchers believe in a balance of native range and improved pasture because native range is well-adapted to drought and requires little maintenance.

Aesthetic. The Gulf of Mexico, the bays, and the pine prairies are virtually the only places in mountainless Sarasota where extensive open vistas may be found and enjoyed. Sunrises, sunsets, local and frontal weather systems, moonrises and moonsets, bird migrations and stargazing—all seem improved, somehow, when viewed against a distant horizon.

Habitat. Game species—deer, quail, rabbit—are commonly found in the pine prairies. In addition, a number of relatively rare species are found in this habitat, including the burrowing owl, the Audubon's caracara, and the red cockaded woodpecker. Gopher tortoises, gopher frogs, and Sherman's Fox squirrel, all species of special concern, are known to utilize pine prairies in Sarasota County. The all-to-infrequent bald eagle "frequently" nests below the canopy of mature slash pines.

Threats

Agricultural. Ranchers are paradoxically major forces in both the protection and the demise of the pine prairies. Land-clearing and vegetable-raising often precede the conversion of pine prairies to improved pasture. Unwise timbering can also change or destroy the habitat.

Invasion. In the South County area particularly, the invasion of the punk tree (*Melaleuca leucadendron*) is threatening many remaining

stands of pine prairie-virtually impossible to eradicate and very difficult and expensive to control, the punk tree invasion threatens most known flatwood functions with the possible exception of timber production.

Residential Development. With tracts of undeveloped coastal land selling at premium prices, and wholly unavailable in some areas, developers are being forced to turn to the pine prairies, the hammocks and other inland habitats for new development sites.

IX. High Dry Scrubs

Specific Habitats: sand pine scrub, scrubby flatwoods, and turkey oak ridges

Images: scrub jays, oaks, pines

Characteristics

The early history of settlement in Sarasota County is clearly associated with the "high, dry scrubs"--sand pine scrub and scrubby flatwoods. The communities of Myakka, Fruitville, Englewood, Venice, Nokomis, Osprey, Vamo, Laurel, and the City of Sarasota all were located on high, dry scrubs. The process of settlement has all but obliterated sand pine scrub; scrubby flatwoods are becoming increasingly rare.

The high, dry scrubs are characterized by the threatened scrub jay (a tame, crestless relative of the familiar blue jay), that is found only in Florida and a few western states. The scrubs themselves are usually dominated by pines and dwarfed, tangled-looking oaks. The light or white-colored soils are usually well-drained and deep--generally similar to existing sand dunes. Most scrubs in fact are the remains of prehistoric wind or water-deposited dunes. Sarasota's scrub soils differ from its dune soils in that the latter are alkaline (due to the presence of shell material), while the former are usually acidic. As might be expected, Sarasota's scrubs are near the coast and the major natural waterways.

Close-up

Sand Pine Scrub is characterized by the presence of sand pines (*Pinus clausa*)--short, fast-growing, frequently crooked or leaning pines with short needles. Sand pines are usually killed by fire; but fire clears the ground of competing vegetation and opens sand pine cones, releasing viable seeds. Rosemary (*Ceratiola ericoides*) and abundant epiphytic lichens are also characteristic sand pine scrub plants. Many plants endemic to the State have been found in sand pine scrub, but detailed studies from Sarasota County are lacking. A population of crowned snakes (*Tantilla relicta*) has been recorded and gopher frogs and gopher tortoises occur in the County's scrub areas. Sand pine scrub in Sarasota County appears to be confined to Orsino or Pomello fine sands. Together, these two soils originally totalled less than six tenths of one percent of the County. Possibly the only remaining stand of sand pine scrub is found on the Englewood Wellfield. Every effort should be made to preserve this remaining area. Unfamiliar to many people, sand pine scrub is recognized as one of the "most endangered Florida habitats" by scientists at the Archibold Biological Station at Lake Placid, Florida.

Scrubby Flatwoods lack sand pines and may be dominated by either slash pine or scrub oaks. The scrub oaks include sand live oak (*Quercus virginiana geminata*), myrtle oak (*Q. myrtifolia*), and Chapman's oak (*Quercus chapmanii*). Scrub oaks and scrub jays (*Aphelocoma v. coerulescens*) are good indicators of this habitat. Scrubby flatwoods are usually found near original waterways--Phillippi Creek and South Creek (Oscar Scherer State Recreational Area) are good places to see scrubby flatwoods. Scrubby flatwoods may be found on Cassia fine sand or Pomello fine sand.

Turkey Oak Ridges. Because of the small extent and xeric nature of ridges and turkey oak (*Quercus laevis*) in Sarasota County, the ridges are included in this discussion of the high dry scrub habitat type. At least one patch of turkey oak ridge is known to exist--near the corner of Hauri Road and 42nd Street, on Lakeland soils. Exhibiting what people

from the north may think of as a "true" oak leaf, turkey oak is more commonly found further north in peninsular Florida and the southeast.

Values

Historic. Scrub soils are usually relatively high in elevation, well-drained and close to water. These valuable features (i.e. the barrier islands and the seasonally flooded flatwoods), though not recognized by the early settlers of Sarasota, were avoided for the most part. As the early settlements grew, they were forced to expand into more isolated and more easily flooded areas by the lack of extensive scrub areas in the County.

Scientific. This particular habitat is of great scientific interest. While ornithologists and sociobiologists study the scrub jay, ecologists study the island-like nature of scrubs and documents the habitat's numerous endemic species (those that originated in Florida's scrubs). Scrub's adaptation to fire and to what may be the poorest soils in the world are also of considerable scientific interest.

Recharge. Because scrub soils hold so little water, they typically serve as local aquifer recharge areas, according to the Florida Department of Natural Resources.

Habitat. The relatively high number of threatened, endangered, or rare plants and animals found in scrubs reflects the endemic nature of these species. Many Florida scrub plants and animals are unique--found nowhere else in the world. Because the scrubs of Florida's southwest coast were never extensive (and because they were always so popular for development), the habitat itself must be regarded as endangered.

Threats

Urbanization. With the early settlers choosing scrubs as townsites, many scrub areas have been all but obliterated. Until 1977, the sand pine with the largest diameter in the State stood in a downtown Sarasota vacant lot. Due to the fact that high dry scrubs are neither wetlands nor flood-prone, many agencies identify scrubs as lands suitable for intensive development. Lack of tech-

nical limitations for building on scrubs has tended to obscure the numerous unique values of the rare scrubs. No habitat is more truly Floridian than this one.

Recreational Use. The few remaining examples of high, dry scrub are relatively small and sensitive. The Department of Natural Resources considers foot and mechanized traffic to be a major threat to scrub systems. Acquisition or other forms of preservation without protection may not suffice to preserve those few remaining examples.

Exotic Vegetation. Nuisance exotic vegetation consists of plants which have been introduced into an area which does not naturally contain them. They compete with native species and may change natural vegetation associations, which in turn may upset long established environmental balances. Currently, the major "nuisance" exotics in Sarasota County are:

- Melaleuca or punk tree (Melaleuca leuc-condendron); does not support wildlife.
- Water hyacinth (Eichornia grasserries); clogs and removes dissolved oxygen from bodies of water.
- Hydrilla (Hydrilla verticillato); same as preceding.
- Brazilian pepper (Schinus terebinthifolius); crowds out native vegetation, competes with mangroves, can cause skin irritation.
- Australian Pine (Casurina); disturbs loggerhead sea turtle nesting, precludes understory vegetation, and may cause respiratory problems.

X. Intensive Agricultural Areas

Specific Habitats: groves, croplands, improved pasture, idle land

Images: cattle, citrus, and celery

Characteristics

Cattle ranches produce a large share of the products in Sarasota's local agricultural economy, with much rangeland used as native range. Native range is not considered as Intensive Agricultural use. Improved and semi-improved pastures,

citrus groves, and croplands are considered as such because they all require either clearing, drainage, irrigation, fertilizer, chemical treatments or all of these measures in order to produce a crop. These crops are harvested either directly as citrus, hay, vegetables, or indirectly as cattle grazed on pasture.

Agricultural lands have been displaced in the urbanized coastal strip of Sarasota County. Citrus groves become subdivisions and improved pastures change to golf courses as urbanization creeps eastward. East of the Myakka River range, citrus, improved pasture and crops all occur. However, the majority of intensive agriculture acreage in the County lies between the coastal strip and the Myakka River.

Groves and croplands customarily appear well-drained (many deep drainage ditches are apparent) and orderly. Improved pastures are grassy fields grazed by cattle, sometimes ribbed with shallow parallel irrigation swales.

Close-up

Groves. Citrus in Sarasota County is planted primarily on Myakka, EauGallie, Wabasso, and Smyrna soils. There is some citrus production in the eastern County and in South County, but the great majority of soils appropriate to citrus are located within the urbanizing coastal strip. Many of the local groves are reaching old age; only a few new ones have been established. Additional areas in the eastern and southern sections of the County can be made viable for citrus production if best agricultural management practices are followed. In 1987, a total of 2,121 acres of grove were reported in the County, compared with 1,760 acres in 1978.

Croplands. Sizable permanent vegetable plots in Sarasota County are found on the mucklands near Fruitville. Most other vegetable crops are raised on land leased temporarily from ranchers, used for several seasons of crops, and then turned back to the rancher for planting as improved pasture. Typically, pest problems escalate and soil nutrients deplete to the point that another crop is unfeasible after several harvests. Because of the rising cost of clearing native range sites for this

type of planting, vegetable growers have begun to reuse old sites after four-year intervals in which the land serves as improved pasture. In 1987, a total of 2,851 acres of cropland were reported in Sarasota County, as compared with 1,415 acres in 1978.

Improved/Semi-Improved Pasture is any area that, having been cleared of its native vegetation--pine flatwoods, usually, or dry prairie--has been planted in high-yield forage grasses that are fertilized and limed. Pensacola and Argentine Bahia and Pangola grasses are commonly used on improved pasture. Pastures planted in clover are irrigated. Semi-improved pastures are those which have been cleared but not planted, fertilized, or irrigated. Semi-improved pastures are closer to native range than other intensive agriculture use. Acreages reported for Sarasota County in 1987 were: improved pasture, 20,000 acres; semi-improved pasture and forests 170,000 acres.

Idle Lands are intensive agriculture areas no longer in agricultural use that have grown up in weedy species. Brazilian pepper, dog fennel, and groundsel are typically found on tracts of idle land.

Values

Economic. Local food production supports the agricultural economy and makes fresh seasonal crops available in the local market. Agricultural land uses makes open unimproved land in private ownership economically viable.

Range Management. Both types of pasture can be used to increase the number of cattle produced on rangeland while reducing the grazing pressure on native range, thereby allowing native forage grasses to regenerate.

Habitat. Florida and greater sandhill cranes, as well as Florida burrowing owls, and Audubon's caracara find valuable feeding habitat on improved pasture when it occurs intermixed with native habitats.

Threats

Urbanization/Commercialization. Agricultural lands on the edge of growing urban communities in Sarasota County inevitably suffer urbanization

pressures. High taxes can force agricultural land sale to real estate speculators, and urbanization moves eastward. Many of the better drained soils suitable for citrus have been converted to urban use.

Competition for Water Resources. To some degree, intensive agriculture relies upon the availability of groundwater resources for irrigation during the dry season. Competition for these resources with municipal and mining users may even threaten the viability of agriculture in Sarasota County.

Oxidation of Soils. Muck soils are subject to oxidation and subsidence when used agriculturally. Over six feet of muck was found in the original mucklands. In many areas this has now been reduced to thirteen inches or less. Special agricultural practices including seasonal flooding and planting of a soil-building crop are used in an attempt to stabilize soil depth at this point.

Market and Climate. Intensive agriculture is vulnerable to excessive or untimely rainfall or drought, and to the expense of fertilizers, pesticides and herbicides.

XI. Developed Features

Specific Habitats: dredged canals and channelized waterways, spoil islands, roads and bridges, manmade pits and lakes, golf courses, cleared land, suburban areas and urban areas.

Images: cars, concrete, man-made complexity.

Characteristics

Most County residents probably spend the majority of each day outside of native habitat and within the built environment. These are called "developed features"--a catch-all category for non-native, nonagricultural areas of the County that have been significantly changed by human activities. Developed features include residences, suburban and urban areas, roads, bridges, canals, borrow pits, artificial lakes, golf courses, and virtually all other areas influenced by man.

Close-up

Dredged Canals/Channelized Waterways. It is no exaggeration to state that the demands for navigable waters, waterfront homesites and drainage have resulted in the creation of thousands of miles of man-made or channelized waterways, which in many cases are characterized by poor water quality and modified watershed boundaries. Deposits of spoil from these excavations have replaced native habitat in many areas. These channelized waterways vary widely in their estuarine impact, design, water quality, and habitat value.

Roads and Bridges. Although some species have adapted to include roads' right-of-way and bridges as part of their habitat, roads directly endanger wildlife ("roadkills"), divide habitats and alter drainage patterns. The future location of public and private roadways is a concern in terms of impact on habitats.

Golf Courses may represent the zenith for energy-intensive open space. While providing recreational opportunities for people and habitat for some animals, golf courses create a large demand for water and nutrients and the potential for water pollution. Irrigation design guidelines should be developed for this land use in order to better regulate its water consumption.

Cleared Land. Some areas of the County have been cleared of native vegetation in connection with real estate development--particularly lot sales. Large expanses of this modified habitat are considered to be good marsh hawk and quail habitat, but otherwise seem unjustifiable from a natural value perspective.

Spoil Islands. In the past, the deposition of fill from dredging projects created spoil islands in wetland habitat. The undesirable and unacceptable characteristics often include the loss of primary native vegetation such as mangroves which are displaced by nuisance exotic vegetation. This results in a loss of detritus in the food production system of the estuary.

Suburban Areas. The well kept lawn, like the golf course, is a great consumer of water, nutrients, herbicides, and insecticides. However, suburban neighborhoods (particularly older ones), do provide habitat value in the form of landscape plantings and remnant vegetation.

Urban Areas. The growth of the County's cities has been hard on some habitats, especially the high dry scrubs. While consuming habitats, cities create needs for parks, recreation areas and natural habitats that can lead to public acquisition or protection.

Values

Habitat. As more of Sarasota County becomes developed, wildlife populations are typically displaced. The extent of developed area represents a great loss of wildlife habitat and wildlife diversity. Nature, however, can be preserved in the County's urban areas. By planning and planting for wildlife needs--adequate food, water, shelter, and space--viable wildlife habitats can be created on small developed properties including suburban lots, larger subdivisions, city and County parks.

Native trees such as Southern red cedar, mulberry, sweetbay magnolia, oaks, and pines, and shrubs and vines such as viburnum, wax myrtle, fire bush, trumpet vine, and Virginia creeper will attract a

number of wildlife species including songbirds, hummingbirds, owls, raccoons, opossums, and butterflies.

Provision of shelter for such species as woodpeckers, screech owls, and bluebirds. Though dead trees should be protected, they can be replaced by nestboxes to encourage cavity nesting birds and mammals. Attracting wildlife in urban areas is an exciting project that could be attempted by both young and old.

Threats

Intensification. The basic threat to the natural system values of developed features is the intensification of human use. The juxtaposition of vacant lots, undeveloped tracts, and vegetated areas with more typical urban and suburban uses provides "reservoir" habitats for wildlife, aesthetic values, and often serves an unofficial role as recreation areas. Intensification of urban and suburban land uses is the only alternative to sprawl that incorporates growth. Some techniques to minimize the impact of development--for example, Planned Unit Developments, and Transfer of Development Rights--could become extremely useful in "developed feature" areas (as described in both the Housing and Future Land Use Chapters.)

Planning Options and Techniques

A number of planning options exist for environmental protection and conservation. The best approach appears to be a middle path that recognizes the importance of both the natural environment and man's place therein. This approach has been the basis of the County's environmental efforts and serves as the foundation for the discussion of the natural and man-made systems which are addressed in this Chapter.

Central to this foundation is the concept that certain natural systems and processes are more compatible with built systems than are others. In order to protect all segments of the environment, both natural and built, human activities must not only recognize and respond to limitations imposed upon them by the natural environment, but must also recognize the value of essential natural functions and ensure their continuance. Environmental limitations can frequently be overcome through applied technology (e.g., drainage modifications, specialized construction techniques); however, the modifications to natural systems resulting from these technologies can have far-reaching effects on the environment. Therefore, prior to the utilization of available technologies to overcome environmental limitations, the total potential impacts of the resulting modifications must be considered. Many adverse environmental impacts can be mitigated, and native habitats can be conserved if management guidelines are stringent enough and implemented properly. If the conversion of native habitats are to intensive agriculture (i.e., improved pasture, cropland), "Best Agricultural Management Guidelines," must be followed. It is acknowledged that habitat loss for certain systems is inevitable as growth in the County continues, however, the "Guiding Principles" contained in this Chapter will be adhered to as the conversion of native habitat to residential, commercial, community facilities, or industrial land is being considered. Certain natural systems, due to rarity,

environmental importance, or degree of compatibility with human activities, require protection from human activities that generate adverse impacts. The terms "preservation" and "conservation" are often used to denote the kinds of management and protection necessary.

There are essentially five major techniques available to implement the protection, conservation, and, where appropriate, preservation of Sarasota's natural environment. These techniques may be applied separately or in combination, and again, would be most effective if used within the framework of this Comprehensive Plan.

Public Acquisition

Public acquisition of environmentally sensitive/important lands can be achieved through fee-simple purchase, the purchase of development rights, or through the purchase of easements.

Using fee-simple purchases, the government acquires desired properties. Since the lands which are in the greatest need of environmental protection are also usually under the greatest development pressures, this may become an expensive undertaking.

With the purchase of development rights, ownership of property remains in the hands of the private property owner; however, the government purchases the right to develop (or not to develop) the land, as it chooses. Purchase of development rights is very similar to the purchase of mineral or timber rights.

Purchase of easements is usually used to gain access for maintenance (as in the case of drainage ditches) or as a means to gain access to another piece of property (as with coastal easements for beach access).

The costs of these three public acquisition techniques may vary greatly. Easements are by far the cheapest, followed by purchase of development rights, then fee-simple purchase. Depending upon the particular properties being considered, there may be very little price difference between these later two techniques. Whenever the same end can be achieved using two or all of these levels of public acquisition, the least expensive alternative should be employed. The following paragraphs discuss all three of these levels of public acquisition simultaneously.

Public acquisition of environmentally sensitive/important properties would give the government (the County) complete control of the properties' use and would remove any concern over the "taking issue." However, as noted above, in many cases environmentally sensitive areas are those which are under the greatest pressure for development, and thus, whose costs are highest. For this reason, public purchase should be determined, if financially feasible, on a parcel-by-parcel basis.

A frequently cited disadvantage of public acquisition is that it reduces level of taxes (in the case of development right purchase or purchase of easements) or removes purchase properties from tax rolls altogether. It must be stated, however, that increases in property values, and therefore the overall tax base, could accrue to properties adjacent to publicly acquired tracts.

An additional cost, frequently overlooked when public acquisition is considered, is that of operating and maintaining purchased properties. The latter frequently are in need of "face-lifting" after their purchase. In cases in which environmentally sensitive or important lands are to be designated as recreational areas, the need for operation and maintenance budgeting becomes even more crucial for their protection.

Acquisition may be expensive, but, in some cases, it is the only way to ensure the protection of endangered habitats. In order to fulfill the Apoxsee objective to preserve an adequate sample of the County's native habitats, an endangered lands acquisition program should be initiated. Such a program would require funding and a project coor-

inator. Funding could be pursued through a bond referendum, a mitigation fund, state or private resources, or a combination of all three alternatives. Should the County use this option (public purchase), it would still be competing with individuals wishing to purchase the same properties. This would mean that construction within environmentally sensitive areas would continue until the County was able to purchase them. For this reason, any program which relied upon public acquisition would also need to set priorities that identified which environmentally sensitive or important lands should be purchased first. This effort needs to work in conjunction with post-hurricane redevelopment planning and the establishment of a management plan which recognizes opportunities for developing conservation/preservation corridors.

Incentives

Incentives may be incorporated in existing land development regulations to aid in environmental protection and the preservation of open space, without the imposition of substantial costs upon the property owner or the County. Incentives can be in the form of tax relief, or in the form of increased flexibility in site development through the use of the cluster housing and Planned Unit Development (PUD) techniques. The ability to transfer development rights, as provided for in the Transfer of Development Rights (TDR) process, is also an incentive which can aid in environmental protection and the preservation of open space.

The most common form of tax relief is the taxing of non-urbanized land for agricultural use, until such time as urban development on the land occurs. This relieves some of the development pressures faced by landowners who own properties on the urban fringe, and who wish to retain their land in agricultural use. The retention of land in agricultural use offers the potential of preserving open space, and of providing areas for urban development when and if such lands are needed to accommodate future growth. However, the tax advantages afforded agricultural land do not equal the market value of the land when urban development pressures are great. In addition, agricultural

operations do not always preserve environmentally sensitive areas or native habitats to the same degree as other development techniques. Therefore, a strong incentive is not provided to land owners to encourage the retention of agricultural operations, or to preserve environmentally sensitive areas.

Zoning regulations can also be used to preserve environmentally sensitive lands, if the development rights of such lands are also preserved. The Open Use Conservation (OUC) District is designed to preserve open space and sensitive environmental areas. The District allows the acreage of lands zoned OUC to be counted in the density calculations of adjacent properties zoned for residential use, but does not allow development on the OUC zoned portion of the property. This transfer of density preserves the environmentally sensitive portion of the property, but provides for increased density on the upland or developable portions of the site. Currently, minimal acreage in the County is zoned OUC, and the designation has been primarily applied to the tidal flats, marshes and mangrove islands in Sarasota County's bays. The designation has not been applied to a great degree within the inland portions of the County, due to the fact that use of the cluster housing or PUD development techniques also preserve environmental areas and open space without requiring a separate zone district designation for such lands.

The redistribution of density within tracts of land through the use of the cluster housing and PUD techniques has been the most widely used, and the most viable, method of preserving environmental areas and open space. Under these development techniques, no minimum lot sizes are required and the property owner can "cluster" the units around environmentally sensitive areas without disturbing such areas. Clustering preserves the permitted density, and thus the property rights, for the overall tract of land but requires that a certain percentage of the land be used as common open space for future residents of the development. Areas of native habitat or environmentally sensitive areas are used initially to meet the open space requirements, and often become amenities which aid in the sale of properties in the development. The designation of such environ-

mentally sensitive areas as "Preservation" or "Conservation" on final subdivision plats also ensures that no development occurs within these areas after surrounding properties are sold to individual owners. This is not always the case when environmental areas are incorporated into individual lots, and thus are under individual ownerships. The cluster housing and PUD development regulations require that open space areas be retained in perpetuity, or for a period of not less than 99 years, and that continued maintenance of the habitats and open space areas occur to ensure their long-term viability.

A more permanent method which can be used to protect environmentally sensitive areas and preserve open space involves the recording of a conservation easement, as provided for in Florida Statute 704.06. Conservation easements limit development activities to those provided for in the Statute, and are intended to retain land and water areas in their natural, scenic, open or wooded condition to serve as suitable wildlife habitat and to preserve the environmental characteristics of the particular land area involved. However, the tax advantages associated with such easements are small compared to the market value of lands which face immediate development pressures. Thus, the economic attractiveness of this incentive to landowners does not equal that which occurs if development is permitted.

The use of the TDR concept may provide an incentive to a landowner to record such a conservation easement. Under the Sarasota County Zoning Ordinance, a property owner may file for a Residential Sending Zone (RSZ) designation and a Transfer Permit. This provides for the transfer of some, or all, of the development rights of a piece of property to another area of the County which can better accommodate urban development. Upon approval of a Transfer Permit, the property owner must record a conservation easement on the property, as provided in Florida Statute 704.06. The TDR process provides for the retention of some of the development rights on the property, if the owner elects to preserve those rights, or allows the owner to use the rights on another piece of property designated a Residential Receiving Zone (RRZ). The property owner is also allowed to sell

the development rights which have been removed from the land to another individual for use on a property designated RRZ. The incentive for the use, or purchase of such development rights is a 25 percent increase in density on the parcel of land designated RRZ.

While the TDR concept was incorporated in the Zoning Ordinance in 1981, its use has not been widespread. The problems associated with the transfer of development rights involve the fact that it is a new concept which is unknown to many developers, the differences in land values of properties, and the perceived incompatibilities associated with increased density on RRZ parcels in developed areas. For example, a property on a barrier island may qualify as a RSZ for the transfer of development rights. However, the market value of lands on a barrier island greatly exceed that which can be recaptured through the reuse, or sale, of development rights on an inland parcel even with a 25 percent increase in density. Thus, the owner of property on a barrier island is usually unwilling to remove the development rights from that property. Conversely, a property owner who wishes to increase the density on an inland parcel through the RRZ designation must first apply for the zone designation and may face public opposition to the proposed increase in density because of the existing development characteristics of surrounding residential properties. The potential opposition to the increase in density, the costs associated with the rezoning process and the purchase of the development rights, and the fact that the process remains relatively "unknown" may preclude its use by certain developers.

Options for consideration by the County to encourage the use of the TDR process include County initiated rezonings on properties that qualify for the RSZ or RRZ district and greater incentive than the 25 percent increase in density currently allowed on the RRZ parcel. Properties on barrier islands could also be allocated more development rights than permissible by the underlying zoning or subdivision plat to offset the differences in value previously mentioned, as an incentive to encourage their transfer to areas more suitable for new development.

Regulations

Regulations are a standard and traditional response to problems. While regulations may be developed in many forms, they generally fall into the following major categories:

Regulations setting environmental standards and requiring compliance with these standards, often in the form of discharge limitations. This form of regulation has been the major thrust of much federal legislation, including Section 208 of the Federal Water Pollution Act Amendments of 1972 (Public Law 92-500). Problems often occur in establishing standards because the actual levels are not known. Enforcement of discharge limitations is difficult and the actual impacts of discharged pollutants on the environment are difficult to determine. Even with these problems, this form of regulation can be effective if the sources of pollution can be identified and violators required to mitigate.

Protection of environmentally important areas and species through the establishment of penalties for harming them is another common form of environmental regulation. Tree protection ordinances are a good example. The effectiveness of such regulations depends upon their feasibility of administration, the ability to identify and prosecute violators, and the severity of the penalty. Protection definitely is not achieved if the economic rewards for violating the regulations greatly exceed the penalties for doing so.

Land use regulations can be designed to control the type and amount of various land uses. The amount of control to protect the environment may vary from total prohibition of all development to simple development guidelines. Coastal setback lines and zoning ordinances are examples of land use regulations. Cost associated with administering land use regulations frequently are passed on to those who apply for development orders.

Design standards are often found in regulations requiring that specific actions and features be included in projects. Subdivision regulations requiring a fifty-foot vegetative filter strip as a buffer between developments and waterbodies are good

examples of design standards addressing water quality problems. Because design standards are by necessity specific, they often lack flexibility, and may stifle innovative approaches. They do, however, have the advantage of clearly stating requirements and making compliance with regulations straightforward.

Performance standards provide a measure of the results to be achieved, but do not state how those results are to be accomplished. This allows for considerable flexibility in developing ways to meet the performance standards, and encourages innovation. Persons attempting to comply with the regulations must, however, convince those in charge of implementing administering regulations that the method to be used in meeting the performance standards will in fact be effective. An ordinance that required that essential natural processes be maintained when developing an environmentally sensitive area would be an example of a performance standard-based regulation.

Technological Improvements

Programs and technological innovations for the protection or improvement of the natural environment of Sarasota County fall into these four categories: revegetation, protection, enhancement, and technological improvement.

Large-scale revegetation/habitat restoration projects can be limited by the lack of an ongoing maintenance/management program which is needed to accomplish the restoration activities, and the frequent inability to ensure that reclaimed areas will remain so in perpetuity. With respect to many small scale revegetation projects follow-up management programs are often not required. Parking lots, with mounds of dirt where trees once were planted, testify to this problem.

The lack of technical information is gradually being filled as more attention is paid to the subject of restoration/revegetation. True restoration of wetlands--especially hardwood swamps, bay/maple and cypress heads--have been limited, yet the success of similar projects with beaches, dunes, bays, and estuaries are more prevalent. However, large-scale restoration efforts employ large capital

outlay. For this additional reason, reliance upon restoration of the vegetation cover of impacted areas should be viewed as a "last ditch effort" for already impacted areas.

Protection programs involving environmentally sensitive areas have met with better success. Within Sarasota County, dune and beach protection has been attempted by providing beach walkovers (thus helping to keep people off the dunes) and by restricting vehicular traffic from these areas with physical barriers (as seen at Caspersen Beach). Using protective boardwalks, the State of Florida and the Audubon Society have developed recreation centers in cypress and wetland areas without adversely affecting these areas (Highlands Hammock State Park and Corkscrew Sanctuary, respectively). Such boardwalks were to be constructed at Caspersen Beach in 1980. Physical solutions to the protection of sensitive areas can be both inexpensive and effective.

Enhancement programs have also been successful at improving the fate of environmentally sensitive areas. Reforestation and the creation of artificial reefs are good examples. (In both these examples, however, periodic and in-depth technical inspections are absolutely necessary to maintain an effective cost/benefit ratio.)

Finally, technological innovations have, and will continue to be, important to habitat preservation. Overall environment quality is upgraded through the reduction of levels of air pollution and the improvement of the quality of wastewater and stormwater runoff.

Pollution from stormwater runoff affects the quality of receiving waterbodies including the estuarine environment. The costs associated with addressing the control and reduction of pollution from stormwater runoff, as well as controlling runoff quantity, are expected to be substantial. Important operations and maintenance functions also must be financed.

Establishment of a Stormwater Environmental Utility would provide an equitable and reliable funding source for addressing stormwater runoff problems. The types of projects and operations that could be financed by the Stormwater Environ-

mental Utility include detention facilities designed to control both water quantity and quality, maintenance of detention facilities, aquatic plant control, erosion control activities, removal of sediment deposits, and preparation of basin stormwater management master plans.

Other technological activities would include environment monitoring programs. These would allow the County to evaluate existing levels of environmental quality, as well as to determine what impacts the expansion of human activities might have on a natural system.

Thus, improving quality of discharges into the air and water and upon the land, as this alternative allows, results in the enhancement of overall quality and the freedom of the natural filters, "designed" through millions of years of trial and error, to function.

Environmental Education

The primary value of education lies in its ability to convey the important relationship between ecosystems and the overall environmental quality of a place (in this case, Sarasota County); to instill an awareness of how delicate environmental

balances can be disrupted or destroyed; and to provide information for the improvement of areas that have been degraded. The development of environmental education programs implies a continuing commitment to maintaining and restoring certain environmental qualities.

The development of the Ringling MacArthur Reserve for potable water resources presents a unique opportunity for the County to become further involved in environmental education. Educational opportunities that highlight the importance of native habitat to wildlife species is essential to the preservation of both species and habitat. An interpretive center and a series of environmental educational activities such as birdwatching, wildlife photography and scientific study might be established on the Reserve as part of an environmental education program.

Any community-oriented environmental education program sponsored by the County needs to be extended and tailored to a range of age groups. Properly pursued as an environmental commitment to the future, the alternative of developing an environmental education program offers the attractive option of establishing broad-based support for continuation of environment stewardship.

Guiding Principles (Guidelines) for Evaluating Land Development Proposals in Native Habitats

The following Guidelines pertain to the native habitats found in Sarasota County and will be applied by Sarasota County staff to assist in the evaluation of land development proposals in conjunction with the descriptions of those habitats discussed in the Environment Chapter under the section entitled, "Habitat Inventory and Analysis." Unless stated otherwise, any finding of fact required by these Guidelines shall be made by County staff. These Guidelines are divided into two parts for each habitat. The first, "Environmental Values and Functions," is a listing of the major natural values and functions of the specific habitat. The second part, "Management Guidelines," shows how the values and functions listed in part one can be conserved.

"Use of 'shall' or 'must' in the guidelines is intended to connote a mandatory requirement."

I. Sandy Coasts

A. Specific Habitat: BEACHES

1. Environmental Values and Functions:

- a. Role in shore processes, especially natural shoreline stabilization.
- b. Habitat for shorebirds, wading birds, and invertebrates.
- c. Nesting site for sea turtles.

2. Management Guidelines:

- a. Artificial shoreline stabilization techniques (e.g., seawalls, groins, etc.) that interfere with the natural beach processes shall be discouraged.
- b. Manage public beaches to protect wildlife habitat functions as well as for recreational purposes.
- c. Maintain lateral access along the beach for public use.

B. Specific Habitat: DUNES

1. Environmental Values and Functions:

- a. Role in shore processes, especially natural shoreline stabilization.
- b. Habitat for dune vegetation and nesting site for sea turtles, birds, and other wildlife.

2. Management Guidelines:

- a. Dunes and dune vegetation shall be preserved. Public acquisition is recommended for dunes not protected by the State of Florida Coastal Construction Control Line and/or County Ordinance 79-03, as amended.
- b. State and County Ordinances restricting motor vehicle operations on dunes and beaches should be strictly enforced.
- c. Pedestrian traffic across dunes should be controlled to minimize adverse impacts (i.e., walkovers and barrier vegetation should be utilized).
- d. Encourage the revegetation of dunes that are subject to erosion.

II. Barrier Backbones

A. *Specific Habitat: COASTAL HAMMOCKS*

1. Environmental Values and Functions:

- a. Habitat for numerous tropical species.
- b. Habitat for gopher turtles and migratory birds.
- c. Tropical vegetation.

2. Management Guidelines:

- a. Clusters of understory and overstory coastal hammock vegetation should be left undisturbed.
- b. Removal of exotic vegetation should be encouraged.
- c. Due to the rarity of this habitat in Sarasota County, undisturbed tracts of coastal hammock should be preserved.

B. *Specific Habitat: INDIAN MOUNDS*

1. Environmental Values and Functions:

- a. Tropical vegetation that is endemic to Indian Mounds.

2. Management Guidelines:

- a. Indian Mound vegetation should be preserved.
- b. Excavation of Indian Mounds should be prohibited except for scientific purposes by scientists authorized by the State of Florida.

III. Estuarine Edges

A. *Specific Habitat: MANGROVE SWAMPS*

1. Environmental Values and Functions:

- a. Nutrient conversion/detritus production contributing to local fisheries.
- b. Shoreline protection.
- c. Breeding areas for herons, ibises, cormorants, pelicans, egrets and other species.
- d. Protective areas for immature stages of valuable fish and shellfish.

2. Management Guidelines:

- a. Mangrove swamps shall be preserved or enhanced.
- b. Dredging and filling of mangrove swamps shall be strictly prohibited.
- c. Adopt a Mangrove Tree Protection Ordinance.
- d. Removal of exotic vegetation, especially Brazilian peppers, should be encouraged.
- e. Previously cleared mangrove swamps should be restored.
- f. Encourage education programs oriented toward protection of this habitat.

B. *Specific Habitat: TIDAL MARSHES*

1. Environmental Values and Functions:

- a. Nutrient conversion/detritus production.
- b. Habitat for shorebirds, ducks, and other wildlife.
- c. Settling areas for sediment carried by surface water systems (creeks, canals, etc.).
- d. Nursery area for fish and wildlife.

2. Management Guidelines:

- a. Tidal marshes shall be preserved or enhanced.
- b. Dredging and filling of tidal marshes shall be strictly prohibited.
- c. Removal of exotic vegetation, especially Brazilian peppers, should be encouraged.

IV. Brackish Bays

A. *Specific Habitat: SEAGRASS BEDS*

1. Environmental Functions and Values:

- a. Primary food production (i.e., nutrient conversion/detritus source).
- b. Refuge for young shrimp, other invertebrates, and fishes.
- c. Stabilization of bottom sediment.

2. Management Guidelines:

- a. Preserve the remaining marine grassbeds in Sarasota County.
- b. Prohibit dredging except for navigational channel maintenance of future County approved navigation channels and beach renourishment projects.
- c. Prohibit filling.
- d. Develop and implement restrictions on stormwater discharge.
- e. Monitor the conditions of marine grassbeds and restrict power boat traffic in areas where propellers and wakes are found to cause significant disruption.
- f. Strive to enhance water quality to encourage the re-establishment and proliferation of seagrass bed habitat.
- g. Increase awareness of the public, especially boaters, as to the sensitivity and importance of this habitat, through public education.

B. Specific Habitat: OYSTER BEDS**1. Environmental Values and Functions:**

- a. Role in nutrient cycle.
- b. Food production.

2. Management Guidelines:

- a. Improve water quality by limiting or eliminating pollution and its causes (according to *Apoxsee's* Public Facilities Plan).
- b. Encourage wise use (i.e., oyster beds open to harvesting not being over-harvested).
- c. Maintain natural freshwater flows entering bays.

C. Specific Habitat: BAY WATERS**1. Environmental Values and Functions:**

- a. Critical habitat for all forms of marine life.
- b. Nursery ground and refuge for young marine organisms.
- c. Utilized by endangered or threatened species including eagles, ospreys, pelicans, and manatees.

2. Management Guidelines:

- a. Prohibit dredging except for navigational channel maintenance and the development and maintenance of future County approved navigation channels and beach nourishment projects. Culverts or similar improvements designed to improve water quality through improved tidal flushing may be considered.
- b. Prohibit filling.
- c. Strive to improve water quality while maintaining natural freshwater flows entering bays. (see IV.B.2.a, above).
- d. Restrict boat access in areas of marginal navigability to reduce bottom scour.

V. Original Waterways***A. Specific Habitat: COASTAL STREAMS*****1. Environmental Values and Functions:**

- a. Freshwater and nutrient transport to bays.
- b. Habitat for alligators, otters, manatees, and fish.
- c. Role in hydrologic cycle including evaporation.

2. Management Guidelines:

- a. Adopt a shoreline protection ordinance establishing a requirement for vegetation buffers for all new construction and which prohibits additional artificial shoreline stabilization and channelization of water-courses.
- b. Dredging shall be prohibited except for the periodic maintenance of existing drainage canals and the development and maintenance of future County approved navigational channels.
- c. Strive to reduce pollution entering coastal streams.

B. Specific Habitat: THE MYAKKA RIVER

1. Environmental Values and Functions:

- a. The only river, and major surface water system, in Sarasota County.
- b. Freshwater and nutrient transport to Charlotte Harbor.
- c. Habitat for alligators, manatees, otters, fish, and waterfowl.
- d. Role in hydrologic cycle including evaporation.

2. Management Guidelines:

- a. Prohibit dredging and filling in the Myakka River.
- b. Adopt a shoreline protection ordinance establishing a requirement for vegetation buffers for all new construction and prohibiting additional artificial shoreline stabilization and channelization of water-courses.
- c. Strive to reduce pollution entering the Myakka River.
- d. Closely monitor the effects of phosphate mining and other potentially detrimental land uses.
- e. Establish a special conservation management area that includes the Myakka River and appropriate lands adjacent to the River to ensure the future conservation of the Myakka River and its watershed.

- c. Critical habitat-Wetlands provide essential food and shelter for numerous species of animals, provide breeding and spawning areas for wildlife and fishes, and provide critical habitat for numerous plant and animal species with special protection status.
- d. High primary production-Wetlands contribute to the elementary levels of the food cycle.
- e. Role in the hydrologic cycle-Wetlands contribute to the hydrologic cycle through evaporation and evapotranspiration.
- f. Recharge-Some wetlands recharge the surficial water table.
- g. Erosion control-Wetlands, especially those bordering coastal and inland waterways, stabilize land surfaces and control erosion.
- h. Recreation-Wetlands provide opportunities for recreation in the form of fishing, bird-watching, hunting, etc.

2. Management Guidelines:

- a. Swamps and Heads-These habitats exhibit a particularly high degree of environmental importance and are relatively rare in Sarasota County; therefore, Swamps and Heads shall be preserved, and should be restored where practicable.
- b. Marshes, Sloughs, and Wet Prairies (referred to collectively as "wetlands") .
 - (1) Information provided on the existing hydroperiod in each wetland shall be the responsibility of the applicant and shall be determined prior to any alteration according to methods approved by County staff. Post-development hydroperiods shall approximate those determined during predevelopment investigations.
 - (2) Vegetation shall be protected in areas subject to seasonal water level fluctuations. Routine maintenance and clearing of ditches and canals specifically designed for channeling of stormwater runoff, will not be prohibited by these Guidelines.

VI. Freshwater Wetlands

A. Specific Habitats: SWAMPS, MARSHES, SLOUGHS, WET PRAIRIES, and HEADS

1. Environmental Values and Functions:

- a. Water filtration-Wetlands can improve water quality by filtering overland flow and by assimilating nutrients contained in runoff.
- b. Natural floodwater storage-During drier periods of the year, wetlands can attenuate some volume of floodwaters.

- (3) Flow of water within and through contiguous wetlands shall not be impeded. In areas where roadways must cross contiguous wetlands, structures of appropriate dimensions must be utilized so that natural flow patterns will be maintained.
- (4) In cases where a wetland is no longer capable of performing desired environmental functions and providing defined environmental values, or in cases where no other reasonable alternative exists other than disrupting a wetland, some alterations may be allowed. All alterations in wetlands which result in a loss of habitat, must be mitigated on at least a one-to-one basis. The success of mitigation shall be monitored by the applicant or his designees. Except as otherwise authorized herein, wetlands shall not be filled, drained, dredged, or converted to lakes or borrow pits.
- (5) Stormwater runoff from impervious surfaces must be pretreated prior to its discharge into natural wetlands. Pretreatment may be in the form of underdrains, grassed swales, lake overflows, or other approved methods. Artificial introduction of water into a natural wetland must be done in a manner that will prevent excessive sedimentation (e.g., the use of spreader swales should be considered). Swales which route stormwater into wetlands shall be stabilized with sod or by other appropriate means as soon as possible.
- (6) If fill is stockpiled near a wetland, appropriate sediment control measures (e.g., hay bales, silt screens, etc.) shall be employed to prevent sedimentation within the wetland. When building sites adjacent to wetlands are elevated by filling, the same erosion control requirements apply and the fill must be stabilized as soon as possible.

- (7) Buffers of existing upland vegetation up to 30 feet wide may be required around all or portions of wetlands to protect the values and functions of those systems from adverse impacts of development.

VII. Shady Hammocks

A. Specific Habitat: MESIC HAMMOCKS

1. Environmental Values and Functions:

- a. Wildlife corridors.
- b. Natural flood attenuation and filtration of flood waters.
- c. Habitats for epiphytic vegetation.
- d. Food source and shelter for wildlife.
- e. Specialized microclimate due to shade and moisture.
- f. Ecotone or edge-effect providing maximum environmental diversity.
- g. Provide a buffer between upland development and wetlands, lakes, and watercourses.

2. Management Guidelines:

- a. Maintain existing seasonal water level fluctuations, hydroperiods, and natural drainage conditions.
- b. No more than 25 percent of a mesic hammock on any lot or parcel shall be removed provided that a buffer of existing trees and understory fifty feet wide shall remain undisturbed between development and any wetland or top of bank of any watercourse. Clearing the maximum acreage will be allowed only if no significant loss of function would be incurred.
- c. Flood elevation construction requirements shall be met with the use of pilings or stemwalls. Filling and or clearing understory vegetation within preserved areas of mesic hammocks shall be prohibited, except that limited filling, and clearing of the understory may be allowed to accommodate nature trails.

- d. Special protection shall be provided for mesic hammocks along the Myakka River and its tributaries. The area of required buffers may be widened along these corridors.

B. Specific Habitat: XERIC HAMMOCKS

1. Environmental Values and Functions:

- a. Food source and shelter for wildlife.
- b. Ecotone or edge-effect providing maximum environmental diversity.

2. Management Guidelines:

- a. Special emphasis should be placed on meeting County open space requirements by conserving areas of xeric hammocks.
- b. Canopy and understory vegetation shall be maintained in conservation areas.

VIII. Pine Prairies

A. Specific Habitat: PINE FLATWOODS

1. Environmental Values and Functions:

- a. Pine flatwoods are the predominant native habitat in Sarasota County and are, therefore, the major habitat for many species of wildlife, including such rare species as Audubon's caracara, the burrowing owl, the red cockaded woodpecker, and the bald eagle.

2. Management Guidelines:

- a. Special emphasis should be placed on meeting County open space requirements by conserving areas of pine flatwoods.
- b. Canopy and understory vegetation shall be maintained in conservation areas.
- c. Recognize fire as an important management tool in the maintenance of this habitat.

B. Specific Habitat: DRY PRAIRIES

1. Environmental Values and Functions:

- a. Habitat for Audubon's caracara.
- b. Native range.

2. Management Guidelines:

- a. Special emphasis should be placed on meeting County open space requirements by conserving areas of dry prairie.

C. Specific Habitat: GRASSY DRY PRAIRIE

1. Environmental Values and Functions:

- a. No grassy dry prairies have been identified in Sarasota County. These habitats are designated by the Florida Department of Natural Resources as being highly endangered to conversion to improved pasture.

2. Management Guidelines:

- a. If grassy dry prairies are identified in Sarasota County, they shall be preserved.

IX. High Dry Scrubs

A. Specific Habitat: SAND PINE SCRUB

1. Environmental Values and Functions:

- a. Rare habitat for many threatened or endangered species.
- b. According to the Florida Department of Natural Resources, this habitat is highly endangered.
- c. Possible recharge areas for artesian aquifers.
- d. Unique scientific and education opportunities.

2. Management Guidelines:

- a. All sand pine scrub shall be preserved.
- b. Access should be restricted except for scientific and education purposes due to the sensitivity of the endemic vegetation to pedestrian and vehicular traffic.
- c. Recognize fire as an important management tool in the maintenance of this habitat.

**B. Specific Habitat: SCRUBBY
FLATWOODS****1. Environmental Values and Functions:**

- a. Habitat for endangered and threatened species including scrub jays, gopher tortoises, indigo snakes, Florida mouse, sand skinks and Florida coontie.

2. Management Guidelines:

- a. Scrubby flatwoods areas used by protected species shall be preserved.
- b. Special emphasis should be placed on meeting County open space requirements by conserving areas of scrubby flatwoods.
- c. Maintain both canopy and understory vegetation in conserving scrubby flatwood areas.
- d. Recognize fire as an important management tool in the maintenance of this habitat.

**C. Specific Habitat: TURKEY OAK
RIDGES****1. Environmental Values and Functions:**

- a. Habitat for endangered and threatened species including scrub jays, gopher tortoises, indigo snakes, Florida mouse, and sand skinks.

2. Management Guidelines:

- a. Turkey oak ridges shall be preserved.
- b. Maintain both canopy and understory in conserving areas of turkey oak ridges.

Environment Plan

Intent

Sarasota County will continue to ensure that environmental quality is maintained and, where possible, enhanced. The purpose of Apoxsee's Environment Chapter is to provide guidance in conserving, maintaining, and where necessary, restoring the natural environment of Sarasota County. In recognition of the close inter-relationships between the coastal and inland environmental systems, the Coastal Zone Management Element and the Conservation Element, required by the Local Government Comprehensive Planning and Land Development Regulation Act, have been combined to form this Chapter on the Environment.

The Environment Chapter is unique within Apoxsee in that its primary focus is upon the natural systems of Sarasota County, whereas Apoxsee's other Chapters focus primarily upon man-made or built systems, such as roads, water and sewer facilities, or housing. These natural systems have existed prior to human habitation, and continue to serve as the foundation for life itself.

In order for these natural systems to be conserved, maintained, and where necessary, restored, the other Chapters of Apoxsee must be coordinated with the Environment Chapter's Plan. This is especially true of the Future Land Use Chapter, which is the culmination of all Apoxsee's Chapters, and serves as a guide to the future physical development of the area. Therefore, the Environment Chapter and the Future Land Use Chapter are intended to be used together, and land development proposals must conform to the relevant Plan sections of the Environment Chapter as well as those sections of the Future Land Use Chapter.

In addition to the Plan section of the Environment Chapter, the section entitled "Guiding Principles (Guidelines) for Evaluating Land Development Proposals in Native Habitats" provides criteria to be used in evaluating development proposals and decision making concerning land use changes in native habitats. A discussion of "exotic vegetation", together with a species list of selected "nuisance vegetation" is provided in the Appendices of the Environment Chapter.

Goal 1

Conserve, maintain and, where deemed necessary in the public interest, restore the barrier island systems of Sarasota County.

Objective 1.1

Construction activities on or off the shore of the Barrier Islands shall not detrimentally impact the barrier island system.

Policy 1.1.1.

Continue to enforce Sarasota County Ordinances pertaining to construction seaward of the State Coastal Construction Control Line and Barrier Island Pass Hazard Line.

Policy 1.1.2.

No hardening of Gulf beaches or passes shall be allowed unless such hardening has been found to be in the public interest.

Policy 1.1.3.

By December, 1989, the County shall determine what course of action shall be taken regarding Midnight Pass.

Policy 1.1.4.

The County shall discourage offshore petroleum development activities and will not favorably consider rezoning or other governmental actions to provide ancillary support facilities onshore.

Objective 1.2

To exceed the current acreage of public beaches and dunes through the year 2010 in accordance with Policies established in the Recreation and Open Space Plan.

Policy 1.2.1.

Continue to fund the County's beach/dune protection and restoration program applicable to all County-owned Gulf shoreline properties.

Policy 1.2.2.

Continue to protect beaches, dunes, and coastal vegetation from vehicular traffic and pedestrian traffic by providing vehicular parking, dune walkovers and by encouraging bicycle use through the provision of bicycle paths and storage racks.

Policy 1.2.3.

By 1991, adopt a Beach and Inlet Management Plan with a monitoring program to:

- assess the nature and extent of coastal erosion;
- monitor the effectiveness of beach restoration programs;
- determine the effect of storm events on sand movement;
- identify dominant coastal processes which would aid in evaluating permit applications and coastal decision making;
- monitor sea level rise;
- identify the impacts of modified inlets on historic erosion rates;
- identify beach segments with common erosion/accretion histories;
- recommend beach management strategies for each segment; and
- develop a long term strategy for areas of chronic erosion.

Objective 1.3

Maintain existing access to Gulf and bay waters for a variety of water-dependant activities and if necessary, provide for additional purchases where feasible.

Policy 1.3.1.

Extend every effort to increase the number of public beach access points and parking spaces.

- Consider meeting the existing parking deficiencies at beach access points and facilities through a variety of alternatives as proposed in the Recreation and Open Space Chapter and Mass Transit Chapter.
- Acquisition of beach and dune property will take place in accordance with the Recreation and Open Space Chapter criteria and in conjunction with hurricane mitigation/post-disaster planning efforts.
- Require public shoreline access in all County-sponsored coastal development projects (for example, beach renourishment).

Policy 1.3.2.

When new coastal development is proposed, provision will be made for lateral public beach access to the wet sand beach where beach hardening practices are being proposed.

Policy 1.3.3.

Identify areas suitable for water-dependent/water-related uses and activities such as marinas, boat ramps, boardwalks, jogging paths, and waterside park trails. Develop techniques to encourage development and expansion of water-dependent uses in these areas and discourage any conversion of water-dependent uses to non water-dependent uses.

Policy 1.3.4.

Encourage the construction of dry dock storage as compared to wet slip docking facilities and encourage this storage upland of the Gulf and bay shorelines.

Policy 1.3.5.

Establish regulations which address the location, planning, design, parking, and construction of marinas and boat ramps. Recommendations for marina facility siting will minimize impacts on estuarine waters and the endangered West Indian manatee. The expansion of existing marinas in suitable locations is preferred over the construction of new facilities. Marinas and boat ramps shall not be located in or adjacent to areas of significant manatee habitat.

Goal 2

To protect and enhance wherever possible, the quality of the estuarine environment throughout Sarasota County.

Objective 2.1

To improve estuarine water quality by the year 2000.

Policy 2.1.1.

By 1991, conduct a baseline assessment of water quality in County coastal streams, bays, and estuaries including the Myakka River and its tributaries. Establish specific water quality parameters that will be improved by the year 2000.

Policy 2.1.2.

Continue to prohibit dredge and fill activities in the Gulf of Mexico, bays, rivers, and streams of the County except to maintain existing drainage canals, existing or future County-approved navigation channels and beach nourishment projects, and silt or obstruction removal, when environmentally sound. The dredging of new navigation channels other than those just described shall be prohibited.

Policy 2.1.3.

Develop techniques to orient boating activities to suitable areas and restrict boat access in areas of marginal navigability in order to reduce bottom scour.

Policy 2.1.4.

Marinas shall contain sewage pump out facilities and for those which sell petroleum and other such products, adequate spill containment equipment shall be required.

Policy 2.1.5.

Establish a mechanism for monitoring surface water quality during the development activities of projects of significant impact as determined by the County's Department of Natural Resources. This program will facilitate the monitoring of cumulative impacts of development on stormwater runoff and water quality.

Policy 2.1.6.

By 1990, the County shall adopt a Stormwater Environmental Utility to ensure that all stormwater discharged into estuarine waters will receive adequate treatment. The Utility shall be developed after seeking cooperation with the municipalities, other appropriate governmental agencies and public and/or private utilities which will implement the Stormwater Master Plan. Procedures shall also be adopted which establish priorities for the replacement and correction of existing facility deficiencies as well as providing for future facility requirements.

Policy 2.1.7.

An interdepartmental approach shall be used to develop a Stormwater Master Plan to be implemented by the Stormwater Environmental Utility.

Policy 2.1.8.

All future development shall be consistent with the adopted Stormwater Master Plan.

Policy 2.1.9.

Pursue a multi-jurisdictional approach to address existing stormwater quality and quantity problems in specifically impacted basins crossing more than one political boundary.

Policy 2.1.10.

Coordinate with existing programs to develop techniques and guidelines to improve the bays of Sarasota County so that shellfish may be harvested.

Objective 2.2

To maintain or increase the area and habitat quality of coastal wetlands and marine resources by the year 2000.

Policy 2.2.1.

Establish an ongoing program of biological and water quality data collection and analysis for estuarine areas. Coordinate with existing programs that perform biological and water quality data collection and analyses in Sarasota County and evaluate results to determine what further study is necessary.

Policy 2.2.2.

Develop and implement a plan for restoring spoil deposition areas to wetland habitat.

Policy 2.2.3.

Encourage the restoration of coastal wetlands and habitat including submerged aquatic vegetation through revegetation projects, shoreline softening, and management of mosquito-ditched mangroves.

Policy 2.2.4.

Utilize the County's regulatory authority to restore designated damaged wetlands to their natural state.

Goal 3

It shall be the Goal of Sarasota County, as a member of the Charlotte Harbor Study area, to maintain and improve the functional and structural integrity of the natural estuarine ecosystems and related coastal components through coordinated management of human impacts in surrounding uplands and freshwater systems and, further, to identify and address the impacts of growth so as to minimize or eliminate any adverse effects on the Charlotte Harbor area.

Objective 3.1

To participate in intergovernmental processes designed to pursue the goals and objectives of the Charlotte Harbor Management Plan.

Policy 3.1.1.

Continue to participate in local, State, or federal scientific modeling of Charlotte Harbor to determine the cumulative impact of development on the water resources of the Harbor. This study should also determine the impact of streamflows on the Harbor.

Goal 4

To lessen the impact of a destructive storm on human life, public facilities, private structures, and coastal natural resources in Sarasota County.

Objective 4.1

To reduce hurricane evacuation times for each storm category so that total evacuation times do not exceed 14 hours by the year 2010, and assist the general public in meeting their responsibility to evacuate in the event of a hurricane.

Policy 4.1.1.

Development orders will be evaluated for their impacts on traffic circulation, evacuation routes, critical locations, on-site hurricane shelter provisions, and proximity to off-site shelter facilities within the storm category 1, 2, and 3 flood zones in the County.

Policy 4.1.2.

By 1990, the County shall develop a post-hurricane disaster plan that considers the following:

- land uses and public facilities in the coastal zone area;
- areas of known high-hazard;
- the effects of hurricanes on the dynamics of coastal areas;
- the direct and indirect costs of a major storm disaster.

Policy 4.1.3.

By 1994, the County shall implement the post-hurricane disaster plan by establishing:

- a budget for post-hurricane redevelopment; and
- prior arrangements with owners in the Coastal High Hazard Area to facilitate acquisition.

Policy 4.1.4.

The designated County Coastal High Hazard Area shall include the Federal Emergency Management Agency's (FEMA) designated Velocity (V) Zones, areas seaward of the Coastal Construction Control Line (CCCL), all inlets and areas of known and/or potential breach.

Policy 4.1.5.

New mobile home development shall be prohibited on the Barrier Islands or within the Coastal High Hazard Area.

Policy 4.1.6.

All new and existing group home facilities and hospitals within storm categories 1, 2, and 3 shall be reviewed for vulnerability to storm inundation by hurricane surge. Each facility shall establish a Mutual Aid Contract with a facility located in a non-evacuation zone.

Policy 4.1.7.

Hurricane evacuation and immediate post-hurricane repair and cleanup actions shall be applied in a manner consistent with the Sarasota County Peacetime Emergency (Hurricane) Plan.

Policy 4.1.8.

The identification of individuals with special medical needs shall be consistent with the Sarasota County Peacetime Emergency (Hurricane) Plan. Before 1990, shelter and transportation to shelter shall be provided for these individuals.

Policy 4.1.9.

The Department of Emergency Management shall continue its public awareness campaign relating to hurricane evacuation, hazardous materials, and the 9-1-1 Program throughout Sarasota County.

Objective 4.2

To provide new hurricane shelter facilities and the expansion of existing facilities.

Policy 4.2.1.

New mobile home developments will establish on-site sheltering for 100 percent of the development's residents. The County Department of Emergency Management shall review and approve the development plans for shelter facility design.

Policy 4.2.2.

All new developments with community facilities in the storm category 1, 2, and 3 zones shall be required to meet hurricane shelter design standards. Developments with community facilities in the storm category 4 and 5 zones shall be encouraged to meet these standards.

Policy 4.2.3.

Encourage hotel/motel development in the storm category 3, 4, and 5 zones rather than in storm category 1 and 2 zones.

Policy 4.2.4.

Coordinate research and planning efforts between the County Departments of Planning and Emergency Management, the Southwest Florida Regional Planning Council, and other appropriate agencies in order to continue to update the pertinent sections of the Sarasota County Peacetime Emergency and Comprehensive Plans and to develop a post-hurricane disaster plan that addresses long-term repair and redevelopment activities.

Policy 4.2.5.

Expand coordination efforts within the limits provided by legislative authority to coordinate development review with the Sarasota County School Board to provide that new school facilities and facility expansions will be designed to provide hurricane shelter.

Policy 4.2.6.

New County buildings, so designated by the Board of County Commissioners, shall be designed and constructed in such a way that enables them to be utilized for hurricane shelter.

Objective 4.3

To limit additional public investment in order to restrict further concentrations of population in the Coastal High Hazard Area.

Policy 4.3.1.

After 1990, the construction or reconstruction of County funded facilities or infrastructure in the Coastal High Hazard Areas shall be prohibited except for passive recreation facilities and those necessary to ensure public health and safety.

Policy 4.3.2.

Utilize the County's power of eminent domain and regulatory authority to relocate threatened and/or damaged structures and infrastructure landward of the Coastal High Hazard Area. Consistent with the availability of budgeted funds, purchase property for relocation.

Policy 4.3.3.

Special High Hazard Area taxing zones, as necessary, will be created to help pay for the relocation landward of the Coastal High Hazard Area, the reconstruction, and/or protection of storm damaged public infrastructure and facilities, and shelters, to ensure public health and safety.

Goal 5

Conserve, protect, maintain, and, where necessary, restore the natural resources of Sarasota County to ensure their continued high quality and critical value to the quality of life in the County.

Objective 5.1

To continue to meet the air quality standards established by the Environmental Protection Agency (EPA) and Florida Department of Environmental Regulation (FDER) through the year 2010.

Policy 5.1.1.

Continue to enforce the air quality standards in County ordinances through the continuation of the current air quality monitoring program.

Policy 5.1.2.

Conduct air quality/transportation studies in those locations in the County and City of Sarasota with heavy traffic circulation/congestion in order to determine the long term impacts and trends of automobile generated pollution.

Policy 5.1.3.

Reduce pollution generated from motorized vehicles by discouraging air pollution control device tampering through public education and encouraging the following:

- the creation of mixed land use centers and residential form which utilizes clustering and Planned Unit Development (PUD) styles of design;
- vegetative buffers between arterial roadways and residential neighborhoods; and
- the use of alternative modes of transport including public transit, bicycle and pedestrian paths/corridors and light rail.

Objective 5.2

To protect the quality and quantity of all jurisdictional waters, recognize the ongoing study efforts, and ensure that the current water quality in the County be improved through the year 2010.

Policy 5.2.1.

The County shall continue to improve the surface water quality monitoring program and perform trend analysis on this data.

Policy 5.2.2.

By 1991, the County shall adopt and implement a shoreline protection ordinance, and/or amend existing ordinances which establishes a requirement for vegetation buffer zones for all new construction adjacent to surface waterbodies and which prohibits additional artificial shoreline stabilization and channelization of watercourses.

Policy 5.2.3.

Support the efforts and consider recommendations from intergovernmental organizations concerning Sarasota's bays, the Myakka River watershed, and the Braden River watershed.

Policy 5.2.4.

By 1990, enact ordinances and/or amend existing ordinances that protect the Myakka River, and consider the results of ongoing study and management efforts by various organizations, agencies, and County Departments (for example, the Myakka River Management Coordinating Council, the Department of Environmental Regulation sponsored Myakka River Basin Study, and the County's Myakka River Downstream Studies).

Policy 5.2.5.

Mining activities (as defined by County Ordinance) are not permitted or permissible under the County zoning regulations within designated areas of special environmental significance and/or sensitivity. The watersheds of Cow Pen Slough and the Myakka River are designated areas of special environmental significance.

Policy 5.2.6.

The County shall continue to monitor and assess any variations in the hydroperiod of wetlands, various aquifers, and flora and fauna located on the Ringling MacArthur Reserve (RMR) in accordance with the provisions of Ordinance 82-94.

Policy 5.2.7.

Continue to require Best Management Practices for conversion of native habitat to agricultural land uses, consistent with State and federal recommended standards, to reduce pesticides, fertilizer, and soil erosion.

Objective 5.3

To protect and conserve surface and groundwater resources.

Policy 5.3.1.

Land use development activities in important groundwater recharge areas shall be consistent with water resources protection.

Policy 5.3.2.

The County shall implement water conservation measures designed to reduce consumption by providing, independently and in conjunction with the Southwest Florida Water Management District, educational materials to the general public. To the extent deemed feasible by the County, the County shall also work with the Sarasota County School District for the purpose of reducing water consumption through student and instructor environmental education on the subject of water conservation practices.

Policy 5.3.3.

By 1991, establish irrigation design standards for non-agricultural water-intensive uses such as golf courses, parks, and government lands.

Policy 5.3.4.

The County shall establish a groundwater quality monitoring program with sensitivity and analytical capabilities suitable for measuring pollutants relative to health and environmental standards. This program will include establishing monitor wells in abandoned landfill sites and at other potentially hazardous sites (for example, hazardous wastes/material storage sites).

Policy 5.3.5.

The County will continue to work with the Southwest Florida Water Management District and the U.S. Geological Survey to identify and map the areas with significant recharge potential. Areas with significant recharge potential shall be considered for designation as conservation areas on the "Future Land Use Plan Map".

Policy 5.3.6.

The County will not permit the use of deep well injection for the disposal of treated wastewater whenever appropriate alternatives for water reuse and recycling can be utilized, such as those identified in the Wastewater Resource Management Program.

Policy 5.3.7.

The County will continue to abide by the Southwest Florida Water Management District's emergency water shortage plan.

Policy 5.3.8.

Sarasota County will cooperate with other governmental entities to protect water resources.

Policy 5.3.9.

Identify and protect from depletion and contamination those aquifers that feed Warm Mineral Springs.

Policy 5.3.10.

The County shall continue to enforce ordinances that regulate borrow pits, and other excavations and landfills throughout Sarasota County including mitigation and restoration measures as necessary.

Objective 5.4

To identify, manage, and protect all ecological communities and wildlife, especially critical habitats and endangered, threatened, and species of special concern identified in official federal, State, or international treaty lists.

Policy 5.4.1.

In accordance with the requirements of Chapter 163, Part II, Florida Statutes, as the same may be amended, adopt a site development review section within the Land Development Regulations that includes a comprehensive review of the natural environment for land development proposals as part of the development review process.

Policy 5.4.2.

The County shall develop and implement protection guidelines for endangered and threatened populations of plants and wildlife that occur in the County. These guidelines will apply to both private and County-owned lands. The County shall encourage the use of management practices for the protection of species of special concern.

Policy 5.4.3.

Require development order applicants to consult with the appropriate agencies and to use recognized sampling techniques to identify endangered, threatened, and species of special concern.

Policy 5.4.4.

Special measures shall be taken to protect the endangered loggerhead sea turtle.

- Renourishment sand shall match the natural sand as closely as possible in grain size distribution and chemical characteristics.
- Renourishment sand shall not be placed on beach dunes.
- If renourishment must be scheduled during the turtle nesting season, arrangements for turtle nest relocation shall be made.
- Lighting ordinances shall be enacted to protect sea turtles.
- Promote greater public awareness efforts.

Policy 5.4.5.

The County shall post "No Wake" zones in the Myakka River and other known manatee critical habitats.

Policy 5.4.6.

Development in areas of critical manatee habitat shall not adversely impact the manatee.

Policy 5.4.7.

Encourage land uses that conserve the environmental values and functions of Sarasota County's native habitats and that are consistent with the "Guiding Principles (Guidelines) for Evaluating Land Development Proposals in Native Habitats."

Objective 5.5

To preserve significant areas and representative samples adequate to maintain the functions and values of native habitat.

Policy 5.5.1.

Fulfill the County's open space requirements with preservation or conservation areas when land development involves the conversion of native habitat. The priority for habitats to be preserved or conserved shall be determined by the County's Natural Science Division.

Policy 5.5.2.

Conversion of native habitat to intensive agriculture must comply with the "Best Agricultural Conservation Management Guidelines" including the Soil Conservation Service's policy for protection of wetlands where applicable.

Policy 5.5.3.

Establish priority locations for habitat conservation and public acquisition, and provide strategies to physically link natural areas into a contiguous system. Priority should be given to the purchase of properties adjacent to or in close proximity to existing preservation areas and/or areas of high ecological value, in addition to properties with multiple use opportunities. This Policy specifically precludes the purchase of property owned by Mabry Carlton and Sons Ranch, Incorporated.

Policy 5.5.4.

Develop mechanisms to fund a County endangered lands acquisition program and establish a review board to identify potential sites and coordinate County resources with existing State programs such as the Conservation and Recreation Lands (CARL) Program, the Save Our Rivers (SOR) Program, and with groups such as the Nature Conservancy and the Trust For Public Land.

Policy 5.5.5.

Utilize a full range of techniques as appropriate (including, but not limited to, tax incentives, cluster development (PUD's), transfer of development rights, the purchase of development rights, and fee-simple public acquisition) to ensure the preservation of designated specific areas.

Policy 5.5.6.

Upon identification of priority locations for habitat conservation and public acquisition, pursuant to Policy 5.5.3., the development review process shall be modified to require the identification of conservation and preservation habitats in those areas which have the potential of becoming incorporated into an overall corridor network.

Policy 5.5.7.

The clustering of residential developments, or the implementation of other measures to minimize adverse environmental impacts, shall be required whenever large areas of significant native habitats would be disrupted.

Policy 5.5.8.

In accordance with the requirements of Chapter 163, Part II, Florida Statutes, as the same may be amended, the County shall develop guidelines in the Land Development Regulations (LDR), Zoning Ordinance, and/or other existing regulations which regulate development and specify the necessary design standards in environmentally significant/sensitive areas (for example, Barrier Islands, floodplains, watersheds, and water recharge areas) and on properties adjacent to Public Resource Lands.

Policy 5.5.9.

The County shall adopt a mangrove tree protection ordinance to regulate mangrove clearing and trimming. The ordinance shall also provide for mangrove restoration.

Policy 5.5.10.

Maintain and promote rural and natural resource land management practices such as prescribed burning through the requirement that all new development in the Rural area or adjacent to Public Resource Lands shall, as part of the development review process, recognize and accept existing rural and natural resource land management practices. Prescribed burning shall be facilitated through the organization of an interdisciplinary/interagency task force.

Policy 5.5.11.

By 1993, the County shall develop and adopt guidelines for the construction and management of golf courses to improve habitat values and reduce or eliminate the use of sub-surface wells as irrigation sources, and encourage the use of secondary treated wastewater for irrigation.

Policy 5.5.12.

To protect the natural diversity, processes and functions of natural communities in the Myakka River State Park and Oscar Scherer State Recreational Area by coordination with Florida Department of Natural Resources and the Southwest Florida Water Management District to maintain and enhance surface water and subsurface water levels within these management areas.

Objective 5.6

To preserve the natural aesthetic quality in developed areas through the planting, maintenance, and preservation of native plantings and other appropriate ornamental plantings and buffer strips in street rights-of-way and in other public and private open spaces. To manage the urban plantings efficiently, maximizing the use of limited resources.

Policy 5.6.1.

The County shall promote the conservation of native vegetation removed during land-clearing and utilize this resource for transplanting and revegetation.

Policy 5.6.2.

The appearance of selected arterial roads shall be improved with the planting of low-maintenance, native or other appropriate ornamental plants and trees.

Policy 5.6.3.

The County shall develop regulations incorporating the expanded utilization of vegetation for screening and shading of parking areas.

Policy 5.6.4.

The County shall incorporate native vegetation into the landscaping of all County-owned buildings and grounds, where appropriate, and provide for the continued maintenance thereof.

Policy 5.6.5.

Where practical, nuisance exotic vegetation will be removed from new developments and County-owned property and replaced with native or other appropriate ornamental species.

Policy 5.6.6.

During the development review process, encourage the private sector to preserve natural vegetation, to relocate native vegetation that cannot be preserved, and remove nuisance exotic vegetation.

Policy 5.6.7.

Pursue an interdepartmental/interagency approach to the development of management plans and/or guidelines, by 1991, for County-owned Public Resource Lands, rights-of-way, and Natural Area Parks in order to protect, maintain, and restore, where necessary, native habitats. Previously approved management plans shall be considered in the implementation of this Policy.

Policy 5.6.8.

Water conservation shall be given priority in the design of plantings for public rights-of-way. Recycled water shall be utilized for irrigation purposes wherever possible.

Policy 5.6.9.

The County shall develop appropriate procedures for effective communication and for coordination of the planning, design, and construction processes which include or affect vegetation growing within or to be planted in public right-of-way.

Policy 5.6.10.

The Street Tree Program of the County Forestry Division shall utilize best arboricultural practices to ensure the longevity and the compatibility of the urban plantings with its environment.

Objective 5.7

To increase the environmental awareness of all County residents.

Policy 5.7.1.

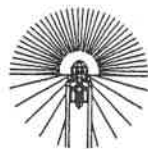
The County shall continue to support and fund the Environmental Library.

Policy 5.7.2

The County shall fund and implement the Ringling MacArthur Reserve Public Use Plan including the establishment of the Environmental Education and Research Center, as proposed in the Ringling MacArthur Reserve Land Use Plan.

Policy 5.7.3

Educational materials shall be made available to developers, homeowners, and other interested citizens concerning proper maintenance, management, restoration, and development in natural areas (for example, pamphlets about habitat creation, endangered species, management of development ponds, shoreline and dune vegetation, xeriscape, water conservation, and the Street Tree Program).



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Comprehensive Plan*

CHAPTER 3

RECREATION AND OPEN SPACE

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CHAPTER 3

RECREATION AND OPEN SPACE

Introduction

In the recent decades, Sarasota County has experienced phenomenal growth. The County population has increased from approximately 120,400 residents, in 1970, to an estimated population of 238,013, in 1986. It is projected that by the year 2010 the County population will increase to approximately 383,300.(1) Additionally, Sarasota County is popular among outdoor recreation enthusiasts throughout the United States, and is a popular vacation spot for international vacationers. This creates a continuing and increasing need for recreation facilities and services in the County.

At the same time, however, the opportunities for providing these facilities and services become increasingly limited, as the County's fixed supply of land, water, shoreline areas, and cultural resources, which support outdoor recreation, are committed to non-recreation purposes necessary for the support of the expanding population.

Sarasota County has taken a long-range perspective towards the provision of recreational facilities. An impressive number of parks and beaches have been developed for both passive and active recreation. In confronting the future, Sarasota County includes recreation and open space planning in the framework of the Comprehensive Plan. With effective planning, the provision of recreational facilities can be synchronized with the needs of County residents.

This Chapter identifies and studies the County's recreation facilities; analyzes its present and future recreational needs based on existing and anticipated population; and prepares an economically feasible long-range plan to fulfill the County's goal of providing high-quality recreation to its residents. Open space is discussed in the Future Land Use Chapter.

Definitions

Recreation is usually pursued in "non-work" moments. Reacquainting one's self with nature, participating in a sport or craft, or just enjoying a temporary release from the routine demands of life allows many people to feel refreshed and creates a personal feeling of fulfillment. These pleasurable experiences contribute to the effective functioning of each individual's total life. Therefore recreation can be described as a state of mind attained by each individual as a result of an experience that refreshes and fulfills, or gives pleasure.

Recreation encompasses a wide range of activities. These can be categorized as either active (in which the person is an active participant in the recreation activity -- e.g., sports) or passive (in which the person is primarily a spectator -- e.g., movies). Open space and parks are two of the many areas where recreation can take place.

Open space is an area, public or private, which is unoccupied or predominately unoccupied by buildings, and which may be used for parks, recreation, agriculture, conservation, preservation of water resources, historic preservation, or scenic

purposes. By its existence, open space helps to shape the character, form and timing of urban development. It varies in size, and may take the form of air, land or water surfaces. It is the green space that is present in and around cities, including parks, golf courses, and playgrounds. It is orange groves, mulch farms, and other land serving agricultural purposes. It is the forest, the swamplands, the beaches and wildlife preserves. It is also parkways, airport approach zones, race tracks and railroad rights-of-way. It is the space between city buildings. Taken in its entirety, open space is a primary functional use of land, air and water resources.

A park is an area permanently dedicated to recreation, aesthetic, educational, or cultural uses, and it is generally characterized by its natural and landscaped features. It can be used for both passive and active forms of recreation. However, the distinctive feature of a park, as opposed to other recreational areas, is the opportunity offered for resource based recreation (beach activities, picnicking, nature study).

Although parks may contain playfields, playgrounds, playlots, golf courses, swimming pools, camping grounds, and the like, none of these facilities alone would make a park.

The following is an alphabetical list of terms and their definitions as used in this Chapter. (2)

- **Community Park:** a park located near major roadways and designed to serve the needs of more than one neighborhood
- **Metropolitan Park:** a park developed to serve several communities, population centers, or large portions of the County
- **Neighborhood Park:** a park which serves the population of a neighborhood and is generally accessible by bicycle or pedestrian ways
- **Open Spaces:** undeveloped lands suitable for passive recreation or conservation uses
- **Playground:** a recreation area with play apparatus

- **Private Recreation Sites:** sites owned by private, commercial, or non-profit entities available to the public for purposes of recreational uses
- **Public Access:** the ability of the public to physically reach, enter or use recreation sites including beaches and shores
- **Public Recreation Sites:** sites owned or leased on a long-term basis by a federal, state, regional or local government agency for purposes of recreational use
- **Recreation:** the pursuit of leisure time activities occurring in an outdoor or indoor setting
- **Recreation Facility:** a component of a recreation site used by the public such as a trail, court, athletic field or swimming pool
- **Regional Park:** a park which is designed to serve two or more communities
- **Special Park:** all parks that cannot be placed in the other four park categories (neighborhood, community, metropolitan, and regional) They include: vest pocket, tot-lot, scenic, service parks, highly specialized facilities, and natural area parks.

Planning

In 1971, pursuant to the direction of the Sarasota County Parks and Recreation Board, the Sarasota County Parks and Recreation Department prepared the "Plan for Parks and Recreation, 1971-1981." This long-range plan addressed County as well as municipally owned and maintained parks and recreation facilities.

The 1975 publication "Criteria for Leisure Facilities", prepared by the Florida Recreation and Parks Association, and the Florida Planning and Zoning Association, established recreation facility standards, including minimum acreage and service area requirements. These standards were designed to be utilized by communities as general guidelines, with which they would evaluate their existing facilities and identify future needs.

In 1976, the State of Florida prepared "Outdoor Recreation in Florida", which is the official outdoor plan for the state.

"Recreation, Park and Open Space Standards and Guidelines," was prepared by the National Recreation and Park Association in 1983. It provides standards and guidelines which also could be used by communities to plan their operations.

In 1985, the Sarasota County Natural Resources and Recreation Advisory Board published a report proposing an aggressive land acquisition program be initiated by Sarasota County. As a result, in 1986, the citizens of Sarasota County had an opportunity to vote on three bond referenda relating to such land acquisitions. These referenda gave the County the right to issue general obligation bonds to develop eight sites for public recreation and related purposes. The acquired lands would be designated by the Sarasota County Parks and Recreation Department. (3)

"Outdoor Recreation in Florida-1987, A Comprehensive Program for meeting Florida's Outdoor Recreation Needs" was prepared in 1987 by the State of Florida. It is the official outdoor plan for the state, and it updates the 1976 plan. (4)

Scope

This Chapter examines recreation and recreation-oriented open space in Sarasota County. Other forms of open space, such as agriculture, conservation and preservation areas, are examined in the Future Land Use and Environment Chapters. Due to the increasing importance of bicycles as a means of transportation, bicycle routes are also discussed in the Traffic Circulation Chapter.

Further, the Local Government Comprehensive Planning and Land Development Regulation Act (LGCP & LDRA), 1985, as amended in 1986, Section 163.3177(4)(6)(e), requires that the recreation and open space element of the local comprehensive plan indicate "a comprehensive system of public and private sites for recreation..." (5) Thus, the physical design of each recreation site is not addressed in this Chapter. Moreover, it is impor-

tant to note that although this document is applicable only to unincorporated Sarasota County, the LGCP & LDRA requires coordination with the comprehensive plans of the municipalities, adjacent counties, the Region (Southwest Florida Regional Planning Council), and the State.

The need for a perspective that transcends political boundaries is particularly important for recreation since County residents use City-owned recreation facilities just as City residents use County-owned facilities. The Myakka River State Park and the Gulf beaches are used by County residents as well as County visitors and tourists.

Therefore, references to minimum service areas are used in this Chapter only for purposes of quantitative analysis. The depiction of a minimum service area does not indicate that only persons within that area use the designated park.

Inventory

Recognizing the State-mandated requirements as well as the need for a wide perspective in comprehensive planning, the following inventory focuses upon the physical sites and facilities of publicly supplied recreation and recreation-oriented open space in Sarasota County, and includes private recreation areas open to the public.

It is important to state the relationships between public and private provisions of recreation. Historically, some recreation/leisure services have been provided largely by the public sector and others by the private sector. However, recently the private sector has begun to provide services traditionally provided by the public sector, and vice versa. As this trend continues and expands, all levels of government and the private sector must continue coordination and cooperation in order to ensure the greatest benefits to the citizens, at the lowest cost.

In Sarasota County, government traditionally has provided recreation facilities (e.g., parks, public beaches) normally not provided by the private sector. It has also provided some recreation facilities that have privately owned counterparts (e.g., tennis courts). It may appear that the provision of recreation facilities by government when similar facilities are provided by private enterprise is a duplication of effort. However, Sarasota County generally provides facilities for beginning or casual use, which are complementary to the more advanced-level facilities offered by the private sector. In addition, Sarasota County public recreation facilities are prime factors in attracting the tourists and retirees who form such a critical component of Sarasota County's identity.

CONCERN 1

The coordination and cooperation of government with private enterprise to ensure recreational opportunities for Sarasota County's residents and visitors, while appropriate, may appear to be in competition with private endeavors.

Park and Recreation Areas

The political boundaries of Sarasota County encompass approximately 375,040 acres of land (586 sq. mi.) and an additional 21,760 acres of water. Approximately 22,819 acres of this land are devoted to public parks and recreation uses, ranging in size from less than one acre to the Myakka River State Park, Sarasota County's portion of which comprises 18,929 acres.

For the purpose of inventory and analysis, the County has been divided into ten areas called "Recreation Planning Areas" (RPA's). For statistical analysis and planning purposes, the RPA's have been designed to be coterminous with census tract boundaries. Figure 11 shows the location of the ten RPA's. The following discussion includes a demographic profile of each RPA as well as a synopsis of the recreational opportunities in each.

Appendix C provides a detailed description -- including acreage, identification of facilities, ownership and classification -- of parks and recreation facilities by RPA.

Recreation Planning Areas

Recreation Planning Area 1

Demographic Profile

RPA 1 includes census tracts 1, 2, 7, 8, 9 and 10, encompassing the Town of Longboat Key and coastal portions of the City of Sarasota. It is approximately 8.7 square miles in area, of which 280 acres are unincorporated. In 1986, it had an estimated resident population of 27,217, a population density of 3,128 persons per square mile. The average household income level (1979) was higher than the Countywide average (\$19,122). However, the average household income levels of tracts 1, 2, 9 and 10 were lower than the Countywide average, while those of tracts 7 and 8 were the highest in the County. Approximately 3.1 percent of the population were over 62 years of age in 1980. Minorities constitute 14.3 percent of the population. (6)

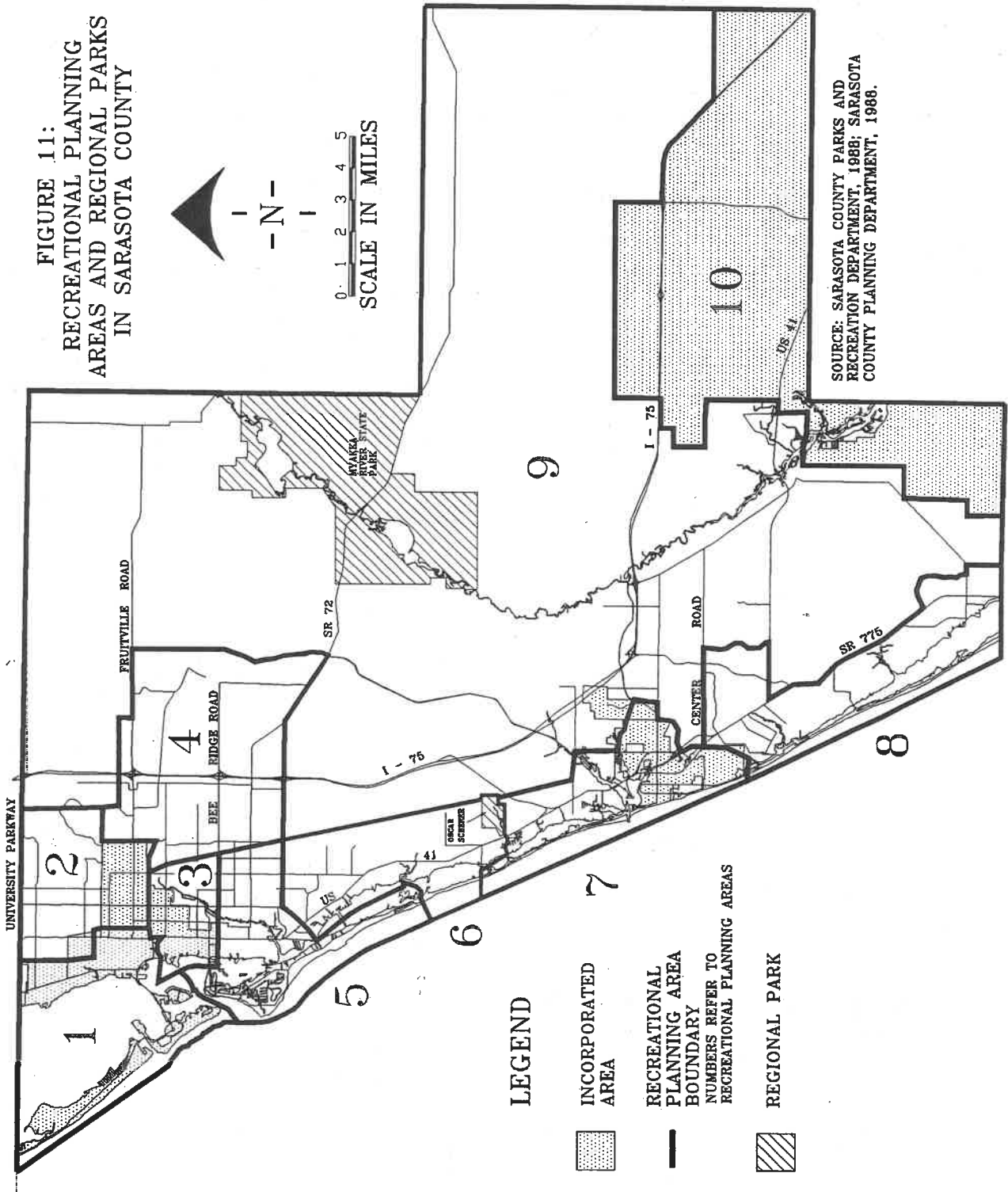
Recreation Synopsis

There are approximately 447 acres of public recreation areas (16.5 acres/1000 persons), of which 42 acres are neighborhood parks, 28 acres are community parks, 285 acres are metropolitan parks, and 92 acres are special parks (7). Most of the public recreational facilities in RPA 1 are owned and operated by the City of Sarasota. Examples include Bird Key Park, Lido Beach, Payne Park, Dr. Martin Luther King Park, City Island, Gillespie Park, and Island Park.

South Lido Park, which serves as a metropolitan park -- due to its function as a public beach -- and Otter Key Park are the only County-owned recreation sites in RPA 1.




The following educational sites located in RPA 1 include recreation facilities. Bay Haven Elementary occupies a five-acre site with neighborhood park level recreation facilities. (8) The University of

FIGURE 11:
RECREATIONAL PLANNING
AREAS AND REGIONAL PARKS
IN SARASOTA COUNTY



SOURCE: SARASOTA COUNTY PARKS AND RECREATION DEPARTMENT, 1988; SARASOTA COUNTY PLANNING DEPARTMENT, 1988.

LEGEND

-  INCORPORATED AREA
 -  RECREATIONAL PLANNING AREA BOUNDARY
 -  REGIONAL PARK
- NUMBERS REFER TO RECREATIONAL PLANNING AREAS

South Florida, Sarasota Campus, and New College are located Southwest of the Sarasota-Bradenton Airport and they include community park level recreation facilities.

There is a large concentration of private recreational facilities in RPA 1. Private facilities supplement the public facilities towards meeting the recreation needs of residents and visitors. Some examples are the Longboat Key Club, Gulf Wind Marine, Sarasota Yacht Club, and Sarasota Jungle Gardens.(9)

Recreation Planning Area 2

Demographic Profile

RPA 2 includes census tracts 3, 4, 11 and 12, thus encompassing portions of the City of Sarasota and unincorporated Sarasota County. RPA 2 is 15.3 square miles in size, with a 1986 estimated resident population of 27,524 persons -- a population density of 1,799 persons per square mile. Approximately 59 percent of its population lives in the unincorporated Sarasota County. Household income levels of 1979 were below the County average. In 1980, 27 percent of RPA 2's population were over 62 years of age, and 25.2 percent were minorities.(10)

Recreation Synopsis

There are approximately 435 acres of public recreation area (15.8 acres/1000 persons), of which one acre is a neighborhood park, 92 acres are community parks, and 342 acres are special parks. Examples of public recreational facilities located in RPA 2 include Bobby Jones Golf Course, the Youth Athletic Complex at Tuttle Avenue and 12th Street, Longwood Park, and Newtown Community Center.(11)

The Booker School complex, which includes an elementary school, a middle school and a high school, is located in RPA 2. The complex covers 18 acres and includes community park level recreation facilities. Portions of the complex are fenced, blocking access after school hours. Also located in RPA 2 are Gocio Elementary, occupying a 20-acre site with neighborhood level facilities, and Tuttle Elementary, occupying an 19.5-acre site with neighborhood park level facilities. (12)

Several private recreational facilities are located in RPA 2 providing additional recreation opportunities to residents and visitors. They include the Boys Club of Sarasota, Girls Club of Sarasota, the Meadows, and Sarasota Lakes Camping Resort.(13)

Recreation Planning Area 3

Demographic Profile

RPA 3 includes census tracts 5, 6 and 16 which encompass portions of the City of Sarasota and unincorporated Sarasota County. In 1986, an estimated 25,851 residents occupied RPA 3's 6.4 square mile area, yielding a population density of 4,039 persons per square mile. Thirty-five percent of the total population live in the unincorporated County. In 1979, the average household income was slightly above the County average. In 1980, 32 percent of the population were over the age of 62, and 12.4 percent were minorities.(14)

Recreation Synopsis

In RPA 3, there are 27.0 acres of public recreation area (1.04 acres/1000 persons), of which 7 acres are neighborhood parks and 20 acres are community parks. Arlington Park, a City of Sarasota facility, and Pinecraft Park, a County Park, are located in RPA 3.(15)

The following schools are located in RPA 3:

Alta Vista School includes an approximately 11-acre site with outdoor recreational equipment similar to a neighborhood park.

Brookside Middle School includes a 20-acre site with facilities similar to a community park.

Sarasota High School includes an approximately 44-acre site with metropolitan park level facilities.

Sarasota Middle School has a 23-acre site with community park level facilities.

Southside School has an 8.43-acre site with neighborhood park facilities.

Pine View School has a 7.01 acre site. (16)

Several private recreational facilities are located in RPA 3 including Forest Lakes Country Club, the Selby Botanical Gardens, the YMCA, and the Village Green Country Club. (17)

Recreation Planning Area 4

Demographic Profile

RPA 4 includes census tracts 13, 14, and 15. Its 32.9 square mile area had an estimated resident population of 32,786 in 1986, yielding a density of 997 persons per square mile. The average household income levels in 1979 were slightly over the Countywide average. In 1980, 12 percent of the population were minorities and 21.8 percent were over the age of 62. (18)

Recreation Synopsis

There are approximately 111 acres of public recreation area (3.4 acres/1000 persons), of which 26 acres are neighborhood parks, and 85 acres are special parks. All of these public facilities are County-owned. (19) They include Ackerman Park, Fruitville Park, and the Miss Softball Complex.

The following schools are located in RPA 4:

Ashton Elementary includes a 20.70-acre site with neighborhood park level playground equipment.

Brentwood Elementary includes a 18.90-acre site with neighborhood park level playground facilities.

Fruitville Elementary includes a 13.20-acre site with neighborhood park facilities.

McIntosh Middle School includes a 118.33-acre site with community park level recreation facilities.

Lakeview Elementary occupies 90.25 acres with neighborhood park facilities.

Private recreational facilities located in RPA 4 include the Bent Tree Golf and Racquet Club, Sun-N-Fun RV Resort, Sarasota Gulf Club, and YMCA Camp Hamilton. (20)

Recreation Planning Area 5

Demographic Profile

RPA 5 includes census tracts 17, 18, 19.01 and 19.02. Encompassing a 17.1-square mile area, RPA 5 had an estimated resident population of 36,495 persons in 1986, and a population density of 2,134 persons per square mile. Average household income levels, in 1979, in census tract 18 were slightly below the County average, while Siesta Key's (tracts 19.01 and 19.02) average household income levels were approximately 27.5 percent above the County average. Approximately 1 percent of the 1980 population were minorities and 22 percent were over age 62. (21)

Recreation Synopsis

There are approximately 289 acres of public recreation area (7.9 acres/1000 persons), of which 114 acres are metropolitan parks, and 158 acres are special parks. All facilities are County-owned. They include the Neville Preserve, Edwards Island, Phillippi Plantation, Siesta Beach, and Turtle Beach. (22)

The following schools are located in RPA 5:

Phillippi Shores Elementary, a 13.50-acre site with neighborhood park level playground facilities.

Riverview High School includes a 37.20-acre site with metropolitan park level facilities.

Wilkinson Elementary includes a 25.60-acre site and neighborhood park level playground facilities.

Sarasota Vocational Technical School occupies a 62.50 acre site. (23)

As in RPA 1, there is a large concentration of privately owned recreational facilities in RPA 5. (24) Some of them are the Palm Bay Club, Siesta Key Marina, Siesta Racquet and Swim Club, Midnight Pass Marina, and Gulf Beach Travel Trailer Park.

Recreation Planning Area 6*Demographic Profile*

RPA 6 includes census tracts 20 and 21, plus that portion of Oscar Scherer State Recreation Area in census tract 22. In 1986, this 14.5 square mile area had an estimated population of 20,099 persons -- a population density of 1,386 persons per square mile. Average household income levels in 1979 were approximately the same as the County average. Fewer than 1 percent of RPA 6's population were minorities, in 1980, while 34 percent were over the age 62. (25)

Recreation Synopsis

There are approximately 498 acres of public recreation area (24.8 acres/1000 persons), of which five acres comprise a neighborhood park, 26 acres are special parks and the 467 acre Oscar Scherer State Recreation Area is classified as a regional park. (26)

The Gulf Gate Elementary School is located in RPA 6. It includes a 20 acre site with neighborhood level park playground facilities. (27)

Several privately owned facilities are located in RPA 6 providing additional recreation opportunities for residents as well as visitors. They include Gulf Gate Golf Club, Prestancia Tournament Players Club, and South Bay Yacht Club. (28)

Recreation Planning Area 7*Demographic Profile*

RPA 7 includes census tracts 22, 23 and 24. Land in tracts 23 and 24 is predominately in the City of Venice. RPA 7 encompasses 15.3 square miles with a resident population in 1986 of approximately 23,718, a population density 1,550 persons per square mile. The average household incomes were slightly lower than the Countywide average in 1979. In 1980, 49 percent of RPA 7's population were over the age of 62, and 2.9 percent were minorities. (29)

Recreation Synopsis

There are 378 acres of public recreation (15.9 acres/1000 persons), of which 38 acres are metropolitan parks, 77 acres are community parks, 30 acres are neighborhood parks, and 233 acres are special parks. (30) Most of the recreational facilities in RPA 7 are owned by the City of Venice. They include Brohard Park, Nokomis Beach, Venice Community Center, Chuck Reiter Field, Wellfield Park, and the City Hall Park among others. Nokomis Beach, North Jetties, and Rattlesnake Island are County parks.

The following schools are located in RPA 7:

Nokomis Elementary includes 16.30-acre site with neighborhood park level recreation facilities.

Venice School Complex includes a 75.5-acre site on which Venice Elementary, Venice Middle and Venice Senior High Schools are located, with metropolitan park level recreation facilities. (31)

RPA 7 has the third greatest concentration of privately owned recreational facilities in the County. (32) They include Capri Isle Golf Club, Red Lake Golf Club, Mission Valley Golf and Country Club, and The Royal Coachman Resort.

Recreation Planning Area 8*Demographic Profile*

RPA 8 comprises census tracts 25 and 26, including the community of Englewood. In 1986, RPA 8's 7.6 square mile area had an estimated population of 28,271, a population density of 3,720 persons per square mile. Average household income levels were below the Countywide average in 1979. Fewer than 1 percent of RPA 8's population in 1980 were minorities, and 41 percent were over the age 62. (33)

Recreation Synopsis

There are currently 278 acres of public recreation (9.8 acres/1000 people), of which 254 acres are metropolitan parks, 10 acres are community parks, 4 acres comprise a neighborhood park, and 10 acres are special parks. (34) They include Caspersen Beach, Challenger Park, Manasota Beach, and Englewood Park.

Caspersen Mainland and Woodmere Parks are also in the development stages.

The following schools are located in RPA 8:

Englewood Elementary adjoins Englewood Park and provides an additional ten acres with neighborhood park level facilities.

Garden Elementary occupies a 30-acre site with neighborhood park level facilities on Center Road, east of Venice. (35)

Several private recreation facilities located in RPA 8 provide additional recreation opportunities to residents and visitors. (36) They include Jacaranda West Country Club, and Brook to Bay Trailer Ranch.

Recreation Planning Area 9

Demographic Profile

RPA 9 includes all of census tract 27.04, which lies outside of the City of North Port and the unincorporated portions of census tracts 27.01 and 27.03. Encompassing approximately 385 square miles, RPA 9 had an estimated resident population of 15,757 persons in 1986, which yields a population density of 41 persons per square mile. In 1979, the average household income was the same as the County average. In 1980, there were fewer than 1 percent minorities in RPA 9, with 17 percent of the population over the age of 62. (37)

Recreation Synopsis

RPA 9 includes the Sarasota County portion of the Myakka River State Park, a regional park of 28,875 acres, of which 18,929 acres are located in Sarasota County. There are 19,319 acres of public recreation areas (1,226 acres/1000 persons), including 18,929 acres of regional parks, and 390 acres of special parks (38). They include Knight Trail Park and Twin Lakes Park. The Ringling MacArthur Reserve is also located in RPA 9.

A number of privately owned recreational facilities are located in RPA 9. (39) They include the Myakka Valley Campground, Sunrise Country Club, the Plantation Golf and Country Club, Gator Creek Golf Club, Warm Mineral Springs, and Snook Haven.

Recreation Planning Area 10

Demographic Profile

RPA 10 includes the incorporated area of the City of North Port. The 1986 population estimate of North Port was 8,490. Its total incorporated area is 68 square miles, and its population density is approximately 125 persons per square mile. In 1979, the average household income of North Port was lower than the County average. In 1980, 48 percent of the population were over the age of 62, and 1.5 percent of the population were minorities. (40)

Recreation Synopsis

There are 38 acres of public recreation (4.5 acres/1000 persons), of which 10.4 are community parks, 24.3 are neighborhood parks and 3.3 are special parks. (41) All of these are owned and operated by the City of North Port. North Port Elementary School, a 47.0 acre site, provides additional neighborhood park level park facilities. (42)

A small number of privately owned recreational facilities are located in RPA 10. (43) They include the North Port Country Club, and the North Port Yacht Club.

Golf Courses

Golf and golf courses have a special historical significance in Sarasota. John Hamilton Gillespie, project manager for the Scottish land development company that founded the City of Sarasota, built a golf course in town in 1886. Though golf had been played on the continent as early as 1779, Gillespie's was one of the earliest, if not the first, golf courses in North America.

Golf courses in Sarasota are major land uses that provide both recreation and open space. The majority of them are privately owned, with the exceptions being Bobby Jones Golf Course (owned by the City of Sarasota), and Red Lake Venice Golf Course (owned by the City of Venice). Locations of golf courses are shown on Figure 12.

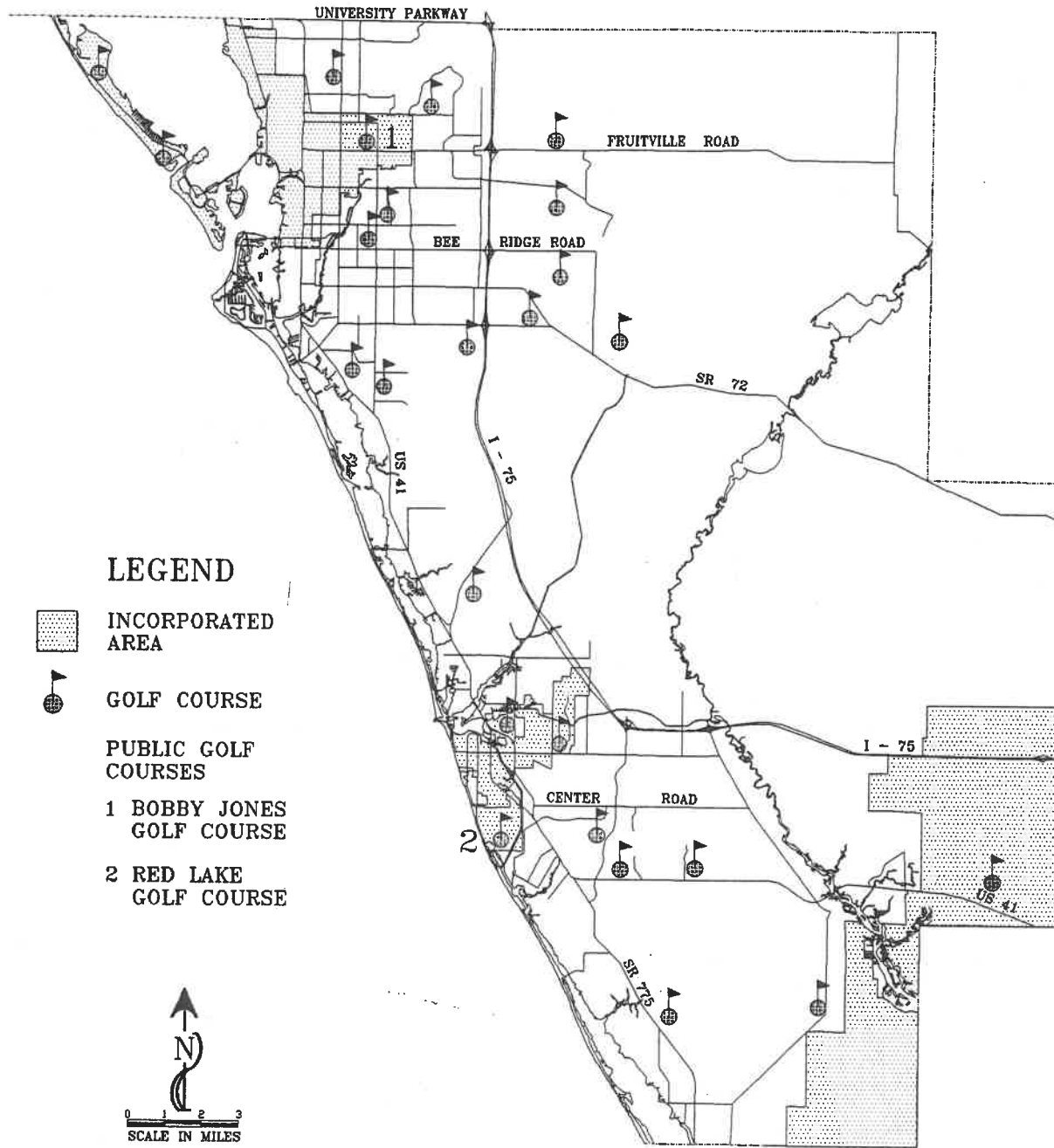


Figure 12: Golf Courses

Source: Sarasota County Parks and Recreation Department, 1988.

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Public Beaches and Beach Accesses

The public beaches of Sarasota County are exceptionally important recreational resources. In addition to attracting residents from all areas of the County, they are national and international attractions. The economic importance of beaches is indicated by the concentration of resorts, hotels, condominiums, restaurants and shops along portions of the Sarasota County shoreline. Beaches and beach accesses are shown in Figure 13.

The public beaches and the smaller beach accesses not only allow people to enjoy the immediate beach and waters, but also provide access to the wet sand beaches and water along the shoreline.

The "wet sand" beaches are legally in public ownership (Florida Constitution, Article XII); however, public access to the wet sand beaches can be blocked by structures jutting into Gulf waters, either through poor design or the loss of beach due to erosion; also, by lack of public access across the dry sand beaches.

CONCERN 2

Public access to the wet sand beaches, the bays, and the Gulf of Mexico, may be blocked and thus requires protection.

During maximum use conditions, parking at beaches and beach access is a problem, particularly on weekends. Many of the accesses were established primarily for residents in the immediate vicinity, and thus have limited parking. Drivers are often forced to park along roadways, and thus create traffic congestion. Occasionally, parking also occurs on environmentally sensitive areas, potentially causing environmental damage.

CONCERN 3

Adequate parking for automobiles is not available at all public beaches and beach accesses.

The popularity of Sarasota County beaches, as reflected in vehicular and pedestrian traffic, can cause severe damage to beach dunes and vegetation. This is significant because of the major role dunes and dune species play in shoreline stabilization (see Environment Chapter).

CONCERN 4

Vehicular and pedestrian traffic can damage coastal dunes and shoreline vegetation.

Boat Ramps and Marinas

Boating and related activities comprise a major portion of the County's recreation. For example, from June 1, 1986 to May 31, 1987, 15,542 pleasure vessel licenses were issued, an increase of 16.6 percent over the 1981 figure. (44)

Figure 14 shows the location of public boat ramps that serve as recreational outlets to the Gulf of Mexico, to the County's more than 32 square miles of inland waters, and to the Intracoastal Waterway; it also shows the marinas that provide docking facilities, fuel, and other services and supplies to boaters. Additional information is available in the Environment Chapter.

Bicycle Paths

Over the past 15 years, the use of bicycles for recreation, sport, fitness and transportation has increased in the United States. Bicycling is popular in Sarasota County as the County's terrain and climate create a favorable environment for the use of bicycles.

This section addresses the recreational aspects of bicycle riding, while the Traffic Circulation Chapter addresses the transportation aspects of it.

Riding a bicycle becomes a resource-based outdoor recreation activity only when the outdoor setting is essential to fulfill the enjoyment of the bicycling experience. A growing number of bicyclists use the bicycle as a means of seeking

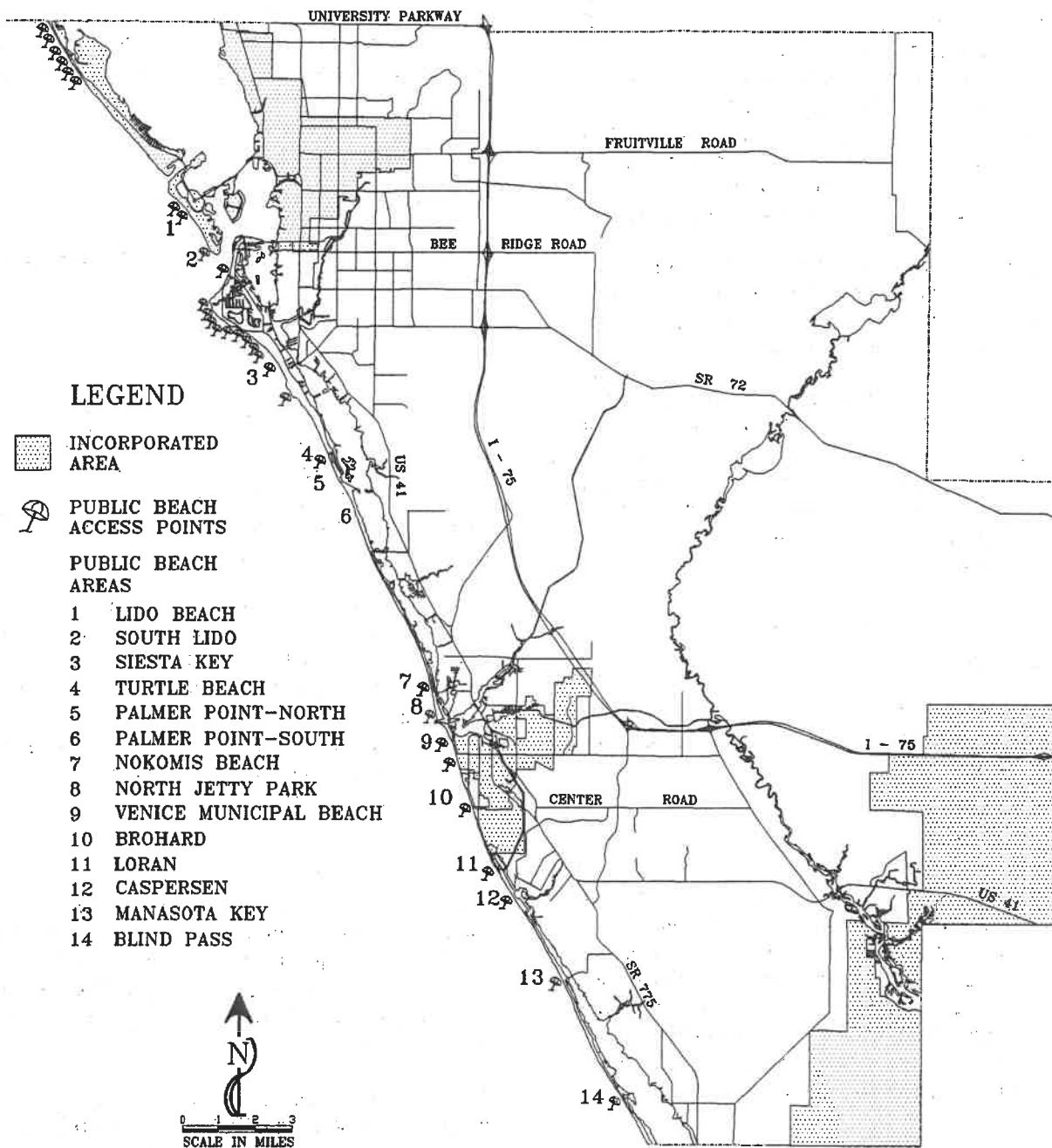


Figure 13: Public Beaches And Beach Accesses

Source: Sarasota County Planning Department, 1988.

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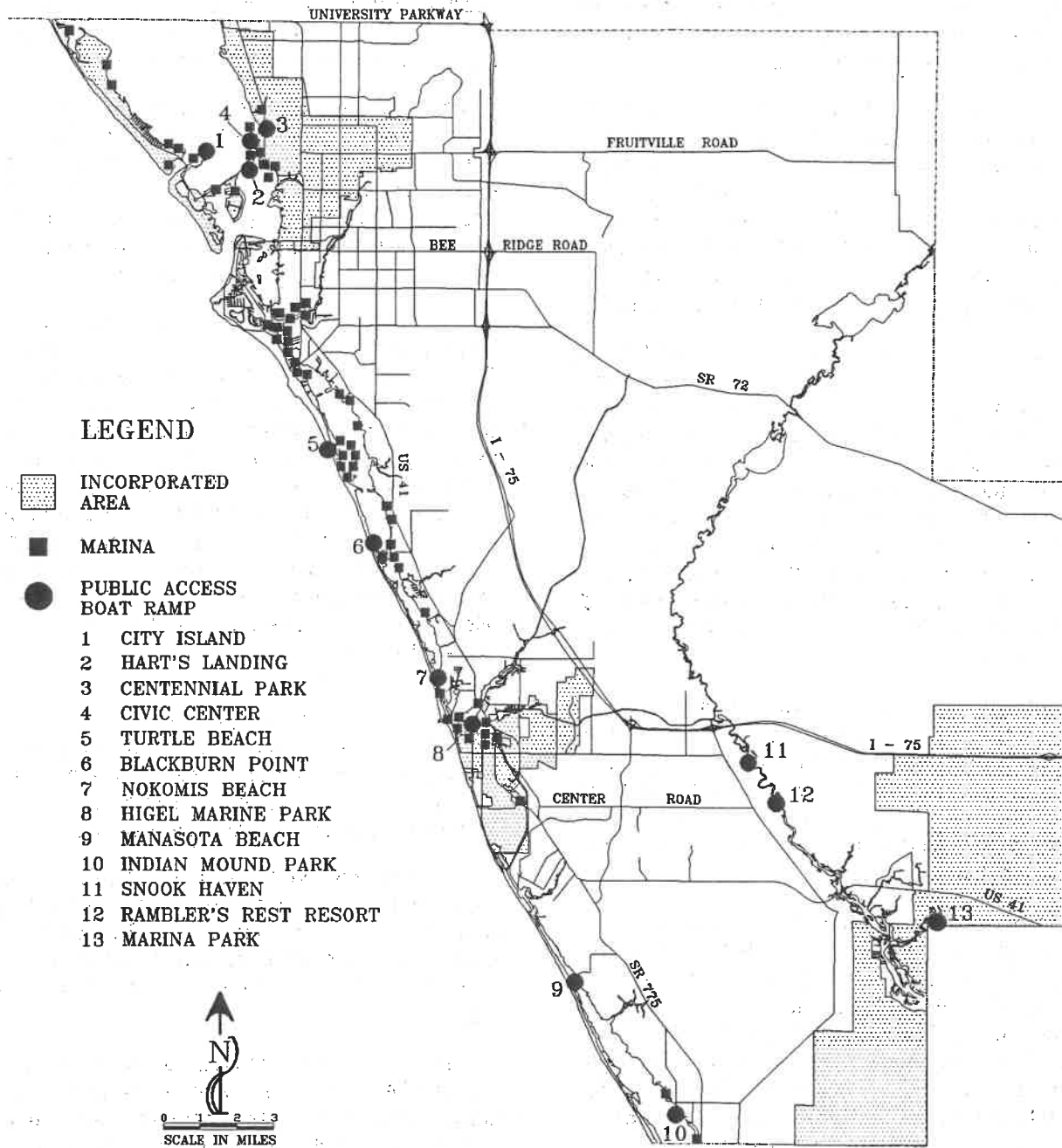


Figure 14: Boat Ramps And Marinas

Source: Sarasota County Planning Department, 1988.

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out the scenic and educational values of the outdoors, and as an alternative means for reaching outdoor recreational destinations. This chapter is primarily concerned with this group.

Bicycling is an activity that can be enjoyed individually or in groups, and it can be varied to suit many circumstances. The concept of bicycling is constantly being expanded. Today, for instance, it is not uncommon to think in terms of a cross-country bicycle trip lasting several days or even weeks. Others use all-terrain bicycles as a means of accessing the more remote backcountry areas.

The primary requirement which needs to be addressed for resource-based bicycling is a system of designated and properly marked routes, commonly referred to as bicycle paths. A bicycle path network must be extensive to afford desirable variety, and to link points of origin and destination. The selection and development of bicycle paths must be carefully done so as to bring cyclists to their destination by taking them through scenic areas, while avoiding environmentally sensitive areas where such use would cause environmental damage.

As of 1985, Sarasota County did not have a bicycle path network. However, consistent with the Florida Transportation Plan, the County's roadways (collector or greater) are constructed or reconstructed to accommodate bicycle traffic. This partially addresses the County's need for bicycle paths.

Additionally, there are safety concerns regarding bicycling in Sarasota County. According to the Sarasota-Manatee Metropolitan Planning Organization (MPO), Sarasota County ranks thirteenth among Florida Counties with most severe bicycle accident problems. Responding to concerns by citizens and public officials, the MPO established a Bicycle Advisory Committee (BAC) in April, 1985 to provide input and direction on bicycle related issues.

In 1986, the MPO, in cooperation with the Bicycle Advisory Committee (BAC), prepared the "Comprehensive Bicycle Plan". It provides for physical improvements to existing facilities; emphasizes safety and efficiency education for cyclists and

motorists; promotes the use of bicycles as an alternative transportation mode; and interrelates bicycle programs and policies to routine government operations and funding mechanisms.

"Outdoor Recreation in Florida-1987" states that bicycle riding ranks second in demand statewide among resource-based outdoor recreation activities. The same source indicates that there are enormous needs for bicycle paths in the entire state. One of the regions with the highest needs is Region IX which includes Sarasota County.

The Sarasota County Parks and Recreation Department, in coordination with the Sarasota County Transportation Department and the MPO, should consider preparing a Countywide bicycle path network plan. This plan should include a map depicting the network, which should be updated annually to reflect improvements/changes to the network. Further, the Parks and Recreation Department could initiate an education campaign regarding safety and efficiency of bicycle riding while introducing the network to the public. Those efforts should be consistent with the 1985 "Comprehensive Bicycle Plan".

Public Schools

County schools are also sources of recreational facilities providing opportunities for their students as well as nearby residents. Figure 15 shows the locations of public schools in Sarasota County.

In 1973, under a joint Sarasota County Parks and Recreation Department and Sarasota County School Board "Community School Program," five schools were available after hours for community recreation. This program was discontinued in 1980.

However, the "Summer Playgrounds Program," a similar joint effort by the same two organizations, is still active. It provides supervised summertime recreational activities for school-age residents at various locations.

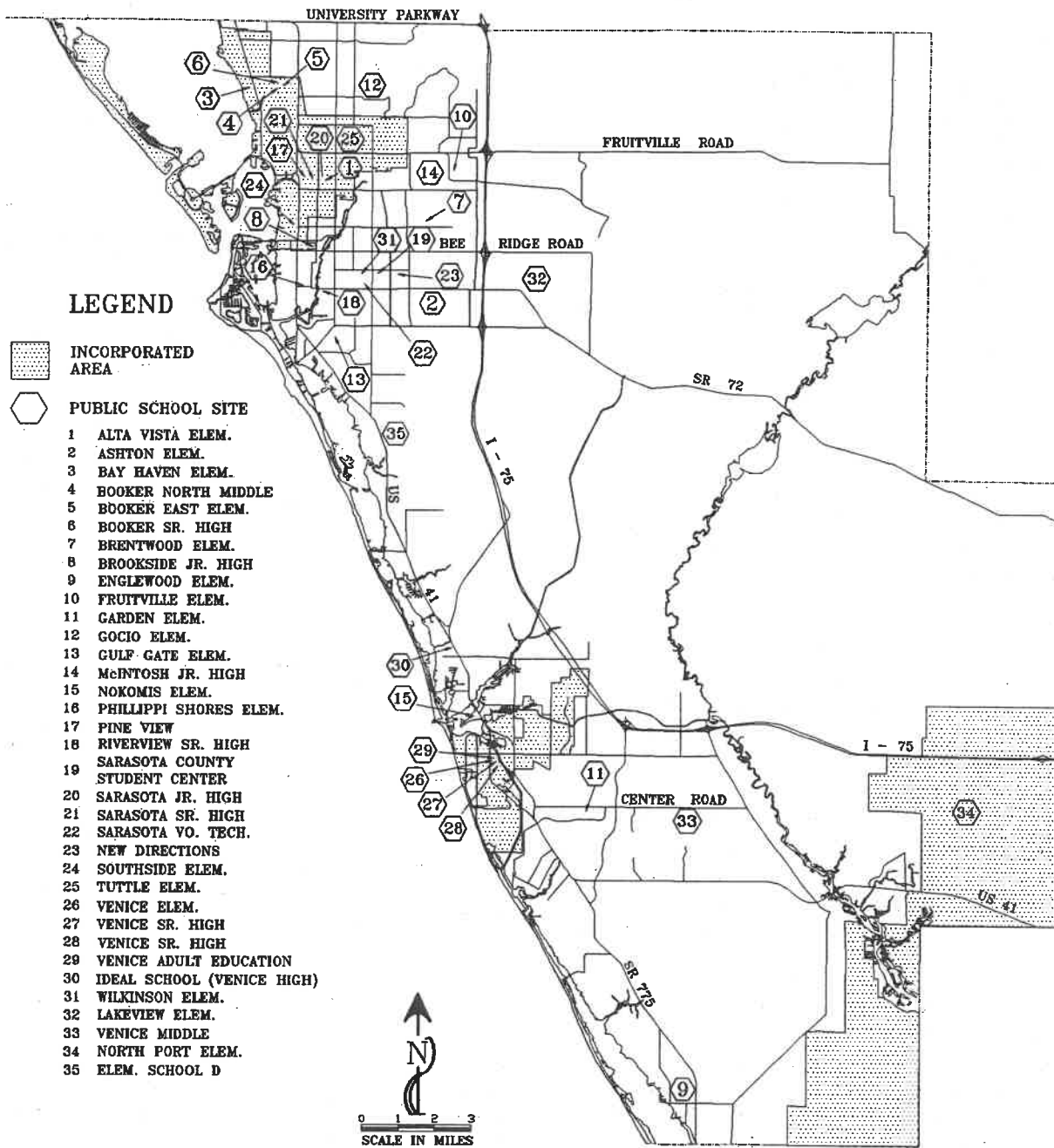


Figure 15: Public School Sites

Source: Sarasota County School Board, 1988.

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CONCERN 5

Land in school sites is not used to its fullest potential in meeting recreational needs of the nearby residents.

Analysis

Existing Conditions

Classifications and Criteria

A recreation space criterion is a measure of the land area required to accomplish specific objectives. Criteria provide guidelines for the creation of objectives of an open space and recreation facilities development program.

In the determination of Sarasota County's criteria, which are used in this analysis, the standards developed by the Florida Recreation and Park Association (FRPA) and the Florida Planning and Zoning Association (FPZA) were studied, and modified to reflect special conditions in Sarasota County. The FRPA-FPZA standards represent idealized goals, levels towards which governmental agencies should strive on a long term basis. Similarly, the criteria developed for Sarasota County provide "bench marks" to evaluate Sarasota County's recreational resources; they are not mandates for public acquisition.

The first step in using the criteria is to classify recreation areas, as to their function, so that the appropriate criteria may then be applied. FRPA-FPZA standards provide for four classifications of parks: neighborhood; community; metropolitan (urban-district); or metro and regional. The following is a discussion of these classifications and the criteria that have been established for each.

Neighborhood Parks Criteria

Size: The FRPA-FPZA standard calls for a minimum of 5.0 acres.

Sarasota County has modified this. The County's criterion calls for a minimum size of ten acres.

Area Per 1,000 Population: Two acres.

Minimum Service Area: 1/2 mile radius (square mile area).

Typical Facilities: Play apparatus, areas for pre-school and older children, sports fields, paved multipurpose courts, senior citizen area, picnic area, open or free play area, landscaping.

Modification Rational: The modification of setting a minimum park size of ten acres is derived from past experiences of the Sarasota County Parks and Recreation Department concerning the cost of park maintenance compared to public recreation benefits. In 1981, ten acres appeared to be the minimum size for economical maintenance.

Community Parks Criteria

Size: Minimum of 20 acres.

Area Per 1,000 Population: Two acres.

Minimum Service Area: One to three miles radius.

Typical Facilities: All the facilities found in a neighborhood park plus facilities to serve the entire family such as pools, lighted softball/baseball fields, lighted tennis courts, play areas, picnic areas, passive and active recreation areas, multi-purpose hard court, and a large recreation center building.

Metropolitan Parks (Urban-District Park) Criteria

Size: The FRPA-FPZA standard calls for a minimum of 100 acres. Sarasota County has modified this. The County's criterion calls for a minimum size of 100 acres, but it does not apply to beaches.

Area Per 1,000 Population: Five acres.

Minimum Service Area: 20 to 40 minutes driving time. This is also modified. The FRPA-FPZA standard requires 30-40 minute driving time.

Typical Facilities: Playground apparatus area, restrooms, concession(s), wooded area with nature, hiking and riding trails; nature center, amphitheater or center for performing arts; areas for boating and swimming, picnic areas with shelters, day or overnight camping areas; and some unlighted sand lot level sport areas.

Modification Rational: The 100 acre minimum size has been excluded for public beaches because of the attraction of the beaches and their function of providing recreation access to the Gulf of Mexico and to the bays. However, for evaluation purposes, public beach acreage is included in the inventory and analysis. The service area change of minimum driving time from 30 to 20 minutes provides a stronger differentiation between the service areas of metropolitan and regional parks, and allows for planning in more energy-conscious future conditions. The 20 minute driving time service is derived from the Sarasota County Parks and Recreation Department's Plan for Parks and Recreation in Sarasota County (1971).

Regional Parks Criteria

Size: minimum of 250 acres.

Area Per 1,000 Population: 20 acres.

Minimum Service Area: 30 minutes to 1 hour.

Typical Facilities: Beaches, bays, water resources, rustic areas, camping, nature study, bridle paths, picnicking and other facilities not requiring intensive development.

Special Parks

In addition to the four FRPA-FPZA classifications discussed above, a fifth classification, "special parks," is included in the County's park system. These parks include all parks that cannot be placed in any one of the other four classifications. Among the parks so classified are the following:

- **"Vest Pocket" and "Tot Lot" Parks:** generally less than one acre in size and usually serving only a small area, sometimes developed to serve higher-density residential subdivisions or commercial areas;

- **Scenic Parks:** provide a visual access to scenic resources usually located along roadways adjacent to open water resources, such as the gulf, bay, or inland waters;
- **Service Parks or Wayside Parks:** designed to serve the needs of highway travelers;
- **Highly specialized facilities:** examples are golf courses, firearm or archery ranges, and facilities primarily used for athletics; and
- **Natural Area Parks:** environmentally sensitive parks maintained in their natural state, receiving maintenance according to normal practices associated with native habitats, as directed by Sarasota County's Department of Natural Resources.

Sarasota County has not developed acreage criteria for special parks because of the diversity of park types included in this classification.

Quantitative and Spatial Analysis

In addition to "minimum size," the preceding criteria for types of parks contain two major sub-categories. The first is "acreage per 1,000 persons," which provides a quantitative measurement of size of park sites necessary for a given population. The second is "service radius," which provides a location or spatial indicator to determine the adequacy of park distribution.

It should also be noted that the most conservative service areas are used in this analysis. Thus, for a service area criterion of a one-to-three mile radius, the one-mile radius is used. This is in consideration of the increasing costs of transportation, as well as possible energy shortages. To convert service areas in measurements of driving time (e.g., 20 minutes), an average travel time of 22 miles per hour is used. This is based upon findings of the Sarasota-Manatee Metropolitan Planning Organization (MPO). (45)

Table 9 provides a summary of park acreage, by classification, in each of the RPA's, as well as a comparison to the acreage criteria as it would be applied to the population of each RPA as of 1986. The narrative which follows describes the areas within the unincorporated County where deficiencies occur for each park type. It is important to note that the identification of priority areas for the development of new parks is not solely dependent upon this quantitative analysis. For example, a particular RPA may not have "sufficient" acres of community or metropolitan parks according to the County's criteria but if the RPA was within the

service radius of such adjacent RPA park sites, there would not be a real deficiency. Similarly, the proximity to special parks, or regional facilities, which are abundant in the County, is weighed when determining priority locations for park development.

Neighborhood Parks

Nine recreational planning areas show a deficiency in neighborhood parks varying from 100 percent deficiency (RPA 9) to 22 percent deficiency (RPA 1). RPA 10, shows a surplus of 41 percent in neighborhood parks.

Table 9: Summary - Public Park Acreage in Sarasota County, 1986

	RPA 1	RPA 2	RPA 3	RPA 4	RPA 5	RPA 6	RPA 7	RPA 8	RPA 9	RPA 10	Total
Neighborhood Parks											
Existing Acres	42	1	7	26	7	5	30	4	0	24	146
Criteria	54	55	52	66	73	40	47	57	32	17	493
Community Parks											
Existing Acres	28	92	20	0	10	0	77	10	0	10	247
Criteria	54	55	52	66	73	40	47	57	32	17	493
Metropolitan Parks											
Existing Acres	285	0	0	0	114	0	38	254	0	0	691
Criteria	136	138	129	164	183	100	119	141	79	42	1,231
Special Parks											
Existing Acres	92	342	0	85	158	26	233	10	390	3	1,339
Regional Parks											
Existing Acres	0	0	0	0	0	467	0	0	18,929	0	19,396
Criteria											4,921
Total Public Recreation Acreage*											
	447	435	27	111	289	498	378	278	19,319	37	21,819
Public Recreation Per 1,000 Persons*											
	17	16	1	3	8	25	16	10	1,226	5	89

Note: *Does not include school site acreage

Source: Sarasota County Planning Department, 1987.

As the County's criteria are used only as a guideline, the deficiencies of the RPA's are weighed, based on the density of the RPA population, the location of other recreation facilities (i.e., parks of other classification, or privately owned facilities), all of which reduce the deficiency by providing neighborhood level park facilities. Further, special consideration is given to the unincorporated areas of the County, as the needs of the incorporated areas are addressed in the comprehensive plans of the municipalities. As a result, "priority areas" for neighborhood parks are determined. These areas are as follows:

- The northern portion of Recreation Planning Area 2 (DeSoto Lakes);
- The majority of RPA 4;
- The Gulf Gate and Vamo vicinities of RPA 6;
- The Sorrento and Nokomis portion of RPA 7; and
- RPA 8.

CONCERN 6

Sarasota's neighborhood parks have certain deficiencies in their acreage and distribution.

The County places more emphasis on the provision of other than neighborhood type parks (such as community and metropolitan parks) due to the high cost of neighborhood park maintenance. Neighborhood parks are encouraged, where appropriate, and where neighborhood associations would be responsible for their development and maintenance, pursuant to County criteria. In addition, the majority of the RPA's with neighborhood park deficiencies have special parks and privately owned recreation facilities. These facilities decrease the overall recreation need of these areas by providing a variety of recreation opportunities; also they are a response to the specific recreation demand in that area.

CONCERN 7

The maintenance of neighborhood parks is not economically feasible for Sarasota County.

Community Parks

Eight recreational planning areas show a deficiency in community parks varying from 100 percent deficiency (RPA 9) to 39 percent deficiency (RPA 10). RPA's 2 and 7 show a surplus of community parks.

As mentioned earlier, the County places emphasis on the acquisition and development of community parks. Since 1981, two sites have been acquired but have not been completely developed yet: Colonial Oaks (RPA 4) and Longwood Park (RPA 2). The County is currently negotiating with Palmer Ranch for park sites on the Ranch's proposed development, which will serve the populated area south of Proctor Road (RPA 6). Sarasota County continues its search for park sites to serve the Sorrento area (in RPA 7), and the Englewood area (RPA 8). Provisions for a site to serve the unincorporated area east of the Myakka River and south of I-75 are included in the County's Capital Improvement Program (CIP).

Target areas for the acquisition and development of community parks were determined using the methodology described in the neighborhood parks analysis. These areas are:

- The populated area south of Proctor Road and extending to the Venice City limits (RPA 6);
- The Englewood area (RPA 8); and
- RPA's 3, 5, and 9.

CONCERN 8

Several areas of Sarasota County are not serviced by community parks.

Metropolitan Parks

Table 9 shows an overall deficiency in metropolitan parks, which varies for each RPA. RPA's 2, 3, 4, 6, 7 and 10 do not have metropolitan parks while RPA's 1, 7, and 8 show a surplus of these facilities, and RPA 5 shows a 37 percent deficiency. However, the large service area based on 20 minute driving time (7.3 mile radius) of metropolitan parks must be considered. All Sarasota County public beaches are classified as metropolitan parks; however, the recreation facilities associated with metropolitan parks are not available at all beaches (Figure 13).

All populated areas of the County are serviced by metropolitan parks except the City of North Port (RPA 10), and the large lot developments of Hidden River and the Myakka Valley Ranches (RPA 9).

Target areas for the acquisition and development of metropolitan parks were determined using the methodology described in the previous two classifications of parks. The County needs to acquire and develop at least two metropolitan parks, one to service the north portion, and the other to service the south portion of the County.

Regional Parks

Myakka River State Park and Oscar Scherer State Recreation Area are the regional parks in Sarasota County. Table 9 shows a 294 percent surplus of Regional park acreage. Due to the large service area of these parks, acreage for this classification cannot be considered in the context of RPA's.

Figure 11 shows the location of the County's two regional parks. Much of the County's populated area is covered by the two service areas with the exception of:

- The area north of Fruitville Road and west of the I-75 Corridor;
- The area south of SR 775; and
- The City of North Port.

Myakka River State Park probably has a much larger service area based, at least, on maximum driving time of one hour. This would extend the service area to a 22-mile radius and would cover

all of Sarasota County, with the exception of the City of North Port because of the constraints of the existing road system linkage with Myakka River State Park.

Levels of Service (LOS)

The previous section described the parks and recreation criteria that are used by Sarasota County to identify locations which are not adequately served by available facilities and to set priorities for planning future park site acquisition and development. This methodology has provided the rationale for the extensive park program adopted in Sarasota County Ordinance 83-24, "The Sarasota County Public Facilities Financing Ordinance." The Ordinance provides for the establishment of two Municipal Service Taxing Units (MSTUs), one each for the north and south urban areas of the unincorporated County. Ordinance 83-24, as amended, contains a five-year capital improvements program for parks which identifies the location and timing of planned park development as well as the estimated costs for each park. A proportionate share of the costs are funded by assessments collected from new residential developments within the North and South County MSTUs.

The legislative requirement, as provided in Chapter 163, Florida Statutes, for local governments to establish level of service standards for parks, as well as for other public services and facilities, as part of their comprehensive plans, is similar, in intent, to that of Ordinance 83-24 to ensure that an adequate number of parks and recreational facilities are available to meet the needs of existing residents and concurrent with the impact of new development.

Although the implementation of Ordinance 83-24, as amended, provides a mechanism for maintaining a level of park development consistent with County criteria, it differs from the statutory LOS requirements in at least one fundamental way. Ordinance 83-24, as amended, is a planning tool which is based on a diverse set of locational criteria

and is designed to direct the planning and financing of future park facilities, whereas the required LOS standard introduces an element of regulatory control into the planning function.

This regulatory aspect of LOS implementation is the primary reason that the criteria established for identifying recreational needs by RPA and for each type of park facility should not be adopted as the LOS standard. The County needs to retain a certain amount of flexibility in deciding upon recreational priorities. The application of the criteria that have been described in this Chapter provides such flexibility. The implementation of the LOS standard as is used to evaluate development proposals, should serve as an indicator that there is an adequate number of public parks and recreational facilities within the jurisdiction of the unincorporated County to meet the needs of its residents.

The information that was provided in Table 9 indicates that there were approximately 89 acres of parks per 1,000 persons in the County as of 1986. This total, however, includes the entire County-wide population, including the municipalities, and also includes all of the public park acreage, including the parks that are the responsibility of other jurisdictions. The adopted LOS standard for the unincorporated County should more accurately reflect the responsibility that County government has to provide services to the residents within its jurisdiction. The accepted criteria used by the County suggests a combined level of service standard of 9 acres per 1,000 persons (i.e., 2 acres/1,000 persons in neighborhood parks, 2 acres/1,000 persons in community parks, and 5 acres/1,000 persons in metropolitan parks.) The adoption of such a standard would, however, not take into account the many unique factors that comprise the availability of recreational facilities in the County. Such factors include the large number of special parks; the availability of numerous private recreational opportunities; the proximity of Myakka River State Park, the largest park in the State system; and the relatively high utilization rate of public beaches.

Table 10 presents a summary of the existing 1,379 acres of park land under the jurisdiction of the County. Overall, the current level of service is 8 acres per 1000 residents. This analysis includes all park acreage, with the largest areas being in special parks and beaches. As discussed in the section on park classifications, beaches are generally considered to be similar in function to metropolitan parks although beaches do not provide all of the facilities of that park classification. Special parks taken in their entirety exhibit some of the characteristics of each of the three park classifications, but individually they cannot be categorized.

A comparison of the acreage ratios per 1,000 residents with the established criteria for each park classification indicates that the available park acreage for each of the park classifications is below the average criteria. The greatest disparities are in community and neighborhood parks. However, the County's long term commitment has been to develop community and metropolitan parks (including beaches.) This suggests that the level of service standard for parks should be 7 acres/1,000 residents, which is the combined acreage criteria for metropolitan (5 acres/1,000 persons) and community (2 acres/1,000 persons) parks.

Although the current level of service (1987), including all types of parks is 8 acres/1,000 residents, the adoption of a slightly lower standard for the purpose of reviewing development orders is consistent with the factors identified above concerning the uniqueness of recreation in the County, particularly with regard to beach utilization. It is estimated that an acre of beach provides two to three times the utilization of other facilities. The adoption of a level of service standard of 7 acres/1,000 residents also takes into account the fact that much of the acreage identified in Table 10 is not fully developed; a significant proportion of planned capital improvements is therefore committed to completing facilities at existing park sites.

Table 10: Existing Levels of Service, Parks And Recreation, Unincorporated Sarasota County, 1987

<i>Park Classification (Acres)</i>							
RPA	Metropolitan					Total	
	Inland	Beaches	Community	Neighborhood	Special		
1	-	100	-	-	20	120	
2	-	-	30	-	65	95	
3	-	-	-	5	-	5	
4	-	-	-	26	85	111	
5	60	54	10	7	158	289	
6	-	-	-	5	26	31	
7	-	43	-	5	12	60	
8	-	254	10	4	10	278	
9	-	-	-	-	390	390	
10	-	-	-	-	-	-	
All	60	451	50	52	766	1,379	
Acres/1,000							
Persons	.4	2.6	.3	.3	4.5	8.1	

Source: Sarasota County Planning Department, 1988.

A level of service set at 7 acres/1,000 residents therefore takes into account present conditions, future financial considerations, and provides the necessary indicator for ensuring that the County is meeting the recreational needs of its residents.

Additional Observations

The County Planning staff and representatives of the Sarasota County Parks and Recreation Department have examined recreation and open space issues. The following concerns were identified.

CONCERN 9

Current levels of funding and staffing need to be retained and expanded in order to maintain and protect existing and future recreation facilities.

CONCERN 10

Although the Park Patrol of the Sheriff's Department regularly patrols the beaches, where security has improved, there is minimum security at inland parks. Patrol personnel have not increased proportionately to the increase of park and recreation areas.

CONCERN 11

Nuisance exotic vegetation, especially Brazilian pepper (*Shinus trebinthifolius*), is encroaching upon park sites; and once established, nuisance exotic species can be difficult to eradicate.

Future Conditions

Community Parks

The quantitative and spatial analysis of existing community parks revealed that a few areas of unincorporated Sarasota County are not serviced by such parks -- a current deficit of 90.8 acres. This deficit will increase with future populations unless additional acreage and sites are acquired. Development of additional community parks in areas which are not currently served but are expected to experience population growth, can fulfill not only existing and future requirements to meet the County's levels of service, but can help to reduce the overall County deficit for neighborhood parks as well.

Sarasota County plans to develop the following community parks through the year 2010: Colonial Oaks, Woodmere, Longwood, Englewood/Overbrook, Gulf Gate East, Sorrento, Bay Street, and a site to serve the unincorporated area East of Myakka River and south of I-75 (Figure 16). At this writing, specific sites for several of the above mentioned future community parks are undetermined. Figure 16 indicates the service areas only of those future community parks for which specific sites are determined. For additional information please see the Capital Improvements Chapter.

Metropolitan Parks

The quantitative and spatial analysis of existing metropolitan parks revealed a current deficit of 378.1 acres in parks of this classification in the unincorporated County. This deficit will increase with future populations unless additional acreage and sites are acquired.

As mentioned in the analysis of existing conditions, most of Sarasota County's residents live within the service areas of existing metropolitan parks. The public beaches provide recreational opportunities far beyond what their acreages would indicate. However, many of the public beaches do not offer a full range of metropolitan park-level recreation facilities. This lack of facilities can be overcome,

without converting valuable and environmentally sensitive beach areas, by establishing or upgrading appropriately located inland sites as metropolitan parks.

Sarasota County plans to develop two metropolitan parks -- one in the North County, and one in the South County -- by the year 2000. The exact locations are yet undetermined. For more information, see the Capital Improvements Chapter.

Regional Parks

Sarasota County has a surplus of regional parks. This surplus will continue beyond the year 2010, based upon both resident and functional population projections. However, it should be noted that regional parks also provide environmental and open space benefits, and therefore they should not be evaluated entirely according to recreational criteria.

CONCERN 12

Sarasota County must continue to acquire and develop sites for community and metropolitan parks, to meet the needs of the increasing populations as well as existing needs.

School Sites

Public school sites in the County provide a potential for serving a portion of the recreational needs of the County. However, they are not generally accessible. Table 11 does provide a summary of school acreage. A comparison of Table 9 and Table 11 provides an indication of the impact that the inclusion of school sites would have on the Countywide level of service for recreation. It would be appropriate to include these areas in the level of service analysis for recreation at such time as the School Board and the County formalize an agreement regarding the joint use of recreational facilities at schools.

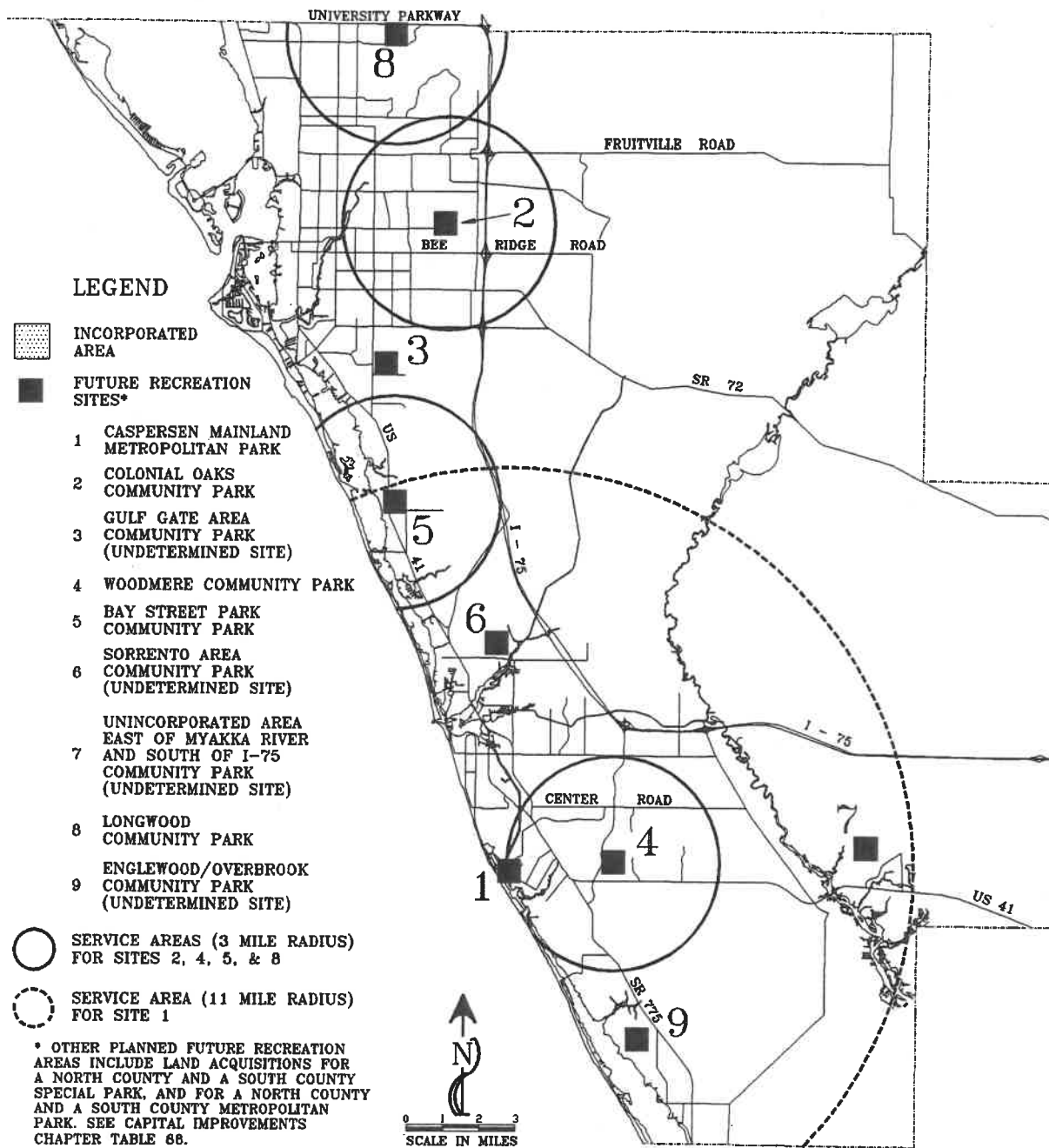


Figure 16: Planned Future Recreation Sites, 2010

Source: Sarasota County Parks and Recreation Department, 1988.

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Table 11: Potential Recreation Levels Of Service - School Sites, 1987

RPA	School Sites With Recreational Facilities (Acres)			Total
	Metropolitan	Community	Neighborhood	
1	-	-	5	5
2	-	18	40	58
3	44	43	26	113
4		118	143	261
5	37	-	102	139
6	-	-	40	40
7	76	-	16	92
8	-	-	40	40
9	-	-	-	0
10	-	-	47	47
All	157	179	459	795
Acres/1,000				
Persons	.9	1.0	2.7	4.6

Source: Sarasota County Planning Department and Sarasota County School Board, 1987.

Additional Considerations

The Florida Department of Natural Resources' plan, "Outdoor Recreation in Florida, 1987" includes a demand/needs analysis for various outdoor activities, such as picnicking, fishing, camping, bicycling, horseback riding, waterskiing, etc. They are listed by planning region. Region IX (Southwest Florida) is shown to have high recreational needs for: saltwater beaches (in miles); bicycle trails -- the highest need among all Florida regions; freshwater beaches (in miles); hiking trails; freshwater fishing; and horseback riding trails. (46)

These needs and opportunities, and the larger questions of Sarasota's regional role, must be considered in planning for Sarasota County's future recreation.

Currently (1988), the Sarasota County park system provides recreational opportunities throughout the County, with the exception of the City of North Port and the Town of Longboat Key. Sarasota County owns and operates one park, South Lido, within the jurisdiction of the City of Sarasota. The City of Venice has entered into an intergovernmental agreement with the County regarding the maintenance and operation of several park and recreation sites. In 1987, the City of North Port requested to enter in a similar intergovernmental agreement with the County regarding the maintenance and operation of the city's parks. Negotiations were in progress at the time of this writing. Additionally, in 1988, discussions were initiated between the County and the City of Sarasota concerning consolidation of services in general. Parks and recreation has been identified as a prime candidate for consolidation. The County could develop a Countywide parks and recreation system to provide the same service on a Countywide basis, while eliminating duplication of efforts.

Problems

The twelve specific concerns stated in preceding discussions synthesize into four general problems. Following the statement of these are listed the opportunities for and constraints upon their solution.

- The provision of adequate recreation facilities to meet the needs of current and future residents and visitors of Sarasota County. (Concerns 1, 2, 3, 5, 6, 8 and 12)
- The availability of funds and staff to maintain and protect existing and future public recreation facilities. (Concerns 1, 4, 7, 9 and 10)
- The adverse impacts of human beings on natural resources at recreation sites. (Concerns 4 and 10)
- The encroachment of nuisance exotic vegetation into recreation areas. (Concern 11)

Opportunities

1. Sarasota County has an extensive parks and recreation system.

2. The Sarasota County Parks and Recreation Department has established coordination with other units of government and other governmental agencies. The County has explored the possibility of a Countywide parks and recreation system. Additionally, Sarasota County will continue to expand its coordination efforts with the Sarasota County School Board in order to maximize the recreation potential of school sites.

3. A portion of Buchan Airport has potential as a future recreation site.

4. A number of new or expanded park sites have been proposed, as shown on Figure 17.

- The following creeks and bayous have been suggested by various groups as potential canoe trails: Brushy Bayou at South Lido Park; North Creek; and Curry Creek.

- The Sarasota County Department of Parks and Recreation plans to develop the 20-acre Bay Road Park site as a community park.
- Funding for future parks and recreational facilities is available through the County's Public Facilities Financing Ordinance (No. 83-24), as amended, as well as through federal and state recreation assistance programs. The 1986 general obligation fund referenda resulted in additional funding opportunities.

- Existing landfill sites could have potential for future recreation uses.

- Several sites have been proposed for recreational use through Sector Plans and Developments of Regional Impact (DRI's): *Woodmere Village at Jacaranda*: the applicant is required to dedicate to the County a 36.5-acre community park/preservation area, and 10.8-acre neighborhood park/preservation area (Resolution No. 84-311).

Sector Plan No. 83-8-SP (the 1100-acre Industrial Area): includes a condition whereby a community level park, containing a minimum of twenty acres, will be established in an area along Center Road and across from the Venice Middle School (Resolution No. 85-344).

Palmer Ranch DRI - Master Development Order: The conditions for development approval indicate 72 acres of park sites, in various parcels, are to be dedicated to Sarasota County by Palmer Ranch. The Palmer Ranch development will provide at least 200 acres of public and private recreational use (Resolution No. 84-418).

The Development Order for Palmer Ranch Increment II DRI indicates that a 16.3-acre linear park and a 6.3-acre park will be dedicated to Sarasota County. The timing of the dedications is at the discretion of the Sarasota County Parks and Recreation Department (Resolution No. 87-382).

The Development Order for Palmer Ranch Increment III DRI indicates that a 32.5-acre park area will be dedicated to

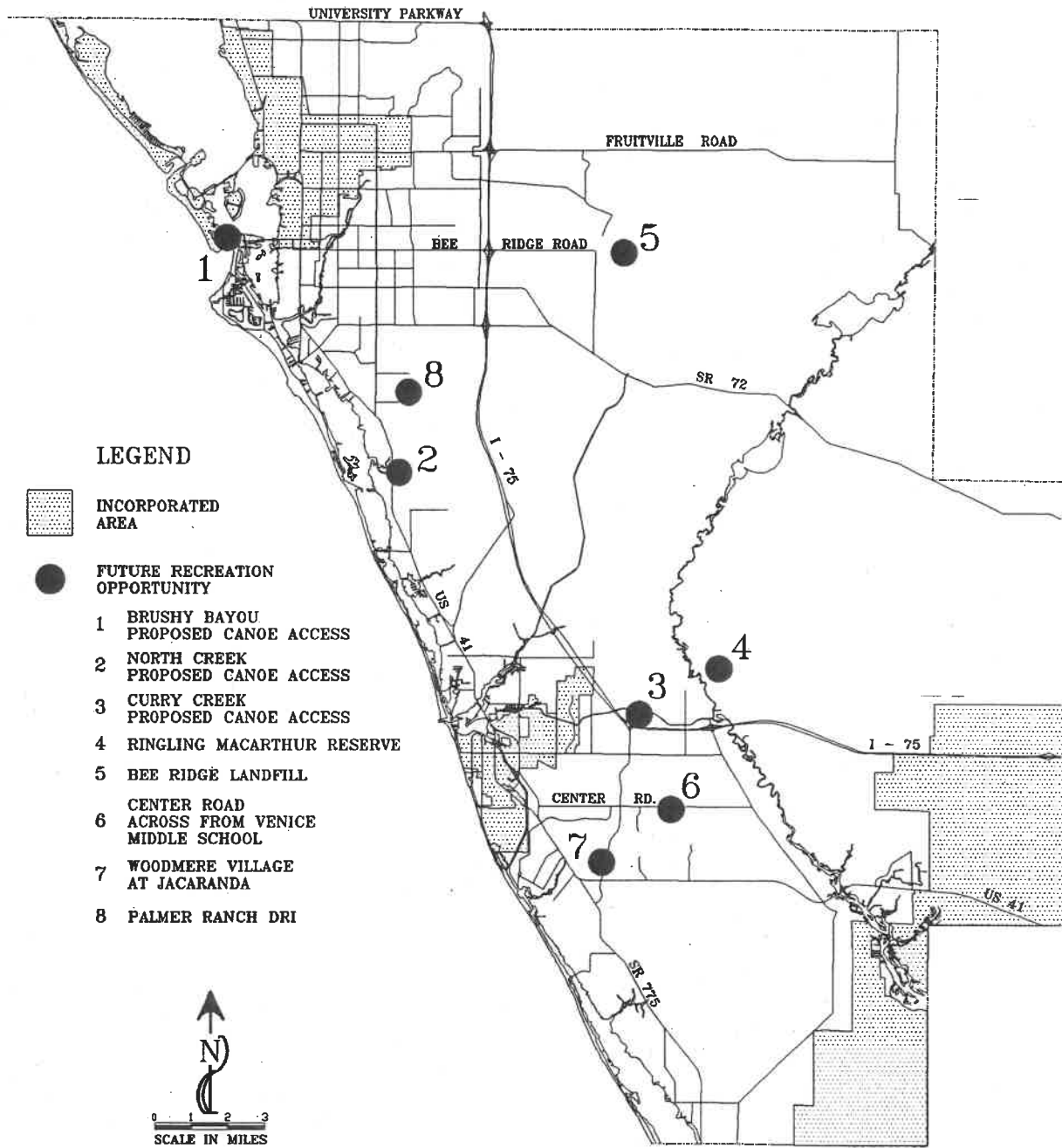


Figure 17: Future Recreation Opportunities In Sarasota County

Source: Sarasota County Parks And Recreation Department, 1988.

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Sarasota County. The timing of this dedication is at the discretion of the Sarasota County Parks and Recreation Department (Resolution No. 87-481).

5. The Board of County Commissioners adopted Resolution 82-200 on September 14, 1982, stating the Board's environmental commitment for the management of the Ringling MacArthur Reserve for a number of reasons, including, the Reserve's ecological and hydrologic significance; its unique assemblage of habitats important to wildlife species; its proximity to the Myakka River State Park, which makes the Reserve a logical expansion of this State Park; its potential for a future water source; and its relationship to Charlotte Harbor, an Area of Critical State Concern. Pursuant to Resolution 82-200, public acquisition of the Ringling MacArthur Reserve was deemed to be necessary and important to present and future County residents. Additionally, public use of the Reserve is to be limited to water consumption, open space, and non-consumptive ecologically benign resource-based recreation. Special consideration is to be given to Environmental Education research, relating to environmental management, ecology, agriculture, and related sciences.

A draft Ringling MacArthur Public Use Plan has been prepared proposing open space and a variety of recreation uses such as biking trails, camping, picnic facilities, horse stables, bridle trails, and other resource-based activities. The final Public Use Plan is due for release in early 1989.

Sarasota County Ordinance 82-94 was also adopted on September 14, 1982, authorizing a Referendum be presented to the voters on November 2, 1982 regarding the issuance of general obligation bonds for the acquisition of the Ringling MacArthur Reserve. The voters supported the Referendum.

Currently (1988), Sarasota County has acquired 16,835 acres of the Reserve, and is in the process of acquiring approximately 8,238 additional acres for the Reserve.

In 1986, Sarasota County purchased the 6,151 acre Walton Tract to develop a new landfill complex and related facilities. Large portions of the Walton Tract cannot be used for landfill purposes

because they are in the floodplain of either the Myakka River or the Cow Pen Slough. However, they will be used as buffer zones, wildlife corridors, and mitigating wetlands. It is expected that the proposed landfill development will leave approximately two thirds of the Walton Tract undisturbed, and suitable for wildlife habitats.

This presents a recreation opportunity for Sarasota County. The County needs to preserve and conserve this undisturbed area, and should consider the implementation of ecologically benign, non-consumptive, resource-based recreational uses in these areas.

Constraints

- The greatest constraints to acquiring and developing new parks, as well as maintaining and protecting existing ones, is limited fiscal resources.
- Certain parks cannot easily be expanded due to surrounding land uses.
- Some County-owned parcels of vacant land are not of a size, location, or character to economically be included in the Sarasota County Park System.

Planning Options

Recreation in some places is viewed as a luxury. The problem with that view is that recreation programs are usually the first casualties of budget cutbacks. This is understandable from a short-range perspective of expediency, and when balanced against the more utilitarian needs of a community. But when viewed from a long-range perspective, and particularly within the context of a place's identity, recreation should not be seen merely as a luxury. In fact, Sarasota County currently takes, and in the past has taken, the long-range perspective. Thus, an impressive number of parks and recreation facilities exist. Most impressive among these are the County's public beaches.

In future years Sarasota County will have three major options. The first is to acquire no new parks and to maintain the existing level of funding for maintenance and protection of existing ones. This "status quo" option, while in the short-run the least expensive one, soon would result in overcrowded recreation sites. As maintenance costs rise with inflation, the level of maintenance could decline, resulting in decline of the overall quality of the facilities and sites.

A second option is contingency planning, whereby new park sites and facilities are acquired as the need for them is recognized. Funding for maintenance would be increased, when possible, to achieve the desired level of service and to overcome the impacts of inflation.

A third option is to include recreation and open space planning within the framework of a comprehensive plan. With effective planning and management, population growth and the provision of facilities, including recreation, could be synchronized through this option. Benefits from recreation expenditure could be maximized and allocated to the areas of greatest need, with overlap and duplication minimized. Individual parks could be managed from within a framework that also included transportation, conservation, and land use chapters.

Recreation and Open Space Plan

Intent

The residents of Sarasota County, in cooperation with local government, have taken a long range perspective towards the provision of recreational facilities. An impressive number of parks and beaches have been developed for both passive and active recreation. In confronting the future, Sarasota County includes recreation and open space planning in the framework of the Comprehensive Plan. With effective planning and growth management, the provision of recreation facilities, can be synchronized with the needs of County residents. Benefits from recreation expenditure can be maximized and allocated to the areas of greatest need, while overlap and duplication is minimized. Individual parks can be managed within a framework which also includes transportation, conservation, and land use.

In general, the Recreation and Open Space Plan sets forth a program to serve the needs of both residents and visitors. While the actions of this Plan will impact primarily unincorporated portions of the County, *Apoxsee* is sensitive to the planning efforts of the municipalities and the surrounding counties.

Sarasota, to many, is synonymous with white sand beaches. The protection of the dunes, coastal vegetation, and hence, the beaches themselves, is vital to their continued appeal. In addition to the Policies in the Environment Plan, the Recreation and Open Space Policies provide specific actions to address concerns about their potential deterioration, including controlling access, facilitating parking, and providing transportation where possible.

County parks, including beaches, are in need of appropriate funding to provide for adequate security and maintenance operations. Whenever and wherever possible, local organizations will be encouraged to work with the public sector to cooperatively accomplish these tasks.

The Recreation and Open Space Plan provides for the development of additional recreational facilities and encourages the provision of open space for recreational use. Consistent with this general overview, specific actions are proposed to meet the needs of the future. The Policies outline the major precepts of the Plan, while the Capital Improvements Chapter provides the details, such as project description, preliminary timetables, construction cost, site acquisition expenses, and proposed funding alternatives. Taken in concert, the Plan will aid in providing quality recreational experiences for the foreseeable future.

Goal 1

It shall be the Goal of Sarasota County to provide, protect, and maintain a high-quality, environmentally sensitive, accessible, economically efficient system of parks, recreation facilities, and recreational open space that serves all Sarasota residents and visitors.

Objective 1.1

To acquire, develop, maintain and protect parks and recreation facilities, consistent with the needs of Sarasota County's population, as determined by the County's recreation levels of service, through the year 2010.

Policy 1.1.1.

- The County will adopt a Countywide recreation level of service (LOS) of no less than 7 acres per 1,000 population, as established in the Recreation and Open Space Chapter.
- By 1994, Sarasota County will adopt Levels of Service (LOS) by recreation activity.

Policy 1.1.2.

The County will develop and/or acquire recreation sites consistent with the Capital Improvements Chapter, giving priority to the following recreation target areas:

Community Parks:

- Colonial Oaks Park (development);
- Longwood Park (development);
- Woodmere Park (acquisition and development);
- Gulf Gate East area (acquisition and development);
- Sorrento area (acquisition and development);
- Englewood/Overbrook area (acquisition and development);
- Unincorporated area East of Myakka River and South of I-75 (acquisition and development); and
- Bay Street Park in Osprey (development).

Metropolitan Parks:

- North Sarasota County - 1 site (acquisition and development); and
- South Sarasota County - 1 site (acquisition and development).

Special Parks (athletics):

- North Sarasota County - 1 site (acquisition and development); and
- South Sarasota County - 1 site (acquisition and development).

Policy 1.1.3.

By 1990, Sarasota County will examine with the Sarasota County School Board the maximum use of school sites as recreation areas, particularly in locations where there are current deficiencies in neighborhood parks and where future deficiencies might be expected due to urbanization.

Policy 1.1.4.

Ecologically benign, non-consumptive, resource-based uses shall be implemented at the Walton Tract and the Ringling MacArthur Reserve.

Policy 1.1.5.

Coordinate future park acquisition and development within the framework of Apoxsee.

Policy 1.1.6.

Sarasota County shall continue, and whenever and wherever feasible, expand its beach and waterfront acquisition efforts. Priority shall continue to be given to those parcels which will expand existing public beaches, serve the greatest number of persons, or protect important native habitats.

Policy 1.1.7.

Increase the ecologically benign recreation potential of Sarasota County's natural waterways (bayous, rivers, and creeks).

- Establish locations, design standards, and implementing techniques for providing public access to appropriate waterways.
- Designate canoe access points on appropriate bayous, rivers, and creeks, including Brushy Bayou at South Lido Park, Curry Creek, North Creek, Blind Pass, and Red Lake.

Policy 1.1.8.

Develop a list of management priorities for each park in the Sarasota County Park System in terms of existing and future functions, relationship to surrounding uses, and other components of the park system.

Policy 1.1.9.

Maintain and where necessary improve security at parks and recreation sites.

- Expand personnel of the Park Patrol Division as new park sites are acquired and developed.
- Work with neighborhood associations, nearby residents, and law enforcement agencies to improve security at sites where 24-hour surveillance or controlled access is inappropriate, or impossible to provide.

Policy 1.1.10.

The acquisition and retention of native habitat areas shall be retained as a high priority in the County's recreation planning and development activities.

Policy 1.1.11.

By 1994, determine the feasibility of developing a public golf course as part of the capital improvements planning for recreation.

Policy 1.1.12.

Include open space definitions and standards in the local land development regulations.

Objective 1.2

To ensure that recreational lands and facilities are compatible with surrounding land uses and the natural environment in accordance with the Environment Chapter, through the year 2010.

Policy 1.2.1.

Design future park improvements to existing park facilities and on-going park operations to minimize the impacts of people on sensitive natural systems.

Policy 1.2.2.

Protect beaches, dunes, and coastal vegetation from vehicular traffic and from excessive pedestrian traffic.

- Install effective barriers to prevent motor vehicle traffic except on designated beach accesses and parking areas.
- Prevent beach pedestrian traffic from destroying native vegetation by providing boardwalks.
- Improve parking at high-use beach sites while protecting beach resources.
- Provide secure bicycle racks at beach sites to encourage bicycle transportation.
- Encourage efforts to redesign existing beach parking areas so that eventually all parking areas will be located landward of coastal construction control lines.
- Prepare and implement techniques to protect nesting bird colonies on the beaches.

Policy 1.2.3.

Eradicate exotic and nuisance vegetation at park and recreation sites; restore native habitats.

Policy 1.2.4.

Encourage conservation and ecologically sensitive management of undeveloped lands for their environmental, recreational and open space value through acquisition and during development review processes.

Policy 1.2.5.

Sarasota County will identify areas which could qualify as "natural area" parks. When acquired and included in the park system, such areas will be kept in their natural state, receiving maintenance according to normal practices associated with native habitats, as directed by Sarasota County's Department of Natural Resources.

Objective 1.3

To improve access to parks and recreation facilities for all Sarasota County residents, through the year 2010.

Policy 1.3.1.

Ensure that future expansions of the Sarasota County Area Transit System (SCAT) links major residential developments with parks and recreation areas, especially during peak demand periods.

Policy 1.3.2.

Develop methods to resolve automobile parking inadequacies at public beaches and beach accesses. As part of this process determine the feasibility of developing a shuttle bus system to convey persons from remote parking areas to high demand recreation sites (for example, Siesta Beach).

Policy 1.3.3.

By 1994, complete a study that analyzes the potential for developing a system consisting of bikeways, footpaths and/or nature trails linking parks and recreation areas with residential areas. Where possible provide linkages between parks and recreation areas.

Policy 1.3.4.

Protect public access to the wet sand beaches, in accordance with the Environment Chapter.

Objective 1.4

To adopt and implement a bicycle plan by 1993.

Policy 1.4.1.

By 1991, Sarasota County will prepare a Countywide bicycle plan, in coordination with the Sarasota County Transportation Department and the Sarasota-Manatee Metropolitan Planning Organization.

Policy 1.4.2.

The County will implement the bicycle plan (pursuant to Policy 1.4.1.) by 1993.

Objective 1.5

To ensure that parks, recreation facilities, and recreational open spaces are economically feasible to develop, operate, protect, and maintain, through the year 2010.

Policy 1.5.1.

Encourage the private sector to develop and maintain neighborhood parks, consistent with County criteria, particularly in the areas where:

- there is existing deficit of publicly owned neighborhood parks;
- there are no future opportunities of public recreation sites; and
- there is no concentration of private recreation facilities.

Policy 1.5.2.

Accept no parcel for inclusion in the County's park system that is of a size or character that cannot be economically maintained, as determined by the Board of County Commissioners with input from the Sarasota County Department of Parks and Recreation, and other appropriate County Departments.

Policy 1.5.3.

Coordinate with local recreation-oriented groups (for example, soccer clubs, gun clubs) to exchange their development of facilities for the use of appropriate County park areas.

Policy 1.5.4.

Utilize indigenous vegetation in landscaping to reduce maintenance costs (for example, grass-mowing).

Policy 1.5.5.

Initiate user fees for facilities with high maintenance costs.

Policy 1.5.6.

Natural plant communities preserved within parks shall be maintained with their historic hydrology and fire sequence.

Policy 1.5.7.

Mowing of County parks shall be limited to necessary corridors and playing fields to protect native forbs, shrubs, and grasses.

Objective 1.6

To maintain, and improve where possible, coordination with other County boards and agencies, the County's municipalities, the Region, and the State in the development and provision of parks and recreation facilities.

Policy 1.6.1.

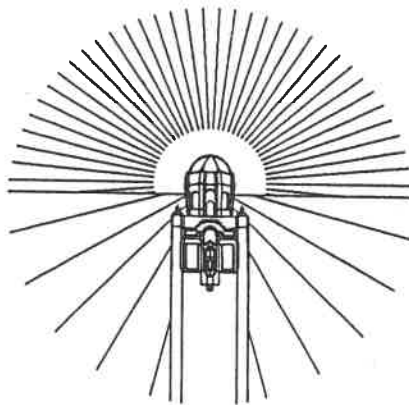
Consolidate, where possible, the provision and maintenance of parks and recreation areas with other units of government to avoid overlap and duplication of effort.

Policy 1.6.2.

Pursue funding available through federal and State recreation assistance programs.

Policy 1.6.3.

Coordinate with the Sarasota County School Board on the location, phasing, and design of future school sites to enhance the potential of schools as recreation areas.



Endnotes

1. Bureau of Economic and Business Research, College of Business Administration, University of Florida. 1986 Florida Statistical Abstract. Gainesville, University of Florida Press, 1986; also Sarasota County Planning Department, 1987
2. Florida Department of Community Affairs, Chapter 9J-5, Florida Administrative Code, "Minimum Criteria for Review of Local Government Comprehensive Plans and Determination of Compliance," February 14, 1986, as amended September 30, 1986; also, Sarasota County Planning Department, 1987.
3. Sarasota County, Office of Supervisor of Elections, September 3, 1987; also, Sarasota County Ordinance No's 86-56, 86-57, and 86-58.
4. State of Florida, Department of Natural Resources, Division of Recreation and Parks. Outdoor Recreation in Florida - 1987. A Comprehensive Program for Meeting Florida's Outdoor Recreation Needs. Tallahassee, February, 1987.
5. Local Government Comprehensive Planning and Land Development Regulation Act 1985, as amended in 1986, Chapter 163.3177 (4)(6)(e).
6. 1980 Census; also, Sarasota County Planning Department, 1987.
7. City of Sarasota Comprehensive Plan, 1986 as revised in 1987; also, Florida Department of Natural Resources. Inventory of Recreational Sites and Facilities. 1987.
8. Sarasota County School Board, 1987.
9. Florida Department of Natural Resources. Florida Recreation and Parks Facility Inventory. 1987.
10. 1980 Census; also, Sarasota County Planning Department.
11. City of Sarasota Comprehensive Plan, 1986, as revised in 1987; also, Sarasota County Parks and Recreation Department, 1987.
12. Sarasota County School Board, 1987.
13. Florida Department of Natural Resources. Florida Recreation and Parks Facility Inventory. 1987.
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CHAPTER 4

PUBLIC FACILITIES

Sanitary Sewer

Introduction

The treatment of sewage and the disposal of wastewater within unincorporated Sarasota County has traditionally been accomplished through either 1) on-site treatment and disposal involving the utilization of septic tanks or small and intermediate sized, privately owned wastewater treatment plants (package plants), or 2) hookup to larger regional wastewater treatment facilities, or franchises. Factors such as rapid growth and the reliance upon private enterprise for the construction and operation of wastewater treatment facilities has caused a proliferation of small package treatment plants and an enormous inventory of individual septic tanks in otherwise urbanized areas. As of August, 1988, there were 118 individual wastewater treatment plants and over 45,000 septic tanks. Current County policy towards sanitary sewer traces its history through a number of wastewater treatment studies and State and federal rules and legislation regulating the treatment and disposal of wastewater.

Legislation Affecting Wastewater Treatment

The following are the relevant laws which govern wastewater treatment including a brief description of each.

U.S. Public Law 92-500, "Federal Water Pollution Control Act" relates to the provision of sanitary sewer service with the goal being the restoration and/or maintenance of the chemical, physical, and biological integrity of the nation's waters. Under this act, areawide waste treatment and management programs were established to ensure adequate control of source polluters. Section 201 made grants available to local governments for the construction of facilities which would treat "point sources" of pollution including sewage treatment facilities.

Chapter 403.086, Florida Statutes, "Sewage Disposal Facilities: Advanced and Secondary Waste Treatment," in part, and Chapter 17-6, Florida Administrative Code implements Public Law 92-500 at the State level. This legislation provides for rules regarding the discharge of treated effluent from domestic and industrial facilities as well as establishing water quality limits for effluent. A 1987 amendment to Chapter 403.086, Florida Statutes, the Grizzle-Figg bill, mandates advanced waste

treatment for wastewater treatment plants which employ surface water discharge by October 1, 1990. This is discussed further in the Level of Service section.

Resolution No. 87-157, adopted by the Board of County Commissioners in response to recommendations made by the 1986 Sarasota County Assembly for Wastewater Management, established the Board's wastewater treatment policy to encourage regionalization of wastewater treatment plants, the consideration of County acquisition of privately-owned systems, and potable water conservation through the encouragement of recycling or reuse of treated water. This represents a major step toward the centralization of sanitary sewer within the unincorporated County.

County regulations have been adopted consistent with federal and State legislation. These rules coordinate wastewater treatment with development at the subdivision level as well as with individual parcel development. A review of the most relevant County Ordinances and Resolutions are found in Appendix D, Section 2.

Planning Studies and Efforts

Wastewater Treatment Plants

Numerous wastewater treatment studies have been conducted since the late 1960's. In 1967 the Report on the Engineering and Economic Feasibility of Water and Sanitary Sewage Systems for the County of Sarasota (1) analyzed the consolidation of existing County wastewater treatment franchises and contained a general discussion of the advantages and disadvantages of private versus public ownership of wastewater treatment systems.

The 1970 Engineering and Cost Analysis of Water and Wastewater Systems, (2) expanded upon the 1967 report. It recommended the development of centralized wastewater treatment facilities for the fast-growing unincorporated areas in North Sarasota County surrounding the City of Sarasota.

With regard to short-range disposal, it proposed two County-owned service areas utilizing deep well injection, and recommended the investigation of landspreading as a long-range effluent disposal technique.

The June, 1971 Water and Wastewater Systems Master Plan for Sarasota County, (3) expanded the recommended service areas of the 1970 study to include sewer service for all of the urbanized areas of Sarasota County, including developed areas near the City of Venice. It also divided the County into five pollution control zones and assessed the water and wastewater needs of each zone through the year 2000.

The 1975 Central County Pollution Control Zone Engineering and Cost Analysis of Water and Wastewater Systems (4) focused on water and wastewater problems in the central County area (in and around Venice), and presented cost estimates associated with its recommended treatment program.

Two years later, the Sarasota County 201 Facilities Plan (5) responded to the federally mandated Section 201 of Public Law 92- 500, the "Federal Water Pollution Control Act." It used the five pollution control zones developed in the "Master Plan" to subdivide the Sarasota County study area, and presented detailed proposals for centralized wastewater treatment in the three most highly urbanized pollution control zones.

The plan stated that, "In order to achieve an environmentally sound and implementable wastewater treatment program for the Sarasota 201 Planning Area, complete regionalization will be required." Recommendations for the implementation of such a regionalization program included the acquisition of privately owned systems, the creation of utility districts, and the creation of a Countywide or districtwide management authority.

This study was subsequently adopted by the Cities of Venice and Sarasota. However, the County determined that implementation of the 201 Plan was "...not to be the optimum planning alternative for the equitable, environmentally sound, and effective treatment of wastewater in the County," Apoxsee, 1981. (6)

The Sarasota County Wastewater Treatment Advisory Committee was created in 1984. The community and industry representatives and County staff members who comprised the committee were instructed to evaluate the status of wastewater treatment systems in the southern portion of the County. In response to the Committee's report, the Board of County Commissioners adopted Resolution No. 84-122 which encourages the regionalization of central sewer systems, mandates connection to existing systems when available, pursuant to State statutes, and encourages the reuse or recycling of treated sewage effluent.

A 1986 report, Wastewater Sludge Disposal Study, (7) detailed the problems with sludge disposal from the County's numerous separate wastewater treatment plants. Based upon an evaluation of alternatives, the following recommendations were made:

- that the County adopt an interim plan whereby co-disposal of wastewater treatment plant sludge is conducted at the County's Septage Treatment Facility and approved landspreading facilities;
- that the County adopt a long-term plan recommending specific management techniques for sludge disposal; and
- that the County designate a single site for a sludge handling facility.

The study further recommended that prior to implementation, the County should consider developing regionalized wastewater treatment and disposal master plans.

In December, 1986, the County sponsored the Sarasota County Assembly for Wastewater Management which was coordinated by the Florida Atlantic University Institute of Government. The Assembly was composed of over thirty experts representing city, county, and regional governments; public and private utilities; engineering firms; media editors and publishers; and civic and environmental organizations. The Assembly concluded that the existing fragmented system of wastewater treatment was inadequate, and that the County government should take the lead role in addressing the County's wastewater treatment problems.

Several community organizations, including the Argus Foundation, the Taxpayers Association of Sarasota County, the League of Women Voters, and others in attendance at the conference expressed support for the Assembly's conclusions. This action prompted the Board of County Commissioners to adopt Resolution No. 87-157, a policy statement regarding central water and sewer systems. Consequently, it became an objective of the Board of County Commissioners to initiate an integrated program of wastewater effluent recovery as a primary water conservation strategy.

Under the Resolution, the Board states that a centralized sewer system is in the best interest of all urban areas, and, in all newly developing areas, centralized sanitary sewer systems shall be required as specified in the Land Development Regulations. The central sanitary sewer systems created will be encouraged to conserve water resources by providing for the recycling of effluent and sludge. Further, the County will initiate and implement the distribution of treated water through the construction of a major transmission main from the proposed treatment facility to all major urbanizing areas, as depicted in Apoxsee.

Another aspect of this Resolution is a program of implementing effluent reuse through an interconnection between existing and future wastewater treatment systems thereby creating a centralized system with designated regional plants. During the consolidation process, small and less efficient plants will be removed from service. Consideration of which plants to consolidate first can be given to those systems which presently are unable to comply with regulatory standards or which are currently creating an adverse impact upon the environment.

Resolution No. 87-265, "Wastewater Resource Management Policy," furthers the goal of wastewater resource recycling by calling for the County to initiate a program of wastewater effluent recovery as a primary water conservation strategy, as well as reducing the proliferation of wastewater treatment plants.

It is expected that the goals of Resolution Nos. 87-157 and 87-265 will be realized through the development and implementation of a Wastewater Resource Management Program in Sarasota County. A consultant has been retained to work in concert with County staff and assist the County through all phases of the development of the Countywide wastewater management system. Tentative scheduling is as follows:

- Phase I: Feasibility Study and Adoption Of Plan As Part Of Apoxsee (12 Months)
- Phase II: Design & Permitting (24 - 36 Months)
- Phase III: Construction (24 - 48 Months)
- Phase IV: Operation and Monitoring (Ongoing)

Septic Tanks

Current policy regarding the use of septic tanks traces its history through relatively few studies, although rules and legislation regulating the treatment and disposal of wastewater through on-site methods have been adopted at the federal, State, and local levels.

In 1969, the Planning Commission, Planning Department, and Soil Conservation Service compiled An Information Report on Drainage, Flooding, and Septic Tanks In South Venice with the following conclusion: "When buildings with septic tanks are considered, 98 percent of the County possesses a limitation rating of 'severe' to 'very severe.'" According to the study, due to soil type, poor drainage, and high water table, only 2 percent of the soil within the County is suitable for septic tank drainfields. Based on this study and the occurrence of numerous septic tank failures (2,000 out of 30,000 in a two-year period), the County felt that the relatively unsupervised usage of on-site wastewater treatment could not be tolerated.

Another study, the 208 Water Quality Management Plan for Southwest Florida, (8) was prepared by the Southwest Florida Regional Planning Council. Developed under guidelines found in Section 208 of Public Law 92-500, it evaluated the impact of private septic tanks upon the County's surface water quality. The plan recommended the

development of local septic tank siting and installation guidelines, and the dissemination of information on septic tank maintenance to septic tank owners.

Although Chapter 381.272, Florida Statutes, and Chapter 10D-6, Florida Administrative Code both regulate on-site sewage disposal systems, the County determined that greater local control was necessary. This concern resulted in Ordinance No. 83-14 relating to the design, construction, installation, operation, maintenance, and repair of individual on-site sewage disposal systems. The Administrator of the State Department of Health and Rehabilitative Services' Environmental Health Program had this comment regarding Ordinance No. 83-14, "...the Environmental Health Program Office has long supported the enactment of ordinances to address matters of local public health significance..." Further, he stated, "...We have reviewed Sarasota County's ordinance relating to subdivision approval and development of lots utilizing individual sewage disposal systems. This ...ordinance would significantly strengthen existing septic tank installation requirements and appears to give Sarasota County better control over the method of sewage disposal in individual subdivisions." Ordinance No. 83-14 has been furthered by the subsequent adoption of Ordinance Nos. 83-83 and 86-03. A brief description of these ordinances can be found in Appendix D, Section 2.

Inventory and Analysis

Wastewater Treatment Plants

Public Systems

As of August, 1988, wastewater treatment is provided by 118 separate wastewater treatment plants and over 45,000 septic tanks. The treatment plants are listed in Appendix D, Section 1. Three public wastewater treatment systems are included in the 118 wastewater treatment plants; the City of Venice, the City of Sarasota, and the Sarasota County Utility System.

Longboat Key's present and proposed sanitary sewer system provides for collection only, with wastewater treatment services provided for by Manatee County. Therefore, their collection system and future needs are coordinated with the Countywide Manatee County Utility System. Consequently, no further discussion regarding its impact upon Sarasota County is necessary.

The City of Venice currently operates its Island Beach plant under effluent standards which comply with the Grizzle-Figg bill and has a capacity of 2.8 million gallons per day (MGD). Plans are underway to add another plant with a capacity of 3.5 MGD. Following completion of the Eastside plant, the Island Beach plant will be down-graded to 400,000 gallons per day.

The City of Sarasota's plant has a capacity of 13 MGD and discharges its treated effluent into Whitaker Bayou, which empties into Sarasota Bay. This disposal of effluent has not met quality standards established by the State of Florida or Sarasota County. As a result, the City has been charged with numerous violations of the Federal Clean Water Act. The Environmental Protection Agency ordered the City to eliminate its wastewater problem by July, 1988, and helped the City with a \$14 million grant to assist in solving that problem.

CONCERN 1

The City of Sarasota wastewater treatment plant has not been able to meet federal and State water quality standards.

The City is currently attempting to solve its effluent disposal problem by changing its dry weather disposal method to landspreading; however, this alternative has been criticized by both local environmental groups and the Florida Department of Environmental Regulation. Through landspreading, which involves transmission of treated effluent for agricultural reuse, golf course irrigation, spray irrigation, or some other similar method, the City hopes to avert the cost of upgrading its treatment plant. However, this method cannot be used

during extended periods of wet weather. Three alternative methods of treatment and disposal during wet weather are under consideration: Advanced Wastewater Treatment, deep well injection, and discharge to an artificial wetlands system.

Recent decisions by the Department of Environmental Regulation indicate that the City must investigate the Advanced Wastewater Treatment alternative. If the City agrees to proceed with this method of treatment, an \$8.9 million grant will be awarded to the City to help fund this more costly process. This alternative would be consistent with the requirements of the "Grizzle-Figg Advanced Wastewater Treatment Act," which mandates advanced wastewater treatment effluent standards for all wastewater treatment plants which discharge into surface waters of the State. The Department of Environmental Regulation estimates that the City will have to spend approximately \$13.6 million to bring its plant into compliance with the law when it becomes effective in 1990.

Sorrento Utilities, formerly a franchise wastewater system, is now a part of the Sarasota County Utility System. It was purchased in late July, 1988 by the Sarasota County Board of County Commissioners, which assumes all operational responsibility. The geographic service area is presented on Figure 18. The plant operates with a design capacity of 400,000 gallons per day. Treatment based on data for 1987-88, was estimated to be 216,000 gallons per day providing an average of approximately 164 gallons per existing equivalent dwelling unit. Based upon the above flow data, this County-owned plant is operating at approximately 54 percent of its design capacity; general facility performance and conditions is rated as good. The Sorrento area served by the County Utility System consists of predominately urban residential development which is not expected to increase enough within the first five years of the planning period to require capacity expansion of the system. Thus no significant capital improvements related to maintaining level of service standards are planned for fiscal years 1990-1994.

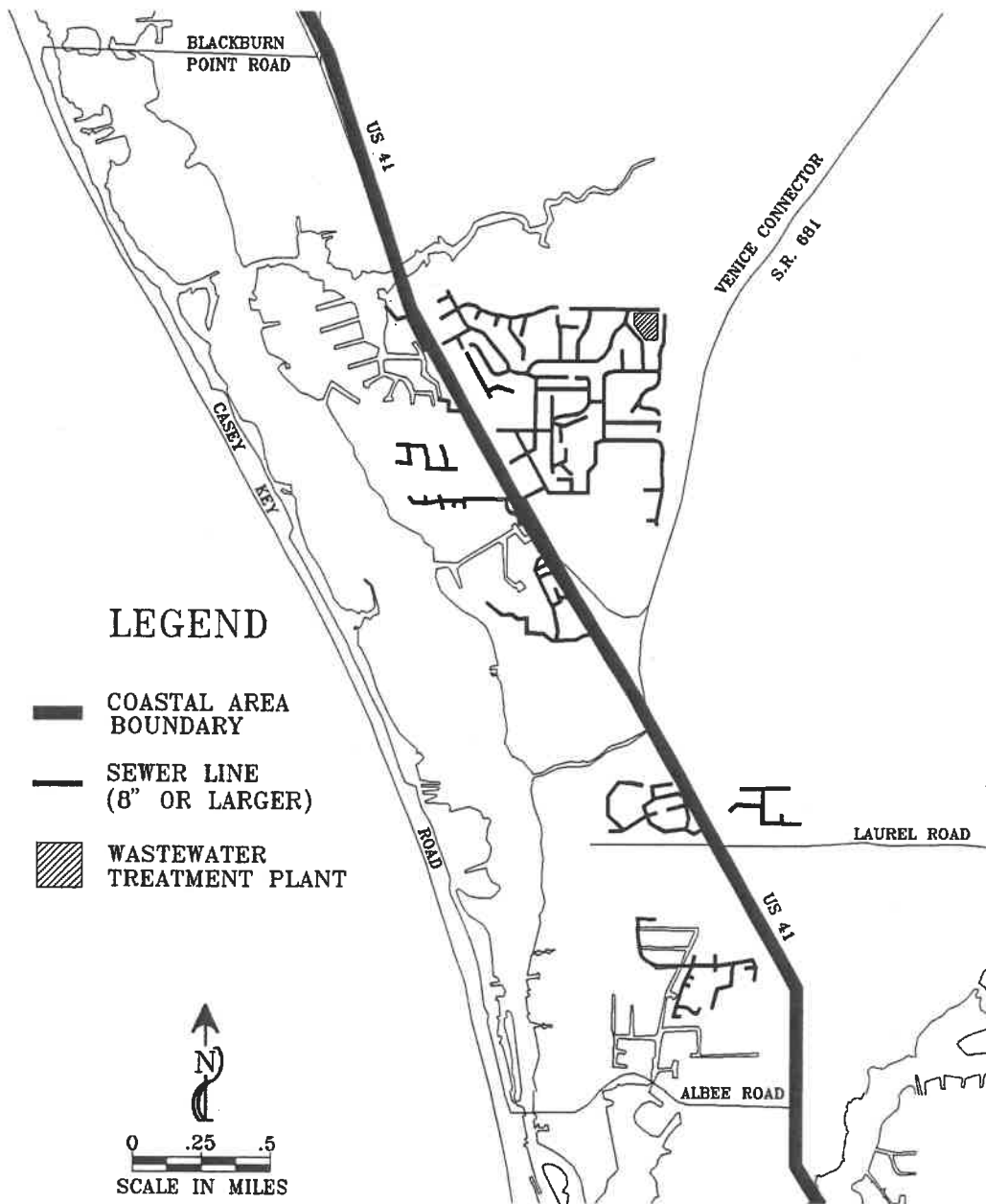


Figure 18: Sarasota County Utility System - Sorrento

Source: Sarasota County Utilities Department, 1988.
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By 1994, the County plans to begin implementation of its Wastewater Resource Management Program, with the eventual goal of consolidating all wastewater treatment plants into a regional system. The final plan for accomplishing this consolidation is expected to be presented to the Board of County Commissioners during fiscal year 1989. A draft concept paper outlining the consulting engineer's proposed program was presented to the County Commission in late 1988. This report identified three implementation stages based on the following schedule: first stage, 1994-2000; second stage, 2001-2010; and the third stage, 2011-2020. Each stage is to be designed to include the provision of adequate treatment capacities and transmission capabilities to meet the requirements of the existing plants being replaced as well as future needs. In addition to the implementation schedule, the report presented the following major concepts:

- Division of the County into eight major service areas. These were established based on existing service areas and natural and man-made barriers. Six of the eight will contain facilities for the Countywide system, while the remaining two will have no infrastructure due to their sparse population;
- Existing plants taken out of service. Wastewater treatment plants which exist in 1988 will be taken out of service by 2020 based on a priority system which considers size of plant, age of plant, current treatment level, and existing effluent reuse. The plants will be retired in the three stages mentioned above;
- Wastewater collected by pump stations and force mains. Each plant taken out of service will be replaced by a pumping station to convey the collected wastewater to a force main in a central location in each service area. The collection system will be sized to include flows from areas presently served by on-site sewage disposal systems;
- Single transfer station in each service area. Collected wastewater will arrive at only one transfer station in each service area.

- Wastewater transmitted to two regional treatment plants. Pumps at each transfer station will transmit collected wastewaters through force mains to two regional wastewater treatment plants. Here, water will be reclaimed by advanced waste treatment; and
- Reclaimed water reuse. Water which has been reclaimed by the treatment process would be available for reuse as follows: 1) Irrigation on turf grasses, such as golf courses, parks, sod farms, cemeteries, and other public access areas; and agricultural areas, such as citrus and pastures; 2) wetland restoration and groundwater recharge in wetlands and on the Ringling MacArthur Reserve; and 3) release of excess waters from the wetlands to the Myakka River to augment flows and to replace water withdrawn upstream as part of the County's Water Improvement Program.

It must be emphasized that the program description provided here has not been formally adopted by the Board of County Commissioners. However, it does represent the direction which has been undertaken to develop a comprehensive wastewater management system within the County.

Private Systems

Prior to the purchase of Sorrento, Sarasota County did not own or operate a public wastewater treatment plant. When development occurred within the unincorporated portion of the County, sanitary sewer needs would be met through the construction of either on-site septic tanks, privately permitted wastewater treatment plants, or connection to a wastewater treatment plant franchise. Until consolidation of the County's wastewater treatment plants occurs, sanitary sewer needs will continue to be met through these methods. The privately permitted and franchise plants range in size from 4,000 gallons per day to 2.7 million gallons per day.

The three public wastewater treatment systems located in Sarasota County have been described in the previous section. One major private

operator, General Development Utility, provides wastewater treatment service wholly within the municipal boundaries of the City of North Port. The remaining 114 treatment plants are classified as either franchise wastewater systems or privately permitted wastewater systems and are listed in Appendix D, Section 1. This listing provides the latest available information regarding each plant including the operator of responsibility, design capacity, average daily flow and average use per person per day. In terms of land use decision making and planning, almost all of the privately permitted wastewater treatment plants serve proprietary uses and have a limited and constrained geographic service area. The listing in Appendix D, Section 1 separates the treatment facilities into generalized use categories. For example, the privately permitted wastewater systems which serve mobile home parks serve only those parks (geographic service areas located in Appendix G, Section 4, Figure G-2). The geographic service area for the remaining privately permitted wastewater systems becomes the physical location of the named plant. For example, the geographic service area for the Kwality Kwik Laundry in Englewood is only that laundry facility. The same is true for the Fair Winds Condominium, the Flying Bridge Restaurant, and the remaining privately permitted wastewater treatment plants.

The primary focus of the analysis of private treatment systems will be on the franchise plants which have the greatest capacity and serve the largest geographical areas in the unincorporated portion of the County. Figure 19 shows the geographic service areas of the franchise systems, most of which serve predominately residential development. The combined design capacity of the "residential" franchises is 15.445 million gallons per day and the average daily flow during 1987-88 was 9.036 million gallons per day, or 58.5 percent of the capacity. Only three franchises were operating at a level above 80 percent of their capacity in 1987-88. They included Florida Cities-Gulf Gate, Florida Cities-South Gate, and Kensington Park Utilities. The areas served by these franchises are essentially built out urban areas; significant levels of new development are unlikely. However, this analysis indicates that these three franchise areas will have to be most closely monitored to ensure that the

approval of additional development is timed with the availability of sufficient treatment capacity. The analysis does indicate that service capacity will be sufficient within the remaining franchise areas to meet the demands of existing and planned development at least through 1994.

General performance and condition of all wastewater treatment plants is rated as good, since the Sarasota County Pollution Control Division physically inspects all plants on a routine basis. Any plants which exhibit conditions which violate state laws are cited. Consequently, all plants must be operated in a safe and legal manner, pursuant to existing state and County laws.

Facility capacity analysis for the period after 1994 is currently being developed through study under the Wastewater Resource Management Program. This long-term plan is a Countywide comprehensive approach which includes consolidation of the many existing wastewater treatment facilities into a regional system or systems, the elimination of inadequate septic systems in urban areas which present an endangerment to the environment, the adequate treatment of all collected wastewater, and the reuse of treated effluent in such a manner as to reduce the inappropriate use of potable water or to enhance potable water resources. To be included in this study are detailed analyses for each wastewater treatment facility which discuss general performance and condition, and their past performance as it relates to impacts upon natural resources. Life expectancy of facilities will be discussed relative to the timeframe within which the plants will be incorporated into the Countywide regional system.

Many franchise systems and privately permitted plants have made attempts to implement improvements in order to achieve improved levels of effluent quality. However, due to their limited market and inability to raise capital, they lack the economies of scale necessary to permit satisfactory expansion and upgrading of facilities. It is the larger systems which generally are able to successfully achieve expansion and comply with increasingly stringent environmental regulations. For example, it is estimated that Myakka Utilities

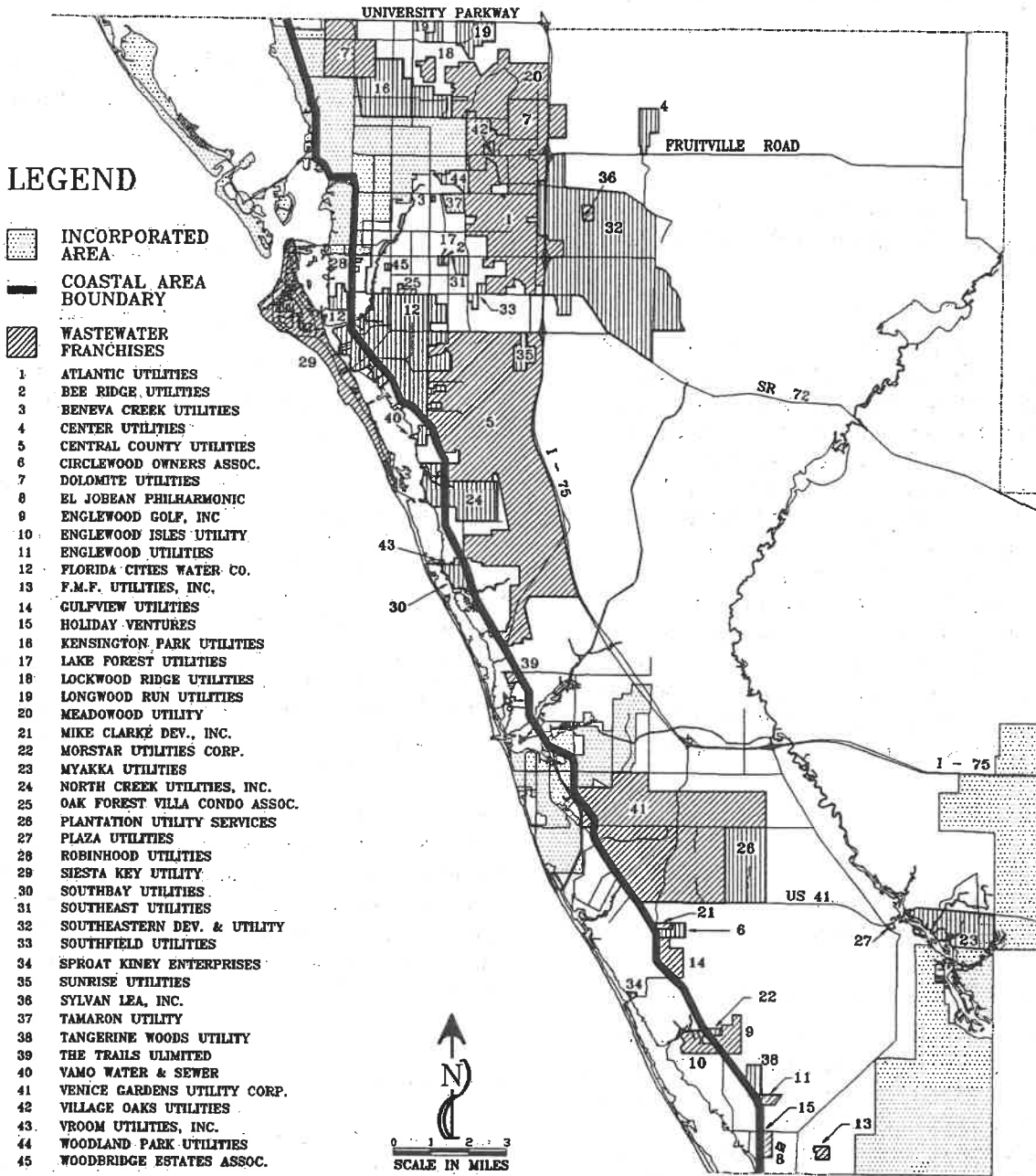


Figure 19: Sarasota County Wastewater Franchise Service Areas

Source: Sarasota County Utilities Department, 1988.
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and Siesta Key Utilities will each have to spend \$1.3 million to meet the Grizzle-Figg Advanced Wastewater Treatment standards by 1990.

CONCERN 2

Smaller wastewater treatment plants and franchised utilities may not have the ability to maintain compliance with environmental regulations.

The problems resulting from a lack of economy of scale or small size are also reflected in the regulations regarding employment of skilled sewage treatment plant technicians. According to Chapter 17-16, "Water and Domestic Wastewater Plants Operator Certification," small plants are not required to employ full-time licensed operators. Instead, many of the plants hire operators on a part-time basis for periodic checks. This may amount to as little as two non-consecutive visits per week. Out of the 118 wastewater treatment plants in the County, 95 have part-time operators of 6 hours per day or less, only 14 employ full-time operators of 16 hours or more per day, while 9 have been unable to provide sufficient data.

CONCERN 3

Most of the wastewater treatment plants are not manned by full-time operators.

The proliferation of these less-than-regional plants has been due, in part, to the County's philosophy of allowing development to occur contingent upon developer provision of necessary infrastructure, such as potable water and sanitary sewer. It was previously thought that package plants would be viewed as a temporary service for wastewater treatment, and when a more efficient system would extend into the area, the smaller systems would be abandoned for the intermediate-sized systems. However, it has been generally the homeowners associated with these smaller package plants who have been reluctant to allow such connections.

CONCERN 4

Connection of smaller package plants to more efficient intermediate sized plants has not taken place as anticipated.

Accordingly, this increase in smaller plants, many of which will be unable to comply with increasingly stringent environmental regulations, and the continued use of septic tanks in urbanized areas, has created an adverse effect upon the environment and contributed to the degradation of surface waters and groundwater supply in the County through inappropriate discharge of effluent.

If the utilization of these smaller plants were a rare case, then their use would not present such a substantial problem. However, considering there are 115 private and franchised plants, it becomes a difficult job to monitor their activity and performance to ensure that they are providing minimum wastewater treatment. Although required to submit monthly chemical analyses of effluent to the County Pollution Control Department, many plants submit late or incomplete reports and their accuracy is questionable.

Current County monitoring of wastewater treatment plants and individual septic tanks is limited due to the lack of monitoring staff. Monitoring activities for wastewater treatment plants and septic tanks are only generally initiated in reaction to a complaint or known problems with effluent quality.

CONCERN 5

The large number of wastewater treatment plants and septic tanks and insufficient monitoring staff makes environmental monitoring difficult.

As the County has grown, so has the number of smaller treatment plants. The ability to obtain licensing for these plants has resulted in the situa-

tion of occasionally allowing development into areas which are not contiguous to existing wastewater treatment franchise areas.

CONCERN 6

The proliferation of smaller wastewater treatment plants allows development in areas not contiguous to existing areas having wastewater treatment. This proliferation of wastewater treatment plants promotes "leapfrog" development.

Septic Tanks

Any entity processing more than 2,000 gallons of effluent per day must have an operating permit issued jointly by the Sarasota County Division of Pollution Control and the Florida Department of Environmental Regulation. Those processing below 2,000 gallons per day may opt for using on-site disposal (septic tanks), regulated by the Sarasota County Environmental Engineering and Health Department and the Florida Department of Environmental Regulation.

The Environmental Engineering and Health Department estimates that approximately 45,000 septic tanks are in place with varying degrees of satisfactory operation throughout the County. Since installation of septic tanks began before accurate record-keeping, the location of all septic tanks is not known; however, areas within the County which experience chronic septic tank failures can be identified, and are shown in Figure 20.

Considering the tremendous number of septic tanks throughout the County, it is interesting to note that out of 31 soils found in the County, only two soil series and two soil sub-series are rated at less than severe for septic tank absorption beds. The Orsino and Tavares Soil Series are rated as Moderate, as are the Cassis Moderately Well Drained and the Pomello Variant sub-series. These four soils only account for approximately 4 percent of the total soils within Sarasota County. This is particularly critical within the urbanized areas of

the County where the density of residential development restricts the use of engineering techniques which can mitigate potential soil inadequacies. Such techniques are more applicable to the less densely developed semi-rural and rural areas of the County where they can be employed to ensure the proper functioning of septic tank drainage systems. Table 1 in the Environment Chapter lists the County's five generalized soil associations, while Figure 5 of that Chapter presents a map showing the location of these soil associations. Because presentation of the soils information requires extremely detailed maps, this detailed soils data is available at the Sarasota County Planning Department or the Sarasota County Soil Conservation Service at a scale of 1:24,000, the same scale used on United States Geologic Survey quadrangle map sheets.

CONCERN 7

Certain localized areas exhibit chronic septic tank failures.

Prior to 1979 few regulations existed in the County regarding septic tanks. Recognizing the difficulty in restraining the use of septic tanks, the County determined a need for more detailed rules regarding the installation and maintenance of septic tanks. This was accomplished through the adoption of Ordinance 83-34 and through an information program created by the Environmental Engineering Department.

CONCERN 8

The continued issuance of septic tank permits, when other means of centralized wastewater treatment may be available, will only make it more difficult to incorporate septic tank users into a regionalized wastewater treatment system in the future.

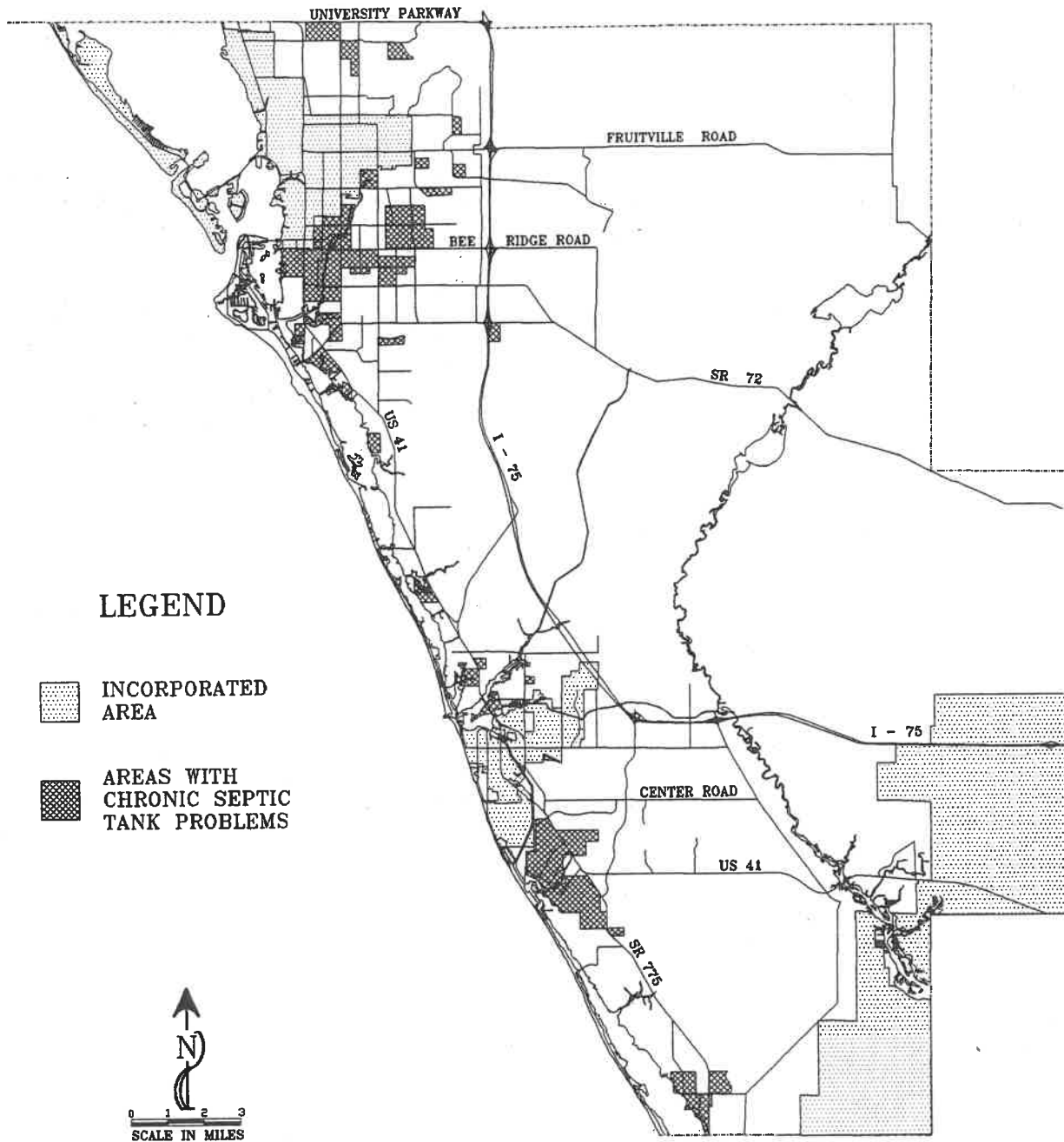


Figure 20: Areas With Chronic Septic Tank Problems

Source: Sarasota County Department of Health and Rehabilitative Services, 1988.

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Level of Service

Present legislation, at both the State and County level, help in establishing level of service standards (LOS) for wastewater treatment. Two components comprise wastewater treatment level of service: 1) the minimum quantity of wastewater to be treated in gallons per day per equivalent dwelling unit, and 2) the minimum quality of treated effluent produced by the treatment facility.

Sarasota County Ordinance No. 83-71, "Uniform Sewer System Code," as amended, currently provides a basis for establishing a minimum quantity LOS by stating "...the average daily flow (ADF) from domestic units shall be calculated at no less than 250 gallons per equivalent dwelling unit..." Table 1 from the Code indicates the following:

TYPE OF ESTABLISHMENT GALLONS PER DAY (GPD)

Residences

- (A) single family 250 (GPD)
- (B) apartment 225 (GPD)
- (C) mobile home 225 (GPD)
- (D) condominium 250 (GPD)

However, an analysis of existing usage rates within the Sarasota County Utility System plus the major franchise areas, as listed in Appendix D, Section 1, indicates that the existing use averages approximately 195 gallons per dwelling unit per day. Discussions with the Sarasota County Utilities Department and the Sarasota County Wastewater Utilities Association confirm that, based on existing use, an appropriate level of service would be 200 gallons per day per equivalent dwelling unit to more closely reflect the actual usage by County residents.

Minimum water quality effluent standards for wastewater treatment facilities are provided for in Chapter 403.086, Florida Statutes, "Sewage Disposal Facilities; Advanced and Secondary Waste Treatment" and its implementing tool, Chapter 17-6, Florida Administrative Code, "Wastewater Facilities", as amended by the Grizzle-Figg Bill. Presently, these standards call for a minimum of secondary treatment, and to the extent necessary,

disinfection and pH control, as defined in Chapter 17-6.060(1), Florida Administrative Code, before discharging into holding ponds, disposal systems, or surface waters. In Sarasota County, Ordinance Nos. 82-90 and 87-139 define Advanced Waste Treatment and require wastewater treatment plants, expanded existing plants, and plants currently operating with advanced wastewater treatment standards which discharge to off-site surface waters, to meet these Advanced Wastewater Treatment standards.

Of significant importance is the Grizzle-Figg Bill referenced above. This bill requires all facilities which employ surface water discharge to "...Sarasota Bay, Little Sarasota Bay, Roberts Bay, Lemon Bay, or Charlotte Harbor Bay, or into any river, stream, channel, canal, bay, bayou, or sound, or other water tributary thereto" to provide advanced waste treatment. The service areas of wastewater treatment plants affected by this bill are shown in Figure 21.

CONCERN 9

Many wastewater treatment plants may not have the ability to generate the necessary capital in order to upgrade their plants to meet the increasingly stringent wastewater treatment standards as specified under the Grizzle-Figg amendment.

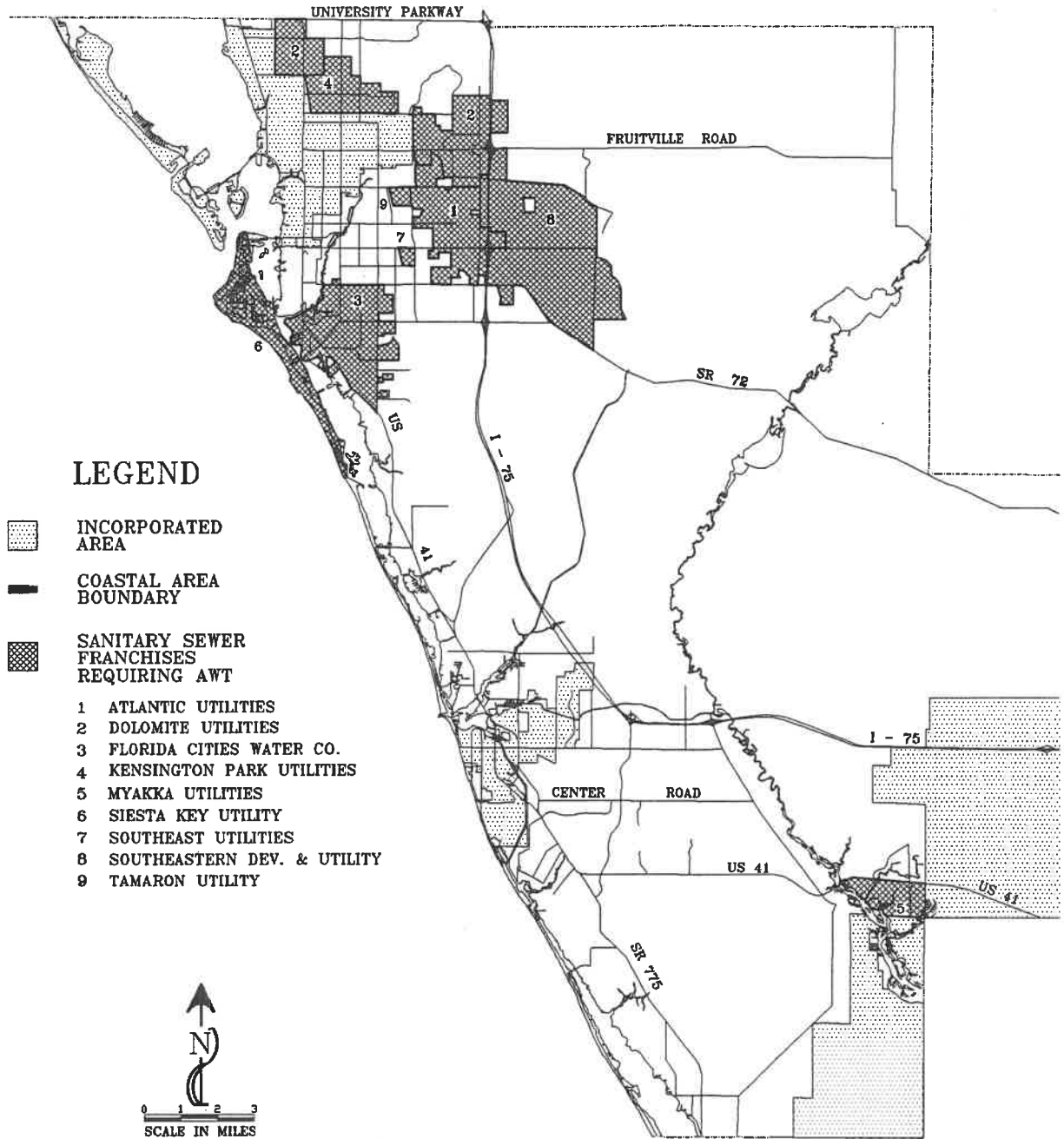


Figure 21: Sewer Service Areas Requiring Advanced Waste Treatment

Source: Sarasota County Pollution Control Division, 1988.

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Problems

The nine specific concerns mentioned in this section can be synthesized into five general problem areas:

- The City of Sarasota has been unable to meet past federal and State water quality standards and the City must expend large sums of money in order to meet current federal and State water quality standards.
- The continued issuance of septic tank permits, despite localized areas of high failure, will make it more difficult to incorporate septic tank users into the County regionalized wastewater treatment system.
- Smaller wastewater treatment plants, and even larger franchised utilities, may not have the ability to maintain compliance with increasingly stringent environmental regulations due to lack of capital and the inability to take advantage of economies of scale associated with larger operations.
- The anticipated connection of package plants to intermediate sized wastewater treatment plants has not taken place. This large number of plants and the large number of septic tanks makes monitoring difficult.
- The proliferation of smaller wastewater treatment plants allows development in areas not contiguous to existing wastewater treatment areas and promotes leapfrog development.

Future Planning Options and Opportunities

Sarasota County recognizes that the present situation of uncoordinated, independent wastewater treatment plants poses numerous problems. This recognition has resulted in the concept of a wastewater resource management program. The County has recently undertaken positive steps towards a centralized wastewater treatment system with the adoption of Resolution Nos. 87-157 and 87-265. The program has been furthered through the issuance of a Request for Proposal regarding a Wastewater Resource Management Program (which contains a Countywide wastewater system), and the subsequent awarding of the contract. These actions further indicate the Board of County Commissioners' commitment to solving the County's wastewater problems.

This Wastewater Resource Management Program combines several concepts. The County's consultant has identified these as "...an integrated collection of wastewater; wastewater renovation into a new freshwater resource; introduction of renovated wastewater into a large scale resource augmentation on the Ringling MacArthur Reserve; and a recovery of a similar amount of water from surface and groundwater resources..."

However, the Wastewater Resource Management Program will not immediately solve all of the County's wastewater problems. The timeframe for the initial phases of the project may take as long as eight years.

Solid Waste

Introduction

Prior to the 1970's, the disposal of solid waste had primarily been accomplished by dumping refuse at numerous unlicensed sanitary landfills. Efforts began in the 1970's to reduce the indiscriminate dumping of solid waste by establishing authorized sanitary landfills.

As numerous smaller dumps closed around the County, Sarasota County opened the Bee Ridge Sanitary Landfill in 1972. The Cities of North Port and Venice had also operated sanitary landfills, which helped to serve the residents in South County. The County eventually assumed operation of the City of Venice landfill but that facility was officially closed in 1984 and the Closure Permit issued at that time. The Venice site, however, has been transformed into a Transfer Station which permits refuse to be collected from the Venice, North Port and Englewood areas for transfer to the Bee Ridge Sanitary Landfill. From late 1985 the only permitted sanitary landfill has been the County-operated Bee Ridge Sanitary Landfill which is expected to remain in operation until 1992-1995, when it reaches maximum capacity. At that time the County expects to have a new sanitary landfill facility in operation.

Landfill activities at the North Port site officially ceased in 1984, however, the Florida Department of Environmental Regulation has not issued a Closure Permit due to environmental concerns. The City of North Port is currently working on these concerns and a closure permit is expected in the near future. The City of North Port now employs the Englewood Disposal Company to haul its solid waste to the Venice Transfer Station.

Legislation Affecting Solid Waste Collection and Disposal

Legislation designed to regulate the collection and disposal of solid waste was initiated at the federal, State and local level beginning in the early 1970's. Presented below are the relevant laws which govern solid waste collection and disposal including a brief description of each.

U.S. Public Law 94-580, "Resource Conservation and Recovery Act." This 1976 law is an effort to better utilize and manage the increasing volume of solid waste by establishing resource recovery as a national priority.

In 1974 Florida enacted Chapter 403.706, Florida Statutes, "Florida Resource Recovery and Management Act." This law required each county in the State to prepare a solid waste management plan. The law also established the Resource Recovery Council within the Florida Department of Environmental Regulation and designated 19 counties, including Sarasota, which would be required to participate in a resource recovery feasibility study. Detailed guidelines and responsibilities for the participating counties are contained in Chapter 17-7, Part II, of the Florida Administrative Code. Further discussion of the County study is found in "Planning Efforts and Studies."

Chapter 17-7, Florida Administrative Code. Chapter 17-7 presents specific state-mandated guidelines regarding solid waste resource recovery and management permits; criteria for operation and closure of sanitary landfills; long term care of landfills; special waste handling;

criteria for resource recovery equipment and certification of resource recovery equipment; and domestic sludge classification, utilization, and disposal criteria.

County regulations (found in Appendix D, Section 2) have been adopted in a manner consistent with federal and State legislation. These rules coordinate the collection and disposal of solid waste in the County. The most significant local regulation regarding solid waste in Sarasota County, Ordinance No. 86-35, became effective as of October 1, 1988.

Under the provisions of the Ordinance, a majority of the unincorporated County will be partitioned into five Municipal Service Taxing Units, to be known as Solid Waste Service Districts. These Special Districts are shown on Figure 22, with the assigned solid waste collectors shown below:

- District 1: Decker Disposal, Inc.
- District 2: Williams Disposal Service, Inc.
- District 3: General Sanitation Corporation
- District 4: Harris Disposal Company
- District 5: Englewood Disposal, Inc.

The municipalities are not included in the MSTU districts. However, pursuant to the Florida Solid Waste Management Act of 1988, each of the municipalities is obligated to use County solid waste disposal facilities. Within each MSTU district, residential solid waste collection and disposal will be mandatory, with collection and disposal conducted only by authorized collectors. Individual collection and disposal of solid waste by other than an authorized collector will not be allowed. However, persons other than authorized collectors may collect and haul land clearing debris, construction debris, debris associated with farm operations involving five acres or more, hazardous or infectious wastes, wrecked or scrapped boats and motor vehicles, or materials collected for recycling systems.

Annual assessments will be determined by the Solid Waste Governing Body which will govern collection and disposal of residential solid waste

for all improved residential real property or customers located within the unincorporated areas of the County lying inside their Solid Waste Service District boundaries. Industrial and commercial customers may haul and dispose of their own solid waste.

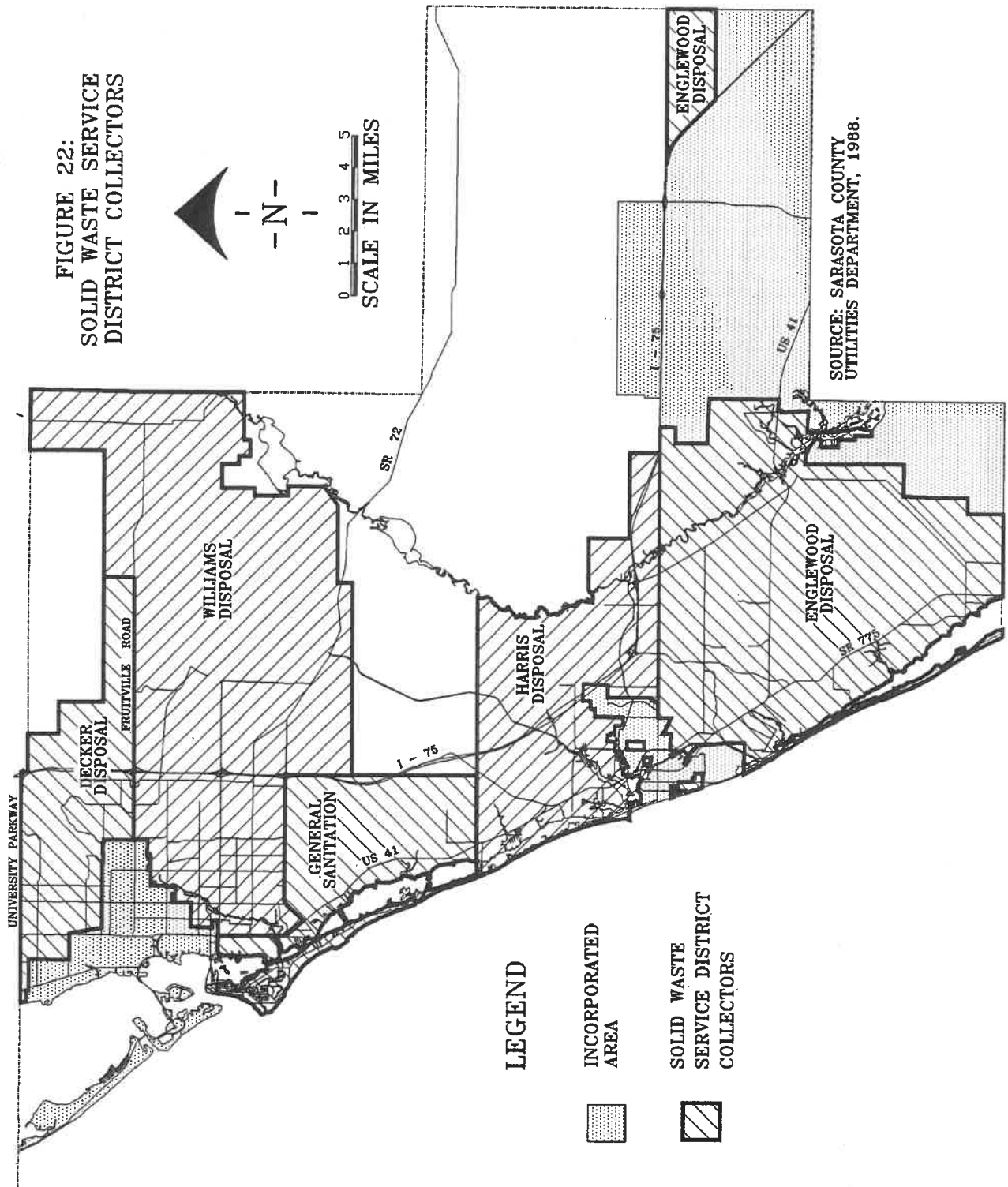
Certain restrictions will apply regarding solid waste collection, such as the size of collection containers and the type of material collected. For example, annual assessments levied by the Solid Waste Service Districts for the collection and removal of residential solid waste do not cover the cost of removal and disposal of the following solid waste: land clearing debris; construction debris, including any remodeling which requires a permit; trash and debris associated with farming operations, when the farming activity involves five acres or more of land; hazardous, radiological, and infectious wastes; wrecked, scrapped, ruined, or dismantled motor vehicles, or motor vehicle parts; materials collected, transported, and utilized in recycling systems; sludge; and commercial and industrial solid waste.

Residential solid waste in the forms described above may be disposed of under annual special assessments to be set by the Solid Waste Service District Governing Body.

Three implementing resolutions accompany Ordinance No. 86-35. Resolution No. 86-449 establishes rules of procedure for public hearings conducted pursuant to Ordinance No. 86-35. Resolution 86-450 establishes rules and regulations pertaining to the use and operation of County disposal sites, while Resolution No. 86-451 provides for rules and regulations governing the mandatory collection of solid waste in the unincorporated County.

The latter Resolution mandates that collectors are to pick up and dispose of all properly prepared residential solid waste, including "special wastes," not less than two times per week with collections at least three days apart.

FIGURE 22:
SOLID WASTE SERVICE
DISTRICT COLLECTORS



Planning Studies and Efforts

Since 1974, three of the four major planning studies concerning solid waste have been principally concerned with solid waste resource recovery. Two of the three studies concluded that, in the near term, landfilling presents a cost-effective alternative to resource recovery. Based on recommendations from these studies and the high costs associated with resource recovery, the County has continued to place its future solid waste disposal efforts in landfilling. However, the County is continuing to assess its alternatives with another resource recovery feasibility study to be conducted in 1989. The following is a description of studies which have already been conducted.

The Solid Waste Management and Resource Recovery Plan (1) was conducted under Chapter 403.706, Florida Statutes, "Florida Resource Recovery and Management Act." Each county in the state was required to prepare a solid waste management plan. Sarasota was also chosen to participate in a detailed Solid Waste Management Plan (SWMP) designed to investigate the feasibility of resource recovery, whereby solid waste would be processed to produce a by-product, such as energy (electric or steam). Detailed guidelines and responsibilities guiding the study are contained in Chapter 17-7, Part II, Florida Administrative Code. The draft report prepared by the County identified 16 general conclusions, while at the same time delineating 14 recommended policies and strategies. The major conclusions included:

- Environmental limitations influence much of the land, and these limitations reduce the potential for solid waste management sites;
- The single greatest environmental constraint to site selection is likely to be that regarding the presence of surface water and groundwater;

- The present method of solid waste disposal (landfilling) is not objectionable and the impending obsolescence of the existing landfill site requires quick action (probably in the form of acquiring a new landfill site); and
- The most economic form of solid waste disposal is likely to be landfilling;

The major recommended policies and strategies included:

- establishing a new landfill site;
- landfill and/or resource recovery operations should be financially self-supporting;
- Sarasota County should not provide general Countywide solid waste collection;
- all municipalities not having approved solid waste management facilities by the Florida Department of Environmental Regulation should utilize County disposal facilities;
- all households should utilize refuse collection services, when available;
- the County should identify and maintain a listing of hazardous waste generators in the County;
- the County should begin small-scale resource recovery projects with the initial operation of the new landfill; and
- the County Solid Waste Management Plan should include a specific plan for long-range resource recovery.

In 1979 the County requested and received an extension of its deadline to submit its Solid Waste Management Plan to the Florida Department of Environmental Regulation, and in 1981 the County transmitted the first draft of the plan. Due to both State and local delays, the plan has not as yet been adopted.

The Resource Recovery Feasibility Report for Charlotte County, DeSoto County, and South Sarasota County (2) was prepared in August, 1985. Charlotte, DeSoto, and Sarasota Counties entered into an Interlocal Agreement whereby they would appoint a committee to study the feasibility of establishing a joint resource recovery facility.

The study area in Sarasota County is south of a line which extends to DeSoto County from the Osprey/Oscar Scherer State Recreation Area.

Five technologies are examined in the study: landfilling, mass burning of refuse, refuse-derived fuels, composting, and recycling. Major findings of the study included:

- landfill requirements can be reduced by 25 to 30 percent if resource recovery is implemented;
- mass burn resource recovery technology is the most reliable and suitable technology for the area;
- refuse-derived fuel technology has had several significant plant failures in the U.S.;
- composting has not proven to be economically viable due to the inability to market the compost;
- recycling and resource separation can reduce the amount of solid waste by 5 to 15 percent and are not complete solutions to the solid waste problem;
- a resource recovery facility under the best financing situation would require an approximate \$25 per ton tipping fee;
- the landfill alternative will remain a lower cost alternative under normal revenue bond financing; and
- environmental issues are manageable with either resource recovery or landfill alternatives;

The study recommended that if the Counties decide to proceed with developing a resource recovery alternative, they should consider passing a resolution whereby they:

- join in creating an Authority to implement the program;
- authorize the three-County Resource Recovery Committee to hire legal counsel to prepare documents establishing the Authority; and
- delegate sufficient powers to the Authority to allow for the project's efficient construction and operation.

The Resource Recovery Feasibility Study for Manatee and Sarasota Counties (3) was conducted at the same time. The consultants per-

formed a resource recovery analysis along with a comparably detailed analysis for a sanitary landfill disposal alternative. The study was based on a 25-year planning period, 1985-2010, with study areas varying according to analytical scenario. These included Sarasota County; Manatee County; Sarasota and Manatee Counties; North Sarasota and Manatee Counties in individual and regional scenarios for resource recovery. Sanitary landfill alternatives included new landfills and vertical expansion of existing County landfills.

According to Hazen and Sawyer, in-depth economic analyses, which included transport costs and costs associated with by-pass wastes and ash or residual combustion wastes indicated that:

- in the near term, the lowest cost disposal alternative is a vertically expanding, existing landfill facility. Total landfill disposal costs were projected to be \$27.38/ton in 1990 and \$57.53/ton in 2010;
- resource recovery costs for a mass-burn facility financed with revenue bonds were projected at \$48.98/ton in 1990 and falling to \$45.23/ton in 2010; and
- it is the revenue from the generation and sale of electricity from the mass-burn resource recovery plant which accounts for the decrease in costs associated with that technology.

In July, 1986, the Landfill Site Feasibility Report: Walton Tract (4) was completed. Since Sarasota's existing landfill at Bee Ridge is expected to reach its maximum elevation, or capacity, between 1992-1995, the purpose of this study was to examine the feasibility of using an area of land known as the Walton Tract for a long-range County landfill. Many topics were examined including Florida statutory landfill requirements, physical characteristics of the site, hydrogeology and soils, landfill block configurations, environmental considerations, and regulatory agency comments.

Approximately 6,151 acres are included in the study area which is shown on Figure 23. This large amount of land was examined in an effort to maximize the County's fiscal and planning efforts. The

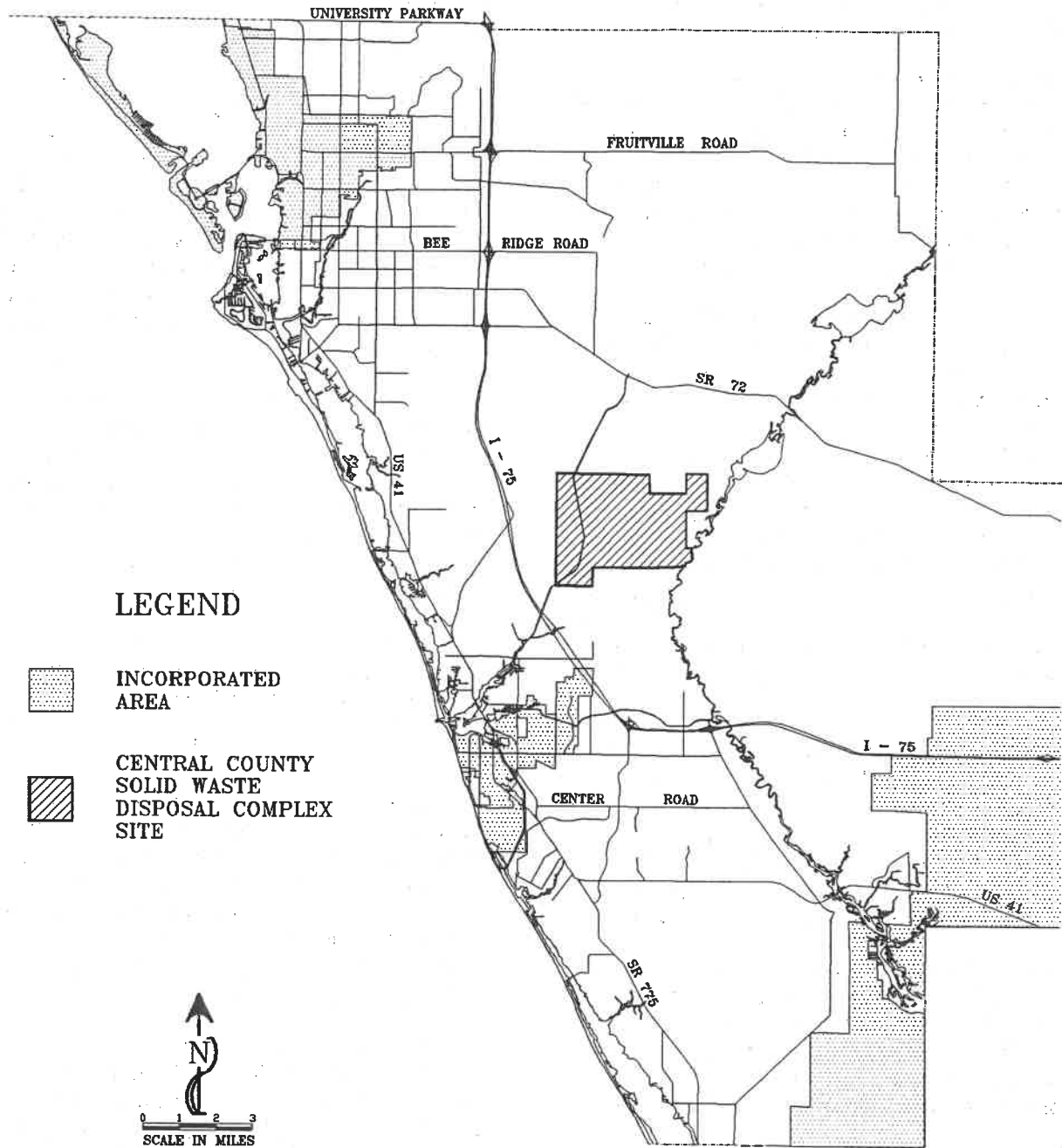


Figure 23: Proposed Central County Solid Waste Disposal Complex

Source: Smally, Wellford, and Nalvin, Inc. and Hunnington, Durham, and Richardson, Inc., 1986.

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Comprehensive Plan*

planning horizon for the proposed solid waste facility is approximately 50 years, from 1993 through 2042.

In part, the rationale for examining sanitary landfilling as an alternative for solid waste disposal was that, even though a waste-to-energy plant has the ability to reduce the waste stream volume by as much as 80 or 90 percent, a landfill would still be required for deposition of ash, bypass waste, and non-combustible demolition debris. Consequently, the need for a landfill will not be eliminated.

If the County continues to utilize solid waste disposal which does not use resource recovery or waste-to-energy technology, it is estimated that approximately 38 million tons of waste, or 63 million cubic yards will have to be disposed of by 2042. These numbers were generated by using conservative values, such as the medium population projection series from the Bureau of Economic and Business Research, a daily per capita waste rate of 8.6 pounds per person, and a fill density of 1,200 pounds of solid waste per cubic yard. To provide sufficient land area for this amount of solid waste, the study estimates that a minimum of approximately three square miles of land will be necessary.

In addition to the three square miles specifically devoted to the landfill, additional land will be required for other associated uses. This land will be used to provide buffer areas desirable to separate the landfill from potential future residential development as well as land for wildlife corridors and lands used to mitigate removal of wetlands.

The hydrogeology of the area does not impose any geotechnical or groundwater related siting factors which might preclude the use of the site as a Class I Landfill. As a precaution, however, the actual landfill site will be set back more than one-half mile from the environmentally sensitive Myakka River.

Other environmental factors are also discussed. Approximately 59 of the 320 acres of wetlands on the site come under the jurisdiction of the Florida Department of Environmental Regulation. Of these 59, six will lie directly in the proposed landfill area and 53 in the landfill borrow area. Since the landfill

is designed to be developed over 50 years, only a small number of these jurisdictional wetland acres would need to be mitigated per year.

Although a large number of threatened or endangered plant and wildlife species were expected to be found due to the large size of the tract, only three species were observed on the tract. Although their presence does not preclude use of the tract for a landfill, it means that a method of mitigating the impact that the landfill will have upon these species will have to be approved by federal and/or State regulators. The proposed landfill project will leave approximately two-thirds of the tract undisturbed.

The study recommended that, if the Board of County Commissioners decides to purchase the Walton Tract for use as a landfill, at a minimum, 3,642 acres should be purchased for the landfill area. However, it would be desirable to purchase the entire 6,151 acre tract so that additional land may be preserved for wildlife corridors, wetlands, buffer zones, and other uses.

As a result of this study, and in conjunction with the Solid Waste Management Plan, in 1986 the Board of County Commissioners authorized the expenditure of funds and the issuance of revenue bonds for the purchase of the Walton Tract.

This initial study is only a preliminary report to be conducted regarding the landfill site. The report identified the need for additional specific and technical studies, such as soil borings prior to landfill design, in order to determine the appropriate leachate containment and treatment systems, and others. Additional engineering studies will be necessary for all aspects of the project.

Fundamental to the implementation of the Central County Solid Waste Disposal Complex is the 20-year capital cost estimate. The Central County Solid Waste Disposal Complex-Preliminary Cost Estimate, (5) conducted in May, 1987, presented a preliminary cost scenario by summarizing the design and construction costs from previous preliminary cost estimates. These costs, summarized below, include design fees, access roads, hydraulic modeling, fencing and security, a Master Drainage Plan, cultural and biological investiga-

tions, an Environmental Impact study, a 20-year site plan, household hazardous waste collection facility, landfill cells and leachate system, restoration of Cow Pen Slough, Administrative offices, site utilities, an Air Curtain Destructor (yard waste incinerator), and costs for permitting.

The project is divided into three phases: 1) site acquisition, interior road construction, and generation of long-term site development plans; 2) environmental studies and permitting; and 3) detailed design and construction of facilities. All project costs are in 1987 dollars and are presented in Table 12.

Table 12: Preliminary Cost Estimates

Fiscal Year	Cost Summary
1986-87	\$640,000
1987-88	\$6,705,500
1988-89	\$630,000
1989-90	\$1,550,000
1990-91	\$1,165,000
1991-92	\$14,435,000
1992-93	\$6,965,000
1993-94	\$1,690,000
1994-95	\$1,690,000
1995-96	\$1,690,000
1996-05	\$0
2005-06	\$2,131,250
Total	\$39,291,750

Source: HDR Techserv, 1987.

The landfill facility is designed to operate as an Enterprise Account and pay for its own capital and operating expenses. Although this study presents only the cost side of the equation, revenues to pay for these costs have been determined (the revenue projection study was not available at time of publication.) However, with the adoption of Ordinance No. 86-35, the County has established the mechanism to fund landfill costs.

User fees will be established for collection and disposal of solid waste in each of the Solid Waste Service Districts. The fees will be based, in part, upon the necessary revenues required to retire the revenue bonds created to establish the Central County Solid Waste Disposal Complex.

Apoxsee's 1981 Solid Waste Management Plan (6) recommends that small scale resource recovery projects be initiated with the initial operation of the new landfill, as well as calling for a specific plan for long-term resource recovery. Further, Chapter 187, Florida Statutes, the "State Comprehensive Plan," and the "Southwest Florida Regional Policy Plan" mandate a reduction in the per capita amount of solid waste entering landfills. For these reasons, and in an effort to ensure that the County maintains its position in providing the least expensive method of solid waste disposal for County residents, the County initiated the first step towards a limited area resource recovery study in November, 1987 through the Resource Recovery Pilot Study. The goals of the anticipated Countywide project include:

- reducing the waste stream and integrating recycling into the County's overall solid waste management plan;
- complying with Florida statutory requirements; and
- working towards the preservation of our natural resources, limiting pollution, and conserving energy.

The purpose of the study is to examine whether or not resource recovery of solid waste prior to arrival at the landfill can be an effective method in reducing the amount of solid waste which is destined for the County landfill.

The study will concentrate on a pilot area containing approximately 4,200 households in a two square mile area north of the intersection of Beneva Road and U.S. Highway 41. Collection service will be provided once a week on a regular collection day. The hauler will monitor the participation rate of each household to determine the program's efficiency. Commercial businesses, trailer parks, and multi-family residences will not be included in the study.

The first stage of the study will involve pickup of newspapers only from this North County location. The results of this first stage will be studied to determine the feasibility of expanding the resource recovery program to other areas and recycling other materials. Should resource recovery prove to be a viable alternative in this initial study area, other resource recovery pilot projects will be initiated. It is anticipated that the next phase of curbside recycling pilot projects will involve approximately 10,000 participants and will include newspaper, aluminum, and glass. The County hopes that these pilot projects will indicate the viability of extending recycling Countywide.

Although not specifically under the auspices of the Resource Recovery Pilot Project, the Solid Waste Management Division has undertaken collection of recyclables. Currently, field collection is provided for batteries, cardboard, homeowner's waste oil, landfill waste oil, and aluminum. Landfill Office collection is provided for newspapers, computer printout paper, scrap metal, and aluminum. In addition to collection of these materials, the County is anticipating a permanent office paper recovery program for all major County facilities. Smaller County offices located throughout the County will be incorporated with alternative collection strategies at a later date. As in the Resource Recovery Project, a pilot project will be established to determine the feasibility of the program.

Inventory and Analysis

Solid Waste Disposal

The Introduction mentions that numerous unlicensed landfills had operated throughout the County in the past and that the exact location of many of these unregulated dumps is unknown. In part, this is due to the situation of the County not providing solid waste facilities prior to 1972 coupled with a lack of documentation regarding these unofficial sites. However, several can be identified and are listed in Table 13 and located in Figure 24. Most of these early landfills and dumps have been abandoned with the exception of the Venice and North Port sites.

Table 13: Operative and Non-Operative Landfills

Non-Operative Landfills

Sarasota

- 1) 12th Street and Tuttle Avenue

Venice

- 2) City of Venice Landfill

Englewood

- 3) Buchan Airport, north at S.R. 775
- 4) South River Road
- 5) S.R. 775, northeast of Keyway Road

North Port

- 6) City of North Port Landfill

Sarasota County

- 7) Curry Creek north shore at railroad tracks
- 8) Center Road and Jacaranda Boulevard
- 9) Jackson Road Landfill
- 10) S.R. 72, south near Foxfire
- 11) East Road, south of Fruitville
- 12) Gocio Road and Mink Road
- 13) Richardson Road and Richardson Way
- 14) 17th Street, south of the Meadows
- 15) Siesta Key, east of Shadow Lawn Avenue
- 16) Ashton Road, south and east of McIntosh Road
- 17) Ashton Road, south and west of McIntosh Road

Operative Landfills and Transfer Stations

- 18) Jackson Road Transfer Station
- 19) City of North Port Transfer Station
- 20) Bee Ridge Sanitary Landfill

Note: Numbers refer to those on Figure 24

Source: Sarasota County Division of Solid Waste Management, 1988.

CONCERN 1

Disposal of solid waste in the past has not always been regulated. Few records, if any, were kept regarding the location of these landfill activities. Consequently, these sites may pose potential problems for contamination of groundwater.

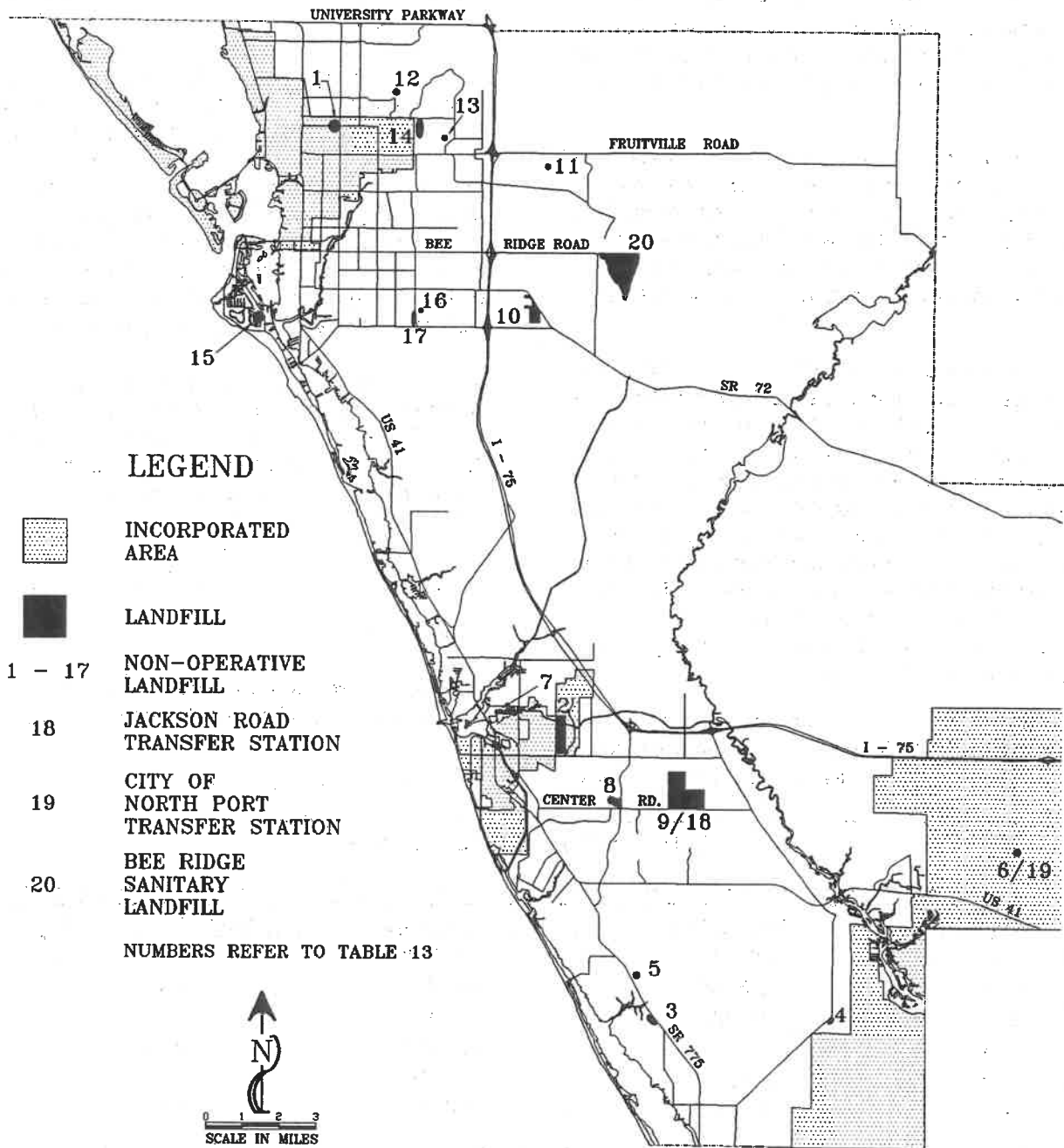


Figure 24: Operative And Non-Operative Landfills

Source: Sarasota County Solid Waste Management Division, 1988.

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The Sarasota County Board of County Commissioners is operationally responsible only for the provision of solid waste disposal facilities and sludge disposal facilities. Both of these activities take place at the Bee Ridge Class I Landfill facility.

Due to the northern location of the landfill, the Board has established a solid waste transfer station located at the site of the old Venice landfill. It is not known at this time whether or not the transfer station will continue its operation once the new, more centrally located landfill goes into operation.

Not all municipalities have used the County's Bee Ridge site. Prior to Florida's Solid Waste Management Act of 1988, the Town of Longboat Key utilized the Cedar Hammock Refuse Disposal Corporation to haul their waste to Manatee County's Lena Road Class I Landfill. Under current State law, each of the municipalities is obligated to use County solid waste disposal facilities. However, due to the relatively small population of Longboat Key, the small increase in solid waste volume should not significantly impact the County's ability to dispose of solid waste.

The geographic service area for solid waste disposal at the Bee Ridge Class I Landfill is the entire County. Since this facility serves the entire county,

no one particular land use is served, although residential land uses dominate the developed areas of the County.

The current design capacity is being reached more quickly than anticipated due to the almost annual increase in the daily per capita disposal rate of solid waste, as shown in Table 14. In 1981 the rate of solid waste disposal was approximately 6.4 pounds per person per day. According to the latest study (7), this has increased to approximately 8.8 pounds per person per day in 1986. These disposal rates include residential, commercial, and industrial wastes, including yard clippings.

It is evident from Table 14 that the per capita solid waste disposal rate has continued to climb since 1980. Further, additional data gathered between 1986 and 1988 verify that the disposal rate continues to climb to well past 9 pounds per person per day.

CONCERN 2

During the past 8 years, the per capita average for solid waste disposal has continued to increase.

Table 14: Solid Waste Average Generation

<u>Year</u>	<u>Population</u>	<u>Lbs./Day</u>	<u>Avg. Lbs./Person/Day</u>
1981	200,053	233,758	6.40
1982	205,492	240,735	6.42
1983	212,965	280,454	7.22
1984	220,130	322,957	8.04
1985	234,421	361,791	8.46
1986	240,948	386,407	8.79

Note: The City of North Port operated its own landfill until 1984. Therefore, North Port's population has not been included in the total County population for these years. The Town of Longboat Key disposes of its waste in Manatee County's Lena Road Landfill. Therefore, the Town of Longboat Key's population has not been included in the total County population for 1981 through 1986.

Source: Smally, Wellford, and Nalvin, 1986 and Sarasota County Planning Department, 1988.

The capacity of the landfill is being used up at an accelerated rate and that the landfill should reach its maximum filled capacity at the end of the initial comprehensive plan 5-year planning period. Subsequent to the 5-year planning period, the County will use the Central County Solid Waste Disposal Complex for all of its solid waste disposal needs through the year 2042.

The general performance of the Bee Ridge Class I Landfill is very good. It has been able to accommodate the nearly annual increases in per capita solid waste while maintaining its ability to dispose of solid waste in a safe and expedient manner. The landfill sits atop an impervious layer of clay which restricts the downward movement of landfill leachate. To further ensure that the surrounding natural environment is protected, a clay slurry trench three to six feet wide and 30 feet deep is under construction which will act as an aquaclude and restrict lateral movement of landfill leachate. Under design is a leachate control system which will treat and neutralize the landfill leachate.

Despite the increases in annual per capita disposal of solid waste, other methods of solid waste disposal, such as resource recovery have not indicated that they can provide a cost-effective alternative to existing and proposed landfilling methods. Under the studies mentioned previously, resource recovery tipping fees are much greater than those for landfilling. Consequently, this remains the method of choice for disposal of solid waste.

CONCERN 3

Resource recovery, including waste-to-energy alternatives, have not been implemented as a viable alternative to reducing the per capita amount of solid waste which is destined for the Central County Solid Waste Disposal Complex.

Due to the limited life expectancy of the Bee Ridge Landfill, the County is currently in the process of replacing it with the Central County Solid Waste Disposal Complex Class I Landfill. The Bee Ridge

site is expected to reach maximum elevation at some point near the end of 1992 or early 1993. At this point the new site, shown in Figure 23, is expected to come on-line to coincide with the closure of the Bee Ridge site.

Sludge Disposal

Disposal of sludge is regulated under the provisions of Chapter 17-7, Part IV, "Domestic Sludge Classification, Utilization, and Disposal Criteria," Florida Administrative Code, and County Ordinance No. 88-30. The Board of County Commissioners determined that regulation of sludge disposal was necessary due to the potential health and safety hazards and environmental pollution, if not conducted by qualified operators under approved standards and procedures.

Under the Ordinance, provision is made for the regulation of "...pumping out, cleaning, or otherwise servicing of septic tanks, holding tanks for temporary privies, grease interceptors, and package wastewater treatment plants..." The Ordinance defines package wastewater treatment plants as those plants operating at a permitted capacity of 100,000 gallons per day or less and stipulates that after sludge is removed and collected by tank trucks, the contents shall be disposed of at the Sarasota County Septage Treatment Plant.

Sludge landspreading is still permitted for those wastewater treatment plants with a rated capacity over 100,000 gallons per day. Below is a list of the six licensed sludge haulers which collect and dispose of sludge:

- Blue Septic Tank Service
- Davis Water and Wastewater
- Elmore Septic Tank Service
- H. Lauden Pitts
- Karle Trucking, Inc.
- Paver Utilities

Since sludge landspreading is dependent upon many factors, such as the seasonal depth to the water table, local physical conditions of the site, etc., the actual timing of landspreading is often not known nor is the exact site of landspreading operations able to be determined. Consequently, only approximate locations are known for previous and

existing sludge disposal sites. These are indicated on Figure 25. The sludge disposal sites depicted in Figure 25 are only for sludge with a rating of Grade II or lower. No provisions are made, either on the State level or the County level, for the regulation of sludge which meets or exceeds the State definition for Grade I sludge.

The Wastewater Sludge Disposal Study (7) completed in 1986 stated the following with reference to sludge disposal from the wastewater treatment plants in the County: "Sludge from each plant is hauled by private companies to numerous land application sites in the County. This current sludge disposal practice complicates the Sarasota County Environmental Service Department's enforcement of State sludge application regulations because of the numerous haulers and sites."

Under Ordinance 88-30, wastewater treatment plants with rated capacities of 100,000 gallons per day and under are mandated to haul their sludge to the County's Septage Treatment facility located at the Bee Ridge Landfill. However, larger plants with rated capacities over 100,000 gallons per day are exempt from this regulation. Further, these large wastewater treatment plants which produce sludge rated as Grade I are exempt from certain sludge landspreading guidelines found in Chapter 403.7, Florida Statutes and Chapter 17-7, Florida Administrative Code. Although State guidelines may be sufficient for areas with limited sludge hauling activity, they may not be adequate to effectively cope with the problems associated with a diversity of sludge haulers and sludge application or disposal sites.

CONCERN 4

State regulations, as provided for in Chapter 17-7, Florida Administrative Code, and County Ordinance No. 88-30, do not provide sufficient control with regard to sludge landspreading activities.

Hazardous Waste

The proper disposal of hazardous waste has been a concern for Sarasota County which presents no easy solution. Disposal problems for commonly found items such as household paint thinner, commercial cleaning fluids, and automotive waste oil underscore the need to address this situation.

Recognizing that hazardous waste can be easily incorporated into the normal waste stream, the Department of Environmental Regulation sponsored a program called "Amnesty Days." These hazardous waste roundups were conducted statewide from 1984 through spring 1986. In Sarasota County, a "Main Station" mobile facility was set up with a team of 10 chemists and technicians. During a five-day period in November, 1985, over 500 County participants disposed of hazardous wastes at the authorized collection station. After examination by the State experts, the hazardous material was shipped to the nearest designated hazardous waste site in Alabama.

The State Amnesty Days Program was reauthorized by the 1988 State Legislature and another Amnesty Days Program will be conducted by State and County authorities sometime between January 1, 1989 and June 30, 1989. Without the benefit of an Amnesty Days Program or a sited household hazardous waste collection facility, it has been estimated by Solid Waste Management that the proper disposal of even the smallest quantity of hazardous waste could conceivably cost up to \$500 for the private citizen. This is the minimum for hauling and disposing a quantity of hazardous material to a designated hazardous waste disposal site.

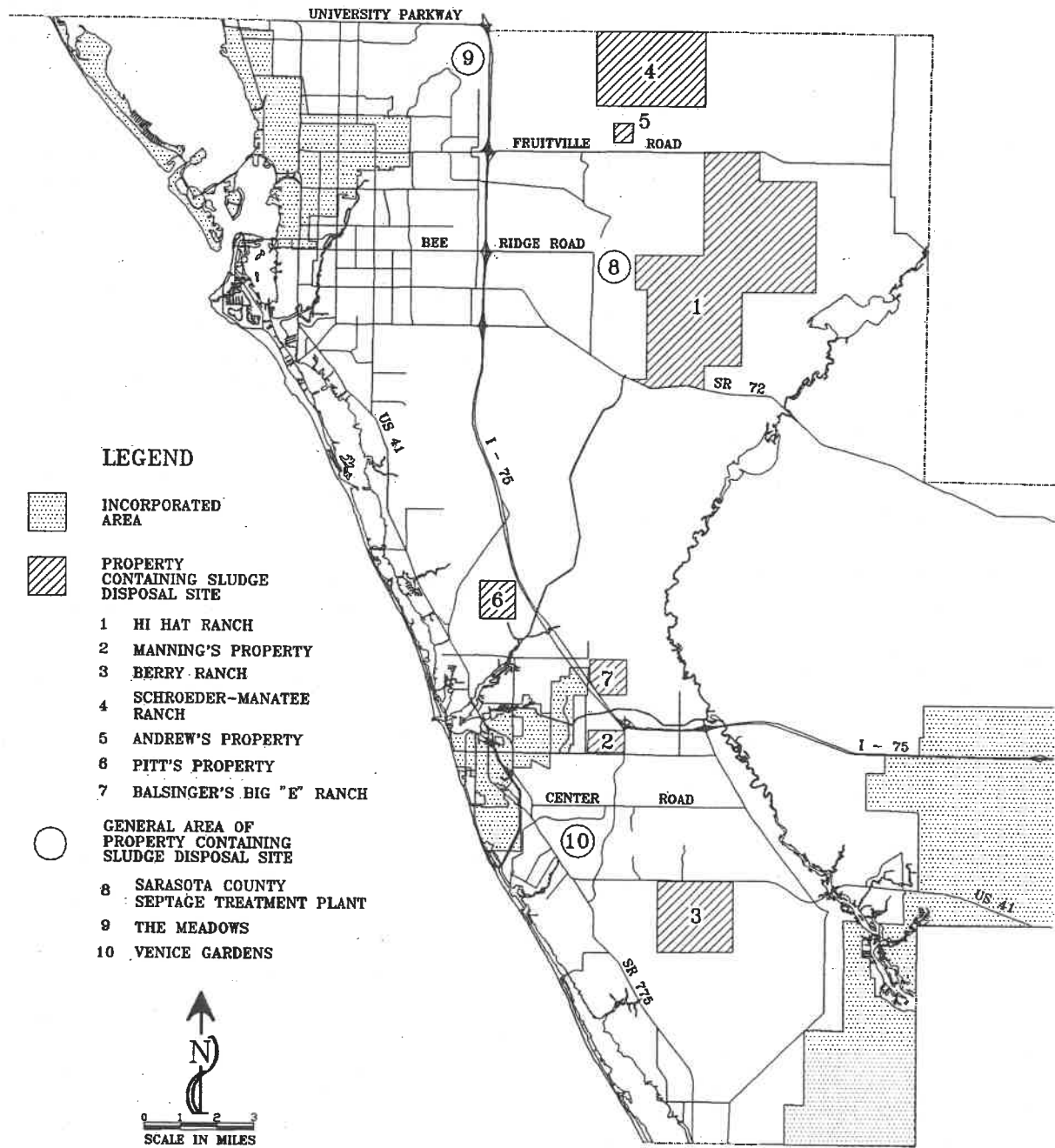


Figure 25: Sludge Disposal Sites

Source: Sarasota County Pollution Control Division, 1988.

Apoxsee - The Revised and Updated Sarasota County Comprehensive Plan

CONCERN 5

The process for safe collection and disposal of hazardous waste is expensive and complicated, and does not encourage or facilitate residential or commercial users to participate. Without the establishment of an ongoing Amnesty Days Program and/or a sited household hazardous waste collection facility, the process actually encourages citizens to insert their hazardous waste products into the normal waste stream.

In 1986, the Southwest Florida Regional Planning Council began an assessment of hazardous waste generation sites and management needs for the County under Chapter 403.7225, Florida Statutes. The County has since taken over the study and in an effort to facilitate completion of the study as well as coordinate the County's hazardous waste program, it has created the position of Director of Hazardous Waste Management. The County is now actively working on completing the study and under the study, has identified two potential hazardous waste storage sites. The sites are the Bee Ridge Landfill and the Jackson Road Transfer Station, which are shown on Figure 22. These sites could be used to temporarily store hazardous waste material prior to shipment to a designated hazardous waste disposal site. To date, no hazardous waste management facilities have been developed at either site.

Level of Service

In establishing a level of service (LOS) standard for solid waste, the County is attempting to focus on the definition of what exactly a "service" should be. One commonly used LOS for solid waste is the number of Pounds Per Person Per Day; however, it is believed that this measure alone does not actually indicate service. A more complete measure is to define a solid waste level of service as the volume and frequency with which the County will obligate itself to the pickup and disposal of residential solid waste. Consequently, the

proposed solid waste LOS has two components, 1) the ability of the County to provide the capacity for solid waste, and 2) the ability of the County to facilitate collection and disposal of solid waste in a timely manner.

Under the provisions of Ordinance No. 86-35 and Resolution No. 86-451, the County, through franchise holders operating in Solid Waste Service Districts, will facilitate collection of all residential solid waste at least two times per week. Therefore, the level of service standard for solid waste can be defined as:

- collection and disposal of solid waste which averages 8.6 pounds per capita per day; and
- collection of residential solid waste at least two times per week, at least three days apart.

Problems

The five specific concerns mentioned previously in this section can be synthesized into five general problem areas.

- Generation of solid waste per capita has risen steadily over the past 10 years.
- Unregulated disposal of solid waste throughout the County may pose potential problems for the contamination of groundwater.
- Although studies have been completed, large scale resource recovery has not yet proven to be a viable economic alternative to landfilling.
- State regulations are insufficient, and County regulations non-existent, for effectively controlling the landspreading of sludge.
- No County mechanism exists for the safe, periodic collection and disposal of hazardous wastes (automotive batteries and waste oil are now being collected and sold for recycling through the Solid Waste Division.)

Future Planning Options and Opportunities

Recycling-The County is currently operating a curbside recycling pilot project as explained under Planning Efforts and Studies, "Resource Recovery Pilot Study, 1988." Under this study and other associated programs, the County is attempting to reduce solid waste from entering the waste stream prior to final deposit into the landfill. These programs are presently targeted to recycle newspaper, however, it is planned that additional pilot study areas will be developed and targeted to begin recycling for paper, aluminum cans, and glass. Plastic bottles, while not identified for recycling in the current pilot programs, are identified as recyclable in Chapter 403, Florida Statutes, and will be targeted during the Countywide recycling phase.

Once pilot studies have been successfully completed, the recycling program will be conducted on a Countywide basis. Throughout the initial phases of the recycling program, the municipalities have expressed an interest in participating in the recycling process. The County intends to ensure, to the maximum extent possible, that municipalities participate in the preparation and implementation of recycling and solid waste management programs.

Yard Waste Reduction-The amount of yard waste currently in the solid waste stream is not known; however, it is believed to constitute a large majority of landfilled material. Two alternatives are being considered which can greatly reduce yard waste currently being landfilled, an Air Curtain Destructor (incinerator) and composting. Chapter 403, Florida Statutes allows both types of technology and each will be examined in order to determine which method, or combination of methods, will be most suitable to eliminate yard waste from the waste stream.

Resource Recovery-Although landfilling is the least expensive solid waste disposal option at this point in time, it may not always continue to be so.

A program to examine resource recovery techniques for their financial and environmental feasibility needs to be established in order for the County to have access to the latest technologies as they develop.

Sludge Monitoring-Landspreading is currently under-regulated in the County. No rules exist for the mandatory declaration of sludge disposal sites by sludge land spreaders. Since it is possible that sludge may contain hazardous waste materials unknown to the wastewater plant operator or the sludge hauler, the adoption of a County ordinance which requires all sludge landspreading activities be recorded and monitored, including an analysis of the sludge, would present an important step in addressing this issue.

Hazardous Waste-Currently, the only mechanism by which individual citizens may dispose of hazardous waste is by contacting an authorized hazardous waste hauler and paying a fee to have the waste hauled to the nearest designated hazardous waste disposal site. This practice is expensive and works as a disincentive to properly dispose of hazardous waste. It is commonly thought that hazardous waste enters the solid waste stream and eventually ends up in the sanitary landfill due to the difficulty and expense of proper disposal.

One method of reducing hazardous waste from entering the landfill is through an "amnesty days" program by which the County establishes a permanent household hazardous waste collection facility. Here citizens may bring their hazardous waste materials where they are examined, classified, and prepared for shipment to the nearest hazardous waste disposal or remediation site. The costs for this program would be borne by the County. However, State Senate Bill 1192 indicates that funds expended by the State for administering the Amnesty Days Program could be utilized by local governments to conduct their own Amnesty Days Program if a sited household hazardous waste collection facility were in place and operational.

Drainage

Introduction

Past drainage activities consisted primarily of attempts to open wetlands to human occupation and activity. These activities usually consisted of removal or control of surface waters. Early Sarasota settlers organized their drainage projects through designated drainage districts. Within the districts they constructed drainage canal networks which were able to reclaim the land for the production of agricultural goods or for the construction of homes.

Prior to the arrival of European settlers, the land area of Sarasota County was (and still is) extremely wet, although not all rainfall is retained as surface water. It has been estimated by the Department of Environmental Regulation that up to 65-70 percent of rainfall is lost annually due to evapotranspiration (return of moisture to the air through evaporation) and an undetermined amount is lost through runoff. Despite these losses, a considerable amount of the rainfall is stored as surface water resulting in numerous wetland depressions dotting the land during the dry months, and large acreages of land being inundated with water during the wetter summer months.

This abundance of surface water is a result of the total water budget in conjunction with natural soil limitations. Between 60 and 65 percent of the area's annual rainfall occurs during the summer months (1) and more water is deposited than can be removed through sub-surface drainage, runoff, or evapotranspiration. The water which remains is surface water, some contained in lakes, but most in shallow wetlands or depressions.

Other factors also influence the occurrence of surface water. Unique soil types which absorb rainfall at different rates play a significant part in

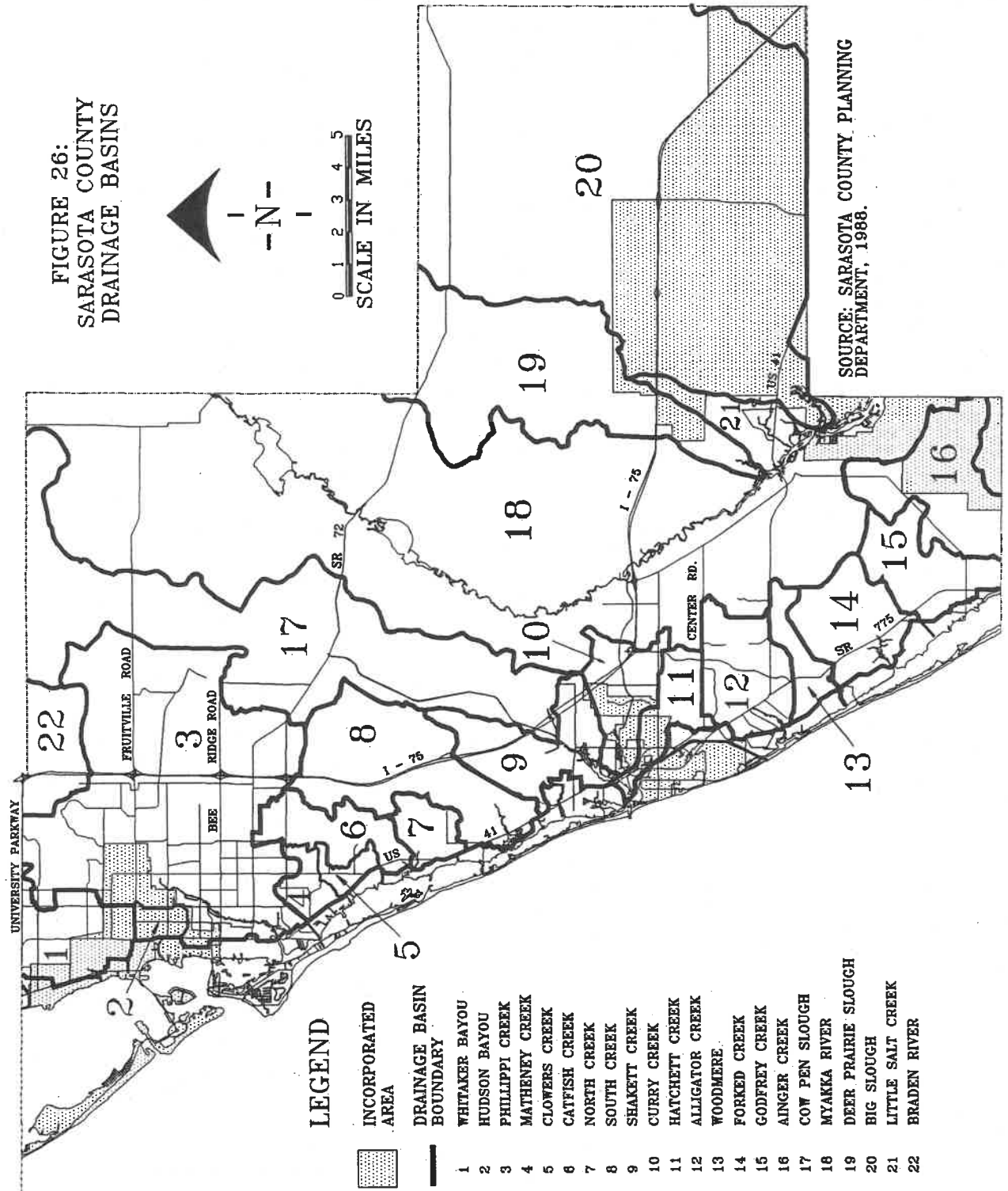
runoff. Well-drained soils have the ability to absorb large amounts of water, thus reducing runoff while remaining relatively dry. However, well-drained soils account for only a small portion of the County's total land area. The ability to hold water, or saturation, varies depending upon soil types. When the soil has reached its saturation capacity, all additional rainfall striking the area becomes either surface runoff or standing surface water.

Another factor is the extent and type of natural ground cover. Through differences in root mass and evapotranspiration rates, differing types of vegetation can alter the speed at which infiltration occurs. Plants with large root systems create passageways in soil which may store additional water; those with higher evapotranspiration rates, particularly trees, literally pump water from the soil into the atmosphere. This explains why fallow land yields more runoff than forested land for any given soil type.

Climate, soils, ground cover, and topography can modify the volume of water retained or dissipated as runoff. Topography generally effects the rate and direction of flow, since areas with greater slope will yield higher rates of runoff and areas with nearly flat slope produce little or no runoff. Consequently, topography becomes the most important physical parameter in determining Sarasota County's drainage characteristics.

Although an examination of the County's topography indicates it is quite flat, sufficient gradient does exist to produce a series of somewhat poorly drained basins. Sarasota County drainage basins are shown on Figure 26. Drainage systems have also been analyzed in terms of geographic service area, predominant types of land use and surface water quality on a basin-by-basin assessment in Appendix B, Section 2.

FIGURE 26:
SARASOTA COUNTY
DRAINAGE BASINS



The flat terrain has produced meandering channels and wide floodplains which, when left in their natural state, convey excess water very slowly. Areas within the 100-year floodprone area are identified in Figure 27.

The relationship of these factors, and their effect upon the quantity of surface waters, are fundamental to understanding the County's natural drainage system.

Due to the naturally wet conditions of the County, early settlement was concentrated in the higher, better-drained areas. The desire to open more lands to human habitation resulted in drainage systems with the singular purpose of conveying stormwater and surface water off the developing land and reducing the potential for flooding.

As drainage activities increased, so did problems associated with the elimination of wetlands and wet areas. It soon became apparent that drainage programs could no longer concern themselves strictly with water removal. Water quality, the conservation of groundwater and surface waters, and the impact of drainage upon the environment all had to be considered.

Legislation Affecting Drainage

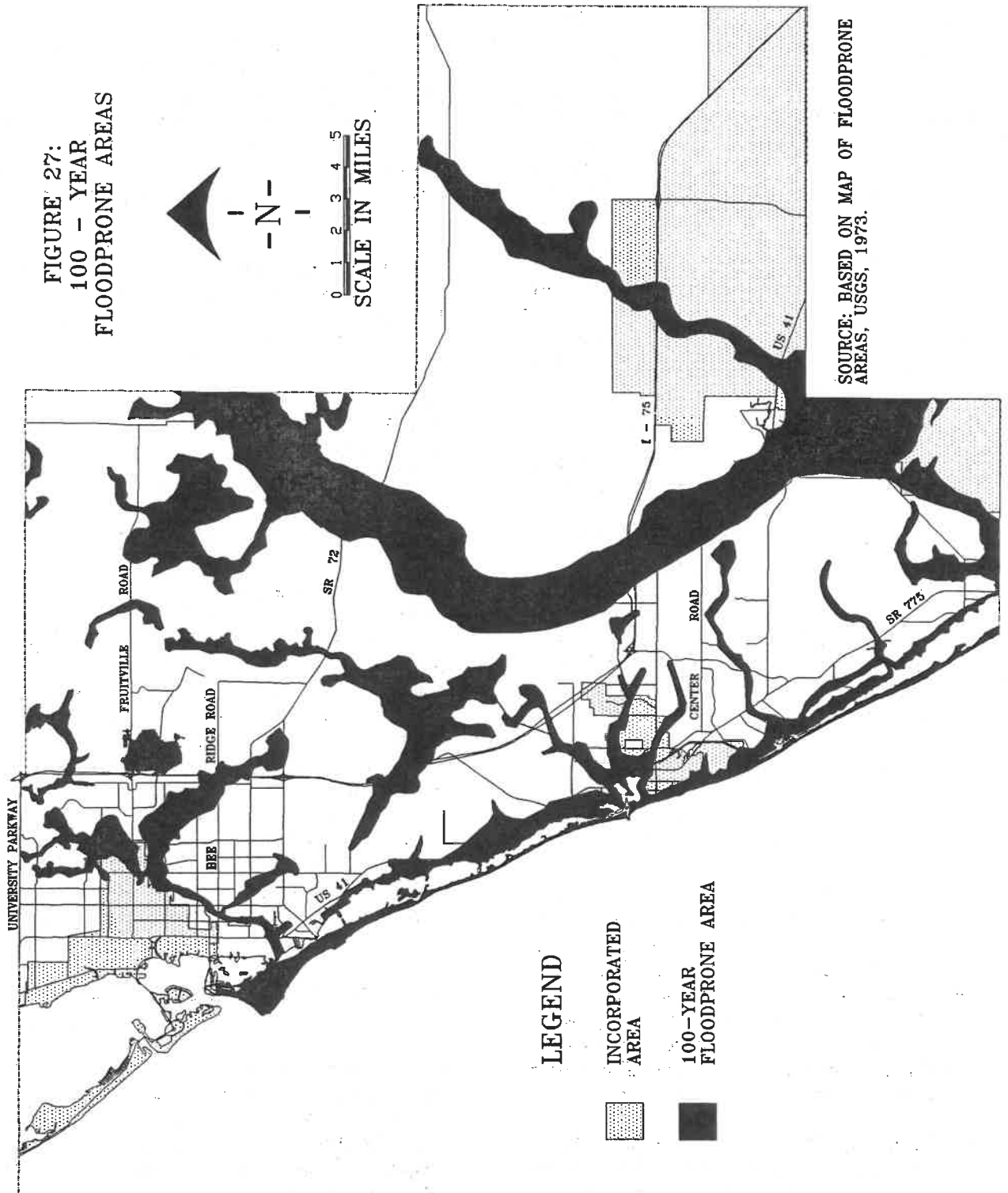
U.S. Public Law 92-500, "Federal Water Pollution Control Act" relates to water quality through water pollution abatement and focuses upon non-point pollution (water pollution from non-specific sources). Section 208 provides assistance to State and local governments by developing Areawide Water Quality Management Plans. Plans prepared according to provisions of Section 208 have as their goal to "...maintain or re-establish the high quality surface water of the region." The local program, managed by the Southwest Florida Regional Planning Council, also studied the Phillippi basin and made recommendations for improving the surface water quality of the County.

Chapter 403, Florida Statutes, "Water Resources Act", provides the Department of Environmental Regulation with the authority to establish water quality guidelines and recognizes stormwater runoff as an important resource.

Chapter 17-25, Florida Administrative Code, "Regulation of Stormwater Discharge," implements this statute by providing minimum criteria for both surface waters and groundwater, as well as fulfilling part of the State's responsibilities under Section 208 of the "Federal Water Pollution Control Act." The rule's basic objective is to achieve 80-90 percent removal of stormwater pollutants before discharging into receiving waters. The rule states that facilities must treat the runoff from the first one inch of rainfall, or as an option for projects with drainage areas less than 100 acres, the first one-half inch of runoff. The rule further states that untreated stormwater may reasonably be expected to be a source of pollution of the waters of the State. Consequently, all new stormwater discharge facilities (those not in existence on February 1, 1982, and/or subject to other conditions) will require a permit under this chapter, subject to Sec. 17-25.030 Exemptions and any other applicable sections. This law was enacted in part to prevent pollution of State waters and to ensure that the designated most beneficial uses of waters are protected, as outlined in Chapter 17-3, Florida Administrative Code.



Chapter 17-25, Florida Administrative Code, emphasizes that "No discharge from a stormwater discharge facility shall cause or contribute to a violation of water quality standards in waters of the state" and continues by stating that erosion and sediment control "best management practices" shall be used as necessary during construction to retain sediment on-site. Further, stormwater discharge facilities which receive stormwater from areas which are a potential source of oil and grease contamination shall include mechanisms suitable for preventing the contaminants from leaving the stormwater discharge facility in concentrations which would cause or contribute to violations of applicable water quality standards in the receiving water. The law continues by stating that stormwater discharge facilities which discharge directly into Outstanding Florida Waters (Sarasota Bay, Little Sarasota Bay, Lemon Bay, and the Myakka River) shall include additional levels of

**FIGURE 27:
100 - YEAR
FLOODPRONE AREAS**



SOURCE: BASED ON MAP OF FLOODPRONE AREAS, USGS, 1973.

LEGEND

-  INCORPORATED AREA
-  100-YEAR FLOODPRONE AREA

treatment equal to fifty percent of the treatment criteria specified in Sec. 17.25.035(1)(b) or Sec. 17.25.040, or Sec. 17.25.042, Florida Administrative Code.

Chapter 17-3, Florida Administrative Code, "Water Quality Standards," provides minimum criteria which govern stormwater drainage necessary to protect the designated uses of State waters. This legislation provides detailed criteria for both surface waters and groundwater.

Sarasota County Ordinance No. 81-12, "Land Development Regulations", also considers the quality of stormwater discharge where it states that drainage features shall treat runoff resulting from the first one inch of rainfall in order to minimize oil, suspended solids, or other objectionable pollution.

The Department of Community Affairs characterizes Chapter 17.25 relating to the treatment of stormwater runoff as follows:

- "Treatment is generally accomplished through retention or through detention with filtration. Retention requires the diversion of the required volume of runoff to an impoundment area with no subsequent direct discharge to surface waters. Pollutant removal by settling and by percolation of the stormwater through the soil is almost total. Detention facilities are typically within the line of flow of the drainage system. Stormwater from a site passes through the detention facility and is filtered prior to discharge to remove pollutants."

The Southwest Florida Water Management District was created by Chapter 61-691, Laws of Florida, as a public corporation for carrying out the provisions of Chapter 378, Florida Statutes and to assist in effecting the maximum beneficial utilization, development, and conservation of water resources. To this end, the District is charged with prevention of the depletion, deterioration, waste, and unreasonable use of these water resources.

Specific activities performed by the District to implement its goal include: the issuance of consumptive use permits which regulate the withdrawal of

either groundwater and/or surface water; regulation of activities regarding the construction, modification, or abandonment of wells; regulation of construction projects which involve artificial recharge or the intentional introduction of water into any underground formation; establishment of minimum water flows and water levels for the purpose of establishing minimum flood levels; issuance of general water use and surface water management permits; and development and implementation of a district water shortage plan.

County regulations coordinating drainage efforts have been adopted consistent with federal and State legislation. The most relevant are found in Appendix D, Section 2.

Planning Studies and Efforts

The drainage plans and programs from the early 1920's through the 1960's emphasized the removal of surface waters from the land with concerns for water quality emerging as a major concern in the late 1960's. As early as 1961, urban area drainage programs had been initiated to control flooding. The Sarasota County Comprehensive Drainage Plan (2) offered engineering solutions to alleviate flooding within each of the coastal river basins. In September, 1962, a low-pressure cell in the Gulf caused over 16 inches of rainfall to occur in a 48-hour period creating the worst flood in Sarasota County's history. (3) Subsequent to the flooding of 1962, the concern for flood control brought more flood control plans and the implementation of additional channelization for Phillippi Creek.

In 1963, the Survey Report on Phillippi Creek Basin (4) was completed by the Army Corps of Engineers and identified several alternative degrees of protection for the area. It stated that "Improvement of Phillippi Creek to about 60 percent of standard project flood capacity..." would eliminate all flooding in the area from floods up to the 1-in-30-year magnitude. These are floods which have a statistical chance of occurring once in 30 years.

In 1967, the Survey of Phillippi Creek Basin (5) was another step in attempting to improve the water quality of Phillipi Creek basin. Although no recommendations were made concerning stormwater runoff, the study did recommend that sewer service be developed in the urban and suburban portions of Phillippi Creek basin in order to improve water quality.

In 1972, U.S. Public Law 92-500, the "Federal Water Pollution Control Act," was enacted which focused upon non-point pollution. The program, managed by the Southwest Florida Regional Planning Council, studied the Phillippi basin and made recommendations for improving the surface water quality of the County.

The Water Resources Management Study - Economic Base Study, (6) conducted in 1975, looked at a larger area, of which Sarasota County was included. The broad regional study examined the supply and conservation of water; flood control; floodplain management; socio-economic and environmental impacts; fish and wildlife enhancement; and recreation.

A further examination of Phillippi Creek, as an extension of the U.S. Public Law 92-500 Section 208 program, was prepared in 1980 by the Mote Marine Laboratory with County staff assistance. (7) This study included a spatial analysis of the existing and proposed future land uses, physical characteristics, and projected population growth.

In 1984 the Board of County Commissioners recognized major inadequacies in the existing stormwater management system and authorized the preparation of a stormwater master plan. The purpose of the Stormwater Master Plan (8) was to assess the need for improvement of major drainage systems in the developed portions of the County. The objectives of the plan include:

- assessing the adequacy of primary stormwater conveyance systems in developed or developing basins;
- estimating the cost for public stormwater improvements as watersheds are developed to ultimate use;

- prioritizing stormwater management needs of each basin within a framework of the needs within the entire County; and
- developing a plan or identifying options available to the County on how to finance the cost of construction, operation, and maintenance of stormwater management facilities.

The report, released in February, 1987, provided an analysis of selected portions of Alligator and Phillippi Creeks. The analysis of these two basins included identification of problem areas, alternative solutions, and recommended actions. This information was extrapolated to the 14 remaining basins within the study area to provide cost estimates for stormwater improvements that could be expected in these watersheds.

In August, 1987, the County Transportation Department prepared a report entitled S.C.S. Soil Characteristics and Delineation of Drainage Basins in Sarasota County. (9) This report encapsulated selected portions of the previous study and included: basin/subbasin area; residential, industrial, and rural land uses; percentage of impervious acreage; percentage of directly connected impervious acreage; primary soils type; S.C.S. hydrologic soil group; subbasin downstream status; and estimated 25-year, 24-hour, and peak discharge for the entire basin.

Inventory and Analysis

The first major drainage projects in Sarasota County were the Sarasota-Fruitville Drainage District and the Hyde Park Drainage District. These projects were established under the authority of Chapter 298, Florida Statutes, "Land Reclamation Act of 1913," with the purpose of increasing the amount of land available for agricultural activities. Other drainage districts were also established under the Land Reclamation Act including: Cattlemen, Englewood, North Port/Charlotte, Peace Drainage Districts, Sarasota Inlet, Venice Drainage District No. 1, and the West Coast Water Management District.

Although each of these drainage districts is now defunct, with most of their drainage work completed by the 1940's, the magnitude of their distribution is still quite apparent.

The Stormwater Management Division of the Transportation Department estimates that the drainage system comprises over 800 linear miles of drainage canals and numerous ponds and lakes within Sarasota County. These canals are shown on Figure 28.

The Sarasota County Board of County Commissioners assumes operational responsibility for those public drainage facilities within unincorporated Sarasota County. Included within this network are natural and man-made conveyance systems. Since these systems are located throughout the entire county, no one particular dominant land use is served. A comparison of the drainage network depicted on Figure 28 with existing land uses shown on Figure 65 indicates that the drainage systems serve a combination of residential, commercial, industrial, extractive, institutional, and agricultural land uses as well as public facilities, conservation/preservation areas, and vacant lands. A facility-specific land use inventory has not been completed. The level of detail involved in such an inventory is to be completed during the planned implementation of the Countywide Stormwater Environmental Utility.

Similarly, a comprehensive analysis of current demand and projected needs of these facilities, which would include existing facility capacity analysis based on design capacity and current demand and future facility capacity analysis based on development permitted by the County, projected population, and land use distributions based on the "Future Land Use Plan Map", has not been completed. In 1987, a consultant for the County prepared a Stormwater Master Plan which examined two of the County's sixteen interior drainage basins. This study presented limited engineering solutions to the problems encountered in these basins. The study extrapolated these engineering solutions for the two drainage basins, in terms of cost, to the remaining basins based on their relative size. The scope of this study was based on the concept that drainage deficiencies

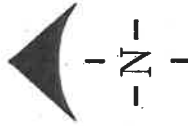
would be addressed on a basis-by-basin application. Although the study provided some baseline data, it did not supply sufficiently detailed information on current and future deficiencies to determine priorities of capital improvements needs. Further, the proposed basin-by-basin approach to financing needed improvements has proven to be unwieldy and not practical. Consequently, in June, 1988, the Board of County Commissioners directed the Transportation Department to proceed with a pilot study for Clower Creek which is designed to determine the feasibility of creating a Countywide Stormwater Environmental Utility. Under the Utility, the County would inventory and assess all drainage facilities and propose an improvement schedule to bring the facilities up to adopted level of service standards. Future capacity analysis, based on the above-mentioned factors, would also be included under the comprehensive approach of the Utility.

The major impact upon surrounding natural resources from drainage facilities is that associated with flooding. Although it has not been determined which segments of the drainage system flood under particular storm events, it is generally believed that those areas further downstream experience flooding more frequently than those upstream. However, this needs to be quantified and it is believed that this information can be obtained during implementation of the proposed Stormwater Environmental Utility.

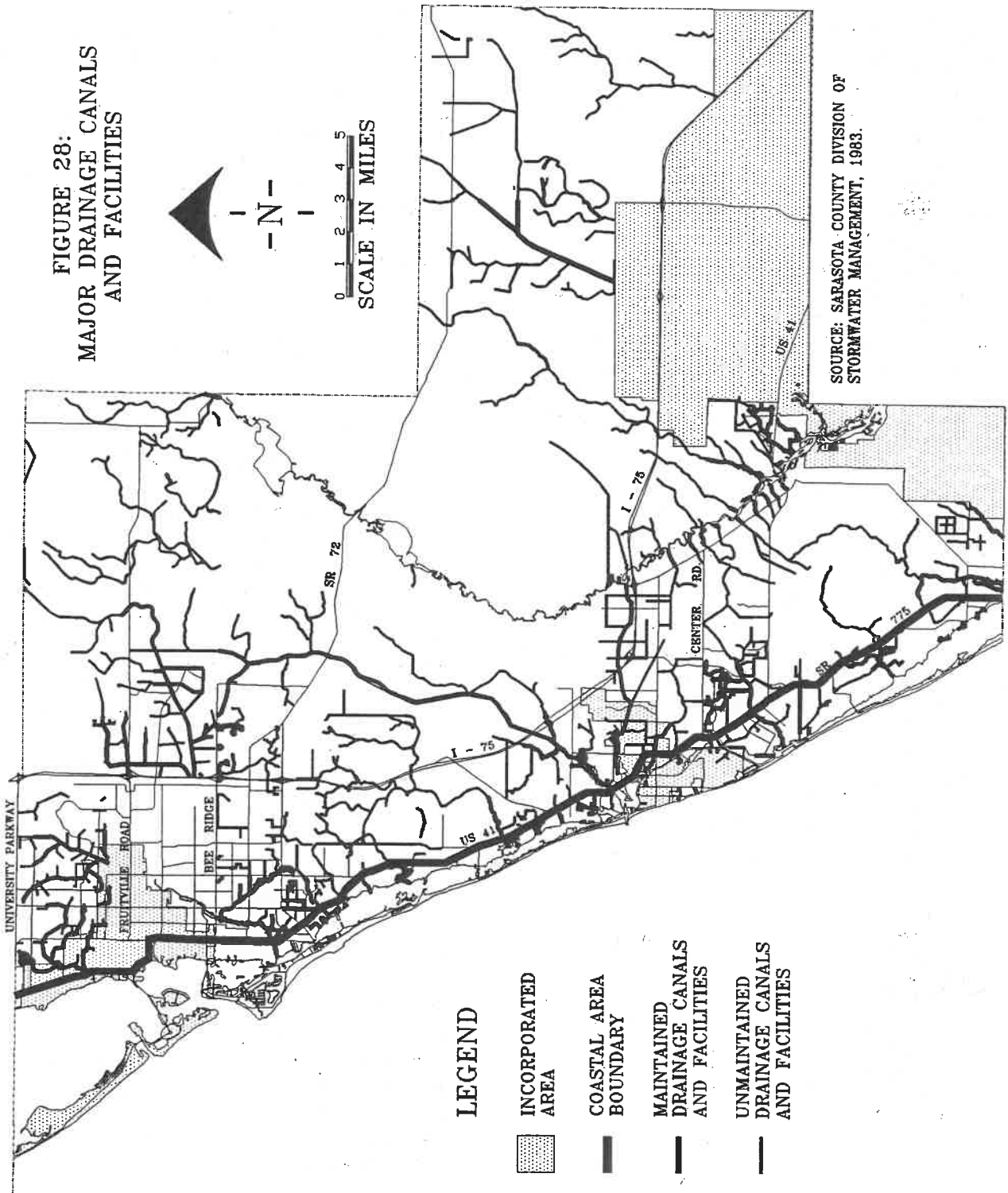
As noted above, the initial water problem perceived by early residents of the County was too much water. Implementation of programs designed to solve this problem soon created new concerns, especially about the ability of the land to store water. Highly efficient drainage systems reduce the capacity of the land to store valuable freshwater.

This reduction in storage capacity occurs through the installation of drainage canals which alter the hydrogeology of the area by inducing greater rates of sub-surface runoff (the flow of water laterally through the soil just below the surface). This has the affect of lowering the water table. Large drainage canals typically link into natural creek or river systems, which in turn empty into the

FIGURE 28:
MAJOR DRAINAGE CANALS
AND FACILITIES



0 1 2 3 4 5
SCALE IN MILES



saltwater bays of Sarasota and Charlotte Counties. Thus, much of the rain falling within the County is transported to the Gulf and lost as a water resource. As a consequence, changes in freshwater flows and the timing of those flows into the bays can have a negative impact upon estuarine systems.

CONCERN 1

Rapid runoff of stormwater results in the loss of valuable freshwater resources, and may have other ecological impacts as well. Further, potential recharge capabilities of natural water systems have been lost or greatly diminished, due to the stormwater drainage practices employed throughout the County in an effort to remove surface waters.

Development associated with urbanization also increases runoff by increasing flow velocity and flow volume due to the characteristics of impervious surfaces. Flow velocity and volume increase significantly when the path is changed from rough surfaces, such as woodland, grassland, or natural channels to smoother surfaces, such as parking lots, diversions, storm sewers, gutters, and lined channels. The creation of large expanses of impervious surfaces also prohibits water storage in the soils they cover. In this manner the problem is compounded since natural water storage capacity is lost while the ability to remove water is increased.

CONCERN 2

Urban development covers large areas of land with impervious surfaces which inhibit the ground's ability to absorb rainfall while at the same time increasing the ability of the land to remove the rainfall.

This increased amount of runoff places greater stress on the drainage system, which results in increased chances for flooding during periods of heavy rainfall. While various techniques have been successfully employed for removal of water from many naturally floodprone areas, these techniques have given a false sense of security and have encouraged development in floodprone areas. Consequently, as development increases in floodprone areas, (which produces even more runoff) the risks of flooding also increase.

CONCERN 3

Extensive development is taking place in floodprone areas.

In addition to increasing the amount of impervious surface, development practices, including the introduction of large amounts of fill, can produce flooding in areas not normally associated with flooding. In the natural drainage system, when especially heavy rainfall produces large amounts of runoff, excess surface water is stored in the floodplain. These waters are gradually drained by the natural waterways and sub-surface drainage. The fill which is used to increase the elevation of developed property and provide local protection from flooding tends to reduce water storage capabilities of the floodplain, thus, in effect, transferring the floodwaters to other areas.

CONCERN 4

Filling floodprone areas can contribute to flooding problems downstream.

Surface waters which drain the developed portions of the County often carry large volumes of litter, automobile wastes, pet wastes, lawn fertilizers, and pesticides. As a result, water quality problems are often found in transmitting and receiving waters. Surface waters that receive runoff from

agricultural areas often are also subject to pollution associated with concentrations of fertilizers, pesticides, and animal wastes.

CONCERN 5

Surface water runoff contains numerous contaminants which pose a threat to local water quality.

Other sources also pollute drainage ways and receiving waters. According to the 1986 "Florida Water Quality Assessment 305(b) Technical Report", by the Bureau of Water Quality Management, Whitaker Bayou was identified and rated as "Poor" and was a problem area showing water quality degradation. This situation was due, in part, to the ineffectiveness of the City of Sarasota's sewage treatment plant which discharges into Whitaker Bayou. This report succinctly stated that Whitaker Bayou "Receives Sarasota STP effluent. This overloaded plant has advanced waste treatment effluent limits, but frequently does not meet secondary treatment standards."

The City's sewage treatment plant was not the only identified degrader in the Sarasota Bay basin. The report continues by stating that there are additional problems with nonpoint source pollution from both agricultural and urban stormwater runoff within the basin. Further, many of the streams running through the Sarasota Bay basin are also impacted by septic tanks.

CONCERN 6

Sarasota Bay Basin is rated fair to good while Whitaker Bayou, is showing poor water quality.

The Bureau of Water Quality Management's report indicates that not all surface water pollution was caused by urban and agricultural runoff. Point source discharges from sewage treatment plants and septic tanks appear to have contributed to lower water quality in some subbasins. While water

quality in other basins appears primarily to be affected by runoff, sufficient data do not exist to pinpoint the specific runoff sources producing the water quality problems.

CONCERN 7

Sufficient water quality data are lacking which can identify specific areas of runoff contributing to lower water quality.

The continuing operation of the County's existing drainage system requires periodic maintenance to remove siltation, debris, and vegetation, including aquatic vegetation. Such maintenance requires access to and along canals, ponds, and lakes. In many cases access is not available, principally because the County's drainage system was constructed prior to the establishment of regulations requiring the provision of adequate easements. Without such easements, these facilities cannot be adequately maintained.

CONCERN 8

Many drainage facilities lack adequate easements for maintenance.

Sarasota County Ordinance No. 81-12, Land Development Regulations, provides regulations which guide development as it pertains to attenuation and drainage of surface water runoff. However, even with these regulations in place, many drainage basins have downstream reaches which do not have the capacity to effectively convey runoff when experiencing 25-year storm events, according to "S.C.S. Soil Characteristics and Delineation of Drainage Basins in Sarasota County." It is the lack of design standards provided for on an integrated basin-wide scale which prevents downstream reaches of some basins from effectively conveying 25-year storm events. The County may require additional design standards for

selected stream reaches which may restrict post-development runoff to less than pre-development runoff levels.

CONCERN 9

The lack of design standards prevents some stream reaches from effectively conveying 25-year storm events.

Throughout the County there are private lakes and drainage ways which serve only the drainage requirements of specific developments and are not considered part of the Countywide drainage system. Maintenance responsibility for these private facilities has not been adequately defined, thus producing confusion as to the County's maintenance role. Additionally, no effective mechanism exists with which the County can monitor and enforce the private sector's role in stormwater infrastructure maintenance.

CONCERN 10

The division of maintenance responsibility between public and private drainage facilities has not been clearly defined.

Within new subdivisions, most developers have incorporated attenuation techniques which mitigate downstream flooding, pursuant to Ordinance No. 81-12, Land Development Regulations. While reducing the rate of runoff, these attenuation practices can also induce the settling out of pollutants in runoff and thereby improve overall water quality. Unfortunately, many subdivisions were platted prior to adoption of Ordinance No. 81-12 and are not bound to incorporate these flooding mitigation techniques in their development.

CONCERN 11

In some older developments, modern attenuation techniques are not implemented.

Level of Service

Stormwater drainage Level of Service standards may have two components: quality of discharge and quantity of discharge. Each will be addressed in order to determine level of service standards which ensure an adequate and safe stormwater management system.

Chapter 17-25, Florida Administrative Code, Section 17-25.025, "Design and Performance Standards, delineates stormwater drainage capacity requirements and generally discusses design criteria for detention and retention basins, filtration systems, and swales. However, the performance standards as presented in Ordinance No. 81-12, Land Development Regulations, have been in place since 1981 and reflect the County's localized conditions. They state:

- adequate drainage capacity in order to accommodate runoff associated with a design storm event of 25-year frequency for major "water management facilities" and a 10-year frequency for minor "water management facilities"; and
- drainage designs which provide attenuation/retention of stormwater runoff where runoff shall be less than that prior to development.

Attempts have been made using other criteria with which to establish or create a level of service for drainage. The 1987 drainage study used three criteria to establish "Level Of Drainage Performance/Stormwater Service Levels" for evaluation of stormwater drainage systems in the County. These criteria were street flooding, structure flooding, and open or green space flooding. These criteria were used to identify the acceptable depth and frequency of flooding which will occur during a 24-hour, 25-year storm event which is the mini-

mum design storm event as adopted by Ordinance No. 81-12, Land Development Regulations. These criteria are defined as follows:

Street Flooding: acceptable where flow to a depth of 6 inches or less on the outer edge of the street surface. This will cause the street to be almost fully covered with water, but will allow the safe passage of one vehicle;

Structure Flooding: objective is to eliminate structure flooding of the first habitable floor in private residences, and prevent flooding of all commercial and industrial properties where flooding would interfere and impede the intended use of the property; and

Open or Green Space Flooding (that portion of the surface vegetation that is generally covered by grass and other non-harvestable crops): objective is to limit flooding of open space or green space in residential, commercial, or industrial areas to a depth of between 12 and 18 inches, unless an area is specifically intended to convey or detain water. Maximum flood level in such areas to be such that there will be no threat to public health or safety, or permanent impediment to the intended use of property.

Based on the above study, an August, 1987, report by the County Engineer entitled "S.C.S. Soil Characteristics and Delineation of Drainage Basins in Sarasota County," further defined the level of service by characterizing the downstream status of subbasins with the following Status Indicators:

Status A No Defined Channel

Includes areas that have no identifiable natural channel or in which development has obscured and eliminated a natural channel that once existed.

Status B Poorly Defined Channel

Includes areas with channels definable only in terms of the 5 and 10-year recurrence interval discharge with significant floodplain.

Status C Marginal Capacity

Includes areas with channels of significant capacity to convey the major (25-year) discharge without significant out-of-bank flow and/or floodplain inundation.

Status D Restricted Downstream

Includes channels that are generally adequate for conveying the major storm discharge with a minimum of out-of-bank flow, but which are subject to flooding because of inadequate bridges, culverts, ditch crossings, etc.

Status E Fully Adequate

Includes those channels which can be identified as being adequate in all respects for the major storm discharge.

The County Transportation Department interpreted the Status Indicators as they related to acceptability and grouped them into two categories: Acceptable and Below Acceptable. Acceptable included Status Indicators C & E, and Below Acceptable included Status Indicators A, B, & D.

From the previous discussion, it is apparent that establishing a level of service for drainage is a complicated task with many interacting factors. Although existing legislation provides many criteria by which to assess stormwater drainage systems, no single set of criteria has emerged as the predominant indicator.

Until such time as a comprehensive stormwater facilities inventory and management program is adopted, the County's stormwater level of service should be designed to reduce flooding potential caused by future development and provide performance standards to minimize impacts on existing surface water quality as follows:

Stormwater Quality: the County will develop and set criteria based upon state and local regulations which will set a community accepted level of water quality standard for stormwater discharge facilities; and

Stormwater Quantity: a complete stormwater management system shall provide for adequate control of stormwater runoff. The stormwater management system shall be designed based upon storms of maximum intensity at twenty-five (25) year intervals for major water management facilities and ten (10) year intervals for minor water management facilities. In order to avoid burdening downstream drainageways and for general conservation purposes, the following specific guidelines are as follows:

- Drainage designs shall provide for the attenuation/retention of stormwater from the site. Water released from the site shall be in such a manner as to assure that the rate of runoff after post development is less than or approximate to that before development.
- Drainage systems shall include special engineering design features to minimize pollution from oil, suspended solids, and other objectionable materials. Such features shall be designed to treat the runoff resulting from the first one (1") inch of rainfall where the ultimate outfall of the drainage system is into a freshwater stream, canal, or other waterbody that has a mean daily discharge of five (5) cubic feet per second or less.
- Stormwater systems discharging directly into major saltwater tidal systems, bays, or the gulf shall be designed to reduce floating and suspended solids to a minimum.
- In locations where soil and groundwater conditions permit, structures such as bottomless inlets, filter inlets, perforated drain pipes, and other similar devices shall be used to minimize pollution and to increase stormwater percolation.
- No cutting, clearing, grading or filling shall be accomplished on any site under development unless appropriate devices have been installed to minimize pollution from objectionable materials to control erosion and to remove sediment from sur-

face water runoff. Appropriate techniques shall also be utilized to stabilize and revegetate disturbed areas as soon as possible.

Problems

The 11 specific concerns mentioned previously in this section can be synthesized into five general problem areas:

- Development in floodprone areas and older development which does not utilize modern attenuation techniques contributes to downstream drainage problems. Further, the lack of design standards prevents some stream reaches from effectively conveying 25-year storm events.
- Urban development covers large areas of land with impervious surfaces which promote rapid runoff, the reduction of freshwater resources, and may have other ecological impacts as well.
- Surface water runoff contains numerous contaminants which pose a serious threat to the coastal drainage basins and receiving waters, such as the bays, creeks, ditches, canals, and development ponds.
- The County lacks a Surface Water Management Ordinance with which to guide development in floodprone areas.
- Maintenance of the drainage system is difficult or impossible where adequate access to the facility is limited or no clear distinction of responsibility is made between the public and private sector.

Future Planning Options and Opportunities

The County has determined that the present system of stormwater management practices has not been adequate to meet all of the problems associated with stormwater management. To this end, in an effort to provide control of water quantity, enhance water quality, and to effectively manage stormwater, the Transportation Department has proposed a Stormwater Environmental Utility.

Under the utility, developed parcels of property would be assessed a fair and equitable user fee based upon that property's amount of impervious surface. This user fee would then be used by the utility to correct existing deficiencies and provide for future facilities in the stormwater management system. The utility fee would also provide ongoing revenues for operation and maintenance of the public system. Sarasota County is considering conducting inspections of private drainage facilities, to be funded by owners. These inspections would assess the adequacy of maintenance accomplished through private means.

Potable Water

Introduction

Sarasota County's water demands have been met by a variety of public and private potable water systems. Municipal systems serve the Cities of Sarasota, Venice, North Port and the Town of Longboat Key. The unincorporated portion of Sarasota County has met its water supply demand by relying upon a system of independent water franchises, other independent water treatment and supply systems, thousands of individual wells and two public systems: the Sarasota County Utility System (SCUS) and the Englewood Water District.

The County began to play a role in the regulation and planning of water facilities in 1956 and 1957, when the Board of County Commissioners established amendments to subdivision regulations which, in part, required all new development to include provisions for central public water and sewer service. In the absence of a central water supply system, developers had the alternative to seek issuance of a water franchise from the County. The first franchise was authorized in 1958 to South Gate Water and Sewer Company. The ongoing use of franchised water systems continues to be a major component in the provision of potable water service in unincorporated areas of the County.

During the late 1960's and early 1970's, several factors heightened the County's awareness regarding the continuation of decentralized water systems. A growth rate of about 5,000 new residents per year combined with growing public concerns about the availability of future water supplies and a severe drought during the winter of 1970-71 provided the impetus for the County to develop its first public water system, Special Utility District No. 1 (SUD-1) under the general administrative umbrella of the Sarasota County Utility System.

The critical demand for water carried the County through the SUD- 1 planning stages in 1972-73, leading to construction of the system in 1974-75, which serves the northwestern segment of the unincorporated portion of Sarasota County. The original and primary water supply source for the SUD system was from Manatee County, which has been augmented with surplus treated water from the City of Sarasota and the development of University Parkway wellfields.

The 1981 adoption of Apoxsee provided further policy direction for the County to develop a centralized, County-owned water supply. One of the prime areas identified as a potential water source was the 33,000 acre Ringling MacArthur Reserve. Subsequent to its examination as a potential water supply source, efforts were made to acquire the property, not only for its water resources, but for related benefits, such as preservation of open space, recreational uses, and historical and educational values. In November, 1982, Sarasota County voters approved a \$30 million bond issue referendum by a 2:1 margin designed to fund the public acquisition of the property with bond issuance in December, 1982.

The County intends to develop the Ringling MacArthur Reserve water treatment and transmission system so it is capable of expanding water service through the Sarasota County Utility System to the middle and southern portions of the County. Historically, these areas have been dependent upon wells and other independent water systems.

Legislation Affecting Potable Water

Under Public Law 93-523, "Safe Drinking Water Act," the federal government established water quality standards for the protection of water for public use, including operating standards and quality controls for public water supply systems. This law directed the Environmental Protection Agency (EPA) to establish minimum drinking water standards which are divided into "primary" standards, or those required for public health, and "secondary" standards, those recommended for aesthetic qualities.

In accordance with federal requirements, the Florida Legislature adopted Chapter 403.850, Florida Statutes, "Florida Safe Drinking Water Act." The Florida Department of Environmental Regulation is the state agency responsible for implementing this act and has established rules classifying and regulating public water systems under Chapter 17-22, Florida Administrative Code. The primary and secondary standards of the "Federal Safe Drinking Water Act" are mandatory in the State of Florida.

The Southwest Florida Water Management District has adopted rules under Chapter 40D-2, Florida Administrative Code, and is responsible for the management of water resources within a 16 county region to protect the supply necessary to meet existing and future demands. Additional regulations relating to the operation of community and non-community public water supply systems are set forth within Chapter 10D-4, Florida Administrative Code.

County regulations and policies have been adopted in a manner consistent with federal and state legislation. These rules and policies coordinate the treatment and distribution of potable water in the County. The most relevant County Ordinances are found in Appendix D, Section 2.

Drinking water quality standards furthering federal and state legislation are enforced and records are maintained by the Sarasota County Public Health

Unit, a Division of the State Department of Health and Rehabilitative Services. The Sarasota County Pollution Control Division of the Department of Natural Resources is responsible for enforcement of Department of Environmental Regulation rules concerning the pollution of groundwater or drinking water supplies which result from improper operation of wastewater treatment facilities or problems resulting from commercial or residential uses.

Planning Studies and Efforts

Numerous studies relating to potable water and water resources in Sarasota County have been completed. Only a few will be highlighted in this section: These studies, dating as far back as 1933, have been performed by the U.S. Environmental Protection Agency, The U.S. Army Corps of Engineers, the U.S. Geological Survey, the Florida Department of Environmental Regulation, the Southwest Florida Regional Planning Council, and others. During the last few decades, though, the major work within the County has either been performed by the County or under the auspices of the County working in cooperation with the Southwest Florida Water Management District.

During the late 1960's and early 1970's, concerns arose surrounding the long term, potentially adverse economic and environmental effects of private water and sanitary sewer franchises. These concerns prompted the Board of County Commissioners to initiate preparation of the first planning effort recognizing the need for a Countywide water supply system. This 1971 study, Water and Wastewater System Master Plan, (1) identified water pollution as the principal rationale for proposing the creation of a Countywide, County-owned and operated water and wastewater treatment system. Public support for the implementation of a portion of the plan involving a water system was strengthened by a drought during the winter of 1970-71, which led to widespread well failures and to the enactment of emergency watering restrictions by the Board of County Commissioners.

CONCERN 1

Many existing water supplies are subject to high mineralization, radiation, or other forms of pollution.

The plan proposed establishment of four "pollution control zones" which would create a County supply system and provide the means for consolidating existing systems. The study concluded that piecemeal planning was inadequate and went on to call for a planning horizon stretching until the year 2010. At this time all of the pollution control zones were contemplated to be interconnected, thus providing adequate fire flows and adequate water supplies to meet the needs of the urbanized areas of coastal Sarasota County.

This master plan provided the mechanism to create SUD-1 to serve the area characterized within the plan as the North County Pollution Control Zone. This particular area was developed because of its residential density, projected growth, and immediate water problems. The primary water source for SUD-1 was Manatee County, which provided an initial forty year contract allowing purchase of up to ten million gallons per day. General recommendations within the plan called for an evaluation and development of additional water supply resources. Cost estimates and financing recommendations were also provided.

Water needs of the mid-County region were addressed through the preparation of a 1975 engineering study entitled, Central County Pollution Control Zone Engineering and Cost Analysis of Water and Wastewater Systems. (2) This study focused on particular problems associated with development of water and wastewater systems within the rapidly urbanizing mid-County area south of SUD-1, particularly near Venice. This study recommended development of a water resource for the County. However, efforts to develop the central County pollution control zone were not successful, due in part to a lack of community consensus regarding the need to implement wastewater treatment facilities.

CONCERN 2

The middle and southern portions of the County, where SCUS water is not available, experience significant water supply problems resulting in the demand for the creation of new systems or expansion of existing systems.

In 1978, continuing concerns regarding the need for identifying additional water resources resulted in a study which analyzed the opportunities for development of a water supply system. A citizens Ad Hoc committee was appointed which presented its findings to the Board and concurred with earlier recommendations to create a Countywide potable water system. The committee urged the Board to continue creating additional special utility districts capable of becoming bulk water customers to a Countywide treatment and supply system. This was to be accomplished through the phased development of existing water resources within the County, including the establishment of a wellfield in eastern Sarasota County as the initial supply source, followed by development of surface water supplies, such as the Myakka River and Cow Pen Slough. It was this report which helped stimulate interest and support for the County to examine the Ringling MacArthur Reserve for use as a long-term potable water supply source.

Additional recommendations called for negotiations among Sarasota, DeSoto, and Charlotte Counties in an effort to create a tri-county water authority capable of utilizing the Peace River as a long-range supply source. In response to the recommendations of the citizen advisory committee, the Board authorized the study for the feasibility of creating a second utility district to serve the Central County Zone.

Sarasota County, which had helped form the Manasota Basin Board, demonstrated support for the need to proceed with planning on a regional basis during January, 1977, by becoming a member county of the Southwest Florida Management District (SWFWMD).

The SWFWMD, which is committed to regional water supply needs on a multi-county basis, proceeded with additional, preliminary investigations of potable water supplies available in the Sarasota and Manatee County area. Findings of these initial studies resulted in the subsequent investigation of four areas in the Manasota Basin.

The water sources studied by SWFWMD included a combination of groundwater and surface waters in eastern Sarasota County to supplement the Myakkahatchee Creek system; groundwater supplies in the northeastern area of Manatee County; augmentation of Lake Manatee; and utilization of Cow Pen Slough as a potable water supply source.

SWFWMD also urged the County to concentrate upon the development of an in-County water supply. This suggestion, in conjunction with the Ad Hoc citizens committee report identifying the Ringling MacArthur Reserve as a potential water supply source, prompted the Board of County Commissioners to seek additional information regarding the tract. As a result, in 1979, the Board requested that SWFWMD provide funding for engineering studies on the tract in order to determine its potential as a water supply source. This report indicated that the potential water from three sources, the surficial aquifer, the Myakka River, and simultaneous draw from the surficial and secondary artesian aquifers, was apparently adequate to supply the County's long term supply needs.

Sarasota County had also requested the United States Geological Survey (USGS) to perform extensive, exploratory hydrological studies on the surficial aquifer of the tract. The USGS proceeded with the installation of 50 shallow exploratory wells designed to evaluate the size of the surficial aquifer and to help determine water quality and preliminary yield information. These studies, which were completed in 1980, provided the basic foundation for developing the Ringling MacArthur Reserve as

a potable water supply. Shortly thereafter the Board of County Commissioners proceeded with statements of financial commitment to the acquisition and development of the Ringling MacArthur Reserve in 1982, resulting in the 1982 referendum signifying voter approval to purchase the tract.

After acquiring nearly half of the Ringling MacArthur Reserve, the Board of County Commissioners authorized the preparation of a County water system master plan. The first installment of the Sarasota County Water System - Study Phase Report, (3) was submitted in November, 1985. The timeframe of this report extends to 2010 and focuses upon the design of a water treatment plant and a water transmission network for the proposed system sufficient to serve the County's projected needs. This 1985 study, in part, forms the basis for the current goals, objectives, data, and projections used for the current planning period 1990 through 1995 and through the planning horizon, 2010.

The recommendation of this report was for the County to proceed with the adoption of a "staged approach" to developing a water treatment plant capable of being expanded on a modular basis. The Study Phase Report indicates that the development phases of a potable water supply treatment plant and distribution network be sufficient to supply as much as 8.6 million gallons per day (MGD) through the year 1990, 17.1 MGD through 1995, and 37.4 MGD through the year 2010.

Further recommendations indicate that the base design of a treatment plant be completed; water quality parameters be identified; and the plan of action provided in the study be implemented. Specific steps include making improvements to the Ringling MacArthur Reserve and road systems necessary for developing a transmission network. Additionally, the Board of County Commissioners agreed to consider efforts to secure water for potential customers, and to study the rate-making requirements of combining the SUD-1 system with a Countywide water supply system.

The Board further authorized a consortium of engineering, environmental, and land use consultants to prepare a series of reports concerning

methods and associated costs of developing water from the Ringling MacArthur Reserve in a manner consistent with environmental considerations. As described in Resolution No. 82-200, these considerations protect the Ringling MacArthur Reserve through the establishment of an ecological monitoring program, as well as determining the overall needs for acquiring and conserving additional portions of the reserve.

These ongoing studies, coordinated by the office of Ecological Monitoring, include a water resource investigation report; the downstream effects of water withdrawn from the Myakka River; environmental analysis of the tract's ability to sustain a water wellfield; and a Comprehensive Land Use Plan for the reserve.

Currently, engineering, environmental, and land use studies necessary to develop the Ringling MacArthur Reserve are ongoing, as well as studies to update the Capital Improvements Program.

Raw water quality data and environmental impact statements are expected to be available during 1989, allowing engineers to proceed with the final design of the water treatment system. Construction of the water treatment plant is expected to occur during FY 1988-89, in time to meet the County's current deadline for water production of November 26, 1990.

Water System Master Plan Update Report (4), completed in 1985 detailed the expansion of the County's potable water network. This study concentrates on projecting water usage within the existing SUD-1 service area. The study includes revised population projections within the service area, refined historical usage data, and recommended improvements in the various facilities of the system. This report, with its refined usage data, is the basis for determining the proposed level of service standard for potable water.

Finally, in its role of promoting a regional approach to water management, the Peace River/Manasota Regional Water Supply Authority authorized a preliminary study and feasibility report on the engineering efforts required to interconnect the four-county area of the Water Supply Authority, which includes Charlotte County, Sarasota County, De-

Soto County, and Manatee County. The study was funded by the SWFWMD Governing Board. The emphasis of the plan is to investigate interconnections which could become active during a time of emergency.

Inventory and Analysis

In 1979, there were 164 potable water systems identified in Sarasota County. This number has grown concurrent with the growing urbanized area of the unincorporated County to more than 200 potable water systems. In addition there continue to be thousands of individual wells throughout the County. This abundance of separate water treatment and supply systems is due primarily to the lack of a centralized, potable water system. Further, chronic water quality problems have been associated with these smaller treatment systems in addition to higher costs due to small scale operation. The high cost of a private entity operating small scale treatment plants was evidenced when the County was considering the purchase of Sorrento and Curry Creek Utilities. Prior to the decision to purchase the utilities, a private investor also expressed interest. When rates were discussed, it was determined that the private investor would charge 2.7 times what the County would charge in order to make a profit.

CONCERN 3

The absence of a centralized County water supply system in the urbanized area has led to a proliferation of expensive, high maintenance, inefficient treatment systems.

Future County planning efforts will be concentrated upon SCUS and efforts to develop a central water supply system capable of serving the SCUS service area. However, these efforts will also include an inventory of the County's largest private and public water supply systems.

The following inventory identifies each of the more than 200 central water supply systems in the County. They are classified into the two general categories as either community or non-community systems. A "community water supply system" serves at least 25 persons on an annual basis. A "non-community water supply system" is a public water system serving at least 25 individuals on a daily basis, for at least 60 days out of the year, but which serves a transient, or non-resident, population.

Central community water supply systems within Sarasota County may be further divided into four categories: 1) those owned and operated by public authorities; 2) private water systems operating under franchises authorized by Sarasota County which either purchase water on a wholesale basis from the County or act as a facilitator for individual SCUS customers; 3) franchised water systems which own and operate potable water production and treatment plants; and 4) other systems owning independent water treatment plants, such as mobile home parks.

Public Authorities

Five public authorities operate central potable water supply systems. Three systems - the City of Sarasota, The Englewood Water District, and the City of Venice own and operate independent well-fields, although the City of Sarasota has two connections with the Sarasota County for purchasing and/or supplying water. The other two systems,

The Town of Longboat Key, and the Sarasota County Utility System, purchase water from Manatee County.

Operational responsibility for the respective water authorities are as follows: Sarasota County Utility System, formerly Special Utility District No. 1 (SUD-1), is governed by the Sarasota County Board of County Commissioners; Sarasota Municipal water system is governed by the City of Sarasota Board of City Commissioners; the Englewood Water District, created by a special act of the Florida Legislature, is governed by the Englewood Water District Board; the Town of Longboat Key water system is governed by the Town of Longboat Key Board of Town Commissioners; and the Venice City Council is the governing body of the Venice Municipal Water Plant.

Projected water demand for the above public water authorities is shown in Table 15.

The City of North Port is supplied with water by General Development Utilities (GDU), a private utility company which operates a water production, treatment and delivery system utilizing surface waters from the Myakkahatchee Creek. The GDU plant is located within the North Port city limits and has a rated capacity of 4.5 million gallons per day, although the City utilizes approximately 1 million gallons per day at this time. GDU operates this plant in accordance with a franchise agreement established and authorized by the City of North Port. The GDU delivery system to the City of North Port is also interconnected with GDU's Peace River plant located in DeSoto County.

Table 15: Public Water Authorities - Projected Potable Water Demand

	Projected Potable Water Demand (Millions of Gallons Per Day)			
	1990-1994	1995-1999	2000-2004	2005-2009
City of Sarasota	8.8	9.0	9.9	9.9
City of Venice	4.2	N/A	N/A	N/A
Town of Longboat Key	2.0	3.0	3.0	3.0
Englewood Water District	3.6-5.4	4.2-6.3	4.8-7.2	N/A
Sarasota County	17.5-24.0	24.8-36.0	34.7-48.0	37.4-52.0

Source: Respective public water authorities, 1988.

Franchised Water Supply Systems

Since the first water system franchise was authorized by Sarasota County, a total of 49 franchises have been granted. There are, however, only 48 active franchises since the purchase of Sorrento Utilities by the County in July, 1988. The SCUS system supplies eight franchises with water on a wholesale basis, while supplying water to 18 other franchised areas on an individual customer, retail sales basis. A total of 14 franchises own and operate independent water supply systems, while eight systems receive water from the Englewood Water District. All but two of these franchises supply wastewater treatment services as well, a factor which will be addressed as Sarasota County continues to evaluate the feasibility of reusing wastewater. The 48 active franchise water systems and their geographic service areas are shown on Figure 29. The figure also identifies whether the franchises are independent suppliers or rely upon either SCUS or the Englewood Water District as a source of water.

As shown on Figure 29, a major portion of the urbanized, unincorporated area of Sarasota County is served through franchise agreements with the Sarasota County Utility System. For the purpose of evaluating the availability of adequate water supplies, none of these 26 franchises can be considered to have a design capacity. They are dependent upon the County to ensure an adequate supply of water for their customers. Therefore, a detailed analysis of each franchise is not appropriate. The analysis of system capacity for the entire SCUS service area, including the franchise areas, is provided in a later section of this Chapter.

The eight franchises which receive water from the Englewood Water District are also identified on Figure 29. Since the Englewood Water District acts autonomously pursuant to a special act of the Florida Legislature, the County has no regulatory authority for the provision of potable water in its service area. The District Board is responsible for ensuring that adequate water supplies are available to meet the demands of existing and future customers within its boundaries. The current

design capacity of the Englewood Water District is 4.5 million gallons per day with an average demand in 1987 of 1.08 mgd. It is in the process of expanding its production and treatment capacities to meet the needs of projected growth through the year 1994 and beyond.






The remaining 14 independent potable water franchises shown on Figure 29 operate their own production and treatment facilities and are responsible for the delivery of water service to the customers within their boundaries. As can be seen in Appendix D, Section 4, complete information was not available for all of the franchise areas for calendar year 1988. This is not extremely critical for comprehensive planning efforts because each of these franchises serves a limited geographic area and has a very limited opportunity for expansion.

However, each of these operations is monitored regularly by the County Health Department to ensure that water quality standards are met and development orders that impact these franchise areas are evaluated by the County to ensure that sufficient service capacity is available.

Analysis of the information available for the four largest independent franchises, i.e., those with a design capacity greater than 100,000 gallons per day does provide a framework for evaluating future needs and coordinating future land use decisions. The two largest independent franchises, Plantation Utility and Venice Gardens Utilities, serve predominately residential developments in the designated urban area east of the City of Venice. Based on an average of 500 and 6,180 connections, respectively, in 1988, Plantation Utility provided 180 gallons of water per connection per day and Venice Gardens Utilities provided 200 gallons per connection per day.

Southbay Utilities, which is located midway between Sarasota and Venice, and Sunrise Utilities, which is located outside of the existing SCUS transmission network, both serve a mixture of residential and retail commercial land uses. The average number of connections served by Southbay Utilities in 1988 was 468, resulting in an average use of 235 gallons of water per connection per day. Sunrise Utilities served an average of 298

LEGEND

-  INCORPORATED AREA
-  COASTAL AREA BOUNDARY
-  SCUS DEPENDENT FRANCHISES
 - 1 ATLANTIC UTILITIES
 - 2 BEE RIDGE UTILITIES
 - 3 BENEVA CREEK UTILITIES
 - 4 CASEY KEY WATER ASSOC.
 - 5 CENTRAL COUNTY UTILITIES
 - 6 CURRY CREEK UTILITIES
 - 7 DOLOMITE UTILITIES
 - 8 FLORIDA CITIES WATER CO.
 - 9 KENSINGTON PARK UTILITIES
 - 10 LAKE FOREST UTILITIES
 - 11 LOCKWOOD RIDGE UTILITIES
 - 12 LONGWOOD RUN UTILITIES
 - 13 MEADOWOOD UTILITY
 - 14 OAK FOREST VILLA CONDO ASSOC.
 - 15 ROBINHOOD UTILITIES
 - 16 SIESTA KEY UTILITY
 - 17 SOUTHEAST UTILITIES
 - 18 SOUTHEASTERN DEV. & UTILITY
 - 19 SOUTHFIELD UTILITIES
 - 20 SOUTHGATE WATER CO.
 - 21 SYLVAN LEA, INC.
 - 22 TAMARON UTILITY
 - 23 VILLAGE OAKS UTILITIES
 - 24 WOODLAND PARK UTILITIES
 - 25 WOODBRIDGE ESTATES ASSOC.
 - 26 VAMO WATER & SEWER
-  INDEPENDENT FRANCHISES
 - 27 CENTER UTILITIES
 - 28 CIRCLEWOOD OWNERS ASSOC.
 - 29 GULFVIEW UTILITIES
 - 30 MIKE CLARKE DEV., INC.
 - 31 MYAKKA UTILITIES
 - 32 NORTH CREEK UTILITIES
 - 33 PLANTATION UTILITY SERVICES
 - 34 PLAZA UTILITIES
 - 35 SOUTHBAY UTILITIES
 - 36 SPROAT KINEY ENTERPRISES
 - 37 SUNRISE UTILITIES
 - 38 THE TRAILS ULIMITED
 - 39 VENICE GARDENS UTILITY CORP.
 - 40 VROOM UTILITIES, INC.
-  ENGLEWOOD WATER DISTRICT
 - 41 EL JOBEAN PHILHARMONIC
 - 42 ENGLEWOOD GOLF, INC
 - 43 ENGLEWOOD ISLES UTILITY
 - 44 ENGLEWOOD UTILITIES
 - 45 HOLIDAY VENTURES
 - 46 MORSTAR UTILITIES CORP.
 - 47 TANGERINE WOODS UTILITY
 - 48 F.M.F. UTILITIES, INC.

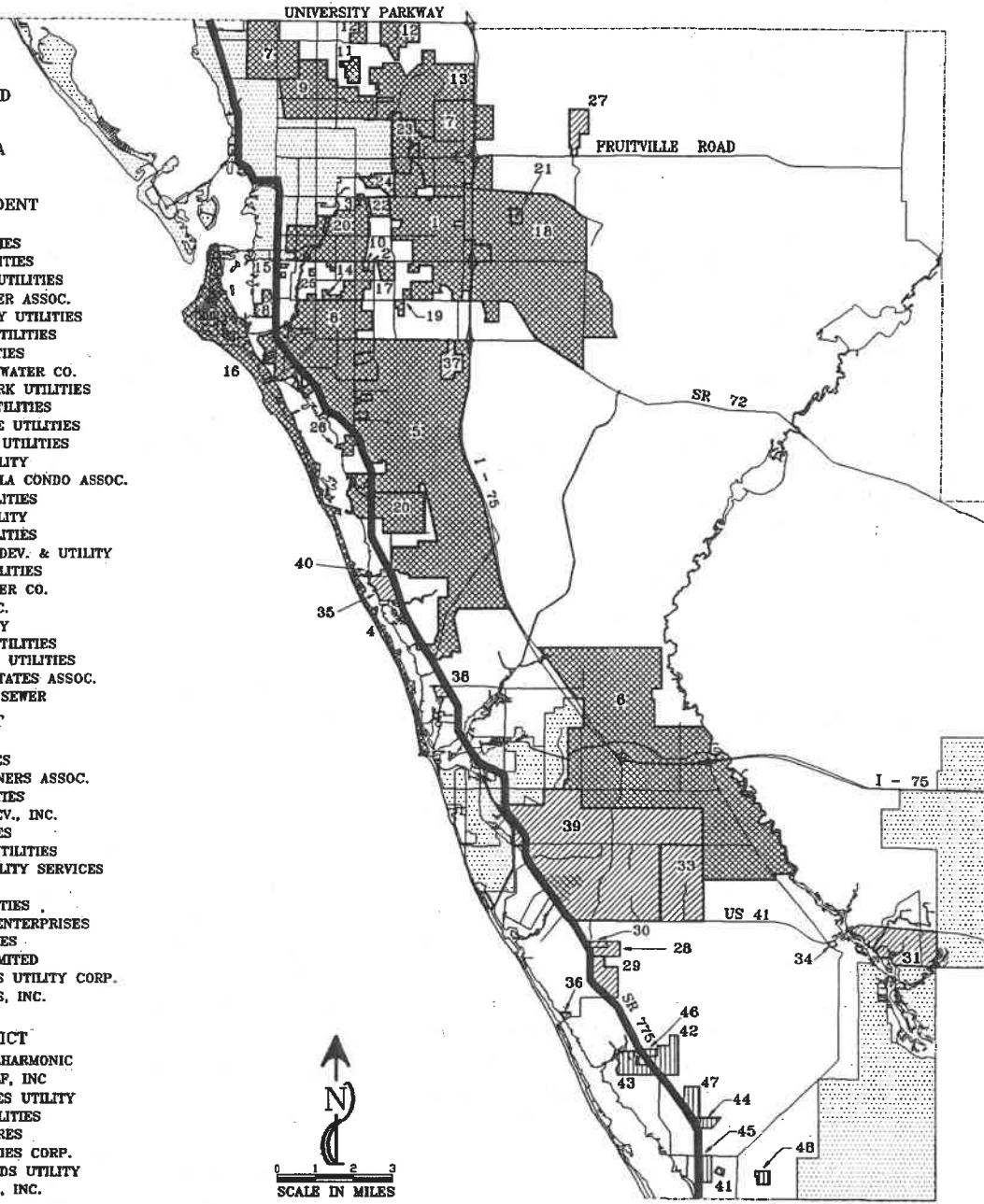


Figure 29: Potable Water Franchises

Source: Sarasota County Utilities Department, 1988.
 Apoxsee - The Revised and Updated Sarasota County
 Comprehensive Plan

connections, providing each with an average of 269 gallons per connection per day. The levels of service exhibited by these two utilities is higher than the levels identified for the utilities discussed previously because of the commercial uses in their service areas. The data presently available do not provide the methodology for converting commercial connections to equivalent dwelling units.

The data provided in Appendix D, Section 4 suggest that both Southbay and Venice Gardens Utilities are operating at or near their stated design capacity. This represents an essential element in the development of future systems because of the potential for substantial growth either in, or adjacent to, these franchises. Existing and future potable water demands for these areas have been factored into the planning for a centralized County water system which is described later in this Chapter. Specifically, the construction of transmission lines which could potentially provide additional service to these two areas, is scheduled in the first phase of the Ringling MacArthur Reserve Potable Water Transmission Network.

Other Community Water Supply Systems

In addition to the water systems operated by public authorities and franchises, there were twenty-three Community Water Supply systems operating in Sarasota County in 1988. They are generally characterized as serving isolated communities, such as a mobile home park or a small condominium, with residential populations of a non-commercial nature. Due to the unavailability of highly reliable data, a complete analysis of existing conditions, design capacity, current facility demand, and facility level of service cannot be provided for the smaller, proprietary Community Water System suppliers. Since the geographic areas of these smaller systems cannot expand and are generally completely within areas to be eventually served by SCUS water, existing and future capacity analyses will be limited to the discussion under the Sarasota County Utility System (SCUS). Until such time as these facilities are connected to a Countywide regional system, in order to ensure concurrency of development with the availability of utilities, all

Community Water Supply systems will be faced with one of two decisions: 1) expansion of the facility, if possible or 2) limiting the amount of development which can occur within the Community Water System service area.

Community water systems are listed in Appendix D, Section 5. In this listing, the named Community Water Supply system is the operator of responsibility and all the plants serve an urban or urbanizing type of land use. In terms of land use decision making and planning, almost all of these systems serve proprietary uses and have a limited and constrained geographic service area. For example, the Community Water Supply systems which serve mobile home parks serve only those parks. The location of mobile home parks is shown on Figure G-2, in Appendix G, Section 4. The geographic service area for the remaining systems becomes the physical location of the named plant. For example, the geographic service area for Children's Haven is only that parcel which contains the buildings which comprise the facility.

Non-Community Water Supply Systems

One hundred thirty-two non-community water supply systems operated in Sarasota County in 1988, up from the 106 such systems listed in 1979. Similar to the discussion regarding the smaller community systems, reliable data are unavailable for these systems for the purposes of detailed facility analysis. Existing and projected demands for areas served by non-community water systems are factored into the planning efforts for developing a consolidated Countywide system.

Non-community water supply systems are listed in Appendix D, Section 6. In this listing, which provides the latest and best available data, the named Non-Community Water Supply system is the operator of responsibility and all the plants serve an urban or urbanizing type of land use. In terms of land use decision making and planning, almost all of these systems serve proprietary uses and have a limited and constrained geographic service area which is defined as the location of the named plant. For example, the geographic ser-

vice area for Seven-Eleven No. 22859 is only that parcel which contains the Seven-Eleven building. Other examples include restaurants, churches, bars, and small commercial buildings.

Miscellaneous Water Systems

Apart from the thousands of individual wells used for water supply, the Department of Environmental Regulation also lists water supply systems which are considered neither community or non-community water supply systems. These "Other" water supply systems number fifty-four in Sarasota County as of 1988, and are owned and operated for commercial or not-for-profit uses.

Sarasota County Utility System (SCUS)

The Sarasota County Utility System, known originally as Special Utility District No. 1 (SUD-1), was created in 1973 to provide central water service to the urbanizing area within the unincorporated, northwest area of Sarasota County. The current conditions within the SCUS service area indicate that water supplies are adequate to meet the demand for potable water, provided that existing water resources remain constant to 1990. However, water use projections and certain supply factors indicate a need for Sarasota County to develop additional water resources and production capabilities beginning in 1991.

The primary source of water for this system is the Manatee County supply system. According to the terms of a 40-year contract established on February 20, 1973, the County may purchase up to 10 MGD of treated water per day. Additional water may be purchased beyond the 10 MGD level until 1990, however, this water comes at a premium rate.

A secondary water supply source for the SCUS system is available from the City of Sarasota water supply system. Contract terms allow the County to purchase up to 2 mgd from the City until 1992. At that time the County is expected to have augmented its supply sources with the development of a wellfield on the Ringling MacArthur Reserve.

A third supply component of the County's existing water supply system is a small wellfield on University Parkway near the Manatee County line, capable of producing 2 mgd. The fourth and final water supply component is the wellfield, treatment plant, and transmission network serving the Sorrento area. This system is not currently tied in with the other SCUS supply network, and the plant operates with a permitted design capacity of 300,000 gallons per day serving 1,600 dwelling units.

Although Sarasota County has a contract with Manatee County to purchase 10 MGD until 2013, of immediate concern is the limitation surrounding another existing water contract with Manatee County. Expiring on November 26, 1990, is a provision with Manatee County which allows the County to purchase treated water in excess of 10 MGD at a premium rate. It has not yet been determined whether the County will be able to negotiate for additional water supplies beyond 1990.

Consequently, Sarasota County is proceeding on the assumption that an independent Sarasota County potable water system will be developed in order to meet a substantial share of its potable water supply needs by the year 1990 and beyond. These additional water supply resources will be required not only for the present SCUS service area, but for extending service beyond the immediate SCUS service area to those unincorporated portions of the County located southerly and easterly of the existing supply area.

The Sarasota County Utility System is contained in two separate geographic service areas. The most recent addition is the southerly area, formerly Sorrento Utilities and Curry Creek Utilities. These utilities were purchased by the County in late July, 1988. The Curry Creek area, as of 1988, does not contain any facilities and has no customers. It is generally located east of the City of Venice, extending to the Myakka River. It is bounded on the north by Venice Avenue and on the south by Venice Gardens. The Sorrento area contains potable water and sanitary sewer facilities and serves over 1,600 homes. It is located immediately south of Oscar Scherer State Recreation Area and extends to the City of Venice. It is bounded on the

west by the Gulf of Mexico and on the east by I-75. (see Figure 30.) The Sorrento area serves a predominantly urban type of land use. The Sorrento water plant operates with a design capacity of 300,000 gallons per day for 1,600 equivalent dwelling units. Current demand upon the facility averages 187 gallons per household per day.

The northern service area, formerly SUD-1, provides service to 115,000, residential, commercial, and industrial customers, or 48,788 equivalent dwelling units, and is in a predominantly urbanized area bounded on the north by the Sarasota County line, on the east generally by Interstate 75, on the west by the City of Sarasota and the Gulf of Mexico, and on the south by The Oaks residential development, just south of South Creek. Service also extends beyond these general boundaries to an area adjacent to the Bent Tree residential area located on east Bee Ridge Road. (see Figure 31.) The present design capacity indicates that the existing potable water system is capable of delivering maximum hourly flows of 35 MGD and maximum daily flows of 16 MGD. Average daily flow was 11 MGD, according to the 1985 SUD-1 Water System Update Report. (4) The same report indicates in Appendix B that the average water usage per capita per day is 85 gallons. Based upon the trend toward fewer persons per household since the report, down to 2.2 persons per household Countywide, the current demand upon potable water facilities provides an average daily level of service of 187 gallons per equivalent dwelling unit per day (2.2 persons per household X 85 gallons per day = 187.) This compares quite favorably with the proposed Level of Service for potable water systems of 200 gallons per day per equivalent dwelling unit.

The County potable water system is in the process of evolving from a supply system serving a limited geographic area to a production and supply system capable of serving the water needs of northern, middle, and southern portions of the County.

The SCUS system is funded through water rates, fees and charges, and financing established by the Board of County Commissioners. For example, a series of new lines, storage, and pumping facilities

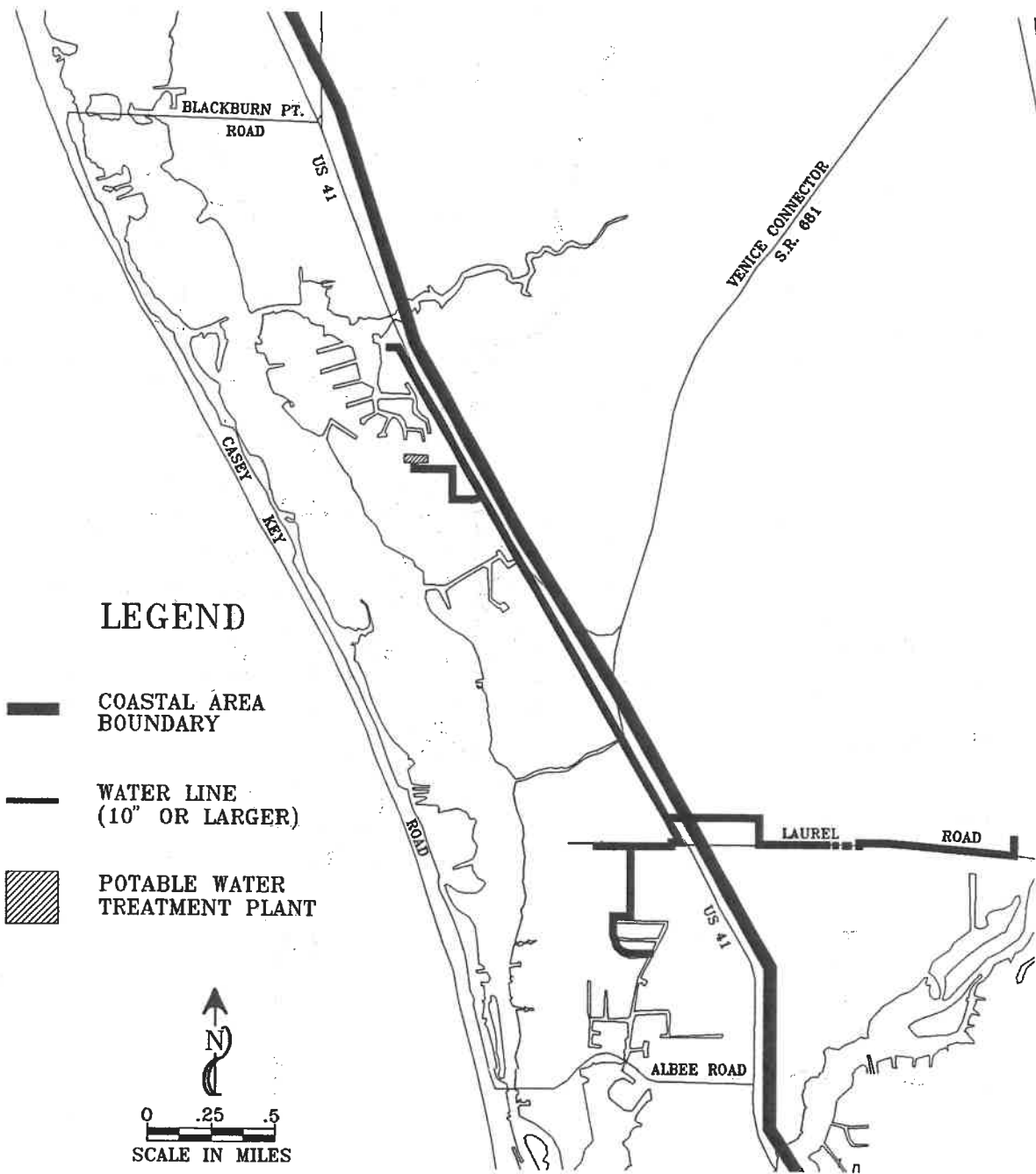
have been added to the system with the improvements funded by the collection of impact fees from new customers. The system currently operates 90 miles of pipeline with 11 million gallons of ground storage in four installations (each with its own pumping station).

Four primary pumping stations drive the SCUS system. Pump Station No. 1 is located on University Parkway, and utilizes a three million gallon storage reservoir which can store a blend of equal amounts of water from the Manatee County System and the County's University Parkway wellfield. It can also be used for storage of either supply source without mixing. Pump Station No. 2 is located on Beneva Road near its intersection with Bahia Vista Street. Pump No. 3 is located northeast of the intersection of Clark and Swift Roads. This repumping station is the largest existing pumping facility. The last pumping station is located near the intersection of Cattlemen Road and Proctor Road.




The SCUS transmission network consists of polyvinyl chloride or ductile iron pipes sized from eight to thirty inches. This system extends from its northern connection with the Manatee County system at Lockwood Ridge Road and University Parkway, with major trunks and lateral distribution mains branching off and looping throughout the service area. The system terminates with a loop in the Vamo area.

Operation of the system has been rated satisfactory from the standpoint of reliability and efficiency with all major components of the system reported to be in good physical condition. The treated water produced by the system has been classified as high quality, meeting all regulatory requirements. The SCUS components are expected to be adequate to serve during the life of the planning horizons.

It is the goal of the County, through a centralized County water supply system, to augment existing SCUS water supplies and to make central water available to the remainder of the County through a progressive, controlled program of expansion. The County's emphasis in potable water planning has been through the development of the Ringling MacArthur Reserve and transmission network as



LEGEND

-  COASTAL AREA BOUNDARY
-  WATER LINE (10" OR LARGER)
-  POTABLE WATER TREATMENT PLANT

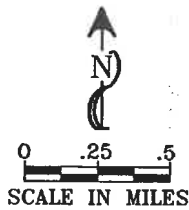


Figure 30: South Sarasota County Utility Service - Sorrento

Source: Sarasota County Utilities Department, 1988.

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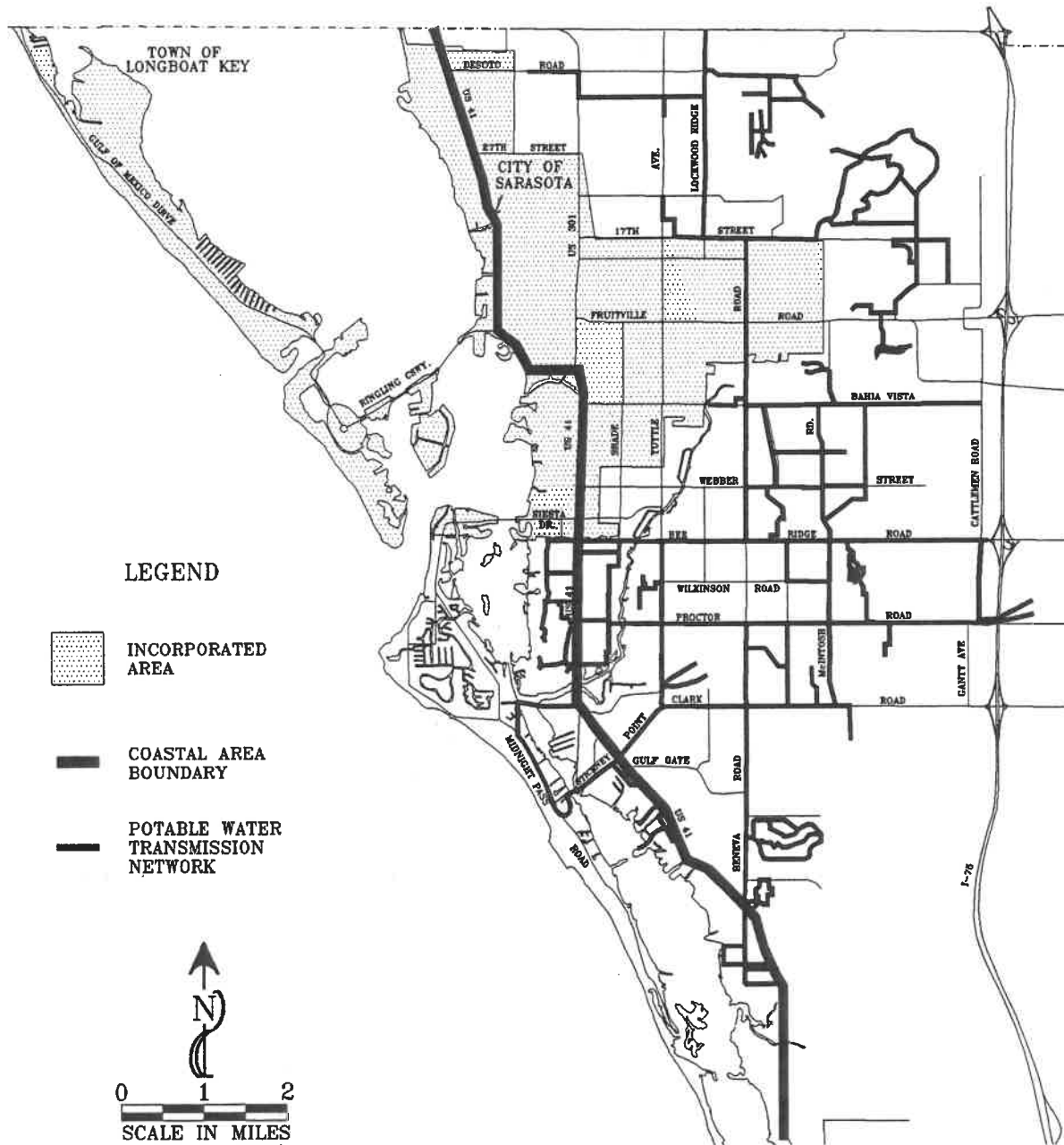


Figure 31: North Sarasota County Utility Service

Source: Sarasota County Utilities Department, 1988.

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an independent water supply source. See Figures 32 and 33. This is seen as the foundation for a staged approach to meeting the County's potable water needs through 2010. Existing and projected land use patterns, zoning, and census information were used to determine the amount of development likely to occur within the SCUS system, outside the existing boundaries, and upon contractual service obligations for customers in private utility areas.

The County has projected water demand based on historical data and other factors, such as the impact of spatial and transient distribution of water needs throughout the service area. These projections, coupled with the fire flow requirements, are used to project the SCUS demand beginning with the year 1990.

During 1985, 114,600 residents within the SCUS system created an average daily demand for 11.4 mgd, with a maximum day demand of 16.0 mgd. By the year 1990, however, projections indicate a population of 139,400 residents which will require an average daily demand of 13.9 mgd, and a potential maximum daily demand of 19.5 mgd. Under existing potable water supply sources, this demand will create an average daily deficit of 2.5 mgd.

CONCERN 4

The production, storage, and transmission capacities of the Sarasota County Utility System will be exceeded during the first increment of the planning period unless alternate or supplemental sources are further identified and developed, or unless the Ringling MacArthur Reserve is developed as a water resource.

CONCERN 5

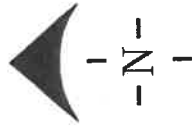
Any further delays in the development of a central County water supply system could jeopardize the County's ability to deliver water by the 1990 deadline.

The projection of a consolidated SCUS system in 1990 indicates a potential population of 176,000 residents, creating an average daily demand of 17.6 mgd, and a maximum daily demand of 24.6 mgd, based upon 100 Gallons Per Capita per Day (GPCD), and average domestic demand at 235 gal/day/residential unit).

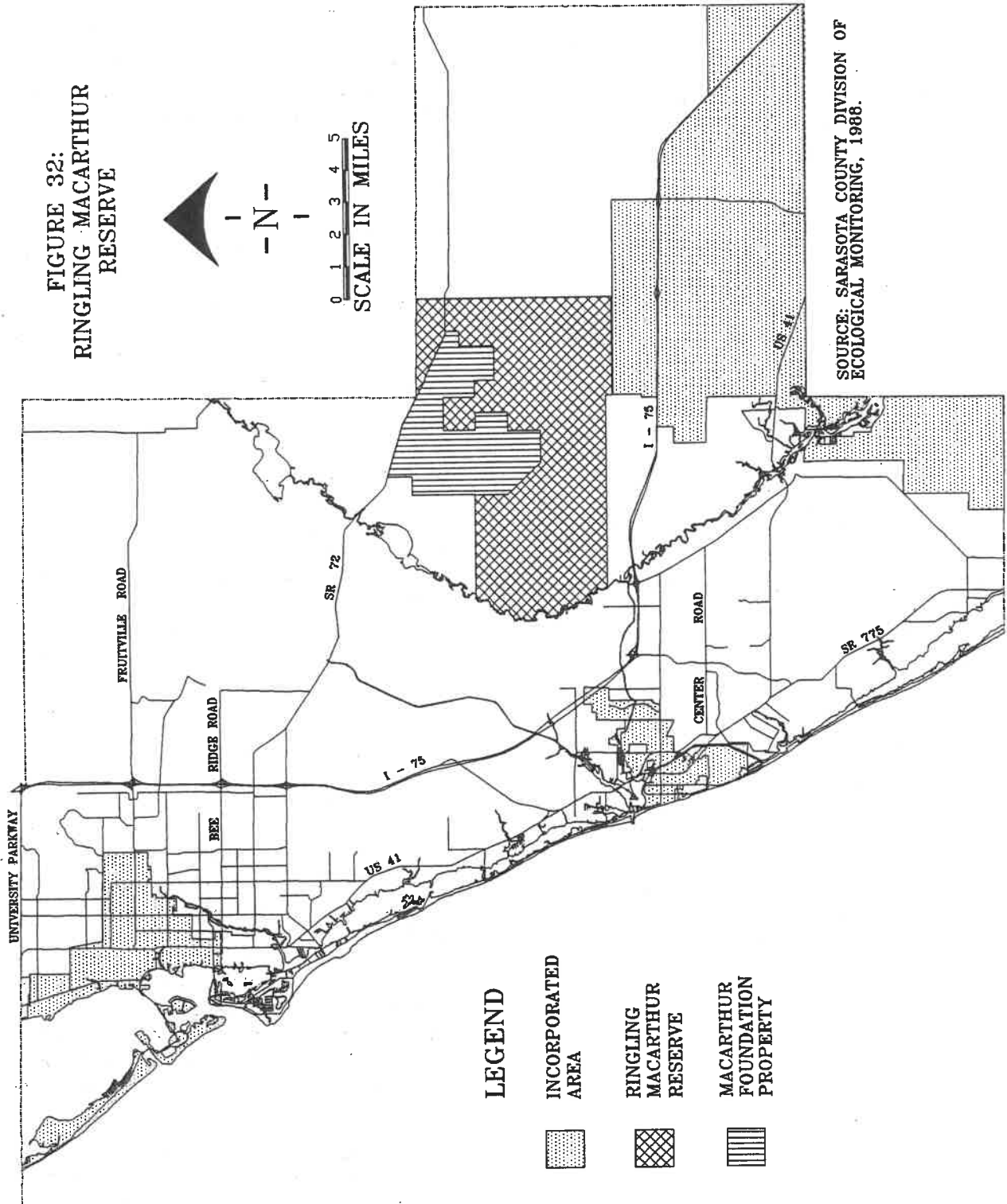
For those areas considered potential service areas for the SCUS system during the future expansion period 1991-1995, projections indicate a potential of 72,828 additional residents, producing an average daily demand of 7.28 mgd, and a maximum daily demand of 10.19 mgd. Population and demand is expected to increase substantially by 2010, with an additional population of 107,035, producing an estimated average daily demand of 10.75 mgd and a potential maximum daily demand of 15.05 mgd (based on 100 GPCD average domestic demand at 235 gal/day/residential unit). However, it should be recognized that with the trend to smaller households, down to 2.2 persons per household countywide, and with the data from the 1985 SUD-1 Water System Update Report indicating an average daily usage per capita of 85 gallons, these initial demand projections may have to be revised. This does not invalidate the projected need to develop the first phase of the centralized potable water system on the Ringling MacArthur Reserve. The County's consulting engineer is under contract to provide the County with an update of the potable water system master plan during the spring, 1989. This update will address the projected demand for water throughout the system and the water sources available to meet that demand.

The 1990 average daily demand and maximum day demand will be met through a combination of water from the Manatee County supply and from

FIGURE 32:
RINGLING MACARTHUR
RESERVE



0 1 2 3 4 5
SCALE IN MILES



SOURCE: SARASOTA COUNTY DIVISION OF
ECOLOGICAL MONITORING, 1988.

LEGEND

INCORPORATED
AREA



RINGLING
MACARTHUR
RESERVE



MACARTHUR
FOUNDATION
PROPERTY



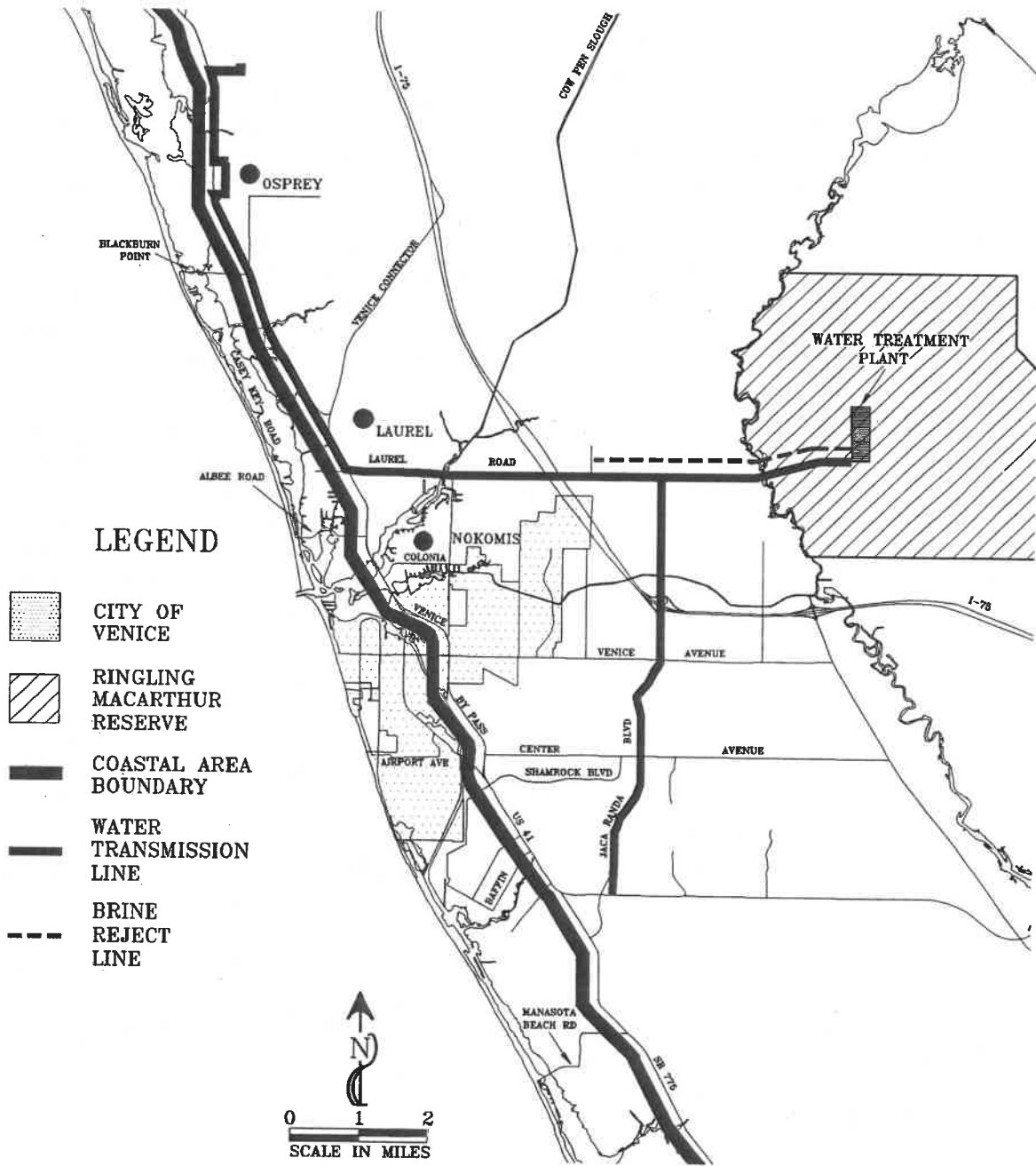


Figure 33: Ringling MacArthur Reserve Transmission Network

Source: Sarasota County Utilities Department, 1988.
Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan

the Ringling MacArthur Reserve supply. Any subsequent increases in demand will be met through expansions to the Ringling MacArthur Reserve wellfield and the supplement from the City of Sarasota.

Please note the significant increase between average daily demand and maximum daily demand. Under maximum demand, water use increases approximately 40.4 percent over average daily consumption. In an effort to lower water consumption, the County enforces water use restrictions under water shortage emergencies as identified in SWFWMD's Water Shortage Plan as well as mandating water-saving fixtures in the Building Code. However, it may be possible to reduce this high peak demand through additional water saving measures.

CONCERN 6

Existing data indicate a high per capita consumption rate during periods of peak demand, a factor which could be addressed through additional water conservation measures.

Potential Water Supply Sources

The County is currently negotiating with Manatee County and the City of Sarasota for purchase of additional supplies of potable water. As of May, 1988, contractual negotiations with Manatee County have centered upon increasing the supply of water from 10 MGD to 15 MGD. The County is also evaluating the feasibility of receiving a potential 7 MGD from the City of Sarasota. Despite these ongoing efforts to evaluate alternate and supplemental water supply sources, the County maintains its commitment to continue with the development of a phased water production, treatment, and transmission system originating at the Ringling MacArthur Reserve in order to have a 12 mgd water plant operable by November 26, 1990.

This portion of the plant is to be the first of three phases intended to take advantage of water supply sources located on the Ringling MacArthur Reserve. Water supplies from the Reserve are expected to average 8.6 mgd 1990, 17.1 mgd by 1995, and 37.4 mgd through 2010. Engineering consultants have tentatively proposed developing the Ringling MacArthur Reserve's potential water supply through a "split stream" approach, balancing the water available from a variety of freshwater and mineralized water sources on the tract. Freshwater sources are identified as the Myakka River, with possible augmentation from the surficial and secondary aquifers or groundwater runoff. The mineralized supply source is identified as the Floridan Aquifer. Although the split stream approach merits further consideration, the County has focused on the mineralized supply component of the study as the most appropriate source for meeting the first phase development needs of the central water supply system, due to the dependability of this source. Initial feasibility studies indicate that additional research will be required before the freshwater stream approach may meet with approval from the Southwest Florida Water Management District.

The County has executed a contract with its consultant to prepare a Wastewater Resource Management Program which will address four concepts. These include: 1) an integrated collection of wastewater, 2) wastewater renovation into a new freshwater resource, 3) introduction of renovated wastewater into a large scale resource augmentation system on the Ringling MacArthur Reserve, and 4) recovery of a similar amount of water from surface and groundwater resources. The implementation schedule for this project is discussed briefly in the Sanitary Sewer section of this Chapter.

CONCERN 7

The lack of a wastewater treatment recycling program is costing Sarasota County the benefit of a substantial amount of water which could be used to augment potable water sources.

Although engineering studies for the development of the water supply system need to be finalized, preliminary studies indicate the modes for water withdrawal, treatment, distribution, and financing.

Four well clusters have been installed at the Ringling MacArthur Reserve, consisting of five production wells and nine monitoring wells. These wells produce variations in the quality of raw water, with initial tests indicating the water to contain sulfate concentrations of between 650 and 720 mg/l and total dissolved solids below 1,300 mg/l. Subsequent tests using water drawn from other wells indicate varying results, with sulfate concentrations in excess of 800 mg/l and total dissolved solids approaching 2,000 mg/l. Consequently, additional studies are scheduled to determine how the final raw water quality will affect the final water treatment plant design. Specifications for the Water Treatment Plant will need to be finalized pending more definitive water quality information.

Although no site preparation or construction for the water treatment plant has been undertaken, it is anticipated that the first phase of the demineralization plant will be designed for use with a reverse osmosis treatment process. The plant will utilize a modular design capable of expansion during subsequent phases to handle additional demand. It has yet to be determined whether the second phase of the expansion will be constructed using the same treatment process, or whether alternate treatment technologies will be incorporated.

Depending upon the availability and quality of additional water resources, and upon environmental considerations, engineers have determined it may be advantageous for the County to use a combination of alternate treatment processes. However, regardless of the treatment process, a second phase expansion for the years 1996-2000 is scheduled to be constructed adjacent to the first phase plant.

The location of the plant site is tentatively identified as that portion of the southwest area of Ringling MacArthur Reserve located in the northeast quadrant of Section 30. The facility will utilize two pump-

ing stations, with the first to be located adjacent to the water treatment plant and the second in the vicinity of Vamo Way.

The transmission network will consist of two separate lines. The first is a treated water transmission line originating at the water treatment plant, and the second is a parallel line designed to transport brine reject water (a by-product of the reverse osmosis treatment process) away from the plant to a reject well disposal site in the mid-County area or to a Gulf outfall. See Figure 33.

With this proposed delivery network, the County intends to furnish water to areas currently without service in the middle to south County areas.

Costs for implementation of the Ringling MacArthur Reserve potable water system are being funded through programs in the Capital Improvement Program and Water Improvement Program and are discussed in the Capital Improvements Chapter.

Level of Service

Level of service standards are influenced by a variety of factors, including contractual obligations with suppliers and franchise holders, supply and physical plant conditions, and water quantity and quality regulatory requirements as established by State and County Legislation. However, it essentially has two components, water quantity and water quality.

Potable Water quantity within the Sarasota County Utility System can be expressed in terms of average daily demand and maximum daily demand. Average daily demand provides an estimate of the average potable water demand throughout the year while maximum daily demand reflects the peak daily demand created by both resident and seasonal populations. A potable water system must have an adequate capacity to meet the average daily demand, while being able to accommodate occasional periods of peak demand. This is especially true in Sarasota County, where the influx of seasonal residents coincides with the dry season. In order to assure that ade-

quate flows are maintained, and to meet fire flow needs, storage capacity should exceed 40 percent of the average daily demand.

It has been determined that the average domestic water usage per year-round resident in the SCUS area is about 85 gallons per day (GPD). Based on the current average persons per household, this translates to an existing level of service for quantity in the SCUS service area which is between 185 and 200 GPD per household. The estimated maximum daily demand is equal to approximately 140 percent of the average annual daily flow. The level of service analysis of the four largest independent franchises also supports a level of service standard of approximately 200 gallons per equivalent dwelling unit per day.

Franchise systems and other community water systems which provide service outside of the SCUS area exhibit existing levels of service which may be markedly different than the County's service area. These providers are presently responsible for determining that their systems have adequate capacity to meet the demands of present users as well as future commitments based on approved development orders and building permits. Deviations from the Countywide average level of service may occur because of different population characteristics in these local areas, and different patterns of water use. Consequently, many of these systems may have a level of service relating to quantity which differs from that adopted for the Sarasota County Utility System.

The Englewood Water District also exhibits an existing level of service different from that of SCUS. It is estimated that its annual average daily demand is approximately 70 GPD per capita. The County has previously recognized a need for potable water service standards and has provided for such in various ordinances establishing the minimum quantity of potable water at 250 GPD per equivalent dwelling unit. Depending upon the adopted level of service standard, all ordinances and regulations will have to be changed to be consistent with the Comprehensive Plan.

Potable Water quality can be expressed in terms of water quality standards as defined in Chapter 17-22, Florida Administrative Code, "Public Drinking Water Systems." This legislation provides detailed criteria for Primary and Secondary drinking water standards. This legislation was promulgated in order to assure that public drinking water systems meet minimum drinking water requirements. Chapter 17-22, Florida Administrative Code, applies to virtually all public drinking water systems with a few limited exceptions which meet the following criteria:

- consists of distribution and storage facilities only and does not have any collection or treatment facilities;
- obtains all of its water from, but is not owned or operated by, a public water system to which such regulations apply;
- does not sell water to any person; and
- is not a carrier which conveys passengers in interstate commerce.

However, the United States Environmental Protection Agency (EPA) will soon enforce recently adopted federal drinking water standards under the 1986 Safe Drinking Water Act. These standards, when in effect, will supersede all other drinking water standards.

Based upon the above, the following criteria shall be used to establish a potable water level of service.

Potable Water Quantity (Minimum Average Daily Flow):

- 1) Minimum average daily flow shall be 200 gallons per Equivalent Dwelling Unit per day.
- 2) Minimum potable water quality shall be as defined by the U.S. Environmental Protection Agency, except where the County may impose stricter standards.

Future Planning Options and Opportunities

Sarasota County is currently anticipating the preparation of the first major water planning evaluation since the Study Phase Report of 1985. Consultants are expected to begin work on an update of the 5-year Capital Improvements Plan, which will allow the County to proceed with design and construction strategy for the expansion of the water system. With initial expansion of the County water system now in the planning stages, this second phase engineering report will discuss engineering specifications, connection policies, capital costs, financing strategies, and the development of new service areas to the middle and southern portions of the County.

One component of the study will examine the future planning needs of the system. An additional component will identify options for the County as it proceeds with environmental and resource management studies necessary to protect the Ringling MacArthur Reserve and related areas, such as the Myakka River estuarine system.

Concurrent with the engineering work will be input from the County's consultant concerning the resources available from the Ringling MacArthur Reserve. These studies are expected to form the basis for a proposed ecological monitoring program on the Ringling MacArthur Reserve. Also, these studies will help provide the information necessary to secure and maintain the active status of the Consumptive Use Permits throughout the life of the central water system.

Perhaps the most innovative and timely planning effort and opportunity lies with the County's plan to implement a Countywide wastewater recycling program as proposed by Resolution Nos. 87-157 and 87-265. The potential for wastewater recycling as a water conservation and water reuse strategy has emerged as an integral component of the potable water system. Projections by consultants indicate the proposed wastewater recycling program could potentially increase the yield of potable water from the Ringling MacArthur

Reserve by threefold. A priority for the County has become a reduction in usage of traditional potable water resources. This strategy calls for the regional consolidation of individual, public, and privately owned wastewater treatment plants and for the construction of County-owned and operated plants.

Intensive planning studies are expected to produce opportunities for other wastewater recycling programs. These may involve operational responsibilities, collection, treatment, and redistribution of the treated effluent, and may include municipalities, private developers and other local entities.

Another planning opportunity involves the City of Sarasota, with its offer to cooperate on the construction of a City-owned and operated wellfield and treatment plant, capable of producing up to 7 mgd for the County. Additional opportunities may be presented in the form of mutually beneficial, cooperative ventures involving water and wastewater recycling efforts, including other entities such as the Englewood Water District, the City of Venice, the City of North Port, and the Town of Longboat Key.

Planning options also include regional opportunities which involve Sarasota County, Manatee County, DeSoto County, and Charlotte County under the auspices of the Peace River/Manasota Regional Water Supply Authority. In addition to the emergency interconnect study previously referenced, the Authority has recently been funded by two of the District's Basin Boards to prepare a regional water supply master plan. This plan, when completed, will identify opportunities for regional solutions to future water supply needs. Ultimately, the Authority may play a major role in the future development of water resources in the region.

Lastly, the continuing relationship with Manatee County is a constant opportunity for bi-county planning and cooperation. Negotiations between Manatee and Sarasota County have resulted in attempts to jointly fund measures to provide additional water capacity, such as the acquisition of watershed lands in Manatee County for the mutual protection of this regional water supply resource.

With respect to these continuing talks, it appears certain that changing financial conditions, population growth, and the ensuing water needs will remain factors which will bring about the opportunities for joint approaches to address mutual

concerns. Sarasota County will continue to explore joint water conservation strategies with local entities and to maintain its existing contractual relations with Manatee County for the supply of treated water.

Natural Groundwater Aquifer Recharge

Introduction

Although some naturally existing groundwater conditions are described within the Environment Chapter and Drainage section of this Chapter, this section will discuss these characteristics in greater detail and place an emphasis on protecting and preserving those areas identified as prime groundwater recharge areas.

In simplest terms, groundwater refers to water found beneath the earth's surface, in water-bearing layers of porous rock, sand, gravel, or other geologic formations. When a water-bearing feature is saturated with enough water where it is found in a usable quantity, the formation is called an aquifer. Several aquifers may exist beneath the surface, separated by confining layers of materials which are impermeable or semipermeable to water.

Surficial aquifers are either unconfined or confined. Unconfined aquifers are saturated areas with no continuous, impermeable layers between the aquifer and the land surface. The top zone in a surficial aquifer is at atmospheric pressure, and is referred to commonly as the water table. Confined aquifers are separated from the land surface by one or more relatively less permeable geologic formations called confining units. These confining units contribute to the formation of water pressure by limiting the vertical transmission of water. This becomes evident when a well casing penetrates a confined aquifer resulting in a rise in water to an elevation above the aquifer. This elevation is called the potentiometric level, and an aggregation of the potentiometric levels across an area is termed the potentiometric surface. This term is analogous to the water table of a surficial aquifer.

Rainfall, percolating downward through the porous surface soils, eventually re-enters the aquifer strata, replenishing or recharging the groundwater. Recharge also occurs as a result of water movement from adjacent aquifers and surface waterbodies. This movement is fairly slow, and the volume of the recharge is influenced greatly by alterations in the surface features of a given area, such as pavement, alteration of stormwater runoff, elimination of water retention areas, dredging of saltwater canals, channelization of wetlands, or the creation of surface water impoundments near wetland areas.

The amount of water stored in an aquifer is a function, in part, of water inflow, balanced against the water discharged from an aquifer. This discharge can take the form of either a naturally occurring flow from springs, lakes, wetlands, or in the form of wells. Should the water loss exceed the water inflow, water pressures between adjoining aquifers can be affected, and overdrafting, or overmining can occur, leading to an exchange of water between the aquifers.

As mentioned previously, protecting the functions of natural groundwater aquifer recharge areas and natural drainage features is the goal of this subchapter. This goal is valid because of the benefits associated with replenishment of water supplies such as: prevention of lateral movement of salt water from saline zones (known as saltwater intrusion); maintenance of lake, spring and stream flows; dilution of contaminants which could contribute to the degrading of the ambient water quality; reduction of surface flooding by providing storage; and prevention of sinkhole formation.

Drainage characteristics of a region, and naturally occurring soil and hydrologic conditions are some of the factors in the ability of the land surface to provide recharge. Although Chapter 373.1397,

Florida Statutes directs the water management districts to designate prime recharge areas, no statutory definition has been provided and the SWFWMD has not as yet designated prime recharge areas for Sarasota County. For purposes of this Chapter, and until a statutory definition is given for prime recharge areas, those areas which provide the highest amount of potential recharge may be known as prime recharge areas. As the definition becomes further clarified, the County will continue to cooperate with the SWFWMD in the delineation of prime recharge areas.

In general, the Southwest Florida Water Management District (SWFWMD) considers the most active recharge areas to be high and dry uplands with highly permeable soils and poor surface drainage characteristics. These areas have the ability to readily absorb rainfall before it is lost as runoff or through evaporation. Wetlands are not considered prime recharge areas, due to the tendency of wetlands to become saturated with groundwater and hold it above the surface. Because no statutory definition for a "prime recharge area" has been established, the designation of an area as a "prime recharge area" does not afford protection for the hydraulic functions of the area. Further, this lack of definition leaves the determination of a prime recharge area a subjective task. Still, an area considered for the designation must be evaluated in terms of its ability to receive sufficient water recharge to sustain the projected groundwater requirements for the natural system, and for anticipated demand. Those areas identified by the County as natural groundwater aquifer recharge areas for the Floridan Aquifer are shown in Figure 34.

The issue of water quality protection must also be addressed, due to the potential for prime recharge areas to receive contaminants and to transfer them to underlying aquifers. As additional studies identify prime recharge areas, specific actions necessary to protect these areas should be addressed by the County. While protection of the prime recharge areas is not mandatory under the 1985 growth management legislation, the act requires local governments to give prime recharge areas special consideration in land use planning and regulatory decisions.

As a result, in order to ensure that the functions of prime recharge areas located in the vicinity of wellfields and other primary water supply resources are maintained, the County should initiate land development measures which guarantee the integrity of these areas. These wells and wellfields are located in Figure 35. Rapid, unplanned growth in environmentally sensitive areas impairs the functions of the recharge areas, creating additional demands upon the aquifers, and threatening the quality of the surface and sub-surface waters.

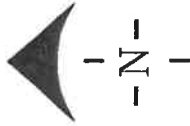
Legislation Affecting Natural Groundwater Aquifer Recharge Areas

U.S. Public Law 93-523, "Safe Drinking Water Act" provides for the protection of public water system wellfields and aquifers used as the sole source of a community drinking water supply. Amendments provide for wellfield protection which require states to work with local governments through the planning process to identify and to protect wellhead areas. Although the aquifer protection amendments require the U.S. Environmental Protection Agency to develop criteria for selecting critical aquifer protection areas, the criteria has not yet been developed.

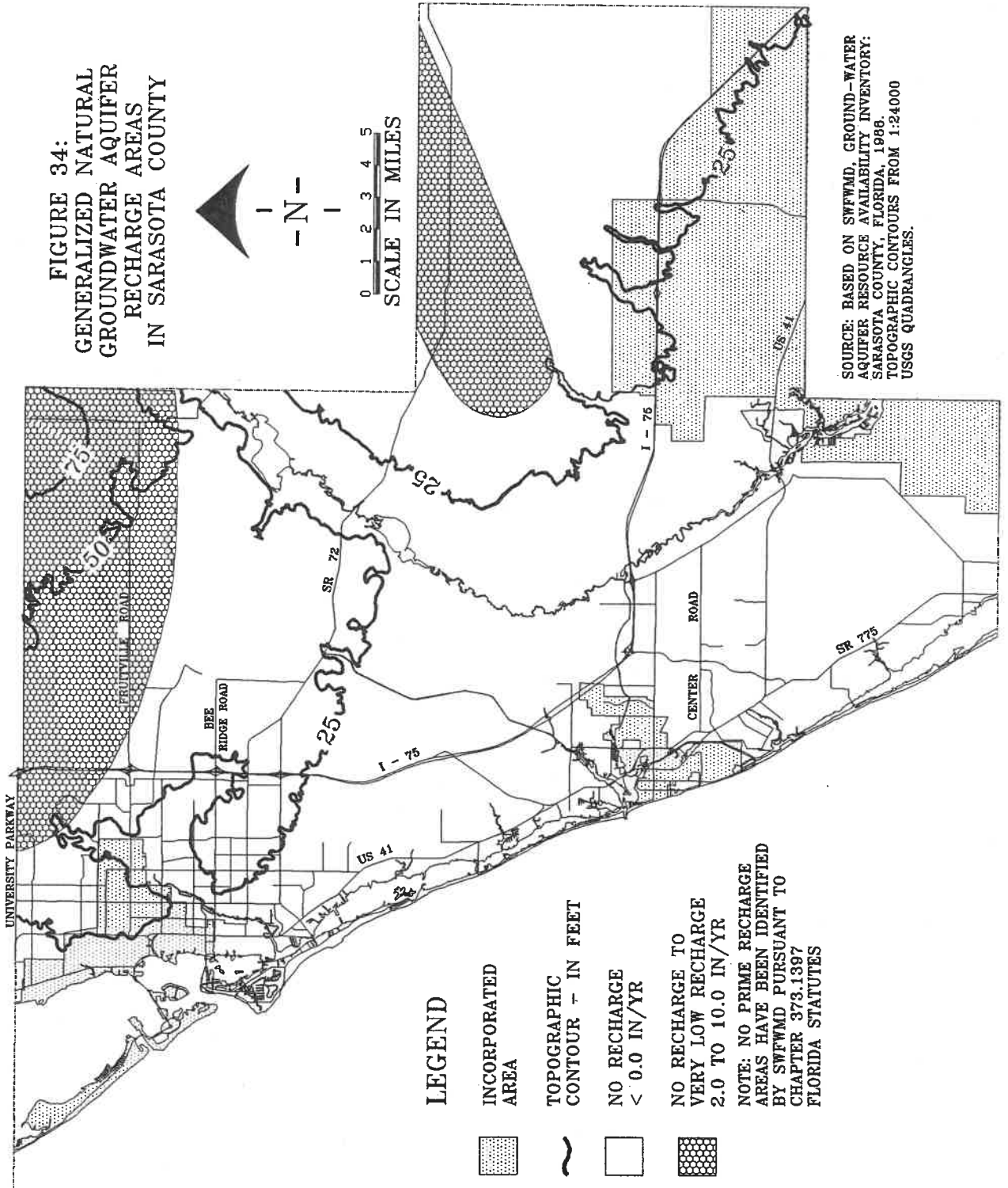
Department of Environmental Regulation Rules within Chapter 403, Florida Statutes, "Florida Safe Drinking Water Act," and Chapter 17-22, Part III, Florida Administrative Code, classify and regulate the use of aquifers. The Department has also developed increasingly stringent regulatory requirements for facilities which discharge to groundwater under Section 17-4.245, Florida Administrative Code, and for those facilities which inject materials underground through deep well injection.

Chapter 163, Florida Statutes, the "Local Government Comprehensive Planning and Land Development Regulation Act of 1985" requires local government comprehensive plans to include a topographic map depicting the prime groundwater recharge areas for the Floridan and

FIGURE 34:
GENERALIZED NATURAL
GROUNDWATER AQUIFER
RECHARGE AREAS
IN SARASOTA COUNTY



SCALE IN MILES
0 1 2 3 4 5



LEGEND

INCORPORATED
AREA

TOPOGRAPHIC
CONTOUR - IN FEET

NO RECHARGE
< 0.0 IN/YR

NO RECHARGE TO
VERY LOW RECHARGE
2.0 TO 10.0 IN/YR

NOTE: NO PRIME RECHARGE
AREAS HAVE BEEN IDENTIFIED
BY SWFWMD PURSUANT TO
CHAPTER 373.1397
FLORIDA STATUTES



SOURCE: BASED ON SWFWMD, GROUND-WATER
AQUIFER RESOURCE AVAILABILITY INVENTORY:
SARASOTA COUNTY, FLORIDA, 1986.
TOPOGRAPHIC CONTOURS FROM 1:24000
USGS QUADRANGLES.

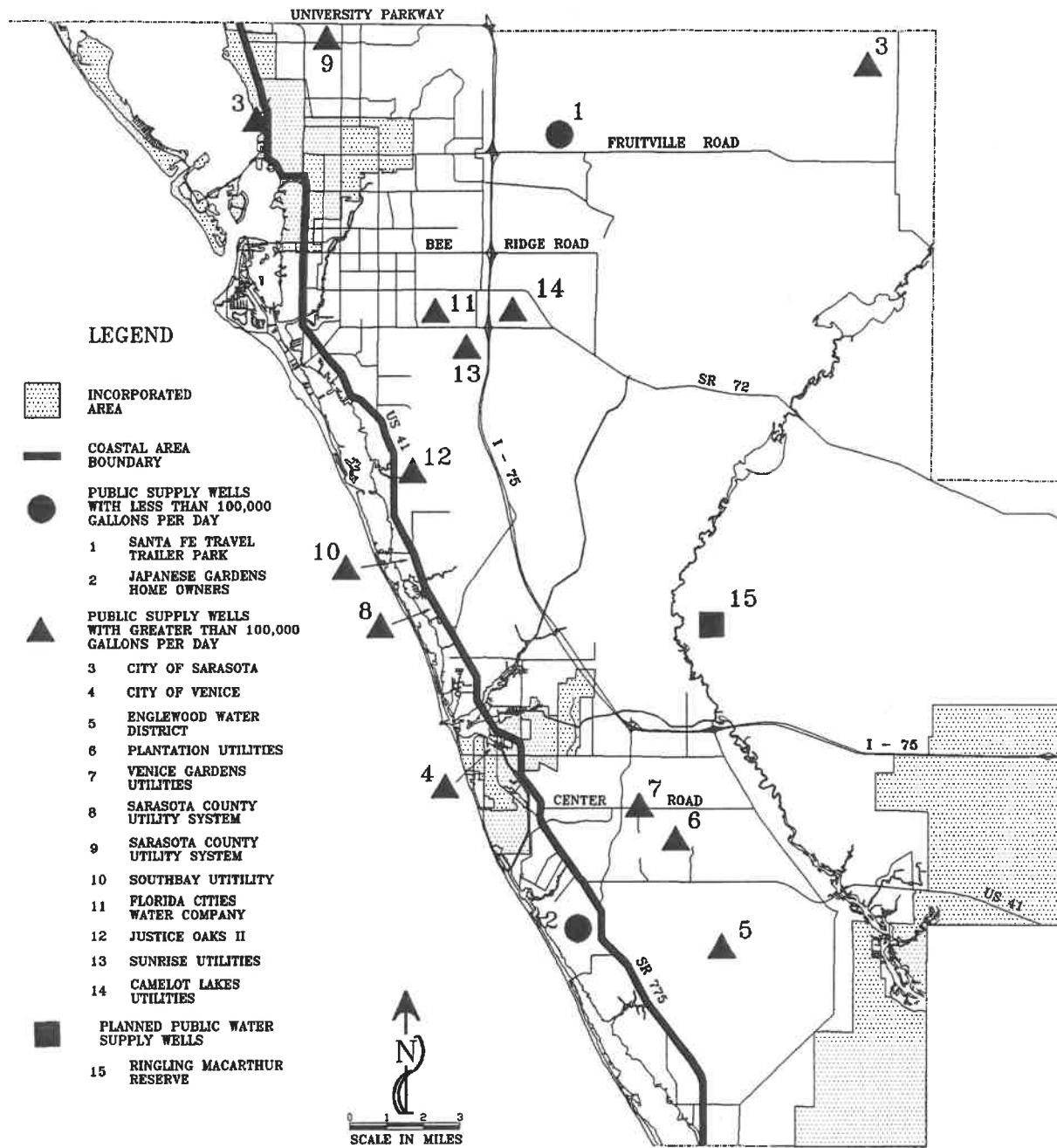


Figure 35: Existing and Planned Waterwells

Source: Southwest Florida Regional Water Management District, Ground-water Aquifer Resource Availability Inventory: Sarasota County, Florida, 1988.

Apoossee - The Revised and Updated Sarasota County Comprehensive Plan

Biscayne aquifers, as designated by local water management districts. Chapter 9J-5, Florida Administrative Code, "Minimum Criteria Rule for Local Comprehensive Plans," requires that objectives and policies be included in local plans addressing the regulation of land use and development for the purpose of protecting the functions of natural groundwater aquifer recharge areas. Although these general requirements do not depend upon SWFWMD to designate a prime recharge area, in an effort to assist local governments, SWFWMD has made available to the County a Groundwater Basin Resource Availability Inventory (GWBRAI) intended for use as a tool in planning land development in a manner which recognizes the limitations of natural resources.

It is the intent of the Legislature, under Chapter 373, Florida Statutes, that future growth and development reflect the limitations of available groundwater or other available water supplies. The prime groundwater recharge map, and associated data contained within the GWBRAI, are intended for use by local governments during consideration of land use decisions.

On the local level, Sarasota County has not adopted specific programs to protect natural groundwater aquifer recharge areas on a County-wide basis, although there are measures affording protection of the groundwater from degradation through development guidelines found in Sarasota County Ordinance No. 81-12, "Land Development Regulations."

Sarasota County Ordinance No. 72-37 establishes the County's policy concerning the prevention, abatement, and control of pollution of waters affecting the health, safety and welfare of the public. This Ordinance is designed to provide more stringent requirements than state standards to ensure the conservation of natural resources and to ensure domestic water supplies.

Sarasota County recognizes the importance of the wetlands for their ecological value through the adoption of Ordinance No. 86-55. This Ordinance is designed to establish guidelines for the protection of wetlands in the unincorporated areas of the

County by preventing the unconditional dredging, drainage, or other reduction of this valuable habitat.

Additionally, Sarasota County routinely relies upon its Pollution Control Division to monitor the operations of commercial utilities, and to identify or to enforce any violations associated with various County ordinances concerning the handling or processing of any hazardous materials which could adversely affect groundwater supplies. The Division of Stormwater Management has operational responsibility for maintaining the ditches and drainage areas throughout Sarasota County, with the primary objective being to divert water away from the land and into the major feeder creeks leading to the bays.

Sarasota County has also passed Resolution No. 82-200, recognizing the public support for the acquisition and ecological value of the Ringling MacArthur Reserve, the area identified as the County's primary water source for the future. This Resolution provides for the establishment of a comprehensive ecological monitoring program structured to provide continuous data collection and analysis necessary to maintain and enhance the hydrological values associated with the Ringling MacArthur Reserve and surrounding areas. Also in place is a comprehensive land use program designed to preserve, enhance, and protect the property by providing for controlled uses and land use practices for the property.

Planning Studies and Efforts

Many studies have been completed which are directly related to groundwater aquifer recharge. The majority of these studies have been conducted under the auspices of other agencies, such as the United States Geologic Service, Florida Bureau of Geology, various Water Management Districts, universities, etc. Few studies specifically relating to groundwater aquifer recharge have been initiated by the County. Consequently, the most authoritative source for this data is the compendium recently completed by SWFWMD. The

Groundwater Resource Availability Inventory: Sarasota County, Florida, released in March, 1988, contains data and information from over 128 sources to make it the most up-to-date and complete reference on the subject.

The following is a partial list of data included in the Inventory:

- A hydrologic study to define the groundwater basin and its associated recharge areas;
- Site specific areas in the basin deemed prone to contamination or overdraft resulting from current or projected development;
- Prime groundwater recharge areas;
- Criteria to establish minimum seasonal surface and groundwater levels;
- Areas suitable for future water resource development within the groundwater basin;
- Existing sources of wastewater discharge suitable for reuse as well as the feasibility of integrating coastal wellfields; and
- Potential quantities of water available for consumptive uses.

Inventory and Analysis

Groundwater Recharge and Aquifers

With a surface area of approximately 586 square miles, Sarasota County has approximately 34 square miles of surface waters. The County lies in an area of southwest Florida characterized by a series of gently sloping marine terraces developed by former stages of sea level during the Pleistocene epoch. In 1970 the County was delineated into three physiographic provinces. These areas, referred to as the Gulf Coastal Lowlands, DeSoto Plain, and Gulf Barrier Chain, are characterized by mild topographic relief with underlying sediments. They range in land surface altitudes from sea level along the western coastal area, to 95 feet above sea level at the northwestern boundary.

Most of Sarasota County is a broad, gently sloping marine plain characterized by flatlands containing sloughs, swampy areas, and seasonal wetland ponds. The Myakka River and the associated lakes and riverine estuaries are the main features of the Gulf Coastal Lowlands. Please refer to Figure 4, "Physiographic Regions and Topographical Contours," in the Environment Chapter. The soils in this area are mostly unconsolidated sand, with organic soils in the wetland areas which become increasingly clayey with depth.

Much of the County is fairly level, resulting in poor drainage. The Myakka River is the largest drainage system in the County, with principal tributaries including the Cow Pen Slough, Deer Prairie Slough, and Big Slough, also known as the Myakka-hatchee Creek. Many sloughs and swampy areas have been altered, such as the channelized Cow Pen Slough area, and are drained by ditches and canals. Several small creeks in the western portion of the County flow into the Gulf of Mexico from shallow coastal embayments which drain areas from several miles inland. The Upper and Lower Myakka Lakes, linked by the Myakka River, are the largest surface water lakes in the County, and hold water year around. Hundreds of wetland depressions and ponds contain water during rainy periods.

The climate is sub-tropical humid, with an average annual air temperature of about 72 degrees. Mean daily temperatures range from 84 degrees fahrenheit in summer to 61 degrees fahrenheit in winter, with highs and lows ranging from 104 degrees to 19 degrees. Sub-freezing temperatures may be expected two to three times annually.

Average annual rainfall for the last 41 years at Myakka River State Park has been 56 inches. The range of rainfall is usually not less than 40 inches and not more than 70 inches. The rainy season occurs June through September, and is associated with convective thunderstorms which produce sporadic and sometimes intense rainfall of short duration. Tropical depressions and severe storms may produce torrential rains lasting one or more days during late summer and fall, leading to the dry season, from October to May. It is common for widespread rainfall not to occur for durations

lasting up to 60 days or more, leading to general water shortages and occasional watering restrictions. The impact upon water resources during the dry season is further compounded by the seasonal influx of tourists, seasonal residents, and residential and agricultural irrigation, all increasing the water demand on an already stressed system.

Freshwater sources in Sarasota County are dependent upon rainfall in either the immediate area or in adjacent areas. Most of the rain evaporates or is transpired through plants (65-75 percent), while water remaining on the surface may be stored temporarily in lakes, ponds, sloughs, or may flow to the bays (25-35 percent). Only about 5 percent of rainfall is estimated to filter into the ground and reach the level of saturation to become groundwater.

In the broad flatlands, most natural drainageways are creeks and shallow sloughs ranging from a few feet in width to more than one mile. Below the elevation of about 60 feet, hundreds of shallow depressions form perennial ponds and lakes, particularly during the wet season.

Surficial Aquifer

The surficial aquifer consists primarily of permeable areas which occur in undifferentiated surface deposits. The surficial aquifer is generally unconfined, with a saturated thickness of about 40 to 75 feet. The base of the surficial aquifer is clayey sand.

Intermediate Aquifer

The intermediate aquifer consists of a series of mixed permeable and poorly permeable materials which function regionally as a water-yielding hydraulic unit sandwiched between the surficial aquifer above and the Floridan aquifer below. The total thickness of the Intermediate aquifer ranges from about 300 feet in the north to about 375 in the southern portion of the County. It is differentiated by an upper and a lower unit. The upper aquifer consists of the Hawthorn Formation, or the Tamiami-upper Hawthorn aquifer, while the lower aquifer consists of the low portion of the Hawthorn Formation and permeable portions of the upper

Tampa limestone that are not in hydraulic connection with the Floridan Aquifer system. This is also called the lower Hawthorn-Upper Tampa Aquifer.

This Tamiami-Upper Hawthorn Aquifer is the most highly developed aquifer in the coastal area and is used to supply most of the water for domestic and irrigation uses. Also, the City of Venice public supply wells tap this aquifer.

The altitude of the top of the Tamiami-Upper Hawthorn aquifer ranges from about 50 feet below sea level to about 100 feet below sea level in the southwest section of the County. The aquifer is confined by clayey materials located above and below it, although some exchange of water occurs as a result of hydraulic connections between adjacent aquifers.

The altitude of the top of the Tamiami-Lower Hawthorn aquifer ranges from 190 to 300 feet below sea level, decreasing in altitude from north to south. It ranges in thickness from 200 feet in the north to 250 feet in the south.

Upper Floridan Aquifer

This aquifer is potentially the most productive of all aquifers underlying Sarasota County, although the water requires demineralization before domestic use. The aquifer is composed of thin, stratified sequences of limestone and dolomite. The altitude of the top of the Floridan aquifer ranges from about 400 feet below sea level in the northeast to about 550 feet below sea level in the southwest, with an average thickness of about 1,700 feet. Although the lower portion of this area is more mineralized than the upper area, the limestone and dolomite generally function as one unit.

Ringling MacArthur Reserve

This area is located adjacent to the Myakka River in the Gulf Coastal Lowlands, with surface aquifers generally less than 50 feet above sea level. The site rises from a low elevation of approximately ten feet above mean sea level in the southwestern corner, near the Myakka River, to elevations approaching 35 feet above mean sea level in the north central and northeastern portions of the site. Land sur-

faces in the western one-third of the site slope west to southwest toward the Myakka River. From the central portion of the site to the eastern boundary, the land surface is characterized by a relatively level plateau with elevations rising from 30 to 35 feet above mean sea level. The eastern third of the plateau within the Ringling MacArthur Reserve boundaries is bisected by Deer Prairie Slough. Please see Figure 32, "Ringling MacArthur Reserve", in the Potable Water section of this chapter.

The Surficial and Intermediate Aquifers have been the major sources of nearly freshwater in the region. These two aquifers have been tapped throughout west Florida for small domestic and agricultural supply wells. In the vicinity of the Ringling MacArthur Reserve, the underlying Floridan Aquifer has only occasionally been tapped for agricultural use due to its marginal quality and depth to water. The sequence of groundwater potentiometric levels, going from lowest to highest, is the Surficial aquifer, the Secondary Artesian and the Floridan Aquifers.

The water table of the Surficial Aquifer is influenced by the topography of the land, with the water table at or very near the surface in low lying areas. Only during extreme droughts or in areas with significant elevation is the water table found at depths exceeding ten feet below the surface.

The Secondary (Intermediate) Aquifer is the best potential source of fresh groundwater in this area. This aquifer has been divided into two separate flow systems: the Upper Secondary and the Lower Secondary Aquifers. However, the systems are not always differentiated and both may be considered equivalent to the thickness of the Hawthorn Formation.

The Secondary Artesian Aquifer generally consists of a sequence of alternating beds, varying from pervious to highly impervious, and functions regionally as an aquifer system that is confined from above and below by the Surficial and Floridan Aquifers. It ranges in thickness from 140 to 300 feet. Generally, flow of water is upward from the

Secondary to the Surficial, with some recharge occurring during drought conditions to sustain wetland hydroperiods.

Water quality from the Secondary Aquifer is generally potable and suitable for drinking after conventional lime softening treatment, although some locations produce water with total dissolved solids, gross alpha radiation, and fluorides in excess of U.S. Environmental Protection Agency primary and secondary quality standards.

The Floridan Aquifer consists of a thick sequence of limestones and dolomites that are hydraulically connected under artesian conditions. The Floridan is confined from above by a consistent layer of clayey materials at the base of the Hawthorn Formation, and from below by a bed at the base of the Avon Park and Lake City Limestones. The thickness of the aquifer is estimated to be 1,700 feet, with an altitude at the top of the aquifer averaging 200 feet below sea level throughout the Ringling MacArthur Reserve.

The altitude of the Floridan potentiometric surface ranges from 30 feet above sea level in the western portion of the Reserve to more than 40 feet above sea level at the southeast corner. The general direction of flow is toward the west and northwest and may be attributable to regional agricultural groundwater withdrawals in southern Hillsborough and north Manatee Counties.

The Floridan Aquifer system provides a source of recharge to the Secondary Artesian Aquifer in areas where wells penetrate both aquifers or in areas where the confining layer is breached or thin. Recharge to the Floridan Aquifer from within the Reserve is nonexistent to very low, with the exception of lateral groundwater flows. The water from the Floridan Aquifer is nonpotable throughout the Reserve, mainly as a result of high sulfate and dissolved solids content.

Water Quality

Many factors influence groundwater quality. Among these include the amount of mineralization occurring in groundwater as influenced by the soil and rock composition, the length of time water is in contact with these materials, as well as the chemical nature of rainfall which infiltrates the aquifer. The degree of mineralization or contamination in surface waters and confined aquifers is further influenced by the interconnection of ponds, lakes, rivers and canals. This is especially true in western Sarasota County, where saline water occurs in confined aquifers at relatively shallow depths. Some areas along the coast have salinity levels exceeding those of the lower aquifers, a result, in part, of upwelling from saline waters, the construction of canals which permit saltwater intrusion, and the uncontrolled discharge of water from more saline zones to the surface through wells.

Man-made pollution from a variety of sources has deteriorated water quality in streams and aquifers in the County, and the source of these pollutants is generally divided into two categories. A "point source" is defined by the Department of Environmental Regulation as an identifiable, confined and discrete facility that discharges pollutants. Examples include end of pipe discharges, sewage treatment plant discharges, or seepage from underground gasoline tanks or landfills. "Non-point" pollutant sources are those which are considered more pervasive and less identifiable than point sources. Examples include runoff from urban, agricultural, construction, or phosphate mining areas.

Artesian Wells

Problems associated with improperly constructed or abandoned artesian wells have been recognized during recent years and addressed through well plugging programs administered by both the County Health Department and SWFWMD's Quality of Water Improvement Program, initiated in 1974. When uncased wells are drilled which connect more than one aquifer, interaquifer contamination may result from the differential hydro-

tatic pressures. Generally, water quality decreases with depth, while hydrostatic pressure increases. When water from one strata is allowed to mix with water from another strata due to the hydrostatic pressure, contamination may result. Therefore, re-establishment of the separation of aquifers by plugging the sections of the well linking the aquifers is necessary to maintain the integrity of the high quality zones. Abandoned artesian wells further contribute to degraded water quality when water is allowed to spill out onto the land surface through uncontrolled flows. This may result in deteriorating surface water quality when heavily mineralized water is allowed to mix with natural wetlands.

Effects of Development

As noted previously, the most extensive alteration of the recharge areas has occurred in the highly urbanized and channelized western portions of the County (see Figure 28, "Major Drainage Canals and Facilities," in the Drainage section of this Chapter). Alteration has also occurred in eastern areas where channelization of naturally existing wetlands has taken place. Widespread use of independent well systems, septic tanks, and stormwater elimination techniques has also reduced water quality. Although many problems relating to water use is directly related to groundwater aquifer recharge, they become more relevant when discussed in the context of their most immediate nature. For that reason, these problems have been addressed in the past, and continue to be addressed, in other portions of Apoxsee. Further, options for the mitigation of problems relating to groundwater are presented in the respective Plan sections of those relevant Chapters.

Additional mitigation procedures, which include development densities, environmental regulations, and a matrix of existing residential and commercial development guidelines, have been developed and are presented in Sarasota County Ordinance Nos. 81-12, "Land Development Regulations," and 75-38, "Zoning Ordinance." The County is also placing into public ownership sub-

stantial portions of the Ringling MacArthur Reserve in order to preserve and enhance groundwater recharge areas in the vicinity of the proposed wellfield and public water supply network.

A substantial portion of the eastern County area remains in a semi-rural to rural state, where these areas are used primarily for ranching, agri-business and other independent uses. Some of these activities do not alter recharge area surfaces, although some past practices have resulted in drainage of wetland areas. Further, some potential sources for groundwater pollutants do occur through the existence of abandoned wells, excessive pesticide uses, and unauthorized landfills.

The Floridan Aquifer has been tapped for agricultural irrigation in the eastern portion of the County, sometimes leading to interchange among the Intermediate and Surficial Aquifers, as noted previously. The regulation of agricultural wells is partly a function of SWFWMD, which has authority to issue Consumptive Use Permits for wells.

Future Planning Options and Opportunities

Sarasota County should continue to promote the wise stewardship of its groundwater resources through comprehensive and environmentally sensitive land use planning practices which recognize the finite nature of its water resources.

As groundwater recharge areas are reduced in the urban area, stormwater drainage regulations should emphasize the preservation of natural drainage features, and encourage the use of

drainage attenuation structures to maximize groundwater recharge. Sarasota County should also consider the re-use of treated effluent for irrigation in urban areas in order to increase recharge to the water table aquifer. For all new development, Sarasota County should use its Land Development Regulations to require the establishment of conservation areas which indicate the greatest recharge potential.

In the rural areas, emphasis should be upon identifying and managing areas with the greatest aquifer recharge potential, in cooperation with SWFWMD.

One practice of ensuring the availability of potable water on a regional basis, with emphasis on the protection and preservation of the groundwater aquifer recharge system, is through the interconnection of regional wellfield systems. The practice of interconnecting wells with transmission lines in a network system and operating the system in a manner which prevents the overpumpage of a single well creates an integrated wellfield. In coastal areas, this type of arrangement helps to meet potable water demand while helping to minimize the degradation of an aquifer system from saltwater intrusion through upwelling. In the event of a well failure or other emergency, the water can be effectively transferred from one well to another within the integrated supply.

This opportunity is being pursued through the County's identification of the need for interconnecting its systems with the Peace River/Manasota Water Authority System. Sarasota County proposes the interconnection of its planned water treatment plant and other utilities in the County with the water systems of Manatee, DeSoto, and Charlotte Counties through a phased process.

Public Facilities Plan

Intent

Sarasota County will continue in its role of overall responsibility for ensuring the provision of public utilities adequate to meet the needs of the residents of the unincorporated portions of the County. The County presently provides solid waste disposal facilities for all County residents and potable water facilities and sanitary sewer facilities for some County residents. The County has partial responsibility for drainage facilities. In circumstances where the County does not provide these facilities, the private sector is the provider.

Rapid population growth and deteriorating facilities have severely stressed existing systems, and future growth can only be expected to increase demands upon facilities. Because of the number of diverse entities involved in the County's growth and development, condition of existing facilities, and the mixed role between the public and private sector in the provision of facilities, the County assumes the role of facilities coordinator.

When considering the financial feasibility of public facility projects, the County encourages the partnership between the public and private sectors. In cases where the County does not provide public facilities, private enterprise will be encouraged to provide these services for existing and new residents. However, if these methods of facility provision are not feasible, other methods, including the creation of special utility districts will be considered.

Considering the above, all Policies must offer solutions which will alleviate present and future public facility problems. Countywide coordination can provide the answer to identified problems, while being responsive to the efficient management of anticipated growth.

Goal 1

Provision of solid waste, potable water, sanitary sewer, and drainage facilities shall be coordinated with land development, as delineated on the Apoxsee "Future Land Use Plan Map", and shall be provided to meet the needs of Sarasota County residents.

Objective 1.1

To implement procedures which coordinate the extension of facilities or increase in the capacity of facilities in order to meet or correct existing facility deficiencies. All system improvements for replacement, expansion, or increase in capacity of facilities shall comply with the adopted level of service standards for the facilities while maximizing the use of existing facilities.

Policy 1.1.1.

The County shall continue to rely upon municipal and franchise solid waste collection systems with the County providing for the operation of solid waste disposal facilities to meet the needs of all incorporated and unincorporated areas of the County.

Policy 1.1.2.

The County shall adopt a Stormwater Master Plan by January, 1990 which ensures that water management facilities develop to attain adopted levels of service. The Master Plan should be developed in cooperation with the municipalities. It shall be designed to protect downstream and estuarine water from degradation by stormwater runoff.

Policy 1.1.3.

By 1992, the County shall have identified: 1) all drainage structures which fall below adopted drainage level of service standards for major and minor water management facilities; 2) costs associated with improving those water management facilities to meet minimum drainage level of service standards; and 3) funding sources for those improvements. Where the improvement of drainage structures is not feasible or desirable, alternative methods to improving drainage structures may be employed including, but not limited to, off-line reservoirs, parks designed for flooding, and floodways.

Policy 1.1.4.

By 1990, a list of all wastewater treatment plants shall be compiled and maintained which includes, but is not limited to, the following: entity having operational responsibility; current rated plant capacity; existing treatment status (number and type of hookups); and all future committed capacity (number and type of hookups).

Policy 1.1.5.

The Utilities Department shall prepare annual reports indicating the available capacity and present demand for potable water and/or sanitary sewer facilities in the Sarasota County Utility System service area.

Policy 1.1.6.

As soon as possible and no later than 1991, the Utilities Department shall identify existing Sarasota County Utility System facility deficiencies, as well as address implementation activities for establishing priorities for replacement and correction of existing facility deficiencies. This shall be an ongoing annual effort for the continual setting of capital improvement priorities. Efforts to correct these deficiencies shall be made on the basis of maximizing the use of existing facilities as well as economic feasibility under the Utilities Department's preventive maintenance practices.

Policy 1.1.7.

Projects needed to correct existing deficiencies within the Sarasota County Utility System shall be given priority in the formulation and implementation of the annual work schedules or programs of the Sarasota County Utilities Department.

Policy 1.1.8.

No permit shall be issued for new development which will result in an increase in demand upon deficient facilities prior to the completion of improvements needed to bring the facility up to adopted level of service standards, unless provided for by existing State and County laws.

Policy 1.1.9.

Until such time as the Sarasota County Utility System can expand its distribution system to provide centralized potable water and/or sanitary sewer service, individually owned platted lots of record located within the designated Urban area, as adopted pursuant to Sarasota County Ordinance No. 81-30, may be provided potable water with a private well and sewer service through septic tank or private package plants, provided all other legislative and regulatory requirements are met.

Policy 1.1.10.

The County shall coordinate wastewater disposal for, but not limited to, the unincorporated County in order to meet or correct existing facility deficiencies in such a manner whereby water treated to a condition more stringent than Secondary Treatment standards may be used for public access areas or agricultural irrigation purposes and water treated to Advanced Wastewater Treatment standards, or standards to be determined in the "Wastewater Resource Management Program Report," may be used for water supply recharge to natural water systems. Deep well injection is the least preferred method of effluent disposal and will be used only as a last resort.

Objective 1.2

To adopt procedures by 1991 which will coordinate the extension of facilities or the increase in capacity of facilities in order to meet the future needs of Sarasota County residents. All system improvements for replacement, expansion, or increase in capacity of facilities shall comply with the adopted level of service standards for the facilities.

Policy 1.2.1.

The County shall establish procedures which monitor the condition of level of service standards for solid waste, potable water, sanitary sewer, and drainage facilities.

Policy 1.2.2.

Procedures shall be adopted whereby a centralized department reviews all development orders to determine their current and future impact upon the capacities of existing solid waste, potable water, sanitary sewer, and drainage facilities.

Policy 1.2.3.

By 1990, the County shall adopt a Stormwater Environmental Utility to ensure that all stormwater discharged into estuarine waters will receive adequate treatment. The Utility shall be developed after seeking cooperation with the municipalities, other appropriate governmental agencies, and public and/or private utilities, which will implement the Stormwater Master Plan. Procedures shall also be adopted which establish priorities for the replacement and correction of existing facility deficiencies as well as providing for future facility requirements.

Policy 1.2.4.

The County shall construct a wellfield and water treatment facility, including a water transmission network for potable water, at the County's Ringling MacArthur Reserve.

Policy 1.2.5.

Additional water supply sources will need to be identified and developed to supplement the amounts anticipated from the Ringling MacArthur Reserve, including wastewater and stormwater recycling systems developed by the County.

Policy 1.2.6.

Sarasota County will continue to explore alternative water resources and water conservation strategies in cooperation with regional water supply authorities and other local entities. Sarasota County will develop an emergency water shortage plan by 1990 designed to allow the County to respond to emergency water shortages.

Policy 1.2.7.

The County shall continue to receive and dispose of sludge in an environmentally sound manner. Wastewater treatment plants with rated capacities of 100,000 gallons per day and under must ensure that its sludge is disposed of at the Sarasota County Septage Treatment Facility. Modifications may be made for long-term sludge management based upon financial and technological feasibility.

Policy 1.2.8.

The County shall coordinate wastewater disposal for, but not limited to, the unincorporated County in order to extend or increase the capacity of facilities in such a manner whereby water treated to a condition more stringent than Secondary Treatment standards may be used for public access areas or agricultural irrigation purposes and water treated to Advanced Wastewater Treatment standards, or standards to be determined in the "Wastewater Resource Management Program Report," may be used for water supply recharge to natural water systems. Deep well injection is the least preferred method of effluent disposal and will be used only as a last resort.

Goal 2

Provision of solid waste, potable water, sanitary sewer, and drainage facilities will be provided in a safe, clean, efficient, and economically sound manner.

Objective 2.1

To develop a master plan, by 1990, for wastewater resource management which evaluates and prioritizes the consolidation of existing wastewater treatment facilities into a regional system or systems. This plan shall include financial feasibility studies and engineering analyses.

Policy 2.1.1.

Sarasota County shall form a public information team intended to coordinate community concerns and to facilitate the need for public information from an authoritative source concerning water, solid waste, and wastewater recycling efforts. Additional information will include conservation measures which could lower demand for these services.

Policy 2.1.2.

Inefficient or undesirable secondary treatment plants will be replaced by intermediate pump stations which will serve to collect and transport wastewater to County facilities when they are developed.

Policy 2.1.3.

Wastewater will be collected from major generators in the County including municipalities, major franchises, and eventually from high density areas containing septic tanks. Wastewater will be pumped either to upgraded secondary treatment plants or directly to regional treatment plants.

Policy 2.1.4.

The County shall investigate the potential for incorporating treated wastewater effluent as a potable water source through a comprehensive wastewater resource management study.

Policy 2.1.5.

The County shall investigate the potential for incorporating stormwater runoff as a potable water source through a comprehensive water resource management study.

Objective 2.2

To implement studies and programs regarding the economic feasibility and environmental consequences of solid waste resource recovery.

Policy 2.2.1.

The Solid Waste Management Division shall conduct a pilot project whereby an assessment can be made regarding the economic feasibility of solid waste stream recovery recycling.

Policy 2.2.2.

Beginning in 1989 and on a continuing basis, the County shall investigate and review the latest available technology for resource recovery and other alternative solid waste management technologies with particular attention paid to environmental effects and risks of such technologies.

Policy 2.2.3.

The County shall initiate a recyclable materials program to include a majority of newspaper, aluminum cans, glass, and plastic bottles by July 31, 1989. (The identification of recyclable materials are provided for consistent with State Statutes).

Objective 2.3

To maintain and enforce the highest possible minimum potable water quality standards for all water franchise systems and community water systems, and throughout the designated urban area.

Policy 2.3.1.

The County shall adopt potable water quality standards as described in Chapter 403.850, Florida Statutes, "Florida Safe Water Drinking Act" and Chapter 17-22, Florida Administrative Code, and as proscribed by the U.S. Environmental

Protection Agency. However, the County may adopt more stringent standards if it deems necessary.

Policy 2.3.2.

Issuance of development orders will be contingent upon demonstration of compliance with applicable federal, State, and local permit requirements for on-site potable water systems.

Policy 2.3.3.

The County shall utilize its regulatory authority to prohibit the installation of private potable waterwells in designated Urban areas; further, the County shall mandate hookup to a centralized potable water system, where available, in accordance with State and County laws.

Objective 2.4

To ensure that solid waste collection shall not create a public nuisance, health, or safety problem.

Policy 2.4.1.

Guidelines shall be adopted by 1991 which prohibit the storage of putrescible solid waste at any County transfer station for periods of longer than 48 hours.

Objective 2.5

To reduce the volume of solid waste requiring landfill disposal by at least an amount consistent with State regulations.

Policy 2.5.1.

The Solid Waste Management Division shall conduct a study to determine the content of waste being delivered to the County landfill in order to develop a strategy with which to begin to reduce per capita disposal of solid waste.

Policy 2.5.2.

The County shall install and operate an air curtain destructor at the County landfill, or other appropriate technology, in an environmentally sound manner designed to reduce the volume of yard waste which is not being recycled.

Policy 2.5.3.

Beginning in 1990 all new development, except single family homes, shall be required to set aside areas for source separation of solid waste.

Goal 3

Provision of solid waste, potable water, sanitary sewer, and drainage facilities shall be done in a manner which ensures the maintenance and integrity of environmental quality, as well as protection and maintenance of groundwater aquifer recharge areas, surface groundwaters, and receiving waters.

Objective 3.1

To establish a program of identifying and protecting existing and potential potable water supply sources.

Policy 3.1.1.

Sarasota County will ensure adequate protection for potable water supply systems and provide for adequate recharge areas and related open space benefits associated with them, by initiating efforts to prepare and implement a wellhead protection program by 1990, subject to engineering studies and future deliberations and considerations. Techniques to be used by Sarasota County in providing such protection may include, but not be limited to: specialized surface water management requirements; development performance standards; land development regulations; limitations on density and amount of impervious surface; and restrictions on the storage of hazardous materials.

Policy 3.1.2.

By 1991, procedures shall be adopted which ensure that all sludge disposal sites are authorized, specifically identified, and monitored for compliance to sludge composition regulations and disposal methods until such time that recommendations contained in the "Wastewater Sludge Disposal" study are implemented.

Policy 3.1.3.

Sarasota County has provided a sludge treatment facility of minimal size and is moving toward a prohibition of the landspreading of sludge. In the interim, landspreading of sludge shall be allowed only in areas that have the least impact on watersheds which drain into the source or recharge areas of a public potable water system. However, the landspreading of sludge shall be prohibited in the Braden River watershed and the Big Slough watershed.

Policy 3.1.4.

By 1991, measures shall be adopted which ensure that hazardous waste material will be deposited at designated County sites for proper transfer to permitted hazardous waste disposal sites, thus avoiding disposal in the County's sanitary landfill. The Department of Environmental Regulation shall regulate biohazardous waste on-site and off-site incineration and off-site transport, storage, treatment, or disposal.

Policy 3.1.5.

The location of any storage area for hazardous and acutely hazardous materials shall be prohibited within the 100-year floodplain of any inflowing watercourse within the watershed of an existing public potable surface water supply, or within 200 feet of the Florida Department of Environmental Regulation jurisdictional line associated with any such inflowing watercourse, whichever is greatest. "Hazardous" and "acutely hazardous" materials shall be as defined and listed in 40 CFR 261, and as adopted within Chapter 17-30, Florida Administrative Code and Section 403.7, Florida Statutes.

Policy 3.1.6.

The County shall implement the Stormwater Environmental Utility to require that the treatment of stormwater discharge meets standards which will ensure that there will not be adverse impacts on the quality of potable public surface water supplies.

Policy 3.1.7.

A survey shall be initiated which examines all improved parcels within the urbanized portion of the County and determines whether the parcel uses septic tank disposal or is connected to a wastewater treatment facility. This survey shall be updated on an annual basis.

Policy 3.1.8.

By 1990, the County shall begin reviewing urban areas served by septic tanks in order to determine which areas perform unsatisfactorily. These areas will be ranked in a priority list which recommends hookup to a centralized sanitary sewer system as soon as possible.

Policy 3.1.9.

As the County consolidates wastewater treatment and stormwater management facilities, all facilities shall be developed with consideration for aesthetics and the possibility of incorporation into the County park system.

Objective 3.2

To provide solid waste, potable water, sanitary sewer, and drainage services in a manner which maintains or improves water quality at or above State water quality standards.

Policy 3.2.1.

The County shall not allow any practice, which, in the provision of solid waste, potable water, sanitary sewer, and drainage facilities, violates water quality standards as established by State Statutes and applicable County Ordinances.

Policy 3.2.2.

The County shall develop procedures which discourage the installation of septic tanks in designated urban areas whenever possible; further, the County shall mandate hookup to a centralized wastewater treatment system in accordance with State Statutes and regulations with no cost to the County.

Policy 3.2.3.

A wastewater treatment inspection/compliance monitoring program shall be established for all wastewater treatment plants which mandates on-site inspection/compliance monitoring at least 12 times annually. All costs for monitoring shall be equal to the appropriate inspection charge.

Policy 3.2.4.

All known public landfill sites, as determined by the Board of County Commissioners, shall undergo inspection and/or monitoring procedures to ensure that they do not create a public health hazard.

Policy 3.2.5.

Issuance of development orders will be contingent upon demonstration of compliance with applicable federal, State, and local permit requirements for wastewater treatment facilities.

Policy 3.2.6.

A systematic stormwater management inspection, monitoring, and maintenance program shall be established for all County stormwater management facilities.

Goal 4

The issuance of development orders or development permits shall be concurrent with adequate solid waste, potable water, sanitary sewer, and drainage facility capacity.

Objective 4.1

To ensure that development permits are issued concurrent with adequate solid waste, potable water, sanitary sewer, and drainage facility capacity based upon the following levels of service:

Policy 4.1.1.**Solid Waste Level of Service:**

- 1) Collection and capacity of solid waste for a minimum of 8.6 pounds per person per day; and
- 2) Collection of residential solid waste in Solid Waste MSTU areas at least two times per week, at least three days apart.

Policy 4.1.2.**Drainage Level Of Service:**

1) *Stormwater Quality:* no discharge from any stormwater discharge facility shall cause or contribute to a violation of water quality standards in waters of the State as provided for in State Statutes. Further, the County will develop and set criteria based upon State and local regulations which will set a community accepted level of water quality standard for stormwater discharge facilities; and

2) *Stormwater Quantity:* a complete stormwater management system shall provide for adequate control of stormwater runoff. The stormwater management system shall be designed based upon 24-hour design storms at twenty-five (25) year intervals for major water management facilities and ten (10) year intervals for minor water management facilities. In order to avoid burdening downstream drainageways and for general conservation purposes, the following specific guidelines are as follows:

- Drainage designs shall provide for the attenuation/retention of stormwater from the site. Water released from the site shall be in such a manner as to assure that the rate of runoff after post development is less than or approximate to that before development.

- Drainage systems shall include special engineering design features to minimize pollution from oil, suspended solids, and other objectionable materials. Such features shall be designed to treat the runoff resulting from the first one (1") inch of rainfall where the ultimate outfall of the drainage system is into a freshwater stream, canal, or other waterbody that has a mean daily discharge of five (5) cubic feet per second or less.
- Stormwater systems discharging directly into major saltwater tidal systems, bays, or the Gulf shall be designed to reduce floating and suspended solids to a minimum.
- In locations where soil and groundwater conditions permit, structures such as bottomless inlets, filter inlets, perforated drain pipes, and other similar devices shall be used to minimize pollution and to increase stormwater percolation.
- No cutting, clearing, grading or filling shall be accomplished on any site under development unless appropriate devices have been installed to minimize pollution from objectionable materials to control erosion and to remove sediment from surface water runoff. Appropriate techniques shall also be utilized to stabilize and revegetate disturbed areas as soon as possible.

Policy 4.1.3.

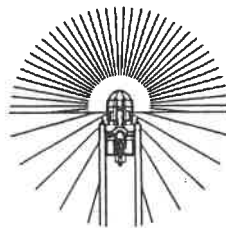
Sanitary Sewer Level Of Service:

- 1) Minimum average daily flow to be treated from domestic units shall be 200 gallons per Equivalent Dwelling Unit per day; and
- 2) Minimum effluent treatment standards prior to discharge shall be Secondary Treatment, except where the State or County requires treatment more stringent than Secondary Treatment including Advanced Waste Treatment standards.

Policy 4.1.4.

Potable Water Level Of Service:

- 1) Minimum average daily flow shall be 200 gallons per Equivalent Dwelling Unit per day.
- 2) Minimum potable water quality shall be as defined by the U.S. Environmental Protection Agency, except where the County may impose stricter standards.



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2. Resource Recovery Feasibility Report for Charlotte County, DeSoto County, and South Sarasota County, HDR Techserv, Inc. 1985.
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CHAPTER 5

TRAFFIC CIRCULATION

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CHAPTER 5

TRAFFIC CIRCULATION

Introduction

The relationship between land use patterns and the transportation network clearly demonstrates the establishment and growth of the population of Sarasota County. Communities were settled along the coast and on the keys and through the area now served by U.S. 41. By 1930, when the population of Sarasota County was only 12,000, the road network was fairly well established (see Figure 36). The east-west roads, Bahia Vista, Bee Ridge and Center Road, linked the rural agricultural areas to the east with the coastal population centers to the west. These urban connector roads served as a basis for the location and allocation of subsequent urban growth in a grid system within the County.

Periods of rapid population growth, seasonal fluctuations in population, with the resulting increase in the number of automobiles have combined in Sarasota to produce traffic congestion. This was manifested not only in the conditions found on thoroughfares but also in the spillover of heavy traffic into residential neighborhoods as drivers sought to avoid the thoroughfares.

In addition to congestion, adequate hurricane evacuation routes, and the ability to adequately provide emergency services (police and fire) are traffic circulation issues that need to be addressed.

The relationship between land uses and highway function is particularly evident with Interstate I-75, which was completed in the mid-1980's to serve as a primary route for through traffic from Tampa to Miami. Although I-75 was intended to function

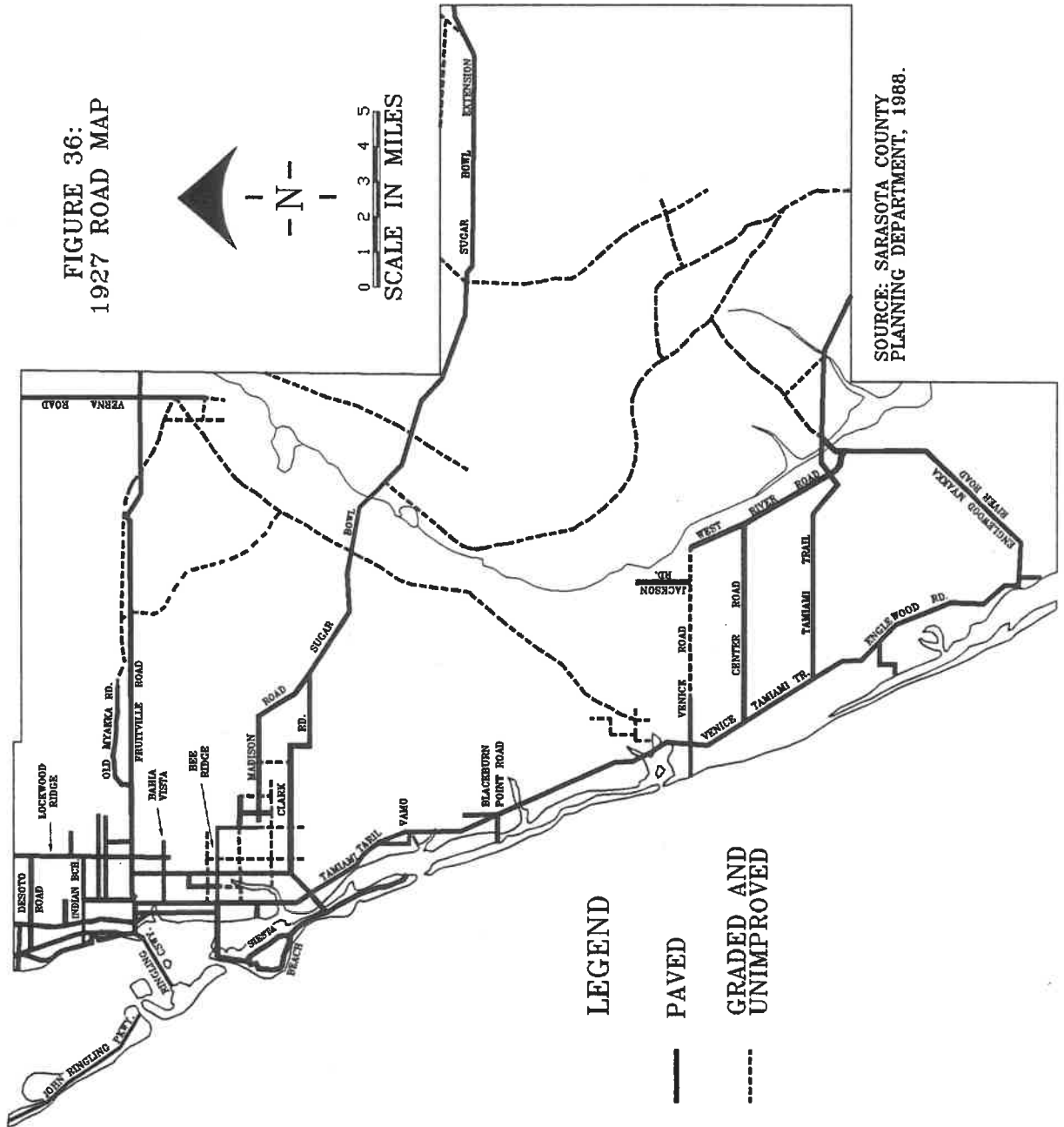
as a limited access facility providing for inter-regional and interstate travel both to and through Sarasota, tremendous pressure has been exerted to permit the establishment of suburban employment centers along its corridors (1). Continued demand for development along I-75 will increase the amount of interlocal travel on the Interstate thus contributing to the congestion and circulation problems not only on I-75, but other facilities as well.

Planning

Sarasota County grew with the automobile, which provided the mobility to accommodate the low-density urban growth that spread inland from the coast. New roads were built to supplement the early road system and to satisfy transportation needs in those areas east of the urban corridor along U.S. 41.

Plans were developed not only to accommodate future growth, but also to coordinate the development of an adequate road network to serve the desired land uses. A "Comprehensive Road Plan" developed in 1960 depicted a road system based upon urban expansion radiating inland and away from the Cities of Sarasota and Venice. This 1960 plan provided for the reservation of right-of-way for future roads in areas that had not yet developed. Additionally this 1960 plan depicted an interstate located as much as 10 miles east of the coastline. The right-of-way requirements specified by the 1960 road plan were later incorporated into the 1978 "Subdivision General Land Development and

FIGURE 36:
1927 ROAD MAP



SOURCE: SARASOTA COUNTY
PLANNING DEPARTMENT, 1968.

Road Construction Regulations for Sarasota County." However the plan itself was not implemented as a general road construction program throughout the County.

The adoption of the "1975 Sarasota County Thoroughfare Plan," as part of the Land Use Plan provided for the development of a major thoroughfare system to serve the urban areas of the County. The 1975 thoroughfare plan was significantly different from the 1960 plan. It depicted I-75 in its current alignment. The road system was consistent with the urban containment policy and was generally designed to serve the areas west and south of the interstate. This plan also introduced the concept of planning for different functioning levels of roadways to serve the urban areas.

In 1974, the Sarasota-Manatee Area Transportation Study (SMATS) was created in order to coordinate all transportation planning (local, County, State, federal) within the two-county area. Its emphasis is on planning for urban areas, as determined by federal regulations. The existing urbanized area of Sarasota County included in the study area is shown in Figure 37.

The Metropolitan Planning Organization (MPO) is composed of elected officials representing the various governmental entities located in the two counties. It is charged with preparing transportation plans and programming activities within the study area; more significantly, MPO approval is required for all non-local transportation programs within the prescribed area in order to be eligible for federal and State urban area transportation funds. Thus the MPO is and will continue to be a local forum available to Sarasota County for ensuring that transportation plans of neighboring communities are not in conflict with its own.

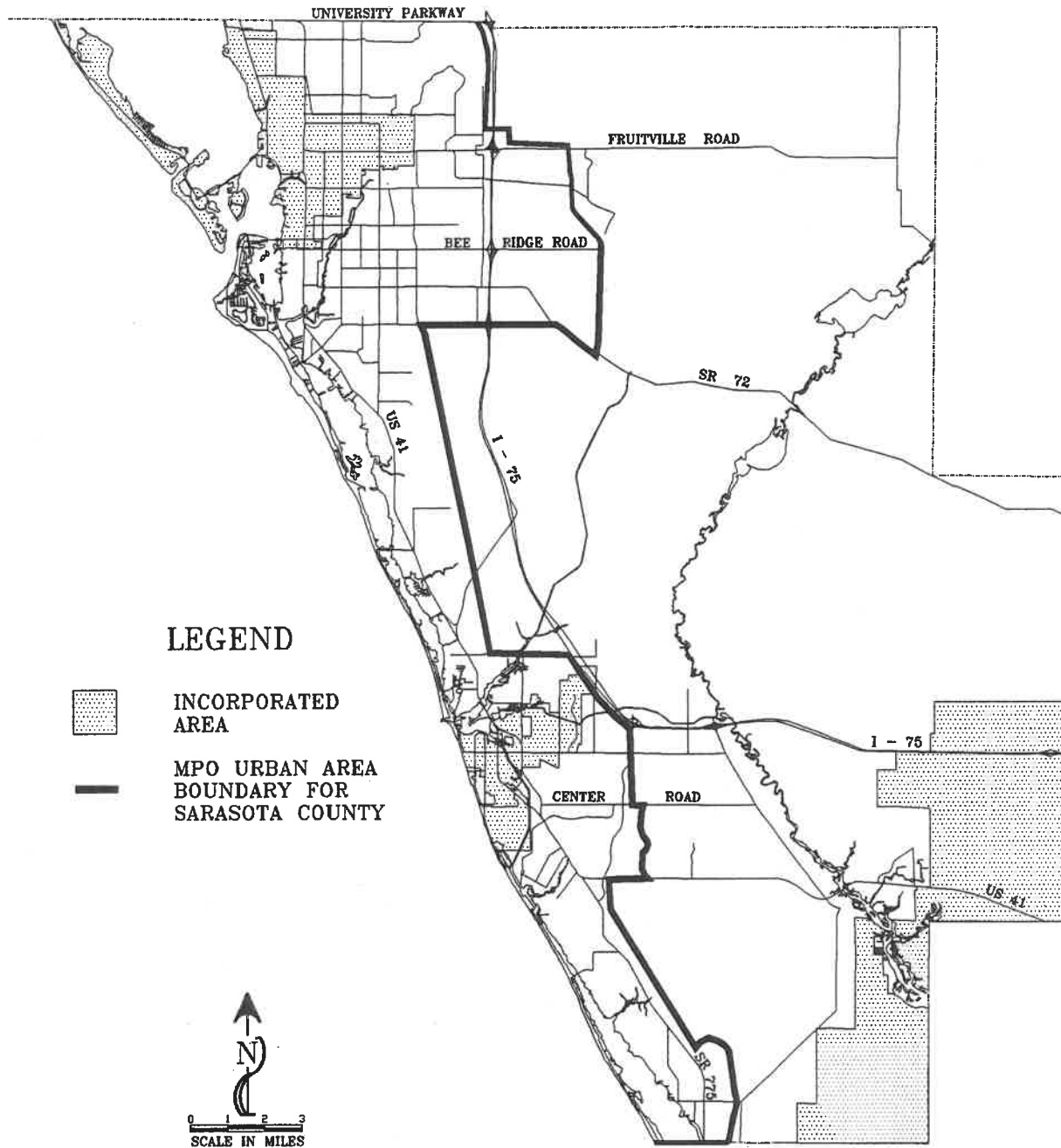
The MPO Technical Advisory Committee (TAC) is composed of representatives of the various planning and engineering departments within the MPO area. Its function is to provide technical advice and support to the MPO.

In 1979 the MPO adopted a Year 2000 Needs Plan for the entire study area from the City of Palmetto to Englewood. The Needs Plan identified major improvements and additions to the thoroughfare

system which were projected to be necessary by the year 2000. It was based on the projected transportation needs related to anticipated population growth and land use patterns as well as political, environmental and financial considerations. The MPO is now in the process of updating the long range plan for the two-county study area to identify the thoroughfare system that will be needed through the year 2010. The Sarasota County Planning Department has worked closely with the MPO to ensure that the year 2010 land use patterns were adequately represented in the MPO's Year 2010 Needs Plan. As a result, the land use data and population projections utilized in the MPO update are consistent with the updated Apoxsee Future Land Use Plan.

In addition to the long range needs plan, the MPO is responsible for the annual preparation of a Transportation Improvement Program (TIP). The TIP identifies State, County and municipal projects which are programmed for implementation within the next five-year period. The TIP is developed from data supplied by the Florida Department of Transportation and the Technical Advisory Committee (TAC) members from the Counties and Cities. The TIP includes information on the type of construction, estimated sources of funding, implementation schedule, and the agencies responsible for implementation.

In 1986 the MPO adopted a Comprehensive Bicycle Plan for Manatee and Sarasota Counties. This plan to date represents the best available data on bicycle transportation in the County. However, it does not include an inventory of bicycle paths. The purpose of this plan was to provide physical improvements to existing facilities, educating cyclists and motorists on road safety and efficiency, improving traffic behavior through encouraging police intervention, promoting increased use of bicycles as an alternative form of transportation, and institutionalizing and interrelating bicycle programs and policies within routine government operations and funding mechanisms.



LEGEND



-  INCORPORATED AREA
-  MPO URBAN AREA BOUNDARY FOR SARASOTA COUNTY

Figure 37: MPO Study Area

Source: Sarasota-Manatee Metropolitan Planning Organization, 1988.

Apoxsee - The Revised and Updated Sarasota County Comprehensive Plan

Inventory

The existing traffic circulation network within Sarasota County consists of road segments which are classified according to their functional relationship with adjacent land uses (see Figure 38 and Appendix E, Section 1). This hierarchical classification of road segments is based on the relationship between two primary functions of road networks, the movement of traffic and the degree of access to surrounding land uses. For example, an expressway, or interstate highway, with controlled limited access at interchanges provides for rapid free-flowing vehicular movement, whereas, the virtually unlimited access provided on local roads results in very restricted traffic flow.

The functional classifications of roadways, as adopted by the Florida Department of Transportation (FDOT) includes primary and minor arterials, urban and rural collectors and local roads, which are discussed below.

Classification

Arterial roads serve the primary function of mobility by accommodating a relatively continuous and high traffic volume with long average trip lengths at high operating speeds. Primary arterials generally link urban areas and serve major centers of activity in urban areas and have the highest traffic volume corridors, the longest trip purpose and carry a high proportion of the urban area travel on a minimum mileage.

Minor Arterials generally interconnect with, and augment primary arterial routes and provide service trips of shorter length and travel speed.

Collector roads collect and distribute traffic between local roads and arterials and provide a link between access to land use and mobility needs.

Local roads provide access to abutting property. These roads are characterized by having relatively low traffic volumes, short average trip lengths and minimal through traffic movements.

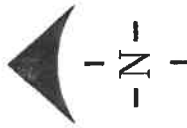
Sarasota County is currently responsible for the maintenance of 1,087 lane miles of roadway which equals the total miles of each lane of roadway. This total lane mileage excludes those roadways under the municipal jurisdictional responsibility of the Cities of Sarasota, Venice, North Port and the Town of Longboat Key and the 555 lane miles within the Florida Department of Transportation's jurisdiction.

In Sarasota County there are 395.3 lane miles of primary arterials, all within the FDOT jurisdictional responsibility. There are 186.7 lane miles of minor arterials in Sarasota County, of which the County is responsible for only 44.2 lane miles. Sarasota County is responsible for 418.4 lane miles of collectors, of which 46.8 lane miles are rural collectors. Figure 39 depicts the lane characteristics of the existing roadway network.

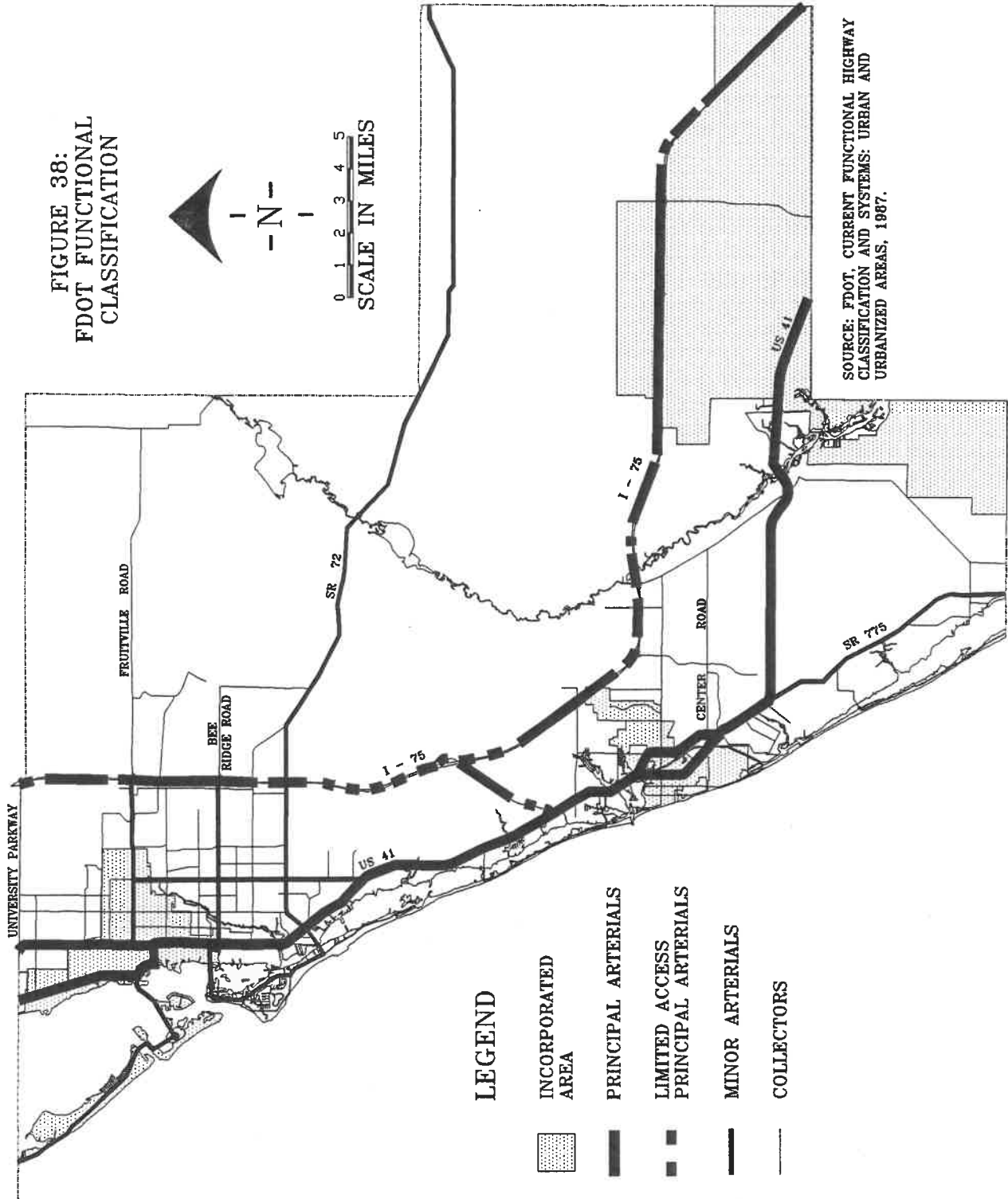
In the 1981 Apoxsee Traffic Circulation Chapter, neither the existing roadway network nor the thoroughfare plan utilized the FDOT functional classification system. The classification used in Apoxsee was similar to FDOT's system because both recognized the functional relationship of roadways with adjacent land uses and also recognized the inverse relationship between traffic movement and the degree of access to surrounding uses. The FDOT functional classification system was designed to represent the Statewide traffic circulation system and therefore, was not sensitive to the local dynamics of the Sarasota County roadway network. Consequently, many roads locally designated as major and minor arterials are urban collectors according to FDOT.

In the future, Sarasota County should work with FDOT in revising their functional classification of Sarasota County roads to more accurately reflect the existing functioning roadway network, consistent with Chapter 335.04, Florida Statutes and Rule 14-12, Florida Administrative Code.

FIGURE 38:
FDOT FUNCTIONAL
CLASSIFICATION



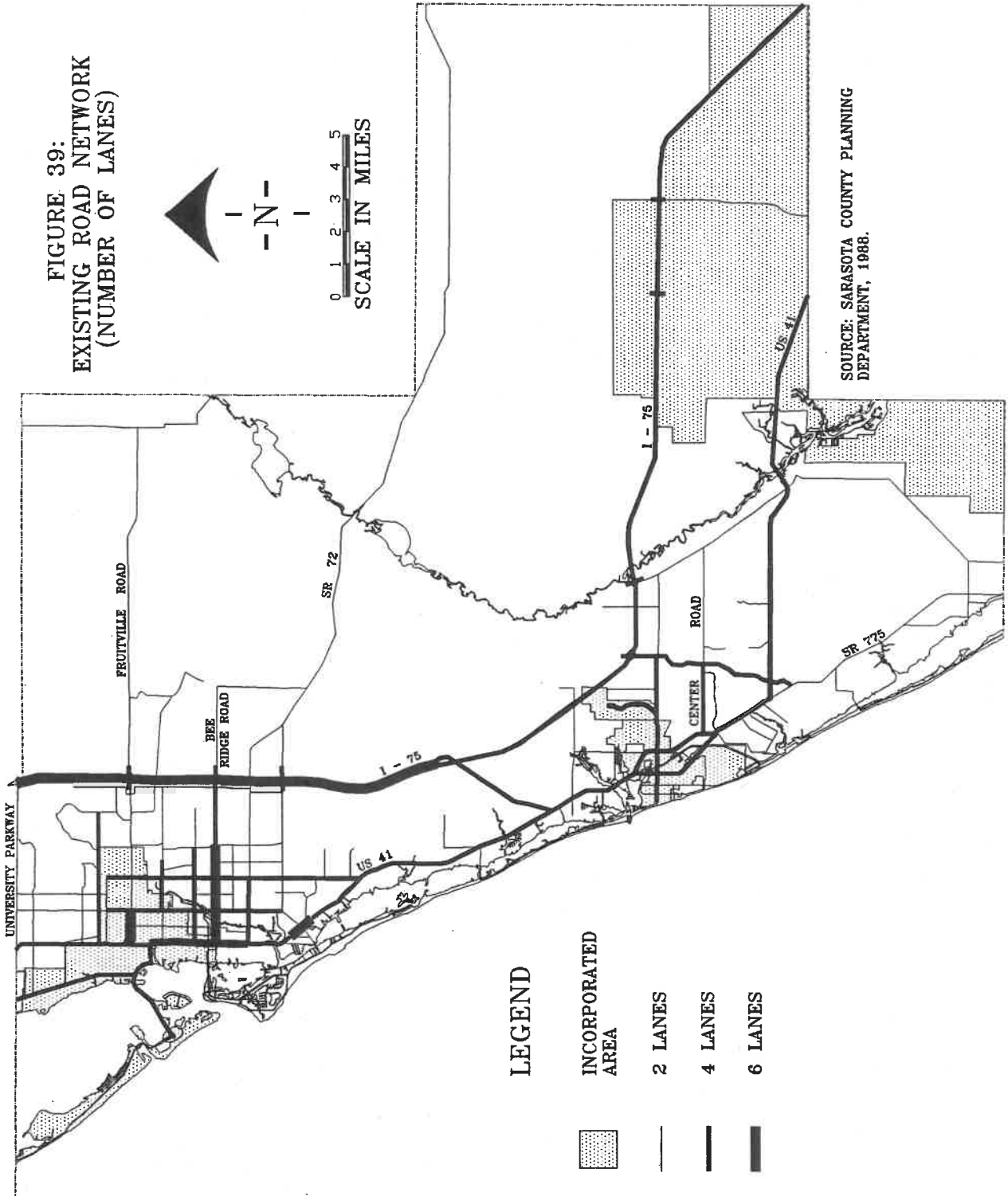
0 1 2 3 4 5
SCALE IN MILES



SOURCE: FDOT, CURRENT FUNCTIONAL HIGHWAY CLASSIFICATION AND SYSTEMS: URBAN AND URBANIZED AREAS, 1987.

LEGEND

FIGURE 39:
EXISTING ROAD NETWORK
(NUMBER OF LANES)



Analysis

The 1981 Traffic Circulation Plan

The 1981 Apoxsee Traffic Circulation Plan had as its goal the development of a thoroughfare system which integrates roadways, bikeways and pedestrian ways, is compatible with the environmental and aesthetic qualities of the community, meets the existing and future needs of the population, is economically feasible to construct and provides for the efficient provision of alternative modes of transportation. In order to accomplish this goal, the Plan required a Countywide construction program, maintenance program and bikeway plan. The Plan also required that a traffic analysis system be used to assess the traffic and road conditions, a traffic management system for identifying needed intersection improvements and all local transportation planning efforts be coordinated with the Metropolitan Planning Organization.

As stated in the Florida Transportation Plan (2), "transportation modes should be viewed as complementary services which together provide for the movement of people and goods." In order to achieve an efficiently operating thoroughfare system, the road network must be coordinated with surrounding land uses and with a complementary mix of other transportation modes such as transit, pedestrian and bicycle travel. The complete integration of all of these modes has yet to be accomplished in Sarasota County.

Currently, there is a road construction program specified in the Capital Improvements Program (CIP) and Sarasota County Ordinance No. 83-24, as amended, the Public Facilities Financing Ordinance. The current road program, as amended by Ordinance No. 87-140, includes 22 road segments on the County system that are scheduled for construction by Fiscal Year 1992. This list is contained in Table 16. Programmed new construction is consistent with the 1981 Apoxsee Traffic Circulation Map in terms of the location of the new

roadways and extensions of existing roadways. Similarly, a road maintenance program exists and is funded through the CIP.

The 1981 Traffic Circulation Plan called for a program to protect planned rights-of-way from future development. To date, a comprehensive program to protect planned rights-of-way has not been initiated. The road construction program would be greatly strengthened by not only a program to protect existing and future rights-of-way, but also an advanced rights-of-way acquisition program. These programs would assure the ability to construct new or expand existing facilities by protecting future needed rights-of-way (ROW) from development.

With regard to road construction and maintenance programs, the Plan encouraged the use of interdisciplinary design teams to prepare special highway studies which incorporate local environmental and aesthetic concerns. Additionally, the Plan addresses the need to ensure that the integrity of existing neighborhoods is protected in road construction and maintenance activities.

The Plan also required the development of a program to maintain substandard roads. Currently, there are approximately 200 miles of County owned but not maintained substandard roads which are carry-overs from previous policies which permitted substandard roads to be deeded to the County without being included in the maintenance program. Presently, it is the policy of the County to accept additional roads for maintenance which are built to County standards only. In 1984 Ordinance 84-43 was adopted to permit the establishment of individual Public Improvement Districts to fund improvements to public roads and for drainage. However, the maintenance of private roads rests solely with the homeowners or associations of homeowners. Aside from identifying the responsibility for the maintenance of private roads, no mechanism exists to ensure that such roads will be maintained.

To date, Sarasota County has not adopted a Countywide bikeway plan which was called for in the 1981 plan. Where possible, in new construction or reconstruction of roadways functioning as collec-

Table 16: Sarasota County Scheduled Road Construction Program, 1988-1992

Facility	Description	Facility Type	Facility Location
1988			
Lockwood Ridge Road	Const 4L	Collect	17th Street to Myrtle Street
Laurel Road	4L/Const 2L	Collect	U.S. 41 to I-75
Jacaranda Boulevard	2L to Ex 2L	Collect	Venice Avenue to Center Road
Palmer Boulevard	Const 2L	Local	I-75 to Niobe
DeSoto Road	Wid to 4L & 3L	Collect	U.S. 41 to U.S. 301
Unnamed	Acquire R/W	Min Art	DeSoto Road to U.S. 301
1989			
Lockwood Ridge Road	Const 4L	Collect	Myrtle Street to University Parkway
Honore Avenue	2L in 4L R/W	Min Art	Longmeadow to County Line
Auburn Road	Reconstruct	Local	Venice Avenue to Border Road
Pine Street	Const 2L in 4LR/W	Collect	S.R. 775 to Dearborn-S. River Road
1990			
Unnamed	Const 4L	Min Art	DeSoto Road to U.S. 301
Albee Farm Road	Const 4L	Collect	U.S. 41 Bypass to Laurel Road
1991			
Bahia Vista Street	Wid 4L W/2BR	Collect	Beneva Road to Cattlemen Road
Laurel Road	Add 2L to Ex 2L	Collect	Albee Farm Road to Haul Road
University Parkway	Add 2L to Ex 2L	Min Art	U.S. 301 to I-75
Dearborn Street	Const 4L	Collect	Indiana Avenue to Pine Street
Lockwood Ridge Road	Const 2L	Local	Gypsy Street to Wilkinson Road
Ortiz Boulevard	Const 4L	Collect	U.S. 41 to Warm Mineral Springs
1992			
Webber Street	Resur & Const 2L	Collect	McIntosh Road to Cattlemen Road
Colonia Avenue	Const 4L W/BRS	Collect	Albee Farm Road to City Limits
Cattlemen Road	Add 2L to Ex 2L	Collect	Bee Ridge Road to Proctor Road

Source: Sarasota County Planning Department, 1988.

tors or greater, outside lanes have been widened to accommodate bicycle traffic consistent with standards set by the Florida Transportation Plan. However, there continues to be a need to integrate bicycle traffic into the overall transportation network.

Just as the need to recognize and integrate bicycle travel, there is a need to accommodate pedestrian needs into the overall County transportation network. Guidelines and criteria should be developed

to assess the need to provide for pedestrian access in the design of roadways and residential and nonresidential developments.

The Traffic Circulation Plan also required the ongoing analysis of road and traffic conditions, the identification of needed intersection improvements, and the coordination of all transportation planning with MPO. With regard to a traffic analysis program, the Sarasota County Transportation Department assesses the impacts of development

proposals on the thoroughfare system and identifies needed system improvements. However, traffic system management techniques useful in identifying needed intersection improvements have not yet been incorporated into the traffic analysis program. Since the creation of the MPO in 1975, all local transportation plans and programming activities have been coordinated with the plans of the MPO, particularly the Year 2010 Needs Plan.

Existing Roadways

Level of Service

The determination as to whether the existing roadways can adequately serve the existing and future demands is predicated on the ability to estimate the maximum amount of traffic a roadway can safely accommodate. The establishment of threshold standards for roadway types or levels of service (LOS) are used to identify needed system improvements, either by the expansion of existing facilities, constructing new facilities, creating parallel facilities, or the use of alternative modes of travel.

While the principle objective of capacity analysis is to estimate the maximum amount of traffic that can be accommodated by a given roadway, such an analysis would be of limited value given that roadways generally operate poorly near capacity and are rarely planned or designed to operate near or at capacity. Therefore, capacity analysis is best used to estimate the traffic-carrying ability of a given roadway over a range of defined operational conditions. The definition of operational conditions is accomplished using level of service criteria.

The concept of level of service is defined as a qualitative measure describing operational conditions within a stream of traffic and the perception of those conditions by motorists and passengers. A level-of-service category or level generally describes these conditions in terms of speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.

Six levels of service have been defined, with LOS A representing the best operating conditions and LOS F the worst. Operating conditions under these levels-of-service are:

* **LOS A:** Motorists are unaffected by the presence of others in the stream of traffic. Freedom to select desired speeds and to maneuver within the stream of traffic is extremely high. The general level of comfort and convenience is excellent.

* **LOS B:** Freedom to select desired speeds is relatively unaffected, but there is a reduction in the freedom to maneuver within the stream of traffic. The level of comfort and convenience is less, because the presence of others in the stream of traffic begins to affect individual motorist behavior.

* **LOS C:** Motorists become significantly affected by the interactions with others within the stream of traffic. The selection of speed is affected, and maneuvering within the stream of traffic requires substantial effort on the part of the motorist. Comfort and convenience declines noticeably at this level.

* **LOS D:** Speed and freedom to maneuver are severely restricted, and a poor level of comfort and convenience is experienced by the motorist. Small increases in traffic will generally cause operational problems at this level.

* **LOS E:** Operating conditions are at or near capacity. All speeds are significantly reduced. Freedom to maneuver is difficult. Comfort and convenience is extremely poor, and motorist frustration is generally high.

* **LOS F:** Operating conditions at this level are forced or have broken down. This condition exists wherever the amount of traffic approaching a point exceeds the amount that can traverse the point. Queues typically form at such locations. Operations are characterized by stop-and-go waves; vehicles may proceed at reasonable speeds for short distances, and then be required to stop in a cyclical fashion. Comfort and convenience is extremely poor, and frustration is high.

These definitions are general and apply primarily to roadway facilities having uninterrupted traffic flows, such as freeways. For each type of roadway facility, levels of service activities are based on one or more operational parameters or "measures of effectiveness." Basic measures of effectiveness used to define levels of service for different types of roadway facilities include: (a) average travel speed; (b) density; (c) delay; and (d) volume.

* Excerpts taken from Special Report No. 209: Highway Capacity Manual (1985); Transportation Research Board

State Highway System Levels of Service

On December 16, 1988, FDOT adopted new LOS standards to be used by the Department in developing its transportation plans for the State highway system and also to address issues related to the preparation and implementation of local government comprehensive plans. The standards reflect a broad consensus on land use/transportation issues and are designed for use in general planning applications; they should not be used for detailed design or traffic operation analyses.

The FDOT LOS standards for rural areas, transitioning urbanized or incorporated areas and incorporated areas beyond an existing urban area is "C" peak hour for freeways and principal arterials and "D" peak hour for minor arterials and other facilities. For existing urban areas, the FDOT LOS is "D" peak hour for freeways and principal arterials and "E" peak hour for minor arterials and other facilities. The adopted LOS standards designate the lowest quality design hour as the 30th highest hour. This design hour is to be used for the present through a 20 year planning horizon.

Included in the FDOT LOS standards are four categories of special consideration: special transportation areas, which may include central business districts or areawide DRI's; roadways parallel to exclusive transit facilities, such as metro rail; constrained facilities; and backlogged facilities. At the present time, there are no "special transportation areas" or "exclusive transit facilities" in the unincorporated portion of Sarasota County. Therefore, the State LOS standards that apply to these categories are not discussed in this section.

Constrained facilities are defined as roadways operating below minimum acceptable operating speed for which it is cost prohibitive to add at least two additional through lanes, or which have met maximum through lane standards. Backlogged facilities are defined as facilities which are operating below acceptable operating speed and are not scheduled for major capacity improvements in the FDOT Five Year Work Program.

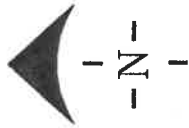
The FDOT LOS for constrained facilities is the maintenance of the existing operating conditions and the commitment from local governments to not further degrade the operating conditions below the current average travel speed. For backlogged facilities, the FDOT LOS is the maintenance of the existing operating conditions of the roadway until the roadway is upgraded, at which time the roadway should operate at or above the adopted minimum standards. A copy of "Operating Level of Service Standards for the State Highway System" is provided in Appendix E, Section 4.

Analysis of Existing Conditions

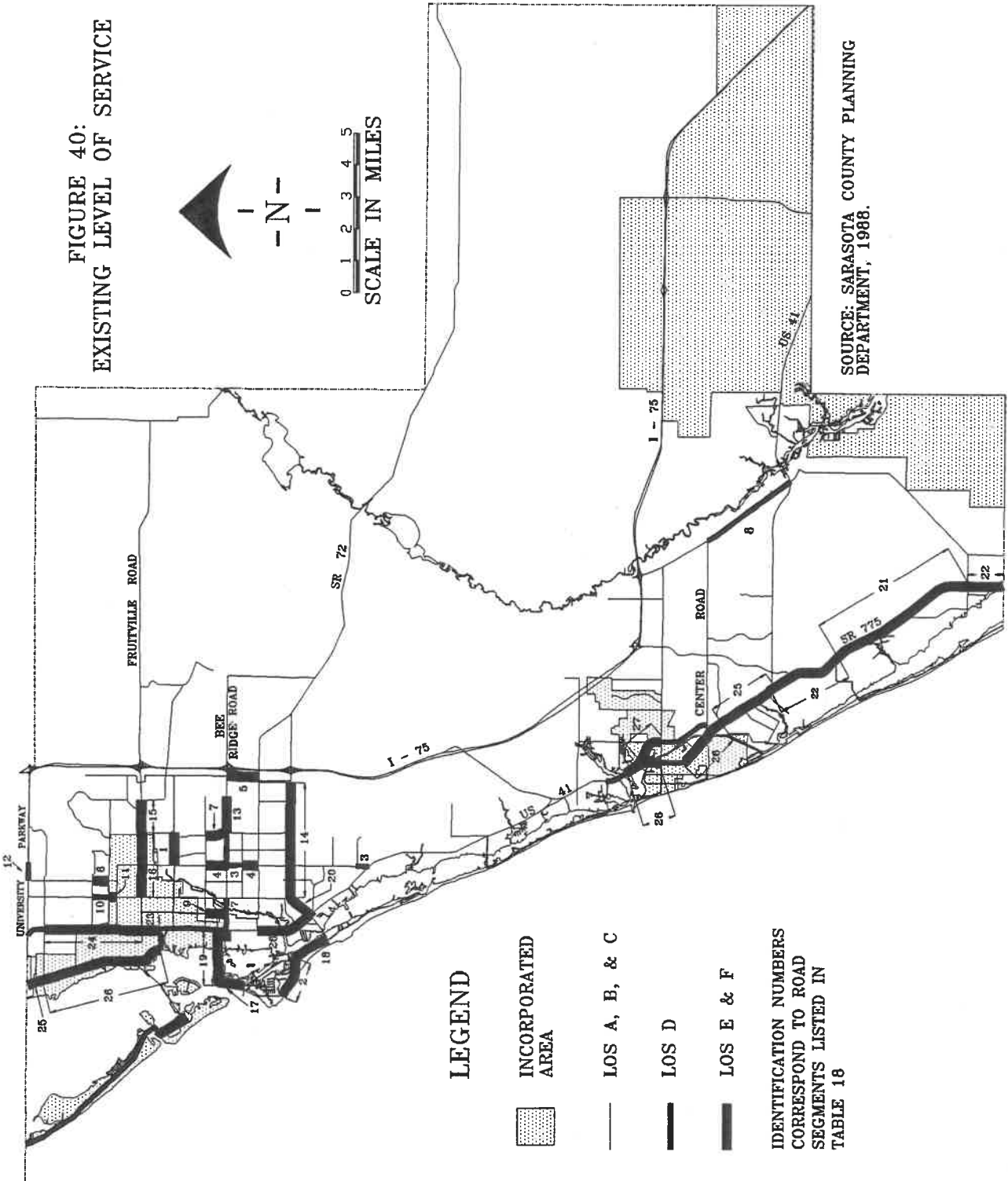
An analysis of the existing levels of service (LOS) was performed for all State and County roadways in Sarasota County as well as selected municipal roadways determined to be key elements of the County road network. The analysis took into consideration 1987 traffic counts as well as all State, County, and other roadway improvement projects which, according to the MPO's TIP, were underway and scheduled to be completed by the end of 1988. Support documentation for the LOS analysis is compiled in a series of seven technical reports and nine technical memoranda published by the Sarasota County Planning Department in August, 1988. This analysis provides a segment-by-segment evaluation of the existing road network, as shown on Figure 40, and also provides the technical background for determining an acceptable LOS standard for Sarasota County. A summary of the methodology used in preparing the LOS analysis can be found in Appendix E, Section 2.

The analysis of existing levels of service indicates that approximately 172 lane miles, are currently operating at Level of Service "D" peak hour or lower. This represents approximately 16 percent

FIGURE 40:
EXISTING LEVEL OF SERVICE



0 1 2 3 4 5
SCALE IN MILES



SOURCE: SARASOTA COUNTY PLANNING DEPARTMENT, 1988.

LEGEND

INCORPORATED AREA

LOS A, B, & C

LOS D

LOS E & F

IDENTIFICATION NUMBERS CORRESPOND TO ROAD SEGMENTS LISTED IN TABLE 18

of the current road network of arterials and collectors. Only 26.9 lane miles, or approximately 13 linear miles, of these road segments are within the jurisdictional responsibility of Sarasota County. Table 17 presents a comparison between the State and County systems, displaying the total lane miles operating below LOS "D" peak hour and LOS "E" peak hour for each jurisdiction. A list of deficient road segments, based on a LOS standard of "C" peak hour for County roadways and the adopted FDOT LOS for State roads, is provided in Table 18.

Adoption of Roadway Levels of Service

The adoption of LOS for roadways in Sarasota County will provide a basis for assessing the impacts of land use decisions and identify needed roadway system improvements. The analysis provided in Appendix E, Section 2 supplies the rationale for Sarasota County to adopt a minimum operating level of service standard of "C", peak hour, based on a 100th hour design criteria as its goal for roadways under its jurisdiction.

The achievement of the above standard would provide a balance between economic efficiency and the availability of adequate service levels throughout most of the year, with roadways functioning at a level of service below "C", for no more than 100 hours during the year. This factor takes into account the unique nature of Sarasota County's seasonal population fluctuations and the

resulting peak periods of traffic volumes. It represents a community tolerance level that equates, for example, to accepting congested conditions for approximately two hours per day either: a) every Friday afternoon throughout the year at suburban locations such as Venice Avenue west of the intersection at Jacaranda Boulevard; or b) every Wednesday through Friday afternoon during the "winter season" at urbanized locations such as U.S. 41 south of Bee Ridge Road.

Although the level of service standard described above provides an overall goal toward which the County can strive, the adoption of a level of service as high as "C" peak hour, based on a 100th hour design criteria, for constrained and backlogged roadways would not be environmentally or economically feasible. Constrained County roadways are defined as exhibiting a level of service lower than the adopted standard and not being able to attain the adopted standard because prohibitive costs or environmental limitations prevent the construction of at least two additional through lanes. Backlogged County facilities are defined as roadways operating below the adopted standard which do not have prohibitive financial or environmental constraints but are not scheduled for major capacity improvement in the County's Five-Year Schedule of Capital Improvements.

Table 17: Peak-Hour Roadway LOS By Jurisdiction

	Total Lane Miles	LOS D Or Worse		LOS E Or Worse	
		Lane Miles	%	Lane Miles	%
FDOT	554.6	145.0	26	106.5	19
Sarasota County	509.8	26.9	5	14.9	3
Total Lane Miles	1064.4	171.9	16	121.4	11

Notes: Reflects existing roadway plus improvements under construction and scheduled to be completed during FY1987; see Sarasota County MSTU FY88-FY92 Capital Improvements Program and FDOT FY 87-FY 92 Five Year Construction Program.
Level of Service determinations based on 1985 Highway Capacity Manual Procedures.

Source: Sarasota County Planning Department, 1988.

Table 18: Deficient Road Segments, 1987

<u>Roadway Name</u>	<u>Length</u>	<u>LOS</u>
<i>Sarasota County</i>		
1. Bahia Vista Street	.9	E
2. Beach Road	1.2	E
3. Beneva Road	.7	D
4. Beneva Road	1.2	F
5. Cattlemen Road	1.0	F
6. Lockwood Ridge Road	.5	F
7. McIntosh Road	.7	F
8. River Road	3.0	D
9. Shade Avenue	.7	E
10. Tuttle Avenue	.5	D
11. Tuttle Avenue	.3	F
12. University Parkway	1.1	D
<i>FDOT</i>		
13. Bee Ridge Road	1.4	F
14. Clark Road	3.5	F
15. Fruitville Road	1.0	E
16. Fruitville Road	2.0	F
17. Higel Avenue	.9	F
18. Midnight Pass Road	1.2	F
19. Siesta Drive	1.4	F
20. Stickney Point Road	.8	F
21. S.R. 775	4.6	E
22. S.R. 775	3.6	F
23. U.S. 301	.7	E
24. U.S. 301	2.9	F
25. U.S. 41	2.7	E
26. U.S. 41	9.3	F

Source: Sarasota County Planning Department, 1988.

The adoption of a level of service standard for State facilities must consider the standard adopted by FDOT. If the County were to adopt a higher level of service standard on State facilities, the burden would rest on the County to prove that such a LOS could be maintained. The County's acceptance of constrained and backlogged roadways on both the State and County systems, however, presumes an additional responsibility on the part

of the County in its review and approval of development orders: to base such decisions on maintaining the existing level of service of such roadways and to not allow the existing operating conditions to be degraded.

One strategy for maintaining roadway conditions on constrained and backlogged facilities is the adoption of Impact Management Plans developed in coordination with FDOT, the MPO, the Regional Planning Council, and other affected jurisdictions. The adoption by Sarasota County of Impact Management Plans would provide for inter-governmental coordination and would address the following:

- guidelines to be utilized by the private sector to address the impacts of proposed development;
- the establishment of funding contributions if necessary for improvements to the deficient roadway;
- the identification of needed system improvements such as access control or intersection improvements necessary to mitigate or improve the LOS on the deficient roadway;
- commitments for providing alternate transportation modes, such as mass transit; and
- identification and commitment of long range system improvements to eliminate LOS deficiencies.

Accident Frequency Data

At the time the analysis of existing roadway conditions was being completed, accident frequency data were unavailable. Because such data are useful in identifying needed roadway or intersection improvements, future analyses of roadway conditions should consider the analysis of applicable accident frequency data.

Future Roadway Levels of Service

A projection of future LOS was performed for the year 1994. In addition to the existing road network, road projects which are scheduled for completion by the end of 1994 were incorporated into the

analysis. These projects include the County's proposed 1990-1994 road construction program as listed in the Capital Improvements Plan and presented in Table 19; other projects identified in the MPO's Transportation Improvement Program; and State projects in FDOT's Five Year Work Program.

Table 19: Proposed Construction Program, 1990-1994

Facility	Description	Facility Type	Facility Location
1990			
Airport Connector	Const 4L	Maj Art	DeSoto Road to University Parkway
Albee Farm Road	Const 4L	Collect	U.S. 41 Bypass to Laurel Road
McIntosh Road	Const 4L	Min Art	Bee Ridge Road to Bahia Vista Street
1991			
Proctor Road	Const 4L	Min Art	Beneva Road to McIntosh Road
Bahia Vista Street	Const 4L	Min Art	Beneva Road to McIntosh Road
University Parkway	Const 4L	Maj Art	U.S. 301 to I-75
Dearborn Street	Const 4L	Min Art	Indiana Avenue to Pine Street
Lockwood Ridge Road	Const 2L	Collect	Gypsy Street to Wilkinson Road
Ortiz Boulevard	Reconst	Collect	U.S. 41 Intersection
1992			
Webber Street	Const 4L	Collect	McIntosh Road to Cattlemen Road
Pine Street	Const 2L	Maj Art	Keyway Bypass to U.S. 41
Tuttle Avenue	Reconst 4L	Min Art	Siesta Drive to 17th Street
1993			
Honore Avenue	Const 4L	Maj Art	Clark Road to Bee Ridge Road
Myrtle Street	Const 2L	Collect	U.S. 301 to Lockwood Ridge Road
Pinebrook Road	Const 4L	Maj Art	Center Road to North City Limits
1994			
Capri Isles Boulevard	Const 4L	Collect	City Limits to Laurel Road
Center Road	Const 4L	Maj Art	Jacaranda Blvd. to Plantation Blvd.
Laurel Road	Const 4L	Maj Art	Albee Farm Road to Haul Road
Longmeadow Drive	Const 4L	Collect	17th Street to Honore Avenue

Note: This list includes only proposed major new construction or reconstruction projects; resurfacing and widening projects are included in the Capital Improvements Chapter. Projected 1994 Levels of Service for roadways in Sarasota County, assuming the completion of this program, are depicted on Figure 41.

Source: Sarasota County Planning Department, 1988.

Major capacity enhancing road projects scheduled during the next five years by the Florida Department of Transportation include completion of the Fruitville Road widening project; widening U.S. 41 to six lanes from Proctor to Stickney Point; widening of S.R. 72 (Clark Road) to six lanes from U.S. 41 to I-75 and the four laning of S.R. 775 from the Charlotte County line to Dearborn Street.

Future traffic volumes were projected for this 1994 road network by applying growth factors to past trends. A summary of this LOS analysis is provided in Appendix E, Section 2. If all of the assumptions made in this 1994 evaluation procedure hold true, roadways listed in Table 20 are projected to be deficient in 1994 and shown on Figure 41.

Some of the projected 1994 deficient roadways are currently operating at or above LOS "C" peak hour, based on a 100th hour design criteria, or, where applicable, the adopted FDOT LOS standard. At this time, these roadways do not warrant special consideration as constrained or backlogged facilities. The roadways which are listed in both Table 18 and in Table 20 are the only ones that meet the definition of constrained or backlogged facilities.

Year 2010 Future Thoroughfare Plan

The Sarasota County Year 2010 Future Thoroughfare Plan, which identifies the general location and type of roadways needed to accommodate the traffic circulation system needs through the year 2010, is presented on the "Future Land Use Plan Map, Sarasota County - 2010", Figure 42: Year 2010 Future Thoroughfare Plan (Functional Classification), Figure 43: Year 2010 Future Thoroughfare Plan (By Lanes) and in Appendix E, Section 3. The Year 2010 Future Thoroughfare Plan utilizes a functional classification system more closely designed to recognize the County road system than the FDOT classification system discussed earlier. This more localized functional classification system is a minor expansion of the classification system used in the 1981 Apoxsee Traffic Circulation Plan by using six types of roadways in Sarasota County: freeways/expressways, major

Table 20: Projected 1994 Deficient Roadways By Jurisdiction

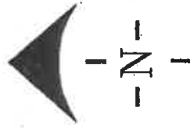
Roadway Name	Length	LOS
<i>Sarasota County</i>		
1. Beach Road	1.2	F
2. Beneva Road	3.7	D
3. Beneva Road	1.0	E
4. Beneva Road	2.7	F
5. Ocean Boulevard	2.4	F
6. River Road	3.0	D
7. Shade Avenue	1.0	E
8. Shade Avenue	.7	F
9. Tuttle Avenue	.5	E
10. Tuttle Avenue	1.3	F
11. I-75 (S.R. 93)	5.5	D
<i>FDOT</i>		
12. Higel Avenue	1.0	F
13. Midnight Pass Road	1.2	F
14. Ringling Causeway	1.1	F
15. Siesta Drive	1.4	F
16. S.R. 775	2.6	F
17. U.S. 301	4.1	F
18. U.S. 41	2.5	E
19. U.S. 41	15.7	F
20. U.S. 41 By-Pass	2.9	F
21. U.S. 41 By-Pass	.35	E

Source: Sarasota County Planning Department, 1988.

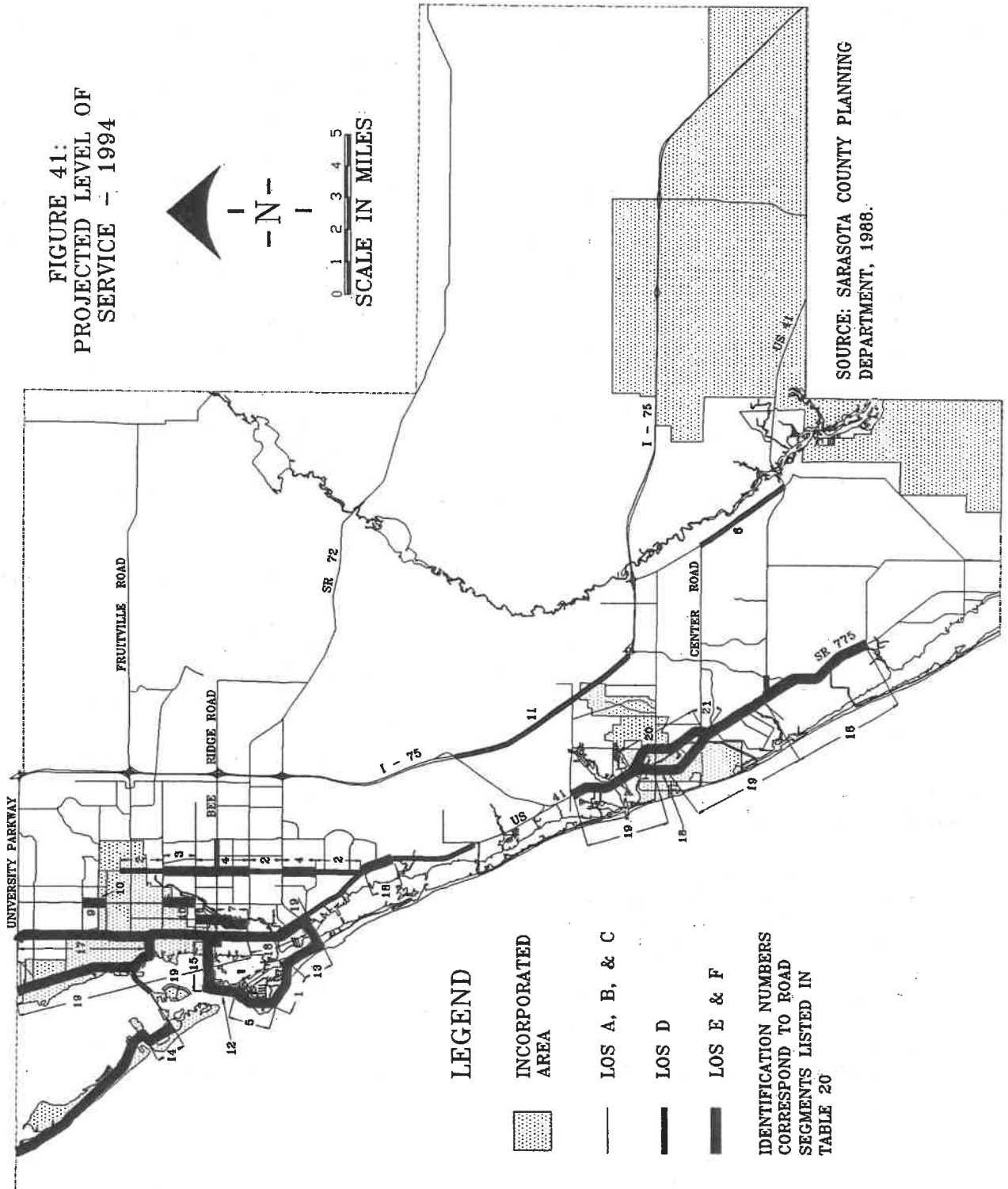
arterials, minor arterials, major collectors, minor collectors and local roads. Each of these categories of roadways is discussed below:

- **Freeways/Expressways** are controlled access facilities with grade separated intersections providing for interregional and/or interstate travel at high operating speeds. Typically, expressways accommodate high volumes of traffic.

FIGURE 41:
PROJECTED LEVEL OF
SERVICE - 1994







0 1 2 3 4 5
SCALE IN MILES



SOURCE: SARASOTA COUNTY PLANNING
DEPARTMENT, 1988.

LEGEND

-  INCORPORATED AREA
-  LOS A, B, & C
-  LOS D
-  LOS E & F

IDENTIFICATION NUMBERS
CORRESPOND TO ROAD
SEGMENTS LISTED IN
TABLE 20

- **Major Arterials** facilitate relatively long trip lengths at moderate to high operating speeds with somewhat limited access to adjacent properties. Major arterials generally serve major centers of activity in urban areas and have the highest traffic volume corridors.
- **Minor Arterials** provide somewhat shorter trip lengths than major arterials and generally interconnect with and augment major arterial routes at moderate operating speeds, and allowing somewhat greater access to adjacent properties than major arterials.
- **Major Collectors** collect and distribute significant amounts of traffic between arterials, minor collectors and local roads at moderate to low operating speeds. Major collectors provide for more accessibility to adjacent properties than arterials.
- **Minor Collectors** collect and distribute moderate amounts of traffic between arterials, major collectors and local roads at relatively low operating speeds with greater accessibility than major collectors.
- **Local Roads** generally provide access to abutting properties. Local roads possess relatively low traffic volumes, operating speeds and trip lengths and minimal through traffic movements.
- The overall traffic circulation system should be viewed in terms of the interrelated modes of travel, including not only the automobile but also pedestrian, bicycle and mass transit. Recognizing the interrelationships among all modes of travel will increase the effectiveness of the overall thoroughfare system in providing for the movement of goods and people.
- Consistency with the Environment Plan regarding facilities on the barrier islands and in the Coastal High Hazard Areas will reduce the need to maintain facilities subject to repeated storm damage and discourage further intensification of development in these areas.
- Development of a future right-of-way protection and acquisition program will ensure sufficient rights-of-way (ROW) will be protected for future use by identifying, where possible, future needed ROW, committing funds for acquiring such ROW and designating minimum ROW needed by facility type.
- The development of standards for controlling vehicular access onto major thoroughfares, and for providing for safe vehicular accessways within developments will assist in providing for a safe, convenient and efficient traffic circulation system.
- The coordination of the Sarasota County Traffic Circulation Plan with the plans of the State, the Regional Planning Council, the local Metropolitan Planning Organization and adjacent jurisdictions will ensure that the regional thoroughfare issues are addressed.
- The establishment of programs to develop a data base on bicycle travel and pedestrian movement would be instrumental in future pedestrian and bicycle planning.
- The development of an accident frequency data base would be useful in identifying needed intersection and roadway improvements.

Planning Options

- The establishment of minimum acceptable Level of Service (LOS) standards is essential for preserving and enhancing the Sarasota County thoroughfare system. There is, however, a need to recognize the constraints preventing the attainment of the desirable LOS due to physical or financial limitations or the lack of jurisdictional responsibility.

- The adoption by Sarasota County of Impact Management Plans for those State facilities below the FDOT LOS and for County facilities below LOS C "peak hour" will ensure that such roadways will not be further degraded by development. Such plans will include the identification of strategies to be used to mitigate the impacts of development; the identification of means to improve the LOS; commitments for funding necessary improvements; and the identification of long range plans to eliminate LOS deficiencies.

Constraints

- Two principal constraints in obtaining an overall acceptable LOS on the thoroughfare system are the funding of the needed improvements and the ability to construct the needed system improvements concurrent with the system needs.
- In addition to being required to establish minimum operating LOS for State facilities for which the County has neither the funding nor scheduling authority for necessary improvements, the County is charged with assuring that LOS on those facilities do not fall below the FDOT LOS. The difficulty in attempting to maintain or improve the LOS on State facilities is further compounded because it cannot be assumed that LOS is a direct result of local development only.

Traffic Circulation Plan

Goal 1

It shall be the Goal of Sarasota County to develop and maintain a safe, convenient, efficient transportation system which: recognizes present need; reflects the Future Land Use Plan and the plans of adjacent jurisdictions; provides for an affordable balance of alternative transportation modes; and respects the integrity of environmentally sensitive areas.

Objective 1.1

Development of a future thoroughfare system, consistent with the adopted Year 2010 Future Thoroughfare Plan and Maps, shall be based on the Future Land Use Plan and coordinated with the plans of adjacent jurisdictions.

Policy 1.1.1.

Develop a Countywide Road Construction and Maintenance Program to provide for the construction and maintenance of a thoroughfare system consistent with the adopted Year 2010 Future Thoroughfare Plan and Maps (Figure 42: Year 2010 Future Thoroughfare Plan - Functional Classification; Figure 43: Year 2010 Future Thoroughfare Plan - By Lanes; and Appendix E, Section 3).

Additionally, where possible the Countywide Road Construction and Maintenance Program should:

- be economically feasible to construct;
 - accommodate pedestrians and bicyclists;
 - balance the need for roadway projects based on road conditions and level of service standards with the need for roadway projects to accommodate future needs;
- and

- include an annual component consisting of signalization, timing and other types of systems management improvements as a means to attain a more efficient level of service, and site specific safety improvements.

Policy 1.1.2.

Develop a comprehensive traffic analysis system by 1990 to monitor and analyze traffic and road conditions on an ongoing basis in order to assess the need for revisions to the Year 2010 Future Thoroughfare Plan and Maps, the Countywide Road Construction and Maintenance Program or the need for new or increased transit service. The monitoring and analysis program shall:

- include a continual inventory of County-owned and maintained roads in the County thoroughfare system;
- be capable of assessing the impacts of proposed developments on roadway system levels of service;
- be capable of monitoring traffic conditions and investigating the application of traffic system management (TSM) techniques to maintain the function of the existing and future thoroughfare system, and increase its efficiency; and
- include the analysis of applicable accident frequency data.

Policy 1.1.3.

All construction and maintenance of the thoroughfare system shall be consistent with the Environment Plan specifically with regard to:

- discouraging where possible the maintenance of transportation facilities in Coastal High Hazard Areas subject to repeated storm damage and considering the relocation of such facilities which are determined to be in the best interest of the public health, safety and welfare; and
- discouraging the expansion of existing transportation facilities on or onto the urbanized Barrier Islands unless: a) the expansion will not encourage the further development on the Barrier Islands; b) the expansion will provide for the safe movement of traffic; and c) the expansion will assist in the safe evacuation of the resident and seasonal population.

Policy 1.1.4.

Coordinate with the Sarasota-Manatee Metropolitan Planning Organization, Florida Department of Transportation, and the Federal Highway Administration to investigate the need and feasibility for designating a new interchange in the Year 2010 Future Thoroughfare Plan and Maps in the vicinity of the extension of Livingstone Street at I-75. However, this is not intended to conflict with or delay the planned construction of the Laurel Road Interchange at I-75.

Objective 1.2

Sarasota County shall provide for the protection and acquisition of existing and future rights-of-way.

Policy 1.2.1.

Sarasota County shall adopt and implement an advanced right-of-way acquisition program within one year of the adoption of Apoxsee as amended.

Policy 1.2.2.

The Capital Improvements Chapter and Plan shall contain a line item each year for advanced right-of-way acquisition.

Policy 1.2.3.

Sarasota County shall adopt a program to protect existing and future rights-of-way within one year of the adoption of Apoxsee, as amended.

Objective 1.3

Sarasota County shall provide for a safe, convenient and efficient traffic circulation system.

Policy 1.3.1.

Sarasota County shall adopt and maintain a Level of Service (LOS) standard of "C" peak hour, based on a 100th hour design criteria (hereafter referred to as LOS "C"), for all County maintained arterials and collectors except those roadways which have been designated as either constrained or backlogged facilities. Constrained County facilities are defined as roadways operating below LOS "C" which are not capable of attaining LOS "C" because prohibitive costs or environmental limitations prevent the construction of at least two additional through lanes. Backlogged County facilities are defined as roadways operating below the LOS "C" standard which do not have prohibitive financial or environmental constraints but are not scheduled for major capacity improvements in the County's Five-Year Schedule of Capital Improvements (Table 80 in the Capital Improvements Chapter). For the purposes of implementing this Policy, the designated constrained and backlogged County facilities are listed in Table 21.

Policy 1.3.2.

Sarasota County shall adopt the same operating level of service standards, as adopted by the Florida Department of Transportation in Standards #525-000-005-a, with an effective date of November 28, 1988, for all State maintained roadways affected by land use decisions in the unincorporated areas of Sarasota County. Florida Department of Transportation Standards #525-000-005-a is provided for reference in Ap-

pendix E, Section 4. Any future changes in the State operating level of service standards by the Florida Department of Transportation will require consideration of a Comprehensive Plan amendment to ensure continued consistency with State standards. For the purposes of implementing this Policy, the designated constrained and backlogged State facilities are listed in Table 21.

Policy 1.3.3.

The review and approval of development orders shall ensure that such approval will not degrade the LOS of those constrained and backlogged roadways specified in Table 21, below that which exists on the date this Plan takes effect. For those roadways experiencing a Level of Service "F" on the effective date of the Plan, degradation of LOS shall be determined by specific operating thresholds, such as an average travel speed or volume/capacity ratios which will be adopted by Ordinance as part of the County's Concurrency Management System.

Policy 1.3.4.

Sarasota County shall adopt Impact Management Plans for all roadways designated as constrained or backlogged facilities in order to maintain the existing LOS on those roadways and to ensure that it is not further degraded. Impact Management Plans for each roadway shall include specific provisions for mitigating impacts and shall be coordinated with the Sarasota-Manatee Metropolitan Planning Organization, the Southwest Florida Regional Planning Council, the Florida Department of Transportation, and any other affected jurisdictional entity. Such plans shall be reviewed by the Sarasota County Planning Commission and adopted by the Sarasota County Board of County Commissioners.

Policy 1.3.5.

Sarasota County shall develop a uniform access control plan for thoroughfare facilities within Sarasota County within two years of the adoption of ~~Apoxsee~~ as amended.

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

Policy 1.3.6.

The Sarasota County Land Development Regulations and the Sarasota County Zoning Ordinance shall be reviewed and amended as necessary to ensure safe internal travel and parking of motorized and non-motorized vehicles in accordance with the requirements of Chapter 163, Part II, Florida Statutes, as the same may be amended.

Policy 1.3.7.

Encourage unmaintained publicly owned substandard roads to be brought up to County standards. Where possible, encourage the establishment of Public Improvement Districts to provide funding for such road improvements.

Policy 1.3.8.

All subdivisions utilizing private roads shall provide for the maintenance of such roads. Approval of all new subdivisions shall require sufficient proof of the ability to maintain private roads.

Policy 1.3.9.

Control vehicular access onto arterials and collectors in order to reduce existing or potential congestion problems. Whenever possible, minimize access points by encouraging shared access.

Objective 1.4

Provide for the safe and convenient non-motorized travel.

Policy 1.4.1.

All new construction and reconstruction of collector and arterial roadways shall, where feasible, provide not less than 14 foot curb lanes, 4 foot paved shoulders, or other bicycle paths consistent with the Florida Department of Transportation Bicycle Facilities Planning and Design Manual.

Policy 1.4.2.

Include provisions in the Zoning Ordinance to encourage unified developments to provide for bicycle paths and safe pedestrian movement in their plans consistent with guidelines and standards contained in the Land Development Regulations.

Policy 1.4.3.

Include provisions in the Land Development Regulations so that all new construction and reconstruction of collector and arterial roadways shall provide for safe pedestrian movement.

Policy 1.4.4.

All new residential subdivisions with residential lots one acre or less in size shall provide for pedestrian access.

Policy 1.4.5.

All schools, parks and recreation facilities and planned developments shall provide pedestrian and bicycle access.

Objective 1.5

All traffic circulation plans and programs shall be coordinated with the plans and programs of the State, the Region, the local Metropolitan Planning Organization and other local jurisdictions.

Policy 1.5.1.

The Traffic Circulation Plan and Year 2010 Future Thoroughfare Plan shall consider:

- the plans of the Florida Department of Transportation;
- the long range plans of the Sarasota-Manatee Metropolitan Planning Organization; and
- the Traffic Circulation Plans of the Cities of Sarasota, Venice, North Port and the Town of Longboat Key and the Counties of Manatee, DeSoto and Charlotte.

Policy 1.5.2.

The development of a future thoroughfare system should, to the greatest degree possible, consider:

- the State's adopted Five Year Work Program;
- the transportation programs of the Cities of Sarasota, Venice, North Port and the Town of Longboat Key; and
- the transportation programs of adjacent jurisdictions.

Policy 1.5.3.

Sarasota County shall coordinate with the Sarasota-Manatee Metropolitan Planning Organization in the development of their long range needs plan and in the annual Transportation Improvements Program.

Policy 1.5.4.

Coordinate with the Florida Department of Transportation and the Sarasota-Manatee Metropolitan Planning Organization in revising the functional classification of Sarasota County roadways.

Objective 1.6

Existing neighborhood environments, their cohesion, and integrity, shall be specifically considered in the development of the Year 2010 Future Thoroughfare Plan, and in individual roadway projects.

Policy 1.6.1.

Public involvement shall be assured by a presentation to neighborhood and/or other groups by County staff, during the development stage for each roadway project involving reconstruction or new multi-laning.

Policy 1.6.2.

Arterial roadways shall be designed to prohibit traffic intrusion into adjacent neighborhoods. Project specific measures to minimize such intrusion may include closure of lower classified streets to through traffic, diversion, or other operational changes.

Objective 1.7

Consider the aesthetics of roadway corridors in the development of roadway projects.

Policy 1.7.1.

Promote the landscaping of multi-lane roadways, via the Street Tree and other applicable programs, considering traffic safety, right-of-way availability, and the affordability of capital and maintenance costs. Where adequate right-of-way exists or can be acquired, landscaped medians shall be the preferred type of center component of roadway sections.

Policy 1.7.2.

Whenever possible, perform a visual impact analysis, consisting of an assessment of existing features, superimposition of project features, and identification of any significant opportunities for enhancing the roadway viewshed, and/or mitigating impacts.

Policy 1.7.3.

Right-of-way acquisition for arterial roadways shall include, where feasible, sufficient land for either preservation or development of buffers. The following uses shall be permitted within buffers: noise walls, screens, or berms; landscaping; facilities for pedestrian, equestrian, or bicycle use; underground utilities; drainage systems components; safety appurtenances; and other environmental mitigation measures.

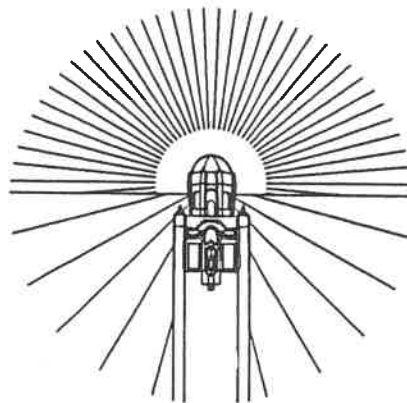


Table 21: Designated Constrained and Backlogged Facilities in Sarasota County

Facility	Location	Length	Sarasota County Adopted LOS
<i>Sarasota County</i>			
Beneva Road	Sarasota Square Boulevard to U.S. 41	.50	D
Beneva Road	Bee Ridge Road to Wilkinson Road	.50	D
Beneva Road	Webber Street to Bee Ridge Road	.65	F
Beneva Road	Wilkinson Road to Proctor Road	.50	F
Tuttle Avenue	27th Street to 17th Street	.50	D
Tuttle Avenue	17th Street to 12th Street	.25	F
Beach Road	Ocean Boulevard to Midnight Pass Road	1.20	E
Shade Avenue	Bee Ridge Road to Proctor Road	1.65	E
River Road	Center Road to U.S. 41	3.00	D
<i>FDOT</i>			
U.S. 301 (S.R. 683)	Fruitville Road to U.S. 41	.70	E
U.S. 301 (S.R. 683)	DeSoto Road to Fruitville Road	2.90	F
Englewood Road (S.R. 775)	U.S. 41 to Manasota Beach Road	2.55	F
Higel Avenue (S.R. 758)	Siesta Drive to Midnight Pass Road	.95	F
Midnight Pass Road (S.R. 758)	Beach Road to Stickney Point Road	1.20	F
Siesta Drive (S.R. 758)	Higel Avenue to Osprey Street	1.35	F
U.S. 41 By-Pass	U.S. 41 to Venice Avenue	1.10	E
U.S. 41	County Line to General Spaatz Boulevard	.20	E
U.S. 41	Shamrock Boulevard to S.R. 775	2.20	E
U.S. 41	Proctor Road to Stickney Point Road	1.80	E
U.S. 41	Colonia Avenue to Venice Avenue	1.40	F
U.S. 41	Turin Street to Shamrock Boulevard	2.30	F
Source: Sarasota County Planning Department, 1988.			

FIGURE 42:
YEAR 2010
FUTURE THOROUGHFARE PLAN
(FUNCTIONAL CLASSIFICATION)

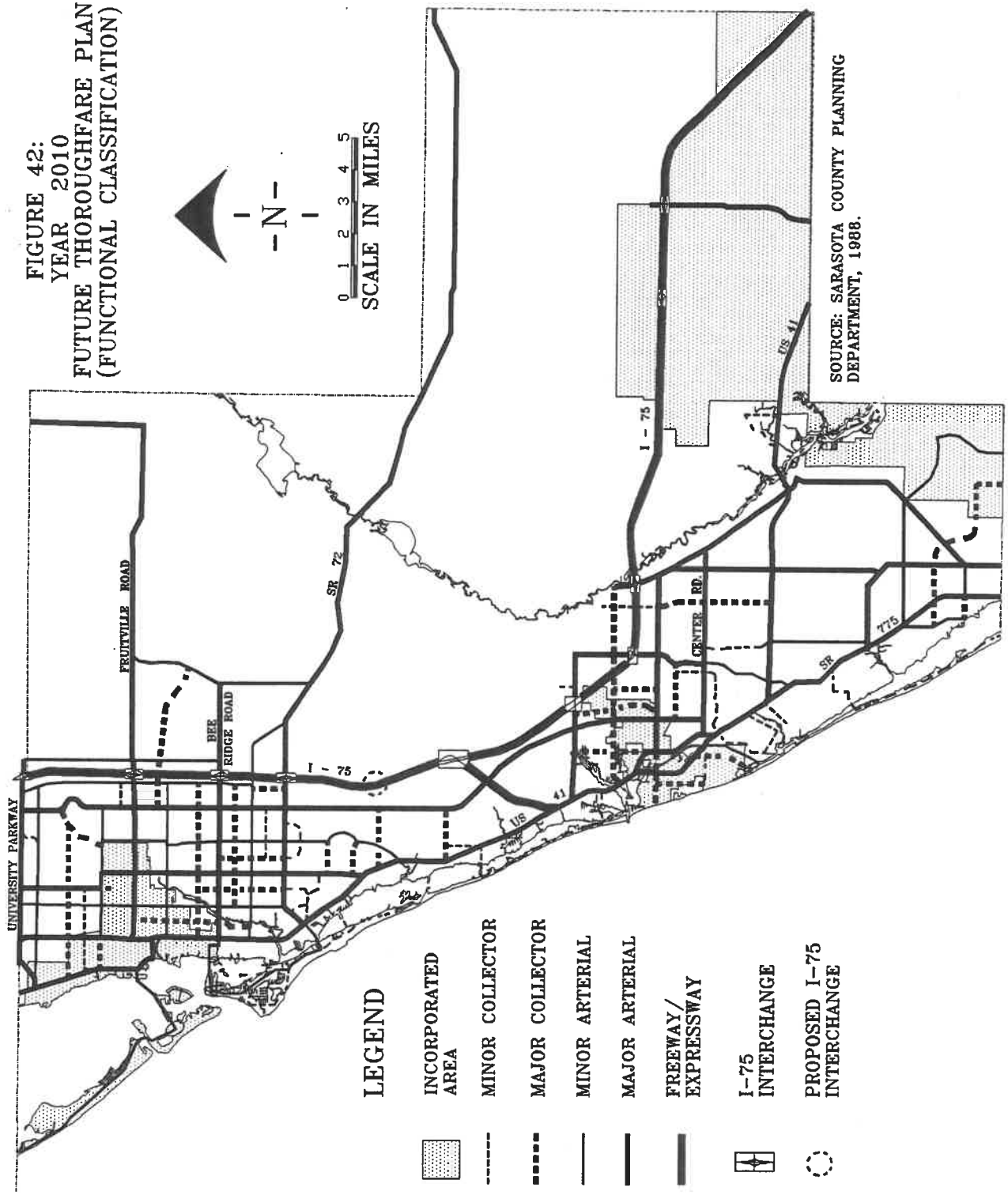
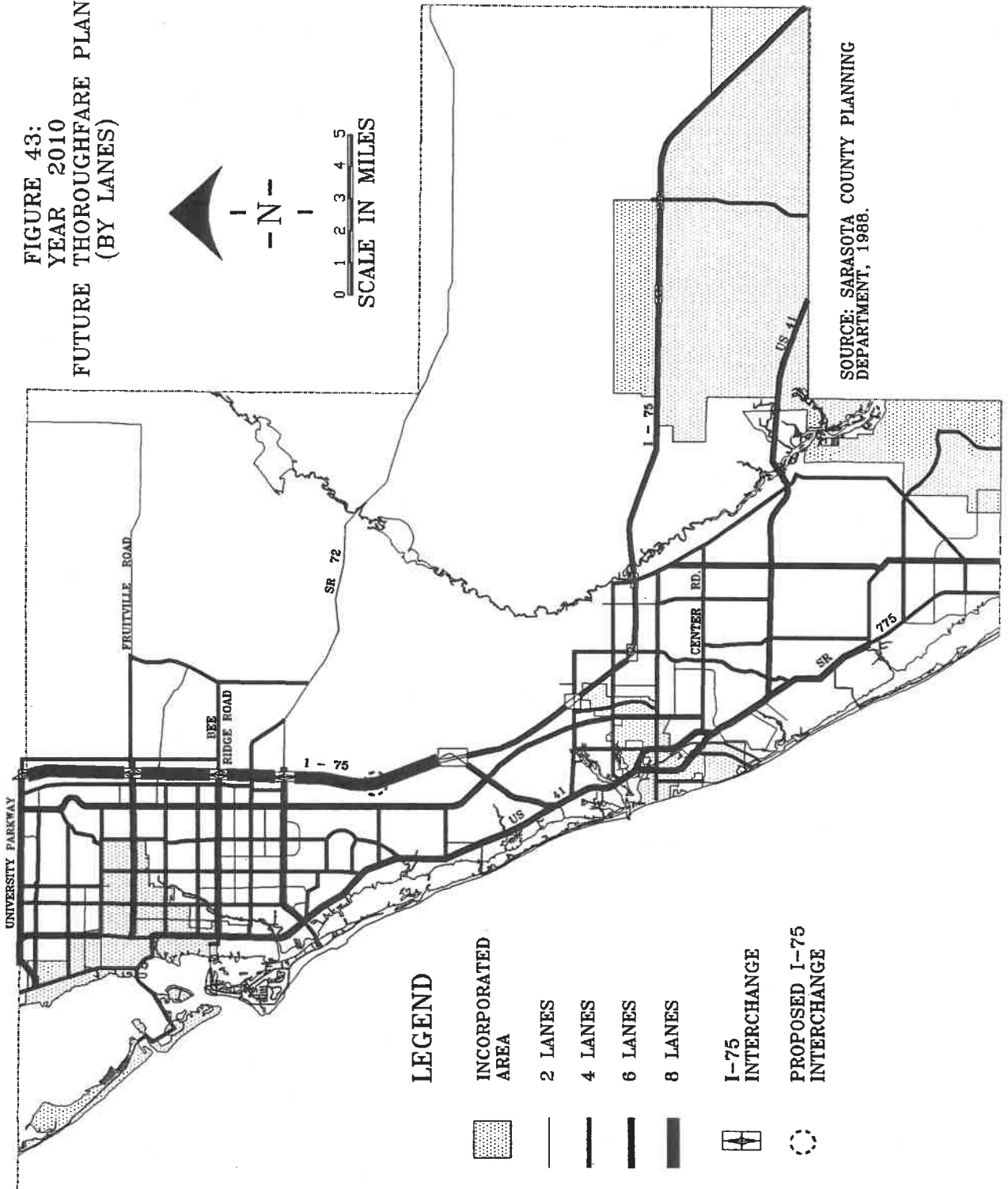


FIGURE 43:
YEAR 2010
FUTURE THOROUGHFARE PLAN
(BY LANES)



SOURCE: SARASOTA COUNTY PLANNING DEPARTMENT, 1988.

LEGEND

- INCORPORATED AREA
- 2 LANES
- 4 LANES
- 6 LANES
- 8 LANES
- I-75 INTERCHANGE
- PROPOSED I-75 INTERCHANGE

Endnotes

1. Florida Department of Transportation, "Suburban Job Growth: Florida's Second Suburban Tidal Wave," 1987.

2. Florida Department of Transportation, 1986, page vi.

3. Florida Department of Transportation, "Policy Topic No. 525-000-0005-a", 1988.

CHAPTER 6

MASS TRANSIT

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CHAPTER 6

MASS TRANSIT

Introduction

This Chapter focuses on Sarasota County's mass transportation systems including both fixed route bus service as well as public and private alternatives to the automobile.

The development patterns in Sarasota County have reflected a wide reliance on the automobile. Such development patterns, characterized by low density development, do not lend themselves to be served fluently by public transit systems. On the other hand, a mass transit system, developed and implemented in conjunction with a land use plan that encourages its utilization, can offer an attractive alternative to the automobile that conserves energy, reduces congestion and air pollution, and most importantly offers mobility to the transportation disadvantaged segments of society -- the young, the old, the handicapped, and the economically disadvantaged.

Although Sarasota County has had transit service for a number of years, the creation of the Sarasota County Area Transit (i.e., SCAT) system on April 9, 1979 could be considered the beginning of public transit in the County. At that time Sarasota County acquired the Cities Transit system, a private bus system which had experienced the decline in the quality of service due to economic problems.

As in most small urban areas, public transit in Sarasota County carries only a fraction of the total trips made in the area. The SCAT bus system acts primarily to provide mobility to those residents

who have difficulty in using the automobile and as a means to address specific problems such as pedestrian circulation and parking shortages.

Apoxsee recognized these circumstances in its goals and objectives, and addressed mass transit's role and potential in complementing the comprehensive plan's overall approach to maintain and enhance Sarasota County's urban character in lieu of exurban low density development. The SCAT bus system and other forms of mass transportation should continue to be used as a positive tool to promote a well balanced growth management plan for Sarasota County.

Mass transit systems are an integral part of the total surface transportation system. Traditional fixed route transit is only one component of the total mass transportation systems, which also includes taxies, limousines, carpools, vanpools, and a wide variety of ride sharing alternatives. Such systems, sometimes referred to as paratransit systems, can serve important functions including service to the disadvantaged, providing linkages to other travel modes, and relieving traffic congestion and parking problems.

The following is a discussion of Sarasota County's mass transit services, a description and evaluation of the existing public systems, and future mass transit needs.

Planning

Prior to the establishment of public transit in Sarasota County, a series of studies were conducted to analyze the potential and need for such services. One of the earliest efforts is the 1974 Wilbur Smith and Associates report entitled: "Manatee and Sarasota Counties Mass Transit Technical Study," which recommended, in part, public acquisition of the existing private transit company, Cities Transit, Inc., and the establishment of a two-county transit authority.

Following this study, Manatee County decided to establish its own public transit system in 1976. At that time, Sarasota County chose to continue its reliance upon Cities Transit, Inc. for the provision of transit service.

Faced with the continuing decline in the quality of service provided by Cities Transit, a decrease in ridership levels, and a noticeable need for capital improvements, the decision was made by Sarasota County to purchase Cities Transit, Inc. and form a "public" transit system for Sarasota County. Subsequently, the Sarasota County Area Transit system (SCAT) inaugurated its first service on April 9, 1979. From the initial acquisition and beginning of the public bus service, the Sarasota County Transportation Authority has relied on federal and State capital grants to fund approximately 90 percent of the capital improvement program, including the acquisition of Cities Transit, Inc.

Since its initiation in 1979, the SCAT bus system has been guided by a series of transit development programs which cover five-year planning periods. The initial transit development plan was issued in November, 1979, by the Tampa Bay Regional Planning Council. After four years of operating experience, the consulting firm of Carter-Goble and Associates provided an update of the transit development plan in November, 1983, entitled: "Sarasota County Transportation Development Plan Update and Marketing Program." This planning document analyzed the first four years of

public transit operations in Sarasota County and provided specific recommendations for service modifications and future direction.

In a parallel planning study effort, in 1982 the Sarasota-Manatee Metropolitan Planning Organization contracted with Kimley-Horn and Associates, Inc. to undertake the "Sarasota-Manatee Area Elderly and Handicapped and Transportation Disadvantaged Transportation Needs Study." This document analyzed the needs of the transportation disadvantaged population within both counties and recommended specific plans for those individuals whose needs could not be accommodated by regular public transit services. Within Sarasota County, the recommendation was made to designate the Senior Friendship Centers, Inc. as the Coordinated Community Transportation Provider for Sarasota County.

The latest transit planning effort was concluded in March, 1988, when the Sarasota County Transit Department issued a draft study entitled "The Sarasota County Area Transit 1988-1994 Transit Development Program." This document updates the two previous transit development plans and makes specific recommendations as to how the SCAT bus system can respond to the public transportation needs of Sarasota County over the next five years and beyond. This planning document provides the basis for much of the material and recommendations contained in this Chapter.

Inventory and Analysis

SCAT - Inventory

As mentioned previously, the SCAT bus system began public bus service in Sarasota County on April 9, 1979. Legally the SCAT bus system operates under the Sarasota County Transportation Authority, which was created under Sarasota County Ordinance No. 74-36, enacted on October 15, 1974. The governing body of the Authority is the Sarasota County Board of County Commissioners. Operationally, SCAT is an operating department of Sarasota County Government. The

Transit Department is managed by the Transit Director, who reports to the Deputy County Administrator of Community Services.

Administrative & Maintenance Facility

Since its inception in 1979, SCAT has operated from an administrative and maintenance facility located in the Sarasota County Pinkney-Ashton Complex. Despite a significant growth in the bus fleet size, no major changes in the facility have occurred. When coupled with the growth of other County operations at this site, a marked decrease in efficiency of the facility has resulted.

The 1987 report entitled "Facility Assessment of the Pinkney Avenue Government Complex" stated that there is a total shortage of space for SCAT in regard to the structure it presently occupies and the physical space in which the buses are required to be kept.

The expansion or relocation of the SCAT administrative and maintenance facility must be considered as a top priority. The existing facility lacks any area for the bus operators, meeting/training rooms, and storage space, and is severely limited in all other functional areas.

CONCERN 1

In 1988, the SCAT administrative and maintenance facility was severely limited in all its functional areas, and will remain so until scheduled improvements take place.

Vehicles

As it began its service in 1979, SCAT leased buses from the Florida Department of Transportation. During the early 1980's, SCAT acquired its own fleet of twenty-three 31-foot, heavy duty, fully accessible buses. These buses subsequently experienced serious structural and mechanical problems which forced Sarasota County to pursue litigation against the bus manufacturer. Based upon that litigation, Sarasota County was awarded

a damage judgement which will result in SCAT receiving seven free buses over the period from May, 1988 to May, 1991.

SCAT was successful in obtaining eight remanufactured buses from the Florida Department of Transportation in 1984 and 1985. With the objective of replacing the fleet of original 23 buses as soon as possible, these eight remanufactured buses and the seven replacement buses will be supplemented with thirteen new 30-foot buses in late 1988 or early 1989. The new buses will be funded with federal and State capital assistance grants which cover 90 percent of associated costs.

The rule of thumb for expected bus service life is that 30-foot buses should remain operational for a minimum of ten years or 350,000 miles.

CONCERN 2

Sarasota County has experienced significant and prolonged problems with its original bus fleet. The original bus fleet needs to be replaced.

Although 54 buses were programmed for acquisition in the Apoxsee Capital Improvements Program, only 23 have been acquired through 1988. In addition to the replacement buses, SCAT will require additional buses to meet future service expansions.

In addition to these buses, SCAT's vehicle fleet also consists of a 1984 trolley bus, a small 1977 bus, and six administrative and service vehicles.

Service

The SCAT bus system provides service by operating buses continually throughout a 13 hour period, six days per week with no Sunday service.

When it began in 1979, SCAT's transit service was almost exclusively in the North County service area. Service consisted of seven buses in daily service on ten routes, generally on one hour frequencies, or headways. Three trips a day were made through Siesta Key to Venice.

In early 1980, SCAT began servicing additional areas of the North County including the Meadows residential development. Later the Meadows route was dropped in favor of a route serving the Bee Ridge Road area. Service was also expanded in South County to include Englewood, North Port and local Venice service. By the summer of 1982, SCAT was operating ten buses in daily service on 13 bus routes.

At the same time, in contrast to this service to new areas, the headways in the original service areas had to be lengthened due to increasing traffic congestion. (A headway is the time interval between two buses traveling on the same route and in the same direction.) Headways on routes were increased from 30 to 40 minutes and from 60 to 80 minutes, and the routes were extended slightly.

In 1983, steps were taken to restore the quality of service in the North County. Routes were again lengthened slightly, but at the same time the 40 and 80 minute headways were reduced to 30 and 60 minutes respectively. These changes required an additional four buses to be placed in daily service. One additional bus was placed in service in South County on a route that had begun in November, 1982. This service expansion brought the daily operational bus requirement from ten to 15 buses operated over 13 routes.

Since 1983, no new regular bus service, as measured by additional revenue hours, has been added to the SCAT bus system. Since that time, however, two more service changes have been made. A fourteenth route was created to serve Newtown Estates by transferring one of the two buses serving Lido Beach/St. Armands area. This resulted in a decrease in service frequency on the Lido route from 30 minute service to one bus every hour. The second change involved modifying the North Port/Englewood route and extending it to SCAT's main transfer point at First Street and Lemon Avenue in downtown Sarasota. This change allowed a bus to be dedicated to local service within the City of Venice. Although these changes did not increase the daily bus requirements, the number of bus routes increased from 13 to 15.

The last new service initiated by SCAT was in December, 1987, when the "Sarasota Trolley" shuttle service began in downtown Sarasota. This open-aired theme vehicle travels a 2.2 mile route on a 15 minute headway. The Sarasota Trolley currently operates from 9:30 a.m. to 5:00 p.m., Monday through Saturday.

Thus, SCAT currently (March 1988) operates 16 buses daily over 16 bus routes. Service is six days per week for approximately 13 hours per day. The North County service generally begins at 6:15 a.m. and extends to 7:15 p.m. The South County routes begin and end about one and a half hours later than the North County routes. Figure 44 depicts the current SCAT route coverage.

Fares

When SCAT began service in 1979, the base fare for local service was set at 50 cents, with the intercity service between Sarasota and Venice at 80 cents. When the intercity service from Sarasota to Englewood and North Port was initiated, that fare was set at \$1, thus beginning the three zone fare system that SCAT has utilized since.

Two fare increases have been implemented since 1979. The first in October, 1981, raised the base fare by 60 percent, from 50 to 80 cents. The second increase occurred in October, 1986, when the fare was increased 25 percent to \$1. The zonal fares were increased proportionally, with the current fare from Sarasota to North Port and Englewood being \$2.50 and the fare to Venice \$1.25.

The SCAT bus system has experienced a decrease in full fare passengers of approximately 50 percent in the past five years. Examination of transfer activity and peak loads indicate that shorter bus trips are being made at lower frequencies. These facts indicate that the financial user cost burden has been placed unevenly upon the full fare passenger.

In compliance with federal regulations, SCAT offers half fare discounts to the elderly (i.e., age 65 and older) and the handicapped. In June, 1983, this discount was extended to the "Youth" (i.e., age 18 and under) during peak hours. Beginning in October, 1986, these half fare discounts were extended to all hours of service.

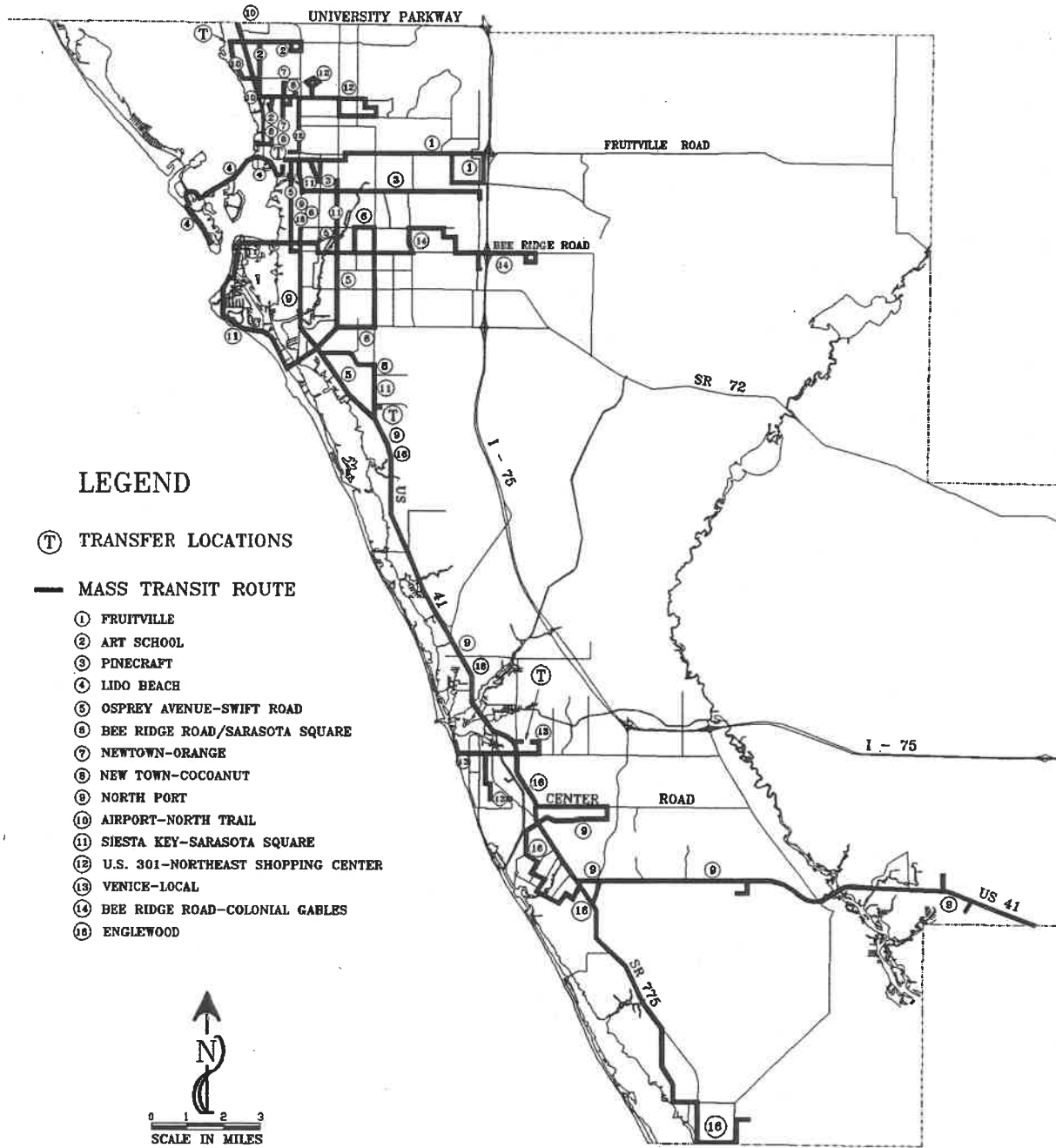


Figure 44: Sarasota County Transit Routes

Source: Sarasota County Area Transit, 1988.
Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan

Ridership

The overall pattern of SCAT ridership shows an increase over the past eight years, as depicted in Figure 45. The peak annual ridership occurred in Fiscal Year 1986 when a total of 842,653 passengers boarded SCAT buses. Ridership increases can be attributed to several factors, with population growth and extension of service to the growth areas being principal factors. The additional service and the reduction in service headways are other contributing factors.

The largest increase in ridership occurred between Fiscal Years 82 and 84 when a 45 percent increase was experienced. This was a direct result of the increase in service levels and reduction in headways that took place at that time.

Relatively little growth in ridership has occurred since 1984. In fact, the decrease in ridership in 1987, which is attributed to increased fares, brought the ridership levels down below the 1984 mark. 1987 represents the second time that fare increases have provided a significant dampening effect on the trend of ridership growth. The fare increases of October, 1981 (i.e., 80 percent) and October, 1986 (i.e., 25 percent) were directly associated with ridership decreases of 13 percent and 7 percent respectively.

CONCERN 3

Ridership levels have not significantly increased since 1984.

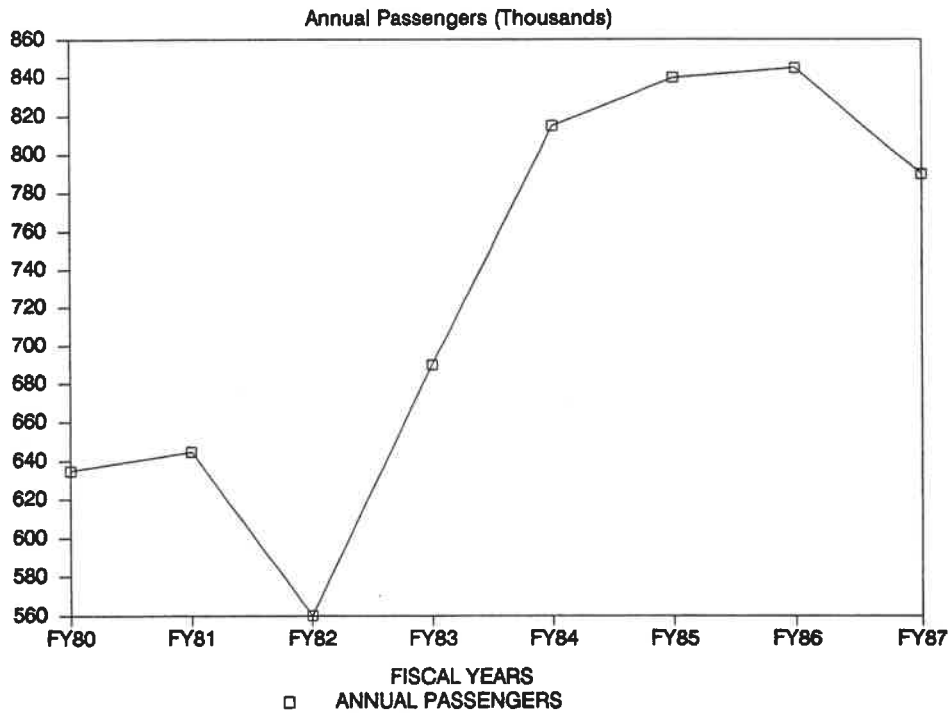


Figure 45: SCAT Annual Passengers

Source: Sarasota County Area Transit, 1988.

Apoxsee - The Revised and Updated Sarasota County Comprehensive Plan

Expenses and Revenues

Since SCAT's inception, most capital improvements, including bus purchases, have been funded using federal and State capital assistance grants which respectively provide 80 and 10 percent of the total project costs. Sarasota County has funded the remaining 10 percent local share from ad valorem property taxes.

The operating expenses and revenues included in this section were taken from SCAT's Urban Mass Transportation Administration Section 15 reports. The Section 15 reports, prepared annually and certified by an independent auditor, form the basis for allocation of federal transit assistance funding.

A summary of SCAT's operating expenses for the four year period from FY84 through FY87 is provided in Table 22, with breakouts by the following categories: administration, operation, and maintenance costs. Total SCAT operating expenses have followed a pattern of generally level increases in expenses since FY84, following SCAT's last service increase in March, 1983. During that period two significant expense increases can be attributed to the Casualty/Liability budget line item increase between FY 85 and FY86 and the expenses related to the litigation with the manufacturer of the original bus fleet, the majority of which occurred in FY87.

A similar summary of SCAT's operating revenue by source for this same six-year period is shown in Table 23. SCAT's revenue sources include passenger fares, charter fees, miscellaneous revenues, and operating subsidies from the federal and local governments. Two items require special

note. First, SCAT has not received any State operating assistance since FY 81 when the State's service development funds for new transit service became ineligible. The State of Florida is one of the few states that does not provide transit operating assistance to public transit systems. The other item is that with the new federal charter regulations that became effective in May, 1987, SCAT has had to forego charter revenues, which are listed on Table 23 as "Other Transportation."

From FY 84 to FY 86, fare box revenue remained stable ranging from \$365,000 to \$370,000. Despite a 25 percent increase in the base fare for FY87, fare box revenue increased by only \$31,500, due to the seven percent decrease in total passengers carried resulting from the fare increase. With the recovery of the lost passengers in FY 88, fare box revenues are expected to again increase in FY87-88. Fares have contributed between 20 to 25 percent of the total SCAT revenue over the past four years. This percentage is comparable to similar U.S. public bus systems.

Inspection of Table 23 shows that the SCAT bus system relies heavily on operating assistance. Sarasota County contributes the majority of this support, contributing over 40 percent of the total operating revenue over the past two years. During that same period, the federal portion of the support has dropped slightly, however, this was due to significant litigation costs incurred in FY 87 which were ineligible for federal operating assistance. As a general rule, provided adequate federal funds are available, SCAT's operating deficit would be shared equally between the federal and local

Table 22: SCAT Annual Operating Expenses

	FY 1984		FY 1985		FY 1986		FY 1987	
	\$	%	\$	%	\$	%	\$	%
Administration	229,427	17.1	255,853	17.2	345,639	21.5	453,265	24.6
Operations	939,843	70.0	999,138	67.0	1,008,653	62.7	1,126,244	61.2
Maintenance	172,820	12.9	236,423	15.8	253,274	15.8	259,703	14.2
Total	1,342,090		1,491,414		1,607,566		1,839,212	

Source: SCAT (from annual National Urban Mass Transportation Statistics), 1987.

Table 23: SCAT Annual Revenue Summary

	FY 1984		FY 1985		FY 1986		FY 1987	
	\$	%	\$	%	\$	%	\$	%
Passenger Fares	368,936	28.6	365,924	25.4	366,197	22.0	397,663	21.8
Other Transportation	4,251	0.3	7,501	0.5	19,406	1.2	14,801	0.9
Non-Transportation	574	0.7	7,803	0.5	817	0.0	683	0.0
Local Grants	434,498	33.7	502,809	34.9	686,741	41.3	733,066	40.2
State Grants		0.0		0.0		0.0		0.0
Federal Grants	481,211	37.3	557,630	38.7	588,423	35.4	675,480	37.1
Total	1,289,470		1,441,667		1,661,584		1,821,693	

Source: National Urban Mass Transportation Statistics. Comparison data from 1985; SCAT, FY 84/85.

governments. The entire local share is borne by Sarasota County through ad valorem property taxes.

Sarasota County has yet to take advantage of some special funding sources from the State of Florida to expand its service levels. The SCAT bus system benefits from no dedicated funding source, relying on all local funding from ad valorem property taxes imposed by Sarasota County. The federal transit funding has been frozen in recent years, and is actually declining when inflation is taken into account. The State of Florida has not provided any operating assistance for public transportation services.

CONCERN 4

Public mass transportation in Sarasota County, as with all similar systems throughout the United States, will require financial operating assistance.

SCAT - Analysis

Development of an efficient and effective public transit system requires the coordination of route design and service levels with the demographic, geographic, and economic characteristics of a particular area. The mass transit system attempts to meet the needs of two distinct groups of population: the transportation dependent population,

who, for a variety of reasons, have no other means of transportation; and, the "choice" riders, who choose to use the mass transit system for all or part of their trips as an alternative to their automobile. Extensive area coverage is very important to the first group, while the second group is interested in the frequency of service. Area coverage, frequency, route design, number of trips per route, areas of special need and system costs all must be evaluated before a transit system can reach the balance of providing an effective service at an efficient level. Additionally, in coordination with the MPO, the analysis must take into consideration the Florida Department of Transportation Five Year Transportation Plan and the MPO plans.

Area Coverage/Frequency

The standard rule of the transit industry is that areas within a five-minute walk of a transit route, or approximately one quarter mile, are considered to be "primary transit service areas." People living within such areas are considered to be the primary transit market. Beyond the five-minute walk radius, the percentage of persons opting for public transit drops rapidly due to their unwillingness or inability to walk that far. Thus, ridership on a specific transit route is largely dependent upon the population within its primary service area. In the absence of a dense development pattern, traditional fixed route transit services will generally not be economically viable. Many residential areas of Sarasota County

are comprised of low density, single-family residential uses that do not have sufficient ridership potential to justify mass transit.

CONCERN 5

Areas of low density residential development are not conducive to the provision of traditional public transit services.

As development densities increase, the potential and demand for public transit services also increase. Figure 46 details the current residential development patterns in the urban areas of Sarasota County. Specifically, Figure 46 plots residential dwelling unit densities by traffic analysis zones. A comparison of the residential density patterns and the current SCAT route coverage (see Figure 44) shows that some of the densely populated areas of Sarasota County are not served by public transportation.

While most of the higher density areas of Sarasota County are covered by transit routes, the frequency of service along several key routes is inadequate to attract significant numbers of "choice" riders. For example, the Bee Ridge-Sarasota Square and Siesta Key routes in north County and the routes connecting Sarasota with Venice, North Port and Englewood all have headways for two hours or greater, as shown on Table 24.

CONCERN 6

The 1987 mass transit service to many population centers is inadequate.

It should be noted that existing area coverage and frequency of mass transit service is often disturbed by road construction. It is very important that the Sarasota County Transportation Department, FDOT, and SCAT coordinate their efforts so as to reduce the impact of road construction on the efficiency of the mass transit system.

Route Design

In addition to the consideration of residential density, a number of other population factors such as age, economic status, and physical condition also contribute to whether any particular area can generate sufficient transit ridership to be considered an adequate trip generator. A good transit system must also consider the other portion of the transit trip, or the trip destination or attraction.

Employment centers, major shopping centers (which are also large employers), hospitals, post-secondary education centers, and public beaches are all examples of major transit trip attractors. Figure 47 indicates the location of the major transit demand centers. Comparison of the transit demand centers with the existing primary transit service areas indicates that the majority of the demand centers are serviced by the existing SCAT bus routes. Figure 47 also shows the existing coverage of the transit demand centers.

This existing coverage indicates that the SCAT bus system has failed to keep up with the development of new demand centers outside its current service area.

CONCERN 7

Certain transit demand centers, especially those being developed in growth areas, remain outside the coverage of the SCAT bus system.

Additionally, existing bus service to the public beaches is inadequate for service employment trips, recreational trips, and visitor travel needs. Deficiencies exist both in the frequency of service and in transferring from other bus routes to the beach routes.

CONCERN 8

The 1987 bus service to the beaches is inadequate.

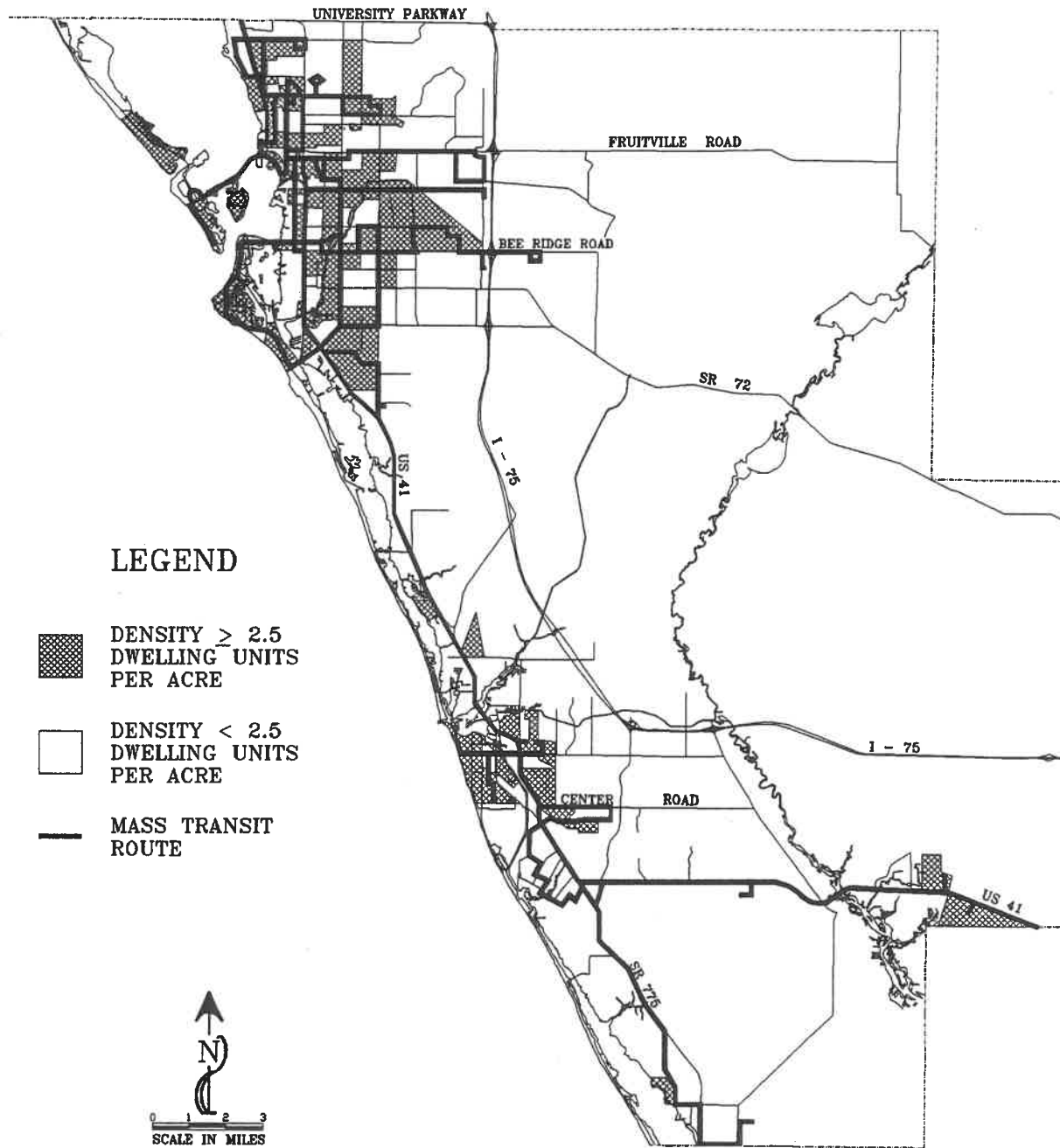


Figure 46: Residential Development Patterns In Sarasota County, 1980

Source: Sarasota County Area Transit, 1988.

*Apoossee - The Revised and Updated Sarasota County
Comprehensive Plan*

Table 24: SCAT Bus Routes, 1986-87

Route #	Route Name	Daily Bus Requirement	Headway (minutes)
1	Fruitville	1	60
2	Art School	1	60
3	Pinecraft	1	60
4	Lido	1	60
5	Osprey/Swift	2	60
6	Bee Ridge-Sarasota Square	1	120
7/8	Newtown	1	30
10	Airport	1	60
11	Siesta Key	1	120
12	Newtown Estates	1	60
14	Bee Ridge-Colonial	1	60
Subtotal (North)		12	
9	North Port	1	240
13	Venice Local	1	60
15	Venice-Sarasota	*2	120
16	Englewood	1	240
Subtotal (South)		3	

Note: *South County routes were modified March, 1987.

Source: Sarasota County Area Transit, 1988.

In order to evaluate its route designs, SCAT has conducted a series of on-board rider surveys to determine what the primary destinations of the current bus passengers are. As detailed in Figure 48, work and shopping trips currently account for nearly two-thirds of all SCAT passenger trips.

System Design

To maximize its service coverage area, the SCAT bus system utilizes a timed transfer concept, commonly called a pulse system. Under this concept, SCAT currently operates a six-centered transfer system in which the buses are brought together on a regular predetermined schedule to permit passengers to transfer from bus to bus to be able to reach a wide variety of destinations. SCAT transfer facilities are located at the Ringling Museum, First Street and Lemon Avenue, South Gate and Gulf Gate Shopping Centers, Sarasota Square Mall, and Venice. However, passenger transfer facilities are not utilized to their fullest extent due to inadequate service and lack of route coordination.

Another consideration in a transit system design is the variation in ridership patterns. This unique variation in ridership patterns makes the SCAT bus system different from the typical transit system. On a daily basis, the SCAT bus system does not exhibit the typical morning and evening peaks in passenger loads associated with the worker commute. The service job economy, lack of employment concentrations, and the high percentage of retirees in the area create a flat passenger level throughout the service day, with ridership levels ranging from seven to ten percent of the average daily ridership every hour.

SCAT ridership levels also vary widely throughout the year in direct relation to the Sarasota area's seasonal visitor levels. Figure 49 shows this monthly ridership variation based on the average of ridership patterns for 1985 to 1987. The peak ridership occurs in March, with September being the low month.

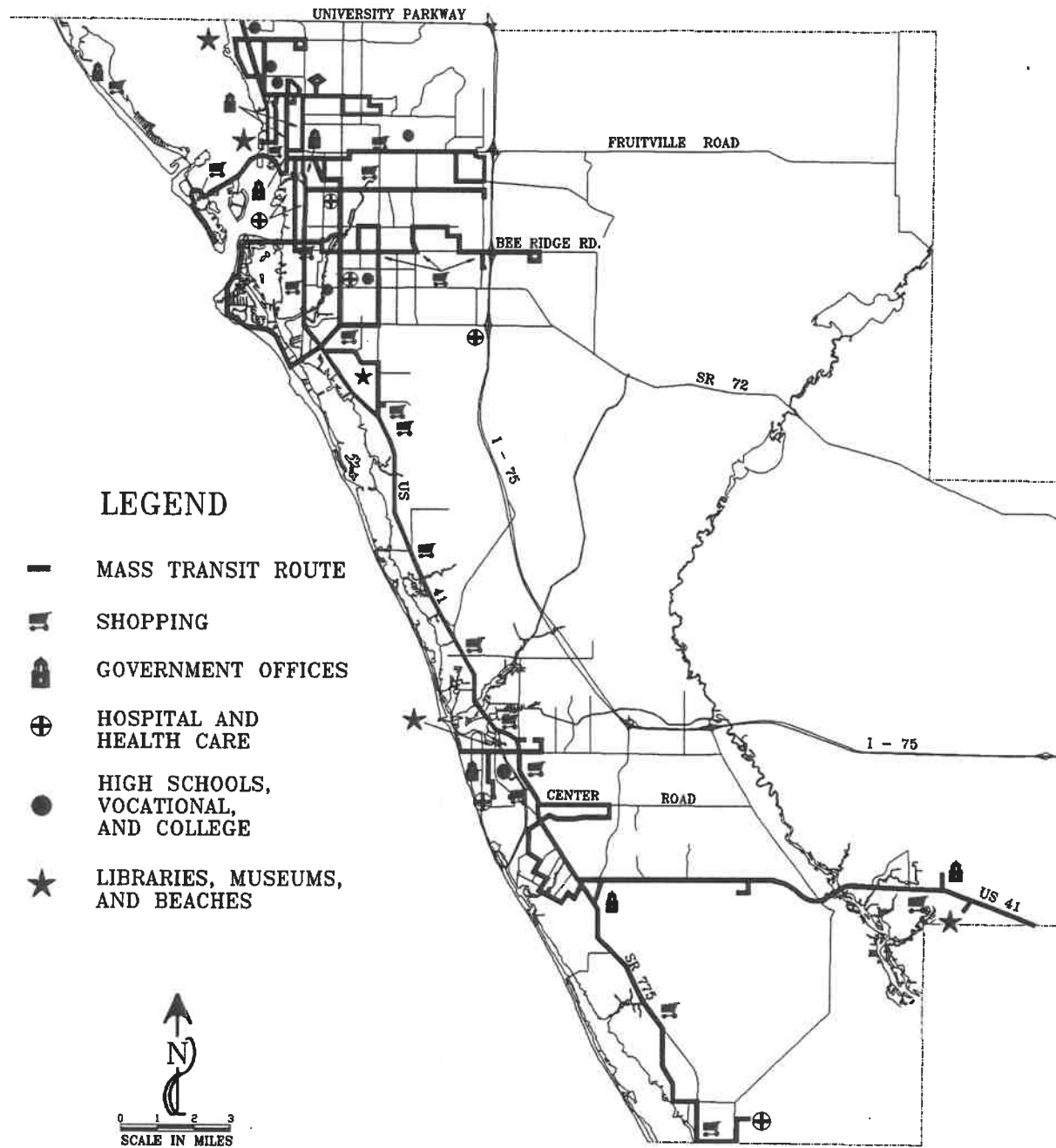


Figure 47: Location Of Major Transit Demand Centers, 1987

Source: Sarasota County Area Transit, 1988.

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

During FY 1987 the SCAT buses traveled 788,512 miles and carried 788,847 passengers. The SCAT bus service in the North County service area carried 90 percent of the passengers, while traveling only 75 percent of bus miles.

Performance Guidelines

SCAT planning efforts document three data sources which will be utilized to define SCAT's future service structure. The three sources are land use as measured by residential density per acre; origin-destination (O-D) information developed from the probable travel behavior; and current route performance. The residential density information will be used to locate neighborhoods that should receive transit service. The O-D information will direct the routes and locate the transfer activities. Finally, the performance guidelines will indicate when to modify service on existing routes.

A key concept to SCAT's future transit planning efforts is the establishment of a minimal service coverage guideline. The recommended guideline would apply to all urban areas with residential densities of 2.5 residences per acre or greater and contiguous population of greater than 25,000 residents. Barrier islands would be considered contiguous to the adjacent areas to which they have bridge connections. Such urban areas would be designated as "Urban Transit Areas." Locations within the Urban Transit Areas lacking adequate transit coverage should be considered for additional service. The generally accepted minimal coverage guideline would be to provide transit service to all residences within this area at one hour frequencies and within one quarter mile of the residences.

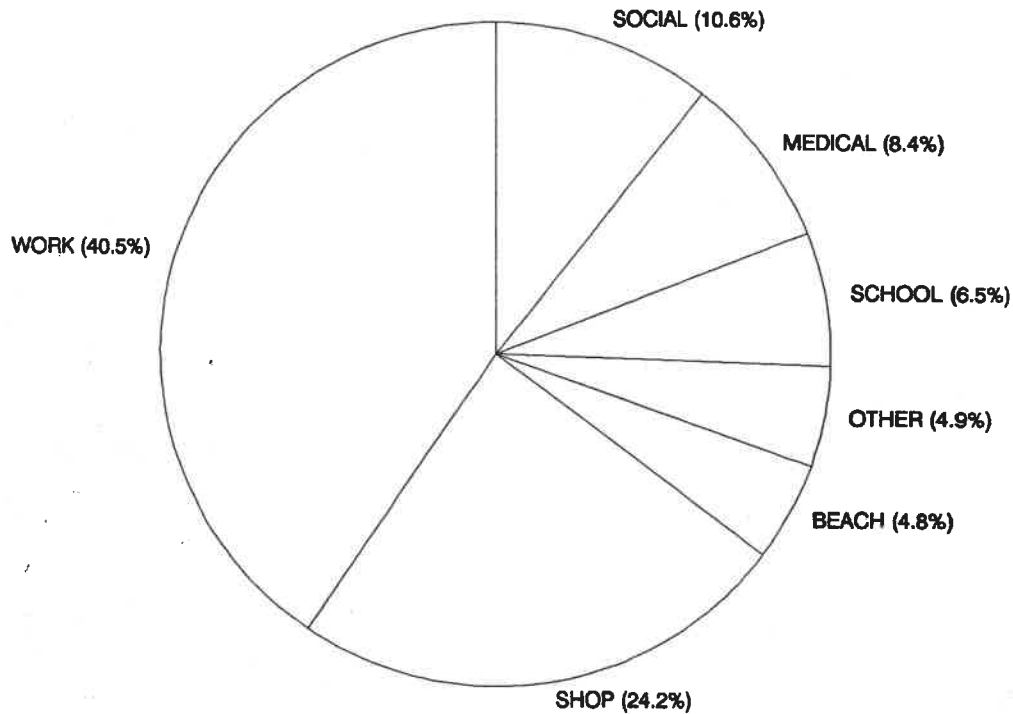


Figure 48: Purpose of Bus Trip

Source: Sarasota County Area Transit, 1988.
 Apoxsee - The Revised and Updated Sarasota County
 Comprehensive Plan

Due to the irregularities of the Sarasota County road network's spacing and layout, the suggested minimal service coverage guideline is that regular bus service should be provided within one quarter linear mile of 90 percent of the residences. For coverage guidelines, regular bus service is defined as having regular clock headways and service frequencies of one bus every hour or more frequently. Figure 50 portrays the 1988 mass transit routes in the North County Urban Transit Area which meet this coverage guideline. Approximately 59 percent of the total dwelling units in the Urban Transit Area do not meet the service guideline. This can be used as a benchmark from which to assess future transit service improvements.

The Urban Transit Area itself was found to be adequate to define the transit service area with a net overall density of 2.46 dwelling units per acre. Furthermore portions of this service area currently receiving transit coverage have fewer dwelling

units per acre than the areas not receiving coverage. This is an indication that SCAT has not been able to expand fast enough to meet the growth in the urban area.

CONCERN 9

Less than one half of the dwelling units in the urbanized area of Sarasota County currently receive adequate transit service.

Intercommunity transit service should be provided at less frequent service headways with service levels being determined on demand and other related factors. Likewise, transit service outside the urban areas should be considered for demand responsive services.

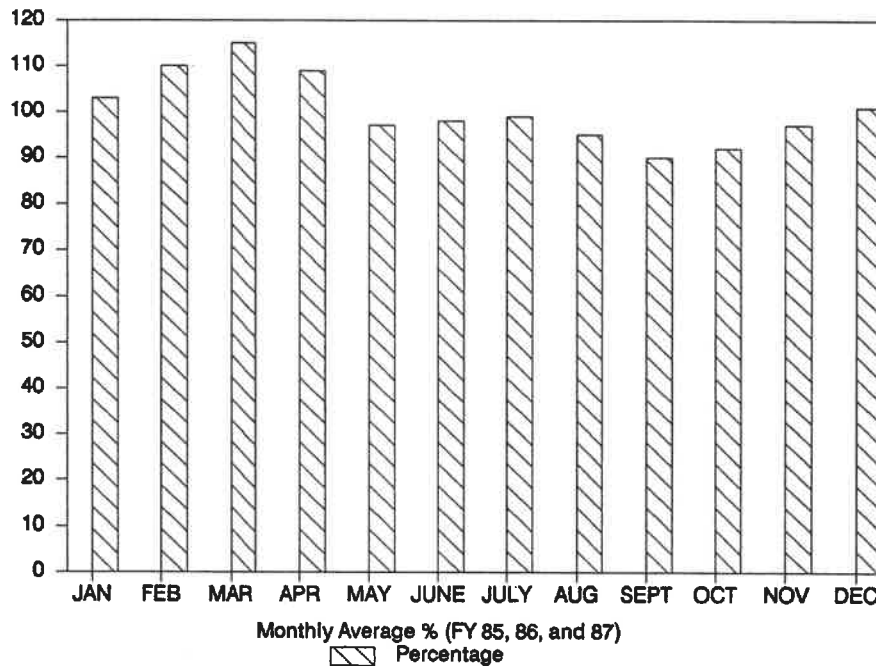


Figure 49: Monthly Ridership Variation

Source: Sarasota County Area Transit, 1988.

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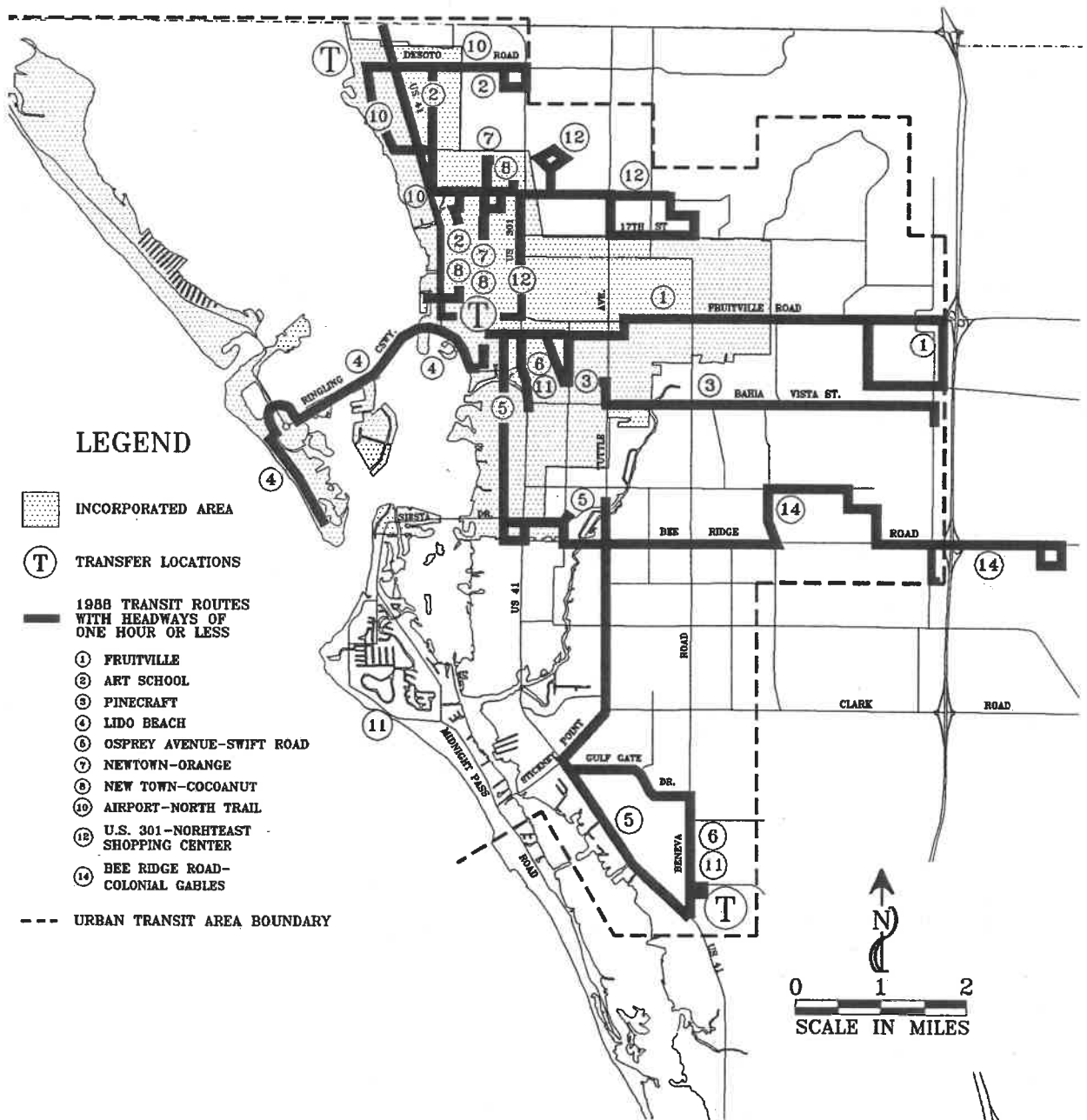


Figure 50: 1988 SCAT Route Coverage Of Urban Transit Area

Source: Sarasota County Area Transit, 1988.

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While various route performance evaluations are undertaken by SCAT, there exists a need to establish a formal method of evaluating the performance of its current transit service. The recommendation is to establish a specific performance guideline that is stratified by the type of transit service provided. For example, all routes terminating at the Main Transfer Point (TP) at First Street and Lemon Avenue would be required to maintain a performance guideline of 14 passengers per revenue hour. Local service not terminating at the Main TP would have a performance guideline of ten passengers per hour and eight passengers per revenue hour would be established for intercommunity routes.

In addition to concentrating on route performance, SCAT should still continue to emphasize safe operations. Over the past five years, SCAT has enjoyed an excellent safety record winning five consecutive safety awards from the Florida Transit Association. SCAT should continue to emphasize its safety program and monitor its performance in this area by measuring the total number of accidents incurred per 100,000 vehicle miles traveled.

Table 25 presents a summary of the SCAT bus systems operating data and performance comparisons for 1987.

Transit Dependent Population

As stated in the Introduction, one of public transportation's most important functions is to offer mobility to the transit-disadvantaged segments of society – the young, the old, the handicapped, and the economically disadvantaged. These groups represent the transit-dependent individuals who have special needs in Sarasota County.

From the 1980 Census, the population of Sarasota County was 202,251 of which 14.1 percent were 16 years of age or younger and 29.9 percent were 65 years of age or older. The same source showed 29.6 percent of the households did not own an automobile and 3.7 percent of Sarasota County residents were documented as "transportation disabled." The non-elderly (i.e., age 60 years and younger) handicapped population was estimated to be 3,860 residents. The total transportation de-

Table 25: SCAT System Operating And Performance Comparisons

<u>Operating Data</u>	<u>FY 1987</u>
Number of Routes	15
Fleet Size	33
Peak Fleet	15
Employees	55
Ridership	788,847
Base Fare	\$1.00
Vehicle Hours	61,957
Revenue Mile	788,512
Vehicle Miles	875,469
Expenses	\$1,839,212
<u>Performance</u>	<u>FY 1987</u>
Cost/Passenger	\$2.33
Cost/Vehicle Mile	2.10
Cost/Vehicle Hour	29.69
Vehicle Hr./Employee	1,126
Average Bus Speed	14.1
Passengers/Hour	12.7
Deadhead	0.110
Accidents/100,000	
Vehicle Miles	2.98

Source: UMTA Section 15 reports and other operating data, SCAT, 1989.

pendent population as defined by households under the poverty level was estimated to be 1,161 or 0.5 percent of the total Sarasota County population. With the lack of more current data, it is assumed that the percentage of the handicapped population has remained relatively stable since 1980. Figure 51 depicts the concentrations of Sarasota County's transportation dependent population.

The results of SCAT's 1987 survey of on-board passengers indicate that the bus system has met some of the needs of the transportation dependent population. The survey revealed that persons "younger than 18 years of age" and "older than 60 years of age" represented 11 percent and 31 percent respectively of the system ridership. Other results show that close to 73 percent of SCAT's passengers did not have an automobile available

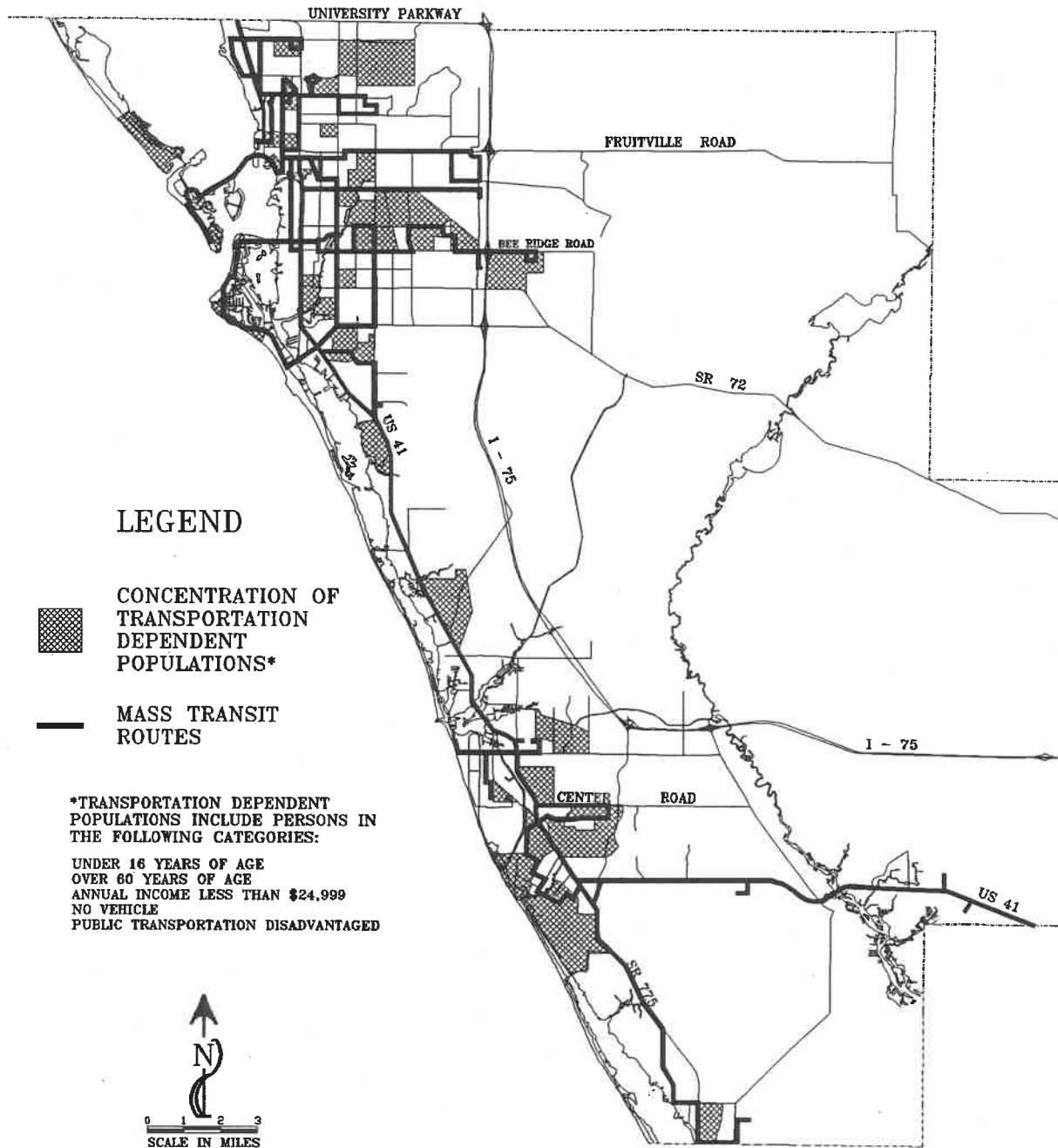


Figure 51: Concentrations Of Sarasota County's Transportation Dependent Population

Source: Sarasota County Area Transit, 1988.

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for their trip and that over 60 percent of the passengers came from households with annual incomes of \$12,500 or less.

Bus Service Potential

In order to measure what level of transit service demand exists within Sarasota County, a comparison of the Sarasota County population and public transit service levels can be compared to similar sized urban areas within the United States. As Table 26 points out, the SCAT bus system is well below national averages for existing transit levels for similar size communities.

Other Transportation Services - Inventory and Analysis

In addition to the traditional bus service that it provides, the SCAT bus system also provides direct connections to many other transportation modes within Sarasota County. The SCAT buses meet the Manatee County bus at the Ringling Museum on an hourly basis to provide an inter-community transfer option, thus expanding the travel potential of passengers on both transit systems.

The SCAT bus system currently provides direct service to the Sarasota-Bradenton Airport, the Greyhound bus terminal, and to the AMTRAK train from Tampa via the AMTRAK bus from the SCAT main transfer point.

Other transportation providers within Sarasota County include a number of taxicab and limousine companies that provide door-to-door service throughout the area. Additionally, there are numerous nursing homes, medical facilities, and social service agencies that provide service to residents and clients.

The 1982 "Sarasota-Manatee Area Elderly and Handicapped and Transportation Disadvantaged Transportation Needs Study" indicated that the estimated demand for essential trips for transportation disadvantaged persons who can not be served by regular transit service totaled 363 round trips per day. This study showed that there was insufficient supplementary transportation to meet the total transportation needs of the transportation disadvantaged. Further, it was concluded that there was a lack of coordination among the special providers themselves and the SCAT bus system.

In response to this identified need and in order to satisfy the requirements of the State's Rule 41, promulgated as a result of Chapter 427, Florida Statutes, the Senior Friendship Centers, Inc. was designated by the Sarasota-Manatee Metropolitan Planning Organization (MPO) as Sarasota County's Designated Coordinated Community Transportation Provider. In August of 1986, Senior Friendship Centers entered into a Memorandum of Agreement with the Florida Department of Transportation. Under this agreement, Senior Friendship Centers acts as the coordinator and provider of all federally and State funded special transportation services within Sarasota County.

Table 26: Comparison of Sarasota County Population and Transit With National Urban Area Averages

	Population (1980)	Population (1990 forecast)	Maximum Buses in Service	Revenue Miles (Millions)
Sarasota County (1)	202,251	254,500	16	0.78
Urban Areas (2)	200,000 to	249,999	38	1.24
Urban Areas (2)	250,000 to	299,999	51	1.82

Source: (1) U.S. Census; Apoxsee Vol. III, Introduction xii; (2) National Urban Mass Transportation Statistics, Section 15 Annual Report, 1985.

Currently, Senior Friendship Centers provides this advance reservation, door-to-door service Monday through Friday with a fleet of 17 vehicles.

The transportation needs of Sarasota County's transportation disadvantaged are difficult to determine, as is the measurement of the total resources being expended both publicly and privately to meet these needs. As SCAT begins to retire its handicapped accessible bus fleet, it is important to demonstrate that the needs for this segment of residents is being met through other means.

CONCERN 10

The special transportation needs of the Sarasota County's transportation dependent and transportation disadvantaged residents fall beyond the capabilities of the SCAT bus system.

The Sarasota County Transportation Authority's UMTA Section 504 Plan, which was adopted in June, 1987, addresses part of these needs. Under this federally mandated program, SCAT will subsidize handicapped persons who are unable to ride the SCAT bus system to ride the Senior Friendship Centers fleet of accessible vehicles. This program is expected to be initiated in October, 1988.

The provision of transportation services to Sarasota County's elderly and handicapped is separated among numerous providers. Gaps in service to these population groups exist and these groups continue to expand at rates at or above the regional growth rate.

CONCERN 11

No source is available to readily identify the needs of the elderly and handicapped residents and respond to those needs.

Future Needs

Planning for effective and efficient mass transportation requires that future conditions be anticipated. Coordination with the MPO assures consistency of planning for future mass transit needs with MPO and FDOT future plans. Further, population growth, energy shortages, and the creation of more compact residential areas are some examples of the factors that will increase the demand for mass transit services.

Sarasota County's resident population is projected to be 304,900 in 1995, and 383,300 in 2010. As provided in the Future Land Use Plan (see Apoxsee's Future Land Use Chapter), the higher density areas (Urban, average density of 3 dwelling units per acre), are generally located west and south of I-75, in the incorporated areas of the City of Sarasota, City of Venice, Town of Longboat Key, and City of North Port, and the surrounding unincorporated areas. Figure 52 demonstrates the proposed SCAT transit routes (1988-1994), which provide extensive coverage in these high density areas. The proposed SCAT transit routes will be further modified to better respond to mass transit needs as future development occurs.

It is necessary to provide a base from which to react to the future transit demand. By relying on the three data sources previously described -- residential density, origin-destination information, and route performance -- the SCAT bus system will be able to react and respond to Sarasota County's growth in a responsible manner. The use of the Urban Transit Area concept when coupled with route performance guidelines provide a level of service framework from which public transportation services can be measured.

In 1981, Apoxsee introduced another concept, the use of a point system to guide the intensity of residential densities based on the existence of urban services. Transit was included in the point system, with a maximum of ten out of the 100 total points being awarded to parcels within 1/4 to 1/2 mile of existing or designated transit routes.

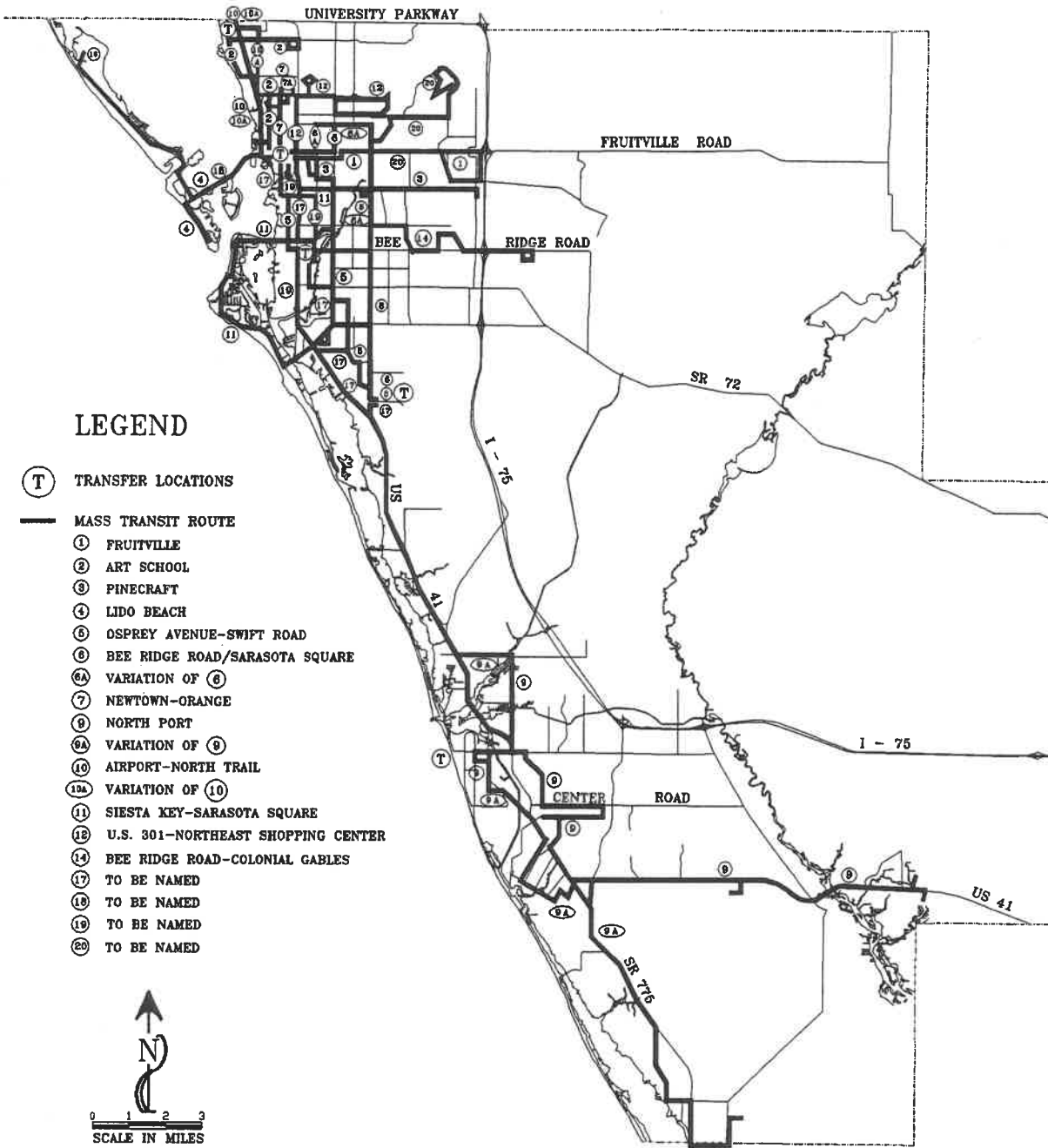


Figure 52: Proposed SCAT Transit Routes (1988-1994)

Source: Sarasota County Area Transit, 1988.

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Since mass transit benefits from more compact development, it should continue to be part of the point system. The problem that exists, however, is that transit routes are subject to modification based on ridership levels and availability of financial resources. Generally mass transit benefits from more compact development and routes tend to follow or react to development patterns rather than drive the development pattern.

It has been observed that SCAT bus service along major or minor arterials has remained relatively constant since 1979. This is a direct result of the major transit demand centers being located either on or near the major roadway network. Since residential density represents a primary factor in the trip generation side of the trip equation, the provision of points to allow for higher residential densities in areas which are located on existing major or minor arterials which currently have transit service, or which will be located on proposed major or minor arterials within the Urban Transit Area will provide a long-term perspective for transit planning.

SCAT's five-year development program follows the primary objective of increasing residential transit service both in terms of coverage and improved service frequencies. The program assumes continuation of the similar service patterns with regard to days and hours of service. The program recommends expansion and improvements in two phases, both of which will provide substantial increases in residential transit coverage. The effort to increase coverage also enables SCAT to meet other objectives including improved service frequency, intercommunity coordination, increased beach area service, increased service to educational and medical centers, and better utilization of the transfer facilities. The program would be implemented in two phases, with the first phase being brought forward in 1988 or 1989; and, the second phase in the 1991 time frame.

The five-year development program as proposed represents an effective and efficient means of solving the service deficiencies and problems detailed previously. Figure 52 depicts the SCAT service coverage that will be in effect with the implementation of these two phases.

A coverage analysis was conducted to assess the impact of the two-phase service improvement program on meeting the objective of increased residential coverage. Figure 53 portrays the coverage analysis in the North County Urban Transit Area. Similar to Figure 50, which presented the coverage analysis of the current SCAT routes, Figure 53 shows the mass transit routes within the Urban Transit Area which are designed to meet the quarter mile, one hour service frequency guideline. The two-phased service expansion would result in an increase in the dwelling units covered from 41 percent to over 75 percent. Expressed in dwelling units receiving the minimum guideline of transit service (i.e., service frequency of a bus every hour or more often and quarter mile proximity to the bus route), coverage would increase from 32,500 dwelling units to 60,000, a net increase of 27,500 dwelling units.

The SCAT five-year development program is a framework for a two-phase service expansion effort. The first phase is scheduled for implementation during FY 1988-89 and will increase the daily bus requirements from 16 to 20 buses daily. Expressed in terms of 1989 dollars, this service expansion will have an incremental increase in daily operating expenses of \$1,027. The final phase, which is scheduled for FY 1991-92, will add an additional five buses in service daily. This expansion is estimated to add \$1,576 in daily operating expenses (1992 dollars).

Over the five year program the total operating expenses for the system, expressed in inflated dollars, will increase from the FY 1987-88 operating cost of \$2,095,953 to \$2,515,933 in FY 1988-89 and \$3,744,568 in FY 1993-94.

The bus service expansion contained in the SCAT five year development program is directed toward meeting the Objectives and Policies contained in this Chapter, especially improved residential coverage, improved service frequencies, and improved transfer connections throughout the defined Urban Transit Area.

Funding sources for this transit service will be derived from the farebox and local, State, and federal operating subsidies.

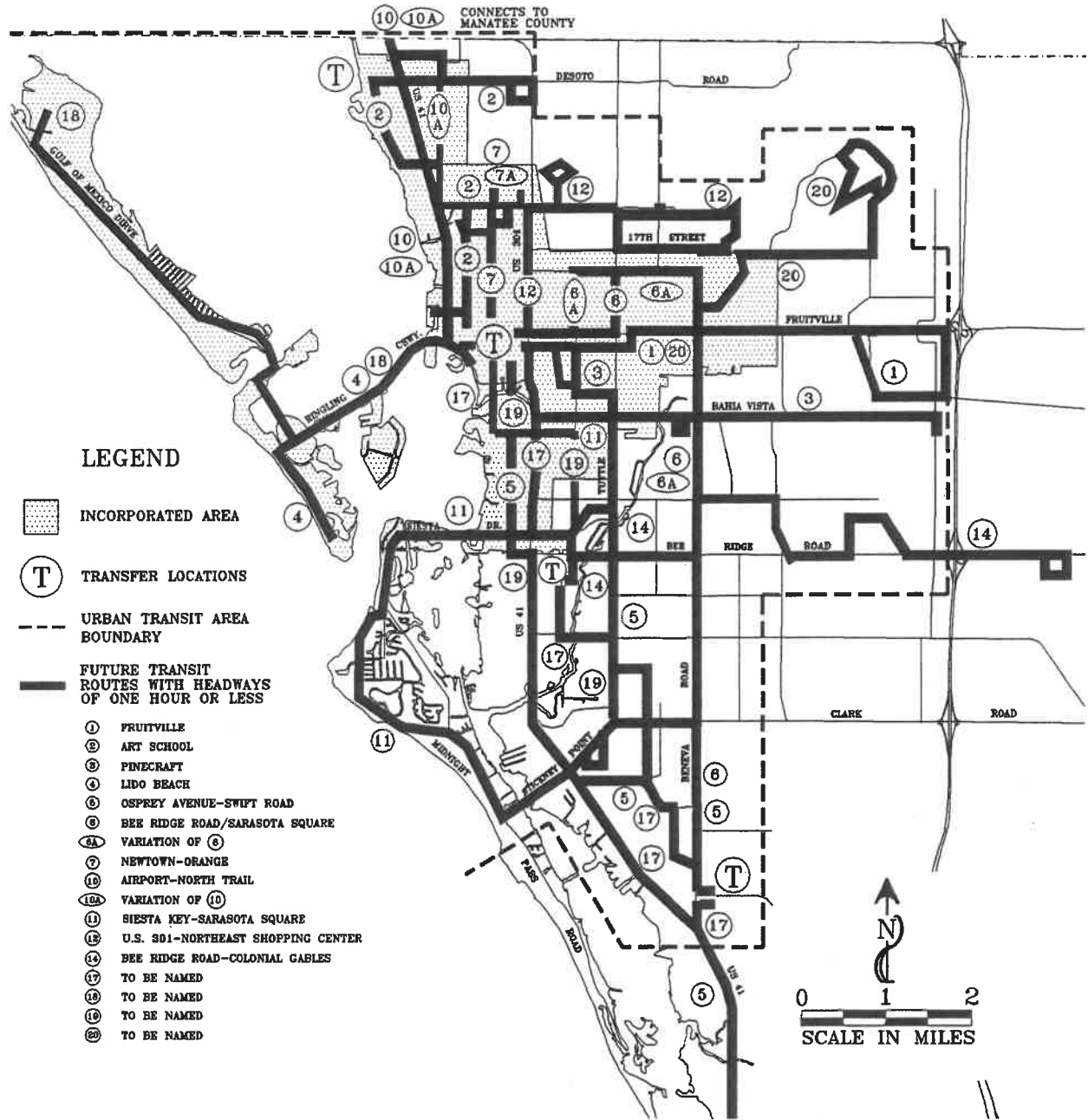


Figure 53: Improved Transit Service For Urban Transit Area (1988-1994)

Source: Sarasota County Area Transit, 1988.

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With this service expansion, SCAT will require an active fleet size of 31 buses. To accommodate this service expansion and to account for existing buses that will need to be replaced during this time frame, SCAT will have to acquire 24 buses over the five year period. Thirteen of the buses are expected to be delivered during 1989, with the remainder to be purchased over the balance of the five year period. The bus purchases are funded with federal, State, and local grants.

In addition to the proposed five-year transit development program, Sarasota County must prepare long range transit plans in coordination with future land uses and based on existing and future mass transit needs.

The majority of mass transit systems have been facing diminishing subsidy revenues. As federal and State subsidy funds become more scarce, Sarasota County will need to secure alternative revenues for SCAT. Several approaches, taken individually or in concert, could assist SCAT in decreasing its dependency on subsidies.

Alternative sources of funding to be explored include: parking charges at public parking facilities; cooperative agreements with beneficiaries of transit service (i.e., a development which receives high density bonuses because of its proximity to a bus route, could in turn provide and maintain a shelter or an on-site bus stop); corporate sponsorships of transit service (i.e., individuals or businesses could invest in the bus transit service); establishment of a reliable local funding source such as a local gas tax revenue dedicated to transit services; and an increase of farebox revenues to cover 35 to 40 percent of the total operating expenses.

The increase in transit revenues can result in service improvements which will attract the "choice" riders. Such improvements and service modifications may include improved coverage of the service areas, lower fares, express services, Sunday service, park-n-ride services, reduced headways, coordination with transit services of adjacent counties, and coordination with paratransit services.

An analysis of the above-mentioned alternatives must be prepared in order for Sarasota County to determine what the needs are, and to choose the most applicable alternatives, towards the goal of reducing the local bus service's dependency on subsidies. If Sarasota County chooses not to proceed with any alternatives, based on this analysis, but is still concerned about the level of required subsidies, the County could consider brokerage. For example, portions of the local service could be subcontracted to private non-profit organizations. Under SCAT's supervision, the private organization would be required to provide compatible service, in accordance with SCAT's performance guidelines. Routes would be coordinated with those of SCAT. Possible routes for brokerage could be, for example, the local service in Venice or shuttle services to the beaches.

Problems

The eleven specific concerns stated in the preceding discussions can be synthesized into four general problems.

- Portions of the County's urbanized area are not covered by mass transit service, while some of the areas presently covered by transit receive inadequate service in terms of coverage and frequency. (Concerns 5, 6, 7, 8, 9, 10, 11)
- The demand for special transportation services exceeds the supply; providers of transit service lack coordination. (Concerns 10, 11)
- User fees do not cover mass transit expenses, thus operating subsidies are required. (Concerns 3, 4)
- The 1988 administrative and maintenance facility for SCAT is inadequate for its needs. Additionally SCAT's original bus fleet needs to be replaced. (Concerns 1, 2)

Opportunities

- The County's Transportation Authority provides a mechanism for obtaining State and federal funds.
- Sarasota County and the MPO can coordinate transit and paratransit services.
- Sarasota County has a number of non-traditional alternative options for the provision of adequate mass transit.

Constraints

- The residential density of the County is generally low and discourages effective fixed route service.
- SCAT depends on federal, State and local subsidies; thus, its ability to expand or prepare long-term plans is restricted.

Planning Options

Optimal Level of Service:

Under this option all portions of the County with densities able to sustain mass transit would be within a quarter-mile of a mass transit route having service frequencies of thirty minutes or more, with minimum dependency on subsidies. (Optimal level of service at any cost)

Sub-Optimal Level of Service:

As mass transit systems generally require an operating subsidy, the County would operate only those routes which were determined to have sufficient ridership to justify local subsidies. (Availability of local funds determine level of service)

Brokerage:

This option allows the County to create a public-private partnership with for-profit or non-profit organizations, or even create a non-profit organization, to work in cooperation with the County for the provision of mass transit in the County.

Mass Transit Plan

Intent

Sarasota County acknowledges that the automobile is and will continue to be the primary transportation mode. The increasing traffic levels, the demand for parking, uncertainty over the price and supply of fuel, and other problems present a need for greater use of public transportation by the general population.

The long range goal of the Sarasota County Area Transit system is to serve the residents and visitors of Sarasota County with an effective, efficient, and quality public transportation system.

In order for the SCAT bus system to be an effective, community-serving system, route design and service levels need to reflect the demographic, geographic, and economic characteristics of Sarasota County. In particular, there must be coordination between transit and land use decision-making. For example, the formation of high-density residential areas adjacent to Commercial Activity Centers, in accordance with the Policies of the Future Land Use Plan, will be instrumental in making mass transit a viable alternative.

This Mass Transit Plan contains a set of Policies for achieving its Goals and Objectives. The Policies provide for significant expansion and modifications to the existing system and identify programs to be followed in the development and adoption of future mass transit development plans, subject to the availability and stability of State and federal subsidies.

Goal 1

It shall be the Goal of Sarasota County to provide a mass transit system within the framework of available finances, which provides a safe, convenient, and economically efficient alternative transportation mode consistent with the identified needs of the County's population and with the prevailing urban land use patterns of the County.

Objective 1.1

To improve by the year 1995 mass transit service levels by 50 percent over the service provided in 1987, as measured by vehicle hours and vehicle miles, and as indicated in Table 25 of the Mass Transit Chapter, subject to the continuation of current federal and State transit assistance. In the event that such assistance is decreased or eliminated, the County will make every effort to maintain at least the 1987 transit service levels.

Policy 1.1.1.

Locate transit services so as to be convenient to residents in accordance to the population and population density of the area, with the objective of establishing bus service within a quarter of a mile of 90 percent of all residences within Urban Transit Areas.

Policy 1.1.2.

Locate passenger transfer facilities at selected Activity Centers, as defined in the Future Land Use Plan, along the major north/south travel corridors periodically reviewing routing and scheduling to maximize coordination and efficiency in the route structure.

Policy 1.1.3.

Continue to provide intercommunity bus service between the urban areas of Sarasota County.

Policy 1.1.4.

Target new transit service to address problems in Sarasota County's transportation services that can be positively impacted by transit, such as the beaches, Central Business Districts employment, commercial concentrations, as well as the major north/south arterial travel corridors.

Policy 1.1.5.

Market transit services to appeal to population segments most likely to take advantage of public transit's opportunities.

Policy 1.1.6.

Maintain safety guidelines comparable with SCAT's past performance, as measured by accidents per 100,000 vehicle miles.

Policy 1.1.7.

Replace the original fleet of SCAT buses by the year 1990, subject to the availability of federal funding.

Policy 1.1.8.

Construct a new SCAT administrative and maintenance facility, after exploring the possibility for a joint facility with other public agencies with similar maintenance requirements.

Policy 1.1.9.

Institute a pre-paid monthly pass program for full fare passengers that would be priced at a cost of approximately 32 regular month trips. Examine a reduction in the local fare in conjunction with a charge for transfers to encourage shorter trips on the bus system.

Policy 1.1.10

Increase service frequency to Lido and Siesta Beaches and provide service to maximize convenience of transferring at the Main Transfer Point, South Gate, and Gulf Gate.

Policy 1.1.11.

Review existing routing and scheduling to identify means to maximize coordination and efficiency. Implement additional service as needed. Relocate the South County transfer facility to downtown Venice. Consider a "theme bus" for the Venice area.

Policy 1.1.12.

Alternate the pulse termination of adjacent routes so that passengers are provided the maximum opportunities to use alternative routes to meet their destinations.

Objective 1.2

To institute a formal method of evaluating route performance.

Policy 1.2.1.

Institute a performance evaluation system that utilizes passengers per hour as a guideline. Evaluate route performance annually. Routes falling below these guidelines will be closely examined for revisions or elimination of the service.

Policy 1.2.2.

Establish a minimum coverage guideline based on minimum urban residential densities and service frequency. The minimum coverage guideline would be to provide transit service within a quarter mile to 90 percent of the residences within the Urban Transit Area, at one hour frequencies. Intercommunity transit service would be provided at less frequent service headways, with service levels being determined on demand and other related factors. Evaluate the coverage annually.

Policy 1.2.3.

Utilize segment boarding counts to measure performance by passengers per hour; set guidelines to indicate when the route performance falls into guideline performance.

Policy 1.2.4.

Investigate transit fare elasticity on an annual basis in order to maintain fair and equitable transit pricing.

Policy 1.2.5.

Update SCAT's mass transit development plan every three years.

Objective 1.3

To continue and improve coordination of public transportation with adjacent communities, other transportation providers, and Florida Department of Transportation and Sarasota-Manatee Metropolitan Planning Organization plans.

Policy 1.3.1.

In cooperation with the Sarasota-Manatee Metropolitan Planning Organization, coordinate transit services with adjacent communities and other modes of public transportation.

Policy 1.3.2.

Coordinate construction activities on the roadway utilized by the transit system to minimize adverse impacts on transit passengers.

Policy 1.3.3.

Consider the existing and future needs of public transit services in the planning and programming of roadway improvements.

Objective 1.4

To assist in establishing a cooperative network of public and private providers which will attempt to meet the needs of the transportation disadvantaged.

Policy 1.4.1.

Identify and implement strategies to eliminate gaps in service to the transportation disadvantaged.

Policy 1.4.2.

In cooperation with the Sarasota-Manatee Metropolitan Planning Organization, maintain the service network by performing broker functions between suppliers and users of transit service.

Objective 1.5

To coordinate land use planning with the provision of mass transit.

Policy 1.5.1.

Continue utilizing the existence of a regular transit route as a factor determining residential development densities urban areas.

Policy 1.5.2.

Develop guidelines to provide incentives for developments so that they support the use of mass transit.

Policy 1.5.3.

Consider developer provided services that coordinate with and enhance mass transit service as alternatives to the provision of a portion of parking requirements to new developments.

Objective 1.6

To investigate and consider implementing alternative programs to fund public services.

Policy 1.6.1.

In coordination with the Sarasota-Manatee Metropolitan Planning Organization, conduct an analysis of alternatives which would reduce SCAT's dependency on public subsidies.

Policy 1.6.2.

Consider implementing the preferred alternative(s) as indicated by the analysis of alternatives through the implementation of Policy 1.6.1.

Policy 1.6.3.

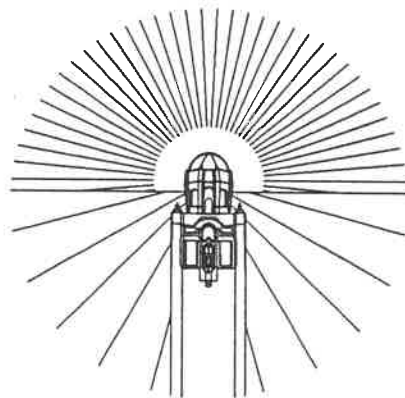
Pursue an adequate, stable funding source for public transit.

Policy 1.6.4.

Support all efforts of obtaining transit operating assistance on the State level.

Policy 1.6.5.

To complete peer comparisons with other similarly sized transit systems as a measure of cost efficiencies and service effectiveness.



Endnotes

1. Wilbur Smith & Assoc./J. E. Griener Co., Manatee and Sarasota County Mass Transit Technical Study, 1974, p. vi.
2. Tampa Bay Regional Planning Council, Needs Study for the SMATS MPO, 1979, p. 1-2.
3. Kimley-Horn and Associates, Inc., Sarasota-Manatee Area Elderly and Handicapped and Disadvantaged Needs Study, Dec., 1982.
4. Carter-Goble Associates, Inc., Sarasota County Development Plan Update and Marketing Program, Nov., 1983.
5. Sarasota-Bradenton Metropolitan Planning Organization, Fiscal Year 1988 Improvement Program, June, 1987.
6. Sarasota County Area Transit, 1988-1994 Transit Development Program, Draft, January, 1988.
7. SCAT, Draft for the Sarasota County Comprehensive Plan Update, February, 1988.
8. Sarasota-Bradenton MPO, op cit (note 5), pp 9-10.
9. Sarasota County, Apoxsee. Sarasota County's Comprehensive Framework for the Future, Vol. II. Capital Improvements Program, as revised, March 12, 1985, p. 1.
10. Ibid.
11. Sarasota County Area Transit, "Route and Schedule Design," 1978, p. 12.
12. Ibid., p. 24.
13. TBRPC, op cit (note 2), p. 1.
14. SCAT, op cit (note 6), p. 81.
15. Ibid., p. 78.
16. SMATS, January, 1988.
17. Kimley-Horn and Associates, op cit (note 3), p. 1-37.
18. Ibid., p. 1-49.
19. Ibid., p. 1-50.
20. Ibid., p. 2-30.
21. Ibid., p. 3-1.
22. Sarasota County, op cit (note 9), p. 19.
23. SCAT, op cit (note 6), pp 73-77.

CHAPTER 7

AVIATION, PORT AND RAIL

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CHAPTER 7

AVIATION, PORT AND RAIL

Aviation

Introduction

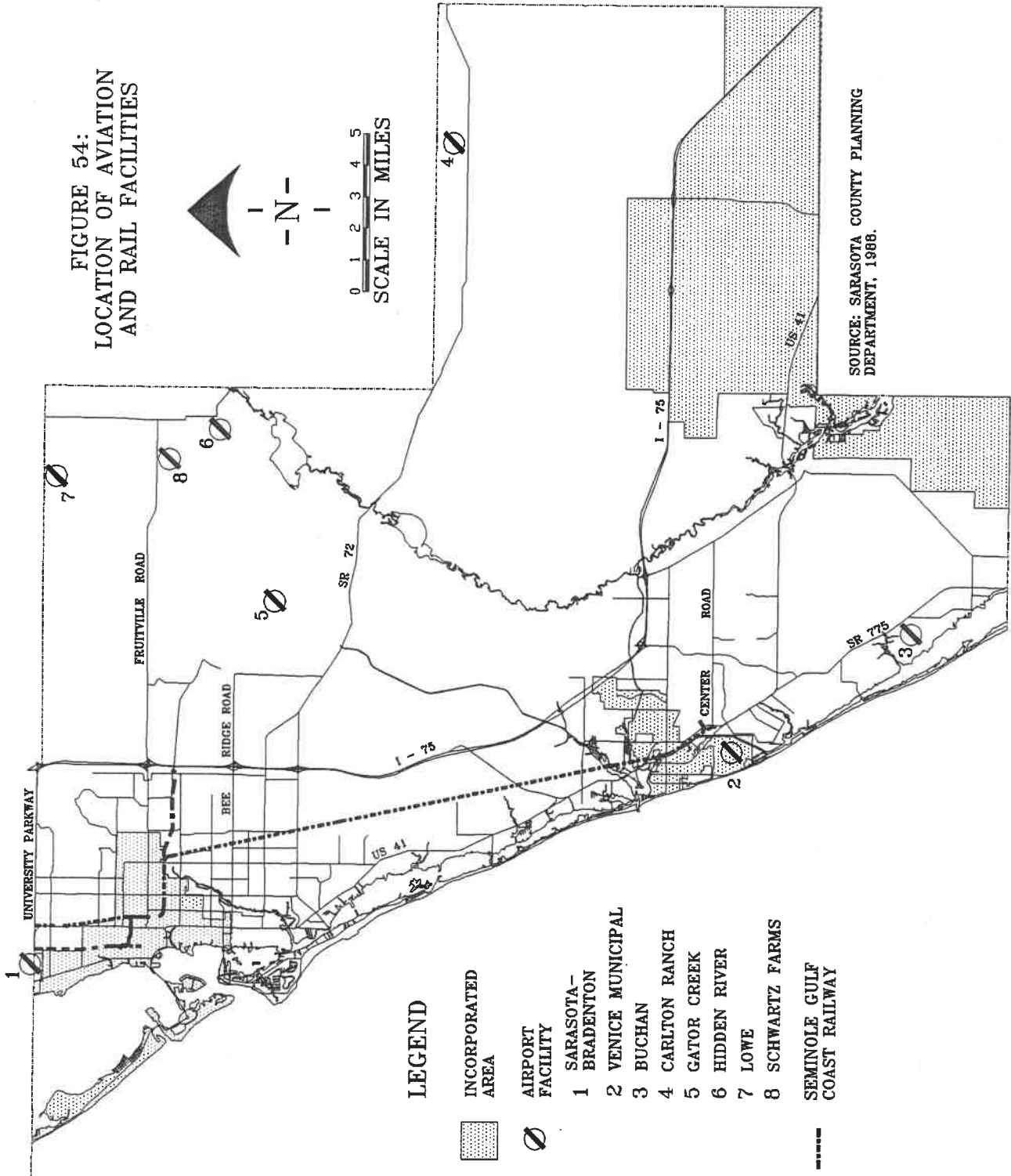
Earlier Chapters establish that County transportation needs are met primarily by highway-oriented vehicles, i.e., automobiles and trucks. However, airplanes contribute greatly to the movement of people and goods to and from Sarasota County.

According to the West Central Florida Metropolitan Aviation System Plan, 1987, there are three public-use aviation facilities in Sarasota County: Sarasota-Bradenton Airport; Venice Municipal Airport; and Buchan Airport. The same source reports that five private-use airports and three heliports/helistops are also located in Sarasota County. They are: Carlton Ranch; Gator Creek; Hidden River; Lowe and Schwartz Farms; Sarasota Fire Department Heliport; Sarasota Memorial Hospital Heliport; and the Oaks Heliport (1). The locations of the airports are shown on Figure 54.

Definitions

- **Air Carrier Airport:** any airport served by a certified passenger airline.
- **Aircraft Operations:** all take-offs and landings.
- **Airport Clear Zone:** a designated area of land which is subject to peak aircraft noise and on which there is the highest potential of danger from aircraft operations (2).
- **Airport Facility:** an area of land or water improved, maintained or operated by a governmental agency for the landing and takeoff of aircraft, or privately owned paved runways of 4,000 or more feet in length, and any appurtenant area which is used for airport buildings, or other airport facilities or rights-of-way (3).
- **Airport Hazard Zones:** designated areas where an obstruction would constitute a hazard to the flight of aircraft taking off or landing at an airport.

FIGURE 54:
LOCATION OF AVIATION
AND RAIL FACILITIES



SOURCE: SARASOTA COUNTY PLANNING DEPARTMENT, 1988.

- **Airport Obstruction:** any structure, object of natural growth, existing condition, or use of land which obstructs the airspace required for the flight of aircraft in landing or taking off at an airport or which otherwise increases the risk of danger to aircraft operations (4).
- **db(A):** the A scale for decibels which most closely approximates human hearing and reaction to sound.
- **Enplanement:** the boarding of an airplane by a single passenger.
- **Feeder Airport:** an airport delivering a normal flow of traffic to larger regional airports.
- **General Aviation:** that portion of the aviation industry covering all private and corporate aircraft, flight instruction, charter flights, air taxi service, and all facilities supporting these activities.
- **Ldn:** cumulative 24-hour day/night average sound level with a 10 db(A) weighting given to noise generated during the hours of 10:00 P.M. and 7:00 A.M.
- **Noise Exposure Maps (NEM):** maps accepted by the Federal Aviation Administration (FAA) as being in compliance with F.A.R. Part 150 which delineate existing and projected five-year future airport noise impact areas of 65 Ldn and greater.
- **Operations-Itinerant:** all operations other than local (i.e., aircraft on extended training flights or cross-country flights).
- **Operations-Local:** aviation activity associated with based aircraft or scheduled airlines.
- **Primary General Aviation Airport:** any airport having more than 5000 annual aircraft operations and/or ten or more based aircraft.
- **Special Use General Aviation Airport:** any airport having fewer than 5000 annual operations or fewer than ten based aircraft.

Planning Efforts (1968-1987)

The 1968 "Long Range Airport Master Plan" recommended expansions to the airport facilities, separation of commercial and general aviation, and search for a new commercial aviation site. In 1969, the Tampa Bay Regional Planning Council reinforced the Airport Master Plan in its "Regional Airport System Plan."

A new airport site was recommended in 1970 by the "Airport Site Selection Study." The 1972 "National Airport System Plan" recommended a new general aviation airport for this area, and major expansion projects at the present site. The "Florida Aviation System Plan for the Tampa Region" recommended a reliever airport for Sarasota-Bradenton Airport, in 1975.

In 1976, the "Airport Master Plan" proposed improvements, and utilization of the existing site through 1995. The "Master Plan Report for Sarasota-Bradenton Airport," 1979, proposed several alternative development strategies, and directed that a long-range master plan be prepared.

In 1980, the Florida Department of Transportation (FDOT) examined the impacts of I-75 on access to the Sarasota-Bradenton Airport. In the same year, the Sarasota-Manatee Area Transportation Study (SMATS) was involved to ensure that airport-generated traffic would not stress County transportation facilities. Additionally, the "Future Airport Capacity and Site Investigation Study" outlined the scope of work necessary to determine the desirability of a new airport.

In 1982, the "Future Airport Capability and Site Investigation Study" examined several alternatives for the solution of the existing problems of the Sarasota-Bradenton Airport (5). A 1983 "Addendum" to this report identified a preferred site for a general aviation airport (6). Additionally, in 1983,

minimum planning standards for airport compatibility were set by the "Airport Noise Control and Land Use Compatibility Study for the Sarasota-Bradenton Airport" (7).

The Sarasota-Manatee Airport Authority initiated a Development of Regional Impact (DRI) in 1985, which proposed various improvements and expansions (8). In 1986, aircraft noise controls and land use compatibility were addressed in the "Airport Noise Control and Land Use Compatibility Study for Sarasota-Bradenton Airport, Noise Exposure Maps, F.A.R. Part 150 Submission Documents" (9). The Noise Exposure Maps were accepted by the FAA on November 14, 1986 and notice of the maps was published locally in order to fulfill federal requirements to recognize the maps as public documents.

Also in 1986, the "Continuing Florida Aviation System Planning Process - Statewide Forecast - Technical Supplement" provided an overview of State, County and demand-center socio-economic forecasts and future land use patterns (10).

The 1987 "West Central Florida Metropolitan Aviation System Plan, Report for the Continuing Florida Aviation System Planning Process (CFASPP)," included the Sarasota County airports and their needs in a regional system context (11).

Also in 1987, the "Sarasota-Bradenton Airport Master Plan" provided recommendations regarding airport operations, defined types of development needed to meet the short and long term air transportation needs of the area and addressed the Airport's compatibility with its environs (12).

Appendix F, Section 1, Aviation Planning Efforts 1968-1987, provides additional information on aviation planning efforts regarding Sarasota County's airports through 1987.

Inventory and Analysis

The update of *Apoxsee* is prepared pursuant to Rule 9J-5, Florida Administrative Code, "Minimum Criteria for Review of Local Government Comprehensive Plans and Determination of Compliance", which addresses requirements for aviation elements, where airport facilities are defined as government owned or operated airport facilities and privately owned airports with paved runways of 4,000 or more feet in length. None of the private airports in Sarasota County meet or exceed this criterion. The characteristics of these private airports are provided in Table 27. A comparison of the characteristics of the three public use aviation facilities is provided in Table 28. The remainder of this Chapter will exclusively address the Sarasota-Bradenton Airport, the Venice Municipal Airport, and the Buchan Airport.

Sarasota-Bradenton Airport

Inventory

A publicly owned air carrier facility, the Airport is situated on 1,102 acres, owned in fee simple, on the Sarasota-Manatee County line less than one-half mile from the Gulf of Mexico (Figure 55). It is administered by the Sarasota-Manatee Airport

Table 27: Private Use Aviation Facilities in Sarasota County

Airport Name	Associated City	Orientation	Runways Length	Surface
Carlton Ranch	Arcadia	9/27	3,400	Turf
Gator Creek	Sarasota	18/36	2,000	Turf
Hidden River	Sarasota	9/27	2,500	Asphalt
Lowe	Sarasota	2/20	2,600	Turf
Schwartz Farms	Sarasota	15/36	3,700	Turf

Source: FDOT, West Central Florida Aviation System Plan, 1987.

Table 28: Public Use Aviation Facilities in Sarasota County

Airport Name	Acreage	Lighting	Radio Aids*	1984 Based Aircraft*
Sarasota-Bradenton	1,102	Runway PAPI, Beacon, MALSR, VASI, REIL	Pie Vortac onfield CAPOK NDB170° 4.4 NM, ILS	253
Venice Municipal	1,200	Runway VASI, Beacon, REIL	SRQ Vortac 161° 20NM	181
Buchan	100			21

Key:
VASI - Visual Approach Slope Indicator
PAPI - Precision Approach Path Indicator
REIL - Runway End Identification Lights
MALSR - Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights

*Radio Aids to Navigation identifies the type of navigational aid, direction outbound from the navigational aid, and distance to the facility. Based aircraft include rotorcraft and ultralights.

Source: Sarasota-Bradenton Airport Master Plan, 1986; Venice Municipal Airport Master Plan, 1986; and Sarasota County Transportation Department, 1987.

Authority which is composed of four elected officials (two from each County). The Authority's powers were established in 1955 by Chapter 77-651, Florida Statutes.

EXISTING FACILITIES

Runways

There are two active runways at the Sarasota-Bradenton Airport. The designated primary runway 14/32 is aligned northwest/southeast, while the secondary (crosswind) runway 4/22 is aligned northeast/southwest (Figure 55). (13)

Runway 14/32 is 7,003 feet long, 150 feet wide, and is constructed of asphaltic concrete. Based on the Federal Aviation Administration's (FAA) rating system for airfield movements, this runway is currently capable of accommodating aircraft weighing up to 150,000 pounds with dual wheel landing gear. The runway has high intensity runway edge lighting

(HIRL), and precision instrument runway instrumentation. Each runway end has a medium intensity approach lighting system with runway alignment indicator lights (MALSR).

Runway 4/22 is 5,006 feet long, 150 feet wide, and is also constructed of asphaltic concrete. It is rated to accommodate aircraft weighing up to 110,000 pounds with dual wheel gear. Runway 4/22 has high intensity runway edge lighting (HIRL), non-precision instrument runway markings, and each runway end has a visual approach slope indicator (VASI).

Each runway has a full parallel taxiway with associated exit taxiways serving as access/ingress routes. The clear zones of the runways and major obstructions are shown on Figure 55.

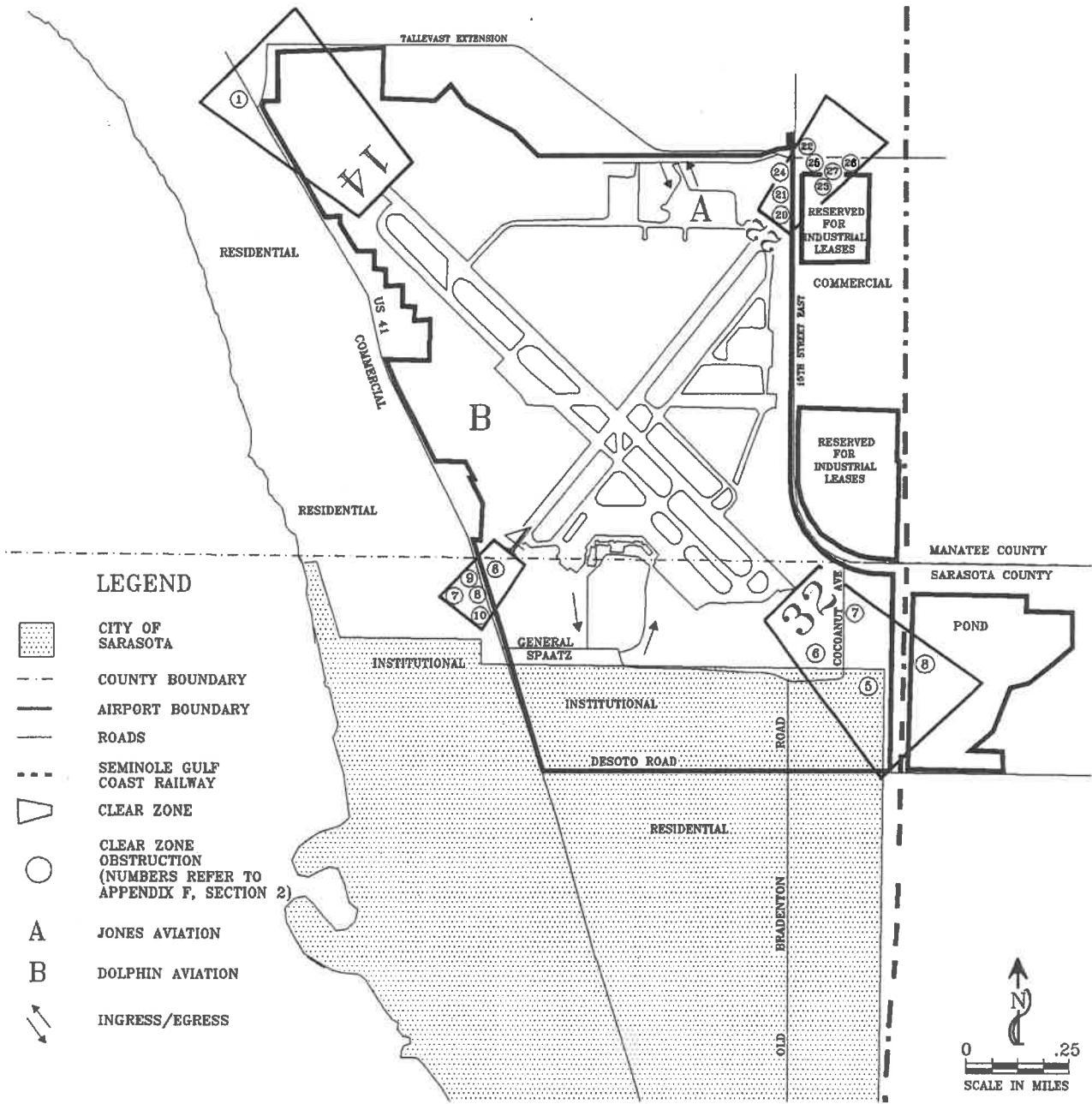


Figure 55: Sarasota-Bradenton Airport - Existing Facilities

Source: Sarasota-Bradenton Airport, 1988.

Apoxsee - The Revised and Updated Sarasota County Comprehensive Plan

General Aviation Facilities

In 1984, the Airport had two major general aviation areas where fixed based operators (FBO) facilities are located. These areas include Dolphin Aviation, situated on the west side of the airfield, and Jones Aviation in the northeastern corner. (14)

The Dolphin Aviation leasehold area contains approximately 14 acres. The apron area consists of 35,600 square yards of asphalt, most of which is on the presently abandoned Runway 9/27. It can accommodate 80 based aircraft, and 10 to 20 transient corporate aircraft. Dolphin Aviation has three hangars, four shade hangars, an 11,540 square feet of office and lobby area located in the main hangar, approximately 100 parking spaces, and three fuel farms with total capacity of 150,000 gallons of gasoline and jet fuel.

The Jones Aviation leasehold area contains approximately six acres. The apron area consists of 29,000 square yards of asphalt. The apron can accommodate 80 based aircraft and 8 to 10 transient aircraft. Jones Aviation has one conventional hangar on their leasehold, but manages two T-hangars, nineteen portable T-hangars and one shade hangar for the Airport Authority. Jones maintains 2,500 square feet of office and lobby space, parking for thirty automobiles and a fuel farm with total capacity of 24,000 gallons of aviation gasoline and jet fuel.

Terminal Facilities

The terminal area is in the south-central side of the Airport and contains approximately 83 acres of land. Several facilities are located in the terminal area, including the air carrier and commuter passenger terminals and apron, air freight building, public automobile parking, airport administration, and maintenance buildings. (15)

The air carrier passenger terminal complex consists of a two-level main terminal building with two single level concourse wings, and an additional passenger terminal building (Wood Terminal) to the west of the main lobby, comprising a total of 62,350 square feet. The commuter terminal facilities occupy an additional 6,000 square feet in the commuter terminal/air freight building.

The public parking area consists of 900 long-term and short-term parking spaces on 16,270 square yards. Additionally, there are 192 spaces for employee parking, and 120 spaces for the rental car lot.

The 6,200 square-foot administration building houses offices and the meeting chambers of the Sarasota-Manatee Airport Authority. The maintenance complex consists of three buildings, and additional structures for a variety of functions.

Other Facilities

A number of other facilities associated with aviation are also located at the Sarasota-Bradenton Airport. They include Crash-Fire-Rescue (CFR) facilities, security, an Air Traffic Control (ATC) Tower, and various navigation aids, including full instrument landing systems (ILS) for runway 14/32. (16)

Adjacent Land Uses

The existing land uses adjacent to the Airport include residential, commercial, industrial, institutional, and open space, as indicated on Figure 55 (17).

Accessibility

Existing points of ingress and egress to the Airport for surface transportation, and access to all other modes of transportation are shown on Figure 55.

Aviation Activity

National Airlines initiated air carrier service to Sarasota and Manatee Counties in 1948, and was joined by Eastern Air Lines in 1961. Several air carriers have served the area since that time. Since mid-1986, Delta, Eastern, American, Northwest, Continental, TWA, and United Airlines have provided major air carrier service, while Air Sunshine, Braniff Express, United Express, and Eastern Express offer commuter service to the Sarasota-Manatee area (18). Tables 29 and 30 provide historic enplanement and operational data, respectively, for the Sarasota-Bradenton Airport.

Table 29: Sarasota-Bradenton Airport - Historic Enplanement Data

Year	Air Carrier	Commuter	Total	% Change
1979	534,659	16,894	551,553	20.26
1980	577,246	8,721	505,967	6.24
1981	506,474	20,746	527,220	-8.32
1982	664,193	35,603	699,796	30.26
1983	694,148	45,904	740,052	5.75
1984	697,528	24,661	722,189	-2.41
1985	614,730	36,316	651,046	-9.85
1986	641,416	31,638	673,054	3.38

Source: Sarasota-Bradenton Airport Master Plan, 1986 (Data for 1979-1984) and Sarasota-Manatee Airport Authority, Activity Reports (Data for 1985 and 1986).

Table 30: Sarasota-Bradenton Airport - Historic Aircraft Operations Data

Year	Air Carrier		General Aviation		Total
	Number	%Total	Number	% Total	
1979	25,239	15.6	136,825	84.4	162,064
1980	25,899	17.9	118,265	82.1	144,164
1981	29,001	20.4	113,355	79.6	142,356
1982	43,776	27.5	115,494	72.5	159,270
1983	42,896	27.1	115,138	72.9	158,034
1984	42,960	27.2	115,135	72.8	158,095
1985	40,772	26.2	115,139	73.8	155,811
1986	35,535	21.9	126,662	78.1	162,197

Source: Sarasota-Bradenton Airport Master Plan, 1986 (Data for 1979-1984) and Sarasota-Manatee Airport Authority, Activity Reports (Data for 1985 and 1986).

The Sarasota-Manatee Airport Authority Activity Reports indicate that there were 163,645 total aircraft operations (air carrier, commuter, general aviation, and military) at the Sarasota-Bradenton Airport in 1986. Of these, there were 35,535 air carrier operations, and 126,662 general aviation operations, accommodating a total of 1,334,201 passengers. The Airport handled approximately 448 total operations per day, 22 percent of which were air carrier operations and 77 percent of which involved general aviation operations. In 1986, there were 120,528 itinerant operations and 43,177 local operations (19). Aircargo is almost exclusively moved in the cargo holds of passenger aircraft

arriving and departing the Sarasota-Bradenton Airport. From 1979 through 1986, the annual average cargo/freight pounds per operation ranged from a low of 55 pounds in 1982 to a high of 128 pounds in 1979. The amount of cargo carried in 1986 averaged 99 pounds per aircraft operation.

Analysis

Sarasota-Bradenton Airport is characterized as an origin-destination airport with passengers arriving to and departing from the Sarasota area from air carrier service involving many major cities in the

Northeast and Midwest. The FAA classifies the Airport as a "small hub" transport category airport based on its physical facilities and level of passenger activity.

Since 1979, there has been an overall increase in passenger enplanement and in aircraft operations, as demonstrated in Tables 29 and 30, respectively, with modest decline in several of the years. A substantial increase in both passenger activity and aircraft operations was experienced in 1987. A review of national aviation statistics compiled by FAA, indicates that the periods of modest decline of aviation activity at this Airport followed a national trend, which is influenced by various factors, such as the national economy, the air traffic controller strike, etc. A number of factors, however, have contributed to the overall increase of aviation activity observed since 1979. They include:

- The economic recovery beginning in late 1982;
- New entry of air carriers to established markets;
- Lower fares on established markets; and
- Increased domestic tourism.

The Sarasota-Bradenton Airport Master Plan (1986) provides forecasts for airport total operations, up to the year 2005. A linear extrapolation was employed to provide estimates for the year 2010.

These forecasts are based on an analysis of the socio-economic factors of the Sarasota-Bradenton Airport service area, with an emphasis placed on those factors for the Sarasota and Manatee area, primarily because of the prominence of this area and the availability of data. The socio-economic factors include population, employment, income, and service demand based upon passenger, freight and cargo usage, community needs, and the local economy.

The population forecast for the entire service area, for the year 2005, is approximately 676,800, while the Sarasota-Manatee area's forecast, for the same year, is approximately 620,000. Total employment for the two-county area is expected to approximate 128,710 jobs.

The forecasts indicate that total annual aircraft activity, including air carrier and general aviation, will exceed 220,000 operations by the year 2000, and surpass 265,000 operations by 2010. It is also forecast that total annual enplanement will increase from 797,370 in 1985, to 1,598,190 in 2005, and up to 1,902,858 in 2010. The average cargo/freight pounds per operation is forecasted to increase to 130.4 lbs. in 1995, 172.5 lbs. in 2005, and 190.0 lbs. in 2010.

The Sarasota-Bradenton Airport Master Plan indicates that the Airport's annual operation capacity equals 230,000 total annual operations.

The FAA has developed thresholds of activity levels that can be used to judge the initiation of capacity-related improvements. When demand reaches 60 percent of annual capacity an airport should begin planning for capacity level improvements. The Sarasota-Bradenton Airport presently exceeds this threshold. According to the forecast demand of aviation activity, total operations are expected to exceed the Airport's capacity soon after the year 2000.

As the Airport reached its 60 percent capacity threshold, and considering conflicts that had arisen relating to the Airport noise and land use compatibility with adjacent properties, the Airport Authority studied several options regarding the relocation of the Airport, and/or separation between air carrier and general aircraft operations. In November, 1986, the residents of Sarasota and Manatee Counties had the opportunity to vote on non-binding referenda regarding airport relocation. The voters of both Counties opposed the relocation of the Airport, while supporting improvements of existing facilities. The Airport Authority presently proposes a number of improvements, including the ones discussed below.

In 1985, the Airport Authority initiated a Development of Regional Impact (DRI) proposing landside improvements, such as the construction of a replacement terminal; modification of the internal roadway network; expansion of existing parking lots; relocation of several on-site facilities; expansion and replacement of the aircraft apron area; and replacement of the Airport sewer collection

system and surface drainage improvements. Work began in late 1987 and is scheduled for substantial completion in 1989 and final completion in early 1990.

CONCERN 1

Sarasota-Bradenton Airport has presently exceeded the FAA 60 percent capacity threshold and is gradually approaching its operating capacity. It will continue so until the proposed airside and landside improvements have taken place.

In 1985, there were 119,580 total general aviation operations at the Sarasota-Bradenton Airport. The Airport Master Plan forecasts indicate that in the year 2005 there will be 160,800 total general aviation operations. This represents two-thirds of the total operations that are projected for that year.

The Sarasota-Bradenton Airport Master Plan proposes the construction of a runway parallel to existing Runway 14/32 to accommodate light general aviation aircraft activity. It is scheduled to be constructed in the 1992-1996 period.

The increase of general aviation operations coupled with the increase in total demand create concerns regarding the efficiency of the present facilities and the safety of air travel at this Airport. The proposed landside improvements and the proposed construction of the general aviation parallel runway will alleviate the capacity problems of the Airport until 1998, at which time the Airport Authority estimates that the Airport will once again reach the 60 percent capacity threshold.

CONCERN 2

The continued efficiency of commercial and private air travel at the Sarasota-Bradenton Airport will be in jeopardy until proposed airside improvements have taken place.

Although Sarasota County does not have a direct role in decisions relating to the Airport, there is a close relationship between Apoxsee and the plans of the Sarasota-Manatee Airport Authority. Land use and ground transportation, both of which are partially or wholly regulated by Sarasota County government, are greatly affected by future airport plans.

Land Use

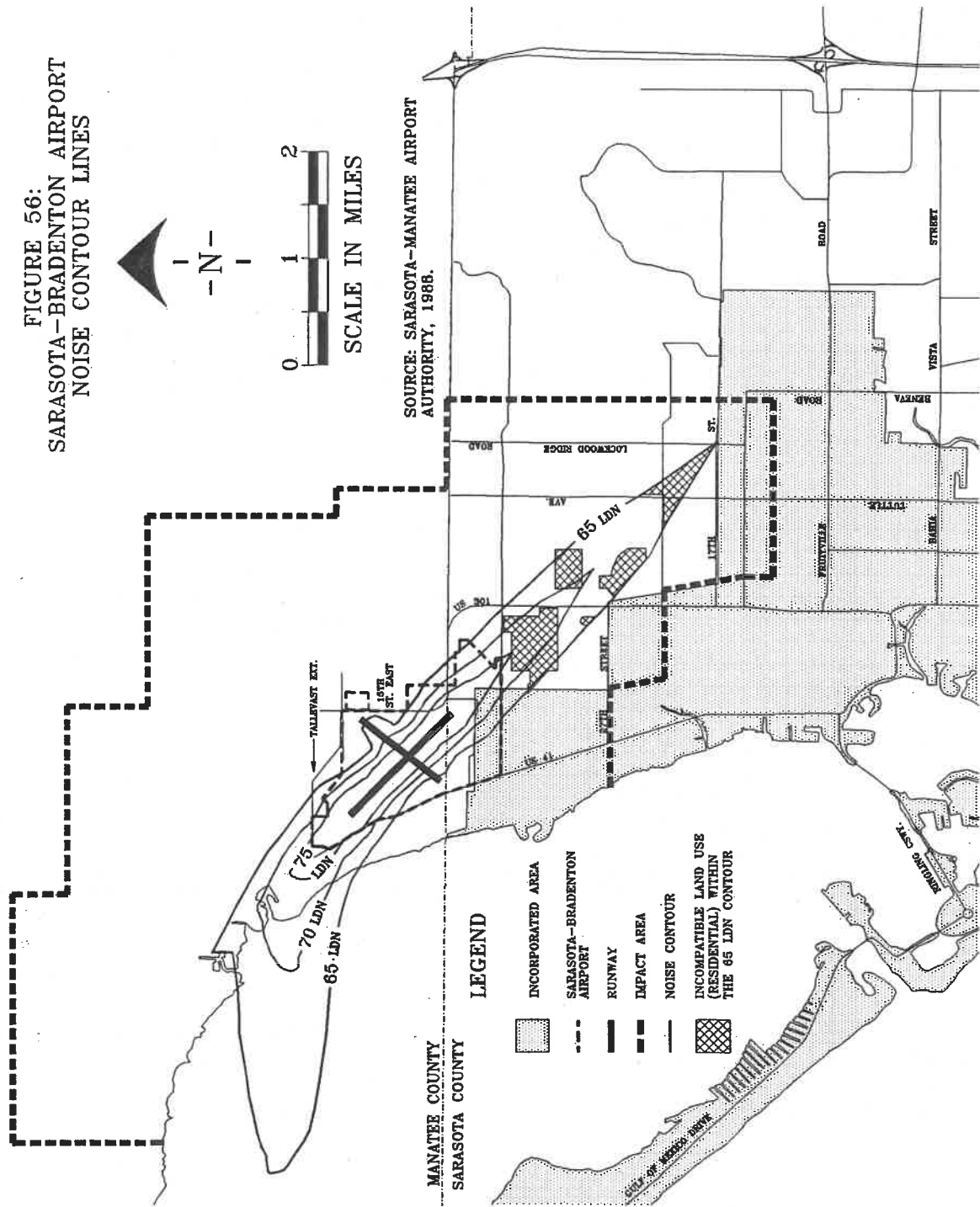
Given the noise produced by jet-powered aircraft, certain land uses are better-suited than others for properties adjacent to airports. Airport requirements for airspace free of tall structures, the absence of activities which might interfere with aircraft communication equipment, and similar considerations limit even more, the number of suitable uses. It is essential, therefore, that land use and aviation planning be coordinated.

At the Airport's present location, the impact upon land uses in unincorporated Sarasota County is rather limited. Most of the land surrounding the Airport lies within the City of Sarasota and Manatee County. The relatively small amount of land located in unincorporated Sarasota County is presently committed to a variety of land uses. Some of the existing land uses are in conflict with the operation of the Airport. For example, residential areas to the west and southeast experience levels of aircraft noise in excess of 75 Ldn (Figure 56). The Environmental Protection Agency (EPA) indicates that long term exposure of noise values of 75 Ldn or higher, on a continuous basis may result in physical and psychological problems, and can affect work performance, especially in high stress situations (20).

CONCERN 3

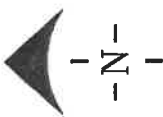
Some residential areas near the Sarasota-Bradenton Airport are exposed to high levels of aircraft noise.

FIGURE 56:
SARASOTA-BRADENTON AIRPORT
NOISE CONTOUR LINES



SOURCE: SARASOTA-MANATEE AIRPORT
AUTHORITY, 1988.

SCALE IN MILES



LEGEND

- INCORPORATED AREA
- SARASOTA-BRADENTON AIRPORT
- RUNWAY
- IMPACT AREA
- NOISE CONTOUR
- INCOMPATIBLE LAND USE (RESIDENTIAL) WITHIN THE 65 LDN CONTOUR

In an effort to alleviate the 10 year noise exposure dispute between the Airport and its environs, the Airport Authority voluntarily initiated the Airport Noise Control and Land Use Compatibility Study. A technical report was prepared in 1983, introducing a noise compatibility plan which includes short-term and long-term measures.

The short-term noise compatibility program includes noise abatement turns, limitations to the aircraft operation hours and calls for a Noise Abatement Advisory Committee, Noise Abatement Officer, noise monitoring, noise complaint response, plan review and evaluation, and public information.

Although the FAA continues to refine the elements of the long-term compatibility program, as of mid-1988, this program consists of:

- continuation of all elements of the short-term program;
- purchase of aviation easements or fee simple interest in certain properties;
- purchase of aviation easements over residential properties, in the 75 Ldn contour, which were purchased by present owners prior to January 1, 1980; and
- purchase of fee-simple interest in residential properties, in the Ldn 75 contour, which were purchased by present owners prior to January, 1980.

In the event that recent actions by the Airport Authority to resolve the noise impact dispute might not bring the anticipated results, or in the event that the Airport Authority might find it necessary -- for any reason -- to relocate the Airport, Sarasota County needs to examine the impacts of airport relocation.

If the Airport, or part of its functions, are relocated into the unincorporated portions of Sarasota County, land use planning will be required for the areas surrounding the new facility as well as for the redevelopment of the current site. If a new site is chosen, it could be in an area of primarily agricultural use.

CONCERN 4

Relocation of the Sarasota-Bradenton Airport to an agricultural site within the unincorporated County may not be consistent with the agricultural preservation policies of Apoxsee's Future Land Use Chapter, or the State agricultural preservation and land development policies.

The introduction of a commercial airport would create the demand for such airport-related commercial land uses as hotels, air freight facilities, car rental firms, etc.; it would, in addition, attract other development, which in turn would continue or promote urban sprawl.

CONCERN 5

A new commercial airport would create a new development center containing numerous air transport-related activities in an area likely to have had a quieter rural agricultural environment.

Transportation

There are three entrances to the Sarasota-Bradenton Airport terminal area, one from U.S. 41 through General Spatz Boulevard, one from U.S. 301, and one from DeSoto Road/Old Bradenton Road (the final link from I-75 via University Parkway). The roadways which have significant airport traffic, and are considered primary airport access routes, are as follows:

- U.S. 41, from the north boundary of the Airport to just south of DeSoto Road;
- Old U.S. 301, from Nicholson Avenue to New U.S. 301;
- DeSoto Road, from U.S. 41 to U.S. 301; and
- University Parkway, from New U.S. 301 to I-75.

Presently, the Sarasota County Transportation Department is designing an unnamed "connector road" from DeSoto Road (near Old Bradenton Road) to University Parkway (near new U.S. 301). (21)

Sarasota County's Capital Improvements Program (CIP) has scheduled the following improvements for the above mentioned primary airport access routes (22):

- 1988-DeSoto Road -widened to 4 lanes, from U.S. 41 to U.S. 301 and Unnamed Road-acquire right of way for a major arterial, from DeSoto Road to U.S. 301 (the "connector road")
- 1989-Unnamed Road-Construct 4 lanes from DeSoto Road to U.S. 301
- 1990-University Parkway-Add 2 lanes to the existing 2 lanes, from U.S. 301 to I-75 (1/2 of the funds contributed by Sarasota County, the other 1/2 by Manatee County).

"The Reevaluation of the Year 2000 Needs Plan" prepared for the Sarasota-Bradenton Metropolitan Planning Organization (MPO), in 1985, indicates that all airport access routes in the Airport's service area will be operating at less than a desirable level of service, even after all planned improvements are in place. In the immediate vicinity of the Airport, however, access will be improved by the construction of the unnamed "connector road," and the improvements of DeSoto Road and University Parkway.

Relocation of the Airport would produce a corresponding shift in traffic patterns. A determination of whether existing roads are adequate would depend upon site selection and upon the availability of existing roads. The construction of new roads and the widening of existing ones could be required to meet traffic demands.

CONCERN 6

Expansion of the road network is necessary to meet traffic demands generated by an expanded airport facility.

Figure 57 is the future aviation map for the Sarasota-Bradenton Airport as prepared by the Sarasota-Manatee Airport Authority.

Discussion

The established need for additional runway capacity and the current and projected aviation demands, particularly those regarding general aviation, which accounts for a significant majority of total operations, indicate that additional facilities should accommodate general aviation through the year 2005. This is the intent for the proposed parallel runway.

Further, the Future Airport Capability and Site Investigation Study demonstrates that airside and landside improvements to the existing Airport will meet the area's aviation needs while costing much less than the construction of a new facility.

Thus, commercial aviation operations should remain at the Sarasota-Bradenton Airport along with the larger general aviation aircraft (as long as sufficient capacity exists).

Although land use incompatibilities will continue to exist, it must be recognized that the Airport was established in its present location long before residential subdivisions began to develop around it. In the same way, relocating a commercial air carrier facility east of the present site would be an unnecessary infringement upon previously established residents who presumably, among other reasons for being there, sought a rural lifestyle with space, peace, and quiet.

Finally, there is the probability of negative environmental impact. Airport relocation could have impacts upon water quality, vegetation and wildlife, agriculture, utility location and land use changes from induced development that jointly could impose severe economic and social costs upon present and future generations. Moving to a new site would not come without major environmental impacts."

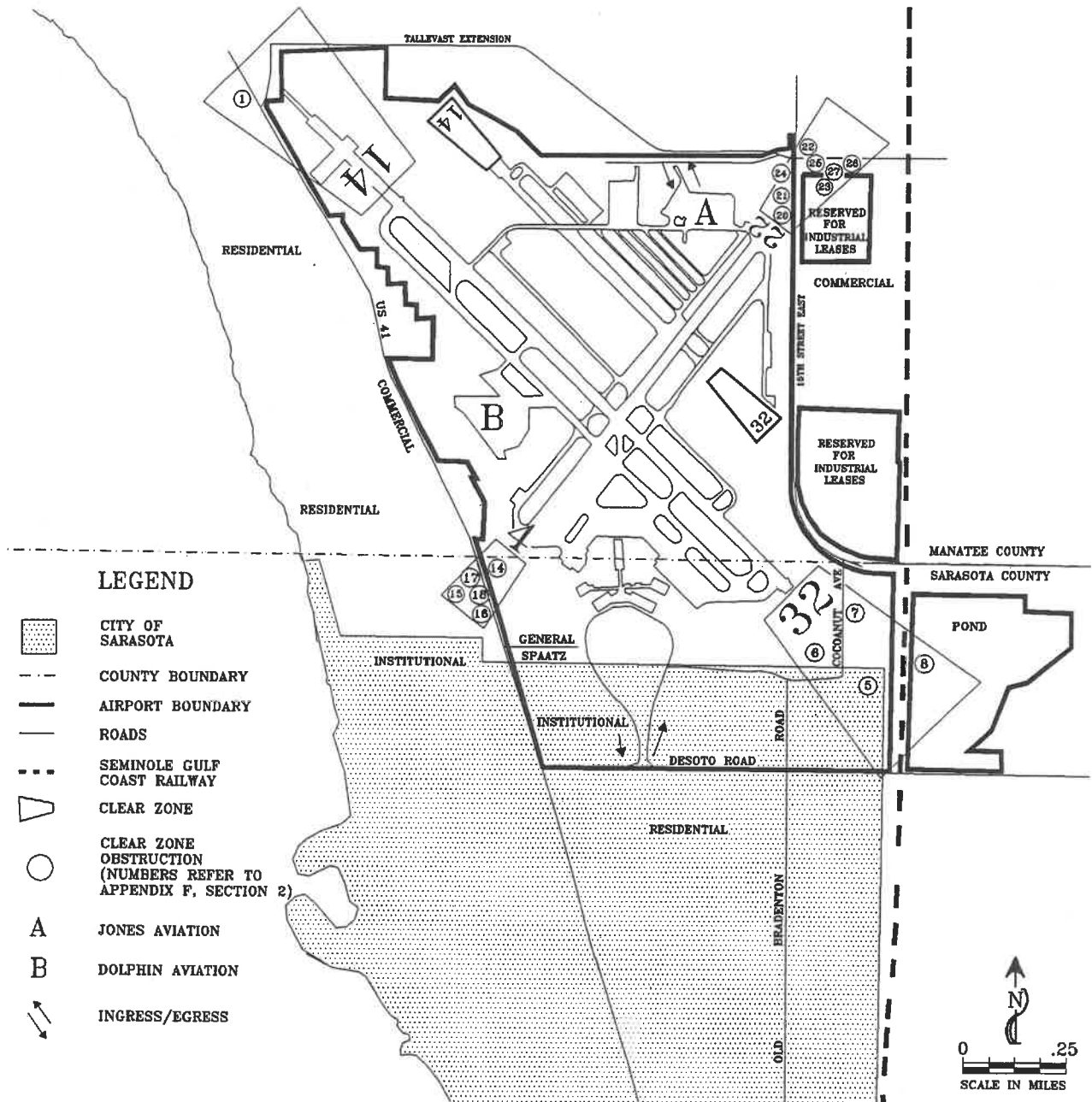


Figure 57: Sarasota-Bradenton Airport - Future Aviation Facilities, 2004

Source: Sarasota-Bradenton Airport, 1988.

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Venice Municipal Airport

Inventory

A publicly owned general aviation airport, the Venice Municipal Airport consists of approximately 1,163.7 acres. It is located in the City of Venice, approximately 1.7 miles south of the downtown area, and is bounded on the southeast by the Intercoastal Waterway, on the west by the Gulf of Mexico, and on the north by residential development (Figure 58). The Airport is administered by an Airport Advisory Board under the direction of the Venice City Council (23).

EXISTING FACILITIES

Runways

There are two runways at the Venice Municipal Airport. The designated primary Runway 13/31 is aligned northwest/southeast, while the secondary Runway 4/22 is aligned northeast/southwest. A third Runway 9/27, has been abandoned. (Figure 58). (24)

Runway 13/31 is 5,000 feet long and 150 feet wide. The weight-bearing capacity is 45,000 pounds, single wheel, and 80,000 pounds, dual tandem. Although the runway was recently resurfaced, separation of the new surface from the old runway is beginning to appear. Runway 13/31 is a visual transport category runway, with medium intensity runway lighting (MIRL), VASI, and REIL on both ends. Runway 13 is used for approximately 27 percent of all operations, and Runway 31 for approximately 23 percent of all operations.

Runway 4/22 is a visual transport category runway, and has 5,000 feet in length, and 150 feet in width. The threshold is displaced 294 feet at the approach end of Runway 22, reducing the usable length for landing in this direction to 4,706 feet. The threshold is displaced due to a drawbridge over the Intercoastal Waterway, approximately 1,200 feet from the end of the runway, which, when raised, penetrates the south edge of the approach surface by 14.35 feet. Runway 4 is used for approximately 30 percent of all operations, and Runway 22 for approximately 20 percent of all operations.

The existing taxiway system is in good condition, and is shown on Figure 58. The primary aircraft parking area is on the north side of the Airport, adjacent to the two fixed based operations (FBO's) and consists of concrete surfaces.

There are obstructions near the Venice Municipal Airport. A lighted radio transmission tower is located approximately 10,200 feet north of the center of the Airport. The tower is 338 feet above mean sea level. The top of the tower penetrates the Federal Aviation Regulations (FAR) Part 77 horizontal surface by approximately 169 feet. As mentioned earlier, the drawbridge on U.S. 41 (Business), at the approach of Runway 22, is an obstruction when it is in the fully raised position. Then, it penetrates the 20:1 slope to Runway 22 by 14.35 feet. The landing threshold on Runway 22 has been displaced 294 feet to compensate for this penetration of the approach slope.

General Aviation Facilities

Two fixed based operators (FBO's), Venice Flying Service, and Air Venice provide FBO services including refueling, maintenance, and flight instruction. In addition, there are several tenants on the Airport property. (25)

Venice Flying Service functions as a full service FBO, providing aircraft sales, flight training, air frame and engine repair, charter/air taxi service, aircraft rental, and fuel service. Existing facilities include a large conventional hangar (120 x 150 feet), one standard T-hangar accommodating 13 aircraft and a 4,800 square foot terminal building which includes a restaurant, office/administration space, and lounge area. Also, there is fuel storage capacity of 36,000 gallons.

Air Venice provides maintenance, flight training, aircraft sales and rentals, charter/air taxi service, aerial photography, and minor repairs. There is fuel storage capacity of 14,000 gallons. Existing facilities consist of one conventional hangar (100 x 100 feet), a maintenance building (40 x 80 feet), and a 2,250 square foot office/administrative building.

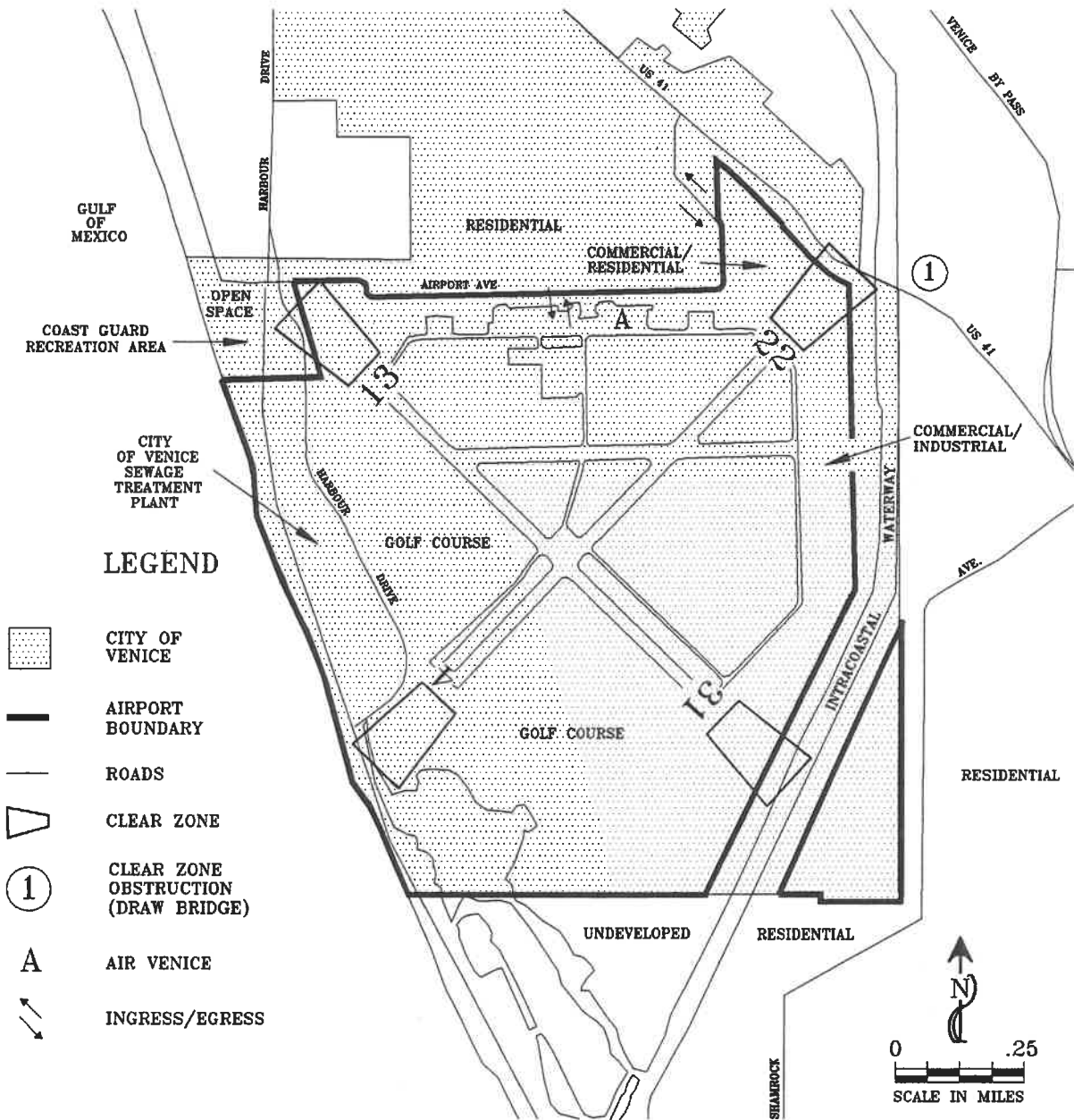


Figure 58: Venice Municipal Airport - Existing Facilities

Source: Venice Municipal Airport, 1988.

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Duncan Aircraft Sales of Florida is primarily concerned with the sale of multi-engine piston, turboprop, and jet aircraft. There are approximately 14 aircraft for sale at this facility. An approximately 10,000 square yard paved apron area accommodates 10 tiedown positions. There are two 10,000 square foot conventional hangars, each of which has 2,500 square feet of office/administrative space. Also, there is fuel storage of 12,000 gallons.

Other tenants at the Venice Municipal Airport include the Red Lake Golf Course, and Ringling Bros. Barnum and Bailey Circus.

Adjacent Land Uses

The existing land uses adjacent to the Airport include residential, commercial, recreation and open space, and vacant land designated for governmental uses, as indicated on Figure 58.

Accessibility

Existing points of ingress and egress to the Airport for surface transportation, and the Airport's access for all other modes of transportation are shown on Figure 58.

Aviation Activity

The Airport was constructed by the United States Government in the early 1940's. Some of the Airport property reverted back to the City of Venice after World War II, and some was directly transferred to private ownership. The Airport, as known today, has been under city control since that time (26).

In 1984, there were approximately 78,960 total annual operations at the Venice Municipal Airport, servicing 33,065 passengers. Table 31 provides 1984 aircraft activity data.

Table 31: Venice Municipal Airport - Airport Activity, 1984, and Forecast Summary

Activity	1984	1989	1994	2004	2010
<i>Based Aircraft</i>					
Single Engine	142	169	190	234	289
Multi Engine	25	29	33	41	45
Turboprop	5	3	4	5	6
Turbojet	7	10	11	12	13
Rotor	0	1	2	4	6
Total	179	212	240	296	359
<i>Enplaned Passengers</i>					
Commuter	2,400	3,571	4,743	7,085	8,256
CA Itinerant	30,665	41,285	56,104	85,668	100,450
Total	33,065	44,856	60,847	92,753	108,706
<i>Operations</i>					
Commuter	3,120	3,510	3,900	4,680	5,070
General Aviation					
Local	39,714	48,127	56,104	70,745	78,065
Itinerant	36,076	45,872	56,103	77,880	88,763
Military	50	50	50	50	50
Total	78,960	97,559	116,157	153,355	171,948

Source: Venice Municipal Airport Master Plan, Table 3-18, page IV, 1986 and Sarasota County Planning Department, 1987.

Analysis

General

Also included in Table 31 are projections for total aircraft operations and enplanements through the year 2010. The comparison between projected demand and capacity is shown on Table 31. The existing annual operations capacity of approximately 203,000 flights is well above projected demands of the 171,953 flights expected in the year 2010. (27)

The Venice Municipal Airport Master Plan establishes that planning for capacity related improvements should start at the 80 percent capacity point. As indicated in Table 31, the Airport can be expected to reach the 80 percent threshold soon after the year 2005. The Airport Master Plan forecasts several improvements which occur during the planning period of the document 1984-2004. Major proposed improvements include expansion of the apron area, additional hangar space and increased terminal space and parking (Figure 59).

Land Use

The majority of the adjacent land subjected to high noise levels (65 + Ldn) is located within the Airport property boundaries, and, therefore, does not affect land uses off Airport property. Although noise complaints may occur as isolated incidents, the overall noise level is not considered a problem under F.A.R. Part 150 rules. The unincorporated areas adjacent to the Airport are a mixture of residential, commercial, and industrial uses (Figure 58).

Transportation

Surface access to the north side of the Airport is fair, however it should be improved as activity at the Airport increases. The Airport Master Plan proposes access improvements to U.S. 41 (Business) from the Airport and improvements to Airport Avenue. Also proposed is the construction of an access road around the approach end of Runway 22 in order to open up the industrial/commercial area on the east of the Airport (Figure 58).

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Discussion

According to the preferred system alternative of the West Central Florida Metropolitan Aviation System Plan (August, 1987), the Venice Municipal Airport now plays an important role by absorbing some of the general aviation traffic which would otherwise use the Sarasota-Bradenton Airport.

In the future, this reliever role will become important in helping to preclude saturation at the Sarasota-Bradenton Airport. For this reason, it has been recommended that the Venice Municipal Airport become a designated reliever for the Sarasota-Bradenton Airport (28).

Buchan Airport

Inventory

Buchan Airport is a publicly owned, special use general aviation airport under the direction of the Sarasota County Board of County Commissioners. Classified by the County as a sport aviation facility, it is utilized as an air-related recreation center for such activities as sky-diving, model airplane flying, gliding, and light private aircraft flying. Buchan Airport also serves as a base for the County's mosquito control program, and as a small general aviation facility for the Englewood area. It is located two miles northwest of Englewood (Figure 60.) (29)

EXISTING FACILITIES AND AVIATION ACTIVITY

Runways

As of 1986 there were two turf runways, one 2700 feet in length and 150 feet in width in good condition, and the other, 2240 feet in length and 100 feet in width in fair condition. The Airport is unattended, and without lighting or services. Additional services or facilities have not been planned. The Airport's clear zones and obstructions are shown on Figure 60.

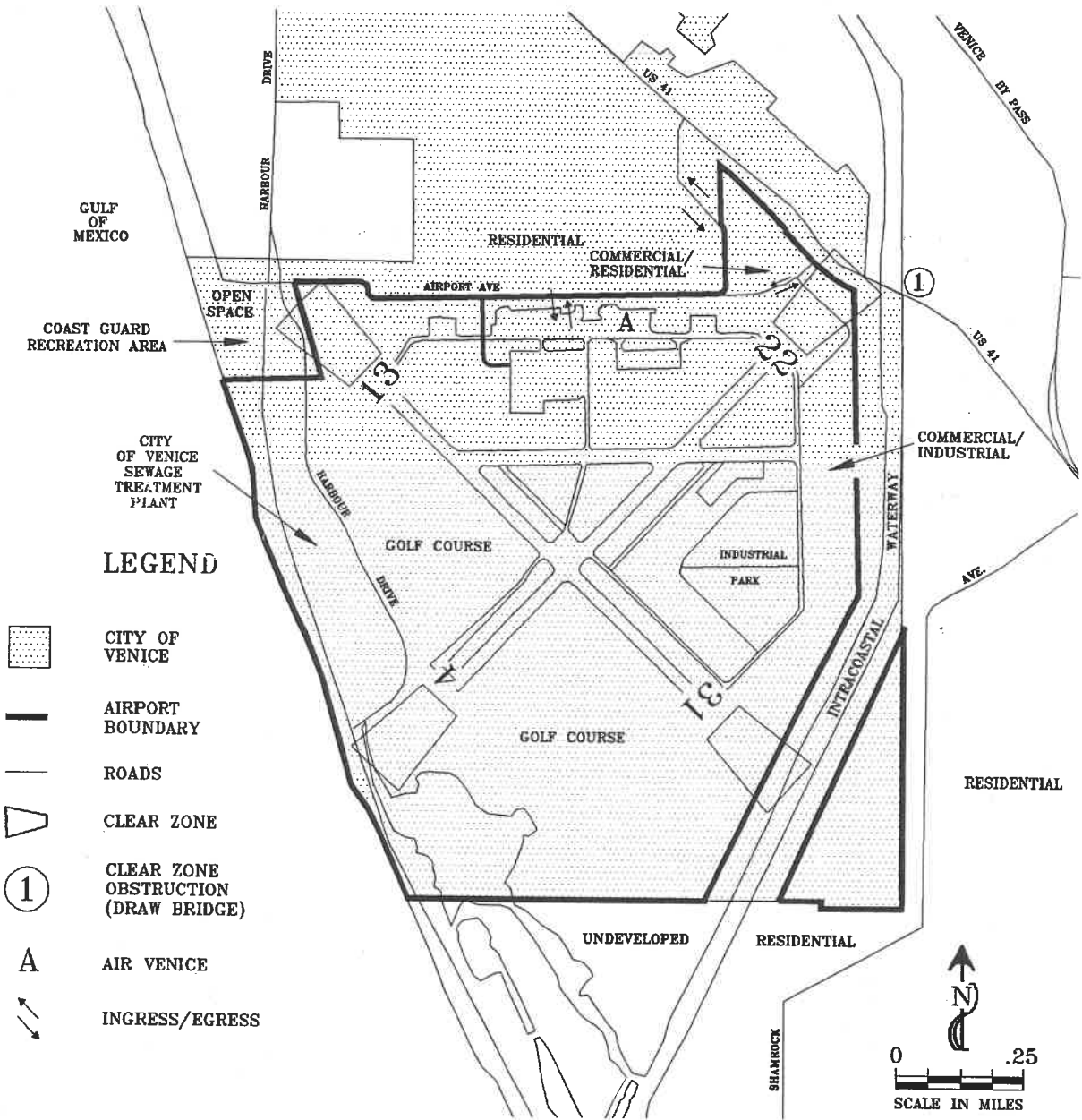


Figure 59: Venice Municipal Airport - Future Aviation Facilities, 2004

Source: Venice Municipal Airport, 1988.
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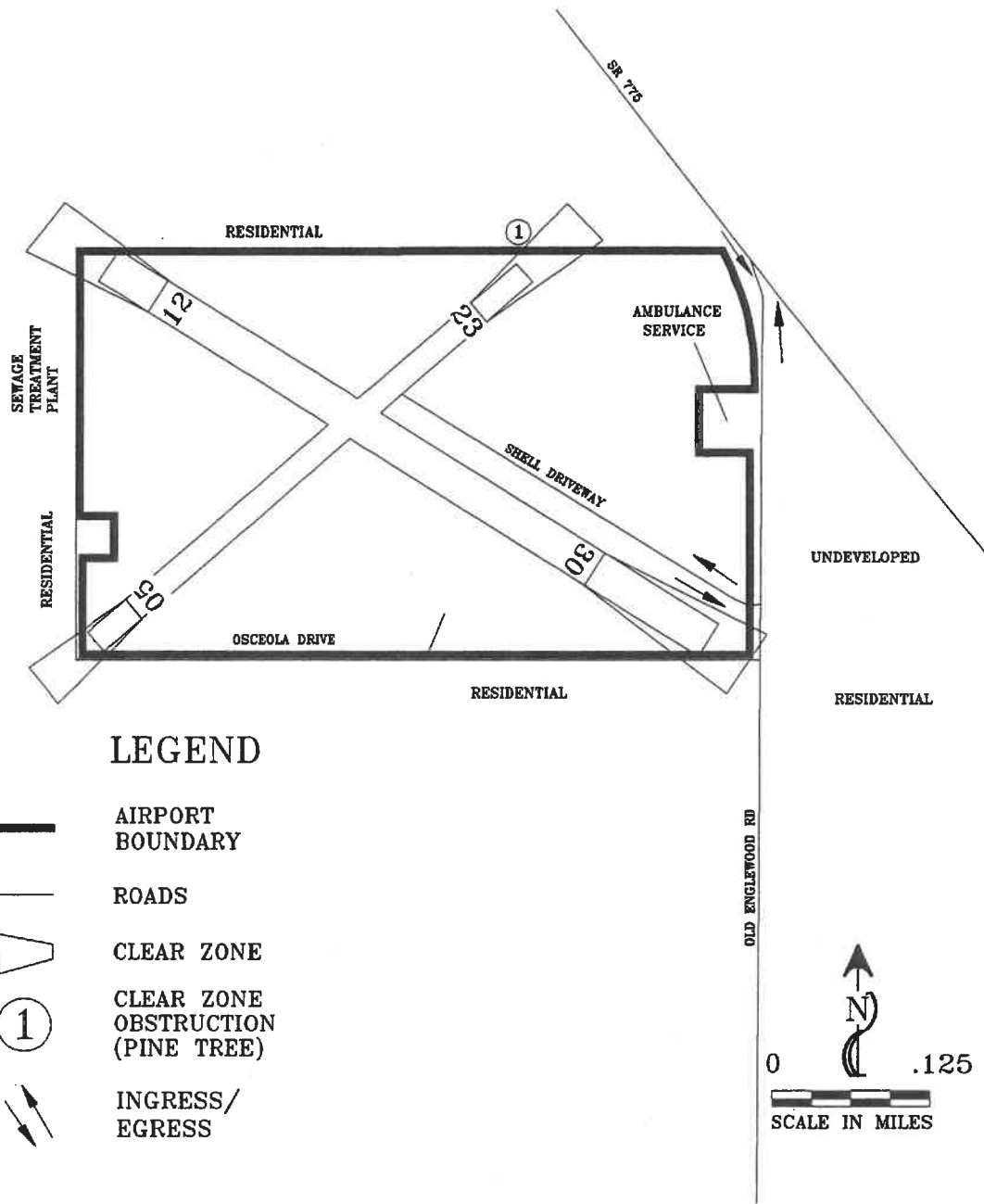


Figure 60: Buchan Airport - Existing Facilities

Source: Sarasota County Transportation Department, 1988.

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Adjacent Land Uses

The existing land uses adjacent to the Airport include residential, recreation and open space, and vacant land, as indicated on Figure 60.

Accessibility

Existing points of ingress and egress for surface transportation to the Airport and access for all other modes of transportation are shown on Figure 60.

Aviation Activity

The latest figure (1984) for total annual operations is estimated at 8,185. There were approximately 21 based aircraft as of 1984 (30).

Analysis

Several improvements have taken place at the Buchan Airport since 1979, such as improvements to the runway, and removal of trees which were obstructing the runway clear zones. There are no additional improvements anticipated for this facility.

Problems

The six specific concerns stated in the preceding discussions synthesize into three general problems. Following the statement of these problems are listed the opportunities for, and the constraints upon, their solution.

- In its existing condition, the Sarasota-Bradenton Airport is inadequate to meet existing and future aviation demands. (Concerns 1, 2)
- Commercial aviation traffic produces a noise pollution problem for nearby neighborhoods. (Concern 3)
- Expansion of the Sarasota-Bradenton Airport (whether at its existing site or relocated), would effect land use and traffic circulation, and would have certain environmental consequences. (Concerns 4, 5, 6)

Opportunities

- The Sarasota-Bradenton Airport Master Plan as updated, proposes improvements – including the construction of a parallel runway – whose implementation will solve several existing problems through the year 2005. The existing runways, with the addition of the proposed general aviation parallel runway, will be adequate for future needs through the year 1998.
- The Sarasota-Manatee Airport Authority has received approval for landside improvements which will improve the Airport's efficiency.
- The recommended F.A.R. Part 150 Noise Compatibility Program for Sarasota-Bradenton Airport proposes solutions to the conflict between the Airport and its environs.
- The Venice Municipal Airport Master Plan was updated and proposed improvements to the Airport, providing it with sufficient capacity to meet South County general aviation needs until the year 2010.
- The State of Florida is involved in the Continuing Florida Aviation System Planning Process (CFASPP) which will provide the organizational structure for a continuous and comprehensive evaluation of Statewide aviation system developments.
- Federal and State grant assistance are available to help fund major airport expansion projects.
- Sarasota County has land use control over the unincorporated areas in the vicinity of these airports.

Constraints

- Sarasota County does not have direct control of operations at either the Sarasota-Bradenton Airport or the Venice Municipal Airport.
- The majority of land use activities surrounding the existing Sarasota-Bradenton Airport are either committed or lie within the City of Sarasota or Manatee County, meaning that Sarasota County has limited or no influence on land use planning in the vicinity of the Airport.
- Relocation of general aviation facilities from the Sarasota-Bradenton Airport to a site in Manatee County may be implemented without a referendum in Sarasota County, thus limiting Sarasota County citizens' say in the matter of relocation and site selection for the new facility.
- Financing a major commercial air carrier facility could be prohibitively expensive.

Port and Rail

Introduction

While most of Sarasota's transportation needs are met by highway-oriented vehicles and aviation, port and rail facilities also contribute to the movement of goods to and from the County.

Sarasota County receives limited service by the Seminole Gulfcoast Railway. There are no seaport facilities in the County, however, Sarasota's port needs are met by the services of Port Manatee -- located north of Bradenton in Manatee County -- and the Port of Tampa. The following is a discussion of these facilities.

Inventory and Analysis

Ports

The City of Sarasota had a deep water port at one time. In 1926-27, \$749,990 was spent to construct it. Not more than fifty tons of freight entered the so-called "million dollar port" before it was obstructed with silt, never to be reopened.

Although Sarasota County has no seaport, the nearby ports of Port Manatee and the Port of Tampa provide necessary services to the County, handling cargo which is later forwarded to Sarasota County by truck or rail.

Port Manatee

Port Manatee is located on Tampa Bay in the northwestern corner of Manatee County, approximately seventeen miles north of the Sarasota-Manatee County line and is Florida's fourth largest seaport. It has nearly a one-mile berthing area, a channel depth of 36 feet, and accommodates vessels in excess of 850 feet in length. Access to the

Port from U.S. 41, I-75 and I-275 is readily available. It also operates its own terminal railroad and interconnects with the rail lines of the CSX Transportation Group. (31)

The Port began as a bulk port in 1970, and handles a large volume of fertilizer products, lumber, cement and petroleum. Other types of cargo include orange juice concentrate, apple juice, bananas, motor vehicles, and containerized general cargo.

Port Manatee is rapidly becoming known as an intermodal terminal and distribution center because of its direct access to rail and highway facilities. It can also provide total container service for shippers with Ro-Ro berths, lifting cranes, reefer plugs, and dockside storage areas.

Presently the Port has scheduled container liner service providing regular connections to Central and South America and Western Europe.

Total cargo tonnage has remained fairly constant since 1980, averaging approximately 5.6 million tons annually, however FY 86 set a record of over 6.9 million tons. The mix of cargo passing through the Port is changing dramatically. General cargo has doubled in the recent years. Dry and liquid bulk products, however, still represent the greatest percentage of tonnage.

According to the Manatee County Economic Development Council and Port Manatee, the FY1986 port activity was as follows:

Principal Cargo: FY 86 Tonnage

• Petroleum Products	3,779,510
• Phosphate Rock	1,646,002
• Fertilizer	657,187
• Cement/ Cement Clinker	462,277
• Bananas/Plantains	141,236
• Citrus Concentrate	114,629

● Other General Cargo	156,428
● Total	6,957,269

Current plans for the Port's 775 acres call for additional warehousing and office space. Another 100 acres have been set aside for a terminal/distribution center. Also, there are smaller sites for manufacturing and industrial development. Port Manatee is also considering the establishment of a Foreign Trade Zone.

Port of Tampa

The Port of Tampa serves areas throughout Tampa Bay. Large portions of the Port are owned by private interests, particularly those facilities used for such bulk cargoes as petroleum, phosphate, and phosphatic products. General cargo facilities are predominately owned and operated by the Tampa Port Authority because of the difficulty for private enterprise to finance the construction of the general cargo operations. (32)

The Port of Tampa provides a large variety of facilities. Access is available to U.S. 41, U.S. 301, I-75 and I-275. The CSX Rail system extends through the Port's area.

Presently the Port has scheduled container liner service providing regular connections to Europe, Asia, and North and South America. In FY 87, the Port Authority reported a total net cargo tonnage of 49,373,336 tons. Exports included phosphate, fertilizer, citrus juice and fruit, scrap metal and poultry. Imports included refined petroleum products, sulfur, ammonia, South American fruit, bananas, steel, lumber and cement.

In 1988, a new general cargo terminal and berths were under construction. Also, plans had been completed for a mixed use facility to include hotel, retail and office areas for the accommodation of cruise ship passengers. The mixed use facility will be constructed on a 21-acre site located near Harbor Island, and Tampa's downtown area and convention center.

Both Port Manatee and the Port of Tampa are international in scope and are an integral part of a worldwide intermodal transportation system. Although the Sarasota County market currently com-

prises a small portion of the ports' market, the planned expansion of their markets and services should have a positive effect on Sarasota County's economy.

Bulk cargoes, such as petroleum and phosphate, comprise the majority of goods handled by Port Manatee and Port of Tampa. Sarasota County does not have, and does not anticipate having, industries that would produce or utilize bulk products. Sarasota County, therefore, does not require bulk handling facilities. Some of the materials utilized in the local construction industry, however, are transported through general cargo facilities. These area ports have excess capacity, which should be capable of meeting the rather limited demands generated by Sarasota County.

Railroads

Seminole Gulfcoast Railway

In 1987, the CSX Rail Transportation Group had approximately thirty miles of track linking the Cities of Venice and Sarasota with points north (refer to Figure 55). Service was limited to the transportation of goods, with passenger service only available in the Tampa and St. Petersburg area (33).

In late 1987 the CSX lines in Sarasota County were purchased by the Seminole Gulfcoast Railway, which is currently involved with track improvements and efforts to re-establish the line's presence in the local market place. Future plans include improvements to the facilities and efforts to encourage industrial facilities in the region (34).

High Speed Rail

The State of Florida is undertaking the development of a high speed rail system which may affect Sarasota County. (35)

In April, 1982, Executive Order No. 82-34 was issued by Governor Bob Graham creating the Florida High Speed Rail Committee to set forth State objectives regarding a high speed rail corridor. The corridor intends to link Tampa/St. Petersburg, Orlando and Miami. The Committee presented their final report to the Governor in April, 1984, and during the 1984 Florida Legislative Ses-

sion, a law was passed creating the Florida High Speed Rail Transportation Commission. The High Speed Rail Transportation Act was approved by the Legislature on May 30, 1984, and signed into law on June 14, 1984.

Potential service corridors have been identified with the first links connecting the highest travel demand corridors of Tampa/St. Petersburg, Orlando and Miami. The system could later expand to other major urban areas such as Jacksonville, Tallahassee and Pensacola to the north, and Sarasota and Fort Myers to the south (Figure 61).

The construction of the primary corridors of the high speed rail is anticipated by 1995, the 150th birthday of the State of Florida. The system, as proposed, will provide passenger service and will be implemented by means of a multi-year franchise, financed and developed by private enterprise. The franchise operating the system will determine the final location of lines. The Sarasota-Manatee Metropolitan Planning Organization (MPO) is participating in the high speed rail effort, representing Sarasota and Manatee County's interests. As part of its mission, the MPO wishes to develop a comprehensive multi-modal transportation network for the area.

Problems

- Sarasota County does not possess rail passenger service.

Opportunities

- Area seaports have adequate capacity to meet future shipping demands.
- The urbanized portions of Sarasota County are part of a national rail network.
- A high speed rail system, whose secondary corridor could include Sarasota County, is being planned. This could establish passenger rail service to the area.

Constraints

- Local physical conditions are not amenable to the development of a commercial port facility.
- Sarasota County has no direct control over the operation of rail systems.

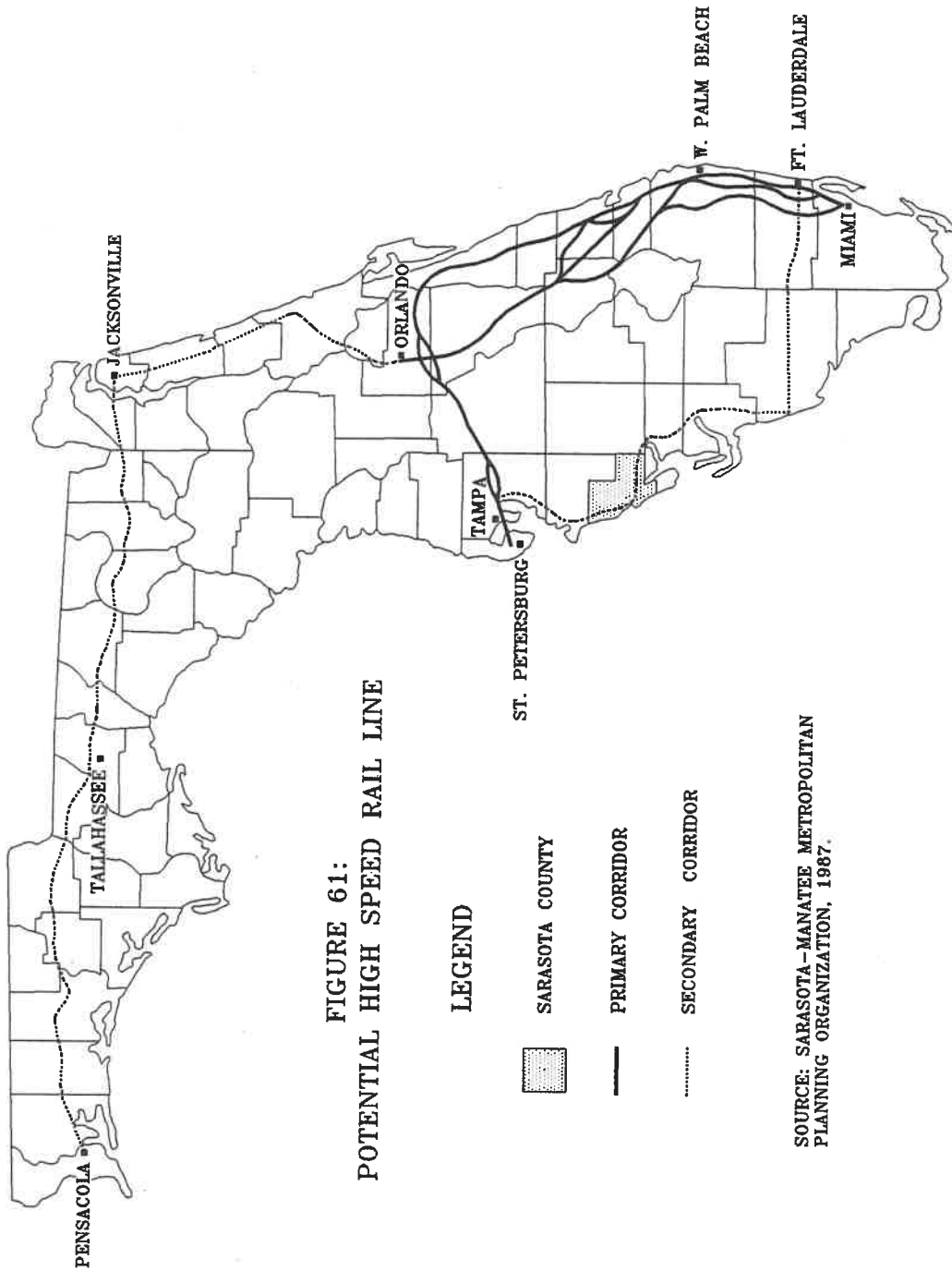



FIGURE 61:
POTENTIAL HIGH SPEED RAIL LINE

LEGEND

-  SARASOTA COUNTY
- PRIMARY CORRIDOR
- SECONDARY CORRIDOR

SOURCE: SARASOTA-MANATEE METROPOLITAN
PLANNING ORGANIZATION, 1987.

Aviation Plan

Intent

The purpose of this Chapter's section on aviation is to develop techniques to accommodate projected future demand for air traffic (both commercial air carrier and general aviation) up to the year 2010. The capacity of the primary air traffic facility serving Sarasota County, the Sarasota-Bradenton Airport, has been under study since the late 1960's.

Although the County has no direct control over this facility, or the Venice Municipal Airport, the County has the responsibility, under the Local Government Comprehensive Planning and Land Development Regulation Act, 1985, as amended, to coordinate its planning efforts effectively with the planning efforts of the Sarasota-Bradenton Airport Authority, and those of the Venice Municipal Airport Advisory Board.

Goal 1

Encourage the provision of commercial air carrier and general aviation facilities which efficiently meet the needs of passengers, commercial airlines, and general aviation users.

Objective 1.1

To encourage and support the implementation of improvements proposed by the Sarasota-Bradenton Airport Master Plan, and the Venice Municipal Airport Master Plan through the year 2010.

Policy 1.1.1.

Retain Sarasota-Bradenton Airport as the commercial air carrier facility for the two-county area, with general aviation facilities as long as the operational capacity of the Airport is not exceeded.

Policy 1.1.2.

Encourage the designation of the Venice Municipal Airport as a reliever facility of the Sarasota-Bradenton Airport for general aviation traffic and pursue the reopening of abandoned Runway 9/27 of the Venice Municipal Airport to assist in noise abatement efforts.

Objective 1.2

To retain Buchan Airport as a special use facility.

Policy 1.2.1.

The County will maintain the runway of Buchan Airport according to Federal Aviation Administration (FAA) standards.

Goal 2

Develop and maintain, in coordination with airport improvements, a transportation system which provides safe, convenient and efficient travel through an affordable balance of alternative transportation modes.

Objective 2.1

To improve the major access roads to the Sarasota-Bradenton Airport, by 1995. Assure that all access roads to the Airport are coordinated and properly integrated with other modes of transportation as indicated in Sarasota-Manatee Metropolitan Planning Organization and Florida Department of Transportation plans.

Policy 2.1.1.

Improvements to DeSoto Road and University Parkway will take place as scheduled in the Sarasota County Capital Improvements Program (CIP) (Ordinance No. 83-24, as amended).

Policy 2.1.2.

The County will coordinate/cooperate, as needed, with the Sarasota-Manatee Airport Authority in the development of the unnamed connector road between University Parkway and DeSoto Road.

Objective 2.2

To maintain, subject to availability of federal funding, through the year 2010, the existing (1987) level of cost efficient mass transit service to the Sarasota-Bradenton Airport in order to accommodate airport employees and airport users.

Policy 2.2.1.

The County will support SCAT to maintain the existing bus service to the Airport subject to availability of federal funding.

Policy 2.2.2.

The County will explore the feasibility of establishing cost efficient para-transit services to the Airport.

Goal 3

Improvements to, and, the operation of the aviation facilities shall be carried out in a manner which minimizes negative impacts on the environment.

Objective 3.1

To ensure minimum negative environmental impacts of the Sarasota-Bradenton Airport during its development period, and to monitor its environmental impacts through the year 2010.

Policy 3.1.1.

The County will monitor the Airport Development of Regional Impact to assure that preservation and conservation areas and natural resources are protected, and that the development is consistent with Apoxsee's Future Land Use and Environment Chapters.

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Objective 3.2

To ensure minimum negative environmental impacts of planned improvements, as proposed by the Sarasota-Bradenton Airport Master Plan during its planning period (1985-2005).

Policy 3.2.1.

The County will review the planned improvements during their scheduled development periods, according to the Sarasota-Bradenton Airport Master Plan, and will assure their consistency with Apoxsee's Future Land Use and Environment Chapters.

Objective 3.3

To ensure minimum negative environmental impacts of planned improvements, as proposed by the Venice Municipal Airport Master Plan, during its planning period (1984-2004).

Policy 3.3.1.

The County will review the planned improvements during their scheduled development periods, according to the Venice Municipal Airport Master Plan, and will assure their consistency with Apoxsee's Future Land Use and Environment Chapters.

Goal 4

Encourage compatibility of land uses in the portions of unincorporated Sarasota County adjacent to aviation facilities.

Objective 4.1

To ensure that any new improvements for aviation purposes, through the year 2010, are compatible with surrounding land uses.

Policy 4.1.1.

The County will review the impact of planned improvements for the Sarasota-Bradenton Airport and the Venice Municipal Airport to ensure minimum adverse impacts upon previously established human settlements.

Policy 4.1.2.

The County will support the mitigation of existing noise conflicts between the Sarasota-Bradenton Airport and its environs.

Policy 4.1.3.

The County will support the implementation of air space zoning as proposed by the Sarasota-Manatee Airport Authority.

Objective 4.2

To protect aviation facilities from the encroachment of incompatible land uses, through the year 2010.

Policy 4.2.1.

The County will not allow development of incompatible land uses in the unincorporated area adjacent to aviation facilities.

Policy 4.2.2.

The County will encourage the Sarasota-Manatee Airport Authority and the Venice Municipal Airport Advisory Board to purchase land adjacent to their aviation facilities.

Goal 5

Ensure intra- and intergovernmental coordination in all planning efforts relating to future aviation transportation.

Objective 5.1

To maintain and increase intra- and intergovernmental coordination relating to aviation transportation, in accordance with Apoxsee's Intergovernmental Coordination and Citizen Participation Chapter. Assure that all future aviation-related efforts are coordinated and properly integrated with Sarasota-Manatee Metropolitan Planning Organization and Florida Department of Transportation plans.

Policy 5.1.1.

The County will continue its cooperation and coordination efforts with the Sarasota-Manatee Airport Authority and City of Venice.

Policy 5.1.2.

The County will ensure all planning efforts for future aviation transportation be consistent with the State, regional, adjacent county, and municipal transportation plans.

Port and Rail Plan

Intent

This Chapter's section on port and rail is intended to address the viability and potential of ports and rail transportation as they relate to Sarasota County. During the 1920's, Sarasota did possess a deep water port, but when silting occurred it was abandoned. Today, Sarasota's water transport needs are adequately met by Port Manatee and the Port of Tampa. In short, the Plan outlined herein recommends a continued reliance upon these regional port facilities.

Sarasota County is served by a rail system that is linked to the national rail network. Limited freight service is available, but the area is not currently served by passenger trains. However, a high speed rail system is currently planned in the State of Florida, with the potential for a secondary route which could include Sarasota County. The Plan contained herein reflects a continued monitoring of State, federal and railroad industry proposals to increase service to the area. The Plan suggests that future growth in the Sarasota area could make the establishment of increased service to the area more attractive to the railroad industry.

The County recognizes the potential benefits of increased rail service, and will work in cooperation with the railroad industry, the private sector, and other levels of government to explore possible alternatives. These alternatives may include: (1) the establishment of passenger rail service connecting urban centers; (2) the preservation, for conversion to other forms of transport, of abandoned railroad lines where right-of-way still exists; and (3) increased freight service to proposed industrial sites, urban centers and other centers of transportation such as regional airport facilities and bus terminals. The exploration of these alter-

natives, taken in concert with the other actions presented below, will enable the County to address the viability and future potential of ports and rail transportation as they relate to Sarasota County.

Goal 1

It shall be the Goal of Sarasota County to develop and maintain an environmentally sensitive transportation system which provides safe, convenient, and efficient travel through an affordable balance through the development of alternative transportation modes, the coordination with desired land use practices, and the coordination with adjacent communities.

Objective 1.1

To continue, through the year 2010, to rely upon existing regional ports to serve the needs of Sarasota County's residents.

Policy 1.1.1.

Support Port Manatee and the Port of Tampa in their efforts to expand their services particularly as these services relate to the Sarasota County market through the year 2010.

Objective 1.2

To encourage the use of rail lines as an alternative means of transporting passengers and freight.

Policy 1.2.1.

The Sarasota-Manatee Metropolitan Planning Organization will monitor State, federal, and railroad industry proposals concerning passenger and freight rail service affecting Sarasota County.

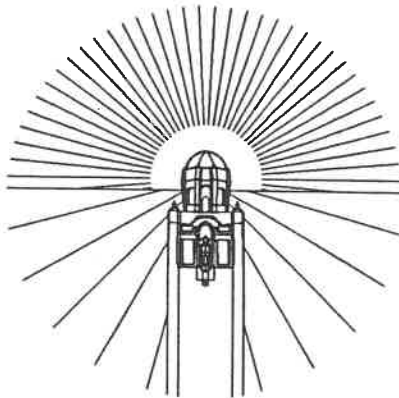
Policy 1.2.2.

Resolutions of support should be adopted for projects which propose expansion of rail service in general, with emphasis upon establishing passenger service to Sarasota County.

Policy 1.2.3.

Work with the railroad industry, representatives of the private sector, and appropriate levels of government to explore potential benefits of increased rail service to Sarasota County. Those "potential alternatives" should include, at a minimum, the following:

- the preservation of existing railroad right-of-way for future rail services;
- the conversion of abandoned railroad lines where right-of-way still exists to other forms of transport, including recreational corridors or habitat and wildlife corridors; and
- the establishment of rapid rail transport facilities to connect urban centers with other forms of transportation such as regional airports, bus terminals, or port facilities.



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CHAPTER 8

HOUSING

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CHAPTER 8

HOUSING

Introduction and Background

Housing is one of the most important elements in our lives and our communities. It provides shelter and a link to the neighborhood and the larger community. It is intricately tied to our natural and our social environments, and to our political and economic institutions. In this critical role, housing today has become an issue of enormous complexity.

Housing can be categorized as private sector housing and publicly assisted housing. The majority of housing in the United States is provided by the private sector; it is constructed and owned or rented according to the principles of supply and demand. However, the government plays many other roles in the provision, support, and development of private housing.(1) The history of publicly assisted housing is usually dated from the Housing Act of 1937, when the public housing program was initiated as federally assisted and publicly owned housing for low income citizens. Housing assistance has taken many forms since 1937. However, despite this attention, assisted housing only comprised approximately 3 percent of the housing stock in the United States as of 1977.

At the national level, in the 1960's, public concern for housing began with attention to slums and those living in them. Those housing concerns have broadened since the late 1960's. Beginning in 1968, federal housing programs expanded, housing planning became a mandated element in

federal community planning, and states required local housing plans. In the mid-1970's housing issues reached beyond the poor to the middle class. The cost of housing began to increase at a more rapid rate than income, making adequate shelter at affordable prices a problem for countless families and individuals across the nation.(2)

For local governments housing is a significant consideration. Residential development is usually the predominant user of urban land. Taxes on housing are a principal source of local government revenue. Services to housing and to the inhabitants of this housing comprise a major portion of local government expenditures.

More than 75 percent of Sarasota County's urban land is in residential development. The majority of the housing stock is of high quality and in good condition, as a result of, and reflecting, the economic level of Sarasota County's residents, and the County's resort/retirement economic base. According to the 1987 Florida Statistical Abstract, in 1984 Sarasota County had the second highest per capita income among Florida counties.(3) This economic wealth has allowed and encouraged the construction, purchase and maintenance of high-quality housing.

The environmental and cultural components upon which Sarasota County's resort/retirement economy is based draw large numbers of new residents to the area. The population has increased by 21.6 percent between 1980 and 1986.

The high demand, fueled by high inflation, has caused housing costs to increase even faster than Sarasota County's population. For example, housing costs increased 60.8 percent from 1980 to 1987 according to the Sarasota Board of Realtors. The impacts of increased housing costs, combined with the needs of special households (e.g., the elderly) and the maintenance of housing and neighborhoods, provide the basis underlying the following issues:

- What is the role of the private and public sectors in providing affordable housing?
- What is the role of the private and public sectors in providing low and very low income housing?
- What effects might be expected from the raising of housing densities to lower land costs?
- What are the negative impacts of traffic circulation on neighborhoods, and how can these impacts be minimized? What are the special housing needs of the households of special concern, particularly the older residents?
- Should low income housing occur in isolated concentrations?
- Are mobile homes a viable housing alternative for low and very low income households?
- Should the government encourage specific housing types (e.g., clustered townhouses) in order to meet special housing needs?
- What areas and structures in Sarasota County require historic preservation, and how can the latter be affected?
- What should Sarasota County's efforts be towards meeting the housing needs of the homeless households -- a national, Statewide and local concern?

Planning

A number of housing related efforts took place in Sarasota County in recent years. The most significant ones are the following. In 1975 the Sarasota County HUD Programs office was established, and in 1976 the Sarasota County Low Income Advisory Board was formed. As part of the federally funded Community Development Block Grant Program (CDBG), a Housing Assistance Plan (HAP) was developed, which indicated "Target Areas" of low income households requiring neighborhood improvements.

In 1979, the Sarasota County Property Appraiser's office initiated an annual publication, "Sarasota County Statistical Report", which includes housing data.

In the late 1970's, the Southwest Florida Regional Planning Council published several housing reports including an "Areawide Housing Opportunity Plan" (AHOP), and "The Impact of Local Codes and Ordinances on Housing in Southwest Florida." In the early 1980's, the Planning Council continued its housing publications which include the "Areawide Housing Plan", the "Migrant and Farmworkers Housing Report", the "Southwest Florida Mobile Home Report", and the "Neighborhood Investment Priority Program".

In 1983, Sarasota County adopted the Southern Standard Building Code, 1982 Edition, through Ordinance No. 83-63. The Code was modified to reflect the County's needs, and to address occupancy safety of buildings. This is of particular importance, as the County does not have a Housing Code.

In addition to the local and regional planning efforts described above, both the state and the federal governments have been active in the funding and administration of housing related programs.

By the mid 1980's, homelessness became an important housing concern nationwide in general, and particularly in Florida. The following reports were prepared regarding homelessness. The "Federal Regulation Governing the Emergency Shelter Grants Programs as authorized by the

Stewart B. McKinney Homeless Assistance Act of 1987"; the "Comprehensive Homeless Assistance Plan for the State of Florida" (1987); and the "Federal Emergency Shelter Grants Program", HRS, (1987).

Additionally, in 1986 the Florida Legislature created the Affordable Housing Study Commission to make recommendations towards the solution of housing problems in Florida. The Commission presented its final report in December 1987, recommending a number of solutions which the Florida Legislature is presently considering (1988 Legislative Session). Additional information on Housing Planning Activities are provided in Appendix G, Section 1. (See Endnotes 4-18).

Inventory

The 1980 Census reported 112,196 year-round housing units in Sarasota County. The 1980 Census of Population and Housing provides the following explanation defining the term year-round housing units:

"Data on housing characteristics in the 1980 census reports are limited to year-round housing units, i.e., all occupied units plus vacant units available or intended for year-round use. Vacant units intended for seasonal occupancy, and vacant units

held for migratory labor are excluded because of the difficulty of obtaining reliable data on their characteristics. Counts of total housing, however, are given for each area..."(19)

Sarasota County, in cooperation with the municipalities, estimated that the Countywide year-round housing units had increased to 146,145 by 1986. As shown on Table 32, this represents an increase of 30.3 percent in the overall housing stock between 1980 and 1986, an average increase of 5,658 new units per year. The major portions of this increase, 68.0 percent, occurred in the unincorporated areas of the County. (20)

The impacts on natural and built systems of this rapid increase in housing units and population are discussed in this Chapter and throughout the Comprehensive Plan.

Types of Housing Units

Housing units may be classified into the following major types:

- **Single Family:** housing units designed for one household with open space at least on three sides; for the purposes of this Chapter, excludes mobile homes;
- **Multi-Family:** housing units which are attached to one another along the sides, corners, floors, or ceilings; and

Table 32: Growth Of Year-Round Housing Units, 1970-1986

Area	Total Year Round Housing Units			% Increase		% Total Change	Average Annual Inc.	
	1970 (1)	1980 (2)	1986 (3)	1970-80	1980-86	1980-86	#	%
Sarasota County	54,948	112,196	146,145	104.2	30.3	100.0	5,658	5.0
Unincorp. County	31,003	71,841	94,896	131.7	32.1	68.0	3,843	5.4
City of North Port	1,235	3,889	5,426	214.9	39.5	4.5	256	6.6
City of Sarasota	18,234	25,202	26,290	38.2	4.3	3.2	181	0.7
City of Venice	3,686	8,780	11,232	138.2	27.9	7.2	408	4.7
Town of Longboat Key	790	2,484	8,301	214.4	234.2	17.1	970	2.9

Source: (1) 1970 Census; (2) 1980 Census, Table H-7 (based on estimates); and (3) Municipal Planning Departments and Sarasota County Planning Department, 1988.

- **Mobile Homes:** detached single family units, fabricated off-site and transported to a housing site.

Single family housing has long predominated in Sarasota County; however, between 1970 and 1980 the percentage of the total housing stock in single family units declined in all areas of the County, a trend which continued into 1986. Table 33 provides a detailed inventory of the type of year-round housing units for 1970, 1980, and 1986 within each of the municipalities and the unincorporated area of the County.

"Transient" housing units (including hotels, motels, travel trailers and recreational vehicles) are excluded from the permanent housing classifications. The 1987 Statistical Report for Sarasota County, FL, published by the County's Property Appraiser's Office reports that in 1986 there were 114 hotels/motels with approximately 3,402 units in the County.(21) The same source reports that in 1986 there were 3,177 available spaces for recreational vehicles and travel trailers.(22)

Table 33: Types Of Housing Units In Sarasota County

Year	Area	Total	Single Family	% of Total	Multi-Family	% of Total	Mobile Homes	% of Total
1970	Sarasota County	54,948	38,654	70.3	10,601	19.3	5,693	10.4
	Unincorporated County	31,003	23,549	75.9	3,705	12.0	3,749	12.1
	City of North Port	1,235	1,202	97.3	4	0.3	29	2.4
	City of Sarasota	18,234	11,797	64.7	5,519	30.3	918	5.0
	City of Venice	3,686	1,657	45.0	1,257	34.1	772	20.9
	Town of Longboat Key	790	449	56.8	116	14.7	225	28.5
1980	Sarasota County	112,196	67,417	60.1	30,356	27.1	14,423	12.8
	Unincorporated County	71,841	46,981	65.4	15,240	21.2	9,620	13.4
	City of North Port	3,889	3,354	86.2	12	0.3	523	13.5
	City of Sarasota	25,202	13,521	53.7	9,881	39.2	1,800	7.1
	City of Venice	8,780	2,965	33.8	3,571	40.7	2,244	25.5
	Town of Longboat Key	2,484	596	24.0	1,652	66.5	236	9.5
1986	Sarasota County	146,145	83,474	57.1	43,044	29.5	19,627	13.4
	Unincorporated County	94,896	61,292	64.6	19,215	20.2	14,389	15.2
	City of North Port	5,426	4,351	80.1	202	3.8	873	16.1
	City of Sarasota	26,290	13,115	49.9	11,423	43.5	1,752	6.6
	City of Venice	11,232	3,366	30.0	5,489	48.9	2,377	21.1
	Town of Longboat Key	8,301	1,350	16.3	6,715	80.9	236	2.8

Note: Single Family includes single family attached/detached and duplexes; Multi-family includes apartments and condos. Data for Town of Longboat Key is for Sarasota County portion. Number of Housing Units represents Year-Round Housing Units. 1986 figures based on estimates.

Source: 1980 Census of Population and Housing, Table H-7 (based on estimates); Sarasota County Property Appraiser's Office, Statistical Report, 1987; Municipal Planning Departments, 1987; and Sarasota County Planning Department, 1987.

Tenure Characteristics

Housing tenure refers to the occupancy of housing units by owners or renters. Ownership is the form of tenure encouraged by government policies, including federal mortgage insurance programs. Preferential income tax treatment (deductions for mortgage interest and property taxes) and Homestead Tax Exemptions are other examples of government's encouragement of home ownership.

Table 34 shows tenure for Sarasota County's occupied units in 1970 and 1980. Approximately 69.9 percent of the County's occupied housing units were owner-occupied in 1970. In 1980, the owner-occupied total in Sarasota County was 61.2 percent. In the unincorporated areas of the County, there were 66.2 percent owner-occupied units in 1980. This relatively high level of home ownership may be explained in part by the economic characteristics of Sarasota County, which in 1984 had the second highest per capita income among the counties in Florida. The percent of renter-occupied units in 1970 was 18.6 percent for the entire County. In 1980, that percentage decreased to 17.9

percent, with an even lower percentage (13.5 percent) located in the unincorporated areas of the County. This is a relatively low percentage compared to the 23 percent renter-occupied units in the Region and 31 percent Statewide.(23)

While home ownership is a key factor in maintaining housing quality, the decline in the percentage of renter-occupied units indicates a potential problem of rental housing availability. The 1987 Statistical Report of the Property Appraiser's Office estimates that in 1986 there were 7,570 rental apartment units in the entire County, approximately 5 percent of all year-round units. No data are available concerning the number of single family or mobile home housing units available for rent. Sarasota County's HUD office indicates an extremely "tight" rental market, especially for very low and lower income households.(24)

The seasonality of Sarasota County's resort/retirement economy affects the availability of rental housing, particularly during the "tourist season" of October through April each year. During the tourist season rents increase. Seasonal rents provide enough profit to allow some units to not be placed

Table 34: Tenure Characteristics Of Year-Round Housing Units

Year	Area	Total Year-Round Housing	Owner Occupied		Renter Occupied	
		Units	Units	%	Units	%
1970	Sarasota County	54,948	38,413	69.9	10,221	18.6
	Unincorporated County	31,003	N/A	N/A	N/A	N/A
	City of North Port	1,235	994	80.0	74	6.0
	City of Sarasota	18,234	10,706	58.7	5,492	30.1
	City of Venice	3,686	2,559	69.4	500	13.6
	Town of Longboat Key	790	N/A	N/A	N/A	N/A
1980	Sarasota County	112,202	68,663	61.2	20,076	17.9
	Unincorporated County	70,288	46,542	66.2	9,513	13.5
	City of North Port	5,461	3,080	56.4	562	10.3
	City of Sarasota	25,191	12,836	50.9	8,712	34.6
	City of Venice	8,759	5,090	58.1	1,127	12.9
	Town of Longboat Key	2,503	1,115	44.5	162	6.5

Source: U.S. Census of Housing and Population, 1979, 1980; and Sarasota County Planning Department, 1987.

on the renter market off season, and remain vacant. Another factor affecting multi-family rental apartments is the financial return to builders and investors. The higher economic return of multi-family condominium units has created a national trend not only to develop condominiums but to convert rental units to condominiums. The Property Appraiser's Office reports that in 1980 there were 488 condominium complexes in the County with a total of 21,496 units. Sixteen of these complexes were apartment conversions.(25) In 1986, the number of condominium complexes increased to 892 and the number of units had grown to 37,848; two of the complexes were apartment conversions.(26)

Vacancy Rates

The Bureau of Census defines a vacant housing unit as one in which no one is living at the time of enumeration, unless its occupants are only temporarily absent. Units temporarily occupied at the time of enumeration entirely by persons who have usual residence elsewhere are also classified as vacant.(27) The availability and variety in housing, whether for ownership or for rent, are partially determined by the vacancy rate in an area.

Nationally, an adequate vacancy rate, usually measured as between 4 percent and 7 percent, has been found to be necessary to provide a degree of choice in housing decisions. A rate lower than 4 percent indicates a "tight" market; one higher than 7 percent indicates some economic distress in the market -- overbuilding -- or a recession.

The 1970 Census indicated an 11.5 percent vacancy in Sarasota County, and the 1980 Census reported a vacancy rate of 20.9 percent (23,463 units) among year-round housing units.(28) However, the rates recorded by the Bureau of Census are misleading for the purpose of determining housing availability. Because they are based upon the Census definition of vacant housing units, these high vacancy rates are a result of the number of homes occupied by seasonal residents during the winter months, rather than a result of "overbuilding" or a "recession." As these homes are suitable for year-round occupancy, they are clas-

sified by the bureau as year-round units; however, if their occupants' usual place of residence was other than Sarasota County, then these second homes were counted as vacant.

The Federal Home Loan Bank, in an interagency agreement with the HUD Office of Policy, Development and Research, prepares annual housing vacancy studies for the nation's Metropolitan Statistical Areas (MSA's), based on surveys conducted by postal carriers as they complete their routes. Their October, 1985 survey indicates that 3.1 percent (2,368) of single family detached units, and 6.9 percent (804) of single family attached units were vacant. This identifies the existence of a "tight" single family home market in Sarasota County. There is no local source for single family vacancy rates.(29)

The Property Appraiser's Office reports that in 1979 the rental apartment vacancy rate was 2 percent,(30) and decreased to 1 percent in 1980 (31)-- the lowest rental vacancy rate for the period 1979-1986. These rates indicated a very "tight" rental apartment market in the County, partly due to conversions to condominiums in that period. The rental apartment vacancy rate has increased to 5.9 percent in 1986,(32) representing more housing choices for renters, however it remains low compared to the national average of 9.6 percent in 1987.(33)

CONCERN 1

A shortage of year-round rental housing units exists in Sarasota County.

Vacancy rates tend to vary with the price range of housing. Very low income households (less than 50 percent of the County's median household income) and lower income households (less than 80 percent but more than or equal to 50 percent of the median income) are restricted in their choice of housing by what they can afford to spend. Low vacancy further limits availability and choice. As

demand exceeds supply and the price of housing escalates, very low and lower income households often cannot compete with those with higher incomes for the housing that is available.

CONCERN 2

Low vacancy rates -- resulting in high housing costs -- lessen the availability and choice of housing for very low and low income households in the County.

Housing Costs

Owner-Occupied Units

The Sarasota Board of Realtors reports the following average prices for single family units: \$71,900 in 1980; \$109,458 in 1986; and \$115,616 in 1987.(34) These figures represent a 60.8 percent increase in the average cost of a single family home from 1980 to 1987. In order to establish income to housing costs ratio it is necessary to indicate household income ranges. Income ranges are determined based on their relationship to median income, and they are as follows:

- **Very low income:** less than 50 percent of median income
- **Lower income:** 50 percent-80 percent of median income
- **Moderate income:** 80 percent-120 percent of median income
- **Middle income:** 120 percent-150 percent of median income
- **High income:** higher than 150 percent of median income

The widely used housing affordability factor for ownership is three times the household's annual gross income. According to the 1980 Census, the median household income was \$15,069.(35) Applications of the affordability factor to the median household income indicate that housing costs were high in 1980. The median value -- in order to be affordable -- should have been \$45,207. Home

ownership was less affordable for the very low income households who could afford to pay up to \$22,600, and the lower income households who could pay up to \$36,100.

Home ownership became even less affordable in the years following 1980, when the average single-family home sales price increased annually by an average of 8.7 percent, while the average annual per capita income increase was 5.5 percent.(36) The housing sales prices increased at a higher rate than the incomes.

According to the Southwest Florida Regional Planning Council, the average housing prices in Sarasota County are higher than the average housing prices of both the Southwest Region and the State.(37)

The widely used affordability factor for monthly housing costs is 30 percent of the household's gross monthly income. Application of this factor to the 1980 Census income data indicates that approximately 26 percent of the very low and lower income households and a number of moderate income households, particularly in the unincorporated areas of the County, could be experiencing financial difficulty to maintain and keep up the homes they own. These households paid 30 percent or more of their monthly income in selective monthly homeowner costs. (38)

Renter-Occupied Units

Housing costs are also reflected in rising rents. As the value of both single family and multi-family rental units increase, the demand for rental units increases, and the owners raise rents. Often owners sell and invest the capital gains in more lucrative ways. According to the Southwest Florida Regional Planning Council, it is anticipated that the 1987 Tax Reform will discourage investors from the rental market.

According to the 1980 Census, the median rent for renter-occupied housing units was \$286.(39) By 1986, the median rent value increased to \$440 according to the Property Appraiser's Office (40),

an increase of 53.8 percent. The average annual rent increase (8 percent) from 1980-1986 was higher than the average annual per capita income increase for the same period (5.5 percent).

In 1980, more than 54 percent of the very low income and lower income households, and a number of moderate income households, particularly in the unincorporated areas of the County, paid more than 30 percent of their monthly gross income for rent.(41) (Note: Additional information on housing costs in Sarasota County is available in Appendix G, Section 2).

CONCERN 3

The rapidly increasing housing costs in Sarasota County represent a decrease in the availability of affordable housing particularly for the very low, lower and moderate income households.

Housing Condition

Housing condition refers to the classification of a housing unit as standard or substandard (deteriorated or dilapidated), based on the locally determined definitions of "standard" and "substandard" housing conditions. Sarasota County's definitions are as follows:

- **Substandard Dwelling:** a dwelling unit that does not meet the criteria for an acceptable standard of living, i.e., through lack of maintenance, age of unit, neglect, lack of (part or all) plumbing facilities, kitchen facilities, or crowded conditions.

The substandard dwelling can be further classified into the following:

- **Deteriorated Unit:** a substandard unit, though structurally sound, which can be raised to standard conditions with rehabilitation; and
- **Dilapidated Unit:** a substandard unit that has deteriorated to the extent that it is unsafe, unsanitary, or dangerous to human life, and rehabilitation is not feasible.(42)

The age of the housing stock, combined with the lack of complete plumbing, complete kitchen facilities, central heating and overcrowded conditions provide indications of the state of housing conditions.

Table 35 shows the age of housing units within Sarasota County. According to the 1980 Census, 77.8 percent of Sarasota County's year-round housing units were constructed after 1960. Thus, the Countywide housing inventory is relatively new. The year-round housing stock in the unincorporated areas was even newer, with 82 percent of its housing constructed after 1960. The Sarasota County Planning Department has estimated that the housing stock in the unincorporated area increased to 83,564 housing units in the period 1980 to 1986, increasing to 84 percent the unincorporated housing stock constructed after 1960.

In 1980, only 4 percent of the Countywide housing stock, and 2 percent of the unincorporated County housing stock, was constructed prior to 1939, being more than 40 years old (the life expectancy of a conventional housing unit as estimated by the Southwest Florida Regional Planning Council). By comparison, the life expectancy of a mobile home is approximately 13.6 years, although stricter requirements regarding construction and materials could extend mobile home's life expectancy.

Important factors in evaluating the age and condition of Sarasota County's housing stock are high levels of home ownership and housing maintenance. Home ownership provides an incentive to maintain housing. Moreover, many non-native residents selected Sarasota County as a result of its amenities, and so are especially interested in the maintenance and enhancement of those amenities. Older housing often receives high levels of maintenance; and, since maintenance and renovation often determine structural conditions more than age does, age as an indicator of substandard housing is limited in Sarasota County at the present time. However, age could play a more important role as an indicator of substandard housing as the housing stock constructed after 1960 grows older, probably in the period between the year 2000 and the year 2010.

Table 35: Age Of Housing In Sarasota County, 1980

Area	Units By Year Of Construction						
	1939 & Earlier	1940 1949	1950- 1959	1960- 1969	1970- 1974	1975- 1978	1979- Mar. 1980
<i>Sarasota County</i>	4,445	4,181	16,273	30,262	27,749	19,493	9,793
% of 1980 Year-Round Housing Stock*	3.96	3.73	14.51	26.97	24.73	17.37	8.73
<i>Unincorporated County</i>	1,441	1,784	9,112	18,620	17,842	14,342	7,102
% of 1980 Year-Round Housing Stock*	1.28	1.59	8.12	16.60	15.90	12.78	6.33
<i>City of North Port</i>	15	-	193	1,373	1,531	1,290	1,085
% of 1980 Year-Round Housing Stock*	0.01	-	0.17	1.22	1.37	1.15	0.97
<i>City of Sarasota</i>	2,671	2,160	5,923	6,893	4,700	2,089	766
% of 1980 Year-Round Housing Stock*	2.38	1.93	5.28	6.14	4.19	1.86	0.68
<i>City of Venice</i>	295	191	869	2,745	2,877	1,106	697
% of Year-Round Housing Stock*	0.26	0.17	0.78	2.45	2.57	0.99	0.62
<i>Town of Longboat Key</i>	23	46	176	631	799	666	143
% of 1980 Year-Round Housing Stock*	0.02	0.04	0.16	0.56	0.71	0.59	0.13

Note: *Countywide Year-Round Housing Units. Data for Town of Longboat Key is for Sarasota County portion.

Source: 1980 Census of Population and Housing, Table H-7, Page H-11.

In 1980, 0.4 percent (426 units) of the year-round housing stock lacked complete plumbing. In the unincorporated areas, the percentage was even lower, 0.3 percent (191 units). These sites are scattered throughout the unincorporated areas. 1980 Census figures also showed that 0.6 percent (646 units) of the year-round housing stock lacked complete kitchen facilities. In the unincorporated areas, the percentage was slightly lower, 0.5 percent (357 units). Also, 3.6 percent (2,026 units) of the year-round housing stock was overcrowded, with more than one person per room; 929 of those units were located in the unincorporated areas -- equivalent to 1.3 percent of the unincorporated area year-round housing stock. Finally, 0.9 percent (1,006 units) of the Sarasota County year-round housing stock lacked central heating; 461 units were located in the unincorporated areas -- equivalent to 0.7 percent of the unincorporated

area year-round housing stock. Additional information on these indicators of the conditions of housing in Sarasota County is provided in Table 36 and Appendix G, Section 3.

The 1980 Census data demonstrates concentrations of indicators of substandard conditions in several census tracts, i.e., census tracts 11, 13, 14, etc. However, it should be noted that these percentages vary from 6 percent to less than 1 percent of the census tracts' housing stock, with the exception of central heating which is indicated in higher percentages.

It is estimated that approximately 1 percent of the 1980 housing stock would qualify as substandard housing, based on the information provided by the 1980 Census. There are no records indicating whether the earlier discussed indicators of substandard housing coexist in the same housing

Table 36: 1980 Housing Conditions

Area	Year-Round Housing Units	<i>Indicators Of Substandard Conditions</i>							
		Lacking Complete Plumbing		Lacking Comp. Kitchen Facilities		Lacking Central Heat		Overcrowded (More than 1 Person/Rm.)	
		#	%	#	%	#	%	#	%
Sarasota County	112,202	426	0.4	646	0.6	1,006	0.9	2,026	3.6
Unincorporated County	70,288	191	0.3	357	0.5	461	0.7	929	1.3
City of North Port	5,461	7	0.1	25	0.5	13	0.2	11	0.2
City of Sarasota	25,191	196	0.8	235	0.9	489	1.9	982	3.9
City of Venice	8,759	13	0.1	23	0.3	38	0.4	87	1.0
Town of Longboat Key	2,503	19	0.7	6	0.2	5	0.2	17	0.7

Source: 1980 Census of Population and Housing, Table H-1 (Figures regarding Housing Units, Plumbing, and Overcrowding), Table H-7 (Figures regarding Kitchen Facilities and Central Heat, based on estimates).

units, or are isolated. Additionally, there are no records indicating the extent of these conditions. Therefore, an accurate determination of the deteriorated or dilapidated housing units in the unincorporated area cannot be made at this time. There exists a general deficiency of housing condition information for the unincorporated Sarasota County.

According to the County Building Department, a minimum housing program was initiated in September 1969 by Sarasota County, and a number of structurally substandard housing units were removed. This program was primarily responsible for the condemnation and demolition of units. From 1969 to 1979, 1053 housing units were demolished in the unincorporated areas, and an additional 229 units were demolished from 1980 to 1986.

The deficiency of housing condition information indicates the need for a current, accurate, comprehensive housing data base.

CONCERN 4

Unincorporated Sarasota County is in need of a comprehensive housing data system.

Subsidized Housing

As of 1987, there were 1,495 subsidized housing units in Sarasota County, with 253 of them (16.9 percent) located in the unincorporated areas. Table 37 and Figure 62 give information about these units.

The Sarasota Housing Authority, Venice Housing Authority, and the Sarasota County HUD Program Office report long waiting lists, indicating the need for additional subsidized housing in the County. In 1987 there were 746 households on the waiting lists, 228 of those were unincorporated County households -- over 30 percent of the Countywide need.

Subsidy programs administered in the County include Public Housing, HUD Section 8 (New and Existing), Section 8/Section 202, Section 221(d)(4), and Farmers Homes Administration FmHA 515.

Section 8 (Existing) the only subsidy program administered in the unincorporated areas, assists 253 very low and lower income households by subsidizing their rents. The household is responsible to search for a unit in buildings of participating landlords. The program benefits landlords and tenants.

Table 37: Subsidized Housing Developments In Sarasota County, 1987

Area	#	Year	Project Name or Number	Units #	Units Type	Street Location	Agency	Program	Waiting List
Unincorp. County		Cont.	Section 8	253	F/E	Scattered Sites	Sarasota County	Sec. 8 Existing	228
City of North Port	1	1981	Grove Park Villas	38	E	119 Bis- cayne Drive	PS	FmHA 515	N/A
City of Sarasota	2	-	Jefferson Center	20	E	930 North Tamiami Trail	PS	Rent Supp. Sec. 202	150
	3	1942	Newtown Heights (Orange Avenue)	60	F	1912 Orange Avenue	SHA	Public Housing	
	4	1953	Newtown Heights (Courts Sub.)	100	F	1912 Orange Avenue	SHA	Public Housing	200
	5	1960	Newtown Heights	100	F	1912 Orange Avenue	SHA	Public Housing	
	6	1970	McCown Towers I	101	E	1300 6th Street	SHA	Public Housing	-
			McCown Towers II	75	E	1300 6th Street	SHA	Section 8	-
	7	1971	Newtown Heights (Proj. Lane/ Cohen Way)	200	F	Central Avenue	SHA	Public Housing	-
	8	1981	St. Martha's Housing	78	E	1576 8th Street	PS	Section 8/ Sec. 202	83
		Cont.	Section 8	232	F	Scattered Sites	SHA	Section 8 Existing	75
City of Venice	9	1970	Grove Terrace	42 8	F E	201 North Grove Street	VHA	Public Housing	10
	10	1982	Villa Capri (part)	36	F	Capri Isles Boulevard	PS	Section 221(d)(4)	-
Total County				1,495					746

Note: F-Family; E-Elderly; PS-Private Sponsor; SHA-Sarasota Housing Authority; VHA-Venice Housing Authority; Waiting List-Persons on the waiting list as of October, 1987; Number corresponds with the map numbers of the location map, Figure 62.

Source: Sarasota Housing Authority; Venice Housing Authority; and Sarasota County HUD Programs Office, FmHA, 1987.

The federal government provides all of the funding for housing assistance in the unincorporated areas. The recent federal government budget cuts in addition to the HUD standards (generally favoring areas with central water and sewer systems), and Statewide competition for funds, however, have interfered with housing assistance effectiveness in the unincorporated County.(43)

Mobile Homes

The Statistical Reports for Sarasota County, published by the County Property Appraiser's Office, indicate that in 1980 there were 85 mobile home parks in the County, including 7 Recreation Vehicle (RV) Parks, 73 mobile home subdivisions and 5

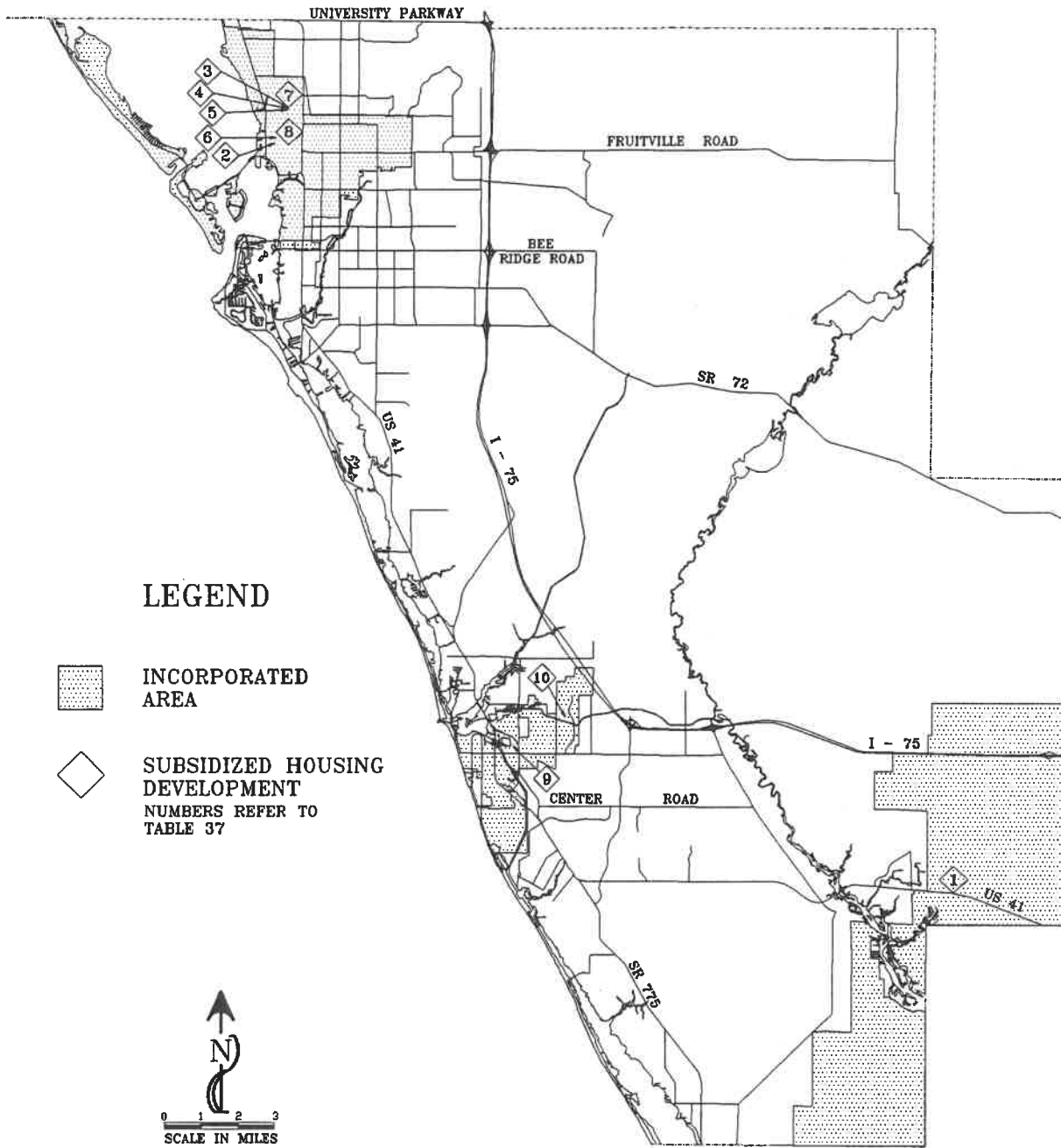


Figure 62: Location Of Subsidized Housing In Sarasota County

Source: Sarasota County Planning Department, 1988.

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mobile home condominiums. By 1986, the same source indicates that the total of mobile home parks increased to 90 parks, including 8 RV Parks, 69 subdivisions and 13 condominiums.

In 1980, there were 18,219 spaces in rental and ownership mobile home parks (15,577 rental, 2,642 ownership). In 1986, there were 19,627 spaces in rental and ownership mobile home parks (15,272 rentals and 4,355 ownership). The decrease in rental spaces for mobile homes is partially the result of rental park conversions to ownership parks.

The number of mobile homes is increasing in Sarasota County. The increasing cost of "conventional" housing encourages the use of mobile homes. The mobile home is the private sector's affordability response to the ever-increasing "conventional" housing costs.

The mobile home has generally been perceived as a source of housing for lower income individuals and families. However, a comparison of typical costs of conventional housing, with the typical mobile home costs - such as land costs, unit contractors and sales price, financing, property taxes, park rentals, and operation and maintenance expenses - in addition to the short life expectancies of mobile homes (13.6 years), indicates that, in the long run, they are almost as expensive as conventional housing units.(44) According to the Southwest Florida Regional Planning Council, the majority of these parks - particularly in the urban areas - are "retirement" mobile home parks, occupied primarily by a white older population.(45)

Tables 38 and 39, and Appendix G, Section 4 provide additional information regarding mobile home parks in Sarasota County licensed by the Florida Department of Health and Rehabilitative Services (HRS).

Households of Special Concern

The Southwest Florida Regional Planning Council's "Draft Areawide Housing Opportunity Plan" identifies these categories of households with special housing needs:

- Large families (five or more persons);
- Female head-of-family households;
- Minorities;
- Elderly (65 and over) households; and
- Handicapped people.

It should be noted that these are not mutually exclusive categories. In 1980, there were 3,570 (6.3 percent) large family households, 6,312 (11.2 percent) female head-of-family households, 4,495 (8 percent) minority households and 15,577 (27.8 percent) elderly people households in Sarasota County. There is no sufficient data regarding the handicapped population of Sarasota County.

The largest category of special concern household in the County, and in the Southwest Region of Florida, is the 65 and over age group. Thirty percent of the County's 1980 population consisted of residents in this age group. As a result of their advancing age, elderly residents have special needs, including accessibility to medical attention, smaller or congregate living facilities for single

Table 38: Mobile Home Parks By Type In Sarasota County, 1986

Area	Total		% of Total	
	Sites	Capacity	Sites	Capacity
Sarasota County	82	17,283	100.0	100.0
Unincorporated County	63	11,790	76.8	68.2
City of North Port	-	-	-	-
City of Sarasota	7	1,487	8.6	8.6
City of Venice	10	3,737	12.2	21.6
Town of Longboat Key	2	269	2.4	1.6

Source: Department of Health and Rehabilitative Services, Sarasota County Public Health Unit, 1986; and Sarasota County Planning Department, 1987.

Table 39: Mobile Home Park Activity In Sarasota County, 1980-1986

Year	Total*	RV Park		Subdivision		Condominium	
		#	%	#	%	#	%
1980	85	7	8.3	73	85.8	5	5.9
1981	87	7	8.1	74	85.0	6	6.9
1982	87	7	8.0	74	85.0	6	7.0
1983	88	7	8.0	73	82.9	8	9.1
1984	88	7	8.0	70	79.5	11	12.5
1985	88	7	8.0	70	79.5	11	12.5
1986	90	8	8.9	69	76.7	13	14.4

Note: Mobile Home Parks - Rent, Own, RV; Subdivision Parks (Rental Parks) - Own Home, Rent Land; Condominium Parks (Ownership Parks) - Own Home and Land; *Totals include RV's (unlike the totals in Table 38); also they represent the entire County.

Source: Sarasota County Property Appraiser's Office, Statistical Reports, 1981-1987; and Sarasota County Planning Department, 1987.

elderly persons, specialized recreational activities and social services. However, it has been estimated that only a small number (approximately 4 percent) of the nation's elderly are so disabled as to require institutional care. The housing need of the remaining elderly population can be met by multi-family dwellings, public or private housing complexes, single family homes, or mobile homes.

For these elderly, barrier-free access in housing is the most evident special need. This could include ground-level units, handrails, gently sloping ramps instead of stairs, etc. An additional factor affecting the housing needs of the elderly is the one-person household. Single people frequently require smaller homes such as one-bedroom apartments, efficiencies, or group quarters. Handicapped people's needs often are similar to those of the elderly.

CONCERN 5

Sarasota County's "households of special concern" have special housing needs.

Group Homes

"Group home" means a facility which provides a living environment for unrelated residents who operate as the functional equivalent of a family, and includes such supervision and care as may be necessary to meet the physical, emotional and social needs of the residents.(46) It includes Adult Congregate Living Facilities (ACLF's), Nursing Homes, and Child Care Facilities.

The Sarasota County Public Health Unit reports that, in 1987, 54 Group Home Facilities (capacity of 3,779 beds) licensed by HRS were located in Sarasota County. Of these, 26 facilities (capacity of 1,267 beds) were located in the unincorporated County, and included: 7 nursing homes (capacity 657 beds); 18 ACLF's (capacity 590 beds); and 1 child care facility (capacity 20 beds). The majority of the resident population of the first two consists of white elderly. Table 40, and Appendix G, Section 5 provides additional information regarding Sarasota County's group home facilities licensed by HRS.

Table 40: Group Home Facilities In Sarasota County, 1987

Area	Total		Facility Type			% Of Total	
	Fac.	Capac.	Nursing Home	ACLF	Child Care	Fac.	Capac.
Sarasota County	54	3,779	21 (2,360)	30 (1,391)	2 (28)	100.0	100.0
Unincorp. County	26	1,267	7 (657)	18 (590)	1 (20)	48.1	33.5
City of North Port	1	120	1 (120)	0	0	1.9	3.2
City of Sarasota	18	1,715	9 (1,105)	8 (602)	1 (8)	33.4	45.4
City of Venice	9	677	4 (478)	5 (199)	0	16.6	17.9
Town of Longboat Key	0	0	0	0	0	0	0

Note: In the columns regarding Nursing Homes, ACLF's and Child Care Facilities, the first number refers to the number of facilities and the second number to the capacity (number of beds) of the facilities.

Source: Department of Health and Rehabilitative Services, Sarasota County Public Health Unit, 1987; and Sarasota County Planning Department, 1988.

Second Homes

Second homes have an adverse effect on the availability of housing for very low and lower income households. They typically are owned by seasonal residents who live outside Sarasota County during a portion of the year.

The impact of second homes on housing is that the "filtering down" process loses effectiveness. This process, by which aging housing becomes affordable to very low, lower income, and moderate households, is interrupted as such homes are acquired by second home buyers. Since many second homes become primary homes upon the retirement of the owner, the filtering down process for many such homes cannot be resumed until the house is sold.

Comparison of the number of year-round resident households to that of existing housing gives an estimate of the number of second homes in Sarasota County. The 1980 Census reported that there were 13,407 (8.5 percent of total housing stock) housing units "held for occasional use" in the entire County. In the unincorporated area there were 7,951 such units (11.2 percent of the unincorporated area's total housing stock).(47)

Migratory Housing

The 1980 Census indicates there were 1,153 migratory housing units in Sarasota County, 650 of which were located in the unincorporated areas. These units are usually occupied by migrant farmworkers, the majority of whom are single males.

The Migrant Worker's Clinic of Sarasota (part of HRS since 1984) reports that in 1980 there were approximately 1,200 migrant workers in the County.(48) This figure decreases as farmland is continuously lost to other land uses in Sarasota County.(49) The Migrant Workers Clinic also reports that there were 1,180 migratory workers in 1981, and 1000 workers for each year 1982, 1983, and 1984. There are no accurate records for migratory workers after 1984. The Migrant Worker's Clinic became part of HRS in 1985, therefore it is not required to compile data specific to migratory labor. The trend from 1980 to 1984 indicates that the number of the migratory workers is decreasing.

Their housing needs are usually met by the farm owner. In past years, there was available housing on the farms (migratory labor camps), however as the number of workers decreases, many farmers

find it economically feasible to make housing arrangements for their migratory labor at local motels, and transport them to the farm during working hours.(50)

Homelessness

Across the nation the number of homeless people has continued to increase in the 1980's. Homelessness is neither a seasonal nor a temporary problem, nor is it confined to a particular geographical area.

Causes of homelessness include lack of affordable housing, evictions due to inability to pay, unemployment, recent arrival in the area, domestic violence and/or family crisis, gaps in services for the mentally ill and chronic substance abusers, and a sharp decrease in federal and state funding for survival services.(51)

The chronic street dwellers represent only a small segment of the homeless population today while the "new comers" include more and more families.

It is estimated that in 1984, 18 percent of the homeless people seeking shelter were single female heads of households with children; approximately 30 percent were mentally ill; and 64 percent represented single member households. Minority groups were represented by 38 percent of the homeless population while 62 percent were white. Approximately 52 percent were under 35 years of age and 28 percent were over the age of 45. A large portion of the homeless have completed high school and some have a college education.(52)

Nationwide, it is estimated that in 1987 there were 3 million homeless persons. HRS estimated 10,000-13,000 homeless persons in Florida in 1985, 70 percent of whom are located in Florida's metropolitan areas. (53) Sarasota County receives its share. The Salvation Army of Sarasota County reports that the local Salvation Army Lodge provides shelter, daily, to 150 homeless individuals -- including families -- however, the lodge cannot meet the existing demand.(54) Both the local HRS office and the Salvation Army estimate that Sarasota County is in need of 300 additional beds. (55)

The annual increase in homelessness is estimated to be 20 percent to 25 percent.(56) It is evident that much more will have to be done in Sarasota County to substantively impact the problem. Sarasota's relatively mild winters attract the homeless as much as they attract wealthier citizens. Additionally, Sarasota County's high housing costs and limited very low, lower, and moderate income housing (one of the major causes of homelessness) make the local very low and lower income households prime candidates for homelessness.

Housing and Energy

Housing, in its construction and development stages and during its occupancy, requires a large consumption of energy.

According to Florida Power and Light (FPL), the provider of electricity in Sarasota County, the residential sector is the second largest energy demand sector (after the transportation sector) followed by the commercial and industrial sectors. In 1980, FPL's residential customers in Sarasota County purchased 914,305,000 KWH, a per capita annual consumption of 11,730 KWH. The per capita consumption declined to 10,979 KWH annually, by 1987. Contributing factors to this decline were the public energy awareness campaign and the energy conservation programs provided by FPL.

Residential energy consumption depends on the lifestyle of the occupants. However, certain site design and building characteristics contribute to the conservation of energy, such as: insulation, heat leakage, the color of exterior surfaces, orientation, vegetation surrounding the building, etc. Energy conservation at the individual building level can be achieved through energy efficiency in new construction and the retrofitting of existing structures.

But energy conservation must also occur at the community level. Detached, single family housing, the predominant housing type in Sarasota County, is more energy intensive than multi-family housing. Although cluster housing, a more energy efficient development technique, is possible in Sarasota County, it requires additional permitting steps,

possibly discouraging its use by developers. Development of lands outside the defined urban areas in Sarasota County has resulted in energy-intensive land use patterns. Modifications in existing land use planning practices can achieve large scale energy savings.

Analysis

The preceding section described existing housing conditions in Sarasota County. This section analyzes the existing conditions, and anticipates future conditions through a closer study of housing supply, housing demand, and the role of financial institutions and the local government in the housing delivery process.

The basic housing consumption unit is the household. A household is attracted to Sarasota County for its climate; beaches; environment; interdependent economic and employment structure; institutions; transportation; educational, cultural, and health facilities; wholesale and retail trade centers; introduction from tourism; Florida's tax structure, etc. (Rarely does a household move to a region merely because of the availability of housing. People seek houses in places where they have reasons to live).

In a perfect equilibrium condition, a new housing unit would be constructed, or an existing unit made available, for each household that moved to Sarasota County, or for each unit taken out of service. The demand by the households determines where housing units will be located in relation to population. What households are willing and able to pay determines their housing choice, after location and the surrounding environment (i.e., access to employment, transportation, community facilities, educational opportunities, recreation, open space, etc.) have been considered. Choice depends largely on income, because the majority of the housing stock is supplied by the private sector. If adequate numbers of housing units are not supplied in a quantity to meet demand, then the price of available housing escalates. A household then is faced with an affordability decision.

Affordability concerns all households, regardless of their income, as a household attempts to reach a balance between its financial means and its needs and desires for amenities which would allow it to function successfully in the society.

An affordability factor is widely used to guide households in their housing choices. It is based on a percentage of the household's gross income. In the 1980's the rule of thumb definition of the affordability factor is 30 percent of gross income. This indicates that a household, regardless of its income, should spend no more than 30 percent of its gross income for monthly housing costs. If a larger share is spent for housing costs, the household is sacrificing monies that should be spent towards other basic household needs, such as, food, medical care, transportation, recreation, education, etc.

A household considers the affordability factor and chooses an affordable unit. If what is affordable housing is not adequate for the household needs, the household may choose to either accept a less adequate housing unit, or contribute more than 30 percent of its gross income towards monthly housing costs. The household may also choose to live in a neighboring community and commute. Appendix G, Section 2 indicates that the housing choices of the moderate, lower, and very low income households in Sarasota County were limited based on the affordability factor.

Sarasota County's workforce constitutes a large portion of the households experiencing limitations in their housing choices in Sarasota County. For example, often these are households of the County's service sector or office sector employees. The service sector is the largest of our resort/retirement economic base. The office sector provides vital services for the functioning of this community. High housing costs for the workforce eventually result in higher costs of services for all Sarasota residents.

The choices for these households were limited in both the rental and ownership housing markets. The inventory indicates that in 1980, 13.5 percent of the housing stock consisted of renter-occupied housing units in Sarasota County. Local governments often encourage ownership believing that

owners represent better managers of housing, contribute more taxes, make more of a contribution to the community, and have a bigger stake in the future.

However, these widely believed advantages of ownership are often found in renters. Renters in many cases are the future owners. Often they rent until they raise down payments for purchasing a housing unit, or until they familiarize themselves with the community so that they can purchase a housing unit most suitable to their needs. Meanwhile, current renters can be good managers of the property they rent, bringing to their landlord's attention problems as they appear in the unit, or even maintaining the property themselves. They contribute to the community (often members of the labor force), and have a stake in the future, as they are often planning for future house ownership. They do not pay property taxes directly, however, their landlords do. Additionally, if renters are encouraged to stay in a community, they are more likely to purchase housing units within that community, thus, contribute to the community's property tax base in the future.

Providing adequate housing opportunities for the lower income households often requires housing assistance. For many years the federal government has been the source of this assistance. Federal assistance to low and moderate income families has taken many forms beyond public housing, such as loans at below market interest rates; direct cash payments, including rent supplements, housing allowances and grants; and special mortgage insurance programs which provide low down payments and long-term loans. Opportunities are available for home ownership and rental assistance for both households and the developers who would construct such housing. It is important to understand that the terms "affordable housing", "low income housing", and "public housing", although related, are neither synonymous nor interchangeable.

- **Affordable Housing:** a housing unit determined affordable for a household based on the application of the affordability factor (monthly housing costs are equal or less than 30 percent of household's

monthly gross income; the purchase cost of a housing unit equal to or less than three times a household's annual gross income).

- **Low Income Housing:** a housing unit determined affordable for a household whose income falls within the lower income range (50 percent to 80 percent of median household income), or the very low income range (less than 50 percent of median household income).
- **Public Housing:** a housing unit owned by the public sector and made available to lower, or very low income households for occupancy. Often these units are associated with the federal housing programs administered by the Department of Housing and Urban Development (HUD).

Additionally, nationwide many people are excluded from portions of the housing market by deliberate market practices which prevent them from renting or owning. For example: in Sarasota County, families with young children are often prevented from renting. Students and welfare recipients also face similar barriers. The Southwest Florida Regional Planning Council indicates that ethnic minorities have suffered most from such practices. In the early 1980's the Regional Planning Council demonstrated this in preparing its draft Housing Assistance Plan. This plan was a federal requirement relating to the Community Development Block Grant Program. Implementation of the Plan would provide for the regional distribution of low and moderate income housing, and would primarily benefit low income persons and racial minorities.

Financial institutions may also contribute to housing choice limitations. Housing is sensitive to the conditions of financial institutions. The cost and availability of money for a mortgage influences whether households can purchase homes; whether investors will purchase rental properties; whether builders will produce new housing units; or whether families will move.

The local government's attitude is also very important. The majority of new construction requires local approval. The local government controls zoning, subdivision regulations, building codes, etc. They provide or authorize all infrastructure such as streets, water, sewer, and utilities. Local government regulations and processing can add substantially to the cost of new housing through the enforcement of demanding building standards, fees, assessments, and growth management controls.

It is the local government's responsibility to contribute, as much as possible, to the creation of a housing market which would include a variety of housing choices for all its residents. The local government must aim for the development of affordable housing for the residents in all income brackets. It must also aim for the availability of low income housing, providing choices for the moderate, lower, and very low income households, which often represent the workforce. Most importantly, the local government must demonstrate through its actions, that it does not support the widely held bias against renters, families with children, ethnic groups, lower income people, etc.

Population Projections

It is projected that Sarasota County's resident population, by the year 2000, will reach approximately 383,300 resident population, and 475,353 functional population. The unincorporated County resident population in the year 2000 is projected to 233,817 an increase of 78.5 percent from 1980, and to 266,240 in 2010, an additional increase of 13.9 percent. The projected functional populations of the unincorporated areas are even higher: 292,271 in the year 2000, and 332,800 for the year 2010. According to the Bureau of Economic and Business Research, the ratio of the 65 and over age group to the total population will continue to increase, while the ratios of the other age groups will be decreasing. Overall, the predominant group will be that of 25-64 years.

Household Projections

Since 1980, the average household size in Sarasota County has decreased according to the Bureau of Economic and Business Research. Indications are that this trend will continue. Application of the projected persons per household, indicate the number of households in the unincorporated areas will increase to 103,459 by the year 2000 and 123,832 by the year 2010. Table 41 shows the projected households in Sarasota County.

Table 41: Projected Households In Sarasota County

	1980 (1)	1986 (1)	1990	1995	2000	2005	2010
Total Co. Population	202,251	244,634	273,000	304,900	332,800	360,700	383,300
Aver. HH Size (2)	2.25	2.21	2.21	2.19	2.18	2.14	2.07
No. of Households	88,914	110,694	123,529	139,660	152,660	168,551	185,169
Unin. Co. Population	130,990	167,002	189,752	214,090	233,817	252,828	266,240
Aver. HH Size (2)	2.33	2.29	2.29	2.27	2.26	2.22	2.15
No. of Households	57,059	72,927	82,861	94,313	103,459	113,886	123,832
% of County Households	62.8	65.9	67.0	67.7	67.8	67.6	66.9

Source: (1) Sarasota County Planning Department Estimates; (2) Woods and Poole Consultants, 1987; Population Projections (Resident Population) 1990-2010, University of Florida, Bureau of Economic and Business Research.

Appendix G, Section 6 shows the 1980 sizes of households, and projects household sizes to the year 2010. As the number of persons per household decreases, the ratio of the large number families (5+ persons) to the total number of households will be decreasing, while the ratio of the 1-person and 2-person households will be increasing. However, the total numbers in all household categories will be increasing.

Appendix G, Section 7 shows the 1980 and 1988 median household incomes in Sarasota County. The median household income in 1980 was \$15,069 according to the Census. It is estimated that in 1988 it was \$25,480 according to HUD median incomes for Sarasota County.

Appendix G, Section 8 shows the projected number of households by income group from 1980 to 2010. As the population and the community needs will change by the year 2010, it is projected that the unincorporated County households will fall into the income group categories as follows: the ratio of the very low income households will decrease to 8.9 percent, the lower income households will increase to 38.9 percent, the moderate income households will increase to 20.1 percent, the middle income households will increase to 12.2 percent, and the upper middle/high income households will decrease to 19.9 percent. However all income groups will experience increases in absolute numbers of households. The change in the number of households by income group is shown in Table 42.

Households of Special Concern

Table 43 shows unincorporated Sarasota County's households of special concern in 1980, and provides projections to 2010. The ratio of the elderly (65 and over) households to the unincorporated County's total households is expected to increase from 27.8 percent in 1980 to 29.8 percent in 2010. The number of large families (5+ persons) decreases from 6.4 percent in 1980 to 5.9 percent in 2010. It is assumed that the ratios of households with female heads, and minority households will remain at the 1980 level through the year 2010 representing 11.2 percent and 8.0 percent respectively, of the unincorporated County's households. There is insufficient data on the handicapped persons in Sarasota County.

Housing Stock

Housing Activity

Table 44 presents housing activity in the unincorporated Sarasota County from 1980 to 1986, including demolitions, removals, and new construction, based on dwelling permit activity.

The total number of mobile homes has increased. Single family homes continue to be the predominant residential housing type in Sarasota County. There has been an increase in the number of duplexes and multi-family homes.

Table 42: Change In Number Of Households By Income Group, Unincorporated Sarasota County

Income Group	1980-90	1990-95	1995-2000	2000-05	2005-10
Very Low	1,166	57	-485	-312	-254
Lower	10,073	5,197	4,850	5,638	5,805
Moderate	5,377	2,841	3,122	2,396	2,113
Middle	4,231	1,511	380	1,179	1,100
Upper Middle/High	4,955	1,846	1,279	1,526	1,182
Total	25,802	11,452	9,146	10,427	9,946

Source: U.S. Census, 1970, 1980; and Sarasota County Planning Department, 1988.

Table 43: Households Of Special Concern, Unincorporated Sarasota County

Category	1980	1990	1995	2000	2005	2010
<i>Total Households</i>						
Number	56,055	82,861	94,313	103,459	113,886	123,832
Percentage	100.0	100.0	100.0	100.0	100.0	100.0
<i>Large Families</i>						
Number	3,570	5,143	5,818	6,306	6,885	7,258
Percentage	6.4	6.2	6.2	6.1	6.0	5.9
<i>Female Heads of Household</i>						
Number	6,312	9,280	10,563	11,587	12,755	13,869
Percentage	11.2	11.2	11.2	11.2	11.2	11.2
<i>Minorities</i>						
Number	4,495	6,629	7,545	8,277	9,111	9,907
Percentage	8.0	8.0	8.0	8.0	8.0	8.0
<i>Elderly (65+)</i>						
Number	15,577	24,610	28,577	30,831	33,938	36,902
Percentage	27.8	29.7	30.3	29.8	29.8	29.8
<i>Handicapped</i>						
Number	-	-	-	-	-	-
Percentage	-	-	-	-	-	-

Source: 1980 Census; and Sarasota County Planning Department, 1988.

Table 44: Additions And Removals - Changes In Housing Stock, Unincorporated Sarasota County

Year	New Construction (1)	Demolitions (2)	Mobile Homes (3)
1981	1,711	23	+ 1,010 spaces
1982	1,458	26	+ 131 spaces
1983	2,202	33	-91 spaces
1984	1,935	30	+251 spaces
1985	1,527	24	+59 spaces
1986	2,078	93	+1,234 spaces

Source: (1),(2) Sarasota County Building Department, 1987; and (3) Sarasota County Property Appraiser's Office, Statistical Reports, 1982-1987.

Housing Condition

Projections of the substandard housing units in the unincorporated areas of Sarasota County for the year 1980-2010 are shown in Appendix G, Section 9. Based on the County's definition of "substandard" dwelling, and the 1980 Census counts of units with the substandard housing indicators (overcrowding conditions, lack of complete

kitchen facilities and plumbing and lack of central heat), it is estimated that approximately 1 percent of the unincorporated County's housing stock is substandard. Appendix G, Section 9 provides information on substandard housing units and the methodology used to project these units - and their removals - to the year 2010.

As mentioned earlier in this Chapter, there are insufficient records indicating the condition of housing in the unincorporated areas of Sarasota County. The Census data is insufficient as it only addresses conditions which could indicate substandard housing, with no reference to the exact location or the extent of these conditions.

Sarasota County adopted the Southern Standard Building Code, 1982 Edition, through Ordinance No. 83-63, on April 17, 1984. The Code has been modified to address the County's needs. Section 103.4(a) of Ordinance No. 83-63 addresses unsafe buildings. The County's Code Enforcement Department indicated that, pursuant to this Section of Ordinance 83-63, when a concerned citizen points out an unsafe building, or a building inspector notices unsafe conditions, an inspection of the unsafe unit takes place. The inspection is followed by corrective action by the owner, or demolition, depending on the extent of the problem(s).

As of 1988, Sarasota County does not have a housing code. A housing code addresses the safety conditions of the unit while occupied, as opposed to a building code, which addresses the unit's structural needs at the time of construction, remodeling, or addition. Following an inventory of housing conditions, the enforcement of a housing code often requires correction of unsafe conditions at early stages, when rehabilitation is economically feasible. This prevents the progress of substandard conditions which could lead to the unit's dilapidation.

As the unincorporated County's housing stock ages, the need for an inventory of housing conditions will become more important. Based on this inventory, Sarasota County needs to determine whether the adoption of a housing code is necessary. Its enforcement would result in a safer and sanitary housing stock, and rehabilitation would keep units from reaching a dilapidated stage, at which point demolition is required. This would help the affordable housing situation of the County, as the rehabilitated units filter down to less wealthy households. It would also decrease the demand for new construction, a major concern for the County as residential land becomes scarcer.

Additionally, implementation of a housing code would require that records be kept of deteriorated and dilapidated units and their locations, information necessary for the establishment of "housing target areas." The identification of such areas will assist the County to address by priority the housing need of deteriorated and dilapidated areas, in its efforts towards the enhancement of the community.

CONCERN 6

Sarasota County does not have sufficient data regarding housing conditions.

In 1979, a one-time field inspection by the County HUD Programs Director, the County Low Income Housing Advisory Board and County Planning staff revealed varying concentrations of substandard housing in seven designated target areas of the County. They also identified three potential target areas.

HUD Designated Target Areas:

- Area 1: Beverly Terrace. Myrtle Street to 44th Street (south to north); Brazil Nut Avenue to Lockwood Ridge Road, (west to east).
- Area 2: Mango - Colson Area. 17th Street to 27th Street (south to north); Mango Avenue to Tuttle Avenue (east to west); Leonard Reid Avenue (south to north); Railroad tracks to Bunche Street (west to east).
- Area 3: Fruitville Area. Honore Avenue to Sawgrass Road (south to north); Palmer Boulevard to Packinghouse Road/Cattlemen Road (west to east).
- Area 4: Fruitville. Simon Avenue to Richardson Road (west to east); Fruitville Road to 10th Street (south to north).
- Area 5: Osprey. Bay Street to Green Street (south to north). U.S. 41 to Glenwood Avenue (west to east).

- Area 6: Laurel. Rohledar Road to Laurel Road (south to north); Old Trail Road to Church Street (west to east).
- Area 7: Nokomis. Venice By-way Road to Shakett Creek (south to north); U.S. 41 to Orange Grove Avenue (west to east).

Potential Target Areas:

- Area A: located at the intersection of Palmer Boulevard and Niobe Road, encompassing a farmworker housing complex;
- Area B: located on both sides of Bahia Vista Street between Phillippi Creek and Beneva Road; and
- Area C: located west of Pinkney Road, and south of Ashton Road.

The County HUD office, through a Community Development Block Grant (CDBG) Program, in 1979 funded rehabilitation of 55 housing units in designated target areas 1-3. Also, new construction and recent road widening projects (i.e., Bahia Vista Street) resulted in the elimination of additional substandard units, some of which were located in the above areas. As a more recent housing survey has not been conducted by the County, and as the above efforts had a relatively small impact, it is assumed that the above areas still represent concentrations of substandard housing units in the unincorporated areas.

CONCERN 7

Sarasota County is in need of regularly scheduled housing condition field surveys.

Housing Construction Need

Table 45 projects the number of housing units based on projected functional population in unincorporated Sarasota County. The housing construction needs for the unincorporated areas of Sarasota County are shown in Table 46. Considering the number of new housing units (needed as a result of new household formations), the replacement of removed substandard units, and vacancy allowance, the estimated housing construction need (1986 to 1990) is 9,252 units (2,313 units annually). Further, the projected housing construction need from 1990 to 1995 is 15,237 units (3,047 units annually); 12,183 units (2,437 units annually) for 1995 to 2000; 13,882 units (2,776 units annually) for 2000 to 2005; and 13,244 units (2,649 units annually) for 2005 to 2010.

As discussed earlier, when there is a vacancy rate between 4 percent and 7 percent the housing market functions well, providing affordable housing and a degree of choice to consumers. In the projection of housing construction needs Sarasota County has included a 6 percent vacancy rate allowance.

Table 45: Projected Housing Units, Unincorporated Sarasota County

	1980	1986	1990	1995	2000	2005	2010
Functional Population (1) (2)	167,389	217,312	237,190	267,613	292,271	316,035	332,800
Persons Per Household (3)	2.33	2.29	2.29	2.27	2.26	2.22	2.15
Total Housing Units (4)	71,841	94,896	103,576	117,891	129,323	142,358	154,791

Source: (1) Figures for 1980, 1986, Sarasota County Planning Department Estimates; (2) Figures for 1990-2010, Projections of Functional Population in Unincorporated County, Sarasota County Planning Department, July, 1988; (3) Table 41, Housing Chapter; and (4) Figures for 1980, 1986, Table 33, Housing Chapter.

Table 46: Housing Construction Need, Unincorporated Sarasota County

	1986	1990	1995	2000	2005	2010
Housing Units Based On						
Future Population (1)	94,896	103,576	117,891	129,323	142,358	154,791
New Housing Units (2)	-	8,680	14,315	11,432	13,035	12,433
Substandard Units						
To Be Replaced (3)	-	52	63	65	65	65
Additional Units For						
Maintenance Of A 6%						
Vacancy Rate (4)	-	520	859	686	782	746
Total Construction Needs	-	9,252	15,237	12,183	13,882	13,244

Source: (1) Figure for 1986, Estimate from Table 33, Housing Chapter; Figures for 1990-2010, Based on Functional Population, Table 45, Housing Chapter; (2) Represents Projections of New Household Formations and Projections of Functional Population; and (3) Appendix G, Section 9, Housing Chapter; (4) 6% of New Housing Units.

Table 47 compares the projected housing construction need by tenure. The 1980 Census provides the tenure characteristics of the resident population, indicating that 20.2 percent of the housing stock was occupied by people who come to Sarasota County for part of the year but their permanent address is in another state. It is assumed that the seasonal population will continue to occupy 20.2 percent of the future housing stock.

The cumulative total of the very low, lower, and moderate income households to the total number of households in the unincorporated areas (Appendix G, Section 8) was also considered in tenure projections. The combined number of households of these three income groups represented 64 percent of the total unincorporated households in 1980; it is projected that this percentage will increase to 67.9 percent by 2010. A portion of these households will likely be renters, due to their income limitations and the likelihood of increasing housing costs. Therefore, the projected ratios for

Table 47: Housing Construction Need By Tenure, Unincorporated Sarasota County

Period	Construction Need (1)	Resident Population		Seasonal Population			
		Owners Units	%	Renters Units	%	Units	%
1980 (2)	-	-	66.2	-	13.6	-	20.2
1986-90	9,252	5,995	64.8	1,388	15.0	1,869	20.2
1990-95	15,237	9,569	62.8	2,590	17.0	3,078	20.2
1995-2000	12,183	7,407	60.8	2,315	19.0	2,461	20.2
2000-05	13,882	8,163	58.8	2,915	21.0	2,804	20.2
2005-10	13,244	7,655	57.8	2,914	22.0	2,675	20.2

Source: (1) Table 46, Housing Chapter; and (2) Table 34, Housing Chapter.

rental units is increasing. The constant ratio for seasonal housing and the increasing ratio of the rental units result in a decreasing ratio for owner units. Due to lack of data, tenure for seasonal population, and type of housing are not projected.

Private Sector and Housing Supply

A large number of private homebuilders are active in the unincorporated Sarasota County, producing a wide variety of housing from single family units to high rise condominiums at prices varying from \$60,000 and up. Table 48 shows the building permit activity in the unincorporated Sarasota County from 1980 to 1986. During this period, according to the Property Appraiser's Office, a total of 19,530 permits were issued at a combined value of \$1,166,700. A total of 16,759 permits were for single family units (85.5 percent), 1,590 permits were for duplexes (8.1 percent), and 1,181 permits were for multi-family structures (6.1 percent). (It should be noted that dwelling permit activity includes new construction, additions/remodeling of existing units, and demolitions.)

Housing Costs

Housing costs consist of several components: land costs; structure costs (design, building materials, labor); financing charges; builder profit; and maintenance costs.

Table 49 shows the average prices for single family homes, condominiums and vacant land from 1980 to 1987. The average prices for single family homes have continued to rise since 1980 (\$71,900) reaching \$115,616 in 1987. The average sales price for condominiums was \$75,500 in 1980, reached \$105,883 in 1983, declined in 1984 and 1985, and increased to \$109,816 in 1987. Land costs usually can be anywhere from 15 percent to 30 percent of the total costs of housing. In Sarasota County the average lot sales price has increased from \$30,389 (57) in 1980 to \$47,137 in 1987 (58), an increase of 35.6 percent (annual average increase of 5.9 percent). Figure 63 provides a graphic comparison between escalating costs of single family homes, condominium units, and vacant land.

Tables 50 and 51 show Sarasota County's financing trends from 1980 to 1987. The average fixed interest rates for single family mortgages fluctuated since 1980 (12.80 percent), escalating to 16.4 percent in 1983, and declining since then to 10.25 percent in 1987.

Table 48: Dwelling Permit Activity, Unincorporated Sarasota County, 1980-1986

Year	Total			Single Family			Duplex			Multi-Family		
	\$	#	%	\$	#	%	\$	#	%	\$	#	%
1980	202.2	3,719	100.0	101.3	3,312	89.0	13.9	253	6.8	46.9	154	4.1
1981	202.5	2,605	100.0	80.9	2,150	82.5	15.2	252	9.6	106.3	203	7.8
1982	130.5	2,074	100.0	64.1	1,792	86.4	6.0	111	5.3	60.3	171	8.2
1983	172.4	3,165	100.0	104.6	2,755	87.0	14.0	249	7.8	62.4	161	5.0
1984	151.8	2,752	100.0	90.2	2,240	81.4	18.5	315	11.4	113.1	197	7.1
1985	126.3	2,153	100.0	78.0	1,811	84.1	12.3	192	8.9	35.9	150	7.0
1986	181.0	3,062	100.0	131.3	2,699	88.1	13.8	218	7.1	35.9	145	4.7
1980-1986	1,167.7	19,530	100.0	650.4	16,759	85.8	93.7	1,590	8.1	590.8	1,151	6.1

Note: Dwelling Permits dollar value in Millions of Dollars

Source: Sarasota County Property Appraiser's Statistical Report, 1987; and Sarasota County Planning Department, 1988.

Table 49: Average Housing Costs - Single Family Homes, Condominiums And Vacant Land, Sarasota County, 1980-1987

Year	Single Family (1)		Condominium (2)		Vacant Land (3)	
	Cost	% Increase	Cost	% Increase	Cost	% Increase
1980	\$71,900	-	\$75,500	-	\$30,389	-
1981	79,570	10.6	91,322	17.3	36,086	18.7
1982	84,456	6.1	99,323	8.0	31,208	-13.5
1983	90,216	6.8	105,283	5.7	34,044	9.1
1984	91,216	1.1	98,066	6.8	38,132	12.0
1985	97,258	6.6	96,016	2.1	43,231	13.4
1986	109,458	12.3	108,491	13.0	41,244	-4.6
1987	115,616	5.6	109,816	1.2	45,137	9.5.

Source: (1), (2) Sarasota Board of Realtors; and (3) Sarasota County Property Appraiser's Office, Statistical Reports, 1979-1988.

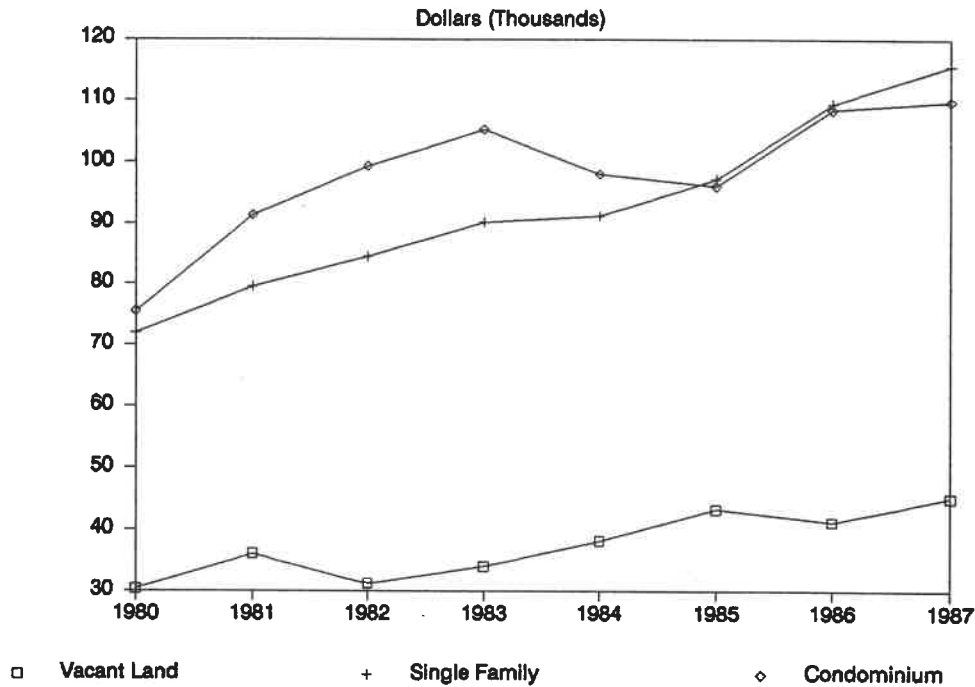


Figure 63: Average Housing Costs - Single Family Homes, Condominiums and Vacant Land, Sarasota County, 1980-1987

Source: Sarasota County Planning Department, 1988.

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Table 50: Single Family Housing Costs and Financing Trends, 1980-1987

Year	Fixed Mortgage Interest		Average Loan To Price Ratio (2)		Monthly Payment to Income (P&I) Costs (3)	
	\$ Rate (1)	% Inc.	Ratio	% Inc.	\$	% Inc.
1980	12.80	-	N/A	N/A	N/A	-
1981	14.75	15.2	N/A	N/A	N/A	N/A
1982	16.40	11.2	75.4%	-	900	-
1983	12.50	-23.8	75.5%	0.2	800	-11%
1984	11.75	-6.0	81.5%	8.0	813	2%
1985	11.50	-2.1	72.3%	-11.3	722	-11%
1986	10.00	-13.0	71.4%	-1.2	692	-4%
1987	10.25*	2.5	75.3%	5.5	790	+14%

Source: (1) Sarasota County Property Appraiser's Statistical Reports, 1981-1987; (2) Federal Home Loan Bank, Atlanta, 1988; (3) Estimates, Sarasota County Planning Department, 1988; and *Barnett Bank, Sarasota, Florida.

Table 51: Multi-Family Housing Costs, Vacant Land Costs and Financing Trends, 1980-1986

Year	Multi-Family Housing				Vacant Land			
	Average Price		Fixed Mortgage Interest		Average Price		Fixed Mortgage Interest	
	\$ Amount	% Inc.	\$ Rate	% Inc.	\$ Amount	% Inc.	\$ Rate	% Inc.
1980	138,673	-	14.70	-	30,389	-	13.50	-
1981	201,936	45.6	17.00	15.6	36,086	18.7	15.00	11.1
1982	143,000	-29.2	17.60	2.9	31,208	-13.5	17.50	16.6
1983	91,773	-35.8	12.90	-26.0	34,044	9.1	13.50	22.8
1984	79,772	-13.1	13.00	0.7	38,132	12.0	13.00	-0.2
1985	87,802	3.8	12.35	-5.0	43,231	13.4	13.20	-1.5
1986	121,496	46.7	11.45	-7.3	41,224	-4.6	11.20	-15.1

Source: Sarasota County Property Appraiser's Statistical Reports, 1984, 1986, and 1987; and Sarasota County Planning Department, 1987. Multiple Listing Sales and Dollar Value

The average fixed mortgage rates for multi-family buildings also fluctuated; from 14.7 percent in 1980, they reached 17 percent in 1982 and declined to 11.45 percent in 1987. The average fixed interest rates for multi-family buildings were higher than those for single family units, possibly discouraging the construction of multi-family units.

The average fixed mortgage rates for vacant land are lower than those for multi-family buildings but higher than the rates for single family buildings. The increase of the average residential lot prices is encouraged by the decline of available residential land in high demand areas. Eventually these prices increase the cost of housing. The demand on

residential land in the unincorporated County will continue to increase as the Cities of Sarasota and Venice, and the Town of Longboat Key reach their build-out capacities.

Increasing land costs can be overcome to some extent by increasing the number of housing units per acre, thereby decreasing the land cost per unit. However, increased housing densities without proper design and planning can stress natural and built systems. With proper design and planning, many problems associated with higher density development can be controlled.

Housing Availability

This section is based on the following information:

- **Median Household Size:** 2.2 persons/household
- **Income Ranges:** based on HUD Circular Letter 88-18, February 25, 1988 (adjusted for 2.2 persons per household)
- **Median household income:** \$25,480
- **Very low income range (less than 50 percent of median):** less than \$12,740
- **Lower income range (50 percent to 80 percent of median):** \$12,740-\$20,389
- **Moderate income range (80 percent to 120 percent of median):** \$20,389-\$30,576
- **Middle income range (120 percent to 150 percent of median):** \$30,376-\$38,220
- **Upper Middle/High income range (more than 150 percent of median):** more than \$38,220
- **Single Family Unit and Condominium Unit Median Sales Prices:** based on the Home Sales Report of the Sarasota Board of Realtors, January 1 to May 31, 1988. These figures are used only as indicators to determine affordability. It should be noted that these figures represent median sales prices in North Sarasota County. However, they are used as indicators of affordability in this section, because, according to the building permit activity (1981-1987), approximately 65 percent of the housing market took place in the North County.

- **Single Family Homes Median Sales Price:** \$79,650
- **Condominium Unit Median Sales Price:** \$95,000
- **Rent Prices:** Due to lack of availability of a median rent figure, mean rent figures are used in this section, as they are reported by the Property Appraiser's 1988 Statistical Report for Sarasota County. It should be noted that this is a December 1987 average rent figure (not February, 1988).
- **Mean rent value:** \$461.00

Upper Middle and High Income Households

The private sector can meet the requirements of all households in the upper middle income and high income ranges. In 1988, these households had annual incomes of \$38,220 or more (Appendix G, Section 7). Using the affordability factor (30 percent) a minimum of \$956 per month would be available for a household of \$38,220 annual income. This annual income was adequate for the purchase of a home up to \$114,660 and more than adequate for any rental housing. The families in these income ranges have nearly total freedom of choice in the housing market.

The upper middle and high income household represented 36 percent of the total households in the unincorporated areas in 1980 (Appendix G, Section 8). It is projected that the ratio of households in these income ranges to the total number of households in the unincorporated Sarasota County will decrease by 2010. This is partially due to the increase in the workforce, the majority of which will earn lower incomes than those in the upper middle and high income ranges. The total number of households in these income ranges however will continue to increase as shown previously in Table 42, requiring an average of 539 additional housing units annually.

Middle Income Households

The annual incomes of these households in 1988 ranged from \$30,576 to \$38,220 (Appendix G, Section 7). Affordable housing for these households required a monthly expenditure of \$764-\$956. According to the Property Appraiser's Office the average rent in late 1987 was \$461, therefore middle income households most likely experienced no financial stress in the rental market. Application of the affordability factor to the middle income range suggests that middle income households would be able to purchase housing units ranging from \$91,728 to \$114,660. The median costs of a single family unit and condominiums, according to the Sarasota Board of Realtors, in early 1988 were \$79,650 and \$95,000 respectively, which indicates that the majority of middle income households did not experience financial distress in the homeownership market.

In 1980 middle income households represented 11.7 percent of the unincorporated Sarasota County households. It is projected that this percentage will increase to 13.2 percent in 1990 and 1995, and decline to 12.4 percent in 2000, 12.3 percent in 2005, and 12.2 percent in 2010 (Appendix G, Section 7). However, the total numbers of middle income households will continue to increase (Table 42), requiring an average of 420 additional units annually.

Moderate Income Households

The annual incomes of these households in 1988 ranged from \$20,389 to \$30,576 (Appendix G, Section 7). Affordable housing for these households required a monthly expenditure of \$510 to \$764. As in late 1987 the average rent was \$461, it appears that moderate income households did not experience financial distress in the rental market. Application of the affordability factor to these incomes suggests that moderate income households would be able to purchase homes from \$61,167 to \$91,728. In early 1988, the median home price was \$79,650, which indicates that households at the lower end of the moderate income range possibly experienced limitations in their housing choices.

The moderate income households are often concerned with raising down payments and the closing fees required for the purchase of a housing unit. Table 50 indicates that the average loan to price ratio from 1982 to 1987, was 75.2 percent. Under such financing conditions the buyer would be required to provide a down payment equivalent to approximately 25 percent of the price of the home. Moderate income households often experience difficulties with raising these amounts. This is also true for the lower income households and the very low income households, discussed later in this section.

In 1980 moderate income households represented 15.8 percent of the unincorporated County households. It is projected that this percentage will increase to 17.4 percent in 1990, 18.3 percent in 1995, 19.7 percent in 2000, 20 percent in 2005, and 20.1 percent in 2010, and they will require an average of 792 additional housing units annually (Table 42).

Lower Income Households

The annual incomes of these households in 1988 ranged from \$12,740 to \$20,389. The affordable housing formula indicates that \$318 up to \$510 per month could be spent on housing. The rental market was capable of providing rental units in this price range though the choices were limited at its lower end. The affordability factor suggests that lower income households would be able to purchase homes from \$38,220 to \$61,167. The \$79,650 average home price in early 1988 indicates that these households probably experienced difficulties in their house ownership choices.

The lower income households represented 29.2 percent of the unincorporated area households in 1980. This percentage is projected to increase to 30.6 percent by 1990, 33.8 percent by 1995, 35.5 percent by 2000, 37.2 percent by 2005 and 38.9 percent by 2010. They will require an average of 1,578 housing units annually. Filtering could assist in the achievement of the housing need of the low income households.

Very Low Income Households

The annual incomes of these households in 1984 were less than \$12,740. The affordable housing formula indicates that up to \$318 per month could be spent on housing. The Property Appraiser's Office reports that the early 1988 average rent in Sarasota County was \$461. This indicates that the households in this income bracket would have limitations in the rental market, and most likely would require assistance in order to secure adequate housing. The affordability factor suggests that the very low income households would be restricted to purchasing homes of less than \$38,220. Their choices in homeownership were limited. Even those households who already owned their housing units (passing down from one generation to the next) were facing difficulties in maintaining their units as discussed earlier.

In 1980, very low income households represented 19 percent of the unincorporated area households. It is projected that this percentage will decline to 14.5 percent in 1990, 12.8 percent in 1995, 11.2 percent in 2000, 9.9 percent in 2005 and 8.9 percent in 2010.

Sarasota County's HUD Program Office assisted 253 low income households (1987). Some of the unincorporated areas low income households receive assistance through the Housing Authorities of the municipalities. The City of Sarasota Housing Authority reports that approximately one-third of their clients are households of the unincorporated areas. This is a result of the long waiting lists for assistance at the County's HUD Program Office, which in 1987 reported that it had 228 households on the waiting list, and that the average waiting period prior to placement is approximately 2 years. These facts indicate that there is great need for housing assistance for the low income households in the unincorporated areas.

The projected ratios of the very low income households to the total unincorporated area households indicate a sharp decline. As discussed in Appendix G, Section 7, the projected decline is due to the increase of employment in the service sector, (however, this will not affect some

households, i.e., elderly on fixed incomes). Sarasota County will aim to increase its efforts towards housing assistance for the very low income households.

Although the ratio of the very low income households to the total households of the unincorporated areas is projected to decrease, the projected total numbers of these households are expected to represent 8.9 percent of the unincorporated County households. It is estimated that an average of 65 additional units will be needed annually.

The Housing Delivery System

The housing delivery system is complex, requiring the coordination of land owners and numerous industries and agencies of both the private and the public sector. Problems in any one part of the system can impact the entire system. It is important that Sarasota County contribute, to the best of its ability, to the maintenance of a well-functioning housing delivery system. Areas where the County could help the system are:

- Land availability;
- Utilities, especially water and sewer;
- Special Assessments;
- Zoning and subdivision approvals;
- Code inspections; and
- Environmental regulations.

The amount and location of residential areas in the County can affect the housing costs. Additional discussion of residential land uses is included in the Future Land Use Chapter.

Sarasota County experienced growth in a short period of time, however, the infrastructure did not improve or expand at the same rate. As a result, portions of populated urban areas are not serviced by central sewer and water. This interferes with proposals for increasing densities, development, redevelopment or infill in those areas. (Additional discussion is included in the Public Facilities Chapter).

On August 16, 1983, Sarasota County adopted Ordinance No. 83-24, "The Public Facilities Financing Ordinance," which establishes MSTU special assessments for new development to pay for projected improvements to parks and roads which will be needed to accommodate the impact of new growth. Additionally, impact fees are applied for water and fire/ambulance services. Rates vary according to land use and location. The 1987 average MSTU assessments/impact fees for residential units are shown in Table 52.

These costs are usually passed on to the purchaser or the user of the housing unit. The 1988 combined, average MSTU assessments and impact fees, represented 4.4 percent of the median sales price of a single family home (\$79,650). They represented 5.7 percent of the price of a home a moderate income family (at the lower range of the income group) could afford to buy. MSTU assessments and impact fees for multi-family units may be passed on to the renters, a large number of whom are very low or lower income households, resulting in higher rents. MSTU assessments and impact fees can, therefore, negatively influence the affordability of housing for the very low, lower, and moderate income households of the unincorporated areas. However, MSTU assessments and impact fees provide mechanisms which allow new growth to assist in paying for its infrastructure cost.

When combined with other revenue sources and effective capital improvement programming they help in the provision of necessary infrastructure concurrently with development.

The County is also involved in the Zoning and Subdivision approval stage of the housing delivery system. A rezoning involves these steps: a pre-application meeting with the Planning staff, review by appropriate agencies, scheduling for public hearings by the Planning Commission (2 meetings), and a Board of County Commissioners public hearing. This process requires an average of 3 months. Subdivision reviews require a similar process: a pre-application meeting, submittal of plans, interagency review, and approval by the Building and Zoning Department. The average length of this process is forty-five days. These necessary review processes help ensure the quality of development but also lengthen the development process. Time expended in the review process can add to the cost of housing. Therefore Sarasota County is attempting to streamline the development review process wherever possible.

Regulations addressing environmental quality may result in reduced density on parcels with environmental constraints. This reduction in density translates into a higher cost per unit. However, Sarasota

Table 52: Average MSTU Assessments and Impact Fees

North County	Single Family Unit	Multi-Family Unit	Mobile Home
Roads	\$1,712	\$907	\$821
Parks	86	62	58
Fire/Ambulance	100	100	60
Water	<u>1,500</u>	<u>1,350</u>	<u>1,100</u>
Total	\$3,398	\$2,419	\$2,039
South County	Single Family Unit	Multi-Family Unit	Mobile Home
Roads	\$1,682	\$ 891	\$807
Parks	253	182	172
Fire/Ambulance	78	78	78
Water	<u>1,500</u>	<u>1,350</u>	<u>1,100</u>
Total	\$3,513	\$2,501	\$2,157

Source: Sarasota County Office of Management and Budget, 1988.

County encourages PUD's and cluster housing developments in order to protect sensitive environmental land. (For additional information, see Planning Options section of the Environment Chapter.)

Migratory Housing

Based on future land use, economic data, and the limited available data regarding migrant workers, the number of migrant workers is anticipated to decline in the future to less than the 1984 level of 1,000 workers. Currently (1988), the farm owners find it economically feasible to make housing arrangements for their migratory labor at local motels, and transport them to the farm during working hours. This trend is expected to continue in the future.

Group Homes

As indicated in Table 40 and Appendix G, Section 5, in 1987 there exists a considerable number and variety of group homes in Sarasota County. The need for the designation of specific sites for group home facilities is unnecessary in Sarasota County, because these facilities are extensively addressed in the Sarasota County Zoning Ordinance (Ordinance 75-38, as amended). This document allows the location of such facilities in a number of zoning districts. Group home facilities are a "permitted use" in the Office, Professional and Institutional (OPI) District. Also, group home facilities are "special exception uses" in the Residential, Single Family (RSF), Residential, Multi-Family (RMF) and Open Use Estate (OUE) Districts. Sarasota County is currently in the process of streamlining its planning-related procedures. As a result, many of the items presently requiring special exceptions in certain districts will be "permitted uses" in those districts in the future.

Mobile Homes

Specific sites for the location of future mobile homes are not included in this Chapter, because mobile homes are dealt with in the Sarasota County Zoning Ordinance. Currently (1988), mobile homes are a "permitted use" in the Residential, Mobile Home (RMH), and the Residential, Com-

bination (RC) Districts, and as a "special exception use" in the Open Use Agriculture (OUA) District. At this writing, there are limited vacant sites in the above Districts. However, mobile homes remain an attractive affordable housing alternative to Sarasota County residents due to the lack of affordable conventional housing.

Historically Significant Housing

The conservation, rehabilitation and/or demolition of historically significant housing will take place in accordance with Apoxsee's Historic Preservation Chapter.

Relocation

Relocation of population has not been a concern in Sarasota County in the past and it is not anticipated as a future problem. Additionally, the relocation of mobile home park residents is addressed by Chapter 723.027, Florida Statutes

Discussion

With the reduction of federal housing programs during the 1980's, the Florida Legislature recognized the need for an increased State role in housing, and created the Affordable Housing Study Commission to make recommendations on solutions to the problem and funding options. The Commission was created in 1986 by the Legislature under Chapter 420.609, Florida Statutes to analyze those solutions and programs which could begin to address the State's acute need for affordable housing, particularly for the very low, lower and moderate income households.

On December 31, 1987, the Draft of the "Final Report of the Affordable Housing Study Commission" was published.(18) After considerable testimony, research and discussion, the Commission affirmed that Florida's affordable housing shortage is real and acute, and, if not acted on today, it will reach crisis proportions. The Commission also found that the current State programs do not meet the present, much less future need for affordable housing.

Recommendations were developed which include: the private sector should be the primary delivery vehicle for housing; State money must be heavily leveraged; State money should be spent on housing, not program administration, and this money should be used as loans (not grants) wherever possible; local governments should provide incentives for financial assistance and the State will provide aid to the local governments which participate; and, that mixed income projects should be encouraged.

The Commission's recommendations were as follows:

New and Existing Programs:

- The State should commit \$50 to \$60 million dollars each year to stimulate construction and rehabilitation through the "SAIL" Program, (State Apartment Incentive Loan Program);
- The State should commit \$4 million each year to the Florida Housing Finance Agency's homeownership bond program to serve lower and moderate income first-time buyers; and
- The "SAIL" Program should replace the Affordable Housing Demonstration Loan Program.

Regulatory Reform:

- Incentives should be built into the current regulatory process for developers, builders, and local governments to encourage the construction of affordable housing units, specifically considering comprehensive planning, waiver of impact fees, and streamlining the building code process.

Financing and Housing:

- Housing should receive a permanent source of dedicated State funding from \$45-\$55 million annually. The Commission suggests reallocating the existing documentary tax revenue. Those funds will leverage a \$300 million annual rental production program and a \$150 million homeownership program; and

- the documentary stamp tax money is not dedicated, housing should be included under the definition of infrastructure and be eligible for funding under the State Infrastructure Fund.

The State has taken a strong approach towards the provision of affordable housing in Florida. The Affordable Housing Study Commission developed equally strong recommendations. If this draft is approved/adopted, millions of State dollars will become available annually to local governments for solutions to local affordable housing problems. If the local governments do not take advantage of the State incentives there are possibilities for the development of State mandates regarding affordable housing, according to the Commission's report.

Problems

The preceding seven concerns synthesize into three problems, followed by opportunities for their solution.

- Sarasota County is in need of affordable housing - particularly for its very low, lower, and moderate income households- and for appropriately designed and constructed housing for "households of special concern"; these needs will increase in the future. (Concerns 1, 2, 3, 5)
- Sarasota County is in need of a computerized housing information system for the comprehensive evaluation of the housing situation in Sarasota County. (Concern 4)
- The quality of Sarasota County's housing stock while in generally good condition now, may decline if appropriate actions are not taken. (Concerns 6,7)

Opportunities

- The 1990 U.S. Census will provide current information on the housing and population of Sarasota County -- thus it represents a valuable opportunity for the verification and updating of Apoxsee in general and of this Chapter in particular.
- A computerized Geographic Base File (GBF) exists. Prepared in cooperation with the U.S. Bureau of the Census, the GBF is a significant tool in developing a local information system.
- The Sarasota County Property Appraiser's Office computerized filing system is capable of providing valuable housing information.
- Housing expertise (Sarasota County Building Department, Sarasota County HUD Programs Office, Sarasota County Planning Department, SWFRPC, and others) is available to implement and update both this Housing Chapter and other special housing studies.
- A number of federal and State housing assistance programs, not utilized in Sarasota County, are available.
- Households can work together through neighborhood associations to assist local government agencies in identifying and solving neighborhood housing problems.
- Government and the private sector can work together to meet the housing needs of Sarasota County.
- Growth management and neighborhood planning programs could improve existing future conditions in Sarasota County.
- Sarasota County and the City of Sarasota are presently exploring consolidation possibilities for a number of services, including the provision of housing assistance. Opportunities for housing, and housing requirements for the very low, lower and moderate income households are incorporated in approved Developments of Regional Impact (DRI's) and Sector Plans.

Constraints

- Sarasota County's high median income levels may lessen the County's opportunities for federal housing assistance.
- Several of the forces influencing Sarasota County's economy and housing costs are of regional, State and national scope, and are therefore beyond local control.

Planning Options

Traditionally, the responsibility for providing the majority of housing in Sarasota County has been left to the private sector. Private sector housing allows variety in housing styles, sizes, and locations, thus satisfying many of the divergent demands of residents. This sector however, often has difficulty in supplying adequate units for very-low, lower, and moderate income households -- these simply are less profitable to construct. In many cases land, labor, materials and regulatory costs contribute to elevating a home's price above a figure affordable to very low, lower, and moderate income households. These same costs affect the price of rental housing as well. Therefore, rental of suitable housing cannot always be viewed as the housing solution for all persons unable to purchase a home.

The federal government's programs providing housing assistance were dismantled in the 1980's, due to major budget cuts. The State has initiated a very aggressive effort towards solutions to the Statewide lack of affordable housing and the provision of housing assistance to the very low, lower, and moderate income households. Local governments in their effort to respond to their local housing programs have a range of opportunities available to them through the remaining federal and State programs. Sarasota County has three options available.

The first option involves ignoring housing planning, and allowing events to happen. Housing problems would then be addressed as they arose, and would be exacerbated by the lack of coordination with supporting infrastructure, existing housing, and the natural environment.

The second option would be to continue with the traditional housing planning practices already established in the County. The third option would be a continuation, enhancement, and expansion of the existing programs, including involvement in new programs.

General Recommendations

Affordable Housing

The County should examine programs which could be designed to meet the affordable housing needs of the County's existing and future population. The following is a brief description of the variety and range of programs whose application could be considered.

Housing Trust Fund - A local Housing Trust Fund provides low or no interest financing for the purpose of new construction (pre-development, development, and post-development costs), land purchases, and second mortgages for housing rehabilitation. Organized as a revolving fund, developers and mortgagees pay back the fund, ensuring a permanent source of funding for affordable housing. Possible sources of seed money for the fund need to be identified.

Inclusionary Zoning - Amend the Zoning Ordinance to require each developer to build or provide for a certain percentage of affordable units. Alternatively, allow the developer to pay a fee based on the number of units constructed into a local Housing Trust Fund which would finance affordable housing, or directly contract with developers who provide affordable housing in their developments.

Density Bonuses - The density bonuses for very low, low, and moderate income housing of Apoxsee's Urban Area Residential Checklist needs revisions, offering more points for the inclusion of such housing.

Set Aside - Considering the Levels of Service for utilities, transportation and parks, the County could set aside a certain capacity for affordable housing units. An affordable housing development would use this reserve capacity and would not be required to pay special assessments as it would not affect the established levels of service.

Land Bank - Publicly owned land, uncommitted for any other purpose, and lots gained through tax foreclosure could be land-banked for affordable housing.

Development Sponsorship - New commercial developments could be required to provide for affordable housing for their anticipated employees. It can be on-site housing units provided by the same developer or off-site housing provided through contracts with other developers, or it can be in contributions to a local Housing Trust Fund.

Equity Share - To assure that affordable housing remains available to the very low, lower, and moderate income households, local government could maintain an equity share in the buildings which is equal to the difference between the "affordable price" of the unit and the property's market value. If the unit(s) were to be sold or rented at current market prices, the local government would be paid back this difference in prices, a percentage of any property value increases, and any deductions in impact fees which were granted to the original development.

Non-Profit Development - Encourage the formation of additional non-profit developers by giving them priority in obtaining property through a land bank, and supporting their efforts with technical assistance and other related activities such as coordinating housing assistance programs with such developments.

Local Housing Partnership - Encourage the formation of a Local Housing Partnership. Such an entity consists of a group of individuals from a variety of disciplines, (e.g., elected officials, bankers, builders, business persons, consumers, realtors, civic and housing advocates, etc.) who work together to develop and implement a local housing agenda. It functions as an informal coalition to pursue specific action-oriented housing initiatives based on locally defined needs. The coalition, not the local government, is responsible for assembling funds, technical expertise, land or buildings, coordination with local land use regulations, or other actions to implement the local housing agenda.

Land Use Controls - Amend the Zoning Ordinance and Land Development Regulations to promote affordable housing by allowing higher densities; limiting large lot districts; facilitating conversions from single family to multi-family uses; allowing accessory apartments; promoting cluster developments and PUD's; encouraging mixed-use developments; applying performance standards to mixed-use projects; reconsidering location for mobile homes; eliminating unnecessary restrictions which depend on the local government discretion; allowing certain uses as permitted uses in the zoning categories so as to eliminate the involved process of special exceptions; promoting infill developments; encouraging housing rehabilitation and adaptive reuse; and developing appropriate public facilities extension policies.

Transfer of Development Rights (TDR's) - Transfer of Development Rights is a means of transferring residential density authorized pursuant to the Zoning Ordinance from one parcel in a Residential Sending Zone (RSZ) district to another parcel in a Residential Receiving Zone (RRZ) district. TDR's could be employed to provide additional opportunities for affordable moderate, lower, and very low income housing while not increasing the overall number of residential units. TDR's are already available in Sarasota County. Sarasota County Ordinance No. 82-61 provides for the establishment of sending and receiving zones, and amends Sarasota County Ordinance No. 75-38 (the Zoning Ordinance) to include RSZ and RRZ districts.

Streamlining Procedures - The development review periods could be reduced by: clarifying the process and regulations through centralized information services; pre-application meetings particularly with one-time clients; drop-off points for the projects of developers who are familiar with the process; and single building permits aided by cross-training of inspectors. Other techniques include the development of an interdepartmental professional team for application reviews; joint Planning Commission and Board of County Commissioners public hearings for the review of rezoning, special exceptions, etc.; and requiring that the developer holds a community meeting with the affected neighborhood prior to the public hearings at the formative stage of the project (potential problems could be resolved, resulting in briefer public hearings).

Activity Centers - Encourage multi-family housing in Activity Centers. Allow the intensification of already developed activity centers to include affordable housing.

Very Low and Lower Income Housing

In the last two decades, there has been a move away from constructing large projects for very low and lower income households towards subsidizing the household in whatever housing they should choose to live. The Section 8 Existing Housing Assistance Program presently provides housing for these households. The need for specific sites to be designated for such housing is negated, because any existing, rehabilitated or new structure may provide needed housing units for very-low, lower and moderate income households through the application of the Section 8 certificates to lower the market rent of the unit.

However, Sarasota County's HUD Program Office must develop and implement procedures in the placement of its applicants to reduce the average two year waiting period. The County in coordination with the cities may study the possibility of a Countywide HUD Assistance Office, thus eliminating any duplication of efforts. Additionally, the combined resources and efforts of the present

Housing Authorities and those of the County's HUD Program Office would bring better results to the needy households by expanding participation to more housing assistance through federal and State programs.

Housing Data Base

Sarasota County is in need of a comprehensive coordinated Countywide housing data base. A Countywide housing data base will prove useful for many planning efforts beyond housing planning. Residential development is the predominant user of urban land and its spatial distribution affects planning decisions regarding infrastructure. Lacking such an information tool, land use planning in general as well as housing studies are difficult to accomplish because they depend on piecemeal data. Often, this data is collected from a variety of sources other than land use or housing planning purposes and is based on different methodologies. The County should study the possibility of implementing a computerized Countywide data system to provide better information of both the public and the private sectors. The development of a computerized housing data base, continuously updated, and a monitoring system will contribute

to a more detailed analysis of current housing conditions and needs in Sarasota County. This will assist the County in being more responsive to the evolving needs for housing, while also assisting in coordination efforts with other regional, State, and federal agencies which share housing information.

The lack of housing information in Sarasota County is particularly true for data reflecting housing conditions, perhaps not a priority concern for Sarasota County until now due to the generally new Countywide housing stock. For the successful enhancement of the community, as the housing stock ages, Sarasota County could encourage better coordination with County agencies which handle housing condition information (i.e., Property Appraiser's Office). Geographic "Areas of Concern" should be identified, which -- through federal and State assistance -- could be rehabilitated, increasing the property values (and County revenue through property taxes); conserving the deteriorated housing as standard housing stock; demolishing dilapidated units; creating more housing opportunities for the lower and moderate income home buyers through the filtering down process; and reducing the demand for residential land.

Housing Plan

Intent

Housing is the major land use in urban areas and is a principal factor in creating the form and ambience of a community. More than seventy-five percent of Sarasota County's urban land areas is in residential development. The majority of this housing is of high quality and in a good condition, reflecting the economic level of Sarasota County's residents, and the resort/retirement economic base of the County. Traditionally, the responsibility for providing the majority of housing in Sarasota County has resided in the private sector. Private sector housing allows variety in housing styles, sizes, and locations, thus meeting many of the divergent demands of residents for housing. The private sector, however, has difficulty in supplying adequate housing for very low, lower, and moderate income households, due to the unprofitability of such construction.

Therefore, the Housing Plan of Apoxsee is designed to encourage and provide for safe and sanitary housing while:

- encouraging variety of type (i.e., price, location, and structure);
- preserving and conserving existing housing stock (e.g., rehabilitation, historic preservation);
- lessening negative environmental impacts; and
- coordinating with sound growth management practices and with the availability of adequate utilities and facilities.

The private sector will continue to play the major role in the successful delivery of an improved housing stock. However, Sarasota County will assist by assessing overall housing needs; providing a positive regulatory environment; developing incentives to meet recognized housing needs that the private

market otherwise would not meet; and expanding its efforts towards meeting the housing needs of the present and future very low, lower, and moderate income residents.

Supporting services, systems and facilities are essential to any housing development. Recognition of this has led the County to require that new residential development be accompanied with provisions for adequate facilities and services.

The development of a computerized housing data base, continuously updated, and a monitoring system will contribute to a more detailed analysis of current housing conditions and needs in Sarasota County. This will assist the County in being more responsive to the evolving needs for housing, while also assisting in coordination efforts with other regional, State, and federal agencies which share housing information.

The availability of housing is a factor in the amount and character of growth. The Housing Plan, therefore, serves as a guide by which an adequate supply of quality housing may be provided to the year 2010. Untapped resources, and innovative planning and design techniques will be investigated to determine their applicability to Sarasota County. All of these actions described, coupled with continuing examination of the County's regulatory functions, such as zoning and development regulations, make up the Housing Objectives and Policies of Apoxsee. This Plan represents the commitment of the County to assist the private sector in meeting the challenges and demands for future housing, and the County's commitment to assist the very low, lower, and moderate income households in their existing and future housing needs.

Goal 1

It shall be the Goal of Sarasota County to provide opportunities for safe, sanitary and affordable housing to all its residents regardless of age, race, sex, religion, economic status, or ethnic background, while recognizing the private sector as the primary provider for housing.

Objective 1.1

To continue and where feasible enhance a local government/public sector association which encourages the private sector to provide an appropriate mix of housing types and to apply innovative planning and design techniques, in both housing structures and land development, and to conserve and preserve natural systems and resources.

Policy 1.1.1.

Coordinate the development of future housing with supporting infrastructure such as mass transit, schools, parks, emergency services, water and sewer services and utilities.

Policy 1.1.2.

Encourage housing that will not adversely affect the environmental quality of Sarasota County, in accordance with the Environment Chapter.

Policy 1.1.3.

Develop a technical assistance public information program to ensure the timely dissemination and explanation of land development regulations, particularly when such regulations are amended.

Policy 1.1.4.

Encourage the construction of an adequate supply of rental housing units to meet existing and future demands.

Policy 1.1.5.

Encourage the development of multi-family housing as a primary use in Activity Centers. Allow the intensification of already developed Activity Centers to include multi-family housing where infrastructure and land use compatibility permit.

Policy 1.1.6.

Encourage the construction of energy efficient housing by establishing regulations that promote innovative, energy efficient, and less expensive building technologies.

Policy 1.1.7.

Consider the use of cluster housing and planned unit developments to conserve open space and environmentally sensitive/valuable areas according to the Environment Chapter.

Policy 1.1.8.

Develop a program to encourage commercial, office and industrial developments to mitigate impacts on the housing markets through methods such as, but not limited to:

- amending the Zoning Ordinance to include provisions for incentives to commercial, office or industrial developments which provide affordable housing for their employees.

Policy 1.1.9.

Encourage the participation of non-profit developers in the housing delivery process.

Policy 1.1.10.

Establish a Community Development Program for Sarasota County.

Policy 1.1.11.

Continue to streamline the development review process wherever it is feasible to do so without compromising the quality of development and the opportunity for public participation.

Objective 1.2

To strive to preserve, conserve and enhance the existing housing stock, including historic structures and sites.

Policy 1.2.1.

Sarasota County will establish continuing procedures for determining housing conditions and will prepare a housing condition report by 1994, which will be annually updated. The housing condition reports will identify geographic areas of special concern.

Policy 1.2.2.

Encourage homeowners to increase private reinvestment in housing by providing information, technical assistance, and incentives.

Policy 1.2.3.

Provide infrastructure and supporting facilities and services where necessary to upgrade existing neighborhoods and, where appropriate, to increase their development/redevelopment potential.

Policy 1.2.4.

Sarasota County shall strive to take maximum advantage of federal and State funding for housing rehabilitation of substandard structures.

Policy 1.2.5.

Preserve and conserve historically significant structures in accordance with Apoxsee's Historic Preservation Chapter.

Policy 1.2.6.

Pursue prompt judicial action when needed to resolve code violations.

Objective 1.3

To improve Sarasota County's housing data base in order to better facilitate planning decisions.

Policy 1.3.1.

Encourage the establishment of a comprehensive Countywide central depository for housing information. Aim for the coordination and cooperation among public agencies which collect and use housing data.

Policy 1.3.2.

Encourage the development of a Countywide housing data system through the coordination of existing sources of housing data in Sarasota County.

Objective 1.4

To strive to provide adequate housing opportunities for Sarasota County's very low and lower income households, and other households of special needs.

Policy 1.4.1.

Encourage the establishment of a Countywide Housing Assistance Office.

Policy 1.4.2.

Expand the County's participation in federal and State housing assistance programs for homeownership and rental, and for rehabilitation efforts. Funding priority will be given to areas as designated through the implementation of Policy 1.2.1.

Policy 1.4.3.

Encourage non-profit organizations in their efforts to meet the housing needs of the homeless.

Policy 1.4.4.

Encourage and assist local agricultural businesses to provide affordable and suitable housing for their farm labor and migrant workers.

Policy 1.4.5.

Ensure that the Zoning Ordinance and Land Development Regulations include locational criteria for the establishment of housing for the elderly and institutional housing which considers accessibility, convenience and infrastructure availability.

Policy 1.4.6.

Consider amendments to the Zoning Ordinance so that different classes of group homes may be permitted in appropriate residential neighborhoods. Other community-based residential care facilities needed to serve group homes and their clients should be available at convenient, adequate and non-isolated sites within the residential or institutional areas of the County.

Policy 1.4.7.

Provide adequate sites for mobile home parks and subdivisions, with supporting infrastructure, for the placement of code-approved mobile homes and manufactured housing.

Objective 1.5

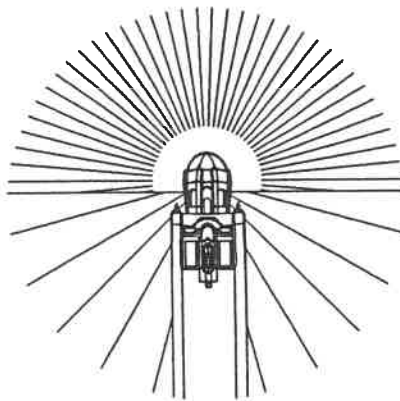
To continue to encourage the private sector to provide affordable housing including very low, lower and moderate income housing.

Policy 1.5.1.

Complete an inventory and analysis of affordable housing approaches being utilized by other communities and determine which approaches are most applicable to Sarasota County.

Policy 1.5.2.

In coordination with the private sector, develop and implement a plan based on the findings of the study prepared in accordance with Policy 1.5.1.



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CHAPTER 9

ECONOMY

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CHAPTER 9

ECONOMY

Introduction

This Chapter examines Sarasota County's economy. It focuses upon income characteristics, major economic activities, labor force, and essential future land use requirements. As few actions taken by County government are without some economic impact, it is of vital importance that the local economy be understood and that County government continues to be a positive force in balancing and diversifying Sarasota's economic base. The recommendations in the plan section are not intended to create radical changes in Sarasota's economy, but to provide guidance for meeting the Goal and Objectives of this Chapter.

History Of Sarasota's Economy

Sarasota has long relied on its coastal and marine resources. The importance of the shellfish economy on the area's earliest inhabitants is evidenced by the indian mounds and kitchen middens which line the coast of Sarasota County. Later, both Spanish and American settlers relied on the rich marine resources and Sarasota became known as a fishing village. In the late 1800's, Sarasota began attracting tourists, lured by sports fishing and by the area's natural beauty.

By 1910, Sarasota was being heavily promoted in the northeastern states as a resort area. Due in large part to the settlement of wealthy and influential people such as Mrs. Potter Palmer and John Ringling, Sarasota became a cultural mecca on the west coast of Florida. As patrons of the arts, these

new residents and their friends brought their love of the arts to Sarasota. Just as the natural beauty of Sarasota is important, so too are the cultural resources which have played and will continue to play a dominant part in Sarasota's economy.

After World War II, improved air transportation and the federal highway system made Sarasota more accessible to the northern population. Increased personal incomes enabled more people to enjoy vacations and make land investments. Many tourists were attracted to coastal Sarasota, with its inviting bay and gulf waters, and upon retirement they returned to become seasonal or permanent residents.

The abundance of recreational, cultural and resort activities in close proximity to bay and gulf waters has made tourism and retirement the "heart" of Sarasota's economy. Both fuel many other sectors including services, construction, finance, and real estate. It is important, however, to remember that tourism and retirement are both based upon the natural resources of Sarasota County and its cultural reputation. Anything that has an adverse effect upon the natural environment of Sarasota County, may also damage the "heart" of its economy.

CONCERN 1

The environmental and cultural amenities of Sarasota County must be maintained if the resort/retirement sector, as well as all economic sectors, of the local economy are to remain healthy.

Planning

This Economy Chapter had its origin in the Sarasota County "Overall Economic Development Plan" (OEDP), authored by an OEDP Committee created in response to the high unemployment rates in 1975 and 1976 of 12.3 percent and 11.6 percent, respectively. The Committee's findings, including goals, objectives, and recommendations, were adopted by the Board of County Commissioners in March, 1978. Those findings were incorporated into the 1981 Apoxsee Economy Chapter.

The adoption of the Economy Plan, as part of the Comprehensive Plan in 1981, addressed much of the OEDP intent by specifying the need for maintaining open dialogues with the private sector and the need for proactive planning efforts.

The adoption of the Future Land Use Plan and Map in Apoxsee established a positive commitment by the County to further economic growth and diversification as espoused by the OEDP by designating 5,500 acres of industrial areas on the Map and providing policy directions for their development. Additionally, a Planned Commerce (PCD) zoning district was added to the Sarasota County Zoning Ordinance in 1983 to allow for the coordinated development of industrial, commercial, service and governmental uses in a park-like setting.

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Comprehensive Plan*

Sector Plans were adopted for some of these designated industrial areas. These plans were designed to provide additional guidance with regard to site-specific concerns including appropriate zoning districts, necessary infrastructure and the need to protect natural resources within Sarasota County.

In 1987, the Sarasota County Board of County Commissioners (BCC) responding to concerns expressed regarding development along Interstate 75 (I-75), appointed the Interstate Regional Office Park Committee to study and make recommendations regarding the viability of designating areas along I-75 for regional office parks. The Committee was later renamed the Interstate Planning Advisory Committee and given a broader perspective and directed to look at all potential land use allocations along the entire I-75 corridor.

Private organizations provide an increasingly important role in providing the initiatives necessary to foster coordination throughout the County. The establishment of the Committee of 100 and the Triangle Economic Development Authority (TEDA) are examples of this expanded role in the economic development process. The Committee of 100, an operating division of the Sarasota County Chamber of Commerce, was founded to establish a professional working relationship with business, government, and civic and community organizations in order to create an atmosphere for the strengthening and diversification of Sarasota County's economic base. TEDA represents the economic development efforts of the three chambers of commerce in the south Sarasota County region: Englewood, Venice, and North Port. TEDA provides a common voice for presenting economic needs and concerns of the area. Some of the issues and concerns shared by both the public and private sectors are listed below.

- The degree of economic diversity needed to maintain long-term stability and provide employment opportunities for Sarasota County residents.
- The impact of economic developments, particularly new industry, on Sarasota County's environment.

- The need for a clear definition of the business characteristics that are desirable in Sarasota County.
- The need to maximize and sustain the opportunities for vocational and professional training in Sarasota County.
- The need to identify locational criteria and performance standards for local industry and commerce.

Inventory and Analysis

Income Characteristics

The Bureau of Economic and Business Research (BEBR) estimated that in 1984, the per capita personal income for Sarasota County was \$16,342, the second highest in the State (see Table 53). This was 28 percent higher than the per capita income of the State and the country. Despite a relatively high per capita income, there are nonetheless a significant number of families and individuals in Sarasota County whose income is below the poverty level. According to 1980 Census information, which represents the latest available information, 9.1 percent of the County population and 6.1 percent of the families in the County were below the poverty level.

Table 53: Per Capita Personal Income By Place Of Residence, 1984

	Per Capita	% of State
United States	\$12,707	
Florida	\$12,773	1.00
Southwest Region	\$11,992	.94
Sarasota	\$16,342	1.28

Note: The Southwest Region contains Charlotte, Collier, Glades, Hendry, Lee and Sarasota Counties.

Source: Florida Department of Commerce, 1986; United States Department of Commerce, 1987.

Personal income represents the sum of four separate sources: income from labor, including wages and salaries; proprietor's income, including income of owners of non-incorporated businesses (farm and non-farm) and the income of independent professionals; income from dividends, interest, and rent; and transfer payments, including government and business disbursements for which no services are currently rendered (such as Social Security and pensions). As shown in Table 54 and Figure 64, in 1984, labor income accounted for 34.4 percent of the total personal income in Sarasota County which was the second largest single source of personal income and represented a decline from 1978 (39.2 percent). Dividends and interest rates account for the largest percentage of total personal income and can be at least partially attributed to the large proportion of the Sarasota County population who are retirees and are not part of the labor force. This segment of the population has previously acquired wealth (stocks, bonds, savings deposits, and properties) which generates income in the form of dividends, interest and rents.

The County's Labor Force

Sarasota County's civilian labor force, as defined by the U.S. Census Bureau, has increased from 34 percent to 41 percent of the size of the total population between 1960 and 1984 (see Table 55). During this same time period, Florida's labor force has increased from 38 percent to 47 percent of the total State population. In Sarasota, the comparatively smaller ratio of labor force to total population is explained by the large proportion of the County's population over the age of 65 (31 percent), which includes a large proportion of retirees. Although this ratio is smaller than that of the State, it is consistent with the Southwest Region's ratio of labor force to total population.

One indication of a healthy economy is the annual unemployment rate (percent of the labor force actively seeking jobs but not working). With the exception of the economic recession of 1975 in Florida's construction industry, Sarasota's unemployment rate has been lower than the State and Nation's unemployment rate since 1965 (See Table 56). The decline in the unemployment rate

since 1976 indicates that Sarasota County's economy has recovered from the economic recession of 1975. Not only has the unemployment rate in the construction industry declined, but the growth in the trade and service industries has contributed to a more stable economic base.

However, a very low unemployment rate (less than five percent) indicates a tight labor supply which in turn hampers economic growth and diversification and contributes to underemployment.(1) Too tight a labor supply not only prevents new businesses from filling their employee needs but also restricts the growth of existing businesses. The resulting

restrictions of employment opportunities further contribute to underemployment by limiting better paying job opportunities for the more skilled and trainable labor force.

CONCERN 2

Tight labor supplies limit new business start ups or expansions and contributes to underemployment.

Table 54: Distribution of Personal Income, 1984

	% Labor	%Proprietor's Income	%Div., Int., Rent	Transfer Payments
Florida	52.7	4.7	25.9	16.7
Southwest Region	28.2	5.3	44.4	22.1
Sarasota	34.4	3.9	42.3	19.4

Note: The Southwest Region includes Charlotte, Collier, Glades, Hendry, Lee and Sarasota Counties.

Source: Florida Department of Commerce, 1986.

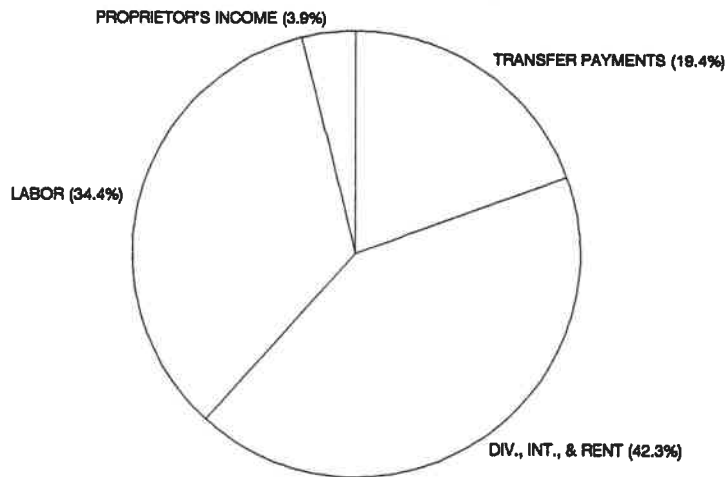


Figure 64: Personal Income For Sarasota County, 1984

Source: Florida Department of Commerce, 1986.

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Table 55: Changes in the Labor Force

	1960	1970	1980	1984
<i>Florida</i>				
Labor Force	1,886,833	2,787,300	3,800,800	5,098,521
%Population	38	41	40	47
<i>Southwest Region</i>				
Labor Force	59,547	118,020	208,372	286,329
%Population	35	39	36	41
<i>Sarasota</i>				
Labor Force	26,112	46,720	70,928	93,977
%Population	34	39	35	41

Source: Southwest Florida Regional Planning Council, 1979 and 1986.

Table 56: Average Annual Unemployment Rate

Year	Percent Unemployment		
	U.S.	Florida	Sarasota
1975	8.5	10.7	12.3
1976	7.7	9.0	9.9
1977	7.0	8.2	6.4
1978	6.0	6.6	4.6
1979	5.8	6.6	4.2
1980	7.1	5.9	4.7
1981	7.6	6.8	4.5
1982	9.5	8.2	6.8
1983	9.5	8.6	6.3
1984	7.4	6.3	4.2
1985	7.1	6.0	4.2
1986	6.3	5.7	4.1

Source: Bureau of Economic and Business Research, University of Florida; Florida Statistical Abstracts (1976, 1977, 1979, 1982, 1984, 1986).

In maintaining a healthy economy, the quality of an area's labor force is as important as its quantity. Often the most desirable types of industry and business require highly-skilled labor. It is therefore essential that vocational training available to

Sarasota County residents be coordinated with employment demands. This coordination requires an open exchange of information between employers, educators, and local governments.

Another major factor in the maintenance of a labor force is availability of affordable housing for workers. If wages and salaries do not keep pace with housing costs, then workers may be forced to move to areas where housing is affordable for them.

CONCERN 3

Sarasota County's labor force needs affordable housing.

The County's Economic Base

As indicated in the discussion of personal income, labor income is not the largest source of income in Sarasota County. This does not detract from the importance of employment activity. The larger employment sectors generating the wages and salaries of the County's labor income are trade (retail and wholesale), service, finance/insurance and real estate, construction and government. The service and trade categories account for over half of the employment in Sarasota County (see Table 57).

Table 57: Non-Agricultural Employment By Industry

Industry	1970	1980	1984
<i>Manufacturing</i>	3,640	6,100	7,007
%	8.1	8.5	8.0
<i>Construction</i>	4,560	4,720	9,236
%	10.1	10.0	10.6
<i>Transportation, Communication, and Public Utilities</i>	2,080	2,900	3,401
%	4.6	4.0	3.9
<i>Trade</i>	11,020	21,700	26,719
%	24.4	30.3	30.6
<i>Finance, Insurance, and Real Estate</i>	2,560	5,700	7,261
%	5.7	8.0	8.3
<i>Service</i>	8,100	17,900	22,721
%	18.0	25.0	26.1
<i>Government</i>	4,860	10,200	10,873
%	10.8	14.2	12.5
<i>Other</i>	36,820		
%	18.3		
Total	45,080	71,700	87,326

Source: Florida Department of Commerce, 1983, 1984, and 1986.

The proportion of employment among all major sectors has remained stable from 1970 to 1984.

The economy of Sarasota County is not a closed system and interaction occurs not only regionally, but Statewide, nationally and internationally as well. Understanding the extent of interaction between the local economy and larger economies is important for two major reasons:

- to determine the sectors of the local economy that are considered "basic", or export activities; and
- to detect potential instability of the local economy.

Export or "basic" activities bring money into the local economy and constitute the economic base. If the local economy is dependent upon one or two economic activities, such as Sarasota County's heavy reliance on tourism and retirement activities, the health of the entire local economy may be

significantly affected by fluctuations in those sectors of the larger economic system. Conversely, a wide, diversified economic base reduces such instability.

CONCERN 4

Sarasota County's economy is dependent upon tourism and retirement activities; fluctuations in these activities can dictate the health of the entire County economy.

A statistical tool called the location quotient is utilized to determine whether economic activities in an area are basic or non-basic. A location quotient represents a ratio of the percentage of an area's total employment engaged in an economic activity compared with the percentage of persons in the United States similarly engaged. A location quotient greater than one (1.00) indicates a basic economic activity, while one or less than one indi-

cates a non-basic status. Table 58 provides the location quotients for major employment sectors for Sarasota County in 1984 (employment in local government is automatically considered a non-basic economic activity). Appendix H provides detailed location quotient data for Sarasota County.

Table 58: Employment Sectors

Sector	Location Quotient	Basic or Non-basic
Agriculture	1.57	Basic
Construction	2.16	Basic
Manufacturing	.45	Non-basic
Transportation, Communication, and Public Facilities	.71	Non-basic
Retail and Wholesale Trade	1.24	Basic
Finance, Insurance, and Real Estate	1.10	Basic
Service	1.09	Basic

Source: Sarasota County Planning Department; U.S. Department of Commerce, 1984; and County Business Pattern Data, 1980.

Major Economic Sectors

As shown in Table 58, the predominant aspects of Sarasota's economy are trade, agriculture, construction, finance/insurance/real estate, and services. Total employment in manufacturing is considerably below national levels. This would indicate that there is an overall net import situation regarding manufacturing in Sarasota County. That is, a greater dollar value flows out of the County for goods required to meet local needs than is realized from the sale of goods manufactured here. However, certain manufacturing sub-categories are basic industries and do export goods.

CONCERN 5

Sarasota County's employment in manufacturing is considerably below the Nation's average.

Agriculture

Activities grouped into the agriculture sector include agricultural production (crops and livestock), and agricultural services (soil preparation, veterinary, landscaping, horticultural services, commercial fishing, hunting, and forestry). While agricultural employment in Sarasota County in 1987 comprised less than 1 percent of the total employment, it was higher than the national proportion and thus, is identified as a basic industry.

In Sarasota County, agricultural production centers around cattle raising, citrus and vegetable crops, and turf and ornamentals.⁽²⁾ Almost half (46.3 percent) of the total land mass in Sarasota County is devoted to cattle production.⁽³⁾ The majority of the graze land is in some state of improvement which permits up to 1 cow per 4 to 5 acres. The remaining unimproved graze land requires up to 20 acres to support a single head of cattle.

Although agricultural acreage in Sarasota County has declined by 20 percent between 1978 and 1986, there has been an increase in production of citrus, vegetables and turf and ornamentals. All three of these agricultural activities have been able to take advantage of technological advances in water conservation thus resulting in reduced water consumption to 10 to 20 percent of previous irrigation methods. The availability of treated effluent could contribute to further water conservation and greatly assist in the production of turf and ornamentals. Additionally, vegetable production and turf and ornamentals are often compatible with urbanization because they serve the growing local as well as regional market. It is projected that turf and ornamental production serving the local urban market will become the major dollar market value for agricultural production.⁽⁴⁾

Sarasota County has also seen an increase in citrus production which may be a response to the loss of citrus acreage in the northern portion of the State. (5)

Another historically important component of the agricultural sector is the fishing industry, both sport and commercial. The fishing industry in Sarasota County experienced a significant decline in seafood landings in the 1970's, which only recently increased. This increase is attributed to the growing international demand for mullet roe.

The commercial harvesting of shellfish in Sarasota Bay ceased in the late 1960's and early 1970's due to the decline in water quality.(6) Very few areas in Sarasota Bay are periodically open and approved for shellfish harvesting for recreational purposes. These areas, however, are mostly inaccessible to the public.

CONCERN 6

The protection of coastal waters for shellfish harvesting is dependent upon improvements in treated wastewater and runoff entering the bay.

The overall 15 year decline in seafood landings may be attributed to over-fishing, water degradation, and most importantly, the loss of marine fisheries habitats.

The economic viability of commercial fishing enterprise is largely a function of the free market place. Although the local government's role is limited with regard to such fishing, anything that the County government can do to prevent marine habitat destruction would be of benefit to the fishing industry.

Construction

Activities that are grouped in the construction sector include building construction (houses, stores, offices), heavy construction (highways, bridges, sewer and water projects), and special trade con-

struction (carpentry, electrical work, painting, plumbing). Construction is a basic industry in Sarasota County as evidenced by its location quotient in Table 58.

Construction is the economic activity of Sarasota most linked with such national economic factors as recessions, tight money supplies, mortgage interest rates and others, and has thus proven to be the most unstable economic sector during recessionary periods. A decline in the construction industry effects not only the unemployment rate but has a far reaching negative effect on the County's economy as a whole. New construction is principally fueled by population growth, of which retirees constitute a large portion for Sarasota. Second homes for seasonal residents play an important part in new construction as well.

Manufacturing

Activities grouped into the manufacturing sector include: mechanical or chemical transformation of materials or substances into new products; assembly of subcomponents of manufacturing products; and blending of materials. The manufacturing sector possesses the lowest location quotient (.45) of all of Sarasota County's economic activities.

While strengthening the manufacturing sector of Sarasota County is desirable in providing a more diversified economy and providing new higher paying career opportunities for local residents who may be under-employed, it is important that new industries complement the existing economic base and not adversely impact the natural environment. Therefore, a number of factors should be considered in determining what types of manufacturing are to be encouraged or allowed in the County. The factors should include adequate answers to these questions:

- Can the business or industry meet or exceed environmental quality standards?
- Does the business or industry depend upon renewable or non-renewable resources?
- Are large quantities of potable water necessary for the operation of the business or industry?

- Does the business or industry promote long-term, year-round economic stability and employment opportunities?

Transportation, Communications, and Public Utilities

The activities in this sector include passenger and freight transportation, communications (radio, television, telephone), electric, gas, water and sewer. The overall location quotient for this sector is .71. However, the percentage of employment in Communications and Electric, Gas, and Sanitary Service subcategories correspond most closely with the national average. These activities principally serve the local economy. Many of the activities included in these subcategories are provided by single public utilities (e.g., General Telephone Company or Florida Power and Light Company).

Retail and Wholesale Trade

Activities included in the major economic sector of trade include establishments selling goods to commercial, industrial, institutional, and professional establishments, as well as to other wholesalers.

Retail trade in Sarasota County has a location quotient of 1.49 with all subcategories similarly above the national average. Wholesale trade, however, is significantly below the national average, with a location quotient of .50.

The low location quotient for wholesale trade partially can be explained by Sarasota County's proximity to the large urban areas in Hillsborough and Pinellas Counties, which include regional wholesale trade operations.

Finance, Insurance, and Real Estate

Activities grouped in this major category are performed by the following businesses: banks, investment firms, credit agencies, and all types of insurance and real estate firms (e.g., agents, developers). The location quotient for this sector is 1.10 and with the exception of the insurance industries, all subcategories are also above the

national average. The higher than average banking and real estate activity can be linked to the large retiree population in Sarasota County and in Florida.

Services

Services differ from trade in that no tangible product changes hands. Included in the major category or services are business services (advertising, personnel, building maintenance, data processing), and personal services (beauty shops, laundries, funeral parlors), hotels, recreation (theaters, bowling alleys), health services, educational services, legal services, and social services.

Employment in the service sector is higher than the Nation's average which is indicative of the strong retirement and tourist activities in Sarasota County. Additionally, Sarasota has historically been considered a cultural mecca on the west coast of Florida. The arts in Sarasota are considered to be part of the infrastructure of the community and not only enrich the lives of residents and visitors, but also play a key role in the economic stability and quality of growth.

The low educational employment activity may reflect the County's low school age population (less than 24 percent of the total County population is below the age of 25).

Data from the Florida Department of Commerce indicate that service employment has steadily risen both numerically and in proportion to the total employment (from 8,100 employees or 18 percent in 1970 to 22,721 employees at 26 percent in 1984). Thus, the service industries continue to play a significant role in Sarasota County's economy.

Government

Government employees are not included in the U.S. Department of Commerce's "County Business Patterns" data. In location quotient analysis, government employment is assumed to be a non-basic economic activity.

Government employment represents 12.5 percent of Sarasota County's labor force, approximately 4.7 percent of the County's total population. In comparison, the numbers for Florida as a whole are 6.5 percent and 2.3 percent, respectively.

of artistic and cultural amenities. The abundance of cultural resources available contribute significantly to the quality of life in the area and are considered an integral part of the infrastructure.

Amenities For Business and Industry

What amenities does Sarasota County offer to businesses and industries which would attract them to locate in the County?

Numerous factors are considered when businesses evaluate where to locate or relocate. Climate, labor force, access to transportation, taxes, availability and cost of land and services are important in the selection of the appropriate geographic area, as are educational opportunities, quality of life, and community acceptance.

Climate

Sarasota County has a mild subtropic climate. In addition to being a prime reason for the growth of tourism and retirement in Sarasota County, the climate offers a number of benefits to businesses and industrial development. These include lower heating costs and lower construction costs due to the fact that freezing and thawing conditions are not a consideration in construction.

Cultural Climate

Sarasota possesses a cultural reputation unparalleled on the west coast of Florida. In addition to the scenic and recreational facilities, Sarasota has long recognized and encouraged the development

Labor Force

Much of the local labor force is generated from both Sarasota and Manatee Counties. With the current low unemployment rate, there is an ample supply of underemployed labor available for more skilled and higher paying jobs. Retirees may also provide an untapped labor force.

Access to Transportation

Three major U.S. highway facilities are located in Sarasota County, U.S. 301, U.S. 41, and Interstate 75, and provide for north/south travel through the County. Additionally, the Sarasota-Bradenton Airport provides a major transportation link beyond the Sarasota-Manatee area.

Several major east/west local facilities in concert with the U.S. highways, provide for reasonable commuting distance for the labor pool. The Sarasota County Area Transit system assists in providing bus service between major shopping, educational, and employment activities as well as other institutional and recreational facilities.

Taxes

Table 59 shows ad valorem taxes, both for County government and for total millage (including the School Board district) for these areas: Sarasota County, the Region, and Florida. As seen in a comparison of the millage rates (one mill equals

Table 59: Ad Valorem Millage Rates, 1984

Political Area	Total County-wide Millage	County Government Operating Millage
Florida (Average)	12.9773	6.0928
Southwest Region (Average)	11.5744	4.3780
Sarasota	10.6980	2.9626

Note: A mill equals one dollar on every one thousand dollars of appraised value.

Source: Bureau of Economic and Business Research, University of Florida, 1987.

one dollar of every one thousand dollars appraised value), Sarasota County's taxation was below the State average and below that of the Region during the year for which most recent data are available.

Availability of Land

In order to adequately provide for the existing and future needs of Sarasota County and to foster a healthy economy, sufficient land possessing or capable of possessing adequate infrastructure should be available for diverse land use needs, including employment centers for use by light industry as well as corporate office parks. The Future Land Use Plan and "Future Land Use Plan Map, Sarasota County - 2010" attempt not only to identify appropriate areas for general land uses but also to provide for the direction of the development and use of land. Where necessary, small area plans are developed to provide additional guidance in implementing the Comprehensive Plan. The land use needs for agriculture, commercial, industrial and residential uses are discussed in detail in the following section and in the Future Land Use Chapter.

The Economy and Future Land Use

To attain a healthy economy, characterized by low unemployment and high diversity meeting the needs of the people, requires government to allocate sufficient amounts of land in proper propor-

tions for all required economic activities. The following paragraphs examine industrial, commercial, and agricultural land use needs in relation to their potential impacts on the local economy.

As described in the Future Land Use Chapter, future acreage requirements for urban land in unincorporated Sarasota County are based on the estimated acreage needed for each of the major land use categories. Population projections as well as the estimated household size and assumptions regarding the future intensity of uses were used to project residential land use needs. Employment projections and estimated employee per acre ratios were used to estimate the future needs for commercial and non-retail major employment acreage needs.

Agricultural Land Requirements

Agricultural land use constitutes almost half of the total acreage in Sarasota County, with 47.8 percent of the County and approximately 58 percent of the unincorporated areas of the County. However, it has previously been reported that since the late nineteenth and early twentieth centuries, agricultural acreage has declined in Sarasota.⁽⁸⁾ Indeed, since 1978, agricultural acreage has declined by approximately 20 percent. Pasturelands have declined by approximately 21 percent, while acreages for groves, field crops, and nurseries have increased (see Table 60).

Table 60: Changes in Agricultural Acreage, 1978-1986

Agricultural Use*	1978	1986	Change	%
Pasture	213,619.8	168,793.7	-44,826.1	-21
Groves	1,760.2	2,120.9	+360.7	+21
Vegetable Crops	1,414.5	2,851.0	+1,436.5	+102
Timber	380.0	345.8	-34.2	-9
Nurseries	68.7	162.1	+93.4	+136
Apiary and Poultry	8.8	7.9	-.9	-10
Total	217,252	174,281.4	-42,970.6	-20

*Note: Acreage represents lands in active agricultural use which qualify for agricultural tax exemptions.

Source: John W. Mikos, C.F.A., Property Appraiser, 1979, 1980; and Sarasota County Planning Department, 1988.

Although agricultural acres may continue to decline as a whole, certain agricultural uses may continue to play an increasingly important role in Sarasota County's economy.

Major Non-Retail Requirements

Growth in the major non-retail employment sector, which includes manufacturing, light industrial distributions, professional office and research and development activities has, since the adoption of Apoxsee in 1981, exceeded earlier projections by 350 percent. It was estimated that by the year 1985, there would be a demand for 300 acres of industrial land and in 1990, the demand would increase to 350 acres with an equal proportion of industrial growth in the north and south County (9). However, in 1986, there were an estimated 1,232 acres of industrial land in the unincorporated County of which, 80 percent was in the north County.

Based on recent employment trends and using the Bureau of Economic Activity's standard of "four times estimated land" to account for unforeseen increases in demand, the projected demand for non-retail major employment activities have been substantially revised since 1981. Table 61 illustrates the projected demand for major non-retail employment land in the unincorporated County through the year 2010.

Additionally, however, the acreage designated on the "Future Land Use Plan Map, Sarasota County - 2010" as Major Employment Centers represent nearly eight times the estimated land needed for major employment uses. Furthermore, although there are approximately 3,300 acres zoned for

major non-retail use, the location and suitability for such use must be considered in evaluating the ability to meet future acreage requirements. Therefore, in over-allocating land for major non-retail land use, several factors were taken into consideration. These factors were:

- the need to provide sufficient areas to reduce the potential for over speculation;
- to provide for large parcels of land to meet local manufacturing needs and encourage the attraction of additional companies to Sarasota County;
- to permit the expansion of the existing north County land needs necessary to retain existing business; and
- the need to reallocate areas in South County.

Determining how to accommodate the projected major non-retail employment activities in order to maximize the social and economic well being of our residents is important in planning for such economic development. Clustering compatible and related uses appears to be the most efficient method to accommodate this type of economic growth in terms of economy, energy and land utilization. Typically, such uses benefit from locating adjacent to similar uses in a park-like setting, although such parks require large parcels of land. The appropriate locational requirements for major non-retail employment activities are discussed in the Future Land Use Chapter.

Table 61: Projected Demand for Major Non-Retail Land and Projected Additional Demand for Commercial Land

	1986-existing	1986-1990	1990-2000	2000-2010
Non-Retail				
Additional Acreage Needs		784	1,060	1,060
Cumulative Demand (acres)	1,090	1,874	2,934	3,994
Commercial				
Additional Acreage Needs		119	515	523
Cumulative Demand (acres)	2,126	2,245	2,760	3,283

Source: Sarasota County Planning Department, 1985, 1988.

Commercial Land Requirements

The projected acreage needed for the various groupings of commercial use, such as retail, finances, insurance, real estate and service which are discussed in the Future Land Use Chapter are also listed in Table 61. Although there are approximately 3,000 acres of commercially zoned land in the unincorporated County, consideration of future commercial development should be consistent with the location criteria identified in the Future Land Use Plan. As stated in the Future Land Use Plan, future commercial development should occur at the intersections of major roadways within designated Activity Centers and Commercial Corridors in the urban areas. In addition, selected commercial uses which are found to be traditionally supportive of major non-retail activities may be allowed to develop within a planned industrial or commerce district.

Problems

The six concerns identified in this Chapter can be translated into the statements listed below. Following these statements the opportunities for and constraints upon their solution are discussed.

- The economic well-being of Sarasota County requires conservation of natural resources, cultural amenities and agriculture, while at the same time requiring that stable sources of income and desirable employment opportunities be available to residents.
- Over-reliance upon a few economic activities such as tourism and retirement industries can lead to economic instability, impair local self-sufficiency, and limit employment choices and opportunities of residents.

Opportunities

- A number of groups (including the Sarasota County Chamber of Commerce, the Sarasota Committee of 100, the Triangle Economic Development Authority, and other local Chambers of Commerce), can assist local government by providing information and enhancing the coordinated efforts of the public and private sectors.
- A network of federal, State, regional, and local government agencies is involved in the collection of economic data.
- Sarasota County's residents have access to educational facilities (including Sarasota County Vocational-Technical School, Manatee Community College, University of South Florida) that provide quality vocational and professional training.
- The environmental and cultural amenities, the demographic characteristics of the population, levels of local taxation, and increased transportation access (i.e., Interstate 75) in Sarasota County should prove attractive to new businesses and industries.
- Sarasota County's senior citizens represent a vast resource of skills, knowledge, and experience.
- In the event appropriate enabling legislation is adopted by the State, the adoption of occupational licenses could provide funding for a County economic development program in coordination with private efforts to promote sound economic development in Sarasota County.

Constraints

- Sarasota County's economy is linked to the regional, State and national economies. Happenings outside the County's political boundaries, over which local government has little or no control, can impact the local economy adversely or favorably.
- Government actions must be carefully considered to ensure that the functions of a free market economy are maintained and enhanced. This requires accurate, comprehensive economic information complemented by citizen input and cooperation.
- Participation in government economic data-gathering programs (e.g. the Florida Department of Labor and Employment Security's labor market analysis program) is voluntary, limiting both the comprehensiveness and the accuracy of the information obtained.
- The lack of adequate infrastructure hampers economic development.

Planning Options

Government involvement in local economic activity theoretically can range from a non-involvement, "hands off" posture to attempts at total regulation and control. The latter option is of course not possible in the free enterprise system upon which the American economy is based. But neither is the former either realistic or desirable.

Traditional government functions, including zoning and taxation, have major and highly visible impacts. Not as visible, but also important, are the economic impacts of other governmental functions and decisions. For example, even a common governmental action like improving a road can raise property values and encourage new development in an area.

It is therefore extremely important for government officials to know the wants and needs of citizens and to be able to respond affirmatively to those wants and needs. It is equally important for citizens to know what government is doing and why. Open dialogue and cooperation between the two is thus essential in identifying and solving economic problems.

Thus, the most realistic planning option is a coordinated effort between Sarasota County and private sector economic development organizations. Such an effort can strengthen, balance, and diversify the economy resulting in the maintenance and enhancement of the County's identity and quality of life.

Economy Plan

Intent

The Economy Plan continues to provide guidelines for the expansion of Sarasota County's economic activity. While recognizing that it is the role of private sector organizations such as Chambers of Commerce to aggressively pursue and promote economic development, local governments must develop a Countywide economic development strategy as well as provide guidelines in fostering the expansion and diversification of the economic base. The Economy Plan sets forth the Goal, Objectives and Policy clusters which identify those activities by the public and private sector which will encourage sound economic development in Sarasota County. The three policy clusters contained in the Plan address the conservation and enhancement of the natural and cultural resources; maximization of employment opportunities; and encouragement of the diversification and expansion of economic activities.

It is further intended that including an Economy Plan in Apoxsee will facilitate a positive relationship between Sarasota County and the private sector in enhancing the local economy.

Goal 1

It shall be the Goal of Sarasota County to achieve a diversified and stable economy that is compatible with planned growth and quality of life objectives and that provides maximum legitimate employment opportunities for all segments of the Sarasota County population.

Objective 1.1

Encourage the conservation and enhancement of those natural and cultural resources which represent the foundations of the County's retirement, and recreation and tourist oriented economy.

Policy 1.1.1.

All development shall be consistent with environmental protection policies in the Future Land Use Plan and the Environment Plan.

Policy 1.1.2.

Promote the preservation and restoration of marine ecosystems affecting commercial and recreational fishing by considering:

- raising the quality of bay waters by improving wastewater treatment (consistent with the Public Facilities Plan);
- encouraging the restoration of altered coastal wetlands; and
- acquiring environmentally sensitive coastal wetlands.

Policy 1.1.3.

Increase public awareness about access to and wise use of recreational shellfish areas.

Policy 1.1.4.

Recognize the importance of Sarasota County's cultural resources as a major component of the economy. The County's cultural resources may be enhanced by providing for or encouraging the following:

- Construction and installation of art in public and private places;
- Awareness of the County's cultural amenities;
- Access to the County's cultural resources;
- Arts education programs for all Sarasota County residents;
- Awareness of historic places and cultural amenities; and
- Increased cultural opportunities for South County residents.

Objective 1.2

Maximize employment opportunities for Sarasota County residents.

Policy 1.2.1.

Promote the availability of employment for all who desire it, regardless of race, creed, sex, age, or national origins. To the greatest extent possible:

- Coordinate with State and local agencies to identify and help persons requiring special assistance (such as information, training, transportation) in obtaining and maintaining employment;
- Continue to assist State agencies in obtaining and disseminating accurate labor market information and encourage local employers to participate in supplying labor market information;
- Ensure that public transit maximizes the opportunities for labor to get to available employment; and
- Assist public schools and universities in determining what vocational and professional training is necessary for current and future labor market needs.

Policy 1.2.2.

Encourage adequate educational and training programs and facilities to enable existing Sarasota County residents to supply adequate and skilled labor to the various sectors of the economy.

Objective 1.3

Achieve a diversified economic base in Sarasota County to minimize the vulnerability of the local economy to economic fluctuations.

Policy 1.3.1.

Encourage and where appropriate, support the economic development efforts of local private organizations.

Policy 1.3.2.

Sarasota County shall promulgate an economic development plan to assist local organizations in fostering the expansion and diversification of Sarasota County's economic base. This plan shall set forth the intent, funding, and the means available for its implementation and establish the date for its implementation.

Policy 1.3.3.

Coordinate with local and State agencies and organizations to maintain an economic and demographic data base to assist both public and private decision making.

Policy 1.3.4.

Identify, and correct or eliminate those laws, regulations, and governmental practices that unnecessarily restrict business, professional, and vocational activities.

Policy 1.3.5.

Encourage a productive and prosperous agriculture to ensure food and fiber production, including where possible:

- the conservation of agriculturally productive land with suitable soils and drainage by providing protection from irreversible conversion to other land uses;
- the encouragement of farmers' markets which provide local distribution of local agricultural produce;
- the promotion of water conservation measures, such as reclaimed water use and efficient irrigation measures, to assure the availability of adequate water resources to meet ongoing agricultural needs;
- the continued provision of the most up to date research findings on conservation, production, and marketing techniques in the agriculture industry; and
- the evaluation of the adequacy of waterfront facilities necessary for the continuance and expansion of commercial and sport fishing.

Policy 1.3.6.

Allocate adequate commercial, industrial, and residential acreage to meet future needs.

Policy 1.3.7.

Encourage the location and clustering of major non-retail activities and selective, commercial and government uses within the planned unit concept.

These activities should be located:

- in close proximity to I-75 and within two and one-half miles of an interchange;
- to have access to mass transit routes where feasible;
- so as to have access to appropriate utilities (water, gas, electricity, telephone, sewer) or to allow provision of these utilities; and
- so as to minimize adverse impacts on the natural environment and adjacent land uses.

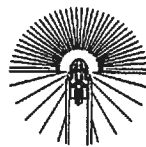
Policy 1.3.8.

Encourage the location of businesses and industries that meet the criteria established in "Guiding Principles (Guidelines) for Determining Desirable Business and Industry".

Guiding Principles (Guidelines) For Determining Desirable Business And Industry

The following Guidelines are provided as criteria for evaluating the desirability of new business and industry. Sarasota County should encourage business and industry that:

- can meet or exceed Sarasota County environmental quality standards;
- promote long-term, year-round economic stability and employment opportunities;
- are consistent with the relevant Policies and Guidelines of Apoxsee's Environment Chapter;
- will attract employees having a high degree of technical skill and education while at the same time offer career opportunities for those having lesser skills or education;
- will market its product(s) or service(s) regionally, nationally, and/or internationally, not locally only;
- will maintain its physical facilities in a manner as to complement the natural environment of the community;
- will not consume large volumes of water and energy resources;
- will not emit noxious fumes, odors, or waste products into the atmosphere, ground, or water;
- will share an interest in the well-being of Sarasota County;
- will help Sarasota County maintain its superior quality of life;
- will vigorously work for better employment, education, medical, and cultural facilities for all Sarasota County's citizens; and
- will work in harmony with existing business and industry in the area. Examples of those types of desirable business/industry may include, but are not limited to, the following:
 - a. electronics;
 - b. aviation;
 - c. data processing/telecommunications;
 - d. pharmaceuticals/health research/health instrumentation;
 - e. engineering/architectural firms;
 - f. international, national and regional headquarters;
 - g. major film/television producers; and
 - h. any other high technology or professional firm meeting the above criteria.



Endnotes

1. Bill Foster, Fantus Corporation Inc., Interview, June 1988.
2. Luther L. Rozar, Director, Cooperative Extension Service of Sarasota County, Interview, July 24, 1987.
3. 1987 Statistical Report for Sarasota County, Property Appraiser's Office.
4. op cit (2)
5. Economic Views, Southwest Regional Planning Council, June 1987.
6. John Stevely, Marine Agent, Manatee County Agriculture Extension Service Center, Interview, July 30, 1987.
7. William W. Couch, Executive Director, Sarasota Committee of 100, Interview, June 21, 1988.
8. 1981 Apoxsee Economy Chapter, p. 336.
9. *ibid*, p.336.

CHAPTER 10

FUTURE LAND USE

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CHAPTER 10

FUTURE LAND USE

Introduction

The Future Land Use Chapter is intended to provide the direction for managing anticipated growth in the unincorporated portions of Sarasota County in an orderly and balanced manner. The direction taken in this Chapter reflects the culmination of the preceding Chapters. The adoption of both the Future Land Use Plan and "Future Land Use Plan Map, Sarasota County - 2010" is designed to ensure that the designation and distribution of different land uses may be planned to meet the future economic, social, physical, and environmental needs of the County.

As stated in the 1981 Apoxsee Future Land Use Chapter, "since growth involves change, so must methods needed to manage growth be reevaluated periodically and changed when and where necessary." As the 1981 Chapter reflected the need to retain the strengths of the 1975 Land Use Plan and respond to its weaknesses, so too must the 1989 Apoxsee Future Land Use Chapter and Plan respond to its predecessor. Therefore, this present Chapter should be viewed as an extension of the 1981 Apoxsee Future Land Use Chapter in providing for the needs of Sarasota County through the year 2000 and establishing a planning framework through 2010.

The following analysis of the previous 1981 Future Land Use Plan will focus on its intent, the assumptions used to develop that Plan and the effectiveness of the implementation strategies contained within the Plan.

History

The need to guide the future physical development pattern in terms of location, intensity and type of use has long been recognized by Sarasota County. In 1971, Milo Smith and Associates, Inc. developed a group of documents, entitled "Policies for Growth" to be used to guide future policy decisions in meeting the needs of future development. The concepts contained in "Policies for Growth" served as a basis for evaluating the 1975 Land Use Plan during the preparation of the 1981 Apoxsee Future Land Use Chapter. The dominant themes of all three plans included the following:

- Establishment of urban areas in which to concentrate urban densities and intensities of use;
- Development should take place in such a way so as to provide for the efficient delivery of necessary urban service;
- Encouragement of open space;
- Protection of the coastal areas; and
- Retention of agricultural lands.

A basic tenet of these three plans was the need to implement an urban containment policy. This policy espoused two concepts: the achievement of compact urban growth in order to efficiently provide necessary urban facilities; and low density development in order to promote the feeling of open space. The 1981 Future Land Use Plan also aimed at heightening the awareness of the environmental and cultural amenities of Sarasota County. The Apoxsee Future Land Use Plan was designed to manage the anticipated growth of Sarasota

County through the year 2000. The achievement of compact urban growth and subsequent reduction of the trend toward leapfrog development beyond the urban fringe was to be furthered by the establishment of urban containment areas, and the attainment of at least a 3.0 dwelling unit per acre residential density in those urban areas.

1981 Apoxsee Future Land Use Plan

The evaluation of the programs comprising the adopted Plan and the underlying assumptions upon which the Plan is based is necessary to assess the effectiveness of the 1981 Future Land Use Plan in guiding development in an orderly manner, and also to identify changing social, economic and environmental needs. The result of this evaluation will increase awareness of the improvements needed to meet the needs of the unincorporated County through the year 2000 and beyond.

1981 Land Use Programs

The dominant theme of the 1981 Apoxsee Future Land Use Plan was the attainment of a quality of life which balanced the social and economic needs of the community while respecting the integrity of the natural environment. This theme was expressed in the goal "to achieve a high-quality living environment through the wise distribution of compatible land use patterns." The objectives further refined this goal by specifying the need to:

- "Ensure that the projected population upon which Apoxsee is based, is provided appropriate land uses (residential, commercial, industrial, etc.) in adequate amounts;
- Encourage the provision of adequate public and private facilities to serve the existing and projected population;
- Ensure energy efficient development;
- Protect environmentally sensitive land and maintain open space; and
- Protect and preserve agricultural lands."

These objectives were addressed through the adoption of land use programs which were divided into five categories. The general programs provided direction for the division of the County into three areas (i.e., urban, semi-rural, and rural) and identified the primary functions of each area. Significant among these was the requirement to confine urban development to designated Urban areas in order to contain urban sprawl, minimize the cost of providing necessary facilities and conserve land, all of which were consistent with all previous land use plans for Sarasota County. General programs also identified the need for development to be consistent with the Environment Chapter of Apoxsee, and to address compatibility of land uses and infrastructure needs. This section of the Plan also introduced the concept of Sector Plans, which were to be prepared for designated areas in order to direct future development consistent with the Comprehensive Plan.

Other general programs encouraged the preservation of distinct urban areas around Sarasota (city), Venice, Englewood, and North Port; provided for growth to occur within, and timed to develop along with the County's system of major highways; restricted the intensity of future development on barrier islands; permitted the development of multi-family development as a secondary use in designated Activity Centers; and discouraged the development of future regional malls.

Residential programs adopted as part of the 1981 Apoxsee Land Use Plan concentrated primarily on the residential densities deemed appropriate for each of the three areas. Maximum residential densities of one dwelling unit per two acres and one dwelling unit per five acres, respectively, were established for the semi-rural and rural areas and guidelines for determining appropriate densities in the designated Urban area were provided. Furthermore, minimum open space requirements were established for development in the urban and semi-rural areas. Commercial programs provided a basis for determining the intensity of development to be allowed in Activity Centers by cross-referencing uses defined in Sarasota County's Zoning Ordinance (75-38, as amended) for various commercial zone districts with the appropriate ac-

tivity center type. Limited commercial uses were also identified for selected interstate interchange areas. Additional programs identified the need for all development within Activity Centers to be consistent with appropriate Sector Plans and to occur through a "planned commercial development process."

The primary purpose embodied in the industrial programs of the Apoxsee Land Use Plan was to restrict industrial uses to those areas designated as industrial on the "Future Land Use Plan Map," and to provide for such development to occur through a "planned industrial development process."

Community facility programs addressed concerns over the compatibility and accessibility of community facilities as well as identifying criteria for facilities which could locate within the semi-rural and rural areas of the County.

Plan Assumptions, 1981

In order to evaluate the effectiveness of the 1981 Future Land Use Plan, there must be an analysis of the underlying assumptions used in the formulation of the Plan as well as the Plan content itself. The following examination of these major underlying assumptions provides the basis for considering their existing and continued usefulness in this update of the Comprehensive Plan. The three primary assumptions upon which the 1981 Apoxsee Future Land Use Plan and the land use distributions designated on the "Future Land Use Plan Map" were based are:

- That the projected year 2000 population of the unincorporated area of the County would be 190,500 residents.
- That the distribution of growth would split equally between the north and south County; and
- That the residential density of at least 3.0 dwelling units per gross acre in the urban areas would be attained.

The population projections used in Apoxsee in 1981 to estimate the land use acreage needed to accommodate growth through the year 2000, were developed in 1977 by the Bureau of Economic and Business Research (BEBR) of the University of Florida. BEBR projections for 1980 were shown to be understated by approximately 9 percent in the unincorporated area when the 1980 Census was completed. This estimating error combined with subsequent growth trends experienced in Sarasota County in the 1980's caused BEBR to increase their population projections for the year 2000 as illustrated in Table 62. Table 62 shows that the population projections for the unincorporated portion of Sarasota County are 23 percent higher than that upon which the Future Land Use Plan was based.

The equal distribution of growth between north and south County areas has not occurred as was assumed in Apoxsee. Research undertaken during the preparation of the Public Facilities Financing Ordinance (Sarasota County Ordinance 83-24, as amended) identified the fact that 65 percent of the growth occurring since late 1983 has located in the north half of the County, not the 50 percent which had been projected in Apoxsee. This trend has continued through 1987.

Table 62: Sarasota County Population Projections for Year 2000

	1981 <u>Apoxsee</u> Projection	1987 BEBR Projections	Difference
Resident Population			
Total County	295,900	332,800	+ 36,900 (12%)
Unincorporated County	190,500	233,817	+ 43,317 (23%)
Source: University of Florida, Bureau of Economic and Business Research, 1987; and Sarasota County Planning Department, 1988.			

Lastly, residential densities of new development in the urban areas have not achieved the 3.0 dwelling units per acre level. The Countywide average densities of approved rezoning petitions in the urban area has been 2.95 dwelling units per acre. However, the average approved density in the north County area was 2.33 du/acre, compared to the south County average approved density of 3.77 du/acre. Further analysis shows that the majority of development which has occurred since 1981 did not require the rezoning of property; this urban development occurred at a density of less than 2 du/acre.

Inventory and Analysis

The preceding discussion provides the foundation for identifying and analyzing land use patterns in the unincorporated portions of Sarasota County. This inventory provides a description of the spatial distribution and identifies the acreage consumed by the various land use categories found in Sarasota County. The analysis that follows provides an evaluation of the land use trends which have been established in the County in context with the basic tenets espoused in *Apoxsee* with an eye to identifying modifications to policies which may be necessary to ensure that future growth can be managed within the framework of existing lifestyles, sound environmental precepts and economical delivery of essential services.

Inventory

The distribution of generalized land uses, as derived from 1986 aerial photography, is depicted in Figure 65. The land uses shown on Figure 65 are groupings of the more specific categories listed on Table 63, which provides land use acreages as of 1986, and which represents the most current comprehensive land use data available. The categories shown on Table 63 are themselves combinations of more detailed land use/land cover classifications used in the photointerpretation process which are provided in Appendix I, Section 4.

In addition to the 1986 land use acreage which is presented by land use category for each of the land areas designated on the 1981 Future Land Use Plan Map, Table 63 also presents the 1978 land use acreage which was the base information used in developing the version of *Apoxsee* adopted in 1981. The 1986 and 1978 data are not directly comparable because of the use of different land use classification systems.

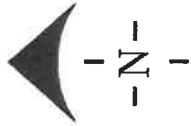
The 1986 land use data indicate that the combined residential categories represent the dominant land use in Sarasota County. In the unincorporated area, more than 80 percent of the developed land, i.e., exclusive of intensive agricultural uses, is devoted to residential use. Within the designated Urban areas, residential uses comprise 83 percent of the developed land area and 47 percent of the total acreage.

A comparison of the 1978 and 1986 data suggests that the number of residential acres in the unincorporated area of the County increased from 19,605 acres to 54,008 acres, a rise of 175 percent. A review of the 1978 methodology indicates that much of the acreage associated with lower density developments, particularly in the semi-rural and rural areas, was not classified as residential use in 1978. Therefore the increase in residential acreage is probably not as great as a direct comparison would indicate. The actual increase in acreage, whatever its precise measurement, has been accompanied by a continued low overall density of residential development, reaching an average residential density of approximately 1.8 units per acre in 1986.

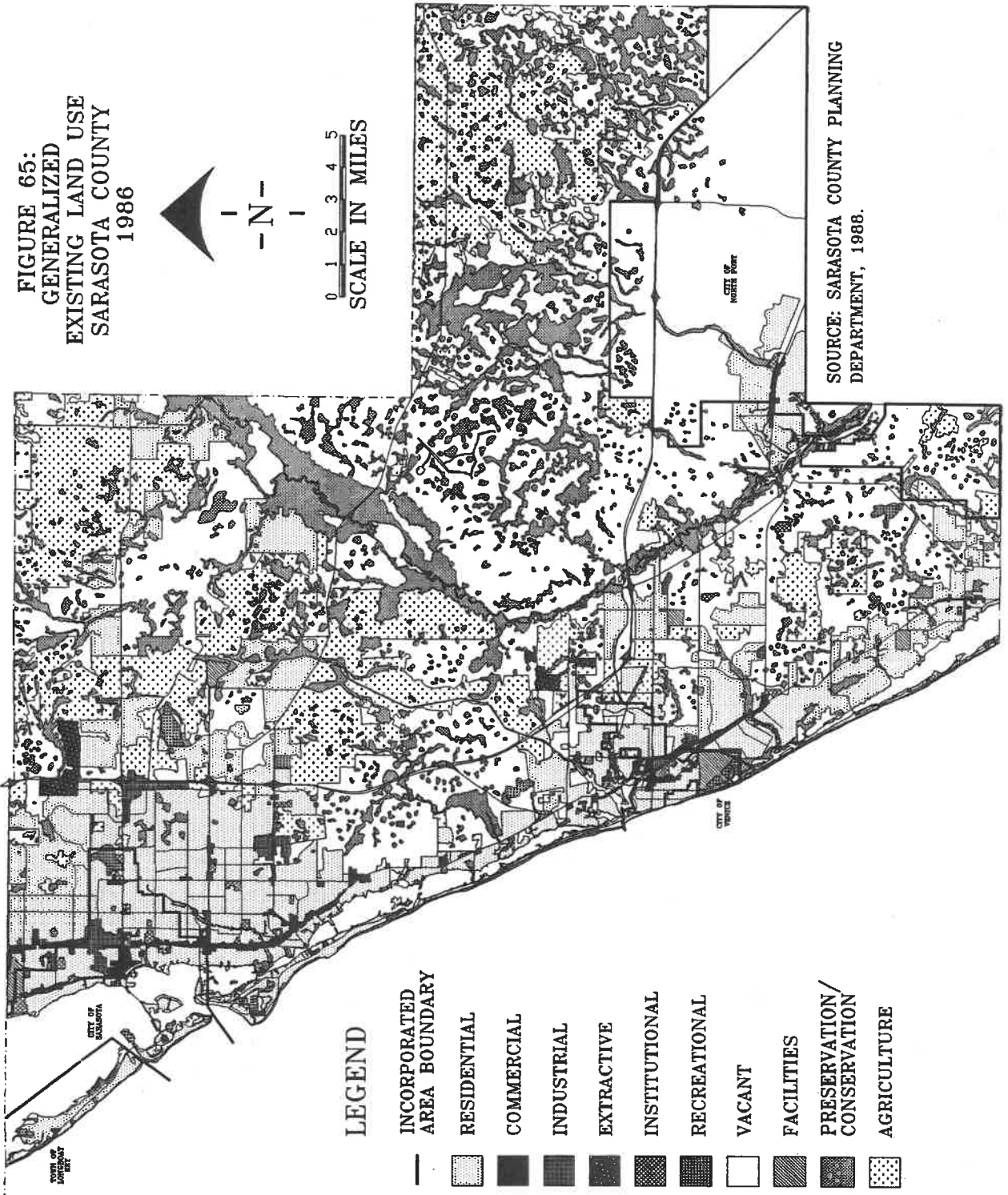
The utilization of land for industrial purposes also reflects a relatively high growth rate. Compared to the 270 acres of industrial land in 1978, the 1,232 acres existing in 1986 represents an increase of 356 percent. Most of the industrial expansion which has occurred in Sarasota County since 1978 has been located in the unincorporated areas because of a lack of available industrial acreage within the municipalities.

The breakdown of land uses for each of the designated Urban, Semi-Rural, and Rural areas of the unincorporated portion of the County as well as the Barrier Islands provides additional background for

FIGURE 65:
GENERALIZED
EXISTING LAND USE
SARASOTA COUNTY
1986



0 1 2 3 4 5
SCALE IN MILES



SOURCE: SARASOTA COUNTY PLANNING DEPARTMENT, 1986.

Table 63: Existing Land Use Acreage, Unincorporated Sarasota County

Land Use Category	1986 Acreage By 1981 Apoxsee Designation							1978 Acreage Totals
	North Urban	South Urban	North Semi-Rural	South Semi-Rural	Barrier Islands	Rural	Total	
Low Density Residential	2,304	2,853	3,404	3,915	493	8,803	21,772	-
Medium Density Residential	11,347	9,990	1,536	2,700	1,308	75	26,956	-
Moderate Density Residential	2,285	1,475	196	695	562	67	5,280	-
Total Residential	15,936	14,318	5,136	7,310	2,363	8,945	54,008	19,605
Commercial	1,251	965	6	99	52	0	2,373	1,850
Industrial	845	155	117	54	0	61	1,232	270
Extractive	16	0	607	16	0	895	1,534	-
Institutional	519	802	148	1,093	33	130	2,725	1,380
Recreational Facilities	513	275	18	794	108	15	1,723	-
Wetlands	126	439	404	229	4	446	1,648	445
Wetlands Preservation/Conservation	882	1,554	899	2,909	0	48,256	54,500	-
Waterbodies	1,211	1,847	360	1,506	2,034	27,466	34,424	-
Agriculture	1,644	2,867	379	1,513	3,671	2,874	12,948	-
Vacant	2,366	1,190	3,461	2,129	0	48,486	57,632	62,015
Total	5,010	9,138	4,429	12,562	112	53,952	85,203	207,975
Total	30,319	33,550	15,964	30,214	8,377	191,526	309,950	315,645

Source: Sarasota County Planning Department, 1988.

the analysis of future needs. By 1986, urban uses had consumed 19,206 acres in the designated Urban area adjacent to the City of Sarasota, 63 percent of that "North Urban" area. The 15,936 acres of residential development represented 83 percent of all developed land and 53 percent of the entire urban area. There were still an estimated 9,469 acres of undeveloped land, including agricultural uses, in this North County urban area. However, of this undeveloped acreage, 2,093 acres were wetland or other environmentally sensitive habitats and 2,030 acres were already under development but as yet unoccupied by residences.

Table 63 also shows the combined acreage of land use in the three urban areas in the south half of the County, adjacent to the Cities of Venice and North Port and in the Englewood area. Within these

areas, residential development remains the dominant land use, however, compared to the North County urban area, there remains a substantial amount of vacant land.

Among the semi-rural areas, residential development only represents a significant portion of the overall land area in the northern section, which is located east of I-75, with 39 percent of this area in residential use or under development. Another 24 percent of this semi-rural area is devoted to agricultural uses. The remaining semi-rural areas located between Sarasota and Venice and adjacent to the South County urban areas, are primarily undeveloped with only a few large lot developments. Most of the urban type land uses depicted in these areas are located in the extra urban enclaves designated in Apoxsee.

Analysis

The analysis of future land use needs will concentrate on the major urban land use categories of residential, commercial and industrial. Each of these categories will be assessed according to existing availability, projected future needs, environmental capability and feasibility of infrastructure provision.

Residential Available Residential Capacity

The residential capacity available in the unincorporated areas of the County can be determined by multiplying the number of vacant acres available for residential development by the expected residential density. For the purposes of this analysis, the amount of "vacant and developable land" is obtained by subtracting wetland and other environmentally sensitive areas from the total undeveloped acreage. The "net acreage available" for residential development is then derived by subtracting those areas designated for industrial and commercial use; deducting 20 percent of the overall acreage in the urban area, and 10 percent of the overall acreage in the semi-rural area, to ensure that sufficient acreage is available for public facilities and roads and to ensure that future institutional, recreational, and community facilities needs are met in proportion to past trends; and also subtracting a factor of 25 percent which is attributed to the need for maintaining a flexible market and to the recognition that not all land would be developed.

The net acreage available for residential development was determined for each of the following four acres in the County:

- North Urban area, defined as the designated Urban area adjacent to the City of Sarasota;
- North Semi-Rural area, defined as all designated semi-rural lands north of Blackburn Point Road;
- South Urban area, defined as the combined designated Urban areas of Englewood and the Urban areas adjacent to the Cities of Venice and North Port;
- South Semi-Rural area, defined as all designated semi-rural land south of Blackburn Point Road.

Table 64 provides a summary of the net available acreage for these four areas and the estimated residential capacity for each. The detailed derivations for each area are included in Appendix I, Section 1. The densities used to project residential capacity in Table 64 are estimated based on the implementation of existing Apoxsee policies.

Projected Future Housing Needs

There are two primary considerations that need to be taken into account in assessing the future housing needs of the County. The first is the overall size of the needed housing stock based upon projected population growth. The second is the locational distribution of the housing stock based on past trends as they might be modified by future population expectations (see Appendix I, Section 2).

Table 64: Residential Capacities, Sarasota County

Area	Available Net Acres	Density (D.U.'s/Acre)	Total Dwelling Units
North Urban	3,630	3.0	10,890
North Semi-Rural	5,100	0.5	2,550
South Urban	5,700	3.0	17,130
South Semi-Rural	9,920	0.5	4,960
Total	24,350		35,530

Source: Sarasota County Planning Department, 1988.

The overall need for housing, as derived in the Housing Chapter, is shown for five year increments through the year 2010 in Table 65.

Comparison with residential capacities shown in Table 64 indicate that, assuming the projected housing needs are accurate, all of the areas currently designated Urban and Semi-Rural could be built out prior to the year 2000. However, in order for that scenario to occur more than 55 percent of the expected growth would have to take place in the south County area, corresponding to the larger available amount of designated Urban and Semi-Rural acreage in that area. As indicated in the previous section which provided an evaluation of the assumptions upon which land use designations were made in *Apoxsee*, a shift of population distribution of this magnitude to the southern half of the County would represent a substantial deviation from the growth trends which have occurred since the adoption of the 1981 Plan. There are no current indications that such a shift is imminent. In fact, as of 1986, nearly 2,400 acres of the available urban land and 600 acres of the semi-rural land in the northern portion of the County were under development compared to 574 acres and 280 acres in some stage of development in the South County's urban and semi-rural areas respectively.

An initial conclusion which can be drawn from the above discussion is that there is currently insufficient residential density designated in unincorporated Sarasota County to meet the demands beyond the year 2000. If all of the residential demand could be accommodated in appropriate locations designated for urban densities (i.e., an average of 3 dwelling units per acre) there would be a requirement for over 12,000 acres of urban land by the year 2000 and more than 23,000 acres by 2010 compared to the 9,720 acres currently

available in the designated Urban areas of the County. However, it is expected that some demand for large lot, estate type residential development will continue in the County. This would result in an even greater number of acres consumed by residential uses. Additionally, the market for residential development continues to be predominately situated in the northern half of the County. This has resulted in a scarcity of acreage available in the designated Urban area adjacent to the City of Sarasota and subsequently the development of nearly 40 percent of the designated Semi-Rural area east of I-75. Until such time as the development potential of the South County is realized in the form of absorbing a significantly higher proportion of the County's overall growth, the continuing scarcity of designated Urban land can be expected to dramatically inflate land values, thus affecting the affordability of housing and rapidly expanding the acreage consumed in low density development east of the Interstate.

In order to recognize existing development trends and also promote a smooth transition for the eventual growth that is expected in the southern half of the County, a modest expansion of the designated Urban area is needed.

Environmental Compatibility

The designation of areas for potential future development must take into consideration several essential environmental factors, including the preservation of critical habitats or natural systems; the impact on ground and surface water quality; and potential flooding characteristics. Most of the undeveloped areas of the County are characterized by depressions and by slough systems, all of which are typified by poor drainage and seasonal inundation. Because of the penchant for Sarasota residents to live in reasonably close

Table 65: Projected Housing Needs, Unincorporated Sarasota County, 1986-2010

	1986	1995	2000	2005	2010
Additional Housing Needed	-	24,489	12,183	13,882	13,244
Cumulative Housing Needed	-	24,489	36,672	50,554	63,798
Total Housing Stock	94,896	119,385	131,568	145,450	158,694

Source: Sarasota County Planning Department, 1988.

proximity to the coastal areas, and the lack of areas which are naturally well-drained, development in the County has resulted in an overall degradation of water quality in the streams and bays, due in large part to excess stormwater runoff and its constituent pollutants. Early development, although concentrated in coastal areas, tended to occur in areas with well-drained soils. However, well-drained soils account for only a small portion of the County's total land area. Future development will be required to contend with the poor drainage characteristics of Sarasota County, through less intensive development in floodprone areas, thus reducing the extent to which major drainage structures would have to be employed and providing some measure of protection to the quality of the County's surface waters.

Additionally, the need to preserve critical habitats and natural systems points to the need to remove the potential for development in these areas. The acquisition of the Ringling MacArthur Reserve and the future acquisition of Public Resource Lands may provide an effective mechanism in preserving not only these areas but may lessen the impact of future development on ground and surface water quality.

A corollary to environmental compatibility is the long standing goal of Sarasota County to protect and preserve agricultural and Public Resource Lands in the rural areas of the County. This is particularly critical in the area east of the Interstate in the northern half of the County where the development of large lot subdivisions has consumed large expanses of agricultural lands. One strategy for mitigating the residential encroachment into agricultural areas would be to designate selected areas adjacent to the existing Urban area as appropriate for accommodating urban densities, thus decreasing the amount to acreage needed for residential development.

Commercial Existing Capacity

The concept of Activity Centers introduced in *Apoxsee* in 1981 has proven to be an effective tool for serving the commercial needs of residents in the expanding areas of urban Sarasota County. These Activity Centers were designated at the intersections of major thoroughfares planned to serve the urban area. Activity Centers were grouped into four categories: Town Centers; Community Centers; Village Centers; and Neighborhood Centers. The retail service area and range of services depended upon the type of center as shown in Illustration 187 in the 1981 *Apoxsee*. The implementation of the Activity Center concept has provided the commercial acreage and range of services needed to serve the population of the urban areas of the unincorporated County, particularly those locations which have developed since the adoption of *Apoxsee*. Within the Activity Centers which have not developed or not fully developed since adoption of the Plan, there exists a maximum potential for an additional 1,280 acres of commercial use to meet the needs of future residents as development continues in the urban areas.

Future Needs

Projections regarding the estimated acreage designated for commercial and office uses indicate that an additional 376 acres will be needed by 1995, and a total of 1,157 acres needed by 2010. The methodology for these projections is provided in Appendix I, Section 3. The distribution of commercial development would continue to be commensurate with the location of residential development at designated Activity Centers adopted in 1981. The primary concept for establishing Activity Centers away from the central urban core was to effectively address the needs of residents to satisfy such requirements as shopping and visits to the doctor while minimizing travel time and distance. Because of this, any extension of the urban boundary should consider the designation of additional Activity Centers appropriate with the expanded residential densities and consistent with capacities of the thoroughfare system.

Major Employment Centers Existing Capacity

There were approximately 5,500 acres of industrial sites designated on the 1981 Apoxsee Future Land Use Plan Map, as amended. Of the total acreage available, approximately 4,400 acres remained undeveloped as of 1986, with a majority of that acreage, or approximately 2,900 acres, located in the southern half of the County. Most of the economic development that has occurred in the County since the adoption of Apoxsee has taken place in the designated Industrial areas in the northern half of the unincorporated County. This development has predominately related to the expansion of the County's service oriented economy. The result of this growth has been a severe restriction on the acreage available for diversified economic interests. The land readily available for development is primarily in small parcels in existing industrial settings which are suitable for warehouse and distribution activities and service supporting the construction industry.

Future Needs

Major Employment Center (MEC) projections, which are based on a trend analysis of existing industrial uses, indicate that an additional 1,300 acres of industrial land will be required to meet the needs expected by 1995 and a total of 2,900 additional acres by 2010. Appendix I, Section 3 provides the methodology for these projections. On the surface it would appear that sufficient land is designated to meet these needs. However, there are two additional factors which need to be addressed. The first is that the demand for industrial land is currently greatest in the North County; this trend is expected to continue into the foreseeable future primarily because the labor pool for this area is situated in North Sarasota County and in Manatee County.

The other factor which is not considered in the trend analysis is the diversification that is taking place in Sarasota's economy and the potential for that diversification to continue and expand. It has been postulated that in "...north Sarasota County, existing allocations of land for employment purposes will not satisfy demand based upon the

movement toward diversification."(1) This movement toward diversification included an expanded market for office space. However, "...past population trends are not a good determinant of office space allocations."(2) Designation of office space is particularly susceptible to speculative forces. Therefore, as much land as possible should be set aside for new office sites to reduce the possibility of overspeculation.

The allocation of industrial acreage in the south County area appears to be more than sufficient to meet future needs. Since the adoption of Apoxsee, there has been a limited demand for industrial acreage, although a Sector Plan has been adopted for the 1,100 acre tract along River Road east of Venice and a Sector Plan is under development for the Laurel Road site east of I-75.

Interstate Regional Office Parks Future Needs

The desirability and viability of Interstate Regional Office Park (IROP) development for Sarasota County is an issue addressed as part of the I-75 Corridor Study. To assist in the planning effort, the Board of County Commissioners established the Interstate Planning Advisory Committee (IPAC), an 18 member citizen's advisory committee.

In the research and preparation of the I-75 Corridor Study, it became apparent that the issues related to the desirability and viability of regional office parks were very complex. Consequently, the Planning staff and IPAC determined that it was desirable to obtain the assistance of a nationally recognized firm with experience and expertise in determining regional office park market feasibility. The results of this study projected demand for a total of 640 acres \pm for IROP development in Sarasota County through the year 2010. The study's methodology involves employment projections from existing Countywide employment sectors reflective of typical office park business, and conversion of these employee projections into net acreage needs after deducting existing occupied office inventory. The study identified general locations for IROP development and recommended no more than four sites be designated for IROP development with a minimum size

of 100 acres. (3) Through the I-75 Corridor Study, County Planning staff conducted a comparative analysis to determine the relatively best locations for the allocation of MEC/IROP's along the I-75 Corridor.

Future Land Use Plan Concepts

This update of the 1981 Apoxsee Land Use Plan retains the concept of three distinct land use areas in the unincorporated County - urban, semi-rural, and rural. It also provides for special consideration of development on the Barrier Islands. It provides a logical extension of the basic policies and programs of the 1981 Plan including locating urban development adjacent to the developed urban core and in concert with the availability of adequate public facilities; restricting commercial development to suitable locations in the designated Urban area; and protecting agricultural lands and sensitive environmental resources.

This Plan also recognizes that the urban boundary established in 1981 does not provide sufficient acreage to meet the projected residential needs for the year 2000 and provides for a modification of the Urban area by recognizing the previously designated "extra urban enclaves" as extended Urban areas in which community facilities are either readily available or can be logically extended in an economically feasible manner.

The continuing demand for residential acreage being concentrated in the northern half of the County has led to a re-evaluation of two long-standing policies: containment of urban development to areas west and south of I-75; and a distinct separation of the four urban areas of the County. Another policy which has been re-examined and modified is related to the concept of "intensity level bands" which permit "higher residential densities toward the cities and a gradual decrease as the distance from the core area increases."

The result is a Land Use Plan which recognizes the generally low density urban lifestyle which has evolved in Sarasota County, while providing for the economically feasible provision of basic urban services. It limits the encroachment of urban development east of I-75, while updating the 1981 Land Use Plan to provide sufficient urban areas in appropriate locations in order to effectively guide and manage the growth which is expected to occur by the year 2000. It provides a framework for future growth management decisions to 2010, while retaining the primary functions of the three basic land use divisions - urban, semi-rural, and rural.

Future Land Use Plan Map

The "Future Land Use Plan Map, Sarasota County - 2010" ("Future Land Use Plan Map") is designed to provide a generalized representation of the land use concepts embodied in the Goals, Objectives and Policies adopted as part of the Future Land Use Plan. It is not intended to serve as a free-standing zoning map with discrete boundaries and the identification of site specific densities and intensities of use. Rather, it depicts broad land use designations which can only be interpreted completely when used in concert with the Goals, Objectives and Policies.

The following sections describe the primary land use designations depicted on the "Future Land Use Plan Map". Specific locations for historically significant properties have not been mapped nor have historic districts been delineated because no such designations have been made at this time for the unincorporated County. For additional information on this subject, the reader should refer to Chapter 1 - Historic Preservation. Similarly, significant mineral deposits are not shown on the map because none have been identified in Sarasota County.

Urban

The functions of the Urban area are to provide adequate land for urban uses; to enhance the economical provision of urban services (e.g., water, sewer, mass transit, fire and police protection); to promote energy efficiency; and to provide a desirable environment comprised of both natural and built features.

As Sarasota County's population increases, the need for additional urban land will cause a reduction in the County's supply of semi-rural and rural lands. Thus, a major objective of this Chapter is to establish an urban boundary that provides sufficient and logical areas to meet projected urban needs while minimizing the continued encroachment of urban land uses into semi-rural and rural areas.

As depicted on the "Future Land Use Plan Map", urban designations are represented by three classifications: Urban, Urban Enclave, and Future Urban. Combined, these three classifications represent a logical refinement of the land use policies of Apoxsee as adopted in 1981. The designated Urban area, in combination with the Urban Enclave, has been configured in size and location to meet the needs of the year 2000. The designation of a Future Urban area provides a framework for future land use decisions based upon the needs projected to 2010.

Specific locations for future educational sites, other institutional uses or public facilities have not been included on the "Future Land Use Plan Map" because of the lack of site specific information for such future uses. However, the calculations for determining the size of the designated Urban area provide for an allocation of 20 percent of the total acreage for such uses to ensure there would be sufficient land available for such uses.

The modification of the urban boundary to include an area between Sarasota and Venice is predicated on several principles. The primary principle is the necessity to provide necessary services to urban populations. Much of the area between Sarasota and Venice, particularly west of U.S. 41 has developed in urban densities. This area was

designated "extra urban enclave" in 1981. However, a substantial portion of this existing urban development is not presently served by central water or sanitary sewer. The 1988 decision of Sarasota County to purchase Sorrento and Curry Creek Utilities and the timed expansion of Central County Utilities to serve the Palmer Ranch area as it develops provides a basis for eventually serving the entire area between Sarasota and Venice. Additionally, the County has committed itself to the development of a water treatment facility on the Ringling MacArthur Reserve with water capacity to be available in this area by the end of 1990.

In the south County area, the Urban boundary has been expanded only slightly to recognize the previously designated "extra urban enclaves"; to foster the development of needed infrastructure improvements; and to promote redevelopment and infill where appropriate services are available.

The Urban Enclave designation east of I-75 in North County is designed to provide for urban densities that are consistent with the existing residential nature of the area. It is estimated that the acreage density of residential development within the Urban Enclave will be approximately 2-2.5 dwelling units per acre. It is not intended that the Urban Enclave designation be the next step in the eastern encroachment of urbanization but that it represents the ultimate delineation of urban intensity uses in that area coincident with existing services and facilities.

The designation of the Urban Enclave, combined with the modest expansion of the Urban area between Sarasota and Venice, is designed to provide sufficient residential densities to meet the County's needs through the year 2000; to recognize the existing demand for housing in the north County; and to provide a smooth transition for future development which is expected to occur in the southern half of the County.

The Future Urban designation provides for sufficient land to meet the needs for the year 2010. These areas are provided to indicate the general locations which will be used to direct future growth, contingent upon the availability of urban services. The intent is for Future Urban areas to be made part of the designated Urban area at some future

date (presumably during the five-year update process) based upon specific needs. During the interim, development proposals in the Future Urban area will be evaluated based on the policies relating to existing designations, i.e., Semi-Rural and Rural.

Distribution of Population in the Urban Areas

In order to conserve urban land, efficiently provide for necessary urban services and facilities (such as roads, water, wastewater treatment, fire, police, etc.), and discourage leapfrog development in the Semi-Rural and Rural areas, residential development should occur at an average of not less than 3.0 dwelling units per acre. The revision of the Urban Area Residential Checklist and Urban Area Residential Density Matrix contained in the Guiding Principles is designed to facilitate the attainment of this residential density in the Urban area by permitting higher densities in close proximity to arterials and Activity Centers. This allows for a broader distribution of densities throughout the Urban area consistent with the development of the thoroughfare system and the availability of commercial services and public utilities.

Commercial Land Uses

This Plan retains the Activity Center concept which refers to the grouping of various activities designed to provide for the retail, service, and office needs of resident and seasonal population, as well as the Commercial Highway Interchange (CHI) designations along I-75. Activity Centers have been identified according to a hierarchy based on their function, goods and services provided, intensity of development, location, population served and travel time. The Plan also identifies new commercial/office designations including Commercial Corridors, Commercial Enclave and Future Commercial areas. Following is a discussion on each of the identified Activity Centers.

Town Center

Town Centers consist of the Central Business District (CBD) areas of the municipalities and Englewood. These Centers are intended to permit a larger variety of commercial and office uses than

would be found in other areas of the County. The size of a Town Center will vary greatly depending on the size of the urban area in which it is located. As the center of an urban area, it is the function of a Town Center to provide for the widest range and highest intensity of uses.

Only one Town Center is currently located in the unincorporated County. The Englewood Town Center is located in the south County astride the Sarasota/Charlotte County Line. Sector Plan 85-1-SP identified the boundary of the 175 ± acre Englewood Town Center and recommended that development of this urban center include civic and cultural activities, government offices, business and professional offices, retail trade and higher density residential activities.

Regional Activity Center

Regional Activity Centers are designed to provide the greatest variety of general merchandise of all Activity Centers as well as office, and institutional uses and professional services. Regional Centers often provide cultural and entertainment uses which are traditionally found in municipal Town Centers. A Regional Activity Center normally contains a regional mall type shopping center with related commercial and/or office uses located in close proximity in order to take advantage of the generated support population. The general characteristics of a Regional Activity Center include:

- 500,000 to 1,000,000 of gross leasable area (GLA)
- Location at the intersection of major arterials
- Leading tenant is a mall with three or more major department stores
- Principal uses include some functions of a Community Center offering shoppers goods and may also provide cultural and/or entertainment uses and office, institutional and professional services
- Radius of Service is Countywide
- Transitional Uses include Multi-Family development

Community Activity Center

Community Centers are designed to offer a wide range of merchandise, although less than a Regional Activity Center and office, professional, and institutional uses. A Community Activity Center normally contains a shopping center and other commercial or office uses in close proximity which permit a sharing of the generated traffic. The following is a description of a Community Activity Center:

- 300,000 to 700,00 sq. ft. of GLA
- Location at the intersection of arterials
- Leading tenant is a shopping center with one or more major department stores
- Principal uses include providing shoppers goods and some functions of a village center and include office, institutional and professional services
- Radius of service is two to four miles
- Transitional uses include Multi-Family development

Village Activity Center

Village Activity Centers are designed to provide for a variety of shopper goods in order to satisfy the weekly shopping needs of the support population, as well as office, institutional and professional uses. A Village Activity Center contains a shopping center and other commercial or office uses close by. Below is a description of a Village Activity Center:

- 100,000 to 300,000 sq. ft. of GLA
- Location at the intersection of arterial and collector
- Leading tenant is typically at least one junior department store, large variety, off-price department store, combined drug/variety/garden center or large scale furniture store
- Principal uses include providing shoppers goods and some functions of a Neighborhood Center and include office, institutional and professional services
- Radius of service is one and one-half to two miles
- Transitional Uses include Multi-Family development

Neighborhood Activity Center

A Neighborhood Activity Center is the least intensive of all Activity Centers and is designed to accommodate the daily shopping needs of the immediately surrounding neighborhoods. Neighborhood Centers would be characterized by such convenience type uses as food, sundries, drugs, limited professional offices, and laundry and dry cleaning services. Below is a description of a Neighborhood Activity Center:

- 10,000 to 100,000 sq. ft. of GLA
- Location at the intersection of collector and arterial
- Leading tenant is a convenience or small grocery store and drug store
- Principal use is to serve the daily retail and service needs
- Radius of service is one-half mile
- Transitional Uses include Multi-Family development

Commercial Highway Interchange

Problems associated with development at the Interstate interchanges and along the connector roads are discussed in the Traffic Circulation Chapter. Those interchanges where commercial uses will be permitted are designated on the "Future Land Use Plan Map". Commercial activities permitted at the interchanges should be limited to activities which serve tourists and travelers -- gas stations, motels, restaurants, gift shops, and the like. These provisions recognize the primary function of the Interstate itself and should be designed to serve the traveling public rather than local residents. The I-75 interchanges should not be designed to serve the general convenience, commercial or other needs of the nearby residents.

Generally, development at these interchanges should occur in a planned, cohesive manner. This would help to ensure that traffic flow would not be impeded, that visual buffers would be adequate, and that development would remain compact.

Commercial Corridor

In addition to Activity Centers, there are non-anchor type retail and service type activities located linearly in commercially zoned lots. Usually in such linear commercial areas, there is no major anchor or unified control. While Activity Centers are the preferable alternative, such strip commercial enclaves do provide for more owner-occupied business and potential locations for businesses whose uses are inappropriate for shopping centers.

Commercial Enclave

Through past actions of the County, many of which occurred prior to the adoption of the 1981 Plan, there exist commercial and office zone districts which lie outside of the Activity Center, CHI, Commercial Corridor, or Future Commercial designations. These Commercial Enclaves may or may not be developed, but are recognized through the Inclusion of Policy 1.8.9. In order to vest these existing developed or zoned areas.

Future Activity Center

Several areas located to the west and south of I-75 are designated for Future Urban use. The Future Urban designation provides for sufficient land to meet Sarasota's needs for the year 2010. These areas are provided to indicate the general locations which will be used to direct future growth, contingent upon the availability of urban services. The intent is for Future Urban areas to be made part of the designated Urban area at some future date (presumably as part of the five-year plan update) based upon specific needs. It may be necessary for those areas designated as Future Urban to be provided with retail, office and service needs at appropriate locations, just as the concept of Activity Centers is utilized in the designated Urban areas of the County. Accordingly, and in order to reserve potential sites for these land uses, the Future Activity Center designation is established. These areas could be considered for activity center uses once the Future Urban areas are converted to urban designations.

Semi-Rural

The Semi-Rural area will function as a transitional zone between urban and rural areas. The Semi-Rural areas may develop at a maximum density of one dwelling unit per two acres. Semi-Rural areas have been designated to retain an "estate character". The primary functions of these areas include the maintenance of open space; the protection of native habitats; and the establishment of limited non-commercial agricultural activities.

The designation of land in Sarasota County as "Semi-Rural" is intended, as previously mentioned, to provide County residents an opportunity to pursue an "estate" type lifestyle without being too far removed from urban amenities. The clustering of residential dwellings is suggested as one means of maintaining open space, protecting native habitats, and allowing small scale (non-commercial) agricultural activities. Clustering of residential dwellings would be voluntary if traditional subdivision platting could achieve the policies of Apoxsee. The Semi-Rural area located east of I-75 serves as a buffer between urban intensities to the west and the rural areas to the east. It is intended that this area provide residents with the opportunity of an "estate" type lifestyle while being relatively close to urban amenities and not as a "holding zone" for future urban encroachment.

Semi-Rural areas to the west and south of I-75 are also designated as Future Urban areas and are intended to provide transition to Future Urban uses. Prior to the designation of these areas as Urban, they may also develop at a maximum density of one unit per two acres.

Rural

The vast majority of the unincorporated County is designated "Rural". The function of this Rural area is protection of agriculture; maintenance of large expanses of open space; and the conservation of native habitats. Residential uses are limited to single-family homes and will be accompanied by sufficient open space to ensure compliance with the stated function of this area. The Rural area to the east of I-75 is not intended to develop to urban or semi-rural intensity and most urban services will

not be available. Rural areas may develop at a maximum density of one dwelling unit per five acres. Rural areas to the west and south of I-75, designated for Future Urban uses, may develop at the same rural density until such time as they are designated Urban.

Barrier Islands

Development on the Barrier Islands is of special concern due to problems associated with hurricane evacuation, potential for storm damage and the sensitive nature of coastal habitats (see Environment Chapter). Previously it was recognized that total preservation or conservation of the Barrier Islands was preferable, but development of one dwelling unit per acre was acceptable, consistent with development patterns on Manasota and Casey Key. Higher densities found on Siesta Key were recognized yet prohibited from further increases as was evidenced from the 1979 Planning Department Study and subsequent down zoning in 1982, consistent with Apoxsee.

On the "Future Land Use Plan Map", the Barrier Islands are represented as a homogenous land use classification to underscore the special considerations attendant with any future development or redevelopment. The future distribution, extent and location of generalized land uses is not portrayed for the Barrier Islands because it is the continued policy of Sarasota County that the intensity of future development not exceed that allowed by existing zoning. Thus future land use on the Barrier Islands will remain essentially the same as the existing land use shown on Figure 65.

Concern for the future development and redevelopment of the Barrier Islands warrants special consideration which necessitates treating the Barrier Islands separate from the urban areas. Thus, the reduction of densities on the Barrier Islands is encouraged particularly in locations where the number of platted lots of record or the underlying zoning is more intense than the existing use. The Plan recognizes that there are vested rights attendant in both of these situations with the provision of establishing a Barrier Island Sending Zone to facilitate the transfer of these development rights.

Public Resource Lands

The major land holdings in public ownership in the County consist of the Myakka River State Park, the Walton Tract, Ringling MacArthur Reserve (RMR), and Oscar Scherer State Recreation Area. These areas have been designated as Public Resource Lands on the "Future Land Use Plan Map". The management and development of the State Park and the Recreation Area are under State authority, while detailed management plans for the Walton Tract and RMR will be adopted by the County. In conjunction with the development of a portion of these two County-owned properties as a waste disposal complex and potable water supply, respectively, substantial acreage is to be preserved to provide for wildlife corridors, wetland protection, buffering zones, recreation, education, and open space uses. It is critical that any development within, and adjacent to, these Public Resource Lands be compatible with their inherent environmental values as well as the public values ascribed to them. The management plans to be adopted for the Walton Tract and RMR will address this issue. Policies in the Environment and Future Land Use Plans provide the direction to develop guidelines which regulate the development of property adjacent to Public Resource Lands in order to buffer and protect these areas from incompatible land uses.

Major Employment Center

The concept of Major Employment Centers (MEC) represents an expansion of the designated industrial area concept of the 1981 Land Use Plan. By establishing Major Employment Centers, the County acknowledges the benefits of economic diversification. Major Employment Centers would include, but not be limited to, light industrial, wholesale, manufacturing and assembly uses, warehousing, offices and combinations of the above uses. Accessory commercial activities within Major Employment Centers are limited to the sale of merchandise produced, manufactured or distributed within that center. Additionally, Major Employment Centers could provide internal retail and service needs for the employees. To ensure viability of a new MEC, areas should involve a

parcel or parcels with a cumulative acreage of 100 acres or greater. The MEC use and site design requirements should be further defined through the update of the County's Zoning Ordinance. Additionally, any available targeting and expansion studies should be used to help define appropriate uses within MEC's which would provide improved economic diversification for Sarasota County.

MEC can be further refined as being either Class A or Class B quality type development. Class A development are those establishments which are developed in a coordinated manner with architecturally significant buildings, and in a park-like setting with substantial amounts of open space and buffers. Conversely, Class B development typically has not been developed in a coordinated and cohesive manner. Class A development is the preferred type of development within the MEC designations of the I-75 Corridor. Limiting MEC acreage designations along I-75 to Class A development would serve to improve the appearance and image of I-75 and reserve roadway capacity at or near the interchange areas for uses more directly dependent on the Interstate for their viability.

Major Employment Centers have specific locational needs in order to ensure their viability. These Centers should:

- be located within easy commuting distance from the labor pool;
- be located along major transportation (and transit) routes;
- possess adequate levels of community facilities and infrastructure;
- be located on large parcels to ensure coordinated development and buffering;
- be located adjacent to compatible land uses (which are compatible with the economic, social and environmental goals of the community); and
- protect appropriately designated non-retail employment areas from the encroachment of incompatible land uses.

Interstate Regional Office Park

Interstate Regional Office Park (IROP) is a refinement of the MEC concept which primarily involves Class A pure office and high technology research and development uses incorporated into a park-like setting. IROP's derive maximum benefit from both visual and physical access to the Interstate. In addition, IROP's would assist in economic diversification and stability for Sarasota County by providing additional employment opportunities. Limited freestanding support uses may be allowed in designated MEC/IROP areas if the MEC-type support uses are located in discrete, buffered areas, separate from the IROP uses and less visible from the Interstate and its major crossroads. To ensure compatibility with the IROP uses, these support uses should also be Class A development integrated and coordinated with the park-like setting. The permitted uses and performance standards for MEC/IROP's should be determined through amendments to the County's Zoning Ordinance such as the establishment of a new IROP zoning district.

Interstate Regional Office Parks have specific locational needs in order to ensure their viability. These IROP's should:

- derive maximum benefit from visual and physical access to the Interstate;
- not serve as an impetus to urban development beyond the designated Urban area;
- be compatible with existing and other planned land uses within or adjacent to I-75;
- compliment and not adversely impact the function of adjacent designated Commercial Highway Interchanges;
- have direct access to regional transportation links to serve regional or national markets;
- be dependent upon close proximity to the Interstate;
- be located on large parcels exceeding 100 acres to ensure coordinated development and buffering;

- be developed in a planned, unified manner which provides a park-like setting, maximizes the provision of open space, utilizes high quality design and aesthetic standards;
- be readily supplied with necessary infrastructure;
- be able to maximize labor supply opportunities;
- be in proximity to available affordable housing stock for employees; and
- be located within reasonable travel times and distances for employees.

Planning Concerns

Floodplains and Watersheds

Development in floodplains creates concerns that go beyond the protection of structures. Increased intensity of development in floodplains and watersheds can:

- decrease the amount of permeable land while increasing impermeable surface;
- reduce natural flood storage capacity;
- increase the potential for pollutants entering surface and groundwater systems;
- increase the number of persons threatened by flooding, thereby increasing the problems associated with evacuation and shelter;
- require expensive, complex and often difficult to maintain mitigation measures (e.g. artificial stormwater detention/retention areas, water quality monitoring programs); and
- increase the cost of potable water due to increased cost of treating lower quality raw water.

More detailed discussions of these potential problems are provided in the Environment and Public Facilities Chapters.

Englewood

In 1981, Apoxsee recognized Englewood as one of four urban areas as well as an Area of Special Concern. The designation of Special Concern was due to its unique nature of being highly urbanized while remaining unincorporated and its bisection by the Sarasota/Charlotte County line. As a result, Future Land Use Plan General Program 11 called for the preparation of a Sector Plan for the Englewood area.

In 1984, the Board of County Commissioners initiated the first step toward the preparation of Englewood's Sector Plan by appointing the Englewood Citizen's Advisory Committee (CAC). In July, 1984 the Board directed Staff to begin the Sector Plan Boundaries and Criteria in April, 1985. The County hired a consultant to prepare the Sector Plan and, under Staff supervision, filed Sector Plan Petition No. 85-1-SP in July, 1986. In September, 1986 the Planning Commission recommended approval of the Sector Plan and in October, 1986 the Board of County Commissioners passed Resolution No. 86-480 adopting the Englewood Sector Plan.

Under the Englewood Sector Plan's Conditions of Approval, several Comprehensive Plan amendments were identified to help implement the Sector Plan. These amendments were mandated to be initiated by the County and were adopted by Ordinance No. 87-07 in May, 1987. They include:

- designation of two Village Activity Centers, one in the vicinity of Elm Street and S.R. 775, and the other at the intersection of Pine Street, Dearborn Street, and River Road;
- designation of an Industrial area at River Road, northeast of the River Road Village Activity Center;
- redesignation of a 312 acre Extra Urban Enclave to Semi-Rural;
- extension of Artist Avenue from S.R. 775 to River Road, through the River Road Village Activity Center, and its further extension to Winchester Boulevard;

- extension of Gissenger Street to the Pine Street extension and on to S.R. 775 at the Elm Street and S.R. 775 Village Activity Center; and
- the reassignment of funding for improvements from Manasota Beach Road to improvements for McCall Road in the same 1996-2000 Capital Improvements Program timeblock.

Contained within the Sector Plan, and also within Staff's analysis and recommendation for approval of the Sector Plan, are specific implementation techniques designed to further the overall goals and objectives of the plan. The Sector Plan calls for the Town Center to become the focal point of Englewood's urban center with an orientation towards Lemon Bay. This would be accomplished through the promotion of waterfront/retail at the Town Center's bayfront as well as a nautical design theme throughout the entire Town Center. The design theme could be emphasized through adoption of an urban design plan for the area in addition to a special zoning district emphasizing design and development standards which mandate specific design criteria.

An additional implementation option for the Englewood community is that of considering integration of a Community Redevelopment Agency, under Chapter 163.330, Florida Statutes, with the other implementing tools. The authority given to this public body would allow it to exercise certain powers, including the ability to determine which areas qualify for community redevelopment; the ability to grant final approval and modification to community development plans; the ability to issue revenue bonds; and the ability to approve acquisition, demolition, removal, or disposal of property and the power to bear loss.

Since no site specific planning has occurred within either of the Activity Centers, the Sector Plan mandates that the County prepare Sector Plans for each of the Activity Centers at such time when future commercial development warrants such study. The Planning Department has scheduled the Pine Street, Dearborn Street, and River Road

Village Activity Center for a Sector Plan beginning in early 1989. The Elm Street and S.R. 775 Village Activity Center is scheduled for study in FY1990-1991.

I-75

I-75 was constructed during the early 1980's as a limited access facility with the intent of serving high speed, high volume inter-regional travel to and through Sarasota County. The construction of I-75 provides access to regional and national markets vital for business development within Sarasota County. I-75 also provides a first impression to visitors of the community which is important to the tourism industry. Future land uses within the I-75 Corridor would include additional housing, employment opportunities, hospitality, community services and retail commercial uses needed to accommodate future population growth within the County. Therefore, well-managed planned development within the I-75 Corridor is essential to maintain the Interstate as a safe and efficient thoroughfare, enhance the positive image of I-75, and maintain the economic livelihood and well-being of the community.

An areawide planning process should be established and implemented for the I-75 Corridor. This Corridor planning process would serve to manage and direct future development while maintaining the environmental integrity, economic potential, function and image of the I-75 Corridor area. The objectives for this Corridor planning effort should be derived from the Goals, Objectives and Policies of *Apoxsee*, but incorporate other related factors which specifically affect development along I-75. These components should include, but not be limited to, the following:

- Investigate options to achieve a diversified and stable economy while maintaining the quality of life through wise distribution of compatible land uses within the I-75 Corridor;
- Designate future land uses in the I-75 Corridor based on demand projections and the unique opportunities presented within the Corridor for economic development, diversity and integration of land uses;

- Ensure that future development is coordinated with the preservation, conservation or enhancement of viable natural systems;
- Ensure that future development within the I-75 Corridor is coordinated with the provision of a safe, convenient, and efficient traffic circulation system;
- Ensure that the provision of potable water, sanitary sewer, solid waste, recreational facilities, and emergency services are coordinated with land development concurrent with availability and adequate capacity; and
- Enhance the visual quality and image of the I-75 Corridor and the overall perception of the adjacent communities.

Planning Techniques

Several planning techniques have been developed in Apoxsee to guide land use decisions. These techniques include the Critical Area Planning Study Program, the Urban Area Residential Checklist and Urban Area Residential Density Matrix contained in the Guiding Principles (retained from the 1981 Apoxsee and refined), and the Functional Classification of Activity Centers contained in the Guiding Principles. In conjunction with levels of service for major facilities, these techniques are intended to control land uses and intensities. Other County land use regulations, including the Zoning Ordinance and Land Development Regulations due to be updated no later than October 1, 1989, will supplement these techniques.

Critical Area Planning Study Program

The intent of the Critical Area Planning Study Program is to develop additional guidelines for specific critical areas of concern in order to ensure compatibility with the Goals, Objectives and Policies of Apoxsee. These areas would include but not be limited to Activity Centers, Commercial Corridors, blighted, declining or transitional neighborhoods, I-75, I-75 interchanges, I-75 connector

roads and other arterials included in the Primary Components of the Apoxsee Traffic Circulation Chapter, the Barrier Islands, Major Employment Centers, Major Employment Centers/Interstate Regional Office Parks, designated Future Urban areas, large tracts of land under common ownership, Englewood or other areas determined appropriate by the Board of County Commissioners. The additional planning for these areas is important because the unique nature of these areas requires treatment separate from traditional planning techniques. These Critical Area Plans are intended to provide a bridge between the general characteristics of the Comprehensive Plan and the specific nature of the land development procedures (e.g., Land Development Regulations, Zoning Ordinance).

The Plans assist in formulating desirable land use distribution and allocation consistent with an analysis of the areas' constraints and opportunities and provide mechanisms to influence the timing of future development and redevelopment on an areawide basis. This planning approach is appropriate because these areawide assessments provide a mechanism to assess impacts on a cumulative basis rather than a site specific, fragmented basis.

This areawide approach is well suited to ensure coordinated planning for large tracts of land under common ownership or unified control. This would allow for systemwide approaches to planning to guide the development approval process (e.g., drainage, habitat, transportation).

An integral part of these Plans would include urban design. While a community's physical foundation is established through its infrastructure, the character, perception image and values are portrayed through enhancement of its natural and aesthetic environment. Additional advantages in formulating these Plans allow for opportunities to establish neighborhood and community identity and cohesiveness through coordinated urban design and development solutions.

Adoption of Critical Area Plans will not automatically assure development approval but provide additional guidelines for development review. Just as all developments shall be consistent with Apoxsee, developments shall likewise be consistent with adopted Critical Area Plans, as appropriate.

There are four major types of plans in the Critical Area Planning Study Program:

- **Corridor Plans:** provide urban design criteria, address land use allocation, distribution and compatibility issues, address transportation needs focusing on access and circulation, providing for other urban services and assessment of development impact.
- **Commercial Corridor Plans:** are designed to develop coordinated plans and establish boundaries for commercial infill, compatibility with adjacent land uses, neighborhood preservation, consolidation of parcels and redevelopment strategies.
- **Sector Plans:** determine appropriate allocation and distribution of land use and impact analysis in Activity Centers, Major Employment Centers, Major Employment Centers/Interstate Regional Office Parks, I-75 Interchanges, large tracts of land, and other areas deemed appropriate by the Board of County Commissioners.
- **Community and Neighborhood Revitalization and Redevelopment Plans:** provide a master plan for community facilities, infrastructure needs and where necessary, housing rehabilitation, redevelopment, community identity and cohesiveness.

In order to ensure the successful implementation of the Critical Area Planning Study Program, there must be assurances that planning for identified critical areas of concern will be addressed on a priority basis. This would be accomplished by developing a five-year schedule identifying the most immediate concerns and setting priorities for the completion of plans addressing those concerns. The five-year Critical Area Planning Study schedule would be adopted by the Sarasota County Board of County Commissioners and reviewed

on an annual basis. To ensure that the private sector is afforded an opportunity to participate in this planning program and that landowners are given a reasonable opportunity to initiate planning for their property, the private sector may be allowed to prepare Critical Area Planning Studies. A decision to allow the private sector to prepare a Critical Area Planning Study would be made by the Board of County Commissioners.

Urban Area Residential Checklist and Urban Area Residential Density Matrix

The 1981 Apoxsee Land Use Plan used concentric "intensity bands", centered on Town and Community Activity Centers to guide the maximum allowable density in urban areas, with the greatest residential densities closest to the Centers; successive bands had decreasing density. In combination with an Urban Area Residential Checklist, providing locational and infrastructure criteria, and an Urban Area Residential Intensity Matrix (the Apoxsee "Point System"), the bands served to determine the maximum allowable residential density for property in the designated Urban area.

The revised Urban Area Residential Density Matrix contained in the Guiding Principles represents a refinement of the land use strategy used in the 1981 Land Use Plan in that the bands are no longer necessary, and infrastructure adequacy concerns are addressed through Levels of Service analysis. Use of the bands has encouraged infill of vacant parcels near the major Activity Centers. However, continued use of the band concept will not direct growth into areas wherein Level of Service requirement can most cost effectively be met. For example, retrofitting of infrastructure in developed areas is usually more expensive than a logical expansion of infrastructure into developing areas. Continued use of the bands could also, inadvertently, encourage intensification of development in floodprone coastal areas.

The revised Urban Area Residential Checklist and Urban Area Residential Density Matrix (i.e., the "Point System") contained in the Guiding Principles are used to guide, in part, the determination

of residential densities in designated Urban areas, and to distribute densities to the most appropriate locations within those areas. Points are awarded for locational and facilities/services criteria and for the provision of affordable housing. Locational criteria include:

- Proximity to a designated Activity Center, Commercial Corridor or Major Employment Center (including Major Employment Center/Interstate Regional Office Park);
- Vehicular access to arterials; and
- Proximity to an existing mass transit route.

Facilities/Service criteria, (after Level of Service requirements are met) include:

- Level of fire protection; and
- Inclusion in an existing central water and sewer franchise area with adequate capacity.

Points for the provision of affordable housing are awarded for:

- Developments in which a portion of the units meet affordable housing standards; and
- Bonus points may be awarded to developments which provide additional very low or low income housing.

Additionally, bonus points may be awarded for:

- Proximity to schools; and
- Proximity to public parks.

The point system is designed to provide an average density of 3 units per acre in Urban areas and 2 units per acre in the Urban Enclave. Under the point system, urban densities could range from 1 to 13 units per acre; however, only those developments which are located adjacent to Town Centers, Regional Activity Centers or Major Employment Centers, which are in close proximity to a major arterial, which are also adequately served by public utilities and which provide a minimum of 30 percent of the development for moderate, lower or very low income housing could approach the 13 unit per acre maximum. Higher

density developments will be restricted to those locations in the Urban area best able to support them, and densities greater than 6 units per acre permitted only if affordable housing is provided.

Levels of service will also affect achievable densities. The maximum density allowed on a property under the point system could not be built if the number of units at that density would negatively impact an adopted Level of Service standard. Development, in such a situation, could be delayed, phased or built at lower densities to avoid negative impacts on levels of service.

Functional Classification of Activity Centers

The Functional Classification of Activity Centers contained in the Guiding Principles is designed to ensure that future commercial development or redevelopment is consistent with the Comprehensive Plan. It defines four levels of commercial development by role and function, as well as by size, service area, and service population. These Activity Centers are: Neighborhood, Village, Community, and Regional, in increasing order of size.

The uses and activities which are permitted within any type of Activity Center will depend on their consistency with the role and function of that center. When the Sarasota Zoning Ordinance is updated, new zoning districts may be developed for each Activity Center type, or the existing zoning districts may be revised to ensure that permitted uses are appropriate to the function of each Activity Center type. Until such new districts are developed, or revisions are made to the existing districts, the current zoning districts most compatible with the type of Activity Center, as indicated in Table 66, will be used.

In all Activity Centers, multi-family housing will be considered appropriate, allowing for a transition in intensity of use between commercial and lower density residential uses.

Table 66: Activity Centers Related to Sarasota County Zoning Districts

Activity Center	Acreage	RMF	GU	OPI	CSC	CI	CG	CN
Regional	Variable Size	X	X	X	X	X	X	X
Community	75-125 acres	X	X	X	X	X	X	X
Village	10-75 acres	X		X	X		X	X
Neighborhood	2-10 acres	X		X	X			X

RMF - Residential, Multiple Family

GU - Government Use

OPI - Office, Professional, and Institutional

CI - Commercial Intensive

CG - Commercial General

CN - Commercial Neighborhood

Note: For requirements of each of the above zoning districts, see the Zoning Ordinance for Sarasota County, Florida.

Source: Sarasota County Planning Department, 1988.

Future Land Use Plan

Goal 1

It shall be the Goal of Sarasota County to achieve a high-quality living environment through a wise distribution of compatible land use patterns, to preserve, protect and restore the integrity of the natural environment and historic resources of the County, and to meet the social and economic needs of Sarasota County residents.

Objective 1.1

To protect environmentally sensitive lands, conserve natural resources and maintain open space.

Policy 1.1.1.

All development proposals must conform to the appropriate portions of the Environment Chapter's Primary Components and Guiding Principles before such proposals can be considered to be consistent with the Future Land Use Plan.

Policy 1.1.2.

All development within the Coastal High Hazard Areas shall be consistent with the appropriate Goals, Objectives and Policies of the Environment Chapter.

Policy 1.1.3.

Development proposals within the watershed of an existing public potable surface water supply shall provide reasonable assurance, prior to the approval of such development, that the development will not degrade the quality of such water supply for potable use. In the development and application of necessary regulations and mitigation measures to protect public potable surface water supplies, Sarasota County shall coordinate with jurisdictions whose public potable surface water supplies could be affected.

Policy 1.1.4.

Development proposals within the 100-year floodplain of the Myakka River shall provide reasonable assurance, prior to the approval of such development, that the development will not degrade the water quality and floodplain functions and values of the Myakka River.

Objective 1.2

To acquire and protect Public Resource Lands.

Policy 1.2.1.

Sarasota County shall attempt to coordinate efforts to acquire public lands for conservation, preservation, and open space.

Policy 1.2.2.

Provide for the adequate buffering of Public Resource Lands from potentially incompatible adjacent land uses.

Policy 1.2.3.

Permit normal management practices associated with native habitats such as controlled burning within Public Resource Lands.

Objective 1.3

To protect historic architectural and archeological resources.

Policy 1.3.1.

All development and redevelopment shall be consistent with the Primary Components of the Historic Preservation Chapter.

Objective 1.4

To ensure that unique development opportunities and constraints are assessed through detailed planning of Critical Areas of Concern.

Policy 1.4.1.

Critical Areas of Concern requiring further planning shall include but not be limited to Activity Centers, Commercial Corridors, blighted, declining or transitional neighborhoods, I-75, I-75 interchanges, I-75 connector roads and other arterials included in the Primary Components of the Traffic Circulation Chapter, the Barrier Islands, Major Employment Centers, Major Employment Centers/Interstate Regional Office Parks, designated Future Urban areas, large tracts of land under common ownership, Englewood or other areas determined appropriate by the Board of County Commissioners.

Policy 1.4.2.

A Critical Area Planning Study Program shall be established and implemented by the County with priorities established for County initiated plans through a five-year program reviewed and updated annually by the Board of County Commissioners. Private sector initiated plans may be prepared if authorized by the Board of County Commissioners.

Policy 1.4.3.

The Sector Plan Program shall be updated and implemented to determine the appropriate allocation and distribution of land uses and associated impacts in Critical Areas of Concern.

Policy 1.4.4.

The Corridor Plan Program shall be developed and implemented to provide urban design criteria, address traffic circulation and access and future land use and impact assessment for arterial roadways.

Policy 1.4.5.

The Commercial Corridor Plan Program shall be developed and implemented for designated segments of arterial roadways consistent with Policies 1.8.4. and 1.8.5.

Policy 1.4.6.

The Community and Neighborhood Revitalization and Redevelopment Plan Program shall be developed and implemented to establish a framework for future land use patterns, infrastructure needs, and housing rehabilitation.

Policy 1.4.7.

Until such time as the guidelines for the various Critical Area Studies identified in Policies 1.4.3., 1.4.4. and 1.4.6. above are established and implemented, these studies shall be processed under the guidelines of Ordinance No. 84-57, as amended.

Objective 1.5

To protect established residential neighborhoods and to promote the development of compatible land use patterns.

Policy 1.5.1.

Land uses which are potentially incompatible either due to type of use or intensity of use, shall be buffered from one another through the provision of open space, landscaping, berms, site design or other suitable means.

Policy 1.5.2.

Where the application of such measures as identified in Policy 1.5.1. cannot mitigate the incompatibility between proposed and existing land uses, the proposed use shall be discouraged.

Policy 1.5.3.

In established residential areas, land uses shall be discouraged if non-residential traffic is generated on local streets in amounts that would adversely affect traffic flow, traffic control and public safety.

Policy 1.5.4.

Signage controls shall be evaluated and implemented through the Sarasota County Zoning Ordinance and the Critical Area Planning Study Program.

Policy 1.5.5.

Urban design strategies shall be encouraged to functionally and aesthetically integrate existing and future land uses within Critical Areas of Concern, improve land use compatibility, enhance neighborhood and community identity, promote highway beautification as well as provide noise abatement, light and air pollution control within heavy traffic areas. Urban design programs shall be implemented as part of the Critical Area Planning Study Program or other studies authorized by the Board of County Commissioners.

Policy 1.5.6.

Protect existing neighborhoods from the encroachment of undesirable or incompatible uses.

Objective 1.6

To establish areas which provide for the appropriate distribution of land uses.

Policy 1.6.1.

The primary function of the Urban area, including the Urban Enclave, as designated on the "Future Land Use Plan Map" shall be to contain urban sprawl, to economically provide for public facilities and services, and to provide for the efficient use of land while providing for the retention of adequate levels of open space consistent with the character of Sarasota County.

Policy 1.6.2.

The primary functions of the Semi-Rural area, as designated on the "Future Land Use Plan Map", shall be to provide for residential development at an intensity that serves as a transition between urban and rural land uses, to protect native habitats and maintain open space, and to allow for the continuation of existing agricultural uses.

Policy 1.6.3.

The primary functions of the Rural area, as designated on the "Future Land Use Plan Map", shall be to preserve agricultural lands, maintain open space, and protect native habitats.

Policy 1.6.4.

Barrier Islands are designated on the "Future Land Use Plan Map" to recognize existing land use patterns and to provide a basis for hurricane evacuation planning and disaster mitigation efforts. The intensity of future development on the Barrier Islands of Sarasota County shall not exceed that allowed by existing zoning.

Policy 1.6.5.

The primary functions of the Future Urban areas, as designated on the "Future Land Use Plan Map", shall be to designate sufficient land areas to meet the projected residential needs of Sarasota County beyond the year 2000. When appropriate portions of the Future Urban areas on the "Future Land Use Plan Map" are designated as Urban during updates of the Future Land Use Plan, development must be based upon the assurance that the level of service specified in the Comprehensive Plan for public facilities and services is available.

Objective 1.7

To ensure that sufficient residential acreage is reserved to effectively manage and direct the projected population growth upon which Apoxsee is based.

Policy 1.7.1.

Residential development with an overall density greater than one dwelling unit per acre shall be confined to the Urban areas, including the Urban Enclave, as designated on the "Future Land Use Plan Map".

Policy 1.7.2.

The Urban Area Residential Checklist and Urban Area Residential Density Matrix contained in the Guiding Principles shall be used to guide, in part, the determination of residential densities in the following situations:

- during the review of a rezoning petition initiated by a property owner or his agent;
- during the review of a Development of Regional Impact (DRI), pursuant to Chapter 380, Florida Statutes; and
- during the preparation of Critical Area Study Plans.

Policy 1.7.3.

Residential development in the Urban areas, including the Urban Enclave, shall be most concentrated adjacent to Activity Centers, Major Employment Centers, Major Employment Centers/Interstate Regional Office Parks, Commercial Corridors and arterials, as designated on the "Future Land Use Plan Map". The level of concentration (density) shall be guided in part by the use of the Urban Area Residential Checklist and Urban Area Residential Density Matrix contained in the Guiding Principles.

Policy 1.7.4.

Residential development in the Semi-Rural area shall have a maximum density of one dwelling unit per two acres.

Policy 1.7.5.

Residential development in the Rural area shall have a maximum density of one dwelling unit per five acres.

Policy 1.7.6.

Residential development in the Future Urban area shall have a maximum density of the underlying land use area, i.e., Semi-Rural or Rural, until such time as it is designated and included in the Urban area.

Policy 1.7.7.

Encourage the reduction of density and intensity on the Barrier Islands, including the vacation of platted lots-of-record, while protecting private property rights through the use of Transfer of Development Rights and the establishment of a Barrier Island Sending Zone.

Policy 1.7.8.

Residential development within the adopted Coastal High Hazard Area shall conform to the following:

- In the event that a residential structure located within the adopted Coastal High Hazard Area is voluntarily destroyed, or destroyed by natural forces, the redevelopment of said property must conform to the underlying zoning;
- The provisions of this Policy shall not be construed as restricting the rebuilding of a single family residence on an existing lot-of-record, provided that such property meets all requirements pertaining to construction in the Coastal High Hazard Area; and
- In the event that natural forces render a property located in the Coastal High Hazard Area unbuildable, or reduce the development potential of a property as allowed by the prior acreage and the underlying zone district, utilization of the Transfer of Development Rights concept will be encouraged. Development Rights, in such cases, shall be determined based upon pre-disaster conditions.

Objective 1.8

To ensure that sufficient acreage for commercial, office and professional uses is reserved at appropriate locations to meet the needs of the projected population upon which Apoxsee is based.

Policy 1.8.1.

The development of Commercial Activity Centers located in the Urban areas, as designated on the "Future Land Use Plan Map" shall be guided by the Functional Classification of Activity Centers contained in the Guiding Principles. No Activity Centers shall be located in the designated Urban Enclave.

Policy 1.8.2.

Until such time as the Sarasota County Zoning Code has been amended to include zoning districts consistent with the Functional Classification of Activity Centers contained in the Guiding Principles, Table 66 shall be used to determine suitable land uses in designated Activity Centers.

Policy 1.8.3.

Commercial uses at Interstate interchanges shall be limited to those interchange quadrants to the west or south of I-75, as designated on the "Future Land Use Plan Map" and designed to meet the needs of the traveling public.

Policy 1.8.4.

The development of commercial, office, community facility and multi-family residential uses in Commercial Corridors, as designated on the "Future Land Use Plan Map", may be permitted. Until such time as Critical Area Study Plans are adopted for Commercial Corridors, a case by case examination for compatibility between land uses and consistency with the Primary Components of the Comprehensive Plan shall guide land use decisions within the corridor areas.

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

Policy 1.8.5.

Critical Area Study Plans shall be developed for Commercial Corridors. The primary intent of these studies will be:

- to define the boundaries of the corridor area;
- to adopt standards for development and redevelopment within the corridor area including, but not limited to, unified access controls, signage and landscaping standards, and minimum parcel sizes for land uses;
- to identify potential land use compatibility conflicts and practical mitigation measures to reduce or eliminate identified conflicts;
- to examine level of service opportunities and constraints for potential land use changes and development within the corridor areas; and
- to achieve other such planning objectives as the Board of County Commissioners may direct.

Policy 1.8.6

All commercial development located outside of Commercial Enclaves pursuant to Policy 1.8.9., shall be consistent with the appropriate Sector or Corridor Plan adopted for the subject area and shall be limited to those areas designated as Commercial Activity Centers, Commercial Corridors, Commercial Interchanges, or Future Commercial on the "Future Land Use Plan Map".

Policy 1.8.7.

In the Semi-Rural area, convenience-oriented commercial uses which serve the daily needs of nearby residents may be permitted only on collector roads provided that such uses are located on a maximum parcel size of two acres and that no other commercial uses are located within a two mile radius.

Policy 1.8.8.

The rezoning of additional lands on the Barrier Islands for commercial or office uses shall be prohibited.

Policy 1.8.9.

Commercial Enclaves are recognized in order to vest existing commercial/office zoning and developments which lie outside of Activity Centers, Commercial Corridors, Commercial Interchange areas and Future Commercial areas. These Commercial Enclaves shall not be expanded beyond their existing zone district boundaries and zoning changes to other commercial or office categories shall be prohibited.

Policy 1.8.10.

The rezoning of land within the Future Activity Center designations to commercial uses shall only be considered at such time as the Future Urban areas within which they are located are determined to be, by amendment to this Plan, included in the designated Urban area.

Objective 1.9

To ensure that sufficient acreage for Major Employment Center uses and Interstate Regional Office Parks is reserved at appropriate locations to meet the economic and employment needs of the projected population upon which Apoxsee is based.

Policy 1.9.1.

Major Employment Centers and Major Employment Centers/Interstate Regional Office Parks shall be limited to those areas so designated on the "Future Land Use Plan Map."

Policy 1.9.2.

All development activity occurring within Major Employment Centers or Major Employment Centers/Interstate Regional Office Parks, as designated on the "Future Land Use Plan Map", shall be consistent with the appropriate Critical Area Plan adopted for the subject area.

Policy 1.9.3.

The development of planned office parks and high technology research and development centers serving regional and national markets shall be encouraged within the Major Employment Center/Interstate Regional Office Park designations on the "Future Land Use Plan Map", provided however that the timing, location and specific siting requirements of such development adjacent to I-75 shall be subject to the provisions of the I-75 Corridor Study Plan and further Critical Area Planning Studies.

Policy 1.9.4.

The coordinated development of industrial, commercial, service and government uses within a park-like setting shall be encouraged in designated Major Employment Centers. Class A quality type development shall be encouraged in designated Major Employment Centers, particularly along I-75.

Policy 1.9.5.

A zoning district shall be developed to implement the Interstate Regional Office Park development concept. This zoning district, when adopted, shall only be applied to Major Employment Center/Interstate Regional Office Park designations on the "Future Land Use Plan Map" which are located along the I-75 Corridor. Additionally, the Major Employment Center concept shall be further defined through the update of the County's Zoning Ordinance.

Policy 1.9.6.

Industrial Enclaves are recognized in order to vest existing industrial zoning and development which lie outside of Major Employment Centers. These Industrial Enclaves shall not be expanded beyond their existing zone district boundaries and zoning changes to other industrial categories shall be prohibited.

Objective 1.10

To provide for the development of community facilities to meet the needs of the projected population upon which Apoxsee is based.

Policy 1.10.1.

Development of institutional, governmental, transportation, recreational, cultural, communication and utility facilities shall generally be limited to the Urban area, as designated on the "Future Land Use Plan Map". The scale of such facilities should be related to surrounding land uses and designed to preserve the character of residential neighborhoods, when so located. Community facility uses are encouraged to locate along collector or arterial roadways, when possible.

Policy 1.10.2.

The provisions of Policy 1.10.1. notwithstanding, it may be deemed to be in the best interest of public health, safety and welfare to provide community facilities in locations which are potentially incompatible with adjacent land uses. In such cases, the provisions of Policy 1.5.1. will be applied.

Policy 1.10.3.

The development of institutional, governmental, transportation, recreational, cultural, communication and utility facilities shall be permitted in the Rural or Semi-Rural areas, as designated on the "Future Land Use Plan Map", only when such development provides regional services, or is incompatible with urban uses or serves the existing needs of the immediate area in which it is located.

Objective 1.11

To preserve and protect agricultural lands.

Policy 1.11.1.

Within the Rural area, as designated on the "Future Land Use Plan Map", the approval of residential development shall acknowledge that the preservation of agricultural lands is a primary function of the Rural area, and that land management activities associated with agricultural uses may be incompatible with residential development. However, such management activities are considered to be an essential element of the preservation of successful operations on agricultural lands and the continuation of such activities shall take precedence.

Policy 1.11.2.

Within the Semi-Rural area, as designated on the "Future Land Use Plan Map", the continuation of existing agricultural uses shall be allowed and shall not be deemed incompatible with existing or subsequent adjacent or nearby residential uses. However, the expansion of such agricultural uses shall utilize appropriate techniques for furthering compatibility with existing residential uses.

Objective 1.12

To ensure that adequate public facilities are available concurrent with the impact of development.

Policy 1.12.1.

The approval of all development orders shall be subject to the availability of adequate levels of service for roads, potable water, sanitary sewer, solid waste, drainage and parks, as defined by the level of service standards contained in the Capital Improvements Chapter.

Guiding Principles

Urban Area Residential Checklist

1. PROXIMITY TO A DESIGNATED ACTIVITY CENTER, COMMERCIAL CORRIDOR OR MAJOR EMPLOYMENT CENTER

That portion of any property within the following stated distance of a Commercial Activity Center, Commercial Corridor or Major Employment Center (including Major Employment Center/Interstate Regional Office Park) designation on the "Future Land Use Plan Map, Sarasota County - 2010":

	Activity Center				Commercial Corridor	Major Employment Center
	Regional	Community	Village	Neighborhood		
a) 1/8 mile	25	25	20	10	20	25
b) 1/4 mile	25	25	20	10	15	25
c) 1/2 mile	20	20	15	5	10	20
d) 3/4 mile	15	15	10	0	5	15
e) 1 mile	10	10	5	0	0	10

2. VEHICULAR ACCESS TO AN ARTERIAL

That portion of any property within the following stated distance of a major roadway as identified on Figure 42: Year 2010 Future Thoroughfare Plan (Functional Classification):

a) within 1/4 mile of an arterial	25 points
b) within 1/2 mile of an arterial	15 points
c) within 1/8 mile of a collector, within one mile of an arterial	15 points
d) within 1/8 mile of a collector, greater than one mile from an arterial	10 points
e) less than 2 miles from an arterial via local roads	5 points

3. MASS TRANSIT

That portion of any property within 1/4 mile of an existing transit route on an arterial 5 points

4. FIRE PROTECTION

That portion of any property within a fire district having a rating of 6 or better 5 points

5. WATER SUPPLY

Within an existing central system/franchise area meeting County water quality standards with adequate capacity to serve proposed development 5 points

6. SEWER SERVICE

Within an existing wastewater treatment franchise area having a treatment capacity of at least .1 mgd, with adequate reserve capacity and meeting County standards to serve proposed development 5 points

7. AFFORDABLE HOUSING*

- a) 100 percent of units in moderate, lower, or very low income housing 30 points
- b) 30 percent of units in moderate, lower, or very low income housing 20 points
- c) 20 percent of units in moderate, lower, or very low income housing 15 points
- d) 10 percent of units in moderate, lower, or very low income housing 10 points

Bonus Points

Additional bonus points may be possible under the following conditions:

1. ACCESS TO PUBLIC PRIMARY AND SECONDARY SCHOOLS

That portion of any property:

- a) within 1/2 mile radius of an existing school and linked by sidewalks and/or bicycle paths 5 points
- b) within 1/2 mile radius of an existing school without sidewalks or bicycle paths 4 points
- c) within 1/2 mile radius of a school site 2 points
- d) within one mile radius of an existing school linked by sidewalks and/or bicycle paths 4 points
- e) within one mile radius of an existing school without sidewalks or bicycle paths 2 points
- f) within one mile radius of a school site 1 point

2. PROXIMITY TO PUBLIC PARKS (10 ACRE MINIMUM)

That portion of any property:

- a) within 1/2 mile radius of a developed park without crossing an arterial or collector 5 points
- b) within 1/2 mile radius of a developed park crossing an arterial or collector 3 points
- c) within one mile radius of a developed park without crossing an arterial or collector 4 points
- d) within one mile radius of a developed park crossing an arterial or collector 2 points

(In all cases regarding proximity to public parks, 1/2 value given for County designated park sites)

3. ADDITIONAL AFFORDABLE HOUSING*

In addition to providing 30 percent affordable housing consistent with Checklist Item 7(b):

- a) 20 percent of units in very low or lower income housing 10 points
- b) 10 percent of units in very low or lower income housing 5 points

*Note: A rental unit is defined as "affordable housing" when the rent is equal to or less than 30 percent of the applicable household's gross monthly income. An owner unit is defined as "affordable housing" when the purchase price is equal to or less than three times the applicable household's gross annual income. For the purposes of evaluating the Affordable Housing provisions of this Checklist, these definitions of affordable housing shall be applied to only those households that meet the income criteria for moderate, lower, or very low income categories, as published annually by the U.S. Department of Housing and Urban Development (HUD), and as locally adjusted to reflect Sarasota County's median number of persons per household.

Urban Area Residential Density Matrix

Points scored on Checklist	Maximum Allowable Density (dwelling units/acre)
86-100	13.0*
76-85	9.0*
66-75	6.0
56-65	5.5
46-55	4.5
31-45	3.5
15-30	2.5
less than 15	1.0

* These densities, i.e., greater than 6 dwelling units per acre, can be obtained only if points have been awarded for Affordable Housing under Item 7 of the Urban Area Residential Checklist and/or under Item 3 of the Bonus Points Section of the Urban Area Residential Checklist.

Note: Approval of development proposals utilizing this Checklist shall be consistent with the level of service standards as adopted by the Board of County Commissioners (Policy 1.12.1.).

Functional Classification of Activity Centers

Neighborhood

- Service Area: One-half mile or less
- Total Acreage within the Center: Two to Ten
- Approximate combined Commercial Allocation: 2,000 to 100,000 square feet of gross leasable area
- Support Population: 2,500 to 10,000
- Function: Provide for the daily incidental retail and service needs of the surrounding residential areas. These Centers provide for the sale of convenience goods and services.

Village

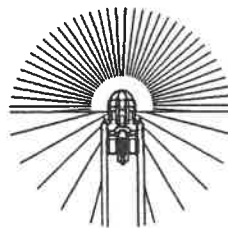
- Service Area: One and one-half to two miles
- Total Acreage within the Center: 10 to 75
- Approximate combined Commercial Allocation: 100,000 to 300,000 square feet of gross leasable area
- Support Population: 10,000 to 40,000
- Function: Provide for the weekly retail, office and governmental uses and service needs of surrounding neighborhoods. These Centers provide for the retail of goods and services and governmental uses greater than those provided in Neighborhood Activity Centers.

Community

- Service Area: Two to four miles
- Total Area within the Center: 75 to 125
- Approximate combined Commercial Allocation: 300,000 to 700,000 square feet of gross leasable area
- Support Population: 40,000 to 100,000 or more
- Function: Provide the surrounding urban areas with a wide range of commercial, office, professional, institutional and governmental uses.

Regional

- Service Area: Regional (Countywide or greater)
- Total Area within the Center: Variable
- Approximate combined Commercial Allocation: 500,000 to 1,000,000 square feet of gross leasable area or greater
- Support Population: 250,000 or more
- Function: Provide for the greatest variety of commercial, office, professional, institutional and governmental uses to serve the Countywide region.



Endnotes

1. PHH Fantus Corporation, "Sarasota County Future Land Use Analysis, Phase I", September, 1988, p. 6.

2. *ibid*, p. 17.

3. PHH Fantus Corporation, "Sarasota County Future Land Use Analysis, Phase II", November, 1988, p. 16.

CHAPTER 11

CAPITAL IMPROVEMENTS

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CHAPTER 11

CAPITAL IMPROVEMENTS

Introduction

Purpose

The purpose of the Capital Improvements Chapter, or Element, (CIE) is to fulfill the mandates of both Chapter 163, Florida Statutes, and Rule 9J-5, Florida Administrative Code: that is, to prepare an element that sets out the infrastructure requirements of the comprehensive plan elements and identifies ways to fund these requirements. The resulting element, by identifying both required expenditures for satisfying the infrastructure needs of existing and future population, and by identifying viable revenue sources to fund these needs, thus demonstrates the financial feasibility of the Comprehensive Plan.

Relationship of the CIE to the Capital Improvements Program

The CIE includes only those public facility types that are required in Rule 9J-5, Florida Administrative Code. These facility types are: 1) traffic circulation; 2) sanitary sewer; 3) potable water; 4) solid waste; 5) parks and recreation; and 6) drainage. The Sarasota County Capital Improvements Program (CIP) includes both the public facility types to be included in the CIE, as well as those public facility types not required by Rule 9J-5. These additional public facility types are general government facilities (i.e., court buildings, administrative buildings, fleet management facilities, etc.), fire and rescue services, and libraries.

The CIE and Level Of Service (LOS) Provisions

The most significant aspect concerning the Growth Management Act of 1985 and 1986, as amended, is the provision calling for local governments to set Levels of Service (LOS) for those facility types required in the CIE. Local governments must maintain the adopted LOS standards for both existing and future populations. Such LOS standards must be balanced between community goals, or "quality of life" considerations, on the one hand, and with fiscal reality, or affordability, on the other. If the adopted LOS standards are not maintained through the implementation of the Plan, then local governments have the responsibility of denying additional development permits. This situation—a development moratorium—can best be avoided by setting reasonable and affordable LOS standards and by developing implementing regulations which provide some degree of flexibility.

Format

This Chapter is structured generally to coincide with the requirements of Rule 9J-5, Florida Administrative Code. That is, four main sections will be presented: 1) an "Inventory" section, which includes those requirements under 9J-5.016(1), "Capital Improvements Data Requirements"; 2) an "Analysis" section, which subsumes those requirements included under 9J-5.016(2), "Capital Improvements Analysis Requirements"; 3) a "Capital Improvements Plan" section, covering 9J-5.016(3), "Requirements for Capital Improvements Goals,

Objectives, and Policies"; and, finally, an "Implementation" section, covering 9J-5.016(4) and 9J-5.016(5), "Requirements for Capital Improvements Implementation" and "Requirements for Monitoring and Evaluation," respectively.

Inventory

Local Practices Which Guide the Timing and Location of Construction, Extension, or Increase in Capacity of Public Facilities

Land Development Regulations. Ordinance No. 81-12, as amended, the County's Land Development Regulations (LDR), by regulating the subdivision of land and the site development process for non-residential land uses, has an important bearing on the timing and location of public facilities. Specifically, the Ordinance states that land shall not be subdivided or developed until provision has been made for public facilities and improvements as stipulated in the Ordinance. The issuance of a building permit is contingent on conforming to the Land Development Regulations; therefore, rezonings, special exceptions, Sector Plans, Developments of Regional Impact (DRI's), and any other development which would result in the new subdivision or development of land, must thus conform with the LDR. The Ordinance includes standards and specifications for such public facilities as streets, stormwater management, potable water systems, sanitary sewer systems, and other utilities.

Special District Establishment Program. Ordinance 84-45 (and the Sarasota County Charter) provides a mechanism whereby subdivisions, neighborhoods, or other geographical subareas may petition the Board of County Commissioners to establish a Public Improvement District, Special Tax Lighting District, Municipal Service Taxing Unit (MSTU), or Special District for such purposes as road improvements, street lighting services, drainage improvements, potable water services, and other types of public facilities.

Public Facilities Financing Ordinance. Ordinance No. 83-24, as amended, also called the "MSTU Ordinance," provides a funding mechanism for road and park improvements by levying a special assessment upon new development. The Ordinance functions in a manner similar to an "impact fee," since the assessment is in proportion to the "impact" that a given development has on the park and/or road systems. The Ordinance includes listings of specific park and road projects scheduled over a five-year period. By providing a funding commitment and a time schedule to these projects, the Ordinance has a definite relationship to the timing and location of public facilities.

Sarasota County Comprehensive Plan (Apoxsee). The Comprehensive Plan, especially, the Future Land Use Chapter, guides the location and intensity of land use activity in the unincorporated area of the County. This, in turn, affects decisions on the timing and location of public facilities. **Apoxsee** implementation programs and techniques, such as Critical Area Study Plans and the Urban Area Residential Checklist and Urban Area Residential Density Matrix (i.e., the "point system"), also affect public facilities provision by conditioning development activity on the availability of adequate public facilities. Rezoning applications and Sector Plans often include stipulations for public facility provisions that are based on the Comprehensive Plan.

Existing Revenue Sources and Funding Mechanisms

The following are major revenue categories found in Sarasota County's annual budget (Note: All budget figures are shown as "net" revenues; i.e., at 95 percent).

Ad Valorem Taxes

In recent years in Sarasota County, there has been a tendency to minimize ad valorem taxes and to look toward other revenue sources, such as "user fees." For Fiscal Year 1987-88, Countywide ad valorem tax millages and their corresponding budgeted amounts were as follows:

General Fund	2.971	\$30,026,487.
Trans. Trust Fund	.4277	\$4,271,885.
Mosquito Control Fund	.0551	\$558,176.
Consolidated Bonds	.2909	\$2,940,053.
Open Space Bonds	.0616	\$622,293.
Total Countywide:	3.8063	\$38,418,894.

It should be noted that, pursuant to Section 4.3.F. of the Sarasota County Charter, the ad valorem tax levy is restricted to a 10 percent increase relative to the previous year; however, the voters may approve, through the holding of a special Countywide referendum, an increase in excess of 10 percent.

Florida Power and Light (FPL) Franchise Fees

This revenue source is dependent upon the growth of FPL customers. For Fiscal Year 1987-88, \$7.158 million was anticipated from this source. In addition, this revenue is being used to pay off a revenue bond (Franchise Tax Series 1978), which will be defeased in 1989. In general, this revenue source can be expected to grow in proportion to population growth in the unincorporated area.

Gas Taxes

Gas taxes consist of: 1) 5th and 6th cent gas tax (or "Constitutional gas tax"); 2) the State levied one cent gas tax; 3) the local option 6-cent gas tax; and 4) the one cent voted gas tax, which was approved by Sarasota County voters on March 8, 1988. In the current fiscal year (1988-89), these sources were budgeted as follows (with the exception of the 1988 voted gas tax):

5th and 6th Cent Gas Tax	\$1,725,000.
7th Cent Pour Over Trust Fund	\$958,000.
Local Option 6 Cent Gas Tax	\$4,554,000.
Total Gas Taxes:	\$7,237,000.

It is projected that the one cent voted gas tax will generate about \$716,000 for Fiscal Year 1989. Gas tax revenues are used for road construction and maintenance and are budgeted within the Transportation Trust Fund.

1/2 Cent Sales Tax

This is a State-shared revenue, which in FY88-89 is expected to yield an estimated \$12,437,200. About \$4,750,000 of this amount will be earmarked to pay debt service on three sales tax revenue bond issues, totaling nearly \$47 million, for the acquisition of the Ringling MacArthur Reserve as a potable water source, as well as for several smaller capital items (Twin Lakes Park acquisition, the South County Administration Center, and Courthouse Complex parking garage). The remainder of about \$7.687 million can be used for other purposes, such as operations or capital outlay.

MSTU Special Assessments (Road and Park Impact Fees)

This category of revenue is derived from the authority of Ordinance No. 83-24, as amended, the County's Public Facilities Financing Ordinance, which has been in effect since November, 1983. This Ordinance authorizes the levy of a one-time special assessment to new residential, commercial, and industrial development for the purpose of funding the construction of road and park capital improvements needed due to the impacts of projected new growth. Although the Ordinance derives its authority from Chapter 125.01, the MSTU enabling legislation, for all intensive purposes, these assessments on new development function in the same manner as "impact fees." A breakdown of collections covering the period from November, 1983 to the end of May, 1988 is as follows:

North County MSTU Roads	\$6,927,832.
South County MSTU Roads	\$2,963,289.
North County MSTU Parks	\$545,103.
South County MSTU Parks	\$631,650.
Total:	\$11,067,874.

In December, 1987, the Ordinance underwent significant revisions through the adoption of Ordinance No. 87-140: 1) the concept of a "rolling" five-year block of projects replaced the "static" block concept; 2) fine-tuning of the projection methodology; 3) the North County MSTU road assessment was increased by 47 percent; and 4) the South County MSTU road assessment was increased by 162 percent.

General Obligation Bonds

The County currently has relatively minimal obligations in terms of General Obligation (G.O.) bond issues, with the FY 1987-88 millage for debt service totaling .3525. This includes five separate issues, two being bonds for improvements to Sarasota Memorial Hospital in the 1960s; one bond for courthouse improvements, also in the 1960s; a 1973 issue for beach acquisition; and bonds for the 1986 beach acquisition referendum. In view of the 10-mill limitation set by State Statute, the County possesses extensive G.O. debt capacity. It should be noted, however that Section 4.3.E. of the Sarasota County Charter provides that no single G.O. bond issue exceed \$10,000,000 except by voter referendum.

Revenue Bonds

Sarasota County is using this financing vehicle to fund a variety of projects, including the acquisition and development of the Ringling MacArthur Reserve as a Countywide potable water resource; the expansion of the County's solid waste management facilities; acquisition of the Kansas City Royals training complex for use as a County recreation facility (Twin Lakes); the construction of a South County administrative/courthouse complex; and the downtown courthouse complex parking garage. Various revenue sources--including FPL franchise fees, 1/2 cent sales tax, solid waste tipping fees, and water system revenues--are pledged to these issues. This funding mechanism provides the County with a great deal of flexibility and ability to finance future capital improvements.

Special Assessments

Special assessments are collected pursuant to the Municipal Service Taxing Unit (MSTU) enabling legislation (Ch. 125.01 (1)(q)(r), Florida Statutes) and are currently being used for both operating and capital expenses. (Note: This type of Special Assessment is not to be confused with the one-time MSTU Special Assessments levied on new development which was previously described.) For example, residents within the South County Fire District pay a "flat" fee for fire service. Assessment revenues collected in the District go toward

operating costs and the payment of debt service on a \$500,000 note from a private lending source. Money from the note was used to purchase the District's fire apparatus and equipment. Special assessments, in accordance with State law, can be used for a wide variety of purposes, including roads, parks and recreation, law enforcement, fire services, and so on.

Water Impact Fees

Pursuant to Ordinance 85-90, the County collects impact fees upon connection to the Countywide water system. The money is used for "the acquisition, development, and construction of new facilities or portions thereof required to secure and obtain a water supply and to convey that water to such users." The money can also be "pledged or used for the repayment of bonds" related to the above purposes.

**New Public Education Facilities
Planned for CIE Period**

Based on the document, "Final Report of the School Construction Advisory Committee," dated April, 1988, and approved by the Sarasota County School Board, various public education facilities are required over the five-year CIE timeframe. These include six new elementary schools and four new middle schools. The general geographic location and construction year are as follows:

<u>Year</u>	<u>Type</u>	<u>Location</u>
1990	Elementary	South Venice area
	Elementary	Booker area
1991	Elementary	Georgetown Subdiv. area
	Middle	Tuttle & 27th St. area
	Middle	South County area
	Middle	Ashton/Sawyer area
1992	Elementary	Palmer Ranch area
1993	Elementary	North County area
	Middle	North County area
1994	Elementary	South County area

According to the report referenced above, these new schools would cost an estimated \$92 million (based on a cost of \$6.5 million per elementary school and \$11 million per middle school).

Analysis

Projected Capital Improvement Costs Based On Other Chapters

Table 67 provides annual capital improvement costs for the period FY90 to FY94 for the required facility types. The Levels of Service (LOS) standards associated with these costs are shown at the bottom of Table 67. The total of project costs for the four facility types shown is \$162.020 million over the FY90-94 CIE period. Tables 68 through 71 provide specific project costs for the various facility types. [Note that all project costs are shown in thousands of dollars.]

It should be noted that no drainage-related costs are shown for the following reasons: 1) a comprehensive stormwater master plan needs to be completed for the entire County; and 2) a "stormwater utility" needs to be established. The Stormwater Utility would rely upon a "user fee" type of approach; that is, each parcel of land would be charged based upon the size of the parcel and its percentage of impervious surface area. The County has begun to take action on the Stormwater

Utility by establishing a Stormwater Management Division within the Transportation Department, in order to set the groundwork for the Stormwater Utility itself. Cost and project information for stormwater improvements will be added to the Capital Improvements Chapter by amendment of the Comprehensive Plan. Detailed information on pending studies and planning relating to drainage is included in the Public Facilities Chapter.

In addition, no costs for sanitary sewer have been included in this Chapter. At the present time, the County has initiated Phase I (the planning phase) of a comprehensive wastewater management program, which is centered on a water resource recovery concept. The objective of the Phase I study is to develop a "master action plan" for implementing the water management approach, previously adopted by the Board of County Commissioners. The Master Action Plan is to be completed by May, 1989. The major tasks of the Phase I study include:

- Inventory existing wastewater collection and treatment facilities within the County;
- Develop a method for phasing out inefficient treatment plants and incorporate existing wastewater facilities into a consolidated Countywide system; develop a

Table 67: Project Cost Summary - All Facility Types

Facility Type	FY90	FY91	FY92	FY93	FY94	Total FY90-FY94
Parks and Recreation (1)	2,362	2,115	2,245	2,279	1,515	10,516
Solid Waste (2)	2,510	2,125	15,395	7,925	2,650	30,605
Potable Water (3)	39,867	3,921				43,788
Traffic Circulation (4)	17,257	17,009	14,944	15,690	12,211	77,111
Totals:	61,996	25,170	32,584	25,894	16,376	162,020

Notes: Dollars shown in Thousands

(1) Designed to achieve 7 acres per 1,000 population developed Park LOS

(2) Development costs associated with construction of new landfill; also, Bee Ridge Landfill closeout capital expenditures. 8.6 lbs. per day per capita LOS

(3) Development costs associated with development of Phase I of Countywide water system; LOS of 200 gallons per Equivalent Dwelling Unit (EDU) per day

(4) Costs necessary to achieve LOS "C peak hour" plus other commitments

Source: Sarasota County Office of Management and Budget, 1988.

Table 68: Project Cost Summary - Parks and Recreation

Facility	Facility Type	Facility Location	FY90	FY91	FY92	FY93	FY94	Total FY90-FY94
Colonial Oaks	New Community Park	Webber and Honore; Colonial Oaks	247	247			247	741
Woodmere Park	New Community Park	Jacaranda Blvd.; near Alligator Creek	394	394				788
Blind Pass Beach	Metropolitan Park		130	120	90	170		510
Nokomis Beach	Metropolitan Park		105	105				210
Phillippi Plantation	Metropolitan Park	Phillippi Creek; West of U.S. 41	160	180	130	120		590
Caspersen Mainland	Metropolitan Park		300		500	320	300	1,420
Caspersen Intercoastal	Metropolitan Park							
Sorrento	New Community Park	Specific Location Not Determined				100		100
Unincorp. Area E. of Myakka River and South of I-75	New Community Park	Specific Location Not Determined		50	150	350	250	800
Bay Street Park	New Community Park	Bay Road; East of I-75	107		244		299	650
Longwood Park	New Community Park	Longwood Run Blvd.; S. of Univ. Pkwy.	219	219	219			657
Gulf Gate East	New Community Park	Specific Location Not Determined			212	419	419	1,050
North Co. Special Park	Land Acquisition	Specific Location Not Determined	700	800				1,500
South Co. Special Park	Land Acquisition	Specific Location Not Determined			700	800		1,500
Totals:			2,362	2,115	2,245	2,279	1,515	10,516

Note: Dollars shown in Thousands

Source: Sarasota County Office of Management and Budget, 1988.

system of pumping stations, transmission lines, and regional wastewater treatment plants to serve the County to the year 2020.

- Develop recovered wastewater reuse concepts.
- Prepare environmental, land planning, and permitting strategies for accomplishing the project.

- Develop conceptual designs for regional wastewater treatment facilities.
- Identify project financing options and assess economic impacts on users of the Countywide system.
- Compile study results into a Master Wastewater Resource Recovery Plan of implementation.

Table 69: Project Cost Summary - Solid Waste

Facility	Description	FY90	FY91	FY92	FY93	FY94	Total FY90-FY94
Central County Solid Waste Disposal Complex	Development of New Landfill on Walton Tract (1)	1,550	1,165	14,435	6,965	1,690	25,805
Bee Ridge Landfill	Closeout of Landfill (2)	960	960	960	960	960	4,800
Totals:		2,510	2,125	15,395	7,925	2,650	30,605

Note: Dollars shown in Thousands

Source: (1) HDR Techserv, Inc., "Central County Solid Waste Disposal Complex, Preliminary Cost Estimate", May, 1987; (2) Bond Prospectus, Solid Waste System Revenue Bonds, Series 1987.

Table 70: Project Cost Summary - Potable Water

Facility	Description	FY90	FY91	FY92	FY93	FY94	Total FY90-FY94
Development of Countywide Water System (Ringling MacArthur Reserve)	Water Treatment Plant	16,222	3,568				19,790
	Transmission Mains	10,691	118				10,809
	Wellfield Piping, Pumps & Appurtenances	4,424					4,424
	Wellfield Electrical	1,659					1,659
	Wellfield Roadway	3,221					3,221
	Central Access Roadway Engineering	3,466	235				3,701
Totals:		39,867	3,921	0	0	0	43,788

Notes: Dollars shown in Thousands

Costs shown above reflect Phase I of water system development; Phase II costs available pending completion of study

Source: Sarasota County Utilities Department, 1988

Cost and project information for sanitary sewer improvements will be added to the Capital Improvements Chapter by amendment of the Comprehensive Plan. Detailed information on pending studies and planning relating to sanitary sewer is included in the Public Facilities Chapter.

General Fiscal Implications Of Public Facility Needs

The following discussion focuses on the general fiscal implications of the public facility needs summarized in Table 67.

Table 71: Project Cost Summary - Traffic Circulation

Facility	Description	Facility Type	Facility Location	FY90	FY91	FY92	FY93	FY94	Total FY90-FY94
Airport Conn.	Const 4L	Maj Art	DeSoto-Univ. Pkwy.	5,100					5,100
Albee Farm Rd.	Const 4L	Collect	U.S. 41-Laurel	6,739					6,739
McIntosh Rd.	Const 4L	Collect	Bee Ridge-Bahia Vista	4,418					4,418
Annual Signals				150					150
Advanced R/W				500					500
Bridge Replace.				350					350
Proctor Road	Const 4L	Collect	Beneva-McIntosh		2,700				2,700
Group B	Misc. Widen/Resurf	Local	Misc. Widen/Resurf		1,297				1,297
Bayshore Road	Resurf/Widen 4Ft	Local	Laurel-Albee		233				233
Higel Avenue	Resurf/Widen 4Ft	Local	Windward-Ocean		248				248
Bahia Vista St.	Widen 4L/2 Bridges	Min Art	Beneva-McIntosh		2,855				2,855
Dearborn St.	Const 4L	Min Art	Indiana-Pine		3,063				3,063
University Pkwy.	Add 2L to Ex 2L	Maj Art	U.S. 301-I-75		4,166				4,166
Lockwood Ridge	Const 2L	Local	Gypsy-Wilkinson		1,182				1,182
Ortiz Road	Inter. Improve.	Intersect	U.S. 41 Intersection		265				265
Annual Signals					150				150
Advanced R/W					500				500
Bridge Replace.					350				350
Pine Street	Const 2L In 6L R/W	Maj Art	Keyway By-Pass-U.S. 41			5,234			5,234
Tuttle Avenue	Reconst 4L Div	Min Art	Siesta-17th			3,800			3,800
Webber Street	Resurf/Const 4L	Collect	McIntosh-Cattlemen			4,910			4,910
Annual Signals						150			150
Advanced R/W						500			500
Bridge Replace.						350			350
Honore Avenue	Const 6L Div w/Br	Min Art	Clark-Bee Ridge				5,500		5,500
Myrtle Street	Const 2L In 4L R/W	Collect	U.S. 301-Tuttle				1,704		1,704
Pinebrook	Const 4L Expwy	Min Art	Center-N. City Limits				4,986		4,986
Annual Signals							150		150
Advanced R/W							500		500
Bridge Replace.							350		350
Design (FY95)							1,000		1,000
R/W (FY95)							1,500		1,500
Capri Isles	Const 4L	Collect	City Limits-Laurel					1,737	1,737
Center Road	Add 2L to Ex 2L	Min Art	Jacaranda-Plantation					3,081	3,081
Laurel Road	Add 2L	Min Art	Albee Farm-Haul					2,153	2,153
Longmeadow	Add 2L to Ex 2L	Collect	17th-Honore					3,240	3,240
Annual Signals								150	150
Advanced R/W								500	500
Bridge Replace.								350	350
Design (FY96)								1,000	1,000
Totals:				17,257	17,009	14,944	15,690	12,211	77,111

Notes: Dollars shown in Thousands
 Cost Estimates generally based on 100% of FDOT, District 1 cost/mile estimates and include 5% annual inflation factor

Source: Sarasota County Office of Management and Budget, 1988.

Traffic Circulation

As shown in Table 67, needed traffic circulation improvements for the FY90 to FY94 planning period total \$77.111 million. Of this amount, \$29.405 million has been identified as "Non-MSTU" costs, which are "existing deficiency" costs. The remainder of the \$77.111 million has been identified as "MSTU" costs, which are attributable to the

impacts of new development projected to occur within the North and South County Municipal Service Taxing Units (MSTUs). The North County MSTU cost is \$25.734 million, while the South County MSTU cost is \$21.972 million.

Since 1983, when the Public Facilities Financing Ordinance (Ordinance No. 83-24, as amended) was adopted by the Board of County Commissioners, the County has committed itself to an ambitious multi-year road construction program. The basis for this program is the concept of funding road improvements through a combination of general, or "Non-MSTU" revenues, and "MSTU" revenues, which are derived from the levying of MSTU Special Assessments upon new development.

Parks and Recreation

The scheduling of \$10.516 million in park improvements from FY90-94 is also based on the MSTU/Non-MSTU concept embodied in the Public Facilities Financing Ordinance. The implications of this program include: 1) an average general fund (or non-MSTU) commitment of \$1.257 million per year; and 2) increases in MSTU park assessments over the levels established in December, 1987 through Ordinance No. 87-140. Table 72 provides

a comparison of costs and revenues for park improvements. It shows a Non-MSTU deficit of \$6.428 million, a North County MSTU deficit of .735 million, and a South County MSTU deficit of .831 million; or, a total shortfall of \$7.994 million.

Solid Waste

Solid waste improvements total \$30.605 million for the planning period. This amount includes \$25.805 as part of the overall development of the Walton Tract as the Central County Solid Waste Disposal Complex. A funding plan has been developed by the County's consultants and consists of an authorized issue of \$80 million of Solid Waste System Revenue Bonds, which are to be backed by solid waste system revenues (i.e., landfill "tipping fees"). In addition, annual costs are shown for the closeout of the Bee Ridge Landfill, totaling \$4.8 million. Table 73 compares costs and revenues for projected solid waste improvements.

Table 72: Park Improvement Costs Versus Revenues

Park Improvement Program Costs	FY90	FY91	FY92	FY93	FY94	Total FY90-FY94
Non-MSTU	1,468	1,335	1,340	1,358	927	6,428
MSTU - North	456	497	193	185	229	1,560
MSTU - South	438	283	712	736	359	2,528
Total Program Costs:	2,362	2,115	2,245	2,279	1,515	10,516
Available Revenues						
Non-MSTU	0	0	0	0	0	0
MSTU - North	135	149	163	180	198	825
MSTU - South	278	306	336	370	407	1,697
Total Estimated Revenues:	413	455	499	550	605	2,522
Program Costs Vs. Revenues						
Non-MSTU	(1,468)	(1,335)	(1,340)	(1,358)	(927)	(6,428)
MSTU - North	(321)	(348)	(30)	(5)	(31)	(735)
MSTU - South	(160)	23	(376)	(366)	48	(831)
Total Surplus (Deficit):	(1,949)	(1,660)	(1,746)	(1,729)	(910)	(7,994)

Notes: Dollars shown in Thousands

Park Improvement Program Costs from Table 68, Capital Improvements Chapter

Source: Sarasota County Office of Management and Budget, 1988.

Table 73: Solid Waste Improvement Costs Versus Revenues

Estimated Costs	FY90	FY91	FY92	FY93	FY94	Total FY90-FY94
Development of Walton Tract	1,550	1,165	14,435	6,965	1,690	25,805
Bee Ridge Landfill Closeout	960	960	960	960	960	4,800
Debt Service	3,480	4,160	4,163	4,894	5,138	21,835
Total Program Costs:	5,990	6,285	19,558	12,819	7,788	52,440
Available Revenues						
Bond Proceeds	1,550	1,165	14,435	6,965	1,690	25,805
User Charges (Tipping Fees)	4,440	5,120	5,123	5,854	6,098	26,635
Total Estimated Revenues:	5,990	6,285	19,558	12,819	7,788	52,440
Program Costs Vs. Revenues						
Total Surplus (Deficit)	0	0	0	0	0	0

Note: Dollars shown in Thousands

Source: Bond Prospectus, Solid Waste System Revenue Bond, Series 1987.

Potable Water

A capital improvements schedule for potable water has been in continuing development since 1982, when a referendum, on the purchase of the Ringling MacArthur Reserve, was held and approved by the public. The fiscal implications of the development of the Ringling MacArthur Reserve and the Sarasota County Utility System consist of the issuance of revenue bonds backed by water system revenues, as well as the continued levying of water impact fees on new development, as it occurs over the planning period. As Table 74 illustrates, revenues for funding Phase I of the development of the water system consist of revenue bond proceeds, impact fees, and revenues from monthly rates charged to system users. Note that costs associated with Phase II of the water system development are not available at this writing, pending the completion of studies on Phase II of the project.

Road Improvement Program Funding Analysis and Strategy

Table 75 provides revenue and operating expenditure projections for the Transportation Trust Fund, which is the fund in which road improvements are budgeted and expended. The analysis shows the

various Non-MSTU revenue types in the Transportation Trust Fund. These sources include a "contribution" from the General Fund, the various gas tax types, cable franchise TV revenues (which will be dedicated to rights-of-way acquisition), and some miscellaneous revenues. Operating and maintenance needs are then deducted from the total Non-MSTU revenues to arrive at "Non-MSTU Revenues Available for Capital Outlay/Debt Service." Based on the projection assumptions, \$3.5 million remains for Capital Outlay/Debt Service. However, Table 75 also deducts \$3.5 million per year to cover the debt service on a bond issue to cover funding shortfalls in the FY88 and FY89 road programs. With the debt service factored into the analysis, no Non-MSTU revenues remain for capital outlay in the Transportation Trust Fund, given current revenue sources.

In addition, MSTU revenues are projected over the planning period; an important assumption here is that revenues are forecast using a "reduction factor" that adjusts for possible over-projection of non-residential square footage in the MSTU base assessment calculation. In addition, the forecast of MSTU revenues assumes annual 5 percent increases in the base assessment rates for both the North and South County MSTUs. Given this adjust-

Table 74: Potable Water Improvement Costs Versus Revenues

<u>Estimated Costs</u>	<u>FY90</u>	<u>FY91</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>Total FY90-FY94</u>
Development of Water System	36,867	3,921				40,788
Total Program Costs:	36,867	3,921	0	0	0	40,788
<u>Available Revenues</u>						
Bond Proceeds	34,374	3,740				38,114
Impact Fees	1,367	87				1,454
Monthly Rates	1,126	94				1,220
Total Estimated Revenues:	36,867	3,921	0	0	0	40,788
<u>Program Costs Vs. Revenues</u>						
Total Surplus (Deficit):	0	0	0	0	0	0

Note: Dollars shown in Thousands

Source: Sarasota County Utilities Department, 1988.

ment, revenues of \$16.71 million are forecast over FY90-94 for the North County MSTU and about \$11.14 million are forecast for the South County MSTU.

Table 76 provides an analysis, or comparison, between annual road improvement costs and forecasted revenues. Comparing program costs vs. revenues, the result is a \$29.405 million deficit for the Non-MSTU category; a \$9.024 million deficit for the North County MSTU; and a \$10.832 million deficit for the South County MSTU. The overall deficit for the FY90-94 road program totals 49.262 million.

Alternative Funding Sources: Local Option Sales Tax and a Special Assessment

Levy on Existing Development

In order to fund the road and park improvement deficits identified above (a total of \$57.256 million), on February 7, 1989, the Board of County Commissioners in workshop session approved a motion to authorize concurrent Public Hearings on two ordinances. The first ordinance would authorize a referendum on the one-cent "infrastructure" sales tax, to be held so that revenues would be received at the beginning of Fiscal Year 1990 (i.e., beginning

October 1, 1989); the second ordinance would enable the establishment of Municipal Services Taxing Units (MSTUs) in the unincorporated areas, within which special assessments would be levied on existing development beginning in Fiscal Year 1990.

The Local Option Sales Tax

Pursuant to Ch. 212.055(2), Florida Statutes, the County may levy a discretionary sales surtax of 0.5 percent or 1 percent, provided that the majority of voters approve a referendum enacting such a levy. This levy is known as the "infrastructure surtax" or the "local option sales tax." The levy can only be expended on infrastructure; can be effective for up to a 15-year period; and applies to those items applicable to the State sales tax, with the exception of tangible property above the amount of \$5,000.

Table 77 provides a projection of a full one-cent levy in Sarasota County for the five-year CIE period. An important assumption in Table 77 is that, because of proposed changes in the sales tax enabling legislation, the Sarasota County School District will receive 25 percent of the Countywide sales tax revenues. After deducting 25 percent of the Countywide revenues for schools, the table shows the distribution of the revenues among the County and its municipalities, based on the 1/2 cent sales tax distribution formula currently in use.

Table 75: Transportation Trust Fund - Fiscal Years 1990-1994 Revenue Projection

<u>Non-MSTU Revenue Type</u>	<u>Proj.</u> <u>FY90</u>	<u>Proj.</u> <u>FY91</u>	<u>Proj.</u> <u>FY92</u>	<u>Proj.</u> <u>FY93</u>	<u>Proj.</u> <u>FY94</u>	<u>Total</u> <u>FY90-94</u>
General Revenue Contribution	3.640	3.830	4.035	4.256	4.494	20.255
Local Option 6 Cent Gas Tax	4.831	4.976	5.126	5.279	5.438	25.650
Local Option 1 Cent Voted Gas Tax	0.737	0.759	0.782	0.806	0.830	3.915
Constitutional 2 Cent Gas Tax	1.830	1.885	1.942	2.000	2.060	9.716
State Levied 1 Cent Gas Tax	1.016	1.047	1.078	1.111	1.144	5.396
Misc. Revenues	0.737	0.759	0.782	0.806	0.830	3.915
Cable TV Franchise Revenues	0.630	0.662	0.695	0.729	0.766	3.481
Non-MSTU Revenue Totals	13.422	13.918	14.439	14.986	15.561	72.328
Less: Operating & Maint. Needs	(9.923)	(10.419)	(10.940)	(11.487)	(12.061)	(54.828)
Non-MSTU Revenues Available for Capital Outlay/Debt Service	3.500	3.500	3.500	3.500	3.500	17.500
Less: FY88 & FY89 Bond Issue Debt Service	(3.500)	(3.500)	(3.500)	(3.500)	(3.500)	(17.500)
Non-MSTU Revenues Remaining for Capital Outlay	0.000	0.000	0.000	0.000	0.000	(0.000)
<u>MSTU Revenue Type</u>						
MSTU-North	3.024	3.175	3.334	3.501	3.676	16.710
MSTU-South	2.016	2.117	2.223	2.334	2.450	11.140
MSTU Revenue Totals	5.040	5.292	5.557	5.834	6.126	27.849
Total Non-MSTU & MSTU Revenues	5.040	5.292	5.556	5.834	6.127	27.849
<u>Annual Growth Rate Assumptions</u>						
Gas Taxes	3.00%					
General Revenue Contribution	5.00%					
Other Misc. Revenues	5.00%					
Operating & Maintenance Costs	5.00%					
MSTU Special Assessments	5.00%					

Note: Dollars in Millions

Source: Sarasota County Office of Management and Budget, 1988.

(Note that an alternative distribution formula can be used through interlocal agreement). The County's portion of the revenues would range from about \$14.729 million in FY90 to about \$17.903 million in FY94; or a total of \$81.383 million over the FY90-94 period. The four municipalities would receive about \$28.523 million over the same period.

Table 77 also shows unincorporated sales tax revenues applied against the road and park improvement deficits identified above. Over the five-year CIE period, projected revenues are sufficient to cover the deficit, as well as providing an estimated \$24.129 million "surplus" for infrastructure other than roads and parks.

Table 76: Traffic Circulation Improvement Costs Versus Revenues

Road Improvement Program Costs	FY90	FY91	FY92	FY93	FY94	Total FY90-FY94
Non-MSTU	9.015	6.133	6.768	6.289	1.200	29.405
MSTU - North	4.900	7.548	3.242	6.404	3.640	25.734
MSTU - South	3.342	3.328	4.934	2.997	7.371	21.972
Total Program Costs:	17.257	17.009	14.944	15.690	12.211	77.111
Available Revenues						
Non-MSTU	0.000	0.000	0.000	0.000	0.000	0.000
MSTU - North	3.024	3.175	3.334	3.501	3.676	16.710
MSTU - South	2.016	2.117	2.223	2.334	2.450	11.140
Total Estimated Revenues:	5.040	5.292	5.557	5.834	6.126	27.849
Program Costs Vs. Revenues						
Non-MSTU	(9.015)	(6.133)	(6.768)	(6.289)	(1.200)	(29.405)
MSTU - North	(1.876)	(4.373)	0.092	(2.903)	0.036	(9.024)
MSTU - South	(1.326)	(1.211)	(2.711)	(0.663)	(4.921)	(10.832)
Total Surplus (Deficit):	(12.217)	(11.717)	(9.387)	(9.856)	(6.085)	(49.262)

Notes: Dollars shown in Millions

Road Improvement Program Costs from Table 71, Capital Improvements Chapter

Available Revenues from Table 75, Capital Improvements Chapter

Source: Sarasota County Office of Management and Budget, 1988.

Special Assessment Levy

In addition to the Local Option Sales Tax, a special assessment levy on existing development provides a means of funding the road and park improvement deficits. In order to accomplish this, Municipal Service Taxing Units, or Special Districts, pursuant to Chapter 125.01, Florida Statutes, will need to be created. All existing development in these new MSTUs will be assessed an annual amount based on the trip generation characteristics of each type of land use. The assessment method is similar to that used in the County's Public Facilities Financing Ordinance, which applies only to new development. This approach, or methodology, involves the projection of Equivalent Trip Generation Units (ETGUs), which are a measure of traffic impact on the road system, for all development projected to be "on the ground" over the five-year CIE period. The assessment rate, or dollars per ETGU, is calculated by dividing estimated costs by total projected ETGUs. Based on a preliminary analysis, it is estimated that an

average total assessment of \$90 to \$100 per ETGU will cover the road and park deficit of \$57.256 million. (Note: 1 ETGU is equivalent to a single family dwelling unit.)

Additional Fiscal Analysis

Table 78 includes projections of the Countywide operations and debt service levies and millage rates over the CIE period. The increase in operating levy would, in actuality, depend on annual budgetary needs and conditions and, ultimately, would be decided annually by the Board of County Commissioners. The debt service levy is based on known general obligation debt service (see Table 79).

Table 77: Projection of Infrastructure Surtax (Local Option Sales Tax) Revenues For Sarasota County, Municipalities, and School District - FY90-FY94

	FY90	FY91	FY92	FY93	FY94	Total FY90-FY94
Countywide Revenue Total	26.521	27.847	29.239	30.701	32.236	146.544
Less: 25%-School District	(6.630)	(6.962)	(7.310)	(7.675)	(8.059)	(36.636)
Distribution by Jurisdiction:						
Unincorporated County	14.729	15.465	16.238	17.050	17.903	81.385
Town of Longboat Key	0.248	0.260	0.273	0.287	0.302	1.370
City of North Port	0.578	0.607	0.637	0.669	0.703	3.194
City of Sarasota	3.357	3.525	3.701	3.886	4.081	18.550
City of Venice	0.979	1.028	1.079	1.133	1.190	5.409
CIE Deficits						
Roads Deficit	12.217	11.717	9.387	9.856	6.085	49.262
Parks Deficit	1.949	1.660	1.746	1.729	0.910	7.994
Total Deficits	14.166	13.377	11.133	11.585	6.995	57.256

Sarasota County (Unincorporated Area) Sales Tax Revenues Applied Toward CIE Deficits:

Unincorporated Area	14.729	15.465	16.238	17.050	17.903	81.385
Total Deficit	(14.166)	(13.377)	(11.133)	(11.585)	(6.995)	(57.256)
Revenues Remaining	0.563	2.088	5.105	5.465	10.908	24.129

Notes: Dollars shown in Millions

(1) Projection of FY89 base figures from Local Government Financial Information Handbook, Department of Revenue, July 1988

(2) Distribution based on Half-Cent Sales Tax formula (s. 218.62, F.S.)

(3) Projection based on full one-cent levy, pursuant to s. 212.055 (2), F.S.

(4) Levy may be for any period up to 15 years

(5) Annual growth rate of 5% assumed in projections

Source: Sarasota County Office of Management and Budget, 1988.

Table 79 provides a projection of debt service over the FY90-94 period. In addition, the table provides a projection of debt capacity for general obligation bond issues. In relation to the 10-mill statutory limit for general obligation bond issues, the County has substantial capacity remaining, based on existing ad valorem taxes.

Fiscal Implications of New Public Educational Facilities

As shown in Table 77, allocating a possible 25 percent of the proposed local option sales tax revenue to school-related infrastructure would yield an estimated \$36.636 million over the five-

year CIE period. Although this amount is not sufficient to cover the costs associated with the construction of 10 new schools (see inventory section), the sales tax, in combination with alternative methods of funding, such as "certificates of participation" (see "Final Report of the School Construction Advisory Committee", dated April, 1988, for additional information), would provide a viable funding approach for the construction of new schools.

Table 78: Projection of Tax Base, Ad Valorem Levy, and Millage Rates

	FY90	FY91	FY92	FY93	FY94	Total FY90-FY94
Projected Taxable						
Value	11,979,216,360	12,659,462,997	13,339,709,633	14,019,956,269	14,700,202,905	N/A
Operating Millage	3.7403	3.8578	3.9906	4.1387	4.3024	N/A
Operating Levy	44,805,482	48,837,976	53,233,393	58,024,399	63,246,595	268,147,845
Net Operating Levy	42,565,208	46,396,077	50,571,724	55,123,179	60,084,265	254,740,453
Debt Service Millage	0.2901	0.2746	0.2609	0.2470	0.2351	N/A
Debt Service Levy	3,474,948	3,476,297	3,480,124	3,463,324	3,455,397	17,350,090
Net Debt Service Levy	3,301,201	3,302,483	3,306,118	3,290,158	3,282,628	16,482,586
Total Millage	4.0303	4.1324	4.2515	4.3857	4.5375	N/A
Total Levy	48,280,430	52,314,273	56,713,517	61,487,723	66,701,992	285,497,935
Net Total Levy	45,866,409	49,698,559	53,877,841	58,413,336	63,366,893	271,223,038

Notes:

- (1) Operating levy projected at 9% per year
- (2) "Net" levies are at 95% of total levy; i.e., as budgeted
- (3) Taxable value projected based on 1981-87 historical data

Source: Sarasota County Office of Management and Budget, 1988.

Table 79: Projection of Debt Service Obligations for Currently Outstanding Bond Issues (with Projection of Debt Capacity for G.O. Bonds)

Bond Issue Name/Purpose	Orig. Am. Issued	Type of Revenue Pledged	FY90	FY91	FY92	FY93	FY94	Total FY90-FY94
Hospital #4	1,350,000	Ad Valorem Taxes	74,275	72,000	69,275	72,450	0	288,000
Hospital #5	6,700,000	Ad Valorem Taxes	411,578	408,515	409,835	405,435	405,555	2,040,918
Courthouse Improvement	1,500,000	Ad Valorem Taxes	92,130	89,250	91,290	88,145	0	360,815
Open Space Bond of 1973	7,750,000	Ad Valorem Taxes	657,015	666,515	669,515	675,800	840,555	3,509,400
Recreation Bond	1,500,000	Cigarette Tax Revenues	137,688	129,688	0	0	0	267,376
Sales Tax & G.O. Revenue Bond 1986A	32,460,000	1/2 Cent Sales Tax (1)	3,196,533	3,196,595	3,195,795	3,194,005	3,195,125	15,978,053
Sales Tax Revenue Bonds 1986B	14,355,000	1/2 Cent Sales Tax	1,421,405	1,420,530	1,422,030	1,420,720	1,421,480	7,106,165
Utility System Revenue Bonds 1985A	6,642,306	Net System Revenues	655,378	652,890	654,240	654,120	657,470	3,274,098
G.O. Bonds Parks & Rec. Series 1987A	20,600,000	Ad Valorem Taxes	2,066,203	2,066,203	2,066,203	2,048,328	2,036,518	10,283,453
Lease Certificate Series 1987	3,535,000	Special Assessments	913,180	913,180	793,450	672,263	0	3,292,703
Landfill/Solid Waste Series 1987	15,000,000	Net System Revenues	1,419,910	1,420,720	1,415,280	1,418,370	1,414,770	7,089,050
Revenue Bonds, Series 1988 (3)	12,320,000	Non-Ad Valorem Taxes	854,022	1,464,807	1,459,811	1,461,487	1,454,570	6,694,697
Fiscal Year Totals:			11,899,316	12,500,893	12,246,724	12,111,122	11,426,043	60,184,097
General Obligation Bond Debt Capacity								
10-Mill G.O. Statutory Debt Limit:			10.0000	10.0000	10.0000	10.0000	10.0000	
Less: Projected Millage Committed (2):			0.2901	0.2746	0.2609	0.2470	0.2351	
Projected Available G.O. Debt Capacity			9.7099	9.7254	9.7391	9.7530	9.7649	

Notes:

(1) Secondary pledge of ad valorem taxes

(2) Projected Committed Millage based on bond issues with ad valorem pledge

(3) Bond issue for dual taxation settlement with municipalities

The above does not represent total outstanding obligations, only those anticipated over the five-year CIE period

Source: Accounting Department, "Schedule of Bonds Payable", September 30, 1987.

Capital Improvements Plan

Goal 1

The County shall provide and maintain, in a timely and efficient manner, adequate public facilities for both existing and future populations, consistent with available financial resources.

Objective 1.1

The County will construct those Capital Improvements necessary to correct deficiencies in existing public facilities, to serve projected future growth, and to replace obsolete and worn-out facilities, in accordance with an adopted Capital Improvements Program.

Policy 1.1.1.

The Capital Improvements Chapter shall only include those facility types explicitly required in Rule 9J-5, Florida Administrative Code, which are Transportation, Sanitary Sewer, Potable Water, Solid Waste, Drainage, and Parks and Recreation.

Policy 1.1.2.

The Capital Improvements Chapter shall include capital improvements that are large scale and high in cost, and that are of a non-recurring nature. For purposes of this Chapter, rolling stock shall not be considered as capital improvements.

Policy 1.1.3.

The Capital Improvements Chapter will be a component of the County Capital Improvements Program, which includes not only the facility types identified in Policy 1.1.1., but also other facility types necessary for the public health, safety, and welfare of the community.

Policy 1.1.4.

The County shall include projects identified in the other relevant Comprehensive Plan Chapters in a Five-Year Schedule of Capital Improvements (Table 80), which Schedule shall be updated on an annual basis.

Objective 1.2

Proposed expenditure of public funds that subsidize or enable land development in Coastal High Hazard Areas shall be limited to those projects identified in the Environment Chapter.

Objective 1.3

The issuance of development orders and building permits shall be conditioned upon the availability of those public facility types mentioned in Policy 1.1.1.

Policy 1.3.1.

The availability of public facilities shall be determined and measured for the required public facility types using the following Level of Service (LOS) Policies contained in the following Chapters of the Comprehensive Plan:

- Transportation - Policies 1.3.1., 1.3.2., 1.3.3., and 1.3.4. of the Traffic Circulation Plan;
- Solid Waste - Policy 4.1.1. of the Public Facilities Plan;
- Drainage - Policy 4.1.2. of the Public Facilities Plan;
- Sanitary Sewer - Policy 4.1.3. of the Public Facilities Plan;
- Potable Water - Policy 4.1.4. of the Public Facilities Plan; and
- Parks and Recreation - Policy 1.1.1. of the Recreation and Open Space Plan.

Policy 1.5.4.

Concurrent with the process identified in Policy 1.5.3., the County shall hold a Public Hearing to consider the adoption of an ordinance to establish Municipal Services Taxing Units, hereinafter referred to as MSTUs, or Special Districts, pursuant to Chapter 125.01, Florida Statutes. Said MSTUs or Special Districts shall provide the revenue necessary to fund road and park improvements not attributable to the impacts of new development. Said ordinance shall be adopted within a timeframe enabling the implementation of assessments in Fiscal Year 1990, commencing on October 1, 1989.

Policy 1.5.5.

The provisions of Policy 1.5.4. notwithstanding, MSTU or Special District assessments for funding road and park improvements not attributable to the impacts of new development shall not be imposed, in the event that the one-cent sales tax is approved, to the extent that proceeds from such assessments can be replaced, on a dollar for dollar basis, by revenues from said sales tax.

Policy 1.5.6.

Capital improvements proposed to be added to the Five-Year Schedule of Capital Improvements (Table 80) shall be evaluated with project selection criteria that consider, but are not limited to, the following factors:

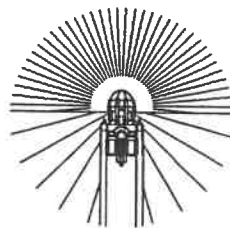
- the relationship to relevant Chapters of the Comprehensive Plan;
- the elimination of public hazards;
- the elimination or mitigation of existing deficiencies;
- the impact on the annual operating and capital budgets;
- location in relation to the "Future Land Use Plan Map";
- the accommodation of new development and redevelopment facility demands;
- the financial feasibility of the proposed project; and
- the relationship of the improvement to the plans of State agencies and the Southwest Florida Water Management District.

Policy 1.5.7.

The debt service implications of the Five-Year Schedule of Capital Improvements (Table 80) shall be evaluated as part of the Monitoring and Evaluation of the Capital Improvements Chapter on an annual basis.

Policy 1.5.8.

The County shall address the renewal and replacement of public facilities in the Five-Year Schedule of Capital Improvements (Table 80).



Implementation

Five-Year Schedule Of Capital Improvements

Table 80 is the "Five-Year Schedule of Capital Improvements," a compilation of the various capital improvement projects for all facility types. The Schedule includes the fiscal year, a brief project description, estimated cost, the revenue source for funding the project, and an affirmation of consistency with the Chapters of the Comprehensive Plan.

Capital Improvements Program

The mechanism for implementing the Five-Year Schedule of Capital Improvements will be the Capital Improvements Program, or "CIP," which will be adopted by County ordinance, and which will include not only the facility types included in the Five-Year Schedule of Capital Improvements, but also additional facility types that have no bearing on the Level of Service provisions of Rule 9J-5, Florida Administrative Code. Examples of these "additional" facility types are general government facilities (i.e., court buildings, administrative buildings, fleet management facilities, etc.), fire and rescue facilities, and libraries.

The Capital Improvements Program, which will also comprise five fiscal years, would be updated annually, meaning that the five-year "block" would "roll over" each year. For example, the first CIP period would be FY90-FY94, the next annual update would result in a FY91-FY95 period, and so on thereafter. This is identical to the "rolling 5-year block" concept found in the Public Facilities Financing Ordinance (Ordinance No. 83-24, as amended). This would mean that additional

projects would be added to the CIP during each annual update. Table 81 provides a listing of FY95-FY2010 road improvement projects that will guide the selection of projects to be added, as each five-year CIP period is rolled over.

Capital Budget

The annual capital budget ties both the CIE and the CIP to the annual budgeting process of County Government. The Annual Capital Budget would include those projects identified for the first year of each five-year CIP period and would be incorporated into the County Budget each year.

Adequate Public Facilities Ordinance

In addition to the CIP and the Capital Budget, an "adequate public facilities ordinance" will be a key implementing mechanism of the CIE. It is possible that such an ordinance could be incorporated into the County's Land Development Regulations (Ordinance No. 81-12, as amended) or, possibly, could function instead as a separate ordinance. Nevertheless, such an ordinance would need to include provisions that would ensure that public facilities are in place to accommodate development within a reasonable and workable period of time. This means that the ordinance would need to address such issues as a definition of "concurrency" (i.e., the concept of having public facilities in place as development occurs), the establishment of a monitoring system to track levels of service for the various facility types in relation to land development activity, and monitoring the status of the Capital Improvements Program.

Table 80: Five-Year Schedule of Capital Improvements

Year	Facility Type	Project Description	Cost	Revenue Source	Consistency With Plan
FY90	Solid Waste	Development of Walton Tract	1,550	Bond Proceeds/User Charges	Yes
		Bee Ridge Landfill Closeout	960		Yes
	Sub-total:		2,510		
FY90	Parks and Recreation	Colonial Oaks	247	Sales Tax/Special Assessment (1) and MSTU Revenues (2)	Yes
		Woodmere Park	394		Yes
		Blind Pass Beach	130		Yes
		Nokomis Beach	105		Yes
		Phillippi Plantation	160		Yes
		Caspersen Mainland	300		Yes
		Bay Street Park	107		Yes
		Longwood Park	219		Yes
		North County Special Park	700		Yes
		Sub-total:			2,362
FY90	Potable Water	Water Treatment Plant	16,222	Bond Proceeds/Water Impact Fees/Monthly Rates	Yes
		Transmission Mains	10,691		Yes
		Wellfield Piping, Pumps, & Appurt.	4,424		Yes
		Wellfield Electrical	1,659		Yes
		Wellfield Roadway	3,221		Yes
		Central Access Roadway	3,466		Yes
		Engineering	184		Yes
Sub-total:		39,867			
FY90	Traffic Circulation	Airport Connector	5,100	Sales Tax/Special Assessment (1) and MSTU Revenues (2)	Yes
		Albee Farm Road	6,739		Yes
		McIntosh Road	4,418		Yes
		Annual Signals	150		Yes
		Advanced R/W	500		Yes
		Bridge Replacement	350		Yes
Sub-total:		17,257			
	FY90 TOTAL:		61,996		
FY91	Solid Waste	Development of Walton Tract	1,165	Bond Proceeds/User Charges	Yes
		Bee Ridge Landfill Closeout	960		Yes
	Sub-total:		2,125		
FY91	Parks and Recreation	Colonial Oaks	247	Sales Tax/Special Assessment (1) and MSTU Revenues (2)	Yes
		Woodmere Park	394		Yes
		Blind Pass Beach	120		Yes
		Nokomis Beach	105		Yes
		Phillippi Plantation	180		Yes
		Unincorp. Area East of Myakka River	50		Yes
		Longwood Park	219		Yes
		North County Special Park	800		Yes
Sub-total:		2,115			

Continued on next page

Table 80: Five-Year Schedule of Capital Improvements (Continued)

Year	Facility Type	Project Description	Cost	Revenue Source	Consistency With Plan
FY91 (Con't)	Potable Water	Water Treatment Plant	3,568	Bond Proceeds/Water	Yes
		Transmission Mains	118	Impact Fees/Monthly Rates	Yes
		Central Access Roadway	235		Yes
		Sub-total:	3,921		
	Traffic Circulation	Proctor Road	2,700	Sales Tax/Special Assessment (1) and MSTU	Yes
		Group B	1,297		Yes
		Bayshore Road	233	Revenues (2)	Yes
		Higel Avenue	248		Yes
		Bahla Vista Street	2,855	Yes	
		Dearborn Street	3,063	Yes	
		University Parkway	4,166	Yes	
		Lockwood Ridge Road	1,182	Yes	
		Ortiz Road	265	Yes	
		Annual Signals	150	Yes	
Advanced R/W		500	Yes		
	Bridge Replacement	350	Yes		
	Sub-total:	17,009			
	FY91 TOTAL:	25,170			
FY92	Solid Waste	Development of Walton Tract	14,435	Bond Proceeds/User Charges	Yes
		Bee Ridge Landfill Closeout	960		Yes
	Sub-total:	15,395			
Parks and Recreation	Blind Pass Beach	90	Sales Tax/Special Assessment (1) and MSTU	Yes	
	Phillippi Plantation	130		Yes	
	Caspersen Mainland	500	Revenues (2)	Yes	
	Unincorp. Area East of Myakka River	150		Yes	
	Bay Street Park	244	Yes		
	Longwood Park	219	Yes		
	Gulf Gate East	212	Yes		
	South County Special Park	700	Yes		
		Sub-total:	2,245		
	Traffic Circulation	Pine Street	5,234	Sales Tax/Special Assessment (1) and MSTU	Yes
		Tuttle Avenue	3,800		Yes
Webber Street		4,910	Revenues (2)	Yes	
Annual Signals		150		Yes	
Advanced R/W		500	Yes		
	Bridge Replacement	350	Yes		
	Sub-total:	14,944			
	FY92 TOTAL:	32,584			

Continued on next page

Table 80: Five-Year Schedule of Capital Improvements (Continued)

Year	Facility Type	Project Description	Cost	Revenue Source	Consistency With Plan
FY93	Solid Waste	Development of Walton Tract	6,965	Bond Proceeds/User	Yes
		Bee Ridge Landfill Closeout	960	Charges	Yes
	Sub-total:		7,925		
	Parks and Recreation	Blind Pass Beach	170	Sales Tax/Special Assessment (1) and MSTU Revenues (2)	Yes
		Phillippi Plantation	120		Yes
		Caspersen Mainland	320		Yes
		Sorrento	100		Yes
		Unincorp. Area East of Myakka River	350		Yes
		Bay Street Park	419		Yes
		Gulf Gate East	800		Yes
		Sub-total:	2,279		
	Traffic Circulation	Honore Avenue	5,500	Sales Tax/Special Assessment (1) and MSTU Revenues (2)	Yes
		Myrtle Street	1,704		Yes
		Pinebrook Avenue	4,986		Yes
		Annual Signals	150		Yes
		Advanced R/W	500		Yes
		Bridge Replacement	350		Yes
		Design (FY95 Projects)	1,000		Yes
		R/W (FY95 Projects)	1,500		Yes
Sub-total:	15,690				
	FY93 TOTAL:		25,894		
FY94	Solid Waste	Development of Walton Tract	1,690	Bond Proceeds/User	Yes
		Bee Ridge Landfill Closeout	960	Charges	Yes
	Sub-total:		2,650		
	Parks and Recreation	Colonial Oaks	247	Sales Tax/Special Assessment (1) and MSTU Revenues (2)	Yes
		Caspersen Mainland	300		Yes
		Unincorp. Area East of Myakka River	250		Yes
		Bay Street Park	299		Yes
		Gulf Gate East	419		Yes
		Sub-total:	1,515		
	Traffic Circulation	Capri Isles Boulevard	1,737	Sales Tax/Special Assessment (1) and MSTU Revenues (2)	Yes
		Center Road	3,081		Yes
		Laurel Road	2,153		Yes
		Longmeadow	3,240		Yes
		Annual Signals	150		Yes
		Advanced R/W	500		Yes
		Bridge Replacement	350		Yes
		Design	1,000		Yes
Sub-total:	12,211				
	FY94 TOTAL:		16,376		

Continued on next page

Table 80: Five-Year Schedule of Capital Improvements (Continued)

Totals-Each Facility	Solid Waste	30,605
	Parks and Recreation	10,516
	Potable Water	43,788
	Traffic Circulation	77,111
FY90-FY94 CIE TOTAL:		162,020

Notes:

Dollars shown in Thousands

(1) The revenue source "Sales Tax/Special Assessment" refers to Local Option Sales Tax revenues and special assessment revenues derived from a levy on existing development not attributable to the impacts of new development.

(2) The revenue source "MSTU Revenues" refers to those special assessments levied on new development in the North and South County MSTUs, pursuant to Ordinance No. 83-24, as amended (Public Facilities Financing Ordinance).

Source: Sarasota County Office of Management and Budget, 1988.

Table 81: Proposed FY1995-FY2010 Future Thoroughfare Plan Improvements

Facility	Description	Facility Location	Project Length (Miles)	Project Costs			Total Costs
				Const.	R-O-W	Design	
Bahia Vista Street	Add 2 Lanes to 2 Lanes	McIntosh Road to Cattlemen Road	1.8	1,716	858	129	2,703
Bee Ridge Ext.	Construct 4 Lanes	Fruitville Road to Bee Ridge Road	2.6	3,414	1,195	256	4,866
Bee Ridge Road	Add 2 Lanes to 2 Lanes	I-75 to Bee Ridge Extension	3.0	2,938	1,469	220	4,627
Brown Road	Construct 4 Lanes	Fruitville Road to University Pkwy.	3.5	5,916	2,958	444	9,318
Cattlemen Road	Construct 4 Lanes	Fruitville Road to Bee Ridge Road	2.4	4,160	2,080	312	6,552
DeSoto Road	Construct 2 Lanes	Longwood Run to Brown Road	1.7	1,122	393	84	1,599
Frontage Road	Construct 4 Lanes	University Pkwy. to Bee Ridge Rd.	6.2	7,976	2,791	598	11,365
Fruitville Road	Add 2 Lanes to 2 Lanes	I-75 to Bee Ridge Extension	3.3	3,553	1,244	266	5,093
Gantt Road	Add 2 Lanes to 2 Lanes	Bee Ridge Road to Clark Road	1.0	970	485	73	1,527
Honore Avenue	Add 2 Lanes to Existing 2 Lanes	University Pkwy. to Richardson Rd.	2.7	2,637	1,319	198	4,154
Honore Avenue	Construct 4 Lanes	Richardson Rd. to Bee Ridge Rd.	3.1	5,303	2,651	398	8,351
Honore/Pinebrook	Construct 4 Lanes (Expressway)	Clark Road to Laurel Road	11.1	14,330	5,016	1,075	20,420
McIntosh Road	Construct 4 Lanes	Fruitville Road to 17th Street	1.0	1,155	578	87	1,820
McIntosh Road	Add 2 Lanes to Existing 2 Lanes	Bahia Vista Street to Fruitville Road	1.0	970	485	73	1,527
McIntosh Road	Add 2 Lanes to Existing 2 Lanes	Bee Ridge Road to U.S. 41	6.3	6,137	3,069	460	9,666
Myrtle Street	Construct 4 Lanes	Tuttle Avenue to Honore Avenue	2.4	3,104	1,086	233	4,423
Myrtle Street	Add 2 Lanes to Existing 2 Lanes	U.S. 41 to Tuttle Avenue	3.1	3,389	1,186	254	4,829
Palmer Blvd.	Construct 2 Lanes	Niobe Road to Bee Ridge Ext.	2.1	1,434	502	108	2,043
Proctor Road	Add 2 Lanes to Existing 2 Lanes	McIntosh Road to Cattlemen Road	1.8	1,724	862	129	2,715
Proctor Road	Add 2 Lanes to Existing 2 Lanes	Cattlemen Road to Clark Road	2.7	2,919	1,022	219	4,159
Tuttle Avenue	Add 2 Lanes to Existing 2 Lanes	University Pkwy. to 12th Street	2.8	2,666	1,333	200	4,199
University Pkwy.	Construct 2 Lanes	I-75 to Frontage Road	0.8	505	177	38	719
University Pkwy.	Add 2 Lanes to Existing 4 Lanes	U.S. 301 to I-75	5.2	5,756	0	432	6,188
Wilkinson Road	Construct 2 Lanes	Bliss Road to Center Gate Boulevard	0.5	578	289	43	910
Airport Drive	Construct 4 Lanes	Harbor Drive to U.S. 41	2.0	2,587	905	194	3,686
Artists Avenue	Construct 2 Lanes	S.R. 775 to North Port City Limits	2.1	1,413	495	106	2,014

Continued on next page

Table 81: Proposed FY1995-FY2010 Future Thoroughfare Plan Improvements (Continued)

Facility	Description	Facility Location	Project Length (Miles)	Project Costs			Total Cost
				Const.	R-O-W	Design	
Bay Street	Add 2 Lanes to Existing 2 Lanes	U.S. 41 to Old Venice Road	0.6	610	214	46	869
Bay Street	Construct 4 Lanes	Old Venice to Honore/Pinebrook	1.5	1,940	679	145	2,764
Border Road	Add 2 Lanes to Existing 2 Lanes	Auburn Road to River Road	3.2	3,064	1,532	230	4,826
Center Road	Add 2 Lanes to Existing 2 Lanes	Rockley Boulevard to River Road	1.9	2,033	712	153	2,898
Colonia/Border	Construct 4 Lanes	Albee Farm Road to Auburn Road	2.1	2,768	969	208	3,944
Glissinger Blvd.	Construct 4 Lanes	S.R. 775 to North Port City Limits	3.7	2,477	867	186	3,530
Harbor Drive	Add 2 Lanes to Existing 2 Lanes	Venice Ave. to Shore/Airport Ave.	1.5	1,673	585	125	2,383
Jacaranda Blvd.	Construct 4 Lanes	I-75 to Laurel Road	1.8	2,341	819	176	3,336
Laurel Road	Construct 4 Lanes	I-75 to Jacaranda Boulevard	1.4	1,862	652	140	2,654
Pine Street	Construct 4 Lanes	U.S. 41 to Center Road	2.3	2,910	1,018	218	4,147
Pine Street	Add 2 Lanes to Existing 2 Lanes	Keyway By-Pass to U.S. 41	3.5	3,826	0	287	4,113
Pine Street	Add 2 Lanes to Existing 2 Lanes	River Road/Dearborn to Co. Line	1.0	1,093	383	82	1,558
Pinebrook/Honore	Construct 4 Lanes	Laurel Road to Venice City Limits	0.8	1,086	380	81	1,548
River Road	Construct 4 Lanes	Border Road to I-75	0.8	1,083	379	81	1,543
River Road	Add 2 Lanes to Existing 2 Lanes	I-75 to U.S. 41	5.5	6,013	2,104	451	8,568
River Road	Add 2 Lanes to Existing 2 Lanes	U.S. 41 to Pine Street	6.5	7,106	2,487	533	10,126
Toledo Blade Blvd.	Add 2 Lanes to Existing 2 Lanes	I-75 to Sarasota County Line	1.6	1,694	593	127	2,415
Venice Avenue	Add 2 Lanes to Existing 2 Lanes	Jacaranda Blvd. to River Road	2.6	2,842	995	213	4,050
Venice East Blvd.	Construct 4 Lanes	U.S. 41 to Keyway Road	3.3	2,188	766	164	3,117
Total Cost:							197,832

Notes:

Project Costs based on FDOT, District 1 cost/mile estimates where R.O.W. cost = 35% of construction cost in rural areas and 50% in urban areas; and design cost = 7.5% of construction cost

All costs in 1987 dollars in thousands

Source: Sarasota County Office of Management and Budget, 1988.

CHAPTER 12

INTERGOVERNMENTAL COORDINATION AND CITIZEN PARTICIPATION

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CHAPTER 12

INTERGOVERNMENTAL COORDINATION AND CITIZEN PARTICIPATION

Introduction

The relationships that exist between local, regional, State, and federal government entities are complex and interwoven. The efforts of these units of government must be coordinated in order to minimize duplication and incompatible endeavors and to promote cooperation and efficiency. The Local Government Comprehensive Planning and Land Development Regulation Act of 1985, as amended, requires the inclusion of an element within local government comprehensive plans which addresses this necessary coordination between units of government. Furthermore, the effective involvement of citizens in governmental processes is a very real part of intergovernmental coordination and an integral component of comprehensive planning.

The Intergovernmental Coordination and Citizen Participation Chapter of Apoxsee provides a review of programs and procedures utilized by Sarasota County to achieve this coordination and involvement; an inventory of the local, regional, State, and federal entities with which the County coordinates; an analysis of coordination methods that are currently in place; an examination of the intergovernmental coordination issues identified in the other Chapters of Apoxsee as well as the Southwest Florida Regional Comprehensive Policy Plan; and a discussion of other intergovernmental coordination mechanisms that Sarasota County could employ to further promote

intergovernmental coordination. The last section of the Chapter, the Intergovernmental Coordination and Citizen Participation Plan, sets forth specific measures to ensure efficient and effective coordination between the County, its municipalities, other County governmental entities, adjacent counties, and regional and State entities. Also included within the Chapter is an account of citizen participation during the update of Apoxsee as well as separate Goals, Objectives, and Policies which address public involvement.

Planning

During the development and update of Apoxsee, Sarasota County has implemented several procedures and programs to ensure effective intergovernmental coordination and citizen participation in the comprehensive planning process. The following is a summary of these various procedures and programs.

Information Exchange Program

The Information Exchange Program was initiated in November, 1977 when units of government, governmental agencies, and special districts affected by or affecting the County's comprehensive planning efforts were identified. A process of "coordination by notification" was established in order to involve these entities as well as interested community organizations, civic associations, and the general public with the development of Apoxsee.

Agendas, minutes, preliminary drafts, final drafts, and other relevant information relating to the Comprehensive Plan were transmitted to these recipients. During the update of Apoxsee, the Information Exchange Program was continued and expanded through the use of the County Planning Department's Community Mailing List. Now computerized, the mailing list contains over 660 entries and is continually updated. Information regarding the update of the Comprehensive Plan, such as notices of meetings, workshops, availability of draft elements, and newsletters, were sent to the parties on the mailing list in order to inform them as to the status of the Apoxsee Update and to encourage their participation.

Program of Action for Cooperation and Consolidation Efforts

In May, 1988, the administrators of Sarasota County and the City of Sarasota presented to their respective governing bodies a program of action for enhancing cooperation and consolidation efforts between the County and the City. Criteria such as cost-effectiveness in the delivery of a service, savings in tax revenue, provision of additional services to the community, and the level of service provided were used for determining those areas where consolidation and cooperation between the Governments might be possible. As a result, the following twelve areas will be further analyzed for possible consolidation/cooperation:

- Countywide Parks and Recreation Agency;
- City-County Stormwater Management Utility;
- Consolidated Public Works Agency;
- Coordinated Purchasing Arrangements;
- City-County Employee Training and Development Program;
- City-County Contractual Services (i.e., street sweeping, traffic counts, automatic car wash, production of traffic signs, etc.);
- Consolidated Community Development and Housing Programs;
- Provision of Sewer Services to peripheral areas surrounding the City;

- Coordinated Geographic Information System;
- Improved Fire and Ambulance Service Area Coverage;
- Coordinated Employee Benefit Programs; and
- Countywide Impact Fees.

These programs for further study were approved by the respective governing bodies in June, 1988.

Public Participation Procedures Ordinance

The Local Government Comprehensive Planning and Land Development Regulation Act directs local planning agencies and local government units "...to adopt procedures designed to provide effective public participation in the comprehensive planning process..." To fulfill this requirement, the Sarasota County Board of County Commissioners adopted the Public Participation Procedures Ordinance (Ordinance No. 87-50) in July, 1987 (see Appendix J, Section 1). The intent of the Ordinance was to ratify and confirm Sarasota County's existing planning process and to meet the provisions of Chapter 163.3181, Florida Statutes. The Ordinance provides for: 1) the dissemination of proposals and alternatives related to the adoption of the Comprehensive Plan, the consideration of Comprehensive Plan Amendments and Comprehensive Plan Evaluation and Appraisal Reports for public inspection at the County's five libraries as well as the County Planning Department, Clerk to the Board's Office, and the South Sarasota County Courthouse Annex; 2) opportunity for written comments; 3) public hearings; 4) open discussions; 5) communication programs and information services; and 6) notification of affected real property owners.

One essential element of public participation is the provision of a vehicle by which the public can provide input into the comprehensive planning process. The Public Participation Procedures Ordinance established a framework for developing this vehicle.

Citizen Participation Program

During the development of Apoxsee in the late 1970's and early 1980's, citizen participation in the comprehensive planning process was much more considerable and extensive than required by legislation. Recognizing the benefits to be gained from a more extensive program of public awareness and involvement, the County Planning Department developed the Citizen Participation Program.

The first step of the Citizen Participation Program was to bring the public up-to-date with the comprehensive planning process. To accomplish this, a brochure describing the Citizen Participation Program was developed and sent out to all persons and organizations on the Department's Community Mailing List as well as distributed to County offices. Copies of the brochure were also supplied to civic organizations for distribution to their membership. The brochure included a timetable of citizen participation events, encouragement to individuals to become involved, and suggestions on how to have an effective voice. It also addressed the special needs of community organizations by offering staff assistance and technical support.

The next phase of the Program consisted of two open Community Meetings, held in November and December of 1987. The purpose of these meetings was to elicit the public's comments regarding their perceptions of the main issues that should be addressed in the update of Apoxsee. The format of these meetings was that of a public "brainstorming session" rather than a formal public hearing. Approximately 150 citizens attended the meetings and identified 168 issues ranging from very specific proposals to general concepts on a variety of topics including land use, transportation, environment, recreation, and utilities.

In order to keep all members of the public aware of the status of Apoxsee, a newsletter was published periodically beginning in January of 1988 and sent out to those on the Department's Community Mailing List. The newsletters provided staff reports regarding the issues identified at the Community Meetings, responses to public inquiries that had community-wide implications, reiteration of the schedule of key events, and reports of Planning

Commission (Local Planning Agency, or LPA), Board of County Commissioners and Planning Department activities. These newsletters were also supplied to the media to ensure the widest possible dissemination of information.

In January and February of 1988, two joint Board of County Commissioners/LPA work sessions were held on the technical aspects of the required level of service standards and capital improvements funding. In addition to providing a forum for understanding some of the complex technical issues in the comprehensive planning process, the work sessions provided an opportunity for interaction among members of the Board, the Planning Commission, Planning Department staff, and the general public. In addition to these work sessions, ten public workshops on the various Chapters of Apoxsee were held before the Board of County Commissioners and the LPA. These workshops were followed by the LPA Public Hearing to complete their recommended revisions and the BCC Public Hearing to transmit "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan" to the Department of Community Affairs (DCA). Prior to the adoption of the updated Apoxsee, additional public workshops and hearings were held by the Board of County Commissioners.

In June of 1988, Sarasota County received a National Association of Counties Achievement Award for the development and implementation of the Citizen Participation Program (see Appendix J, Section 2).

The following is a summary of the numerous public meetings which were held for the update of Apoxsee and highlights of the key events of the Citizen Participation Program:

May 14, 1987 - Comprehensive Plan Update Program presented to LPA

July 7, 1987 - Board of County Commissioners adopts Ordinance No. 87-50 (Public Participation Procedures Ordinance)

November 5, 1987 - Citizen Participation Program presented to LPA

November 18, 1987 - Community Meeting - Venice

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

December 1, 2, and 3, 1987 - Town Meetings sponsored by the County Planning Department and Historical Commission on proposed Historic Preservation Chapter

December 4, 1987 - Community Meeting - Sarasota

January 7, 1988 - Proposed Historic Preservation Chapter presented to LPA

January 27 and February 10, 1988 - Joint work sessions with Board of County Commissioners and LPA regarding level of service standards and capital improvements funding

April 27, 1988 - Board of County Commissioners/LPA Joint Public Workshop

- Overview of Apoxsee Update
- Legal Preface
- Compliance Issues regarding Rule 9J-5, F.A.C.
- Transportation Chapters - Traffic Circulation, Mass Transit, Aviation, Port and Rail; Level of Service Recommendations

May 6, 1988 - Board of County Commissioners/LPA Joint Public Workshop

- Infrastructure Chapters - Potable Water, Sanitary Sewer, Drainage, Solid Waste; Level of Service Recommendations

May 27, 1988 - Board of County Commissioners/LPA Joint Public Workshop

- Environment Chapter

June 1, 1988 - Englewood Area Citizens Advisory Committee Meeting regarding the Comprehensive Plan Update

June 3, 1988 - Board of County Commissioners/LPA Joint Public Workshop

- Future Land Use Chapter

June 9, 1988 - Board of County Commissioners/LPA Joint Public Workshop

- Historic Preservation and Housing Chapters

July 6, 1988 - Board of County Commissioners/LPA Joint Public Workshop

- Capital Improvements and Future Land Use Chapters

July 13, 1988 - Englewood Area Citizens Advisory Committee Meeting regarding the Comprehensive Plan Update

July 15, 1988 - Board of County Commissioners/LPA Joint Public Workshop

- Recreation and Open Space, Economy, and Intergovernmental Coordination and Citizen Participation Chapters

August 3, 1988 - Board of County Commissioners/LPA Joint Public Workshop

- Future Land Use Plan and Capital Improvements Chapters

August 16 and 22, 1988 - Board of County Commissioners/LPA Joint Public Workshop

- Review of Public Comments regarding the various Chapters of Apoxsee

August 29, 31, and September 6, 1988 - LPA Public Hearing

September 9, 16, and 23, 1988 - BCC Transmittal Stage Public Hearing

February 1, 1989 - BCC/Planning Staff Workshop to discuss DCA Objections, Recommendations and Comments Report, other governmental agency comments, Staff editorial changes, and those issues referred to Planning staff for further study during the September 23, 1988 BCC Transmittal Stage Public Hearing

February 6 and 7, 1989 - BCC Workshop on Capital Improvements Funding

March 1, 2, and 13, 1989 - BCC Adoption Stage Public Hearing

Inventory

Many formal and informal networks of information and coordination currently exist between Sarasota County and other governmental units and agencies. These units and agencies often participate in some phase of planning involving land use and/or provision of services necessitating coordination with Sarasota County. The following section provides an inventory of these information and coordination networks between the County and its municipalities; adjacent counties; local authorities and special districts; regional authorities and districts; State agencies; federal agencies; and utility companies providing services in Sarasota County.

Coordination with Municipalities

Sarasota County coordinates with its municipalities, the Cities of Sarasota, Venice, North Port and the Town of Longboat Key on a myriad of issues. A substantial portion of this coordination is achieved through Interlocal Agreements by which the County provides services within the corporate limits of the municipalities.

In addition to Interlocal Agreements, other effective networks of coordination, both formal and informal, exist between the County and municipal governments. A listing of these coordinated efforts, Interlocal Agreements, and formal and informal procedures is provided in Table 82.

Table 82: Coordination With Municipalities

Coordinating Entity	Subject	Nature of Relationship	Office With Primary Responsibility
City of Sarasota	Maintenance of City Roads and Traffic Signals	Through Interlocal Agreement, the County maintains certain City roads and traffic signals.	Transportation and Road and Bridge Departments
	Housing and Demographic Data	Through informal procedures, County and City staff exchange data, as needed.	Planning Department
	Review of Development Proposals	As set forth in the Sarasota County Planning Commission's Rules of Procedures, copies of development proposals within the County are transmitted to the City for their review and comment when the proposal lies within 1/4 mile of the City's boundaries.	Planning Department
	Air Quality Monitoring Stations	Through Interlocal Agreement, the County locates Air Quality Monitoring Stations within the City.	Laboratory Division, Environmental Services Department
	Potable Water	The County purchases water from the City and contract negotiations for the purchase of additional water supplies are ongoing.	Utilities Department
	Maintenance of Transit System Transfer Stations	Interlocal Agreement	Sarasota County Area Transit (SCAT)
	Downtown Trolley System	The County operates a trolley system which serves the downtown Sarasota area.	Sarasota County Area Transit (SCAT)
	Bookmobile Operations	Through Interlocal Agreement, the County operates Bookmobiles within the City.	Library Department

Continued on next page

Table 82: Coordination With Municipalities (Continued)

Coordinating Entity	Subject	Nature of Relationship	Office With Primary Responsibility
City of Sarasota (Continued)	Solid Waste Disposal	The City utilizes the County's sanitary landfill for their solid waste disposal needs.	Solid Waste Franchise Div., Environmental Services Department
City of Venice	Parks and Recreation	Through Interlocal Agreement, the County maintains the City's active recreational facilities.	Parks and Recreation Department
	Review of Development Proposals	As set forth in the Sarasota County Planning Commission's Rules of Procedure, copies of development proposals within the County are transmitted to the City for their review and comment when the proposal lies within 1/4 mile of the City's boundaries.	Planning Department
	Provision of Planning Services	Through Interlocal Agreement, the County provides a full-time planner to the City.	Planning Department
	Housing and Demographic Data	Through informal procedures, County and City staff exchange data, as needed.	Planning Department
	Traffic Signal Maintenance	Through Interlocal Agreement, the County maintains certain traffic signals within the City.	Road and Bridge Department
	Solid Waste Disposal	The City utilizes the County's sanitary landfill for their solid waste disposal needs.	Solid Waste Franchise Div., Environmental Services Department
	Air Quality Monitoring Stations	Through Interlocal Agreement, the County locates Air Quality Monitoring Stations within the City.	Laboratory Division, Environmental Services Department
City of North Port	Review of Development Proposals	As set forth in the Sarasota County Planning Commission's Rules of Procedure, copies of development proposals within the County are transmitted to the City for their review and comment when the proposal lies within 1/4 mile of the City's boundaries.	Planning Department
	Housing and Demographic Data	Through informal procedures, County and City staff exchange data, as needed.	Planning Department
	Solid Waste Disposal	The City utilizes the County's sanitary landfill for their solid waste disposal needs.	Solid Waste Franchise Div., Environmental Services Department
Town of Longboat Key	Housing and Demographic Data	Through informal procedures, County and Town staff exchange data, as needed.	Planning Department

Source: Sarasota County Planning Department, 1988.

Coordination with Adjacent Counties

Sarasota County coordinates with the counties adjacent to its borders, Manatee, Charlotte, and DeSoto Counties, on various issues. The networks of coordination between the four counties are useful and effective and include contractual arrangements, interlocal agreements, and both formal and informal procedures. Table 83 provides a listing of these issues and intergovernmental processes.

Coordination with Local Authorities and Special Districts

There are several local authorities and special districts within Sarasota County which the County communicates and coordinates with. Included within these are the Sarasota County Board of Public Instruction; the Housing Authorities of Sarasota, Venice, and North Port; the Soil and Water Conservation District; the Mosquito Control District; the Animal Control District; the Sarasota Downtown Redevelopment Authority; the Englewood Water District, and special tax lighting districts. Coordination with these local authorities and special districts has been effective and should be continued. The following more fully addresses the existing networks of coordination between the County and these local authorities and special districts.

Sarasota County Board of Public Instruction

Sarasota County and the School Board coordinate on a variety of issues, including the location of school sites and recreation areas. County staff members also attend meetings and participate in long-range planning through representation on the School Board's Long-Range Facilities Planning Committee. Additionally, the School Board is a member of the County's Development Review Committee and provides review and comment to the County on school-related planning issues associated with Sector Plans and Developments of Regional Impact. The School Board is also represented on the Sarasota County Planning Commission through ex-officio membership. The County

Planning Department is primarily responsible for coordination regarding land use issues, especially related to the siting of schools. In addition, the County's Parks and Recreation Department coordinates with the School Board regarding the utilization of school sites as recreational areas.

Sarasota, Venice, and North Port Housing Authorities

The County Planning Department coordinates with the Housing Authorities of Sarasota, Venice, and North Port in order to obtain and provide data regarding housing with Sarasota County. This informal coordination has been effective and should be continued as needed.

Soil and Water Conservation District

The County's Natural Resources Department coordinates with the Soil and Water Conservation District on updates of the Sarasota County Soils Survey. Additionally, the District provides review and comment on issues resulting from proposed Developments of Regional Impact and Sector Plans as a member of the County's Development Review Committee.

Mosquito Control District

The Mosquito Control District is an independent district under the Sarasota Board of County Commissioners which provides mosquito control and spraying services with the County. The County's Environmental Services Department is primarily responsible for coordinating with the Mosquito Control District. The District is also a member of the County's Development Review Committee and provides review and comment on issues associated with Sector Plans and Developments of Regional Impact.

Animal Control District

Created by a special act of the Legislature with Countywide legislative authority, the Animal Control District performs animal control and tagging services within Sarasota County. The County's Environmental Services Department is primarily responsible for ensuring effective coordination with the Animal Control District.

Table 83: Coordination With Adjacent Counties

Coordinating Entity	Subject	Nature of Relationship	Office With Primary Responsibility
Manatee County	Potable Water	The County purchases water from Manatee County and contract negotiations for the purchase of additional water supplies are ongoing.	Utilities Department
	University Parkway	Interlocal Agreement	Transportation Department
	Transfer of Transit Passengers	The Manatee County Transit System accepts transfers from SCAT passengers.	Sarasota County Area Transit (SCAT)
	Talking Book Program	Interlocal Agreement	Library Department
	Review of Development Proposals	As set forth in the Sarasota County Planning Commission's Rules of Procedure, copies of development proposals within the County are transmitted to Manatee County for their review and comment when the proposal lies within 1/4 mile of the County's boundaries.	Planning Department
Charlotte County	Charlotte Harbor Management Area	As Charlotte Harbor is designated a Resource Planning and Management Area, the County coordinates with Charlotte County as well as Lee County and appropriate regional and State agencies regarding intergovernmental efforts and scientific modeling of Charlotte Harbor.	Natural Resources Department
	Planning-Related Issues Regarding the Englewood Urban Area	As the Englewood Urban Area straddles the Sarasota-Charlotte boundary, Sarasota County encourages Charlotte County's participation in the activities of the Englewood Area Citizens Advisory Committee.	Planning Department
	Review of Development Proposals	As set forth in the Sarasota County Planning Commission's Rules of Procedure, copies of development proposals within the County are transmitted to Charlotte County for their review and comment when the proposal lies within 1/4 mile of the County's boundaries.	Planning Department
DeSoto County	Review of Development Proposals	As set forth in the Sarasota County Planning Commission's Rules of Procedure, copies of development proposals within the County are transmitted to DeSoto County for their review and comment when the proposal lies within 1/4 mile of the County's boundaries.	Planning Department

Source: Sarasota County Planning Department, 1988.

Sarasota Downtown Redevelopment Authority

In order to provide low cost transportation to shoppers, tourists, and business persons in the downtown Sarasota area, the Sarasota County Area Transit System (SCAT) initiated the "Sarasota Trolley" in 1988. The trolley project is a cooperative venture between the County, the City of Sarasota, the Sarasota County Chamber of Commerce, and the Downtown Redevelopment Authority.

Englewood Water District

The Englewood Water District, created by a special act of the Legislature, is governed by the Englewood Water District Board and provides water to eight of Sarasota County's 49 franchised water supply systems. The County's Utilities Department has the primary responsibility for ensuring effective coordination with the Englewood Water District.

Special Lighting Districts

Within Sarasota County there are 30 special tax districts for the installation of street lighting. The County's Office of Management and Budget is primarily responsible for coordination with these special districts. The following is a list of these special lighting districts.

Bay Point Lighting District
 Bay Vista Boulevard Lighting District
 Center Gate Woods Lighting District
 Center Gate Woods, Units 1-5, Lighting District
 Clark Road Industrial Center Lighting District
 Denham Acres Lighting District
 Englewood Lighting District
 Englewood Street Lighting District
 Forest Lakes Country Club Lighting District
 Gulf Gate Lighting District
 Gulf Gate Woods Lighting District
 Hermes Road - East Park Lighting District
 Newtown Estates Lighting District
 North Gate Center Subdivision Lighting District
 Overbrook Gardens Lighting District
 Oyster Bay Estates Lighting District
 Phillippi Gardens Lighting District
 Pinecraft Lighting District

Ridgewood Estates Lighting District
 River Forest Lighting District
 Shadow Lakes Lighting District
 Siesta Key Lighting District
 South Gate Lighting District
 South Gate Ridge Lighting District
 Southpointe Shores Lighting District
 South Venice Lighting District
 Uplands Subdivision Lighting District
 Venice Gardens Lighting District
 Village Green Lighting District
 Warm Mineral Springs Lighting District

Coordination with Regional Authorities and Districts

Sarasota County coordinates with various regional authorities and districts, such as the Sarasota-Manatee Airport Authority; the Sarasota-Manatee Metropolitan Planning Organization; the Southwest Florida and Tampa Bay Regional Planning Councils; the Southwest Florida Water Management District; the Peace River/Manasota Regional Water Supply Authority; SARABASIS; the West Coast Inland Navigation District; and the Myakka River Management Coordinating Council. Coordination between the County and these regional authorities and districts has been useful and should be continued. The following is a discussion regarding these regional authorities and districts with which Sarasota County coordinates.

Sarasota-Manatee Airport Authority

The Sarasota-Manatee Airport Authority, composed of elected representatives from Sarasota and Manatee Counties, governs the acquisition, operation, maintenance, and facilities expansion functions of the Sarasota-Manatee Airport located near the border of Sarasota and Manatee Counties. Sarasota County works closely with the Airport Authority regarding aviation transportation planning issues. Also, the County Planning Department is represented at meetings of the Airport Authority's Noise Abatement Committee. The County's Transportation Department also coordinates with the Airport Authority concerning the location of airport-connector roads.

Sarasota-Manatee Metropolitan Planning Organization

Composed of elected officials from Sarasota and Manatee Counties and the Cities of Sarasota, Venice, Bradenton, and Palmetto, the Sarasota-Manatee Metropolitan Planning Organization (MPO) directs ongoing transportation studies for the Sarasota-Manatee urban area. The County Planning and Transportation Departments coordinate efforts regarding transportation planning issues with the MPO, and the Sarasota County Area Transit system (SCAT) works closely with the MPO regarding transit system planning. In addition, Sarasota County is represented on the MPO's Technical Advisory Committee by County Planning and Transportation Department staff. The MPO is a member of Sarasota County's Development Review Committee and provides review and comment regarding transportation planning issues associated with proposed Sector Plans and Developments of Regional Impact within Sarasota County.

Southwest Florida Regional Planning Council

Located in Fort Myers, the Southwest Florida Regional Planning Council (SWFRPC) is composed of elected officials and appointed representatives from Sarasota, Charlotte, DeSoto, Glades, Collier, Hendry, and Lee Counties. The County Planning Department works closely with the SWFRPC regarding the coordination of local plans with regional and State plans, review of Developments of Regional Impact and other planning related issues.

Tampa Bay Regional Planning Council (TBRPC)

The Tampa Bay Regional Planning Council (TBRPC), located in St. Petersburg, serves Pasco, Pinellas, Hillsborough, and Manatee Counties. The County Planning Department coordinates with the TBRPC on planning-related issues in Manatee County which impact Sarasota County.

Southwest Florida Water Management District (SWFWMD)

Located in Brooksville with a service office in Venice, the Southwest Florida Water Management District (SWFWMD) serves all or part of sixteen counties from Levy to Charlotte, including Sarasota County. The Manasota Basin Board, one of nine basin boards covering SWFWMD's region, represents Sarasota and Manatee Counties. The County coordinates with SWFWMD regarding such issues as water quality improvement, the protection and management of Sarasota Bay and the Myakka River, and aquatic weed control. SWFWMD also conducts regulatory programs within the County such as consumptive use permits, stormwater discharge, and surface water management and storage. The well construction permitting program, once a SWFWMD regulatory program, has been delegated to Sarasota County through a formal agreement. Other programs conducted by SWFWMD include the Quality of Water Improvement Program, the Local Government Coordination Program, the Local Government Planning Assistance Program, the Surface Water Improvement and Management Program, and the Save Our Rivers Program. The County's Utilities and Natural Resource Departments are primarily responsible for ensuring effective intergovernmental coordination with SWFWMD.

Peace River/Manasota Regional Water Supply Authority

Sarasota County, as well as Manatee, DeSoto, and Charlotte Counties, work with the Peace River/Manasota Regional Water Supply Authority in order to ensure adequate water supply within the four County region. The Authority is currently (August, 1988) studying the feasibility of emergency interconnections of water supplies and will be undertaking a regional water supply master plan.

Sarasota Bay Area Scientific Information Symposium (SARABASIS)

The Sarasota Bay Area Scientific Information Symposium (SARABASIS) is an intergovernmental effort to address the water quality of Sarasota Bay. Many governmental entities are involved with SARABASIS including Sarasota and Manatee

Counties, the Cities of Sarasota and Bradenton, and the Town of Longboat Key. The County's Natural Resources Department is primarily responsible for coordinating with SARABASIS.

West Coast Inland Navigation District

A special taxing district, the West Coast Inland Navigation District is composed of Sarasota, Manatee, Charlotte, and Lee Counties. The County's Natural Resources Department coordinates with the West Coast Inland Navigation District for the submission of grant applications for the dredging of inlets and passes and the utilization of spoil material for beach restoration to State and federal agencies.

Myakka River Management Coordinating Council

The Myakka River Wild and Scenic Designation and Preservation Act (Chapter 258.501, Florida Statutes) created a permanent Myakka River Management Coordinating Council to develop a management plan for the Myakka River. The County's Natural Resources Department is primarily responsible for coordinating efforts with the Myakka River Management Coordinating Council.

Coordination with State Agencies

Sarasota County coordinates with numerous departments and agencies of the State of Florida, including the Departments of Environmental Regulation; Natural Resources; Transportation; Community Affairs; Health and Rehabilitative Services; Agriculture and Consumer Services; Business Regulation, and Professional Regulation; the Bureau of Historic Resources and Archaeological Research; the Game and Freshwater Fish Commission; the Division of Alcoholic Beverages and Tobacco; the Universities of Florida and South Florida; and the Florida High Speed Rail Commission. Coordination with these State departments and agencies has been effective and should be

continued. The following is a list of these State departments and agencies and the coordination efforts that currently exist between them and Sarasota County.

State Agency: Bureau of Historic Resources and Archaeological Research

Subject: Listing of historic sites on the Florida Master Site File; nomination of eligible historic sites to the National Register of Historic Places
County Department with primary responsibility for coordination: Historical Resources

State Agency: Department of Environmental Regulation

Subject: Environmental Protection; Permitting; Dredge and Fill activities

County Department with primary responsibility for coordination: Environmental Services

State Agency: Department of Natural Resources

Subject: Protection of Natural Resources; Coastal Construction Setback Line

County Department with primary responsibility for coordination: Natural Resources

State Agency: Department of Transportation

Subject: Transportation Planning

County Department with primary responsibility for coordination: Transportation

State Agency: Community Affairs

Subject: Comprehensive Planning related issues; review of Developments of Regional Impact

County Department with primary responsibility for coordination: Planning

State Agency: Game and Freshwater Fish Commission

Subject: Protection of Fish and Wildlife Resources

County Department with primary responsibility for coordination: Natural Resources

State Agency: Health and Rehabilitative Services

Subject: Environmental Engineering; State/County partnership for operation of County Public Health Unit

County Department with primary responsibility for coordination: Sarasota County Public Health Unit

State Agency: Agriculture and Consumer Services

Subject: Management and Protection of Forest Resources

County Department with primary responsibility for coordination: Division of Forestry

State Agency: Business Regulation

Subject: Licensing/Permitting Activities

County Department with primary responsibility for coordination: Building and Zoning

State Agency: Professional Regulation

Subject: Licensing/Permitting Activities

County Department with primary responsibility for coordination: Building and Zoning

State Agency: Division of Alcoholic Beverages and Tobacco

Subject: Licensing/Permitting Activities

County Department with primary responsibility for coordination: Building and Zoning

State Agency: University of Florida, Bureau of Economic and Business Research

Subject: Population Projections; Demographic, Housing, and Economic Data

County Department with primary responsibility for coordination: Planning

State Agency: Universities of Florida and South Florida

Subject: Research Activities

County Department with primary responsibility for coordination: Natural Resources

In addition to these State departments and agencies, Sarasota County, through the Sarasota-Manatee Metropolitan Planning Organization, coordinates with the Florida High Speed Rail Commission regarding the feasibility of high speed rail throughout the State.

Coordination with Federal Agencies

Sarasota County coordinates with agencies of the Federal Government regarding such issues as environmental and fish and wildlife protection, flood insurance, census and housing data, and funding for transportation and transit planning. These federal agencies that Sarasota County coordinates with include: the Environmental Protection Agency; the Army Corps of Engineers; the Soil Conser-

vation Service; the Urban Mass Transit Administration; the Federal Emergency Management Administration; the Flood Insurance Administration; and the Departments of the Interior, Commerce, Housing and Urban Development and Transportation.

Coordination with Utility Companies

There are numerous utility companies, both publicly and privately owned and operated, which provide services in Sarasota County. The County's Utilities and Environmental Services Departments are primarily responsible for ensuring effective coordination with these public and private systems.

In 1988, there were more than 200 potable water systems providing services in Sarasota County including five public authorities, 49 franchises, 23 community water systems, 132 non-community water systems, and 54 other water systems. The Public Facilities Chapter of Apoxsee contains a detailed inventory and analysis of these potable water systems.

As of December, 1987, there were 118 individual wastewater treatment plants providing services in Sarasota County including two municipal systems for the Cities of Sarasota and Venice and the County-owned Sorrento Utilities. A detailed discussion as well as a listing of these plants is provided in Apoxsee's Public Facilities Chapter.

For the disposal of solid waste, there are five authorized collectors servicing the unincorporated areas of Sarasota County. These authorized collectors are Decker Disposal, Inc., Williams Disposal Service, Inc., General Sanitation Corporation, Harris Disposal Company, and Englewood Disposal, Inc. More information regarding solid waste collection and disposal is included within the Public Facilities Chapter of Apoxsee.

Analysis

Specific analyses of identified concerns and problems along with Goals, Objectives, and Policies are included within the other Chapters and Plan sections of Apoxsee. While many of these can be implemented by Sarasota County, some require specific intergovernmental coordination measures. This section of the Chapter explores these issues and the expanded coordination necessary to achieve the Goals, Objectives, and Policies of Apoxsee. Additional opportunities for coordination have also been identified where applicable. In addition, this section provides an analysis of those policies of the Southwest Florida Regional Comprehensive Policy Plan which necessitate intergovernmental coordination.

Historic Preservation

The Historic Preservation Chapter of Apoxsee states that identified prehistoric and historic sites should be registered on the Florida Master Site File as well as nominated for inclusion on the National Register of Historic Places. Sarasota County coordinated with the State Division of Historical Resources through the use of grant-in-aid assistance funds for the preparation of the Chapter. The County must continue its coordination with the State through the Bureau of Historic Preservation and Archaeological Research for the listing of sites on the Florida Master Site File and the nomination of sites to the National Register as set forth in Policy 1.3.10. of the Historic Preservation Plan. Policy 1.1.8. of the Plan also calls for efficient and effective communication among local, regional, State, and federal government agencies and private organizations involved in preservation activities. The County's Department of Historical Resources will have the primary responsibility for coordinating these efforts.

Environment

The Environment Plan of Apoxsee includes numerous policies which will require additional coordination efforts. Policy 2.1.9. of the Environment Plan advocates that a multi-jurisdictional ap-

proach be pursued in order to address existing stormwater quality and quantity problems in specifically impacted basins which cross more than one political boundary. In addition, Policy 5.3.8. states that Sarasota County will cooperate with other governmental entities to protect water resources. The County's Utilities Department has the primary responsibility for ensuring this coordination.

The County and the City of Sarasota currently have an Interlocal Agreement for the location of air monitoring stations within the City. Multi-jurisdictional studies to determine long-term impacts and trends of automobile pollution on air quality is advocated in Policy 5.1.2. of the Environment Plan. The Laboratory Division of the County's Environmental Services Department will continue to coordinate with the City regarding this issue.

Sarasota's bays, the Myakka River watershed, the Braden River watershed and the Charlotte Harbor Study Area are the focus of several policies of the Environment Plan which necessitate intergovernmental coordination. Policy 5.2.3. calls for the support of efforts and consideration of recommendations from intergovernmental organizations concerning Sarasota's bays, the Myakka River watershed and the Braden River watershed. Many entities are involved with this effort including Sarasota and Manatee Counties, the Myakka River Management Coordinating Council, SARABASIS, SWFWMD, and the Department of Environmental Regulation. Also, Objective 3.1 and its corresponding Policy, 3.1.1., advocate the participation of the County in intergovernmental processes and scientific modeling of Charlotte Harbor which is designated as a Resource Planning and Management Area. Sarasota, Charlotte, and Lee Counties, as well as the Southwest Florida Regional Planning Council are involved in this coordinated effort.

Other Policies within the Environment Plan necessitating intergovernmental coordination include Policy 4.2.4. which advocates coordination between the County Planning and Emergency Management Departments and the Southwest Florida Regional Planning Council regarding updates of the Sarasota County Peacetime Emergency and Comprehensive Plans. Also, Policy 4.2.5.

calls for coordination of development review with the Sarasota County School Board to provide that new school facilities and facility expansions be designed to provide hurricane shelter.

overlap and duplication of effort. The County's Parks and Recreation Department will have the primary responsibility for ensuring these coordinated efforts.

Additional Opportunities for Coordination

Policy 2.1.6. of the Environment Plan states that a Stormwater Environmental Utility will be adopted in cooperation with the municipalities, other appropriate governmental agencies and public and/or private utilities. In a related issue, the County and the City are studying the possibility of the creation of a County-City Stormwater Management utility as part of the Government's plan of action for consolidation and cooperation.

Additional Opportunities for Coordination

In 1980, the County and the City of Venice entered into an Interlocal agreement by which the County assumed responsibility for the operation of the City's active recreation facilities. The Interlocal Agreement has been very successful and of mutual benefit to both the City and the County.

In August, 1988, Sarasota Bay was selected as one of twelve sites nationwide to be included in the Environmental Protection Agency's (EPA) National Estuary Program. Under the five-year program, local, regional, State, and federal government officials will address ways to curb pollution and restore the natural ecological systems of the Bay.

The City of North Port has also requested an interlocal agreement similar to Venice's. The Interlocal Agreement, if ultimately adopted by both governments, will require further coordination between the County and the City in order to facilitate its implementation.

In addition, the County and the City of Sarasota are investigating the feasibility of consolidating parks and recreation services. If deemed feasible, implementation of the consolidation effort is scheduled to take place April 1, 1989.

Recreation and Open Space

Apoxsee's Recreation and Open Space Plan contains several policies which necessitate additional coordination efforts. Policies 1.1.3. and 1.6.3. of the Plan call for coordination with the Sarasota County School Board for the maximum utilization of school sites as well as the location, phasing, and design of future school sites to enhance the potential of schools as recreation areas. The Plan also states in Policy 1.4.1. that the County will adopt a Countywide bicycle plan. This will require coordination between the County Transportation Department and the Sarasota-Manatee Metropolitan Planning Organization. Finally, Policies 1.5.3. and 1.6.1. of the Recreation and Open Space Plan call for coordination with local recreation-oriented groups to exchange their development of facilities for the use of appropriate County park areas and the consolidation of County/Municipal parks and recreation services to avoid

Public Facilities

Potable Water

Sarasota County currently purchases water from the City of Sarasota and Manatee County. Negotiations with both entities are ongoing for the purchase of additional supplies of potable water which necessitates further intergovernmental coordination. The County must also coordinate with the Cities of Sarasota and Venice, Manatee County, the Englewood Water District, and the County's independent water franchises in the establishment and maintenance of level of service standards. Also, Policy 1.2.6. of *Apoxsee's* Public Facilities Plan advocates the exploration of alternative water resources in cooperation with regional water supply authorities and other local entities. The County's Utilities Department will have the primary responsibility for ensuring these coordinated efforts.

Sanitary Sewer

Sarasota County's sanitary sewer needs are met through either the construction of on-site septic tanks, privately permitted wastewater treatment plants, or franchised wastewater treatment systems. Sarasota County must coordinate with these privately permitted and franchised systems for the establishment and maintenance of level of service standards. The County's Utilities Department will have the primary responsibility for this necessary coordination.

Additional Opportunities for Coordination

Objective 2.1 of the Public Facilities Plan of Apoxsee states that a master plan, including feasibility studies for financial and engineering analyses, be developed for wastewater resource management in order to evaluate and set priorities regarding the consolidation of existing wastewater treatment facilities into a regional facility or facilities.

Solid Waste

The only permitted sanitary landfill within Sarasota County is the County-operated Bee Ridge Sanitary Landfill. The Cities of Sarasota, Venice, and North Port utilize the County landfill for their solid waste disposal needs. The unincorporated areas of the County are serviced by five franchised collectors. The County must coordinate with these collectors as well as the Cities of Sarasota, Venice, and North Port in the establishment and maintenance of level of service standards for solid waste collection and disposal. The Solid Waste Franchise Utilities Division of the County's Environmental Services Department will have the primary responsibility for ensuring these coordinated efforts.

Traffic Circulation

Objective 1.5 and its Policy Cluster in the Traffic Circulation Plan of Apoxsee state that the County's Traffic Circulation Plan and Year 2010 Future Thoroughfare Plan shall be coordinated with the plans and programs of the State, the Region, the local Metropolitan Planning Organization and other local jurisdictions. This will require coordination with the Cities of Sarasota, Venice, and North

Port; the Town of Longboat Key; Manatee, DeSoto, and Charlotte Counties; the Sarasota-Manatee Metropolitan Planning Organization; the Southwest Florida Regional Planning Council; and the Florida Department of Transportation. The Sarasota County Transportation and Planning Departments will have the primary responsibility for ensuring this coordinated effort.

Mass Transit

Policy 1.3.1. of Apoxsee's Mass Transit Plan calls for the coordination of transit services with adjacent communities and other modes of public transportation in cooperation with the Sarasota-Manatee Metropolitan Planning Organization. Also, Policy 1.3.2. of the Plan advocates the coordination of construction on the roadways utilized by the transit system to minimize adverse impacts on transit passengers. The Sarasota County Area Transit System (SCAT) will have the primary responsibility of ensuring these coordinated efforts.

Aviation, Port and Rail

The Aviation Plan of Apoxsee contains two policies which will require intergovernmental coordination efforts. The first, Policy 5.1.1., calls for cooperation with the Sarasota-Manatee Airport Authority and the City of Venice regarding aviation planning. Additionally, Policy 5.1.2. of the Plan encourages all planning efforts for future aviation transportation to be consistent with State, regional, adjacent county, and municipal transportation plans. This will require coordination with the appropriate local, regional, and State entities.

Housing

Policies 1.3.1. and 1.3.2. of Apoxsee's Housing Plan call for the development of a Countywide central depository and data system for housing information. This effort will require coordination between the appropriate government entities of Sarasota County: the Cities of Sarasota, Venice, North Port, and the Town of Longboat Key; the Housing Authorities of Sarasota, Venice, and North Port; the Southwest Florida Regional Plan-

ning Council; the University of Florida's Bureau of Economic and Business Research; the U.S. Department of Housing and Urban Development; the U.S. Department of Commerce's Bureau of the Census; and private agencies concerned with housing.

Additional Opportunities for Coordination

The County and the City of Sarasota are currently exploring the feasibility of consolidating the County and City's community development and housing programs.

In January, 1989, the City of Sarasota's Mayor's Task Force on Affordable Housing released the report entitled, "Recommendations of the Mayor's Task Force on Affordable Housing, Final Report, July 12, 1988". At the same time, the Sarasota County Board of County Commissioners appointed a 13-member advisory board to study housing concerns throughout the County and requested that the advisory board and the City task force coordinate efforts.

Economy

Policy 1.2.1. of Apoxsee's Economy Plan calls for coordination with State and local agencies to identify and help persons requiring special assistance in obtaining and maintaining employment. The Policy also advocates the continuation of assistance to State agencies in obtaining and disseminating accurate labor market information as well as encouraging local employers to participate in supplying labor market information.

Future Land Use

The impacts of development proposed in local government comprehensive plans upon development in the County's municipalities, adjacent counties, the Region, and the State must be addressed through intergovernmental coordination mechanisms. A review of some of the mechanisms that Sarasota County could employ to foster this necessary intergovernmental coordination are discussed in the following section of the Chapter.

Additional Opportunities for Coordination

In June of 1988, the Sarasota County Planning Commission amended their Rules of Procedure for the filing and review of rezoning and special exceptions. Under the new requirements, petitioners are to submit an additional copy of the rezone and/or special exception application. This additional copy will then be transmitted to the Cities of Sarasota, Venice, and North Port and Manatee, Charlotte and DeSoto Counties for their review and comment if the subject property lies within a 1/4 mile of any of these neighboring jurisdictions.

The Braden River watershed, a portion of which is located in Sarasota County, drains into the Evers Reservoir which provides drinking water for the City of Bradenton (Manatee County). In order to continue the viability of the Reservoir, Sarasota County shall forward all development applications which impact the watershed to the City of Bradenton for review and comment.

Also, Sarasota County is preparing to petition the State for local Development of Regional Impact (DRI) certification. A detailed discussion regarding this issue is included in the section on intergovernmental coordination mechanisms.

Capital Improvements

In order to fund the road and park improvement deficits identified in the Capital Improvements Chapter of Apoxsee, the Sarasota County Board of County Commissioners authorized that concurrent Public Hearings be held on two ordinances. The first would authorize a referendum on the one-cent "infrastructure" surtax or "local option sales tax", to be held so that revenues would be received at the beginning of Fiscal Year 1990 (i.e., beginning October 1, 1989). The second ordinance would enable the establishment of Municipal Service Taxing Units (MSTUs), or Special Districts, in the unincorporated areas of the County within which special assessments would be levied on existing development beginning in Fiscal Year 1990. These funding mechanisms are addressed in Policies 1.5.3., 1.5.4., and 1.5.5. of the Capital Improvements Plan.

If the referendum on the one-cent "infrastructure" sales tax is approved, the County's municipalities would receive a portion of the revenues collected. Also, the School Board would receive 25 percent of the Countywide sales tax revenues. Intergovernmental coordination between the County and these entities will be necessary to ensure proper distribution of these funds. Revenues from the proposed sales tax could also be used for projects of mutual benefit to both the County and its municipalities, such as improvements to the County's library system which would also necessitate intergovernmental coordination.

Southwest Florida Regional Comprehensive Policy Plan

The Florida Regional Planning Council Act of 1980, as amended by the State and Regional Planning Act of 1984, mandated that Regional Planning Councils (RPC's) prepare and adopt Comprehensive Regional Policy Plans. The Southwest Florida Regional Planning Council adopted its Regional Comprehensive Policy Plan in May of 1987.

The Local Government Comprehensive Planning and Land Development Regulation Act of 1985, as amended, require local government comprehensive plans to be consistent with the Regional Comprehensive Policy Plan as well as the State Comprehensive Plan (Chapter 187, Florida Statutes). Table 84 provides a review of those regional issues and policies from the SWFRPC Plan which require intergovernmental coordination with Sarasota County.

Table 84: Policies of the Southwest Florida Regional Comprehensive Policy Plan Requiring Intergovernmental Coordination

Regional Issue	Subject
Evacuation Time and Route Protection	Increased coordination between governments in Disaster Preparedness Plans
Protection of the Water Supply; Cluster 37	Continuation, expansion, and exchange of data regarding water supplies Development and implementation of comprehensive coordinated water management plans and programs within the Region Development of coordinated programs to ensure adequate water resources for future development
Protection of Natural Systems; Cluster 38	Development of coordinated programs to protect natural systems
Treatment of Effluent	Establishment of coordinated and appropriate rules, regulations, and inter-jurisdictional agreements to guide planning for water reclamation
Protection of Natural Resources; Cluster 40	Establishment of a program to coordinate efforts to evaluate, plan, and manage the changing environmental quality of coastal and marine resources
Access in Coastal Areas; Cluster 42	Coordinated coastal access plans for all coastal jurisdictions
Beach Erosion and Dune Loss	Implementation of State, regional, and local government coordinated beach and dune protection plans
Protection of Natural Systems; Cluster 43	Adoption of coordinated fire management programs to curtail the ecological and economic damage resulting from uncontrolled burns, maintain rare and endangered species habitats, and discourage invasion by exotics

Continued on next page

Table 84: Policies of the Southwest Florida Regional Comprehensive Policy Plan Requiring Intergovernmental Coordination (Continued)

Regional Issue	Subject
Protection of Endangered Species; Cluster 44	Adoption of intergovernmental agreements pertaining to the protection and enhancement of endangered, threatened, and species of special concern Development of a computerized data base to facilitate the identification, location, and habitat needs of listed species within the Region
Parks and Recreation; Cluster 46	Implementation of park and recreation management systems including school district and park/recreation department programs for joint acquisition and development of sites
Protection of Native Species from Encroachment by Exotic Species	Development of inventory of acres invaded by exotic species within the Region
Improving Air Quality; Cluster 47	Establishment of comprehensive planning & monitoring systems which require the participation of all governments in a coordinated air monitoring program
Solid Waste Treatment and Disposal; cluster 51	Examination of the feasibility of multi-jurisdictional facilities included in future land use plans
Providing for Environmental Health Care Protection; Cluster 55	Establishment of an intergovernmental procedure to control mining impacts, especially those associated with waste disposal and phosphate pollution
Protecting Property Rights; Cluster 56	Coordination of planning at all levels of government to ensure the compatibility of development objectives
Maximizing the Use of Existing Public Facilities and Services; Cluster 59	Development, utilization, and coordination of capital improvement plans at all levels of government
Integrated Transportation Systems; Cluster 63	Development of local traffic circulation plans which identify opportunities for a coordinated transportation system
Transportation to Aid Growth Management; Cluster 64	Protection of the capacities and operations of major regional roadways through coordinated policies between all levels of government Coordination between area governmental agencies and FDOT in its Continuing Florida Aviation System Planning Process to ensure that future air systems needs can be met with a minimum of land use conflict Coordination of traffic circulation elements between local governments Study of Special Transportation Areas to determine agreements regarding service levels and improvement responsibilities
Coordination of Roadway Systems	Identification of boundary areas where roadway coordination issues exist Review and comment by adjacent local governments on the land use, traffic circulation, and capital improvements programs of adjacent jurisdictions Review and comment by local, regional, and State agencies on each other's long-range transportation and short-range improvement programs

Continued on next page

Table 84: Policies of the Southwest Florida Regional Comprehensive Policy Plan Requiring Intergovernmental Coordination (Continued)

Regional Issue	Subject
Coordination of Roadway Systems (Con't)	<p>Sharing of costs of regionally significant road facilities</p> <p>Provision of access to adjacent jurisdictions or between jurisdictions</p> <p>Coordination of roadway systems to provide scenic opportunities, common operation and maintenance standards, and coordinated roadway network expansion programs</p>
Maintaining Rail Service	Coordinated programs to reduce safety and operational conflicts between rail use and other transportation uses
Bike Paths, Sidewalks, and Transportation Access	Coordination of interconnections for cyclists and pedestrian users between internal land uses and adjacent communities
Intergovernmental Coordination; Cluster 66	Improved intergovernmental coordination through the use of appropriate inter-local agreements, technical assistance, identification of joint venture solutions, circulation of and participation in plans and decisions and the review and comment process for land development proposals
Efficiency and Efficacy in Government; Cluster 66	<p>Development of multi-jurisdictional services and facilities when economies of scale and efficacy of service are maintained</p> <p>Participation in a coordinated system to collect, assess, and share information about efficiency and effectiveness among public entities</p>
City and County Borders	<p>Identification of services which are now or will be shared and cooperation between local government agencies to develop and maintain those services</p> <p>Utilization of mediation by local governments to resolve jurisdictional disputes as a first alternative to judicial action</p>
Economic Stability; Cluster 67	<p>Establishment of agreement between the Region's agencies on computer hardware and software standards centers providing technical and information services, and new data repositories for State and regional agency data</p> <p>Establishment of a multi-county advisory board</p> <p>Development of a coordinated information sharing network</p>
Opportunities for the Unemployed and Economically Disadvantaged; Cluster 72	Development of coordinated system to expand training and job opportunities
Intergovernmental Coordination and Cooperation; Cluster 74	<p>Continuation of cooperation among communities which have a unique natural area</p> <p>Establishment of a process for effective intergovernmental coordination to pursue the goals and objectives of the Charlotte Harbor Management Plan</p> <p>Implementation and monitoring of the goals and objectives of the Charlotte Harbor Management Plan</p>

Source: Southwest Florida Regional Comprehensive Policy Plan, 1987; and Sarasota County Planning Department, 1988.

Intergovernmental Coordination Mechanisms

A substantial portion of intergovernmental coordination is achieved through informal processes, such as the exchange of data between City and County government agencies. These informal processes are useful and effective but formal mechanisms for intergovernmental coordination are also necessary to address some issues that cannot always be resolved through informal methods. The following is an overview of various measures that can be utilized to further promote intergovernmental coordination.

Council of Governments (COG)

Chapter 163.02, Florida Statutes, provides for the establishment of a council of local public officials, more commonly referred to as a Council of Governments. Any two or more governments may, by resolution, establish a Council of Governments. According to the legislation, the Council shall have the power to:

- study area governmental problems;
- promote cooperative agreements and coordinate action among its members; and
- make recommendations for review and action to the member governments.

Many critics of the COG concept argue that the establishment of such councils only add another layer of government to an already over-complicated bureaucracy. However, Council of Governments are organizational devices for bringing representatives of local governments together on a regular basis to discuss common problems, exchange information, and develop consensus on policy questions of mutual interest. They are not another layer of government but in effect are confederations and alliances which can be effective in furthering intergovernmental coordination. Coastal management, land use, parks and recreation, transportation, public facilities, emergency management, and capital improvements are just a few of the issues that could be addressed by a Council of Governments.

The formation of a Sarasota County Council of Governments was attempted in 1983; however, a formal agreement was never adopted. The municipal and county governments of Sarasota County would benefit from the establishment of such a council.

Comprehensive Planning Committee

While the formation of a Sarasota County Council of Governments would provide a forum for interaction among government elected officials, the establishment of a Comprehensive Planning Committee would provide a similar forum for the exchange of data and information between the professional staffs of the various government entities. The functions of the Comprehensive Planning Committee could include:

- Coordination of comprehensive planning activities;
- Coordination in addressing the impacts of development on neighboring jurisdictions;
- Coordination in establishing level of service standards; and
- Coordination of planning activities mandated by local government comprehensive plans.

Under the 1975 Local Government Comprehensive Planning Act, each unit of local government was required to appoint one representative to a Technical Advisory Committee (TAC) established within the jurisdictional boundaries of each county. The purpose of the TAC was to coordinate the technical elements of comprehensive plans and to advise local planning agencies and governing bodies. While no longer a specific provision of the 1985 Local Government Comprehensive Planning and Land Development Regulation Act, the establishment of a Comprehensive Planning Committee would be a useful and effective instrument for coordinating the comprehensive planning activities of the County; its municipalities; the School Board; the Sarasota-Manatee Metropolitan Planning Organization; neighboring counties; and the Southwest Florida Regional Planning Council.

Development of Regional Impact (DRI) Certification

Chapter 380.065, Florida Statutes, allows local governments to request certification from the State to review Developments of Regional Impact (DRI's) within their jurisdictions. Consistent with these provisions, the Southwest Florida Regional Planning Council (SWFRPC) has entered into a contract with the Florida Department of Community Affairs (DCA) for development of a "Limited Certification" program as a demonstration project within their Region. In June, 1988, the Sarasota County Board of County Commissioners authorized the County Planning Department to proceed with the DRI Certification process for Sarasota County.

In preparing to petition for this DRI Certification, Sarasota County is pursuing a phased approach which could lead to full certification of the DRI program for the County, if ultimately approved by the State. The first phase of the program involves a "demonstration certification" process under which the County will conduct reviews on all local and regional issues associated with DRI's with the SWFRPC remaining the lead review agency. As a part of this initial phase of the program, Sarasota County will also implement a monitoring procedure for previously approved DRI's on a trial basis which would be evaluated by the SWFRPC and DCA. The second phase of the program involves full certification following State approval and the adoption of Apoxsee, and demonstration of performance on implementing the County's DRI Program.

There are several advantages and benefits to be gained from DRI certification. Currently, the SWFRPC reviews both regional and local issues associated with DRI's. Once full certification is approved, Sarasota County would become the lead review agency which would facilitate coordination and communication between the developer, their consultants and the other review agencies. The SWFRPC would continue to participate throughout the DRI review process by providing advisory comments on regional issues

and retaining its right to appeal local development orders. Representatives from adjacent jurisdictions would be involved in the DRI review process from its inception and therefore would be aware of and have an opportunity to comment on the issues affecting them prior to public hearings and the issuance of development orders.

Sarasota County has been reviewing DRI's for the past five years, with the County Planning Department serving as the local coordinating agency. Certifying Sarasota County to conduct DRI reviews would result in the tapering of the unwieldy DRI review process thereby increasing its efficiency, and ultimately, promoting more effective intergovernmental coordination.

Functional Consolidation

While there are five separate governing bodies in Sarasota County, the provision of some selected services, such as property appraisal and tax collection, are functionally consolidated so that one government entity is responsible for providing the service instead of many.

The most often cited benefit to be gained from functional consolidation is the ability of the responsible government to provide more efficient services at a lower cost while reducing the amount of governmental overlap and fragmentation. Functional consolidation could also play a role in the establishing of level of service standards for public facilities. If one unit of government was responsible for establishing and ensuring that these standards were met, duplication of, and inconsistency between, the levels of service standards could be eliminated.

For functional consolidation to be successful, a strong commitment for intergovernmental coordination is necessary. Both the County and municipal governments would benefit from the functional consolidation of government services by fostering this essential intergovernmental coordination and as a result, provide more efficient and economical services to the residents they serve.

Intergovernmental Coordination and Citizen Participation Plan

Intent

The relationships that exist between local, regional, State, and federal government entities are complex and interwoven. The efforts of these units of government must be coordinated in order to minimize duplication and incompatible endeavors and to promote cooperation and efficiency. Furthermore, the awareness and involvement of citizens in these governmental processes is an integral component of intergovernmental coordination.

The Intergovernmental Coordination and Citizen Participation Plan of Apoxsee sets forth specific measures to provide for this necessary cooperation and public involvement. The Plan provides for formal coordination procedures between the County, its municipalities, other local government entities, and neighboring counties. In addition, the Plan also provides for the coordination of comprehensive plans and mechanisms to ensure that the impacts of development proposed in the County's Comprehensive Plan upon development in the County's municipalities, adjacent counties, the Region, and the State are addressed. The Plan also includes provisions to ensure the establishment of coordinated and compatible level of service standards for public facilities. Finally, the Plan advocates citizen awareness and participation of the comprehensive planning process.

Goal 1

It shall be the Goal of Sarasota County to foster and encourage intergovernmental coordination between the County; its municipalities; adjacent governments; and regional, State, and federal government entities.

Objective 1.1

To pursue the establishment of a formal process for intergovernmental coordination between the County, its municipalities, and other units of local government, by 1990.

Policy 1.1.1.

Pursue the formation of a Sarasota County Council of Governments as a forum for discussion of issues of mutual interest and benefit and coordinate with the governing bodies of the Cities of Sarasota, Venice, and North Port; the Town of Longboat Key; and the Sarasota County Board of Public Instruction in the formation of such a council.

Policy 1.1.2.

Invite and encourage participation from the governing bodies of Manatee, Charlotte, and DeSoto Counties on the Sarasota County Council of Governments.

Objective 1.2

To seek the implementation of procedures which will ensure that the County's Comprehensive Plan is coordinated with the comprehensive plans of the County's municipalities; adjacent counties; the Sarasota County Board of Public Instruction; the Sarasota-Manatee Metropolitan Planning Organization; and the Southwest Florida Regional Planning Council, by 1990.

Policy 1.2.1.

Encourage the establishment of a Comprehensive Planning Committee with representation from the professional staffs of the County; the Cities of Sarasota, Venice, and North Port; the Town of Longboat Key; the Sarasota County Board of Public Instruction; and the Sarasota-Manatee Metropolitan Planning Organization.

Policy 1.2.2.

Invite and encourage participation from Manatee, Charlotte, and DeSoto Counties and the Southwest Florida Regional Planning Council on the Comprehensive Planning Committee.

Policy 1.2.3.

Establish review procedures for the review of comprehensive plans and comprehensive plan amendments of the County's municipalities, adjacent counties, and the Sarasota County Board of Public Instruction.

Policy 1.2.4.

Participate in the update of the Southwest Florida Regional Comprehensive Policy Plan.

Policy 1.2.5.

Encourage and support the participation of professional staff in local and regional organizations which serve to promote intergovernmental coordination.

Objective 1.3

To ensure that the impacts resulting from the implementation of the County's Comprehensive Plan upon development in the County's municipalities, adjacent counties, the Region, and the State are addressed through intergovernmental coordination mechanisms.

Policy 1.3.1.

Maintain procedures for the timely transmittal of rezoning and special exception petitions and other development applications which are pertinent to adjacent municipalities and counties for their review and comment.

Policy 1.3.2.

Maintain procedures to review and provide comment on development proposals in or by adjacent municipalities and counties which impact Sarasota County.

Policy 1.3.3.

Establish procedures to resolve conflicts, such as land use compatibility and level of service consistency, between the County and adjacent governments regarding annexation issues.

Policy 1.3.4.

Establish procedures to achieve coordination with adjacent municipalities; local authorities and special districts; adjacent counties; regional authorities and districts; State agencies; federal agencies; and private entities, as appropriate, for the effective implementation of the Goals, Objectives, and Policies contained within the other Plan sections of Apoxsee which identify specific intergovernmental coordination efforts.

Policy 1.3.5.

Coordinate with the Southwest Florida Regional Planning Council in the implementation of those policies included within the Southwest Florida Regional Comprehensive Policy Plan which necessitate intergovernmental coordination.

Policy 1.3.6.

Encourage cooperation and coordination between the County, the County's municipalities, interested citizens groups and advisory boards, and private organizations, regarding mutually beneficial endeavors such as improvements to the County's library system or other desirable projects.

Objective 1.4

To develop and maintain a review mechanism to evaluate and provide means for mitigation of developments having areawide impact consistent with the intent of the Development of Regional Impact process, by 1991.

Policy 1.4.1.

Petition the State Administration Commission for certification to conduct Development of Regional Impact reviews.

Policy 1.4.2.

Adopt, with the concurrence of all parties, Interlocal Agreements with the Cities of Sarasota, Venice, and North Port; the Town of Longboat Key; and Manatee, Charlotte, and DeSoto Counties for resolving greater-than-local impacts of development in concert with Sarasota County's proposed Development of Regional Impact certification program.

Policy 1.4.3.

Execute, with the concurrence of all parties, Memoranda of Understanding between the County and the Southwest Florida and Tampa Bay Regional Planning Councils for review assistance on regional issues resulting from proposed Development of Regional Impact in concert with Sarasota County's proposed Development of Regional Impact certification program.

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Policy 1.4.4.

Seek to employ the Southwest Florida and Tampa Bay Regional Planning Councils to resolve incompatible issues between the County and adjacent jurisdictions through the process of informal mediation in concert with Sarasota County's proposed Development of Regional Impact certification program.

Objective 1.5

To coordinate with the responsible local, regional, and State authorities, and private utility companies, as appropriate, in the establishment of level of service standards for public facilities. Upon adoption of the County and adjacent government's comprehensive plans, initiate further coordination efforts, if necessary, to ensure consistency between adopted level of service standards.

Policy 1.5.1.

Continue to explore the consolidation of appropriate public services with the County's municipalities as one means of maintaining consistent standards and avoiding duplication of services.

Policy 1.5.2.

Seek to employ the Southwest Florida and Tampa Bay Regional Planning Councils for informal mediation if incompatibilities regarding the establishment of level of service standards cannot be resolved by the affected government entities.

Policy 1.5.3.

Adopt, with the concurrence of all parties, Interlocal Agreements and Memoranda of Understanding between Sarasota County and other affected units of government, where appropriate, regarding the establishment of coordinated and compatible level of service standards.

Goal 2

It shall be the Goal of Sarasota County to continue to promote the awareness and involvement of the citizens of Sarasota County in the comprehensive planning process.

Objective 2.1

To continue to advocate public participation in the comprehensive planning process.

Policy 2.1.1.

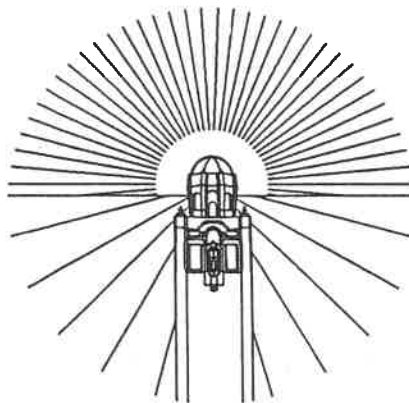
Continue to utilize an information exchange program, including the maintenance of an updated mailing list, as one means of communication between the County and all interested parties.

Policy 2.1.2.

Maintain procedures to provide for the disseminating of proposals and alternatives for public inspection; opportunities for written comments; public hearings; open discussions; communication programs and information services; and the notification of real property owners for the adoption of the Comprehensive Plan, amendments to the Comprehensive Plan, and Comprehensive Plan Evaluation and Appraisal Reports.

Policy 2.1.3.

Continue to encourage public awareness of the Comprehensive Plan by providing for public education programs designed to promote a widespread understanding of the Plan's purpose and intent.



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APPENDIX A: HISTORIC PRESERVATION

Section 1: Definitions

ARCHAEOLOGICAL SITE: A location that has yielded or may yield information on history or prehistory. An archaeological site contains physical remains of the past. An archaeological site may be found within archaeological zones, historic sites, or historic districts.

ARCHAEOLOGICAL ZONE: A geographically defined area, designated pursuant to this section, which may reasonably be expected to yield information on local history or prehistory based upon broad prehistoric or historic settlement patterns.

BUILDING: A structure created to shelter any form of human activity. This may refer to a house, barn, garage, church, hotel, packinghouse, or similar structure. Buildings may refer to a historically or architecturally-related complex, such as a house or jail, or a barn.

DEMOLITION: The complete removal of an improvement, or any part thereof.

HISTORIC DISTRICT: A geographically definable area, urban or rural possessing a significant concentration, linkage, or continuity of sites, buildings, structures, objects, or area, which are united by past events or aesthetically by plan or physical development. A district also may be comprised of individual resources which are separated geographically but are thematically linked by association or history.

HISTORIC ARCHITECTURAL REVIEW BOARD: A board of citizens created by local ordinance and charged with enforcing provisions of local laws governing historic districts and buildings.

HISTORIC PROPERTY OR HISTORIC RESOURCE: Any prehistoric or historic district, site, building, object, or other real or personal property of historical, architectural, or archaeological value. The properties may include, but are not limited to, monuments, memorials, Indian habitations, ceremonial sites, abandoned settlements, sunken or abandoned ships, engineering works, treasure trove, artifacts or other objects with intrinsic historical or archaeological value, or any part thereof, relating to the history, government, and culture of the state.

HISTORIC SITE: A single lot or portion of a lot containing an improvement, landscape feature, or archaeological site, or a historically related complex of improvements, landscape features or archaeological sites that may yield information on history or prehistory.

HISTORIC SURVEY: A comprehensive survey involving the identification, research and documentation of buildings, sites and structures of any historical, cultural, archaeological or architectural importance.

MITIGATION: A process designed to prevent adverse impact of an activity on a cultural resource, by the systematic removal of the prehistoric, historic, or architectural data in order to acquire the fundamental information necessary for understanding the property within its proper historic context. For structures, at minimum, this may require primary archival studies, informant interviews, measured drawings, and large scale photography. For archaeological sites, at mini-

mum, this may require literature studies, informant interviews, field survey, excavation, and artifact analysis. All mitigation projects require the preparation of reports.

NATIONAL HISTORIC LANDMARK: Authorized in 1935 and implemented in 1960, a federal program that identifies sites and buildings of clearly national significance.

NATIONAL REGISTER OF HISTORIC PLACES: Established by Congress in 1935, the National Register of Historic Places is a listing of culturally significant buildings, structures, objects, sites, and districts in the United States. The listing is maintained by the U.S. Department of Interior.

OBJECT: A material thing of functional, aesthetic, cultural, historical, or scientific value that may be by nature or design, movable, yet related to a specific setting or environment.

PRESERVATION: The identification, evaluation, recordation, documentation, analysis, recovery, interpretation, curation, acquisition, protection, management, rehabilitation, restoration, stabilization, maintenance, or reconstruction of historic properties.

RECONNAISSANCE SURVEY: For archaeology: background research on the prehistory, history, and environmental history of an area, followed by a detailed inspection of selected lands, from which projections on the nature and location of potentially significant archaeological resources can be made of the entire area. For architectural resources: a visual inspection of buildings to determine their apparent architectural quality, age, condition and number for the purpose of assessing the required extent of a comprehensive survey. At most, the architectural reconnaissance survey will include a listing or inventory by address of the buildings observed.

RECONSTRUCTION: The authentic reproduction of a building or site that once existed, but disappeared or was demolished.

REHABILITATION: The act or process of returning a property to a state of utility through repair or alteration which makes possible an efficient contemporary use while preserving those portions or features of the property that are significant to its historical, architectural, and cultural values.

RESOURCE: Sites, buildings, structures, objects, districts, and areas, public or private, singly or in combination.

RESTORATION: The creation of an authentic reproduction beginning with existing parts of an original object or building.

SITE: The location of a significant event, activity, building, structure or archaeological resource where the significance of the location and any archaeological remains outweighs the significance of any existing structures.

STRUCTURE: A work made up of interdependent and interrelated parts in a definite pattern of organization. Constructed by man, it may be an engineering project large in scale, such as a bridge, wall, gate, or building, or small in scale, such as monuments or fountains.

Section 2: National Register Program

The National Register of Historic Places is an official listing of historically significant sites and properties throughout the country. Maintained by the National Park Service, U.S. Department of Interior, it includes districts, sites, buildings, structures, and objects that have been identified and documented as being significant in American history, architecture, archaeology, engineering, or culture. These sites and properties reflect the prehistoric occupation and historical development of our nation, state and local communities.

Listing in the National Register does not, in itself, impose any obligation on the property owner or restrict the owner's basic right to use or dispose of the property as he or she sees fit. It does, however, encourage the preservation of significant historic resources in three ways:

- By providing official recognition of the historic significance of the property and encouraging consideration of its historic value in future development planning;

- By imposing limited protection from activities involving funding, licensing, or assistance by federal agencies that could result in damage or loss of its historic values; and
- By making the property eligible for federal financial incentives for historic preservation.

Redevelopment of a listed property which involves federal funding, licensing, or assistance will be subject to review by the State Historic Preservation Officer and the Advisory Council on Historic Preservation to ensure that adequate and appropriate consideration is given to the preservation of the historic qualities for which it was originally listed. This review requirement will also apply to any federally funded, licensed, or assisted activities undertaken by others that could have an adverse effect on the property.

Federal financial incentives for historic preservation include eligibility for direct matching grants and investment tax credits for the rehabilitation of income-producing properties.

Section 3: Sites in Unincorporated Sarasota County Listed in the Florida Master Site File

Category	Name	Location
A:	Osprey	3/38S/18E
A:	Pool Hammock	25/38S/18E
A:	True*	
A:	Phillippi Creek	8/37S/18E
A:	Midnight Pass	4/38S/18E
A:	Manasota Key	22/40S/19E
A:	Cove	16/40S/19E
A:	Forked Creek Point Midden	23/40S/19E
A:	Mystery River Point (Lemon Bay)	23/40S/19E
A:	Second Point North of Lemon Bay	23/40S/19E
A:	Davids	36/40S/19E
A:	Lampp Mound	36/40S/19E
A:	Englewood Cemetery	31/40S/20E
A:	Casey Key	4/38S/18E
A:	Warm Mineral Springs	25/39S/21E
A:	Deep Hole	31/37S/20E
A:	Paulsen Point	36/40S/19E
A:	Gory	30/39S/19E
A:	Davis Midden	33/37S/18E
A:	Mosquito Control	33/37S/18E
A:	Burial Island Mound	33/37S/18E
A:	Burial Island Midden	33/37S/18E
A:	South Coconut Bayou Midden	1/37S/17E
A:	Out of Door School	6/37S/18E
A:	Field Club	7/37S/18E
A:	Roberts Bay	7/37S/18E
A:	Martin Midden	7/37S/18E
A:	James Haley	5/37S/18E
A:	Osprey Point	10/37S/18E
A:	Oscar Scherer Park	13/38S/18E
A:	Salt Creek Mound	29/38S/19E
A:	Horse and Chaise	30/39S/19E

Category Key:

A: Archaeological site

S: Structure

* Data not available

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Category	Name	Location
A:	Forked Creek Mound	15/40S/19E
A:	Cherokee Midden	36/40S/19E
A:	Phillippi Man	35/36S/18E
A:	Matheny Creek Mound	20/37S/18E
A:	Indianola	28/37S/18E
A:	Wilson Mound A	25/36S/20E
A:	Crowley Mound A	36/36S/20E
A:	Crowley Homestead Mound	36/36S/20E
A:	Whidden Pond Mound	25/36S/20E
A:	Hidden River Mound	1/37S/20E
A:	Holiday Harbor	21/37S/18E
A:	Vanderipe Slough Mound	16/37S/20E
A:	Wilson Mound B	25/36S/20E
A:	Carlton Mound	36/36S/20E
A:	Handcock Mound Complex	35/36S/20E
A:	Pinehurst Springs	21/37S/18E
A:	Ralston Mound	28/37S/18E
A:	Hansens Landing	6/37S/18E
A:	Cocoplum Sink *	
A:	Bernhard *	
A:	Star *	
A:	Rhapsody *	
A:	Townsend Shores	15/38S/18E
A:	Laurel Mound	31/38S/19E
A:	Pinard Midden	19/36S/18E
A:	Manasota Key Bridge	16/40S/19E
A:	Hi Hat Ranch 1	31/36S/20E
A:	Mumford	8/39S/20E
A:	One Horn	18/37S/19E
A:	Lazy River Midden	35/39S/20E
A:	Old Palmer Ranch House*	
A:	APLS 3	5/38S/22E
S:	Field Estate*	
A:	Blind Pass Midden	35/40S/19E
A:	Hatchett Creek 1	16/39S/19E
A:	Myakka Valley Ranches Mound	16/37S/20E

Category Key:

A: Archaeological site

S: Structure

* Data not available

Category	Name	Location
A:	Gator Creek	1/37S/19E
A:	Blackburn	11/39S/20E
A:	Martin/McGuire	31/38S/19E
A:	Saleman Site	2/39S/18E
A:	The Indianola Mound	28/37S/18E
A:	William Royal*	
A:	Florida Land Site*	
A:	Barclay Site	10/38S/18E
A:	Melnick Site	10/38S/18E
S:	Miakka School House	20/36S/20E
S:	Stoltzmer	35/40S/19E
Category Key:	A: Archaeological site	S: Structure
		* Data not available

Section 4: Types of Historic Districts

National Historic Landmark District

A National Historic Landmark district must meet the criteria of exceptional national significance as determined by the Keeper of the National Register. Structures located in National Historic Landmark districts that are listed as contributing to its qualities may be eligible for grant monies. Owners of income-producing contributing buildings may be eligible for provisions of the Tax Reform Act. There are no federal restrictions governing properties within these districts unless federal funds are being employed on a project that may affect the properties. In such cases, review of the work is required.

National Register of Historic Places District

A district listed in the National Register of Historic Places is comprised of a group of structures linked geographically or thematically. The structures may exist within a defined boundary or appear in scattered locations within the same geographic entity. The district must be nominated by the State Historic Preservation Office (SHPO), approved by the U.S. Department of Interior, meet the criteria of the National Register, and be listed by the Keeper of the Register. Contributing structures may be eligible for grant monies. Owners of income-producing contributing buildings may be eligible for provisions of the Tax Reform Act. Projects using federal monies or permits affecting districts must be reviewed by the SHPO.

Local Ordinance Certified District

A locally certified historic district is one that is created under local ordinance, but certified by the U.S. Department of the Interior. That certification permits the contributing structures within the district to be eligible for federal tax benefits. The district must substantially meet the criteria of the National Register. The statute (ordinance) and district must be endorsed by the SHPO and certified by the Keeper of the Register. Projects using federal monies or permits affecting districts may be reviewed by the SHPO.

Local Ordinance District

Historic districts created under local ordinance are entirely a local matter. The local government may establish architectural review procedures and zoning limitations. Buildings in these districts are not eligible for grants nor are they eligible for the Tax Reform Act provisions, unless, of course, the districts in which they are located overlap National Register Historic Districts. Projects using federal monies or permits affecting districts will only be reviewed if the SHPO is aware of the district.

Section 5: Preservation Laws

Federal Government

Antiquities Act of 1906

Public Law 59-209 16 U.S.C. 431-33

This Act authorizes the President to designate historic and natural resources of national significance located on federally-owned or controlled lands as national monuments. It provides for the protection of all historic and prehistoric ruins and objects of antiquity located on federal lands by providing criminal sanctions against excavation, injury, or destruction of such antiquities without the permission of the Secretary of the Department having jurisdiction over such resources. The Secretaries of the Interior, Agriculture, and Defense are authorized to issue permits for archaeological investigations on lands under their control to recognized educational and scientific institutions for the purpose of systematically and professionally gathering data of scientific value. For further information, consult the Interagency Resources Division, National Park Service, U.S. Department of the Interior, Washington, D.C. 20240.

Historic Sites Act of 1935

Public Law 74-292

This Act establishes as national policy the preservation for public use of historic resources by giving the Secretary of the Interior the power to make historic surveys to document, evaluate, acquire, and preserve archaeological and historic sites across the country. It led to the eventual establishment within the National Park Service of the Historic Sites Survey, the Historic American Buildings Survey, and the Historic American Engineering Record. For further information, consult the Associate Director for Cultural Resources, National Park Service, U.S. Department of the Interior, Washington, D.C. 20240.

National Historic Preservation Act of 1966

Public Law 89-665 16 U.S.C. 470-470m.

This Act authorizes the Secretary of the Interior to expand and maintain a National Register of districts, sites, buildings, structures, and objects of local, state, and national significance and to grant funds to states for the purpose of undertaking comprehensive statewide historic surveys and preparing matching grants-in-aid to the states for the preservation, acquisition, and development of National Register properties and provides funding to the National Trust for Historic Preservation to implement its programs. The Advisory Council on Historic Preservation was established through this Act to advise the President and Congress on matters relating to historic preservation and to comment on federally licensed, funded, or executed undertakings affecting National Register properties. Under Section 106, federal agencies are required to take into account the effect of their proposed undertakings on properties listed in or eligible for inclusion in the National Register before the expenditure of federal funds or the issuance of any licenses, and to allow the Advisory Council a reasonable opportunity to comment. For further information about grants or nominations, consult the Associate Director for Cultural Resources, National Park Service, U.S. Department of the Interior, Washington, D.C. 20240. For further information on the Council's procedures, consult the Advisory Council on Historic Preservation, Old Post Office Building, 1100 Pennsylvania Avenue NW, Room 809, Washington, D.C. 20004. This Act was amended significantly by the National Historic Preservation Act Amendments of 1980.

Transportation Act of 1966

Public Law 89-670 23 U.S.C. 138 - "4(f)"

This Act directs the Secretary of Transportation not to approve any program or project that requires the use of land from a historic site of national, state, or local significance as determined by federal, state, or local officials having jurisdiction thereof

unless 1) there is no feasible and prudent alternative to the use of such land, and 2) such program includes all possible planning to minimize harm to such historic property. This means that the Federal Highway Administration, the Federal Aviation Administration, the Urban Mass Transportation Administration, and the U.S. Coast Guard must consider the potential effect of their projects on historic resources whether or not the historic resource affected is listed in or determined to be eligible for the National Register. For further information, consult the Office of Environmental Affairs, U.S. Department of Transportation, Washington, D.C. 20590.

***National Environmental Policy Act of
1969***

Public Law 91-140 42 U.S.C. 4321 et. seq. (1970)

Under this Act federal agencies are obligated to consider the environmental costs of their projects as part of the federal planning process. For major federal actions significantly affecting the quality of the human environment, federal agencies are to prepare an environmental impact statement. The Department of the Interior and the Advisory Council on Historic Preservation comment on environmental impact statements to evaluate impact on historic resources. For further information, consult the Office of Review and Compliance, Advisory Council on Historic Preservation, Old Post Office Building, 1100 Pennsylvania Avenue, NW, Room 809, Washington, D.C. 20004.

***Executive Order 11593, Protection and
Enhancement of the Cultural
Environment***

16 U.S.C., 470 (Supp. 1, 1971)

With this Order, the President directs federal agencies to take a leadership role in preserving, restoring, and maintaining the historic environment of the Nation. Federal agencies must survey, inventory, and nominate all historic resources under their jurisdiction or control (to the extent that the agency substantially exercises the attributes of ownership) to the National Register. Until these processes are completed, agency heads must exercise caution to assure that potentially qualified

federal property is not inadvertently transferred, sold, demolished, or substantially altered. When planning projects, agencies are urged to request the opinion of the Secretary of the Interior as to the eligibility for National Register listing of properties whose resource value is questionable or has not been inventoried. Agencies are directed to institute procedures, in consultation with the Advisory Council on Historic Preservation, to ensure that federal plans and programs contribute to the preservation and enhancement of non-federally owned historic resources. The procedures of the Advisory Council on Historic Preservation recommend that federal agencies comply by identifying all potential historic resources in the environmental impact area of projects which they fund, license, or execute. Properties that have been determined eligible under this process receive the same protection as National Register listed properties under Section 106 of the National Historic Preservation Act, as amended, but they are not eligible to be considered for National Park Service matching grants-in-aid. For information and procedures on requesting determinations of eligibility, consult the National Register of Historic Places, National Park Service, U.S. Department of the Interior, Washington, D.C. 20240. Substantial portions of the Order were incorporated into and modified by the National Historic Preservation Act Amendments of 1980.

***The Archaeological and Historic
Preservation Act of 1974***

Public Law 93-291 16 U.S.C. 469a

This Act calls for the preservation of historic and archaeological data that would otherwise be lost as a result of federal construction or other federally licensed or assisted activities. It authorizes the Secretary of the Interior, or the agency itself, to undertake recovery, protection, and preservation of such data. When federal agencies find that their undertakings may cause irreparable damage to archaeological resources, the agencies shall notify the Secretary of the Interior, in writing, of the situation. The agencies involved may undertake recovery and preservation with their own project funds, or they may request the Secretary of the Interior to undertake preservation measures.

Archaeological salvage or recording by the Historic American Buildings Survey or the Historic American Engineering Record are among the alternatives available to the Secretary. This Act presents two innovations over previous law: 1) previously only dams were covered, now all federal projects are; and 2) up to 1 percent of project funds may be used for this purpose. For further information, consult the Interagency Resources Division, National Park Service, U.S. Department of the Interior, Washington, D.C. 20240. This Act was amended by the National Historic Preservation Act Amendments of 1980.

*Housing and Community Development
Act of 1974*

Public Law 93-333

This Act replaces the Department of Housing and Urban Development (HUD) categorical grant programs that previously funded urban renewal, planning, and other federally assisted community development activities with a comprehensive block grant program. Funds may be used for a broad range of community development activities. The acquisition, rehabilitation, preservation, and restoration of historic properties, historic preservation planning and surveys, and adaptive use of historic resources may be funded with block grants. Funds may be used as the match for grant money from the National Park Service Communities receiving funds must comply with federal laws and regulations protecting historic resources; HUD has delegated these responsibilities directly to the recipients who now function as federal officials. For further information, consult the Assistant Secretary for Community Planning and Development, Department of Housing and Urban Development, Washington, D.C. 20410.

*Emergency Home Purchase Assistance
Act of 1974*

Public Law 93-449 12 U.S.C. 1723e

This Act authorizes federal insurance for loans to finance the restoration or rehabilitation of residential structures listed in or eligible for the National Register. Address inquiries to Director, Title I Insured Loan Division, Department of Housing and Urban Development, 451 7th Street, SW, Room 6133, Washington, D.C. 20410.

*Amendment to the Land and Water
Conservation Fund Act of 1965*

Public Law 94-422 16 U.S.C. 4601-4 1976

This Act allows the Secretary of the Interior, at his discretion, to increase the maximum percentage of federal funding from 50 percent to 70 percent for statewide historic preservation plans, surveys, and project plans as allowed under the National Historic Preservation Act of 1966. It establishes a Historic Preservation Fund to carry out the provisions of this act and establishes the Advisory Council on Historic Preservation as an independent agency. Section 106 of the National Historic Preservation Act is amended to direct federal agencies to take into account in the planning process, properties eligible for inclusion in the National Register, as well as those already listed. For further information, consult the Associate Director for Cultural Resources, National Park Service, U.S. Department of the Interior, Washington, D.C. 20240.

*Public Buildings Cooperative Use Act of
1976*

Public Law 94-541 90 STAT. 2505, 40 U.S.C. 175

This Act requires the General Service Administration (GSA) to acquire structures of historic or architectural significance for federal office buildings. Unless the choice is infeasible and imprudent, GSA will give preference in its purchase and utilization of space to historic structures over other existing structures and over the alternative of new construction. GSA is also required to encourage the public use of such buildings by accommodating commercial, cultural, educational, and recreation-

al uses of them both during and outside regular federal working hours and to provide for handicapped access to them. Address inquiries to Historic Preservation Officer, General Services Administration, Washington, D.C. 20405.

***Archaeological Resources Protection
Act of 1979***
Public Law 96-95

This Act establishes terms and conditions for the granting of permits to excavate or remove archaeological resources on public or Indian land. It provides for the custody and disposition of resources removed and imposes criminal penalties for excavating, removing, or damaging archaeological resources on these lands without a permit, and civil penalties for violating regulations or permits issued under this Act. It directs the Secretary of the Interior to improve cooperation and exchange of information between 1) private individuals with collections of archaeological resources and data, and 2) federal authorities responsible for the protection of archaeological resources on public and Indian land and professional archaeologists. For further information, consult the Interagency Resources Division, National Park Service, U.S. Department of the Interior, Washington, D.C. 20240.

***National Historic Preservation Act
Amendments of 1980***
Public Law 96-515

These amendments continue existing National Register programs, require public and local government participation in the nomination process, and prohibit listing of properties if the owner objects. The amendments specifically authorize the National Historic Landmarks program, strengthen the role of state programs, establish statutory authority for existing elements of programs (such as SHPO's, review boards, and public participation), and establish statutory authority for state programs. The amendments require the states and the Department of the Interior to establish mechanisms to certify qualified local governments to participate in nomination and funding programs. Ten percent of historic preservation fund (HPF) money is authorized for preserv-

ing threatened National Historic Landmarks, demonstration projects, and training in preservation skills. The amendments authorize \$150 million annually for the HPF program for fiscal years 1982-87 and federally guaranteed market-rate loans for preserving National Register properties. They establish statutory responsibilities for federal agencies to manage federally-owned historic properties, surveys and nominations, recording of buildings to be lost, appointment of agency preservation officers, leasing of historic federal buildings, and increased sensitivity of federal programs to meeting preservation objectives.

State of Florida

The Historical Resources Act
(Chapter 267, F.S. 1986)

This Act, initially signed into law by the Governor in 1967, contains Florida's primary historic preservation legislation. Citing the necessity to preserve the State's cultural heritage, the law promulgates a series of goals and objectives for State action. It lists the historic preservation responsibilities for each State agency in the Executive Branch, paralleling those in the 1966 National Preservation Act, which apply to federal agencies. The Florida law creates the Division of Historical Resources within the Department of State as the agency responsible for coordinating and overseeing the State's historic preservation activities. The Division is charged under the law with carrying out on behalf of the State the programs established by the National Historic Preservation Act of 1966.

***Florida Environmental Land and Water
Management Act of 1972***
(Chapter 280, F.S. 1986)

This Act established "Areas of Critical State Concern" and requires within such areas a review of the impact of projects upon historic and archaeological sites.

The Florida Coastal Management Act of 1978

(Chapter 380, F.S. 1985)

Environmental impact statements, required under this Act, must address historic resources.

The State Comprehensive Planning Act of 1972 and The State Comprehensive Plan

(Chapter 186, F.S. and Chapter 187, F.S.)

These Acts direct the development of a State Comprehensive Plan, create Regional Planning Councils, and set forth requirements for protecting historic resources in State, local, and regional planning efforts.

The Local Government Comprehensive Planning and Land Development Regulation Act

(Chapter 163, F.S. 1986)

This Act requires historic resources to be addressed in the land use, housing, and coastal management elements prepared in conformance with State planning requirements.

Assessments: Part II Special Classes of Property

(Chapter 193.441-193.623 F.S.)

This Act provides for a reduction in property taxes through a deferred tax liability for the protection of archaeological and historic sites through development rights transfers.

Conservation Easements

(Chapter 704.06(3) F.S.)

This Act provides economic incentives for protecting historic resources through less than fee acquisitions.

Offenses Concerning Dead Bodies and Graves

(Chapter 872, F.S. 1985)

Although not a historic preservation law, the provisions of this Act may apply to prehistoric and historic grave sites.

Preservation of Cemeteries and Burials

(Chapter 872.05, F.S. 1987)

Although not originally intended as a preservation law, 872.05, Florida Statutes, 1987, provides penalties for willfully destroying, mutilating, defacing, injuring or removing any tomb, monument, gravestone, burial mound, earthen or shell monument containing human skeletal remains or associated burial artifacts. Such action is a misdemeanor of the first degree. However, if the damage to such property is greater than \$100 or if any property removed is greater than \$100 in value, then the perpetrator is guilty of a felony of the third degree.

Further, Section 872.05, Florida Statutes provides that any person who knows or has reason to know that an unmarked human burial is being disturbed, destroyed, defaced, mutilated, removed, excavated, or exposed shall immediately notify the local law enforcement agency with jurisdiction in the area where the unmarked human burial is located. When an unmarked human burial is discovered other than during an archaeological excavation authorized by the State or an educational institution, all activity that may disturb the unmarked human burial shall cease immediately, and the district medical examiner shall be notified. Such activity shall not resume unless specifically authorized by the district medical examiner or State Archaeologist.

Section 6: Private Organizations

There are numerous private organizations at the federal, State, and local level involved in the historic preservation process. None of these organizations exercise any legal or regulatory responsibility for the protection of historic resources, unless the particular entity actually owns such property or is assigned applicable trusteeship under law. Such organizations nevertheless play a vital role in preserving historic resources by providing useful information or services, making available legal instrumentalities necessary for implementing certain preservation activities (such as facade easements), or even lending financial assistance.

National Trust for Historic Preservation: Chartered by the Congress in 1949, the National Trust is a quasi-public organization that provides assistance, advice, and some funding to private organizations for historic preservation activities and serves as the principal national lobbying group for preservation concerns. The National Trust produces educational and informational journals and technical publications. The organization maintains a national headquarters in Washington D.C. and regional field offices.

Florida Trust for Historic Preservation: Organized in 1979, the Florida Trust is the State equivalent of the National Trust. It provides information and assistance to individuals and organizations, assists the Department of State in fulfilling its historic preservation responsibilities, and currently maintains one historic property. The Florida Trust has initiated a revolving fund and is empowered to serve as a recipient for charitable donations, such as facade easements, that serve historic preservation purposes.

Florida Anthropological Society: Established in 1948, this non-profit organization publishes a quarterly journal devoted to scholarly articles about Florida anthropology. The Society has taken a close interest in the preservation of Florida's archaeological resources.

Florida Archaeological Council: An organization of professional archaeologists practicing in Florida, the Council can provide information about archaeological sites in Florida as well as the lists of individuals knowledgeable about resources in specific areas.

Florida Historical Society: The oldest scholarly organization in the State, the Society issues a quarterly publication of scholarly articles and book reviews. The Society also maintains a collection of publications on Florida history at the University of South Florida.

Crowley Museum and Nature Center: Located in Old Miakka, this organization maintains a museum located in a conservation area. Two reconstructed buildings are situated on the property.

Gulf Coast Heritage Foundation: This organization maintains a significant historical site and program at Spanish Point at the Oaks, located near Osprey.

Historical Society of Sarasota County: The society performs promotional and educational tasks related to local history.

Longboat Key Historical Society: This organization is dedicated to the preservation and education of the history of Longboat Key.

Lemon Bay Conservancy: Formed in 1970, the Lemon Bay Conservancy, numbering some 300 members in 1987, encourages the conservation of natural resources, but is also involved in preservation of historical resources. The organization has encouraged acquisition of endangered lands, including historical and archaeological sites.

Lemon Bay Historical Society: The Society, which maintains its headquarters in Englewood, focuses on the history of the southwestern part of Sarasota County. The organization's objectives include protection of artifacts and development of a museum to display historical and archaeological materials associated with the area.

Lemon Bay Women's Club: Organized in 1922, this community group maintains its offices in a building constructed in 1926. Nomination of the clubhouse to the National Register of Historic Places has been forwarded to the U.S. Department of Interior.

Manasota Key Association: The purpose of the Manasota Key Association, established in 1963, is to promote conservation and preservation measures in that part of the County. Along with the Lemon Bay Conservancy, it has actively pursued acquisition and preservation of the Hermitage, a significant residential structure.

Sarasota Alliance for Preservation and the Arts: Established in 1985, the Alliance is engaged in an effort to develop public awareness about historic preservation concerns and to mobilize support for appropriate goals.

Time Sifters, Inc.: A local, non-profit archaeological society and chapter of the Florida Archaeological Council, which brings together individuals interested in the preservation and investigation of archaeological sites on the coast of southern Florida.

University of Miami: Owns and maintains the Little Salt Spring archaeological site located in North Port.

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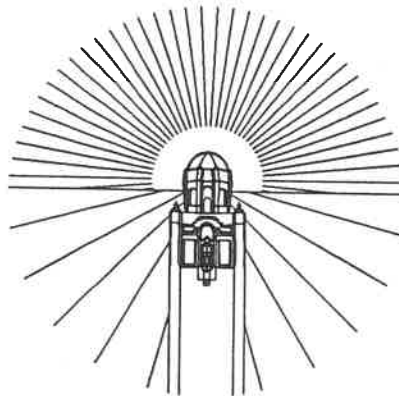
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APPENDIX B: ENVIRONMENT

Section 1: Charlotte Harbor Management Plan

It shall be the Goal of Sarasota County, as a member of the Charlotte Harbor Study area, to maintain and improve the functional and structural integrity of the natural estuarine ecosystems and related coastal components through coordinated management of human impacts in surrounding uplands and freshwater systems, and further, to identify and address the impacts of growth so as to minimize or eliminate any adverse effects on the Charlotte Harbor area.

Objectives

1. Policy, consistent with the Charlotte Harbor Committee goals and objectives, should be incorporated into all public plans relating to the Charlotte Harbor area.
2. A process of effective intergovernmental coordination that is designed to pursue the goals and objectives of the Charlotte Harbor area is to be established.
3. The data needed for decision making affecting the estuarine areas are to be provided through an ongoing effective and efficient program.
4. Future development in floodplain areas is to occur only in a manner consistent with the function of floodplains.
5. The stormwater and drainage systems of the Charlotte Harbor areas are to function in a manner that protects and preserves the Charlotte Harbor estuarine system.
6. Permitting and inspection processes for wastewater management should be improved in order to assure that future development does not result in avoidable pollution of estuarine and freshwater systems.
7. Predictable impacts of development within wetland areas should be mitigated or prevented through a prior planning process.
8. The barrier islands and beaches of the Charlotte Harbor area should be managed as a whole, recognizing that any development activity potentially affects the processes of the entire barrier beach, barrier island, and pass systems.
9. Existing and future water needs of the natural systems, areas of existing and projected population growth, and agricultural areas are to be met.
10. Future Land development decisions by local government should be in accord with the goals and objectives of the Charlotte Harbor Committee, and existing platted areas should also be encouraged to develop in accord with these goals and objectives.
11. Mitigation and prevention of development impacts should be initiated during site planning and site alteration processes.
12. Predictable dredge and fill impacts within the Charlotte Harbor area should be minimized through a prior planning process.
13. Existing and future water and natural system problem areas should be restored to healthy conditions where practical and necessary for the quality of the estuarine system.

14. Coastal areas should be managed in a manner which minimizes the threat to life and property caused by tidal flooding.

15. The progress made by governments and agencies involved in the Charlotte Harbor area towards implementing the goals and objectives of the Charlotte Harbor Committee should be monitored and assessed.

Program

1. Participating local governments, regional and state agencies should commit, in their plans, to protect, conserve and/or preserve through acquisition, incentives, or other appropriate means, the following areas and their natural functions: Submerged bottom communities, estuarine waters, floodplains, freshwater and saltwater swamps and marshes, mangroves, barrier islands, beaches and dunes, aquatic preserves, undeveloped passes, and tidal creeks. (Objective 1)

2. Participating regional and state agencies should commit to provide, and Local Governments to receive and consider, input into local government land decisions. Participating local governments and regional and state agencies should also commit to expand technical resources and communication within the study area. (Objective 2)

3. Local, state, and federal government should participate in a major scientific modeling of Charlotte Harbor to determine the cumulative impact of development of the water resource of the harbor. The study should also determine the impact of streamflows on the harbor. (Objective 3)

4. Water Management Districts: prepare floodplain maps for Sarasota, Charlotte, and Lee Counties. (Objective 4)

5. Water Management Districts: adopt criteria for development within the various floodplains. (Objective 5)

6. Local Governments: Implement floodplain regulation not inconsistent with District criteria. (Objective 4)

7. Local Government: adopt a master stormwater\drainage management plan and require future development to be consistent with this plan. (Objective 5)

8. Local Government: establish plans and regulations requiring post development runoff conditions to approximate the natural surface water flow in terms of rate, quality, hydroperiod, and basin. (Objective 5)

9. Local Government: require acceptable operation and maintenance programs for stormwater drainage systems. (Objective 5)

10. Department of Environmental Regulation: ensure that stormwater runoff is treated using best management practices to meet or exceed state water quality standards and minimizes reliance on the mixing zone to achieve water quality standards. (Objective 5)

11. DER: amend Chapter 17-3, Florida Administrative Code to classify as "Outstanding Florida Waters" those Class II approved and conditionally approved waters located in the Charlotte Harbor study area. (Objective 5)

12. HRS: develop rules for septic tank installation in the Charlotte Harbor area which strengthen the requirements of 10D-6 relating to soil and water table conditions and require installation inspections. (Objective 6)

13. DER/HRS/Local Health Departments: review monitoring and enforcement programs for the maintenance and operation of sewage systems and develop programs including public information programs for remedying any shortcomings. (Objective 6)

14. Local Government: adopt wastewater treatment plans which meet projected needs and demands to the year 2000, addresses the needs of preplatted areas, and addresses natural restrictions to specific treatment systems. (Objective 6)

15. Local Governments: for those wetland areas not adequately protected by state and federal regulations, discourage development which alters the natural functions of these areas. (Objective 7)

16. DER, DNR, FGFWFC, WMD's: proved technical assistance to local government in identifying wetland areas and establishing criteria for their management. (Objective 7)
17. Local government, DER, WMD's: assess cumulative impacts of small scale projects. (Objective 7)
18. Local government/all participating agencies: when public or private projects produce unavoidable damage to wetland areas, restoration or mitigation programs should be implemented. (Objective 7)
19. DNR: require all new structures and modifications to existing structures to be designed so as to permit the free flow of water to prevent shoaling or scouring. (Objective 8)
20. DNR, DER, Corps of Engineers: discourage dredging of new channels and the addition of more passes to existing pass maintenance programs (Objective 8)
21. Local Governments: discourage further development on barrier islands. (Objective 8)
22. Local Governments: prohibit construction of bridges and causeways capable of carrying motor vehicles, paved roads, and commercial marinas on or to undeveloped barrier islands. (Objective 8)
23. Water management districts/working in cooperation with local governments: develop an areawide water supply plan which emphasizes the use of basin water resources, provides for the needs of both man and the natural systems, and addresses potential future demand including currently platted areas. (Objective 9)
24. Local Government: ensure that development decisions are consistent and coordinated with the delivery of adequate potable water supplies. (Objective 9)
25. Local Government: promote water conservation within utility systems and through inspection and regulatory actions. (Objective 9)
26. Water Management District: ensure that the estuaries will continue to receive the volume of flow of freshwater, within a maximum 10 percent increase or decrease, until such time more definitive data are established. (Objective 9)
27. Local Government: require that all development coincide with the ability of public and private sectors to provide community services and facilities as based on studies employing methods of reasonable predictability generally acceptable in the planning profession. (Objective 10)
28. Local Government/All agencies: encourage land use changes for platted but undeveloped areas to protect those environmentally sensitive areas and to assist in the provision of governmental services, to discourage urban sprawl, and to protect agricultural lands. (Objective 10)
29. Local Government/DOT: highway corridor planning for undeveloped areas shall consider the suitability of adjacent land for urbanization and shall direct construction away from environmentally sensitive areas. (Objective 10)
30. Legislature: explore ways to encourage voluntary reassembly of platted and sold subdivisions where environmental or other public benefits could result from a redesign of such subdivisions. (Objective 10)
31. Local Government: require implementation of erosion control techniques during development activities. (Objective 10)
32. Local government: require site development plans that provide for the maintenance of habitats for wildlife species, as listed by the Federal and State Endangered Species Acts, tree protection, and prevent the introduction or spread of noxious vegetation. (Objective 11)
33. Local government, SWFRPC, DNR, DER: state and regional agencies should develop technical criteria and natural resource inventories to assist local government in the establishment of plans and regulations addressing marina and port location, planning and construction. (Objective 12)

34. DER: require all public works projects involving dredging and filling to have a long term spoil disposal plan, addressing location of spoil, manner of disposal, and a maintenance program, prior to permitting any new work or maintenance dredging. (Objective 12)

35. DER: for those canals identified as having severe water quality problems, require, where practical, the implementation of mitigation techniques. (Objective 13)

36. DER, DNR: when the party responsible for the destruction of seagrass beds or shellfishing grounds can be identified, require restoration of these areas by that party. When responsibility cannot be established, assume the lead role in conducting a cooperative, intergovernmental restoration program. (Objective 13)

37. Local Government: prepare and implement an evacuation plan which provides each person located in an area subject to total flooding the opportunity to evacuate to a place of safety. (Objective 14)

38. Local Government: manage growth so that the population in areas subject to tidal flooding is consistent with evacuation and refuge capabilities. (Objective 14)

39. Local Government/DNR: structures built in areas subject to tidal flooding should be elevated, capable of withstanding wind and water forces associated with a 100-year storm, and located as far from tidal waters as practicable. (Objective 14)

40. Local Government: new and future development of non-water dependent uses should be discouraged from locating in identified high hazard flood zone (velocity zones of Federal Flood Insurance Rate Maps). (Objective 14)

41. Develop or endorse programs, legislation, studies, further recommendations, etc. which will serve to advance the stated goals of the Charlotte Harbor Committee. (Objective 15)

42. Require that an annual report be prepared by the Southwest Florida Regional Planning Council in which development decisions made by the member agencies of the Charlotte Harbor Committee are evaluated for consistency with the Local Comprehensive Planning Act and the Charlotte Harbor Management Plan. Said report shall be forwarded to the Department of Community Affairs, or its successor, for any necessary legal or administrative actions. (Objective 15)

Section 2: Sarasota County Drainage Basins

Water Quality Assessment Study 1980-1987

Sarasota County Department of Natural Resources, Division of Pollution Control; February, 1988.

Introduction

These qualitative assessments are based primarily on the data generated by the County Environmental Services ambient water quality monitoring program. Specific pollutants have been identified where violations of those parameters have been found at sampling stations in the various waterbodies. Qualitative or "professional judgement" decisions were also applied where personal knowledge of the waterbodies and non-point pollution sources exist (for example, Upper Myakka Lake - eutrophication status).

The waterbodies were rated as follows: A "moderate" impairment rating was applied to those waterbodies which continue, over the years, to display some water quality violations/high nutrient levels at least one of the sampling stations indicated, and/or for which personal knowledge indicates that there is some definite impairment of their designated use (due to heavy siltation, shoreline alteration, etc.) in at least some areas of the waterbody. (An attempt was made to take into consideration and factor out the point source contribution to any water quality violations/problem areas for the assessment).

A "severe" impairment rating was given to those waterbodies for which water quality violations were found roughly 50 percent or more of the time and which are located in highly urbanized areas or areas with intensive agricultural runoff. Professional knowledge indicates impairment of these waterbodies' use throughout.

A "suspected" impairment rating was given to those waterbodies for which there is no known impairment; but for which impairment of the waterbodies' designated use is suspected based on location of the waterbody, its surroundings, etc.

A "threatened" impairment rating was given to the Myakka River. This is based on the fact that there is no known impairment of its designated use at this time, however, based on the poor water quality in the Upper Myakka Lake and future development in the watershed, its designation use could become impaired.

Dual ratings were given to those waterbodies for which there are professional judgement differences. Consideration should likely be given to the worst case rating in these cases.

There is suspected non-point source impairment of the waterbodies for which landfills exist in the drainage basins, and of the surficial aquifer groundwater in the areas of the landfills.

In completing the study, it became apparent that important facts about many of the waterbodies in the County were lacking. An increase in the number of sampling stations and parameters monitored, and information on flows in the individual waterbodies would be extremely useful to this end.

BASIN: HUDSON-WHITAKER BAYOUS

Development Status: urbanized (City of Sarasota covers most of the basin; upper reaches of Whitaker Bayou extend into Sarasota and Manatee Counties).

Water Quality Data:

Hudson Bayou: severe impairment rating.

* non-point source categories include urban and septic tanks.

* symptoms for surface waters are turbidity/siltation.

* pollutants/problems include sediments/erosion, coliform bacteria, debris and physical habitat alteration. - seawalls prevalent.

Hudson Bayou drains that portion of the City of Sarasota south of 10th Street to Hyde Park Street.

Whitaker Bayou: severe impairment rating.

* non-point source categories include urban and septic tanks.

* symptoms for surface waters are turbidity/siltation.

* pollutants/problems include sediments/erosion, nutrients, coliform bacteria, debris, oxygen depletion, and physical habitat alteration. - seawalls are prevalent resulting in sedimentation.

Whitaker Bayou drains a portion of the City of Sarasota just north of University Blvd. south to 10th Street. The area is served by the City sewage collection and treatment facilities. The Bayou receives City of Sarasota secondary treatment effluent near US 41; in addition to a Dolomite Utilities - Tri Par Estates sewage treatment plant outfall up until late 1987.

Flood Potential: the mouth of Whitaker Bayou and length of Hudson Bayou are within the 100-year floodplain.

Impairment Rating of Direct Outfall: Sarasota Bay

* Moderate impairment rating.

* non-point source category is urban.

* symptoms for surface water include algal bloom, decline in fishery, and turbidity/siltation.

* pollutants/problems include sediments/erosion, nutrients, and impacts with physical habitat alteration.

* occasional closing of shellfish harvesting waters; seagrass depletion.

BASIN: BRADEN RIVER (includes Cooper Creek in Sarasota County)

Development Status: Extractive, agricultural including improved pasture, some low-moderate residential density. Urbanizing.

Water Quality Data: Water Quality for Cooper Creek has not been measured in Sarasota County.

* nonpoint pollution - primarily stormwater from agricultural uses.

Flood Potential: Long Swamp and associated wetlands are within the 100-year floodplain. Ditching west of I-75 has reduced flood potential in that portion of the basin.

Impairment Rating of Direct Outfall: Braden River

* generally good water quality.

* major threats to water quality are nutrient and coliform inputs.

BASIN: PHILLIPPI CREEK

Development Status: 80 percent urbanized - extreme easterly sections within the basin east of I-75 continue in agricultural land uses.

Water Quality Data: impairment rating is moderate/severe.

* non-point source categories include urban, septic tanks, agriculture, land disposal (landfills, sprayfields), and construction.

* symptoms from surface waters include aquatic weed problems, and turbidity/siltation.

* pollutants/problems include sediments/erosion, nutrients, coliform bacteria, other chemicals, debris, oxygen depletion, metals, physical habitat alteration, and petroleum products.

* receives Kensington Park Utilities, Southeast Utilities, and Florida Cities South Gate sewage treatment plant outfalls.

The third largest drainage basin in the County; Phillippi Creek is also the most developed and most effected by development activities - channelization sedimentation, septic tanks, road construction effects.

Flood Potential: length of Creek, Main A, B, and C are in 100- year flood area.

Impairment Rating of Direct Outfall: Roberts Bay

- * moderate impairment rating
- * non-point source category includes urban, septic tanks, and agriculture.
- * symptoms of surface water include decline in fishery, and turbidity/siltation.
- * pollutants/problems include sediments/erosion, nutrients and physical habitat alteration.

BASIN: ELLIGRAW (includes Matheny Creek and Clowers Creek)

Development Status: urbanized and urbanizing

Water Quality Data:

Matheny Creek: severe impairment rating

- * non-point source categories are urban and septic tanks.
- * symptoms of surface waters are turbidity/siltation.
- * pollutants/problems include sediments/erosion, nutrients, coliform bacteria, debris, oxygen depletion, physical habitat alteration.

The Gulf Gate area is drained primarily by Matheny Creek and generally all of the area south of Clark Road to approximately Sandalwood Dr. and US 41 in Coral Cove.

Florida Cities Gulf Gate advanced waste treatment effluent outfall, discharge at Matheny Creek near US 41.

Elligraw Bayou: a moderate impairment rating with urban as the non-point source category.

- * symptoms of surface waters include fish kill and turbidity/siltation.

- * pollutants/problems alter the physical habitat - the upper reaches are ditched.

- * a small, low flow creek until it joins an estuarine section just west of US 41 at Southpointe Dr.; Elligraw Bayou drains a very small area.

Clowers Creek: severe impairment rating

- * non-point source categories include urban and septic tanks.
- * symptoms of surface waters include turbidity/siltation.
- * pollutants/problems include sediments/erosion, nutrients, coliform bacteria, oxygen depletion, and physical habitat depletion.

- * the general area of Sarasota Square Mall and Pelican Cove Condominium, US 41 and Beneva Road/Vamo Road, is drained by Clowers Creek.

- * consistently high levels of nutrients (1980-1987); potential discharge problems originating from Sarasota Square Mall.

Flood Potential: small strip along Little Sarasota Bay within 100 year floodplain.

Impairment Rating of Direct Outfall: Little Sarasota Bay

- * moderate impairment rating
- * non-point source categories include urban, septic tanks, and agriculture.
- * symptoms of surface water include fish kill, algal bloom, decline in fishery, odor, turbidity/siltation.
- * pollutants/problems include sediments/erosion, nutrients, coliform bacteria, oxygen depletion, and physical habitat alteration.

BASIN: CATFISH CREEK

Development Status: urbanizing

Water Quality Data: moderate impairment rating

- * non-point source categories include urban and agriculture.
- * symptoms of surface water are turbidity/siltation.

* pollutants/problems include sediments/erosion, nutrients, coliform bacteria, oxygen depletion, physical habitat alteration.

An old closed landfill in addition to agricultural runoff from nearby areas.

The area between Clowers Creek Basin and North Creek is drained by the small, low-flow Catfish Creek.

Flood Potential: mouth of Catfish Creek is within the 100-year flood area.

Impairment Rating of Direct Outfall: Little Sarasota Bay

BASIN: NORTH CREEK

Development Status: limited development, but urbanizing (Palmer Ranch and The Oaks).

Water Quality Data: moderate impairment rating.

* non-point source categories include urban and agriculture.

* symptoms of surface waters are turbidity/siltation.

* pollutants/problems include sediments/erosion, nutrients, coliform bacteria, oxygen depletion, physical habitat alteration.

* An old closed landfill in addition to agricultural runoff from nearby areas. Just north of Osprey near Cordes St. and US 41, North Creek crosses US 41. It drains a small area which is mostly agricultural usage and relatively undisturbed. The estuarine area is a small salt marsh where it joins Catfish Creek.

Flood Potential: much of North Creek lies within the 100-year floodplain.

Impairment Rating of Direct Outfall: Little Sarasota Bay

BASIN: SOUTH CREEK

Development Status: limited development - development along mouth of South Creek.

Water Quality Data: moderate impairment rating.

* non-point source category is urban and agriculture.

* symptoms of surface waters are turbidity/siltation.

* pollutants/problems include sediments/erosion, nutrients, coliform bacteria, oxygen depletion.

* Agriculture (pastureland) runoff, also receives Sorrento Utilities STP effluent underdrain discharge through stormwater lake system (near US 41).

South of Osprey and through Oscar Scherer State Park, heading northeasterly is the South Creek Basin.

Flood Potential: mouth of South Creek is in the 100-year floodplain area.

Impairment Rating of Direct Outfall: Dryman Bay

* suspected impairment rating.

* non-point source category is urban.

* symptoms of surface water is turbidity/siltation.

* pollutants/problems are sediments/erosion.

* also receives R.O. reject discharge from South Bay Utility.

BASIN: LAUREL SUB-BASIN

Development Status: urbanized

Flood Potential: virtually covered by the 100-year floodplain.

Impairment Rating of Direct Outfall: Blackburn Bay and Lyons Bay

Lyons Bay: suspected impairment rating

* non-point source categories include urban and septic tanks.

* symptoms of surface water include turbidity/siltation.

* pollutants/problems are sediment/erosion - shoreline alterations heavy - seawalls.

Blackburn Bay: suspected impairment rating

- * non-point source category is urban.
- * symptoms of surface water are turbidity/siltation.
- * pollutants/problems include sediments/erosion with physical habitat alteration - shoreline alteration - seawall, etc.

BASIN: SHAKETT CREEK (includes Cow Pen Slough)

Development Status: urbanization along Shakett Creek at mouth of basin - majority of basin in agricultural use.

Water Quality Data: * moderate impairment rating.

* non-point source category includes urban, agriculture, and septic tanks.

* symptoms of surface waters include turbidity/siltation and aquatic weed problem.

* pollutants/problems include sediments/erosion, nutrients, coliform bacteria, oxygen depletion, physical habitat alteration.

* Heavy siltation due to channelized flow.

* Bee Ridge landfill (active) within drainage basin - confirmed surficial aquifer groundwater contamination.

Cow Pen Slough - drains a large portion of central Sarasota County, one of the largest drainage basins in the County.

The Slough meanders south from near the north County line to Dona Bay in Venice. The area is largely low density in the upper, agricultural portion and moderate near Venice.

Shakett Creek - a small portion of the basin is drained by this and is mostly estuarine in nature.

Flood Potential: Cow Pen Slough and Shakett Creek are included in the 100-year floodplain.

Impairment Rating of Direct Outfall: Dona Bay

- * moderate impairment rating.
- * non-point source category is urban and agriculture.

* symptoms of surface waters include a decline in fishery, turbidity/siltation.

* pollutants/problems include sediments/erosion, nutrients, physical habitat alteration; heavy siltation due to channelized flow and development adjacent to Cow Pen Slough.

BASIN: CURRY CREEK

Development Status: urbanized and urbanizing.

Water Quality Data: suspected impairment rating.

* non-point source category is urban.

* symptoms of surface waters is turbidity/siltation.

* pollutants/problems include sediments/erosion, nutrients, coliform bacteria, and oxygen depletion.

Has old (now closed) City of Venice landfill and County Venice landfill (being closed) transfer station. The area directly east of Robert's Bay in Venice is drained by Curry Creek.

Flood Potential: mouth of Curry Creek lies within the 100-year floodplain.

Impairment Rating of Direct Outfall: Roberts Bay

* suspected impairment rating.

* non-point source category includes urban and septic tanks.

* symptoms of surface water include turbidity/siltation.

* pollutants/problems include sediments/erosion.

Septic tanks and the old (closed) landfill are areas of concern.

BASIN: HATCHETT CREEK

Development Status: urbanized and urbanizing.

Water Quality Data: impairment rating is moderate/severe.

* non-point source category is urban.

* symptoms of surface waters is turbidity/siltation.

* pollutants/problems include sediments/erosion, nutrients, coliform bacteria, oxygen depletion, and physical habitat alteration.

Road construction effects, heavy siltation during rains, channelizing, and seawalls. Receives Reverse Osmosis brine reject from City of Venice. The area drained by Hatchett Creek includes a small portion of the City of Venice near the Venice Bypass and US 41 northern junction and southeasterly, which meets the Intracoastal Waterway at Business 41. This area is heavily developed.

Flood Potential: the length of Hatchett Creek and the Intracoastal Waterway lie within the 100-year floodplain.

Impairment Rating of Direct Outfall: Roberts Bay

BASIN: ALLIGATOR CREEK

Development Status: urbanized and urbanizing.

Water Quality Data: impairment rating of moderate/severe.

* non-point source category is urban.

* symptoms of surface waters are turbidity/siltation.

* pollutants/problems include sediments/erosion, nutrients, coliform bacteria, oxygen depletion, physical habitat alteration.

Dredge and fill impacts; old (closed) landfill within the drainage basin.

The area south of Center Road to approximately US 41 and SR 775 in Venice is drained by Alligator Creek. The western area of the basin has developed rapidly.

Flood Potential: areas along the Creek and the area surrounding the mouth lie within the 100-year floodplain.

Impairment Rating of Direct Outfall: Lemon Bay

* moderate impairment rating.

* non-point source category includes urban and septic tanks.

* symptoms of surface waters is closure to swimming.

* Pollutants/problems are nutrients and coliform bacteria.

* impairment based primarily on Class II waters (occasional closing of the shellfishing water due to septic tank failures); otherwise water quality data has been consistently fair.

BASIN: FORKED CREEK

Development Status: some urbanization at the mouth of the Creek; basin is primarily agricultural.

Water Quality Data: a moderate/severe impairment rating.

* non-point source category is urban.

* symptoms of surface waters are turbidity/siltation.

* pollutants/problems include sediments/erosion, coliform bacteria, oxygen depletion, physical habitat alteration.

Two old (closed) landfills within the drainage basin.

The basin extends just north of Englewood approximately between US 41 and SR 775 and south to Englewood Road and SR 755 then north-easterly.

The area is partially developed with the highest density in the western section.

Flood Potential: the lower creek is in the 100-year floodplain.

Impairment Rating of Direct Outfall: Lemon Bay

BASIN: GODFREY CREEK (DEER CREEK)

Development Status: lower creek urbanized (Englewood); remainder agricultural.

Water Quality Data: suspected impairment rating.

* non-point source category is urban.

A section of the southern corner of the County, including most of Englewood, makes up the Deer Creek basin. The area has only moderate development in the southwest portion of the basin and is sparse to the north.

Flood Potential: the area along the creek lies within the 100- year floodplain.

Impairment Rating of Direct Outfall: Lemon Bay

BASIN: MYAKKA RIVER

Development Status: few residential areas (primarily large lot); virtually entire area is agricultural/preservation.

Water Quality Data: the impairment rating is one of threatened.

* non-point source category of agricultural and land disposal (landfills, sprayfields).

* pollutants/problems, include nutrients, coliform bacteria, oxygen depletion.

* Agricultural runoff, possible surface runoff from Venice landfill transfer station - Central County Solid Waste Complex (landfill) proposed.

The eastern half of Sarasota County makes up the Myakka River basin. It includes Spring Run (Warm Mineral Springs Creek), Big Slough, Deer Prairie Slough, Myakkahatchee Creek, the Cocoplum Waterway, and the Myakka River. The northern area is primarily undeveloped and only moderate density exists in the southern quarter within the City of North Port.

The River is typically low flow with high seasonal variation. Its environmental sensitivity is of prime concern to many (Wild and Scenic River and OFW designations). The River flows through Port Charlotte and joins Charlotte Harbor to the south which is another ecologically sensitive area.

Upper Myakka Lake/Lower Myakka Lake

* moderate/threatened impairment rating.

non-point source category is agricultural.

* Upper Myakka Lake has aquatic weed problem, algal bloom.

* pollutants/problems are nutrients and oxygen depletion.

Eutrophication problems, water hyacinths, etc.

Howard Creek: moderate impairment rating

* non-point source category is agriculture

* pollutants/problems are nutrients, coliform bacteria, oxygen depletion

* agricultural runoff is of primary concern.

Flood Potential: A wide flood basin along the River is within the 100-year floodplain.

Impairment Rating of Direct Outfall: Charlotte Harbor (see Charlotte Harbor section in the Environment Chapter text)

BASIN: BIG SLOUGH

Development Status: undeveloped portion of North Port included; primarily agricultural lands.

Water Quality Data: impairment rating is moderate.

* non-point source category is agricultural and urban.

* symptoms of surface waters include turbidity/siltation.

* pollutants/problems include sediments/erosion, nutrients, oxygen depletion.

Myakkahatchee Creek has also received General Development Utilities STP effluent runoff - North Port disposal site (off- line spring 1987).

Flood Potential: a wide floodplain along Big Slough included in the 100-year floodplain.

Impairment Rating of Direct Outfall: Myakka River

Section 3: Water-Dependent/Water-Related Facilities In Sarasota County

BEACH ACCESS

Location/Access	*Length	Depth (ft.)	# Parking Spaces
<i>Longboat Key</i>			
Longview (M)	75	50	41
Westfield (M)			15
Mayfield (M)			8
Triton (M)	75	50	(Potential For 20)
Neptune (M)	75	50	4
Buttonwood Drive	30	40	
Colony Beach			
Tennis Resort (X)	1100	60	
Triton Inn (X)	200	150	
<i>Lido Key</i>			
North Lido (M)			20
Lido Public Beach (M)	7800	150	210
South Lido Park (C)	4500	50	300
Azure Tides Resort (X)	250	100	
Harley SandCastle Resort (X)	600	75	
Gulf Beach Resort (X)	140	30	
<i>Siesta Key</i>			
Avenida Messina (C)	75	150	0
Columbus Avenue (C)	75	150	4
Avenida Navarra (C)	75	150	6
Ocean Boulevard (C)	75	150	14
Tenacity Lane (C)			
Calle de Invierno (C)	75	150	
Calle de Siesta (C)	75	150	10
Plaza des Las Palmas (C)	75	150	5
Plaza des Las Palmas (C)		5	
Shell Road (C)			4
Avenida del Mare (C)			8
Siesta Public Beach (C)	2300	200	518
Stickney Point Bridge (C)	40	140	15
Turtle Beach (C)	1200	75	150
Aloha Kai Resort (X)	200	300	
Sarasota Surf and Raquet Club (X)	317	150	
Sea Castle Motel (X)	330	720	
Gulf Beach			

<u>Location/Access</u>	<u>*Length</u>	<u>Depth (ft.)</u>	<u># Parking Spaces</u>
Travel Trailer Park (X)	200	20	
Gulf and Bay Club (X)	650	50	
Palm Bay Club (X)	260	200	
Trivoli By the Sea (X)	100	400	
Casey Key			
Nokomis Beach (C)	1200	20	120
North Jetty Public Beach (C)	2080	20	80
Palmer Point (C)	1800	150	
Venice			
Venice Public Beach (M)	600	150	140
Brohard Public Beach (M)	5500	60	200
Caspersen Public Beach (C)	10000	50	627
Loran Park (M)	320	60	
Ocala Street			8
Old USCG Site			20
Manasota Key			
Manasota Public Beach (C)	1400	150	103
Blind Pass Public Beach (C)	400	50	200

Legend:

(C) County (M) Municipal (X) Commercial *Linear feet of beach front

Source: Florida Department of Natural Resources, 1987; Sarasota County Department of Natural Resources, 1988.

BOAT RAMPS

<u>Location</u>	<u>Access</u>	<u>#Ramps/#Lanes</u>	<u>#Parking Spaces</u>
Longboat Key			
Lido Key			
	City Island (M)	4/4	50 (25)
Sarasota			
	Hart's Landing*	1/1	10
	6th Street Boat Ramp (M)	2/3	15 (5)
	10th Street Boat Ramp (M)	1/6	50 (100)
Siesta Key			
	Turtle Beach** (C)	2/2	32
Casey Key			
	Blackburn Point Road Boat Ramp*** (C)	1/1	30
	Nokomis Island Boat Ramp (C)	2/4	30
Venice			
	Higel Marine Park (M)	1/1	22
	Rambler's Rest Resort Campground (X)	1/1	4

*Apoossee - The Revised and Updated Sarasota County
Comprehensive Plan*

Location	Access	#Ramps/#Lanes	#Parking Spaces
	Snook Haven (X)	1/1	10
<i>Manasota Key</i>	Manasota Boat Ramp (C)	1/1	15
<i>Englewood</i>	Indian Mound Park (C)	1/1	60
<i>North Port</i>	Marine Park	1/1	20

Legend:

(C) County (M) Municipal (X) Commercial *Shallow Water ** Lagoon Shoaling ***Only Serves Small Shallow Draft Boats @ High Tide () Overflow Parking

SHORE FISHING AREAS

Location	Access	Linear Feet	#Parking Spaces
<i>Longboat Key</i>	City Island (M)	2159	
	Ringling Causeway (M)		300
<i>Sarasota</i>	6th Street (M)	136	
	Island Park (M)	7000	
<i>Siesta Key</i>	Bay Island Park (C)	800	4
<i>Nokomis</i>	Bay Point (C)		
<i>Venice</i>	Higel Marine Park (M)	350	
	South Jetty Park (M)	600	50
<i>Manasota Key</i>	Manasota Boat Ramp (C)	160	
<i>Casey Key</i>	Nokomis Island Boat Ramp (C)	270	
	North Jetty Public Beach (C)	1500	
<i>North Port</i>	Marina Park (M)		

Legend:

(C) County (M) Municipal (X) Commercial

Source: Florida Department of Natural Resources, 1987; Sarasota County Department of Natural Resources, 1988.

ARTIFICIAL REEFS

Reef Site	Location		Distance (Statute Miles and Headings from Passes)	Depth Materials
	Loran C	LAT/LON		
A	14166.1	27 16'57"	2.7 Miles at 192-New Pass 30'	Concrete rubble, boxes, and piles
	44423.6	82 35'54"	2.1 Miles at 270-Big Pass	
B	14166.1	27 17'55"	2.0 Miles at 215-New Pass 30'	Concrete rubble, boxes, and piles
	44437.4	82 37'54"	2.9 Miles at 295-Big Pass	
C	14169.5	27 18'06"	2.0 Miles at 185-New Pass 22'	Old Orange Avenue Bridge
	44425.8	82 35'36"	1.6 Miles at 305-Big Pass	
D	14154.5	27 06'06"	1.2 Miles at 225-Venice Inlet 25'	Concrete rubble, Old Venice Avenue Bridge, Old Venice Pier Landing Craft
M8	14128.1	27 12'36"	14.5 Miles at 240-New Pass 65'	
			14.6 Miles at 255-Big Pass	
			21.5 Miles at 290-Venice Inlet	
			36.0 Miles at 310-Stump Pass	
M10	14114.8	27 01'80"	20.6 Miles at 200- New Pass 67'	Boats
	44391.5	82 42'62"	18.0 Miles at 210-Big Pass	
			15.7 Miles at 250-Venice Inlet	
			24.6 Miles at 295-Stump Pass	

MARINAS

<u>Marine Name</u>	<u>Wet-slips</u>	<u>% occupied</u>	<u>Dry Storage</u>	<u>% occupied</u>
<i>Recreation Planning Area 1</i>				
Boathouse on Longboat Key	0		194	0
Bird Key Yacht Club	40			
Dock On The Bay	18			
888 Condo On The Bay	48		0	
Gulfwind Marine	26	100	175	100
Hansens	100			
Harbourside Mooring	277	75	0	
Hyatt House	13		0	
Island Park (M)	140			
Longboat Key Club	277		0	
Longboat Marina	18		80	
Marina Jack	170		0	
Marlow Marine	40		40	
O'Leary's Sailing School	6		0	
Sarasota Yacht Club	90			
Yacht Harbor	7		100	
<i>Recreational Planning Area 5</i>				
Anchorage Yacht Club	18			
Abbey Marine	10			

<u>Marine Name</u>	<u>Wet-slips</u>	<u>% occupied</u>	<u>Dry Storage</u>	<u>% occupied</u>
The Boatyard	28		0	
Boca Siesta Condo	32			
"C & S" Marine	25		70	90
CB's Boat Rentals	11		0	
Chez Med Restaurant	10			
Fisherman's Cove	47			
Fisherman's Haven	7			
Harbor Towers Yacht	47			
Harbor Towne Condo	50			
Just Add Water	28			
Landing Marina	40		0	
Marina West	80			
Midnight Cove Condo	19		0	
Midnight Pass Marina	25	95	152	95
Palm Bay Club	13			
Phillippi Shore Marina			100	100
The Pointe	24			
Reagle Lagoon	50		0	
Siesta Key Marina	14	100	265	80
Sea Club Condo	10		0	
Sunrise Yacht Club	50			
Tortuga Club	10			
<i>Recreational Planning Area 6</i>				
Helmsmen Marina			65	100
Spanish Pointe Marina	40	10		
Captains Cove Marine	10	98	0	
Casey Key Marina	50	99	0	
Osprey Marine	25	90	250	90
Pelican Cove	77		0	
South Bay Yacht and Raquet	213		0	
<i>Recreational Planning Area 7</i>				
Bella Costa	10			
Crow's Nest Marina	24	90	0	
Dona Bay Marina	28	30	0	
Fisherman's Wharf Marina	40	90	0	
First Nat'l Bank of Venice	22			
Gulf Harbor Marina	45	75	245	75
Gulf Liner Marina	14			
Harbor Lights Travel Resort	35		0	
Higel Marine Park (M)	25			

<u>Marine Name</u>	<u>Wet-slips</u>	<u>% occupied</u>	<u>Dry Storage</u>	<u>% occupied</u>
Sorrento Inlets	14		0	
Venice Marine Center	75	80	272	80
Venice Yacht Club	380			
<i>Recreational Planning Area 8</i>				
Dion's Yacht Basin	50		750	0
Englewood Boats and Motors	10		190	

Section 4: Endangered, Threatened, And Species Of Special Concern- Vertebrates and Plants

Habitat	Class	Species	Status	
SANDY COASTS	Birds	Peregrine Falcon <i>Falco peregrinus tendrius</i>	(E)	
		Southeastern Snowy Plover <i>Charadrius alexandrinus tenuirostris</i>	(T)	
		Least Tern <i>Sterna antillarum</i>	(T)	
		American Oyster Catcher <i>Haematopus palliatus</i>	(SSC)	
		Kemp's Ridley (a) <i>Lepidochelys kempii</i>	(E)	
	Amphibians/ Reptiles	Green sea turtle (a) <i>Chelonia mydas</i>		
		Leatherback sea turtle (a) <i>Demochelys coriacea</i>		
		Atlantic Loggerhead <i>Caretta caretta caretta</i>	(T)	
		Bay cedar <i>Suriana maritima</i>	(E)	
		Sanibel Lovegrass <i>Eragrostis tracyi</i>	(T)	
Plants	Beach Creeper <i>Ernodea littoralis</i>	(T)		
	BARRIER BACKBONES	Plants	Florida Coontie <i>Zamia Floriana</i>	(C)

<u>Habitat</u>	<u>Class</u>	<u>Species</u>	<u>Status</u>	
ESTUARINE EDGES	Birds	Wood Stork <i>Mycteria americana</i>	(E)	
		Bald Eagle (b) <i>Haliaeetus leucocephalus</i>	(E)	
		Tricolored Heron <i>Egretta tricolor</i>	(SSC)	
		Snowy Egret <i>Egretta thula</i>	(SSC)	
		Reddish Egret <i>Egretta rufescens</i>	(SSC)	
		Little Blue Heron <i>Egretta caerulea</i>	(SSC)	
		Roseate Spoonbill <i>Ajaja ajaja</i>	(SSC)	
		Eastern Brown Pelican <i>Pelecanus occidentalis</i>	(SSC)	
		Fish	Rivulus <i>Rivulus marmoratus</i>	(SSC)
			Common Snook <i>Centropomus undecimalis</i>	(SSC)
	Plants	West coast prickly apple <i>Cereus gracilis</i>	(E)	
BRACKISH BAYS	Mammals	W. Indian Manatee <i>Trichechus manatus latirostris</i>	(E)	
		Bald Eagle <i>Haliaeetus leucocephalus</i>	(T)	
		Eastern Brown Pelican <i>Pelecanus occidentalis</i>	(SSC)	

<u>Habitat</u>	<u>Class</u>	<u>Species</u>	<u>Status</u>
		American Oyster Catcher <i>Haematopus palliatus</i>	(SSC)
ORIGINAL WATERWAYS	Mammals	W. Indian Manatee <i>Trichechus manatus latirostris</i>	(E)
	Birds	Eastern Brown Pelican <i>Pelecanus occidentalis</i>	(SSC)
	Amphibians/ Reptiles	American Alligator <i>Alligator mississippiensis</i>	(SSC)
FRESHWATER WETLANDS	Mammals	Florida Black Bear (b) <i>Ursus americanus floridanus</i>	(T)
	Birds	Wood Stork <i>Mycteria americana</i>	(E)
		Snail Kite <i>Rostrhamus sociabilis</i>	(E)
		Limpkin <i>Aramus guarauna</i>	(SSC)
		Tricolored Heron <i>Egretta tricolor</i>	(SSC)
		Snowy Egret <i>Egretta thula</i>	(SSC)
		Reddish Egret <i>Egretta rufescens</i>	(SSC)
		Little Blue Heron <i>Egretta caerulea</i>	(SSC)
	Amphibians/ Reptiles	American Alligator <i>Alligator mississippiensis</i>	(SSC)

<u>Habitat</u>	<u>Class</u>	<u>Species</u>	<u>Status</u>
SHADY HAMMOCKS	Plants	Golden Polypody	
		<i>Phlebodium aureum</i>	(T)
PINE PRAIRIES	Mammals	Florida Panther (b)	
		<i>Felis concolor coryi</i>	(E)
		Sherman's Fox Squirrel	
		<i>Sciurus niger shermani</i>	(SSC)
	Birds	American Kestrel	
		<i>Falco sparverius paulus</i>	(T)
		Red-cockaded Woodpecker	
	<i>Picoides borealis</i>	(T)	
Amphibians/ Reptiles	Florida Pine Snake		
	<i>Pituophis melanoleucus mugitus</i>	(SSC)	
GRASSY DRY PRAIRIES	Birds	American Sandhill Crane	
		<i>Grus canadensis pratensis</i>	(T)
		Audubon's Crested Caracara	
		<i>Polyborus plancus</i>	(T)
		Burrowing Owl	
	<i>Athene cunicularia</i>	(SSC)	
	Plants	Hand and adder's tongue fern	
		<i>Ophioglossum palmatum</i>	(E)
HIGH DRY SCRUB	Mammals	Sherman's Fox Squirrel	
		<i>Sciurus niger shermani</i>	(SSC)
		Florida Mouse	
		<i>Peromyscus floridanus</i>	(SSC)
	Birds	Florida Scrub Jay	
		<i>Aphelocoma coerulescens coerulescens</i>	(T)

<u>Habitat</u>	<u>Class</u>	<u>Species</u>	<u>Status</u>
	Amphibians/ Reptiles	E. Indigo Snake (b) <i>Drymarchon corais couperi</i>	(T)
		Florida Gopher Frog <i>Rana areolata</i>	(SSC)
		Gopher Tortoise <i>Gopherus polyphemus</i>	(SSC)
	Plants	Florida Coontie <i>Zamia Floridana</i>	(C)
		Florida bonamia <i>Bonamia grandiflora</i>	(E)
		Curtis milkweed <i>Asclepias curtissii</i>	(T)

Legend: (E) Endangered (T) Threatened (SSC) Species of Special Concern (C) Commercially Exploited (UR1) Under review for federal listing, with substantial evidence in existence indicating at least some degree of biological vulnerability and/or threat.

Endangered, Threatened, and Species of Special Concern: Flora and fauna identified by the United States Fish and Wildlife Service (List of Endangered and Threatened Wildlife and Plants, 50 CFR 17.11-12) and Florida Game and Freshwater Fish Commission (Section 39-27.003-005, Florida Administrative Code).

Note:

(a) These sea turtle species migrate through the Gulf waters off the coast of Sarasota County.

(b) One of many habitats used by this species.

THE INFORMATION PROVIDED IN THIS LIST SHOULD NOT BE CONSIDERED AS A FINAL STATEMENT REGARDING THE HABITAT AND/OR STATUS OF ENDANGERED, THREATENED, AND SPECIES OF SPECIAL CONCERN IN SARASOTA COUNTY. THE LIST ONLY RECOGNIZES PRIMARY HABITAT FOR LISTED SPECIES. MANY SPECIES UTILIZE MORE THAN ONE TYPE OF HABITAT. PRIOR TO DEVELOPMENT, AN ON-SITE INSPECTION MUST BE CONDUCTED USING RECOGNIZED SAMPLING TECHNIQUES TO DETERMINE THE PRESENCE OF ENDANGERED, THREATENED, AND/OR SPECIES OF SPECIAL CONCERN. OFFICIAL LISTS ARE UPDATED PERIODICALLY AND SHOULD BE CONSULTED FOR CHANGES.

Source: Florida Game and Freshwater Fish Commission, "Official Lists of Endangered Fauna and Flora in Florida," July 1, 1987; Glen E. Woolfenden, "Rare, Threatened, and Endangered Vertebrates of Southwest Florida and Potential OCS Activity Impacts, U.S. Fish and Wildlife Service, February, 1983; Lincer, J.L., Ph.D, "Sarasota County's Species and Their Status," September, 1983; Soil Conservation Service, "26 Ecological Communities In Florida, Revised Edition, Soil Conservation Society of America, March, 1987; Peter Pritchard, ed, "Rare and Endangered Biota of Florida," University Presses of Florida.

Section 5: Definitions

AGRICULTURAL USES: activities within land areas which are predominantly used for the cultivation of crops and livestock including: cropland; pastureland; orchards; vineyards; nurseries; ornamental horticulture areas; groves; confined feeding operations; specialty farms; and silviculture areas.

AREAS SUBJECT TO COASTAL FLOODING: see hurricane vulnerability zone.

BEACH: the zone of unconsolidated material that extends landward from the mean low water line to the place where there is marked change in material or physiographic form, or to the line of permanent vegetation, usually the effective limit of storm waves. "Beach", as uses in the coastal management element requirements, is limited to oceanic and estuarine shorelines.

BEST MANAGEMENT PRACTICES: methods or combination of methods designed to reduce or prevent non-point source pollution to levels compatible with water quality goals.

CARRYING CAPACITY: pertains to the level of use which can be accommodated and continued without irreversible impairment of natural resources productivity, the ecosystem, and the quality of air, land, and water resources.

COASTAL AREA: the area that incorporates the barrier islands, bayfront mainland, gulf and bay waters, and all other areas affected by tidal waters including mangrove swamps and tidal marshes. The coastal areas includes all areas below and including the five foot contour line supporting salt tolerant vegetation.

COASTAL HIGH HAZARD AREAS: These areas shall include Federal Emergency Management Agency designated Velocity Zones, areas seaward of the Coastal Construction Control Line established by the Florida Department of Natural Resources pursuant to Chapter 161, Florida Statutes, and inlets and areas of known and/or potential breach.

COASTAL OR SHORE PROTECTION STRUCTURES: shorehardening structures; such as seawalls, bulkheads, revetments, rubblemound structures, groins, breakwaters, and aggregates of materials other than natural beach sand used for beach or shore protection and other structures which are intended to prevent erosion or protect other structures from wave and hydrodynamic forces including beach and dune restoration.

CONSERVATION USES: See definition in "Native Habitats" section.

DRAINAGE BASIN: the area defined by topographic boundaries which contribute stormwater to a drainage system, estuarine waters, or oceanic waters, including all areas artificially added to the basin.

DUNE: a mound or ridge of loose sediments, usually sand-sized sediments, lying landward of the beach and extending inland to the landward toe of the dune which intercepts the 100-year storm surge.

ESTUARY: a semi-enclosed, naturally existing coastal body of water in which saltwater is naturally diluted by freshwater and which has an open connection with oceanic waters. "Estuaries" include bays, embayments, lagoons, sounds and tidal streams.

EVACUATION ROUTES: routes designated by County civil defense authorities or the regional evacuation plan, for the movement of persons to safety, in the event of a hurricane.

EXOTIC "Nuisance" VEGETATION: a non-native plant that has been introduced into the area. Nuisance species include: Melaleuca, Water Hyacinth, Hydrilla, Brazilian Pepper, Australian Pine.

HURRICANE SHELTER: a structure designated by the County Department of Emergency Management as a place of safe refuge during a storm or hurricane.

HURRICANE VULNERABILITY ZONE: the areas delineated by the regional or local hurricane evacuation plan as requiring evacuation. The hurricane vulnerability zone shall include areas requiring evacuation in the event of a 100-year storm or Category 3 storm event.

LIVING MARINE RESOURCES: oceanic or estuarine plants or animals, such as mangroves, seagrasses, algae, coral reefs, and living marine habitat; fish, shellfish, crustacea and fisheries; and sea turtles and marine mammals.

LOCAL PEACETIME EMERGENCY PLAN: the plans prepared by Sarasota County Emergency Management Agency addressing weather-related natural hazards and man-made disasters except nuclear power plant accidents and war. The plan covers hazard mitigation, emergency preparedness, emergency response, emergency recovery and hurricane evacuation.

MARINE HABITAT: areas where living marine resources naturally occur, such as mangroves, seagrass beds, algal beds, salt marshes, transitional wetlands, marine wetlands, rocky shore communities, hard bottom communities, oyster bars or flats, mud flats, coral reefs, worm reefs, artificial reefs, offshore springs, nearshore mineral deposits, and offshore sand deposits.

MARINE WETLANDS: areas with a water regime determined primarily by tides and the dominant vegetation is salt tolerant plant species including those species listed in Subsection 17-4.02(17), Florida Administrative Code, "Submerged Marine Species."

MINERALS: all solid minerals, including clay, gravel, phosphate rock, lime, shells (excluding live shellfish), stone, sand heavy minerals, and any rare earths, which are contained in the soils or waters of the state.

NATURAL RESOURCES: air, land, and water and the elements thereof which are valued for their existing and potential usefulness to man, and their ability to support critical species.

POINT SOURCE POLLUTION: any source of water or air pollution that constitutes a discernible, confined, and discrete conveyance.

POLLUTION: the presence in the outdoor atmosphere, ground, or water of any substances, contaminants, noise, or manmade or man-induced alteration of the chemical, physical, biological, or radiological integrity of air or water in quantities or at levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property, or unreasonably interfere with the enjoyment of life or property including outdoor recreation.

PUBLIC ACCESS: the ability of the public to physically reach, enter, or use recreation sites including waterways, beaches, and shores.

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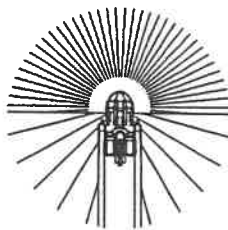
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APPENDIX C: RECREATION PLANNING AREAS

Just as Sarasota County differs in demographic, economic, and land use characteristics from other counties in Florida, so do various areas within Sarasota County differ from each other. Historically, settlement has concentrated along the coast and along U.S. 41 in five major centers: the City of North Port, the City of Sarasota, the City of Venice, the Town of Longboat Key, and the community of Englewood. Each of these areas has different characteristics. Much of the eastern portion of the County, especially east and north of the I-75 corridor, is predominately sparsely populated open space.

The Sarasota County Parks and Recreation Department's "Plan for Parks and Recreation in Sarasota County" (1971) divides the County into ten service areas for recreation inventory and as-

essment. These areas were used in *Apoxsee* (1981) and in this Chapter. The ten "Recreation Planning Areas," or RPA's, are modular to census tracts and to boundaries of incorporated areas. Figure 11 in the Chapter shows the RPA's superimposed over their component census tracts, or in the case of RPA 10, the City of North Port. The following tables, C-1 through C-20, provide an inventory of public and private recreation sites and facilities for each RPA. The codes in the tables which identify activities at each site can be cross-referenced with the listing of Recreation Activity Codes below. The location of public parks and recreation facilities in each of the ten RPA's is shown on the accompanying figures, C-1 through C-10.

Recreation Activity Codes

Arch	Archery	Pic	Picnicking
Bsbl	Baseball Field	Rang	Pistol and Rifle
Bkbl	Basketball Court	Play	Play Equipment
Ramp	Boat Ramp	Pool	Pool
Bowl	Bowling Court	Putt	Putting Green
BMX	BMX Track	Rec	Recreation Building
Can	Canoeing	Rstm	Restrooms
Snak	Concession Stand	Sct	Scout House
Fish	Fishing	Shfb	Shuffle Board
Ft/Jy	Fitness/Jogging	Soc	Soccer Field(s)
Ftbl	Football Fields	Sftbl	Softball Field(s)
Golf	Golf	Swim	Swimming
H/Rbl	Handball/Racquetball	Ten	Tennis Courts
Hrsh	Horseshoes	Trap	Trap and Skeet
Shltr	Large Shelter	Und	Undeveloped Land
Mar	Marina	Vac	Vacant Land
Trail	Natural Trail	Vol	Volleyball Courts

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

Table C-1: RPA 1 - Public Parks And Recreation Facilities

Name	Location	Loc. Code #	Owner-ship	FPZA Class.	Acre.	Activities
Bayfront Park	U.S. 41 and Main Street	1	SC	S	32.0	Fish, Rstm, Swim
Bird Key Park	Ringling Causeway	2	SC	S	3.0	Und
Causeway Park	Ringling Causeway	3	SC	S	12.0	Fish, Rstm
City Hall Park	1st St. and Orange Ave.	4	SC	S	3.0	
City Island Park	John Ringling Parkway	5	SC	M	84.0	Ramp, Fish, Pic, Rstm
Civic Center	U.S. 41 N. on 6th Street	6	SC	C	28.0	Ramp, Bowl, Rec, Rstm, Shfb, Ten
Dr. Martin Luther King, Jr. Park	27th Street and Cocoanut Avenue	7	SC	S	2.5	Pic
Gillespie Park	Osprey Avenue and Gillespie Avenue	8	SC	N	10.0	Bsbl, Shltr, Pic, Play, Ten
Island Park & Marina	U.S. 41 Bayfront	9	SC	M	10.0	Ramp
Lemon Avenue Mall	Lemon Avenue	10	SC	S	0.5	
Lido Beach	Ben Franklin	11	SC	M	15.0	Can, Shltr, Play, Rstm, Swim, Vol
Luke Wood Park	U.S. 301 & U.S. 41	12	SC	S	9.0	Ft/Jy
North Lido Park	4000 Ben Franklin Drive	13	SC	M	76.6	Swim, Und
North Tower	Rilma Street	14	SC	N	20.0	Bsbl, Shltr, Play, Swim, Vac
Orange Avenue Park	1800 Orange Avenue	15	SC	N	4.0	Play, Vac
Otter Key Park	Otter Key	16	CO	S	20.0	Fish, Vac
Payne Park	Adams Lane	17	SC	S	5.7	Bsbl, Snak, Shltr, Rec
Pioneer Park	Cocoanut Avenue	18	SC	N	6.0	Bkbl, Play, Rec, Shltr
Ringling Blvd. Park	Ringling Boulevard	19	SC	S	0.5	Und
St. Armands Circle	St. Armands	20	SC	S	2.0	Und
South Lido Park	South End of Lido Key	21	CO	M	100.0	Can, Fish, Trail, Pic, Play, Rstm, Swim, Und, Vol
Sun Circle	Sun Circle	22	SC	S	2.0	Fish, Pic, Rstm, Swim, Und, Vol
35th Street Park	Old Bradenton Road at 34th Street	23	SC	N	1.5	Play, Vac

Continued on next page

Table C-1: RPA 1 - Public Parks And Recreation Facilities (Continued)

Notes: Table C-1

C-Community Park; M-Metropolitan Park; N-Neighborhood Park; S-Special Park; CO-Sarasota County; SC -City of Sarasota

Location Code - refers to numbers on Figure C-1

For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department; Sarasota County Parks and Recreation Department; and City of Sarasota Comprehensive Plan, 1987.

Table C-2: RPA 1 - Private Recreation Facilities

Name	Location	Acreage	Activities
Bird Key Yacht Club	301 Bird Key Drive	2.5	Mar, Pool, Ten
Longboat Key Club	301 Gulf of Mexico Drive	438.0	Golf, Mar, Pool, Rec, Ten
Sarasota Yacht Club	1100 Ringling Boulevard	2.0	Mar, Ramp
Senior Citizen Friendship Center	1538 State Street	0.3	Rec
Condo on the Bay	888 Boulevard of the Arts	1.0	Mar
Longboat Key Club Marina	2800 Harbourside Drive	6.0	Mar
Dock on the Bay	3440 Gulf of Mexico Drive	1.0	Mar
Sarasota Art Association	707 North Tamiami Trail	1.0	
Azure Tides Resort	1330 Ben Franklin Drive	1.0	Pool, Swim
Bellm's Cars/Music Museum	5500 North U.S. 41	3.0	
Colony Beach Tennis Resort	1620 Gulf of Mexico Drive	7.0	Pool, Swim, Ten
Coquina on the Beach	1088 Ben Franklin Drive	1.0	Pool, Shfb, Swim
Golden Beach Resort	5581 Gulf of Mexico Drive	2.0	Shfb
Golf Beach Resort	930 Ben Franklin Drive	1.0	Pool, Shfb, Swim
Gulf Wind Marina	101 City Island Road	10.0	Mar
Hansens Marina	1201 N. Tamiami Trail	1.0	Mar, Ramp
Helmsmen Marina	1130 10th Street	2.0	Mar
Holiday Beach Resort	4765 Gulf of Mexico Drive	1.0	Pic, Pool, Shfb, Swim, Ten
Holiday Inn Resort	4949 Gulf of Mexico Drive	3.0	Ft/Jy, Pool, Shfb Rec, Swim, Ten
Holiday Lodge	4235 Gulf of Mexico Drive	1.0	Pool, Rec, Shfb, Swim
Longboat Marina	410 Gulf of Mexico Drive	2.5	Mar
Marina Jack	U.S. 41-#2 Marina Plaza	1.0	Mar
Harbour Town Condo	2055 Wood Street	1.0	Mar
Riviera Beach Resort	5451 Gulf of Mexico Drive	1.0	Swim
Sarasota Bonsai Gardens	Fruitville Road	0.1	
Sarasota Jungle Gardens	3701 Bayshore Road	11.0	
Sandcastle Resort	1540 Ben Franklin Drive	2.0	Pool, Shfb, Swim
Silver Sands Resort	5841 Gulf of Mexico Drive	1.0	Pool, Shfb, Swim
Yacht Harbor Marina	7700 South Tamiami Trail	3.0	Mar
Trinton Inn	2050 Ben Franklin Drive	1.0	Pool, Swim
Hyatt House	1000 Boulevard of the Arts	0.8	Mar
O'Leary's Sailing School	Island Park Bay Front	0.5	Mar

Note: For Activity Codes - refer to Introduction of Appendix C

Source: Sarasota County Planning Department, 1987.

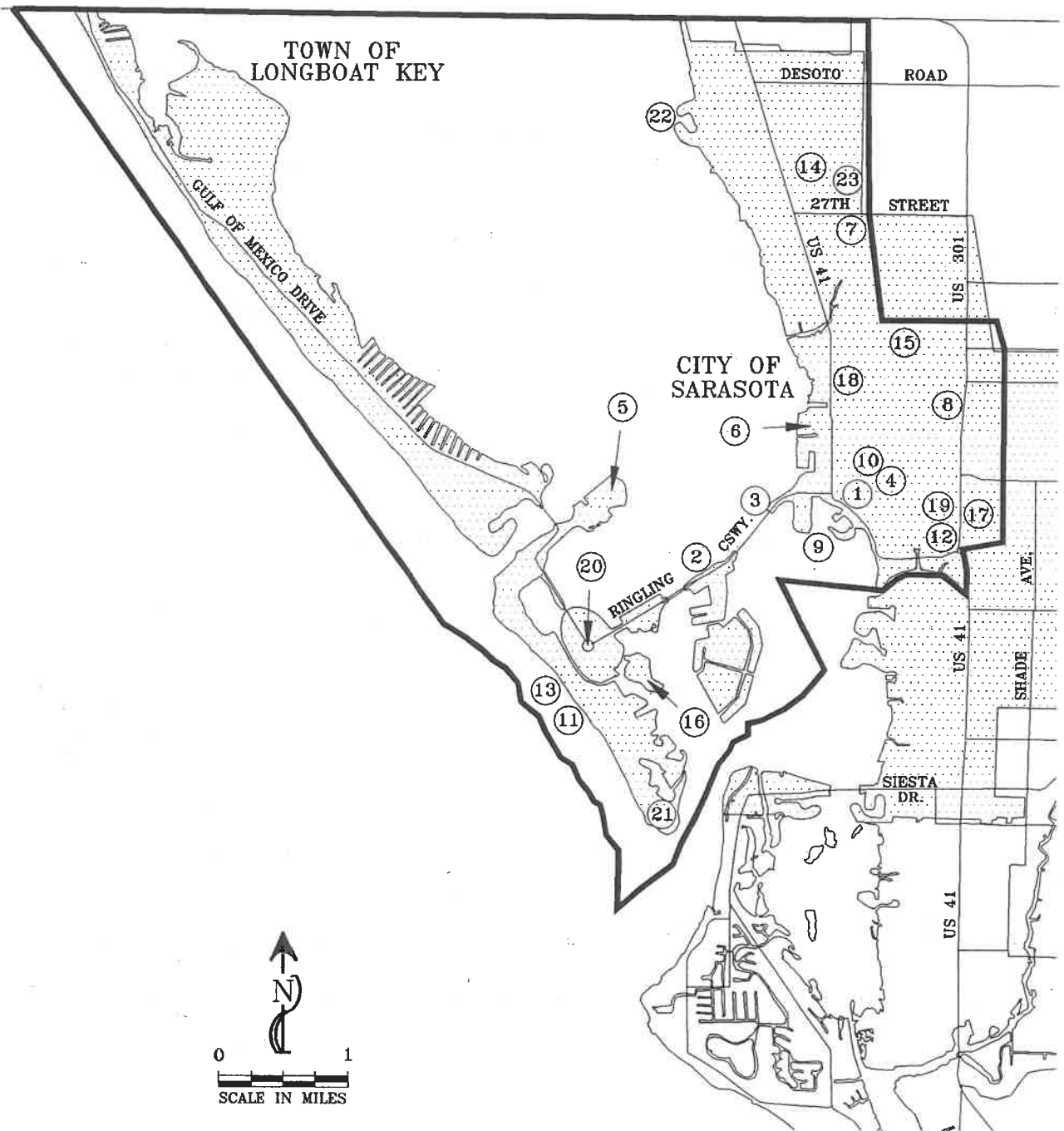


Figure C-1: RPA 1 - Public Parks And Recreation Facilities

Source: Sarasota County Parks and Recreation Department, 1988.

*Apoossee - The Revised and Updated Sarasota County
Comprehensive Plan*

Table C-3: RPA 2 - Public Parks and Recreation Facilities

Name	Location	Loc. Code #	Owner-ship	FPZA Class	Acre.	Activities
Bobby Jones	Circus Boulevard	1	SC	S	275.0	Snak, Shltr, Putt, Rstrm, Ten
Ed Smith Sports Complex	12th Street and Tuttle Avenue	2	SC	C	52.0	Bsbl, Shltr, Play, Rstrm, Shfb, Sftbl
Fairgrounds Park	Fruitville and Pompano	3	CO	S	25.0	Bsbl, Snak, Rstrm
Longwood Park		4	CO	C	20.0	Und
Newtown Community Center	Myrtle Street and Osprey Avenue	5	SC	C	10.0	Bsbl, Bkbl, Shltr, Pic, Play, Pool, Rstrm, Shfb, Shftbl, Ten, Vol
Newtown Estates Park	Newtown Boulevard and 27th Street	6	CO	C	10.0	Bsbl, Bkbl, Shltr, Pic, Play, Rec, Rstrm, Sftbl, Ten
Eastwood Park	Cornelious Circle	7	SC	S	2.0	
Seville Park	Central Avenue	8	SC	N	1.0	Bkbl, Pic, Play
Youth Athletic Complex	Tuttle Avenue and 12th Street	9	CO	C	40.0	Bsbl, BMX, Snak, Ft/Jy, Ftbl, Shltr, Pic, Play, Rstrm, Ten

Notes:

C-Community Park; N-Neighborhood Park; S-Special Park; CO-Sarasota County; SC-City of Sarasota

Location Code - refers to numbers on Figure C-2

For Activity Codes - refer to Introduction of Appendix C

Source: Sarasota County Planning Department; Sarasota County Parks and Recreation Department; and City of Sarasota Comprehensive Plan, 1987.

Table C-4: RPA 2 - Private Recreation Facilities

Name	Location	Acreage	Activities
Boys Club of Sarasota	3100 Fruitville Road	17.0	Bsbl, Bkbl, Ftbl, H/Rbl, Trail, Pic, Play, Pool, Rec, Soc, Sftbl, Ten
Girls Club of Sarasota	201 South Tuttle Avenue	140.0	Bsbl, Bkbl, Pic, Pool, Sftbl, Ten, H/Rbl, Trail, Play, Soc, Trap
Rolling Green Golf Club	4501 North Tuttle Avenue	140.0	Golf
The Meadows	3401 Longmeadow	284.0	Golf, Bkbl, Ft/yg, Ftbl, Play, Pool, Rec, Soc, Ten
Sarasota Lakes Camping Resort	1674 University Parkway	46.0	Pic, Play, Pool, Rec, Shfb, Ten

Note: For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department, 1987.

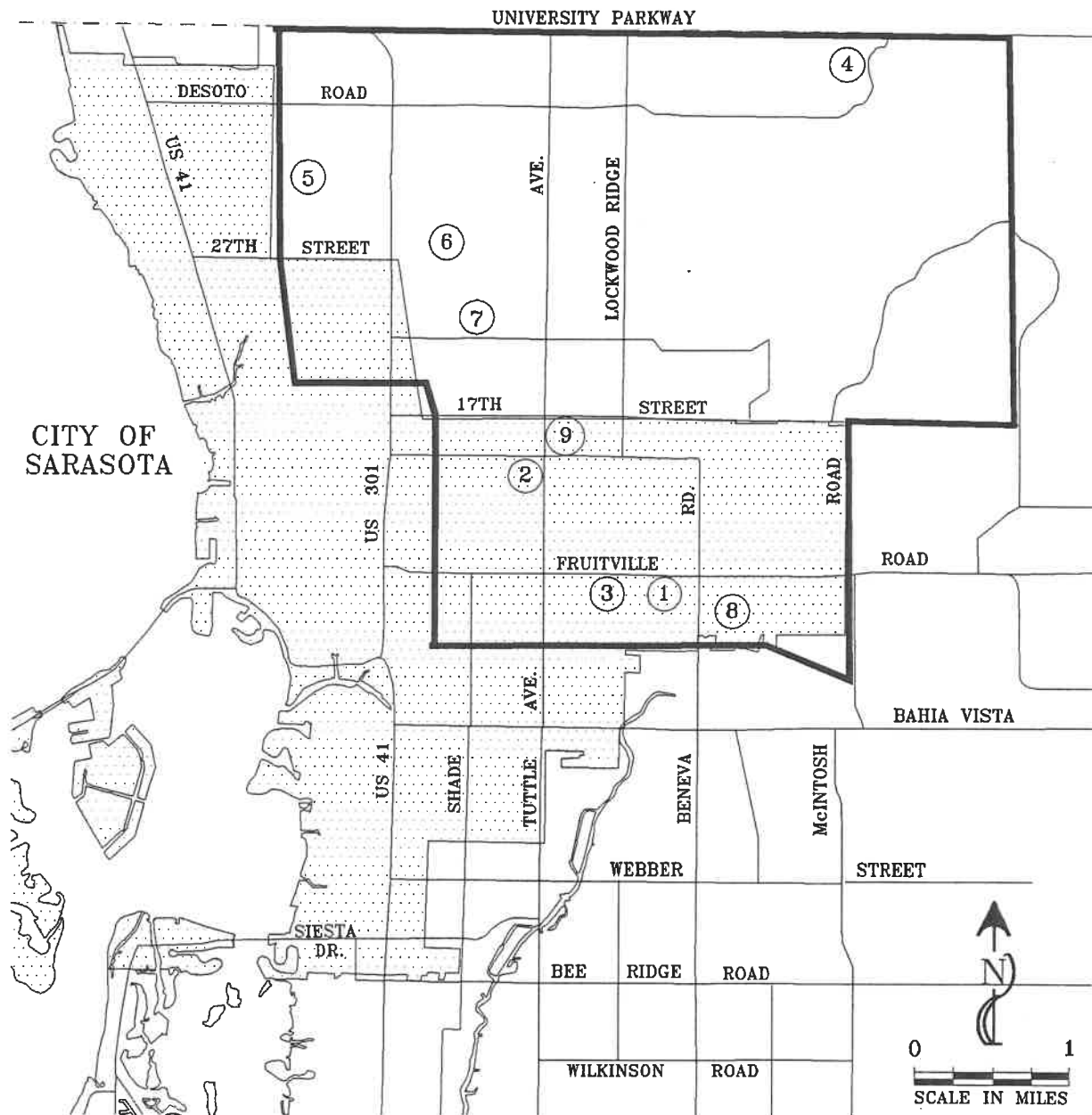


Figure C-2: RPA 2 - Public Parks And Recreation Facilities

Source: Sarasota County Parks and Recreation Department, 1988.

*Apoossee - The Revised and Updated Sarasota County
Comprehensive Plan*

Table C-5: RPA 3 - Public Parks and Recreation Facilities

Name	Location	Loc. Code #	Owner-ship	FPZA Class	Acre.	Activities
Pinecraft Park	South of Bahia Vista, Phillippi Creek	1	CO	N	5.0	Bkbl, Ramp, Can, Fish, Hrsh, Shltr, Pic, Play, Rstm, Shfb, Vol
A. B. Smith Park	Oak St. and Payne Pkwy.	2	SC	N	2.0	Pic, Play
Arlington Park	Waldemere Street	3	SC	C	20.0	Bkbl, H/Rbl, Trail, Pic, Play, Pool, Rec, Swim, Ten, Vac, Vol

Notes:

C-Community Park; N-Neighborhood Park; CO-Sarasota County; SC-City of Sarasota

Location Code - refers to Numbers on Figure C-3

For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department; Sarasota County Parks and Recreation Department; and City of Sarasota Comprehensive Plan, 1987.

Table C-6: RPA 3 - Private Recreation Facilities

Name	Location	Acreage	Activities
Forest Lakes Country Club	2401 Beneva Road	101.0	Golf, Pool, Ten
Village Green Golf Club	2500 Pembroke Drive	37.0	Golf, Rec
Marie Selby Botanical Gardens	300 South Palm Avenue	10.0	
YMCA-Sarasota	1075 South Euclid Avenue	10.0	H/Rbl, Play, Pool, Rec, Ten

Note: For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department, 1987.

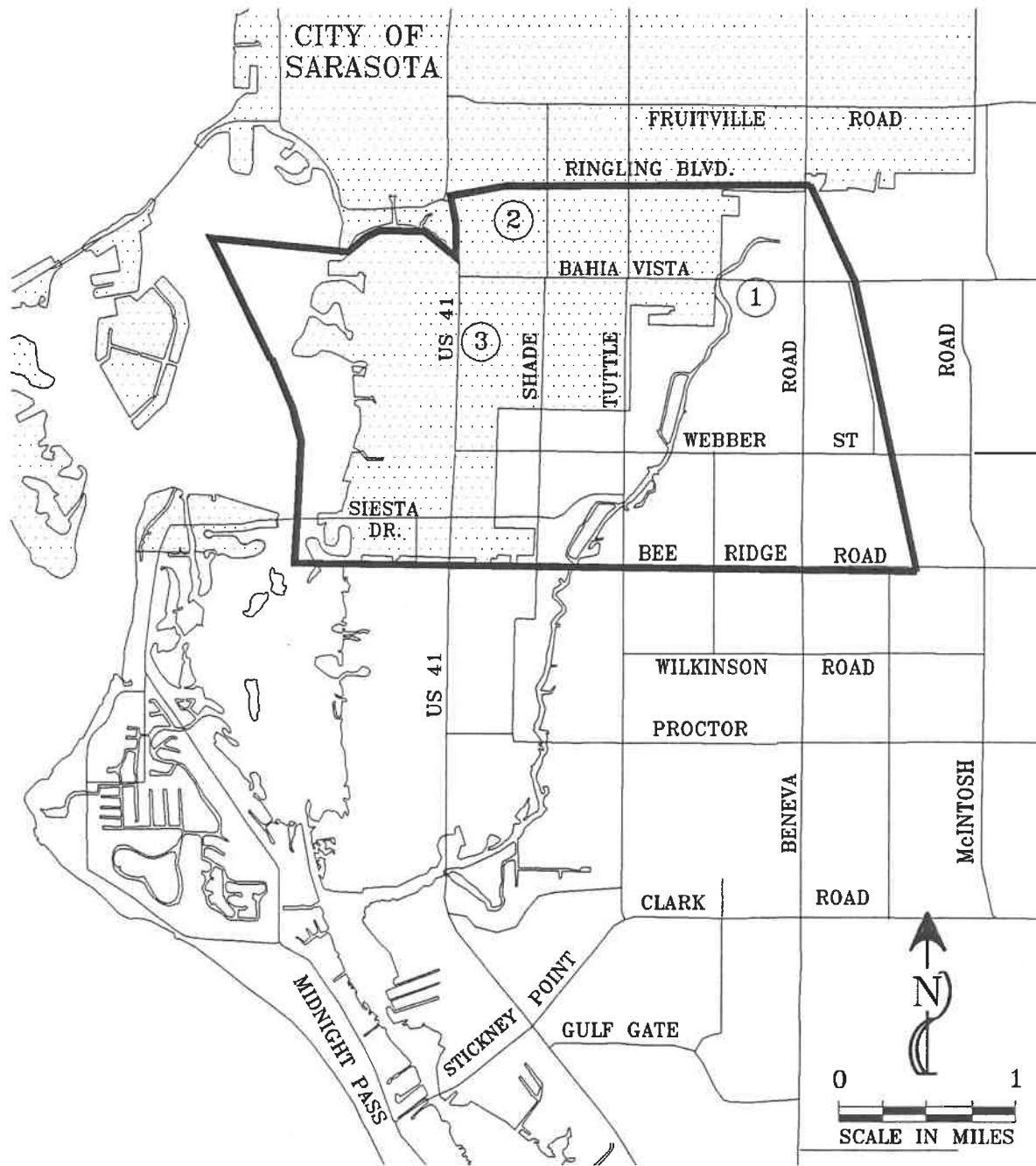


Figure C-3: RPA 3 - Public Parks And Recreation Facilities

Source: Sarasota County Parks and Recreation Department, 1988.

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Comprehensive Plan*

Table C-7: RPA 4 - Public Parks and Recreation Facilities

Name	Location	Loc. Code #	Owner-ship	FPZA Class	Acre.	Activities
Ackerman Park	Sawgrass Road and Bell Road	1	CO	N	26.0	Fish, Und
Fruitville Park	Richardson Road	2	CO	S	25.0	Ft/Jy, Shltr, Pic, Play, Rstrm, Soc, Sftbl, Ten, Vol
Miss Softball Complex	Gun Club Road	3	CO	S	15.0	Snak, Pic, Rstrm, Sftbl
Ringling Rock Pit Park	17th Street East	4	CO	S	45.0	Und

Notes:

C-Community Park; N-Neighborhood Park; S-Special Park; CO-Sarasota County

Location Code - refers to the numbers on Figure C-4

For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department and Sarasota County Parks and Recreation Department, 1987.

Table C-8: RPA 4 - Private Recreation Facilities

Name	Location	Acreage	Activities
Bent Tree Golf and Racquet Club	4700 Bent Tree Boulevard	150.0	Golf, Pool, Rec, Ten
Foxfire Golf Club	7200 Proctor Road	120.0	Golf
Sarasota Bath and Racquet Athletic Club	2170 Robinhood Street	13.0	Bkbl, H/Rbl, Pool, Ten
Sarasota Golf Club	7280 North Lee Wynn Drive	170.0	Golf
YMCA Camp Hamilton	Proctor Road	98.0	Bkbl, Pic, Play, Rec, Shfb, Ramp
Sun-N-Fun RV Resort	7125 Fruitville Road	188.0	Golf, Pool, Rec,
Windward Isle	1 Catamaran Drive	4.0	Pic, Play, Pool, Rec, Shfb

Note: For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department, 1987.

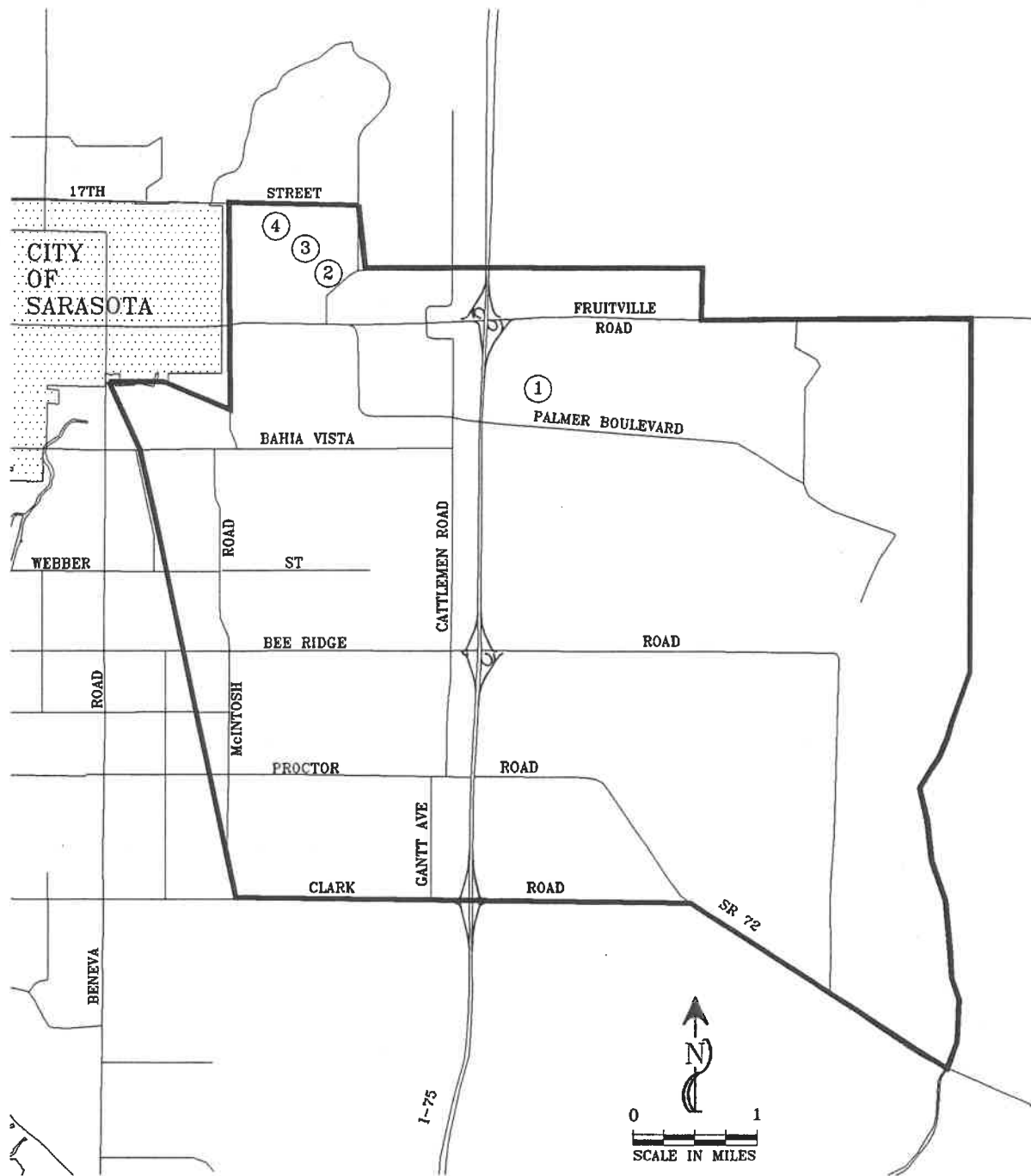


Figure C-4: RPA 4 - Public Parks And Recreation Facilities

Source: Sarasota County Parks and Recreation Department, 1988

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

Table C-9: RPA 5 - Public Parks and Recreation Facilities

Name	Location	Loc. Code #	Owner-ship	FPZA Class	Acre.	Activities
Bay Island Park	Little Sarasota Bay	1	CO	S	3.0	Fish
Bee Ridge Park	Wilkinson Road	2	CO	C	10.0	Bkbl, Hrsh, Shltr, Pic, Play, Rec, Rstrm, Shfb, Sftbl, Ten, Vol
Boyd Park	Higel/Midnight Pass Road	3	CO	S	1.0	Vac
Edwards Island	Roberts Bay	4	CO	S	32.0	Fish
Neville Preserve	Little Sarasota Bay	5	CO	S	116.0	Fish, Vac
North Palmer Point	South end of Siesta Key	6	CO	S	6.0	Fish, Swim, Vac
Phillippi Plantation Park	Plantation Boulevard	7	CO	M	60.0	Und
Phillippi Shores Park	West U.S. 41, North Phillippi Creek	8	CO	N	6.0	Fish, Pic
Red Rock Park	Camino Real	9	CO	N	1.0	Bkbl, Pic, Play, Sftbl
Siesta Beach	Beach Road, Siesta Key	10	CO	M	40.0	Snak, Ft/Jy, Shltr, Pic, Rstrm, Soc, Sftbl, Swim, Ten, Vol, Play
Turtle Beach	Midnight Pass, Siesta Key	11	CO	M	14.0	Ramp, Can, Fish, Hrsh, Shltr, Pic, Play, Rec, Rstrm, Swim, Vol

Notes:

C-Community Park; M-Metropolitan Park; S-Special Park; N-Neighborhood Park; CO-Sarasota County

Location Code - refers to numbers on Figure C-5

For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department and Sarasota County Parks and Recreation Department, 1987.

Table C-10: RPA 5 - Private Recreation Facilities

Name	Location	Acreage	Activities
Gulf and Bay Club	5730 Midnight Pass Road	2.0	Pool, Swim, Ten
Palm Bay Club	5960 Midnight Pass Road	4.0	Mar, Pool, Ten
Siesta Racquet and Swim Club	5831 Midnight Pass Road	3.0	Pool, Ten
Tivoli by the Sea	625 Beach Road	2.0	Pool, Rec, Swim
Boca Siesta Condo	5911 Midnight Pass Road	1.0	Mar
Harbour Tower Yacht and Racquet Club	5855 Midnight Pass Road	1.0	Mar
Sea Club Condominium	5955 Midnight Pass Road	1.0	Mar, Pool
Midnight Cove Condo	6302 Midnight Pass Road	1.0	Mar
Anchorage Yacht Club	6415 Midnight Pass Road	1.0	Mar
The Boatyard	1586 Stickney Point Road	1.0	Mar
Sunrise Yacht Club	8877 Midnight Pass Road	1.0	Mar
Fishermen's Cove	8900 Blind Pass Road	1.0	Mar
Fishermen's Haven Condo	9150 Blind Pass Road	1.0	Mar
The Pointe	9390 Midnight Pass Road	1.0	Mar
Tortoga Club	8730 Midnight Pass Road	1.0	Mar
Abbey Marine	5365 South Tamiami Trail	1.0	Mar
Aloha Kai Resort	6020 Midnight Pass Road	5.0	Play, Pool, Rec, Swim
Landing Marina	5353 South Tamiami Trail	1.0	Mar
Midnight Pass Marina	8865 Midnight Pass Road	3.0	Mar, Ramp
Phillippi Shores Marina	1810 Phillippi Shores Drive	2.0	Mar, Ramp
Sarasota Surf and Racquet Club	5900 Midnight Pass Road	3.0	Pool, Swim, Ten
Sea Castle Motel	1001-1019 Seaside Drive	2.0	Pool, Shfb, Swim
Just Add Water	7658 Tamiami Trail	1.0	Mar, Ramp
Siesta Key Marina	1265 Old Stickney Point	3.0	Mar
Mr. CB's Boat Rentals	1249 Stickney Point Road	1.0	Mar
Chez Med Restaurant	9122 Midnight Pass Road	1.0	Mar
Marina West	1780 Phillippi Shores Way	3.0	Mar
Reagle Lagoon	1400 Kenilworth	1.0	Mar, Ramp
First National Bank of Venice	Tarpon Center Drive	1.0	Mar
Gulf Beach Travel Trailer Park	8862 Midnight Pass Road	3.0	Pic, Swim

Note: For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department, 1987.

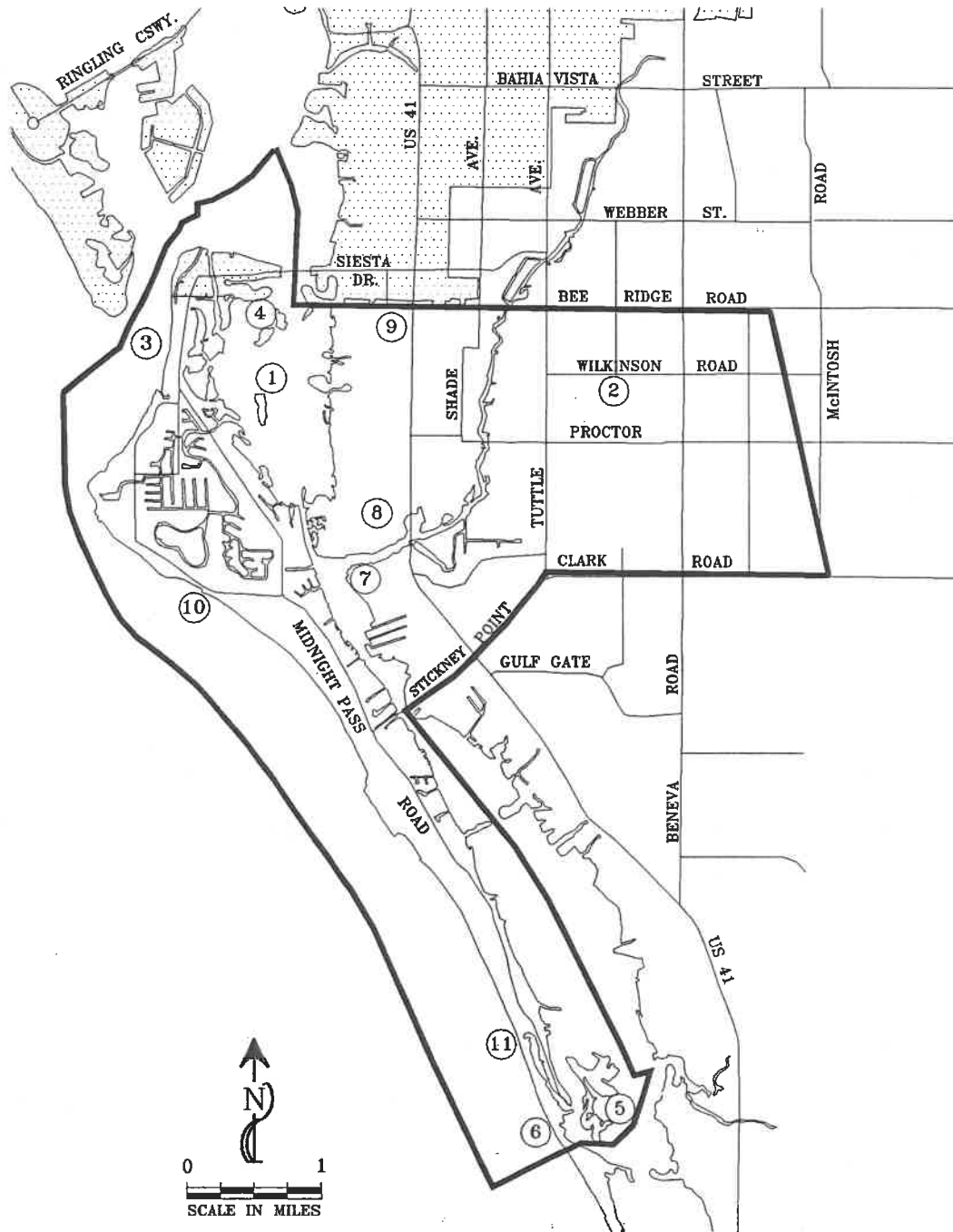


Figure C-5: RPA 5 - Public Parks And Recreation Facilities

Source: Sarasota County Parks and Recreation Department, 1988.

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

Table C-11: RPA 6 - Public Parks and Recreation Facilities

Name	Location	Loc. Code #	Owner-ship	FPZA Class	Acre.	Activity
Blackburn Point Park	Blackburn Point Road	1	CO	N	5.0	Fish, Pic
Oscar Scherer State Recreational Area	U.S. 41, 2 miles South of Osprey	2	ST	R	467.0	Snak, Fish, Shltr, Trail, Pic, Play, Rstm, Swim
Shoreland Park	Shoreland Drive	3	CO	S	2.0	Can, Fish, Pic
South Palmer Point	North end of Casey Key	4	CO	S	24.0	Fish, Swim, Vac

Notes:

C-Community Park; N-Neighborhood Park; S-Special Park; CO-Sarasota County; ST-State of Florida

Location Code - refers to numbers on Figure C-6

For Activity Codes - refer to Introduction of Appendix C

Source: Sarasota County Planning Department and Sarasota County Parks and Recreation Department, 1987

Table C-12: RPA 6 - Private Recreation Facilities

Name	Location	Acreage	Activities
Gulf Gate Golf Club	2550 Bispham Road	156.0	Golf
Knight Trail Park	Haul and Rustic Roads	100.0	Pic, Rec
South Bay Yacht Club	1400 Southbay Drive	35.0	Mar, Pool, Rec, Ten
Casey Key Marina	482 Blackburn Point Road	3.5	Mar
Osprey Marine Center	480 1/2 Blackburn Point Road	3.0	Mar
Bob White's Fish Camp	135 Bayview	1.0	Mar
Prestancia Tournament Players Club	3600 Torrey Pines Boulevard	175.0	Golf, Pool, Ten
Pelican Cove Marina	1615 Pelican Point Drive	1.0	Mar

Note: For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department, 1987.

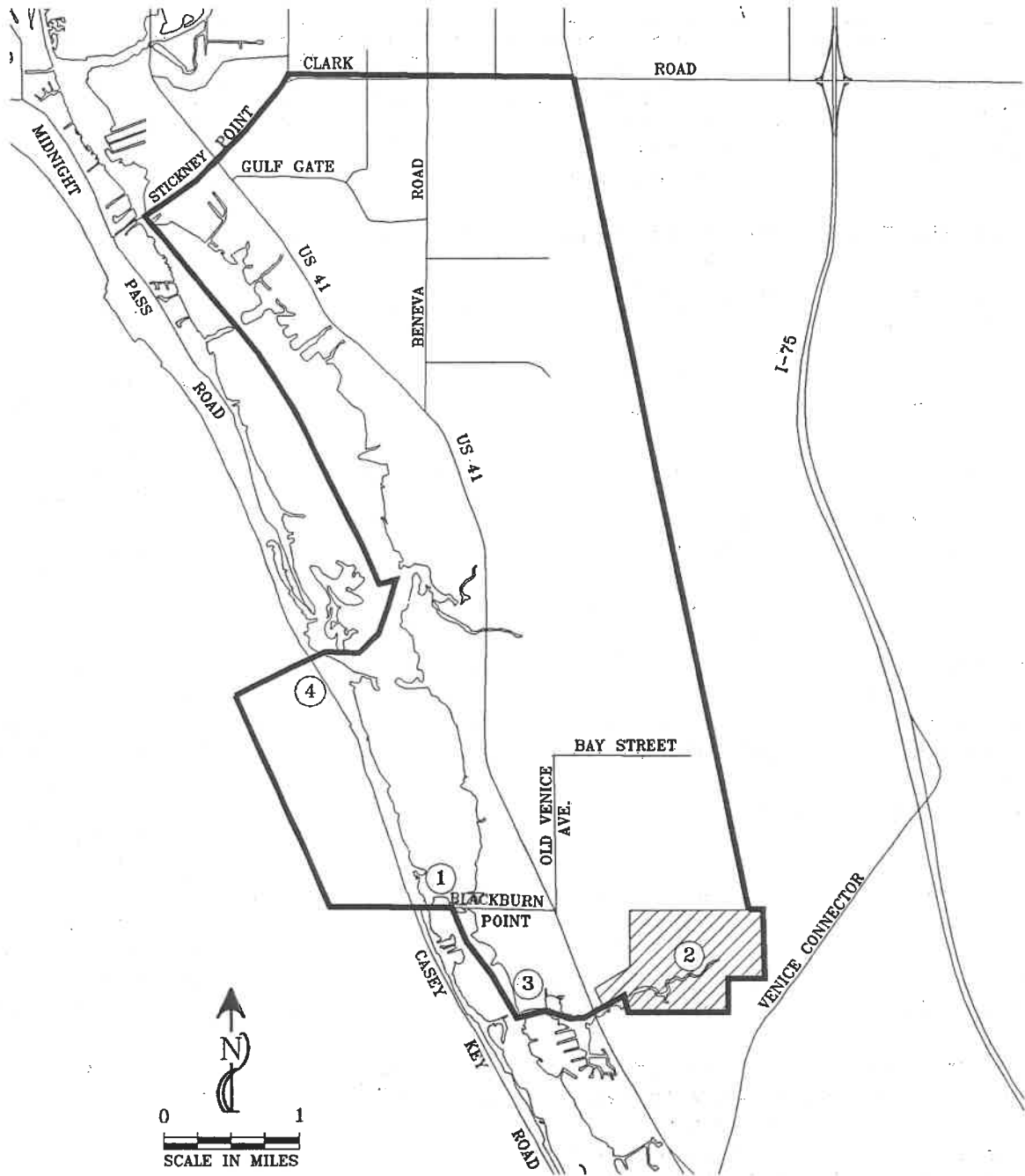


Figure C-6: RPA 6 - Public Parks And Recreation Facilities

Source: Sarasota County Parks and Recreation Department, 1988.

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

Table C-13: RPA 7 - Public Parks and Recreation Facilities

Name	Location	Loc. Code #	Owner-ship	FPZA Class	Acre.	Activities
Bay Point	Lyons Bay Road	1	CO	S	1.0	Fish, Vac
Blalock Park*	Nassau Street	2	CV	S	13.0	Und
Brohard Park	South of Beach Road	3	CV	C	61.0	Snak, Fish, Pic, Rstm, Swim, Vac
Chuck Reiter Field*	Field, Cockrill, Cooper, and Fort Streets	4	CV	S	11.0	Bsbl, Snak, Play, Rstm
City Hall Park	Venice City Hall	5	CV	C	3.0	Rstm
Centennial Park	South of Fort Street, East of Cockrill	6	CV	S	1.0	Ten
East Gate	Popular Avenue	7	CV	S	0.5	Play, Pic
Hecksher Park*	Venice Avenue and Harbor Drive	8	CV	N	3.0	Bkbl, Play, Rec, Rstm, Shfb, Ten
Higel Marine Park		9	CV	C	1.0	Ramp, Ftbl, Pic, Rang, Rec
Red Lake Golf Course	South of Venice Airport	10	CV	C	2.0	Golf
Laurel Park	East of Forest Street	11	CO	N	5.0	Bkbl, Shltr, Pic, Play, Rstm, Stfbl
Linear Parks	Venice Ave., Park Blvd., Harbor Drive	12	CV	S	10.0	
Manatee Court Park	Venice City Hall	13	CV	N	3.0	Pic, Vac
Median Parkways*		14	CV	S	10.0	
Mundy Park	Country Clubway	15	CV	S	1.5	Pic, Play, Sftbl
Municipal Beach*	East of Venice Avenue	16	CV	C	7.5	Snak, Pic, Play, Rstm, Swim, Vol
Nokomis Beach	Albee Road, Casey Key	17	CO	M	23.0	Ramp, Snak, Fish, Pic, Rstm, Swim, Vol
North Jetties	South end of Casey Key	18	CO	M	18.0	Snak, Fish, Hrsh, Shltr, Pic, Play, Rstm, Swim, Vol
Palmetto Court Park	Menendez & Des Parques	19	CV	N	3.0	Pic, Vac
Pinebrook Park*	Pinebrook Boulevard	20	CV	S	5.0	Ft/Jy, Pic, Rstm, Ten
Rattlesnake Island	Lyons Bay Road	21	CO	S	11.0	Fish, Vac
Curry Creek Rest Area	Rt. 41, between Venice and Nokomis	22	CO	S	2.0	Fish, Pic, Rstm
Venezia Park	Salerno & Nassau Streets	23	CV	N	5.5	Pic, Vac
Venice Comm. Ctr.*	326 S. Nokomis Avenue	24	CV	S	7.0	Rec, Rstm
Venice Rec. Ctr.*	391 Bahama Street	25	CV	C	2.0	Pic, Play, Pool, Rec, Rstm, Sftbl, Vol

Continued on next page

Table C-13: RPA 7 - Public Parks And Recreation Facilities (Continued)

Name	Location	Loc. Code #	Owner-ship	FPZA Class	Acre.	Activities
Wellfield Park*	391 Bahama Street	26	CV	S	160.0	Bsbl, Snak, Ft/Jy, Ftbl, Shltr, Pic, Play, Rstm, Soc, Sftbl, Und

Notes:

C-Community Park; N-Neighborhood Park; M-Metropolitan Park; S-Special Park; CO-Sarasota County; CV-City of Venice

* Owned by the City of Venice, maintained by Sarasota County

Location Code - refers to the numbers on Figure C-7

For Activity Codes - refer to Introduction of Appendix C

Source: Sarasota County Planning Department; Sarasota County Parks and Recreation Department; and City of Venice Comprehensive Plan, 1987

Table C-14: RPA 7 - Private Recreation Facilities

Name	Location	Acreage	Activities
Bird Bay Ex. Golf Course	602 Bird Bay Drive	75.0	Golf
Capri Isle Golf Club	849 Capri Isles Boulevard	119.0	Golf
Red Lake Golf Club	Harbor Drive and Venice Avenue	186.0	Golf
Mission Valley Golf & Country Club	Mission Valley Boulevard	175.0	Golf, Ten
Venice Yacht Club	1330 Tarpon Center Drive	2.0	Mar, Putt
Sorrento Inlets	8 Sorrento Drive	1.0	Mar
Crows Nest Marina	1968 Tarpon Center Drive	1.0	Mar
Dona Bay Marina	Dona Bay on the Gulf	2.0	Mar
Fishermen's Wharf Marina	449 North Tamiami Trail	3.0	Mar
Gulf Liner Marine	601 North Tamiami Trail	1.0	Mar
Kings Gate Travel Trailer Park	1500 Kings Way	15.0	Pool, Rec, Shfb, Ten
Gulf Harbor Marine	Circuit and Albee Roads	3.0	Mar
Royal Coachman Resort	1070 Laurel Road	104.0	Bsbl, Bkbl, Ramp, Trail, Pic, Play, Pool, Rec, Shfb, Sftbl, Ten
Venice Marine Center	1485 South Tamiami Trail	3.0	Mar
Pelican Alley Restaurant	1009 West Albee Road	1.5	Mar
Harbor Lights Travel Resort	617 North Tamiami Trail	17.5	Mar, Pic, Pool, Rec, Shfb, Ten

Note: For Activity Codes - refer to Introduction of Appendix C

Source: Sarasota County Planning Department, 1987.

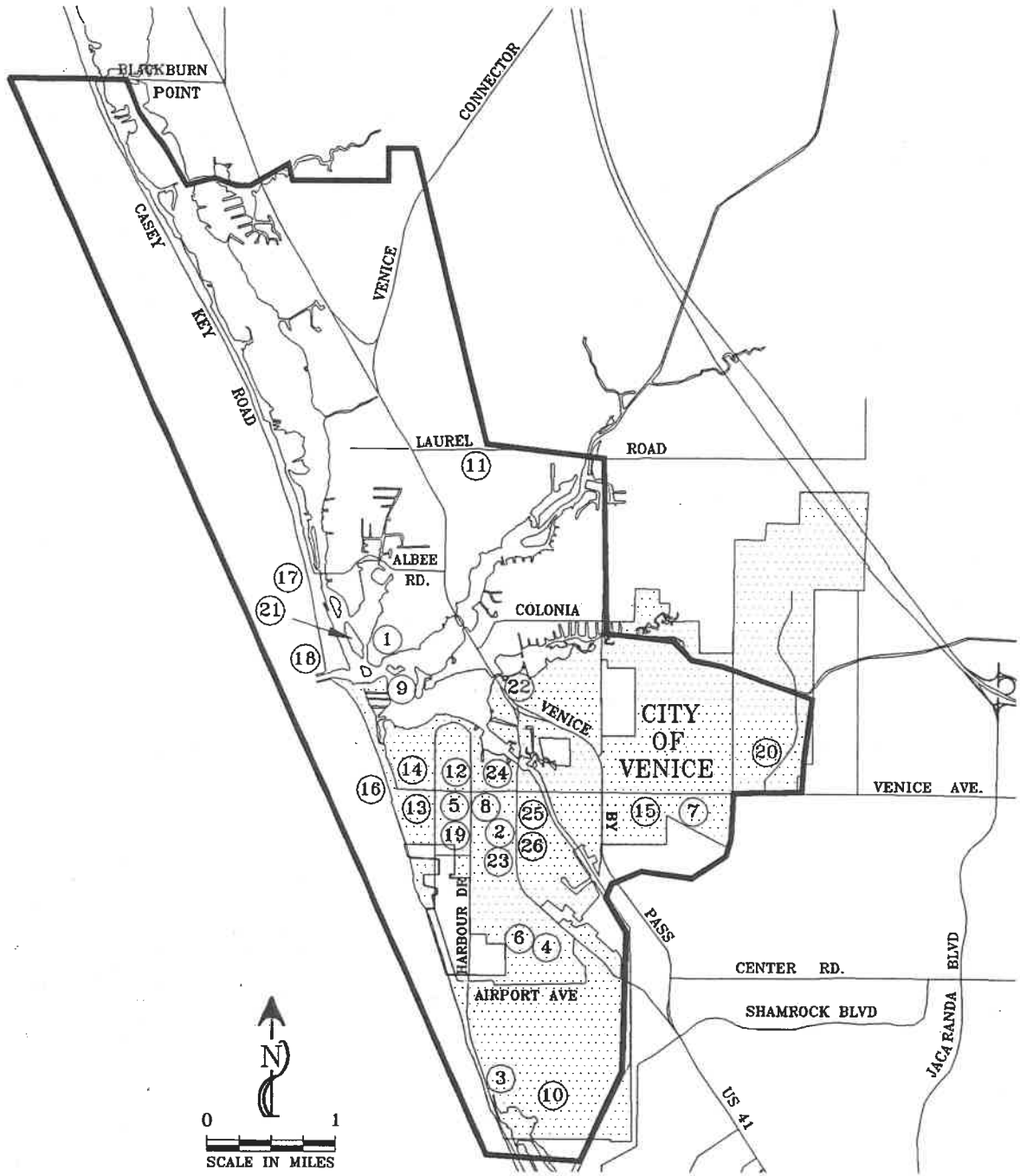


Figure C-7: RPA 7 - Public Parks And Recreation Facilities

Source: Sarasota County Parks and Recreation Department, 1988.

*Apoossee - The Revised and Updated Sarasota County
Comprehensive Plan*

Table C-15: RPA 8 - Public Parks and Recreation Facilities

Name	Location	Loc. Code #	Owner-ship	FPZA Class	Acre.	Activities
Blind Pass Beach	Manasota Key	1	CO	M	63.0	Fish, Swim, Und
Caspersen Beach	Beach Drive, Venice	2	CO	M	177.0	Fish, Trail, Pic, Rstm, Swim, Und
Challenger Park	Caryl and Olivia Roads	3	CO	N	4.0	Bkbl, Pic, Play, Sftbl
Englewood Park	101 North Orange Avenue	4	CO	C	10.0	Bkbl, Ft/Jy, Hrsh, Pic, Play, Rec, Rstm, Shfb, Sftbl, Ten
Indian Mound Park	End of Winson Street, Englewood	5	CO	S	10.0	Ramp, Fish, Shltr, Pic, Rstm
Manasota Beach	Manasota Beach Road, Manasota Key	6	CO	M	14.0	Ramp, Fish, Shltr, Trail, Pic, Rstm, Swim

Notes:

C-Community Park; N-Neighborhood Park; M-Metropolitan Park; S-Special Park; CO-Sarasota County

Location Code - refers to numbers on Figure C-8

For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department and Sarasota County Parks and Recreation Department, 1987.

Table C-16: RPA 8 - Private Recreation Facilities

Name	Location	Acreage	Activities
Jacaranda West Country Club	601 Jacaranda Boulevard	147.0	Golf, Ten
Jacaranda Boulevard	Jacaranda Boulevard	4.6	Play, Pool, Rec, Shfb, Ten
Dions Yacht Basin	779 West Wentworth Street	3.0	Mar
Brook to Bay Trailer Ranch	1891 Englewood	19.5	Ramp, Pic, Rec, Shfb

Note: For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department, 1987.

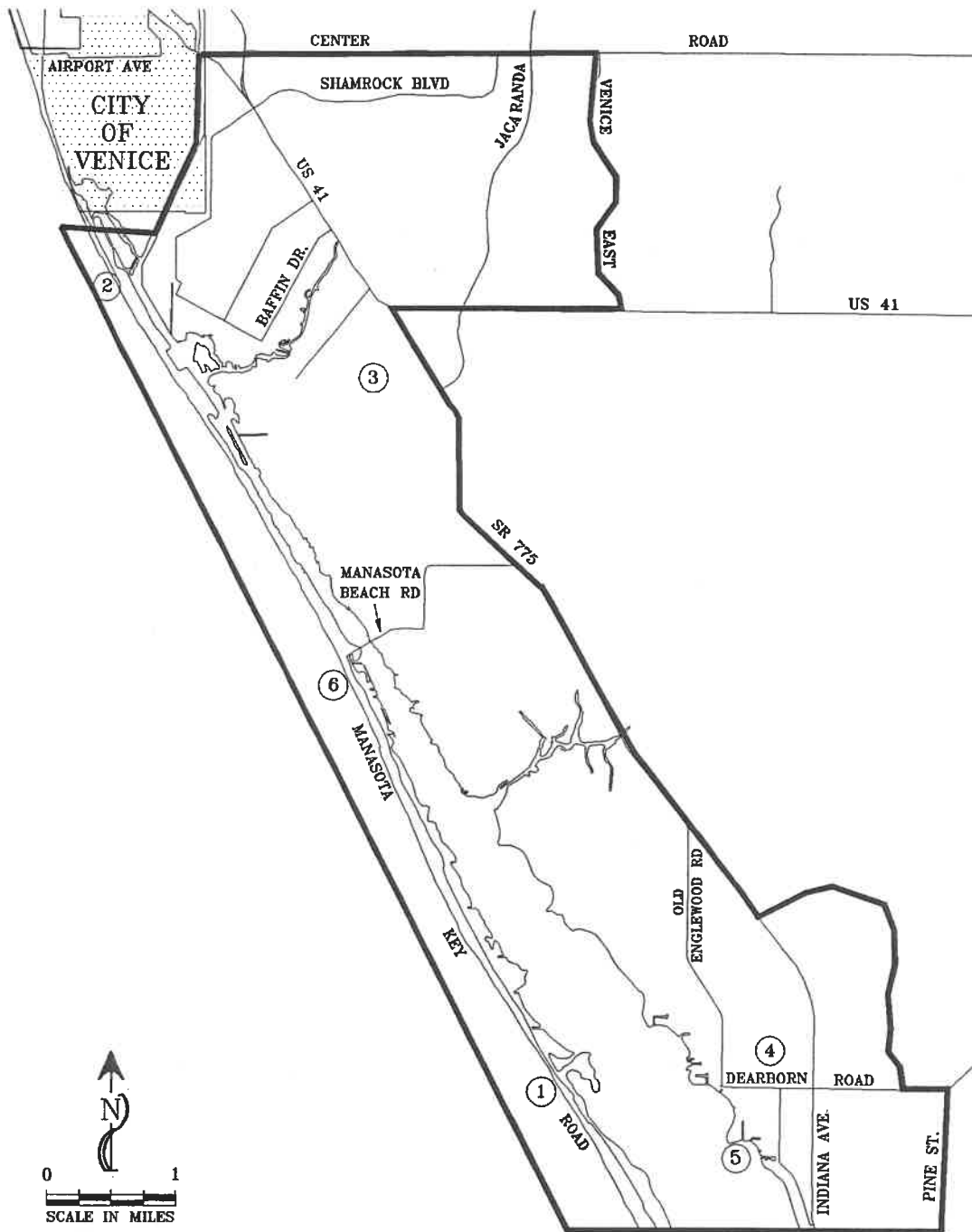


Figure C-8: RPA 8 - Public Parks And Recreation Facilities

Source: Sarasota County Parks and Recreation Department, 1988.

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

Table C-17: RPA 9 - Public Parks and Recreation Facilities

Name	Location	Loc. Code #	Owner-ship	FPZA Class	Acre.	Activities
Knight Trail Park	Haul and Rustic Roads	1	CO	S	267.0	Pic, Rang, Rec, Rstm, Trap, Und
Myakka River State Park	17 miles east of Sarasota off S.R. 72	2	ST	R	18,929.0	Ramp, Snak, Fish, Shltr, Trail, Pic, Rstm
Twin Lakes Park	6700 Clark Road	3	CO	S	123.0	Bsbl, Can, Fish, Pic, Rstm, Swim, Ten
Ringling MacArthur Reserve	East of Myakka River	4	CO	S	16,835.0	Und

Notes:

R-Regional Park; S-Special Park; CO-Sarasota County; ST-State of Florida

Location Code - refers to numbers on Figure C-9

For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department and Sarasota County Parks and Recreation Department, 1987.

Table C-18: RPA 9 - Private Recreation Facilities

Name	Location	Acreage	Activities
Gator Creek Golf Club	9000 Gator Creek	225.5	Golf
Myakka Pines Golf Club	Rt. 777 on U.S. 41	196.5	Golf
The Plantation Golf & Country Club	500 Rockley Boulevard	141.0	Golf, Pool, Ten
Sunrise Country Club	5710 Clark Road	120.0	Golf
Venice East Golf Club	107 Venice East Boulevard	36.0	Golf
East Myakka River RV Park	10400 U.S. 41	7.0	Pic, Pool, Rec
Myakka Valley Campground	Maykka Valley Trail	160.0	Trail, Pic
Ramblers Rest Resort Campground	River Road	75.0	Mar, Bkbl, Ramp, Pic, Play, Pool, Rec, Shfb
Roncon Horse Ranch	Singletery Road		Trail
Venice Campground Travel Trailer Park	4085 East Venice Avenue	23.0	Trail, Pic, Play, Pool, Rec, Shfb
Warm Mineral Springs	San Servondo Avenue	10.25	Pic, Swim
Warm Mineral Springs	U.S. 41 and I-75	20.25	Pic, Swim
Florida Pines Mobile Home Park	150 Satulah Circle	24.0	Rec, Shfb
Snook Haven	5000 Venice Avenue	2.0	Ramp

Note: For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department, 1987.

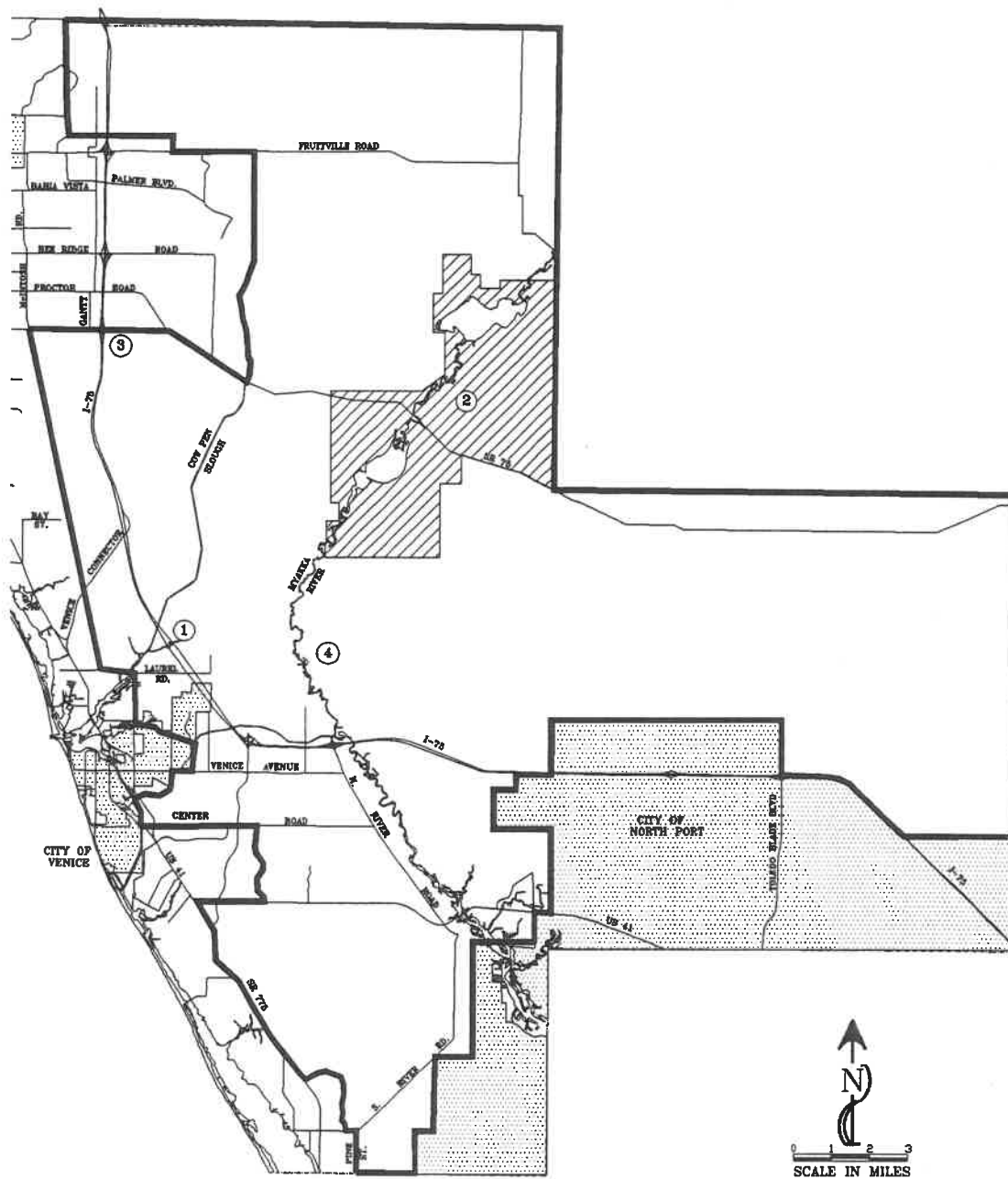


Figure C-9: RPA 9 - Public Parks And Recreation Facilities

Source: Sarasota County Parks and Recreation Department, 1988.

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

Table C-19: RPA 10 - Public Parks and Recreation Facilities

Name	Location	Loc. Code #	Owner-ship	FPZA Class	Acre.	Activities
Kirk Park	Trinof Ave. and Gorges	1	NP	N	2.5	Shfb
La Brea Park	Pan American Boulevard and La Brea Road	2	NP	N	3.2	Bsbl, Bkbl, Shltr, Play
Marius Park	Cul du sac of Marias Road	3	NP	S	0.3	Vac
Dallas White Rec. Complex	North Port Boulevard	4	NP	C	10.3	Bsbl, Bkbl, Shltr, Pic, Play, Pool, Sflb, Sftbl, Ten
Senior Citizens Center	Pan American Boulevard and La Brea Road	5	NP	N	2.7	Shltr
Veterans Memorial Park	South Highway and South Biscayne Drive	6	NP	N	2.9	Vac
Highland Ridge Park	Kenwood Avenue and Mesa Court	7	NP	N	10.0	Play
McKibben Park	Trekell Street	8	NP	N	3.0	Pic
Glasser Field	Pan American Boulevard at Nekosa	9	NP	S	3.0	Bsbl

Notes:

C-Community Park; N-Neighborhood Park; S-Special Park; NP-City of North Port

Location Code - refers to numbers on Figure C-10

For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department and Florida Department of Natural Resources, 1987

Table C-20: RPA 10 - Private Recreation Facilities

Name	Location	Acreage	Activities
North Port Country Club	701 Greenwood Avenue	65.0	Golf, Pool
North Port Yacht Club	102 SE Chancellor Boulevard	1.1	Rec
Americian Police Hall of Fame	14600 South Tamiami Trail		

Note: For Activity Codes - refer to introduction of Appendix C

Source: Sarasota County Planning Department, 1987

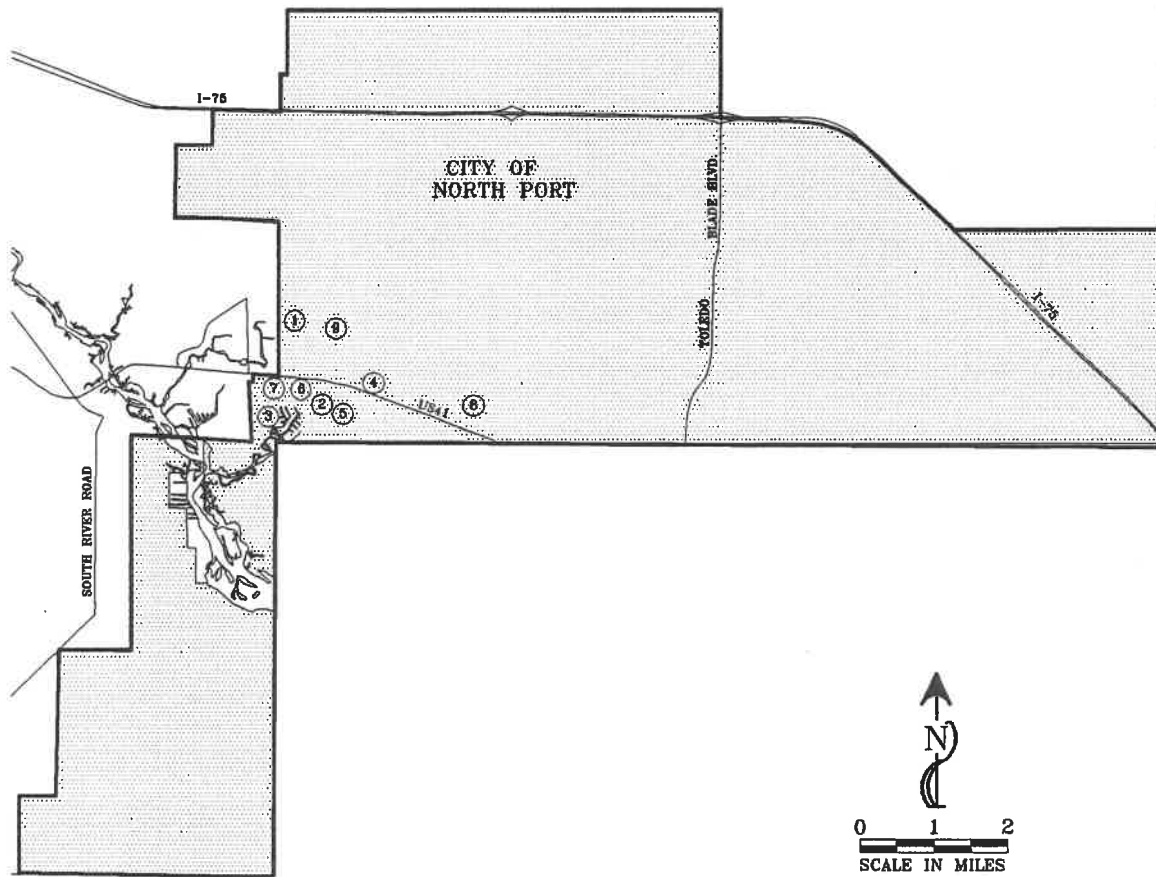


Figure C-10: RPA 10 - Public Parks And Recreation Facilities

Source: Sarasota County Parks and Recreation Department, 1988.

*Apoxsee - The Revised and Updated Sarasota County
Comprehensive Plan*

APPENDIX D: PUBLIC FACILITIES

Section 1: Wastewater Treatment Plants In Sarasota County

Facility	Design Capacity MGD (1)	Average Flow MGD (2)	GPD/ Person (3)
<i>Residential Franchises</i>			
Siesta Key Utility Authority	2.70	1.86	71.21
Florida Cities, Gulf Gate	1.80	1.48	77.88
Florida Cities, South Gate	1.30	1.06	71.23
Venice Gardens Utility #1	1.30	0.874	61.42
Atlantic Utilities	1.20	0.665	74.27
Kensington Park Utilities	0.56	0.484	85.06
Meadowood Utilities	0.75	0.471	55.71
Venice Gardens Utility #2	1.00	0.432	61.42
Central County Utilities	1.00	0.280	92.73
Southeastern Development and Utility	0.75	0.269	53.25
Dolomite Utilities, Tri-Par	0.30	0.178	55.43
Myakka Utilities	0.40	0.153	46.50
Southbay Utilities	0.25	0.122	106.00
Tamaron Utility Authority	0.155	0.112	96.04
Dolomite Utilities, Fruitville	0.200	0.103	153.19
Englewood Isles Utility Company	0.400	0.099	144.58
Plantation Golf and Country Club	0.400	0.082	98.93
Sunrise Utilities	0.180	0.053	97.55
Circlewoods of Venice	0.080	0.046	45.18
Englewood Utility Corporation	0.055	0.031	8.20
Holiday Ventures, Inc.	0.075	0.022	34.69
Village Oaks Utility Corp.	0.060	0.021	16.84
Woodland Park Utilities	0.067	0.020	N/A
Mike Clark Development Inc.	0.020	0.014	68.61
Longwood Run	0.152	0.013	N/A
Lockwood Ridge Utilities	0.035	0.011	N/A
Englewood Golf Condominium	0.025	0.010	65.00
El Jobean Philharmonic	0.015	0.008	39.60
North Creek Utilities	0.152	0.008	46.49

Facility	Design Capacity MGD (1)	Average Flow MGD (2)	GPD/ Person (3)
Southfield Utilities	0.055	0.007	N/A
Sylvan Lea Inc.	0.030	0.003	60.34
Oak Forest Villas	0.025	0.002	10.60
Lake Forest Condominium	0.030	0.002	66.67
Sproat Kiney Enterprises	0.010	0.002	68.97
Mobile Home Parks			
Camelot Lakes Mobile Home Park	0.10	0.083	40.94
Sun-N-Fun Resort	0.152	0.056	27.59
Spanish Lakes Mobile Home Park	0.06	0.043	23.06
Japanese Gardens Mobile Home Park	0.053	0.024	N/A
Orange Acres Trailer Park	0.036	0.024	40.00
Windward Isles Mobile Home Park	0.04	0.024	38.41
Bahia Vista Mobile Home Estates	0.04	0.023	51.25
Royal Coachman Resort	0.055	0.021	31.63
Venetian Mobile Home Park	0.03	0.019	44.15
Bay Lake Mobile Home Estates	0.04	0.017	25.00
Rambler's Rest Resort	0.045	0.016	31.68
Arbors Mobile Home Park	0.03	0.015	41.32
Lake Village Mobile Home Park	0.05	0.015	25.68
Royal Palms Mobile Home Park	0.018	0.013	28.80
Polynesian Village Mobile Home Park	0.04	0.013	22.72
Brook to Bay Mobile Home Park	0.02	0.009	26.18
Palm and Pines Mobile Home Park	0.014	0.008	40.00
Tri-State Mobile Home Park	0.01	0.007	40.00
Oak Grove Mobile Home Park	0.018	0.006	13.66
Myakka Mobile Home Court	0.0083	0.005	39.85
Deer Creek Mobile Home Park	0.015	0.005	21.27
Florida Pines Mobile Home Park	0.0105	0.004	39.79
Venice Ranch Mobile Home Park	0.035	0.003	9.41
Happy Haven Mobile Home Park	0.0075	0.003	N/A
Shady Haven Mobile Home Park	0.006	0.002	40.00
Venice Campgrounds	0.01	0.002	31.76
Group Homes/Nursing Homes			
Beneva Nursing Pavillion	0.03	0.019	56.33
Wilhelm's Nursing Home	0.015	0.010	103.09
Children's Haven	0.01	0.007	73.68
Burzenski Nursing Home	0.008	0.005	59.35
L.I.F.E.	N/A	0.002	N/A

Facility	Design Capacity MGD (1)	Average Flow MGD (2)	GPD/ Person (3)
<i>Other Residential Uses</i>			
Lake Tippecanoe	0.06	0.031	28.46
Oak Pointe Manor	N/A	0.012	N/A
Proctor Road Utilities	N/A	0.011	N/A
Kings Gate Association	0.04	0.010	37.38
Fair Winds Condominium	0.03	0.007	35.00
Oakwood Garden Apartments	0.01	0.006	39.78
Bayclay House Apartments	0.008	0.005	68.75
Lyon's Cove	0.005	0.002	68.97
Heron Bay Homeowners	0.0075	0.002	15.86
<i>Health Care</i>			
Florida Medical Facilities	0.02	0.026	28.33
Rehab. Institute of Sarasota	0.01	0.007	N/A
Bee Ridge Utilities	0.015	0.005	10.61
Beneva Creek Utilities	0.01	0.002	14.46
<i>Schools/Government</i>			
Twin Lakes Park	0.015	0.009	N/A
Ashton Elementary School	0.01	0.007	15.87
Fruitville Elementary School	0.01	0.005	15.92
Manatee Community College	0.014	0.005	2.86
Nokomis Elementary School	0.015	0.004	26.12
South County Administration Center	0.005	0.002	14.56
Englewood Elementary School	0.015	0.001	15.89
Oscar Scherer State Recreation Area	0.015	0.0005	3.16
Myakka River State Park #1	0.015	0.0003	3.17
Myakka River State Park #2	0.015	0.0003	3.17
<i>Commercial/Industrial</i>			
Southeast Utilities	0.092	0.080	80.45
Kings Gate Club, Inc.	0.05	0.029	24.97
The Trails Unlimited	0.04	0.014	15.190
Palmer Utilities	0.098	0.009	14.50
Robin Hood Utilities	0.015	0.009	14.50
Morstar Utilities Corporation	0.032	0.008	10.59
Dana Corporation	0.006	0.008	14.51
Field Club	0.008	0.007	89.29
Flight Deck Restaurant	N/A	0.005	N/A
Mission Valley Country Club	0.005	0.004	75.00

Facility	Design	Average	
	Capacity	Flow	GPD/
	MGD (1)	MGD (2)	Person (3)
Bath and Racquet Club	0.005	0.004	61.11
Sarasota Fish Market	0.005	0.003	N/A
Yoders Too Restaurant	0.005	0.003	N/A
Center Utilities	0.015	0.003	14.28
Englewood Coin Lanudry	0.080	0.0025	N/A
Western Sizzling Steak	0.005	0.002	N/A
Hilton Industries	0.005	0.002	14.49
Englewood Elks Lodge	0.01	0.001	14.49
Vroom Utilities	0.0075	0.001	N/A
Hynautics, Inc.	0.005	0.001	N/A
Englewood Oyster Bar	0.005	0.001	N/A
Kwality Kwik Laundry	0.012	0.001	N/A
Leopard Boutique	0.0078	0.001	N/A
Workman Electronic Prod.	0.005	0.001	14.49
Super Bowl, Inc.	0.006	0.001	N/A
Skyline Corporation	0.0033	0.001	14.49
Peterson Manufacturing Corporation	0.0033	0.001	14.49

Source: (1) Groundwater Management System, January 1988, Florida Department of Environmental Regulation; (2) Vision 20/20 Sarasota County Wastewater Resource Recovery Project, Board of County Commissioners Briefing, December 1988, Dames and Moore, Inc.; and (3) Wastewater Sludge Disposal Study, September 1986, Camp, Dresser and McKee, Inc.

Section 2: Sanitary Sewer, Solid Waste, Potable Water, and Drainage Ordinances and Resolutions

Sanitary Sewer Ordinances

72-30 Furthers the "Water and Wastewater Systems Master Plan for Sarasota County", which established the Sarasota County Water and Sewer Utility System. This Ordinance empowers the County to provide for, among other things:

- the implementation of the master plan; and
- the acquisition or construction of water systems, sewage disposal systems, or combined water and sewage systems within the unincorporated area of the County as part of the County Water and Sewer Utility System.

72-37 Provides for the control and regulation of water pollution with standards stricter than those permitted by the State; the degree of treatment for domestic and industrial waste; etc.

75-6 Amends Ordinance No. 72-37 relating to water pollution.

77-79 Emergency Ordinance No. 77-79 and standard Ordinance No. 77-80 provide for protective devices to be erected in order that children and adults be prevented from falling into certain sewage treatment plants.

78-52 Provides for non-issuance of building permits where public water production or sewerage treatment facilities have exceeded design capacity.

79-33 Authorizes expenditure of funds for a feasibility study and initial expenses in connection with the creation of a mid-county Utility District.

79-37 Provides for the operation and maintenance of public water and sewerage system lift stations by franchise.

80-94 Provides for issuance of building permits for temporary uses, pursuant to the Zoning Code, with approved temporary water and sewerage facilities.

81-12 The Land Development Regulations provide rules for central sanitary sewerage systems and individual sanitary sewerage systems.

82-25 Regulates domestic laundry wastewater treatment levels of discharge.

82-37 Provides for approval of building permits by the Utility Department when a bond in the amount of 110 percent of any necessary water and/or sewer construction is submitted together with County and DER plan and specification approval.

82-90 Regulates the discharge of treated wastewater to off-site surface waters from new wastewater treatment plants and defines Advanced Waste Treatment effluent standards.

83-14 Regulates the design, construction, installation, utilization, operation, maintenance, and repair of individual on-site sewage disposal systems.

83-48 Regulates sewerage systems, authorizes the Board of County Commissioners to grant franchises and set rates and regulations for the administration of franchises, etc.

83-71 Regulates sanitary sewerage systems through adoption of a Uniform Sewer System Code.

83-83 Regulates the design, construction, installation, utilization, operation, maintenance, and repair of individual on-site sewage disposal systems.

85-90 Relates to the use of impact fees in the establishment of a County Water and Sewer Utility.

86-03 Relates to setback requirements for septic tank systems.

86-77 Regulates water and sewerage systems and discusses establishment of rates.

87-01 Regulates sanitary sewerage systems through revision of the Uniform Sewer System Code.

87-118 Regulates the administration of franchises.

87-139 Deletes the requirement that wasteload allocations be approved by the Pollution Control Director.

Sanitary Sewer Resolutions

R84-122 States 1) a central sanitary sewer system shall be required in all new developing areas, and 2) in existing platted areas developed before adoption of 81-12, "Land Development Regulations", septic tanks may continue to be used.

R87-157 Policy Statement Directive regarding central water and sanitary sewer systems with direction for staff to prepare necessary amendments to the Comprehensive Plan and the Land Development Regulations.

R87-265 States and clarifies the County's Wastewater Resource Management Policy.

R87-333 Adopts Sarasota County Utility Rates, Fees, and Charges.

Solid Waste Ordinances

72-76 Empowers the Board of County Commissioners to designate and establish dumps along with prohibiting discarding of garbage except in duly designated dumps.

77-101 Prohibits the creation, maintenance, and/or keeping of a sanitary nuisance.

82-13 Provides for solid waste disposal facility regulations and standards.

83-82 Prohibits the accumulation or uncontrolled growth of weeds, undergrowth, rubbish, trash, filth, refuse, or debris.

84-12 Improves solid waste management system and facilities by establishing a liquid waste treatment plant; closes the South County Landfill (Venice) and authorizes construction of the South County Transfer Station; and issues revenue bonds not to exceed \$5,000,000 to pay for the above projects.

86-35 Provides for the mandatory collection of solid waste in the unincorporated County and the establishment of solid waste service districts as Municipal Service Taxing Units (MSTUs), etc. This is by far the most far-reaching Ordinance passed by the Board of County Commissioners to date.

87-115 Provides the authority for issuance of revenue bonds to provide funds for the acquisition and construction of solid waste disposal capital projects.

88-30 Defines Package Wastewater Treatment plants and regulates sludge collection from these plants by requiring sludge haulers to dispose of all sludge at the County Septage Treatment Facility.

Potable Water Ordinances

72-30 "Sarasota County Water and Sewer Utility System Ordinance," is the commonly used referenced title for this Ordinance. This Ordinance was enacted in order that the Board of County Commissioners could implement a master plan for water and wastewater systems, enabling the Board to acquire property and facilities, to issue revenue bonds for funding purposes, and to contract with other governmental agencies to provide for or to receive water supply or sewer supply, disposal, collection, treatment, or both. This Ordinance also provides for the establishment of an impact fee for service connections, and designates the County Utilities Department as the entity for operational responsibility for the system.

72-37 Adopted pursuant to Section 403.182, Florida Statutes, which allows each county to establish a pollution control program, this Ordinance recognizes the public policy of Sarasota County concerning the prevention, abatement and control of pollution of waters affecting the public health, safety and welfare. The Ordinance is designed to provide for more stringent requirements to ensure conservation of natural resources and to ensure domestic water supplies.

73-2 Enacted to establish the special water district known as Special Utility District No. 1, this Ordinance provided for a special referendum within the District, and provided for the construction, operation and maintenance of a water system or systems and improvements and authorized contracts with Manatee County and others to provide water to SUD system wholesale and retail customers.

77-48 "Uniform Water System Code," is the reference or short title for this Ordinance, enacted to prevent a recurrence of past problems associated with the installation by contractors of potable water systems comprised of substandard materials, undersized pipe and other poor practices, such as inadequate pressures. Regulations set forth within this Ordinance are intended to provide uniform standards and specifications for the construction of potable water systems, to promote the interconnection of public drinking supply systems and to provide adequate flows for fire fighting.

81-12 "Land Development Regulations". This Ordinance sets forth specific requirements for developers or individuals seeking to establish a potable water supply system. Concerns include establishment of individual wells, central potable water supply systems, fire flow pressures, etc.

82-94 This Ordinance was passed to authorize issuance of bonds not exceeding \$30,000,000 in general obligation bonds to finance the acquisition of certain lands known as the Ringling MacArthur Reserve as a potable water supply source, and for recreational and open space purposes (bond issue passed at referendum November 2, 1982).

83-48 This Ordinance, as amended, is the base Ordinance used by the Board of County Commissioners to regulate franchised water (and sewer) utilities in Sarasota County. This Ordinance allows the Board to prescribe classes and conditions of service, to set rates, fees and charges, to establish franchises and to adopt rules and regulations for the administering of this Ordinance, and related penalties.

83-88 This Ordinance created the Public Utilities Advisory Board, an advisory body to the Board of County Commissioners composed of not more than nine members, appointed by the Board of County Commissioners for two-year terms. Advisory Board members hear and deliberate on a variety of matters pertaining to the regulation and operations of potable water operations in Sarasota County, particularly the franchised utilities, including the rates, fees, charges, quality and availability of service, and other matters.

85-74 An Ordinance amending Ordinance No. 83-48, relating to the regulation of water and sewerage systems and bulk water utilities in Sarasota County; amending Ordinance No. 83-48 to authorize the Board of County Commissioners to enter into agreements with governmental bodies, public utilities and other legal entities, including individuals, to allow for the reservation of specific quantities of water being developed and supplied by the County; providing a form of the agreement to be used, providing that such agreements will constitute an amendment to existing franchises without the necessity of a public hearing, and providing for rate adjustments and impact fees.

Chapter 33 of the Sarasota County Code, Article I, in general, provides authority for Board of County Commissioners to take emergency measures during drought conditions for the purpose of water conservation.

85-90 (Amends 72-30) Provides that the costs of new facilities for developing a water supply system should be borne by new users of such water supply to the extent that the Board of County Commissioners is authorized to collect impact fees for the acquisition, development and construction of a County water system.

85-90 This Ordinance amends Ordinance No. 72-30, relating to the establishment of a County water and sewer utility system, authorizing the Board of County Commissioners to collect impact fees from those seeking new connections to the County water systems, providing that such impact fees shall be used for the acquisition, development and construction of new facilities or portions thereof required to secure and obtain a water supply.

78-52, amended by Ordinance No. 80-94 and 82-37 Provides that the County Utilities Department shall not signify approval of building permit applications in the unincorporated areas of the County where the public water production (or sewage treatment) facilities have exceeded design capacity, or are otherwise being operated or maintained in such a manner as to create a potential hazard to public health. This Ordinance provides further for the approval of building permits under specific conditions, and provides for bonding requirements by the developer, prior to initiating construction, and penalties for violations.

Potable Water Resolutions

R73-121 Resolution of the Board of County Commissioners, sitting as the ex-officio governing body of Special Utility District No. 1, providing for the acquisition and construction of a water system in the Special Utility District No. 1, and the issuance of bonds not exceeding \$10,200,000 general obligation water bonds, series 1973...

R82-138 - A statement of financial commitment by the Board of County Commissioners for the purpose of demonstrating intent to acquire the Ringling MacArthur Reserve.

R82-200 Often referred to as the "environmental covenant" for the Ringling MacArthur Reserve, this Resolution was enacted to demonstrate the Board of County Commissioner's commitment to proper management of the Ringling MacArthur Reserve, and recognized public support for the acquisition and ecological value of the property, and provided for water conservation, education, ecological monitoring, and a comprehensive land use plan indicating appropriate land uses which would remain compatible with the long term protection and enhancement of the property.

R82-312 Enacted November 4, 1982, in support of County efforts to acquire the Ringling MacArthur Tract through the issuance of \$30,000,000 sales tax and general obligation bonds of the County to pay the costs as detailed therein.

R85-428 Authorized and approved the transfer of the Special Utility District No. 1 water system to Sarasota County, thereby ending the practice of the Board of County Commissioners sitting as the ex-officio governing body of SUD, and transferred the complete responsibility for the County utility system to the Board of County Commissioners.

R85-486 (Amended Resolution No. 85-474) "A Resolution Awarding \$6,642,305.70 in utility system revenue bonds, series 1985, of Sarasota County, Florida, authorizing the execution of a contract for the sale and delivery of the bonds..."

R85-487 "A Resolution of the Board of County Commissioners of Sarasota County, Florida, Authorizing the Refunding of the Outstanding General Obligation Water Bonds, Series 1973 of Special Utility District No. 1, Authorizing the Acquisition and Construction of Additions, Extensions and Improvements to the Utility System to be Transferred to the County from the District; Providing for the Issuance of Not Exceeding \$50,000,000 Utility System Bonds, Series 1985, of the County to Finance the Cost of Said Refunding of Said Project." The intent of this Resolution was to decrease the original SUD system bonds, and to provide financing for improvements to the Ringling MacArthur Reserve.

R86-35 "Order Adopting Sarasota County Utility System Rules and Regulations," and establishing the rules for customers seeking service from the County, and setting forth the rules of operation for the County water system.

R86-86 "Order Adopting Extension Policy for Developers." Adopted for the purpose of establishing the County's official policy and standard for extension of water utility lines and/or installation of water supply and treatment facilities by the County and by developers, under provisions of Ordinance No. 72-30.

R87-157 "Policy Statement Directive Regarding Central Water and Sanitary Sewer Systems," a Resolution intended to require staff to draft the necessary amendments to Sarasota County Ordinance No. 81-30 (Apoxsee) and No. 81-12 (Land Development Regulations) concerning the policies of implementing centralized water and/or sanitary sewer systems expressed within the Resolution. Emphasis is upon proceeding with the development of the Ringling MacArthur Reserve project, developing water supply distribution system, and upon consolidating existing public and private wastewater treatment systems in a manner conducive to water conservation and environmentally sound principles of resource management.

R87-333 Rate Resolution establishing the rates fees and charges of the Sarasota County Utility System.

Drainage Ordinances

74-32 Permits the temporary drawdown, maintenance, and excavation of lakes 10 acres or less.

81-12 The Land Development Regulations, which call for 1) drainage systems designed to meet or exceed the peak discharge of 25 and 10-year storms for major and minor stormwater systems respectively, 2) on-site drainage systems to provide for attenuation and retention of stormwater with the rate of runoff to be equal or less than pre-development conditions and 3) drainage systems designed to treat runoff from the first inch of rainfall where discharge is to a freshwater body.

84-45 Provides for the establishment of Public Improvement Districts, which may include drainage and other public facilities.

Section 3: Definitions

Sanitary Sewer Definitions

ADVANCED WASTEWATER TREATMENT (AWT): shall mean wastewater treated to a level that will achieve the effluent limitations specified in Sarasota County Ordinance No. 87-139.

COLLECTION/TRANSMISSION SYSTEMS: shall mean sewers, pipelines, conduits, pumping stations, force mains, and all other facilities used for collection and transmission of treated effluent from individual service connections to facilities intended for the purpose of providing treatment prior to release into the environment. This shall also include pipelines, conduits, pumping stations, force mains, and all other facilities used to transport treated effluent to its point of outfall.

DISINFECTION: shall mean the selective destruction of pathogens in wastewater effluent and sludge.

DISPOSAL SYSTEM: shall mean injection wells, effluent outfalls, subsurface drain systems, and other facilities utilized for the reuse of effluent prior to its release into the environment.

DOMESTIC WASTEWATER: shall mean wastewater derived principally from dwellings, business buildings, institutions, and the like; sanitary wastewater; sewage. May be further defined as either Blackwater (waste carried off from toilets, urinals, or kitchen drains) or Graywater (all waste not covered under Blackwater.)

EFFLUENT: unless specifically stated otherwise, shall mean treated wastewater flowing out of the chlorine contact chamber of the treatment plant.

FRANCHISE WASTEWATER TREATMENT SYSTEM OR FRANCHISED WASTEWATER TREATMENT UTILITIES: shall mean those systems designed to serve three or more connections, as defined by Sarasota County.

INDUSTRIAL WASTEWATER: shall mean wastewater not otherwise defined as domestic wastewater, including the runoff and leachate from areas that receive pollutants associated with industrial or commercial storage, handling, or processing.

LAND APPLICATION: shall mean the utilization or disposal of effluent or sludge on, above, or into the surface of the ground through spray irrigation, land spreading, or other methods.

ON-SITE SEWAGE DISPOSAL SYSTEM: shall mean any domestic sewage treatment and disposal facility, including standard subsurface systems, graywater systems, laundry wastewater systems, alternative systems or experimental systems.

PACKAGE WASTEWATER TREATMENT PLANTS: shall mean a domestic sewage treatment plant with a permitted capacity of 100,000 gallons per day or less.

PRIVATELY PERMITTED WASTEWATER TREATMENT SYSTEMS: shall mean those systems which are not federal, State, County, or municipal systems.

SECONDARY TREATMENT: shall mean wastewater treated to a level that will achieve the effluent limitations as specified in current State legislation.

SEPTAGE: shall mean a mixture of sludge, fatty materials, human feces, and wastewater removed during the pumping of an on-site sewage disposal system.

SEPTIC TANK: shall mean a watertight receptacle constructed to promote separation of solid and liquid components of wastewater, to provide limited digestion of organic matter, to store solids, and to allow clarified liquid to discharge for further treatment and disposal in a soil absorption system.

SLUDGE: shall mean the accumulated solids, residues, and precipitates generated as a result of wastewater treatment.

TREATMENT PLANT: shall mean any plant or other works used for the purpose of treating, stabilizing, or holding wastes.

TYPE II FACILITY: shall mean a wastewater facility having a design average daily flow of 100,000 up to but not including 500,000 gallons per day or greater.

TYPE III FACILITY: shall mean a wastewater facility having a design average daily flow of over 2,000 up to but not including 100,000 gallons per day or greater.

WASTEWATER: shall mean the combination of the liquid and water-carried pollutants from residences, commercial buildings, industrial plants and institutions together with any groundwater, surface runoff or leachate that may be present.

WASTEWATER FACILITIES: shall mean any or all of the following: the collection/transmission system, the treatment plant, and the disposal system.

Solid Waste Definitions

AUTHORIZED COLLECTOR OR COLLECTOR: shall mean the Board of County Commissioners or any person authorized by the Board to collect and dispose of solid waste, including transfer stations, or otherwise.

AUTHORIZED DISPOSAL SITE: shall mean any real property set aside or authorized by the Board of County Commissioners for disposal of solid waste or sludge.

COMMERCIAL CUSTOMER, COMMERCIAL REAL PROPERTY: shall mean real property not classified as residential, including property used primarily for commerce. This classification shall not include commercially zoned property which is used primarily for residential purposes.

COMMERCIAL WASTE: shall mean solid waste generated upon commercial and industrial real property.

DISPOSAL SITE: shall mean places specifically set aside by the Board for the reception of solid waste or sludge.

FRANCHISE: shall mean the written authority granted by the Board to County Commissioners to a person to engage in the collection and disposal of solid waste.

GARBAGE: shall mean all kitchen and table food waste, animal or vegetative waste that is attendant with or results from the storage, preparation, cooking or handling of food materials and is included in the definition of solid waste.

HAZARDOUS WASTES: shall mean materials or combinations of materials which require special management techniques because of their acute or chronic effects on air and water quality, on fish, wildlife, or other biota, and on the health and welfare of the public and the collectors. These materials may include, but are not limited to, volatile, chemical, biological, explosive flammable, radioactive and toxic materials; also included are those materials identified in Chapter 17-30, Florida Administrative Code.

INDUSTRIAL: shall mean a place, building and/or enterprise engaged in manufacturing or the processing of raw materials or alteration or modification of a product for the purpose of producing a usable or finished product and having as a by-product industrial waste.

INFECTIOUS WASTES: shall mean those wastes which may cause disease or reasonably be suspected of harboring pathogenic organisms; included are wastes resulting from the operation of medical offices and clinics, veterinarians, hospitals and other facilities producing wastes which may consist of, but are not limited to, diseased human and animal parts, contaminated bandages, pathological specimens, hypodermic needles, contaminated clothing, and surgical gloves.

RECOVERED MATERIALS: shall mean materials which are recovered from the solid waste stream by separation, collection or other means for reuse or resale.

REFUSE: shall mean discarded material.

RESIDENTIAL CUSTOMER: shall mean improved real property, including but not limited to single family residences, duplex apartments, apartment buildings, travel trailer parks, mobile homes, condominium units, cooperatives, time-share apartments, tourist and other transient accommodations, leased or rental residential premises of the classifications described above, whether occupied or not; and premises occupied as a residence located in or upon commercially zoned property.

RESIDENTIAL SOLID WASTE: shall mean solid waste as defined herein which is generated by a Residential Customer upon its property.

RESOURCE RECOVERY: shall mean the process by which materials excluding those under control of the Nuclear Regulatory Commission which still have useful physical or chemical properties after serving a specific purpose are reused or recycled for the same or other purpose including use as an energy source.

RUBBISH: shall mean every waste accumulation of any kind other than "garbage" such as, but not limited to, paper, sweepings, dust, rags, bottles, cans, or other waste, and is included in the definition of solid waste.

SANITARY LANDFILL: shall mean the places set aside by the Board of County Commissioners for the reception of solid waste or sludge.

SLUDGE: shall mean any solid or semi-solid or liquid generated from any wastewater treatment plant, water supply treatment plant, air pollution control facility, septic tank, grease trap, portable toilets and related operations, or any other such waste having similar characteristics or effects. Sludge is further defined as either Grade I, II, or III as classified in Rule 17-7.540, Florida Administrative Code.

SOLID WASTE: shall mean garbage, rubbish, refuse, special waste, yard trash, construction debris, infectious waste, hazardous waste, radiological waste or other discharged solid or semi-solid materials, including but not limited to any debris from any source, wrecked vehicles and boats, or junk or any kind, resulting from domestic, residential, commercial, industrial, agricultural, and governmental operations, but does not include sludge.

SOLID WASTE SERVICE DISTRICT: shall mean the Municipal Service Taxing Unit established under Ordinance No. 86-35.

SPECIAL WASTES: shall mean those wastes that require extraordinary management. They include, but are not limited to, abandoned automobiles, white goods, used tires, waste oil, sludge, dead animals, agricultural and industrial wastes, and infectious and hazardous wastes.

TREATMENT SYSTEM: shall mean a place, building and/or enterprise engaged in the manufacture of a by-product, processing and/or alteration of solid waste into a usable and/or saleable product such as methane gas, fertilizer or other usable and/or saleable product.

YARD TRASH: shall mean vegetative matter resulting from landscaping maintenance or land clearing operations and includes materials such as shrub trimmings, tree trimmings, grass clippings, and palm fronds.

Drainage Definitions

DETENTION: shall mean the collection and temporary storage of stormwater in such a manner as to provide for treatment through physical, chemical, or biological processes with subsequent gradual release of the stormwater.

RETENTION: shall mean the prevention of, or to prevent the discharge of, a given volume of stormwater runoff into surface waters of the State by complete on-site storage.

STORMWATER: shall mean the flow of water which results from, and which occurs immediately following, a rain event.

STORMWATER DISCHARGE FACILITY: shall mean a stormwater management system which discharges stormwater into surface waters of the State.

STORMWATER MANAGEMENT SYSTEM: shall mean the designed features of the property which collect, convey, channel, hold, inhibit or divert the movement of stormwater.

WATERS: shall mean that definition as contained in Section 403.031(3), Florida Statutes.

WETLANDS: shall mean those waters which are dominated by those plant species listed in Section 17-4.020(17) or Section 17-4.022, Florida Administrative Code, and which meet the conditions specified in Section 17-25.042(2), Florida Administrative Code.

WETLANDS STORMWATER DISCHARGE FACILITY: shall mean a new stormwater discharge facility which incorporates those wetlands identified in Section 17-24.042(2), Florida Administrative Code into the stormwater management system to provide stormwater treatment as regulated by Section 17-25, Florida Administrative Code.

Section 4: Independent Franchised Potable Water Systems

	Land Use	Design Capacity (gal)	Average Daily Flow (gal)
Center Utilities	Industrial	45,000	3,631
Circlewoods Owner's Association	Residential	37,000	69,825
Gulfview Utilities, Inc.	Residential	60,000	12,619
Mike Clark Development, Inc.	Residential	27,000	12,875
Myakka Utilities, Inc.	Mobile Home	17,000	N/A
North Creek Utilities, Inc.	Residential	N/A	N/A
Plantation Utility Services, Inc.	Residential	1,200,000	90,000
Plaza Utilities	Commercial	N/A	N/A
Southbay Utilities	Res./Comm.	111,000	110,000
Sproat Kiney Enterprises	Commercial	N/A	N/A
Sunrise Utilities	Res./Comm.	3000,000	80,286
The Trails Unlimited	Commercial	57,600	17,692
Venice Gardens Utilities	Residential	1,500,000	1,233,000
Vroom Utilities, Inc.	Commercial	72,000	N/A

Source: Drinking Water Program MOR Inventory, Sarasota County Health Department, January, 1989.

Section 5: Other Community Potable Water Systems

Facility	Design Capacity (Gallons)	Production (Gallons)	Storage (Gallons)
Arbors Mobile Home Park		30,000	0
Bay Lake Mobile Home Park	40,000	40,000	25,000
Camelot Lakes	97,000	0	245,000
Children's Haven	15,000	0	0
Fairwoods Condo Village	18,000	13,000	5,009,000
Florida Pines Mobile Home Court	300,000	300,000	700
Happy Haven Mobile Home Park	7,000	0	2,500
Heron Bay Club	10,000	0	0
Japanese Gardens	72,000	34,000	20,000
Kings Gate Club	50,000	0	32,000
Lake Tippicanoe	288,000	288,000	25,000
Lake Village Mobile Home Park	100,000	0	149,000
Orange Acres Mobile Home Park	110,000	110,000	13,000
Palm & Pines Mobile Home Park	14,000	20,000	440
Park East Mobile Home Park	50,000	0	5,000
Pine Shores Trailer Park	50,000	25,000	29,100
Sarasota Bay Mobile Home Park	5,000	0	0
Spanish Lakes Mobile Home Park	100,000	0	79,000
Sun-N-Fun Resort	50,000	31,000	25,000
Sunrise Golf Club Villas	18,000	0	250
Venice Ranch Mobile Home Estates	30,000	17,280	3,370
Windward Isle Mobile Home Park	230,000	230,000	20,250

Source: Florida Department of Environmental Regulation, Drinking Water Quick Look Report, 1988.

Section 6 : Non-Community Potable Water Systems

Facility	Design Capacity (Gallons)	Production (Gallons)	Storage (Gallons)
American Dental Center	0	0	81
Amoco Discount Beverages	0	0	82
Aristocrat Trailer Court	0	0	0
Ashton Business Center	0	0	120
Barton Farms Labor Camp	0	0	0
Bay Front Trailer Court	216,000	216,000	0
Baypoint Center	0	0	180
Beacon Rental Apartments	0	0	0
Bee Ridge Landfill	432,000	7,000	500
Bizzy Bee Child Care	0	0	50
Britt's Place	0	0	0
Cafe' Raul	0	0	82
Camp Hamilton	0	0	0
Candlelight Motel	0	0	0
Captain Eddie's Seafood	86,400,000	86,400,000	150
Casey Key Marina	0	0	0
Casey Key Plaza	0	35,000	400
Casperson's Beach	0	0	200
Church of the Holy Spirit	0	0	200
Circle K	0	0	42
Club 41	0	0	0
Club Mary	0	0	200
Corvettes A Tavern	0	0	0
Countryside Montessori	0	0	80
Courtside Tennis Club	0	0	0
Culligan Water Condition	0	0	0
Cumberland Farms	0	0	150
Dearybury's Doughnuts	0	0	0
Dona Bay Marina	0	0	750
Elks Lodge #2495	0	0	200
Elks Park	0	0	0
Englewood Racquet Club	0	0	0
Fairchild Weston	0	0	0
Faith Christian School	0	0	164
Fame Nursery	0	0	0
Fancee Farms Labor Camp	0	0	0
Farm Stores #1657	0	0	0

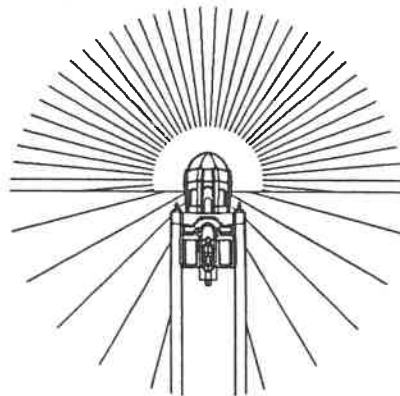
*Apoxsee-The Revised and Updated Sarasota County
Comprehensive Plan*

Facility	Design Capacity (Gallons)	Production (Gallons)	Storage (Gallons)
Fielding Academy	0	0	0
Flame Pit	0	0	100
Foxfire Golf Club	0	0	0
Fraternal Order of Eagles	0	0	120
Frosted Mug	0	0	25
Fun Village Nursery	0	0	700
Gator Creek Golf Club	14,000	19,000	700
Geier's Sausage Kitchen	0	0	35
Gulf Oldsmobile	64,800	64,800	400
Hap's Honda	0	0	50
Herman's Meats	0	0	120
Holiday Center	0	0	150
Hoosier Inn	0	0	80
Howard Lincoln Mercury	28,800	28,800	230
International Trade Center	0	45,000	0
Johnson and Salt Company	0	0	30
Julie Rohr Petite Academy	0	0	82
Kenmar	0	0	0
Kentucky Fried Chicken	0	0	82
Kentucky Fried Chicken	0	0	500
Kiddie Campus Preschool	0	0	0
Kinder Haus	0	0	50
Kings Gate Travel Trailer Park	30,000	40,000	117,000
Lakeside Lutheran Church	0	0	100
Laurel Day Nursery	0	0	115
Laurel Mobile Home Park	0	0	0
Lazy Ridge Mobile Home Park	0	0	0
LIFE Building	0	75,000	72
Lollypop Nursery	0	0	250
Lyons Cove Condo	6,000	6,000	0
M & D County Kitchen	0	36,000	100
Manatee Community College	0	0	0
Marketplace Mall	0	57,600	5,000
McAshton Plaza	0	0	0
Meadows Trailer Park	0	0	0
Mission Valley Golf Club	100,000	0	0
Munchkin Day Nursery	0	0	0
Myakka Pines Golf Club	0	0	0
Myakka River State Park	0	0	60
Myakka River State Park - RO	0	0	20,000

Facility	Design Capacity (Gallons)	Production (Gallons)	Storage (Gallons)
Night Trail Park	0	0	500
Nokomis Elementary School	0	72,000	500
Nokomis Groves	0	0	100
Nokomis Motor Inn	0	0	0
North Port Elks Lodge	43,200	35,000	100
Osprey Village Shopping Center	0	0	0
Palmer Blvd Dugout	0	57,600	42
Pelican Alley	0	0	0
Peninsula Motor Club	0	0	0
Peterson Manufacturing Company	0	0	800
Pizza Hut	43,200	43,200	240
Prew Preparatory School	0	0	82
Quick Stop #12	0	0	25
Quick Stop #18	48,000	48,000	2,000
Racine Hydraulics	10,000	0	0
Rainbow Child Care Center	0	0	80
Ramblers Rest Resort	0	110,000	0
Restwood Lodge	0	0	100
Royal Coachmen Resort	21,000	16,000	6,500
Sabado Ranch Labor Camp	0	0	0
Sarabay Trailer Park	216,000	0	82
Sarasota Golf Club	0	0	0
Seal's Cove Motel	0	0	50
Seven-Eleven #15477	0	0	400
Seven-Eleven #22859	0	0	30
Shamrock Child Care	0	0	200
Snook Haven	0	0	300
South County Administration Center	0	0	0
South County Plaza	36,000	0	0
Spanish Point Marina	0	0	200
Storer Cable TV	0	0	120
Sugar & Spice Nursery	0	0	500
Suncoast Christian School	0	0	75
Suncoast Mental Health Center	0	0	20
Superbowl Bowling Alley	0	0	0
Teachers Educational Center	0	0	0
Tides Inn Motel	0	0	0
Twin Lakes Park	0	0	0
Urbanek	0	0	1,500
Vandy's Steak & Hoagie	0	0	0

Facility	Design Capacity (Gallons)	Production (Gallons)	Storage (Gallons)
Venice Campground Trailer Park	72,000	0	2,500
Warm Mineral Springs	0	0	0
West Florida Christian School	0	0	160
Workman Electronic Products	43,000	0	250
Young World Pre-School	0	0	82

Source: Florida Department of Environmental Regulation, Drinking Water Quick Look Report, 1988.



APPENDIX E: TRAFFIC CIRCULATION

Section 1: FDOT Roadway Functional Classification

ID #	Roadway Name	Roadway Segment	Jurisdiction	Func. Class.	# of Lanes	Segment Length	Lane Miles
1	17th Street	U.S. 301 to Honore Avenue	Sarasota Co.	UCOL	4	4.5	18.0
2	17th Street	Honore Ave. to Richardson Rd.	Sarasota Co.	UCOL	2	1.0	2.0
3	27th Street	U.S. 301 to Lockwood Ridge Road	Sarasota Co.	UCOL	2	1.5	3.0
4	27th Pkwy./Prudence Dr.	Lockwood Ridge Road to 17th St.	Sarasota Co.	UCOL	2	1.0	2.0
5	Albee Farm Road	Laurel Road to U.S. 41	Sarasota Co.	UCOL	2	2.6	5.2
6	Albee Road	Casey Key to U.S. 41	Sarasota Co.	UCOL	2	1.2	2.4
7	Avenida del Circo	Airport Drive to U.S. 41	Sarasota Co.	UCOL	2	0.5	1.0
8	Baffin Road	Shamrock Lane to U.S. 41	Sarasota Co.	UCOL	2	1.1	2.2
9	Bahia Vista Street	U.S. 41 to Tuttle Avenue	City Sarasota	UCOL	2	0.95	1.9
10	Bahia Vista Street	Tuttle Avenue to Beneva Road	Sarasota Co.	UCOL	4	1.0	4.0
11	Bahia Vista Street	Beneva Road to Cattlemen Road	Sarasota Co.	UCOL	2	2.8	5.6
12	Bayshore/Harbor Drive	Park Boulevard to Venice Avenue	Sarasota Co.	UCOL	2	0.8	1.6
13	Beach Road	Ocean Blvd. to Midnight Pass Rd.	Sarasota Co.	UCOL	2	1.2	2.4
14	Bee Ridge Road/Bay St.	Osprey Avenue to U.S. 41	FDOT	MA	4	0.2	0.8
15	Bee Ridge Road	U.S. 41 to McIntosh Road	FDOT	MA	6	3.0	18.0
16	Bee Ridge Road	McIntosh Road to Cattlemen Road	FDOT	MA	4	1.8	7.2
17	Bee Ridge Road	Cattlemen Road to I-75	FDOT	MA	6	0.2	1.2
18	Bee Ridge Road	I-75 to Mauna Loa	Sarasota Co.	UCOL	4	0.7	2.8
19	Bee Ridge Road	Mauna Loa Blvd. to Bee Ridge Ext.	Sarasota Co.	UCOL	2	2.0	4.0
20	Bee Ridge Road (Ext.)	Bee Ridge Road to Clark Road	Sarasota Co.	UCOL	2	2.5	5.0
21	Beneva Road	17th Street to U.S. 41	Sarasota Co.	MA	4	8.1	32.4
22	Blackburn Point Road	Casey Key to U.S. 41	Sarasota Co.	UCOL	2	1.0	2.0
23	Brown Road	Richardson Road to Fruitville Road	Sarasota Co.	UCOL	2	0.5	1.0
24	Casey Key Road	Blackburn Point Road to End	Sarasota Co.	UCOL	2	3.5	7.0
25	Cattlemen Road	Fruitville Road to Proctor Road	Sarasota Co.	UCOL	2	3.65	7.3
26	Center Road	U.S. 41 to Jacaranda Boulevard	Sarasota Co.	UCOL	4	2.85	11.4
27	Center Road	Jacaranda Blvd. to River Road	Sarasota Co.	RMCOL	2	2.3	4.6
28	Clark Road (S.R. 72)	Swift Road to Gantt Road	FDOT	MA	2	3.5	7.0
29	Clark Road (S.R. 72)	Gantt Road to I-75	FDOT	MA	4	0.45	1.8
30	Clark Road (S.R. 72)	I-75 to County Line	FDOT	MA	2	23.9	47.8

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Comprehensive Plan*

ID #	Roadway Name	Roadway Segment	Jurisdiction	Func. Class.	# of Lanes	Segment Length	Lane Miles
31	Colonia Avenue	U.S. 41 to Orange Grove Avenue	Sarasota Co.	UCOL	2	2.475	4.95
32	Constitution Boulevard	U.S. 41 to Swift Road	Sarasota Co.	UCOL	2	1.0	2.0
33	Dearborn Street	Englewood Road to River Road	Sarasota Co.	UCOL	2	1.8	3.6
34	Debreacan Road	Palmer Blvd. to Fruitville Road	Sarasota Co.	RMCOL	2	1.0	2.0
35	DeSoto Road	U.S. 41 to University Parkway	Sarasota Co.	UCOL	2	5.3	10.6
36	Englewood Road	S.R. 775 to Dearborn Street	Sarasota Co.	UCOL	2	2.2	4.4
37	Fruitville Rd. (S.R. 780)	U.S. 301 to Tuttle Avenue	FDOT	MA	6	1.1	6.6
38	Fruitville Rd. (S.R. 780)	Tuttle Avenue to Packinghouse Rd.	FDOT	MA	2	3.9	7.8
39	Fruitville Rd. (S.R. 780)	Packinghouse Road to I-75	FDOT	MA	6	0.2	1.2
40	Fruitville Rd. (S.R. 780)	I-75 to Verna Road	Sarasota Co.	UCOL	2	10.5	21.0
41	Gateway Avenue	Stickney Pt. Rd. to Gulf Gate Drive	Sarasota Co.	UCOL	2	0.55	1.1
42	Gantt Avenue	Proctor Road to Clark Road	Sarasota Co.	UCOL	2	1.0	2.0
43	Gen. Spaatz Boulevard	U.S. 41 to Old U.S. 301	Sarasota Co.	UCOL	2	0.7	1.4
44	Gulf Gate Drive	U.S. 41 to Beneva Road	Sarasota Co.	UCOL	4	1.675	6.7
45	Gulf of Mexico Drive	County Line to New Pass Bridge	FDOT	MA	2	5.2	10.4
46	Harbor Drive	Venice Ave. to so. of Beach Rd.	Sarasota Co.	UCOL	2	5.05	10.1
47	Higel Avenue	Siesta Drive to Midnight Pass Road	FDOT	MA	2	0.95	1.9
48	Honore Avenue	Longmeadow Dr. to Richardson Rd.	Sarasota Co.	UCOL	2	2.15	4.3
49	Honore Avenue	Fruitville Road to Palmer Boulevard	Sarasota Co.	UCOL	2	0.75	1.5
50	I-75 (S.R. 93)	University Pkwy. to S.R. 681 (V.C.)	FDOT	PA	6	14.1	84.6
51	I-75 (S.R. 93)	S.R. 681 to County Line	FDOT	PA	4	26.75	107.0
52	Jacaranda Boulevard	I-75 to U.S. 41	Sarasota Co.	UCOL	4	5.0	20.0
53	Laurel Road	Bayshore Road to I-75	Sarasota Co.	UCOL	2	4.1	8.2
54	Lockwood Ridge Road	County Line to 17th Street	Sarasota Co.	UCOL	2	2.5	5.0
55	Lockwood Ridge Road	17th Street to 12th Street	City Sarasota	UCOL	2	0.25	0.5
56	Lockwood Ridge Road	Ashton Road to Gulf Gate Drive	Sarasota Co.	UCOL	2	1.3	2.6
57	Longmeadow Drive	17th Street to Honore Avenue	Sarasota Co.	UCOL	2	2.0	4.0
58	Manasota Beach Road	S.R. 775 to Manasota Key Road	Sarasota Co.	UCOL	2	1.95	3.9
59	Manasota Key Road	Manasota Beach Rd. to Co. Line	Sarasota Co.	UCOL	2	4.75	9.5
60	McCall Road	Artists Avenue to Dearborn Street	Sarasota Co.	UCOL	2	0.9	1.8
61	McIntosh Road	Fruitville Road to Clark Road	Sarasota Co.	UCOL	2	4.65	9.3
62	Midnight Pass Road	Higel Ave. to so. of Stickney Point	FDOT	MA	2	6.05	12.1
63	Myrtle Street	Old Bradenton Road to U.S. 301	Sarasota Co.	UCOL	2	0.95	1.9
64	Ocean Boulevard	Higel Avenue to Beach Road	Sarasota Co.	UCOL	2	2.4	4.8
65	Old Miakka Road	S.R. 70 to Myakka Park	Sarasota Co.	RMAACL	2	3.7	7.4
66	Old Venice Road	Bay Road to U.S. 41	Sarasota Co.	UCOL	2	1.25	2.5
67	Ortiz Boulevard	DeLeon Drive to U.S. 41	Sarasota Co.	UCOL	2	1.0	2.0
68	Palmer Boulevard	Honore Avenue to Debreacan Road	Sarasota Co.	UCOL	2	2.75	5.5
69	Park Boulevard	Bayshore Drive to Harbor Drive	Sarasota Co.	UCOL	2	1.25	2.5
70	Pine Street	County Line to River Road	Sarasota Co.	RMAACL	2	1.0	2.0

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ID #	Roadway Name	Roadway Segment	Jurisdiction	Func.	# of	Segment	Lane
				Class.	Lanes	Length	Miles
71	Proctor Road	U.S. 41 to Beneva Road	Sarasota Co.	UCOL	4	2.0	8.0
72	Proctor Road	Beneva Road to Clark Road	Sarasota Co.	UCOL	2	5.15	10.3
73	Richardson Road	Fruitville Road to Brown Road	Sarasota Co.	UCOL	2	1.5	3.0
74	Ringling Parkway	New Pass Bridge to St. Armands	FDOT	MA	2	1.1	2.2
75	Ringling Parkway	St. Armands Circle to U.S. 41	FDOT	MA	4	2.25	9.0
76	Ringtail Road	Shamrock Dr. to Sunset Beach Dr.	Sarasota Co.	UCOL	2	0.6	1.2
77	River Road (North)	I-75 to U.S. 41	Sarasota Co.	RMACL	2	5.5	11.0
78	River Road (South)	U.S. 41 to Pine Street	Sarasota Co.	RMACL	2	6.5	13.0
79	Sawyer Road	Bee Ridge Road to Clark Road	Sarasota Co.	UCOL	2	2.0	4.0
80	Shade Avenue	Fruitville Road to Webber Street	City Sarasota	UCOL	2	2.0	4.0
81	Shade Avenue	Webber Street to Proctor Road	Sarasota Co.	UCOL	2	1.65	3.3
82	Shamrock Boulevard	U.S. 41 to Center Road	Sarasota Co.	UCOL	4	2.7	10.8
83	Shamrock Drive	Baffin Drive to U.S. 41	Sarasota Co.	UCOL	2	3.0	6.0
84	Shore Rd./Airport Ave.	Sunset Drive to Ringling Drive	Sarasota Co.	UCOL	2	1.0	2.0
85	Siesta Drive	Higel Avenue to Osprey Avenue	FDOT	MA	2	1.35	2.7
86	Siesta Drive	Osprey Avenue to U.S. 41	City Sarasota	UCOL	2	0.25	0.5
87	Siesta Drive	U.S. 41 to Tuttle Avenue	Sarasota Co.	UCOL	4	1.0	4.0
88	S.R. 681 (Venice Con.)	U.S. 41 to I-75	FDOT	PA	4	3.0	12.0
89	Stickney Point Road	Midnight Pass Road to U.S. 41	FDOT	MA	4	0.9	3.6
90	Stickney Point Road	U.S. 41 to Swift Road	FDOT	MA	2	0.85	1.7
91	Sunset Beach Drive	Shamrock Drive to U.S. 41	Sarasota Co.	UCOL	2	1.3	2.6
92	Swift Road	Bee Ridge Road to Clark Road	Sarasota Co.	UCOL	4	2.0	8.0
93	S.R. 775	U.S. 41 to Co. Line (Bay Height)	FDOT	MA	2	8.15	16.3
94	Tuttle Avenue	University Parkway to 12th Street	Sarasota Co.	UCOL	2	2.75	5.5
95	Tuttle Avenue	12th Street to Bee Ridge Road	Sarasota Co.	UCOL	4	3.6	14.4
96	University Parkway	Old U.S. 301 to I-75	Sarasota Co.	MA	2	5.9	11.8
97	U.S. 301 (S.R. 683)	University Parkway to U.S. 41	FDOT	PA	4	4.075	16.3
98	U.S. 41 (S.R. 45)	County Line to U.S. 301	FDOT	PA	4	0.2	0.8
99	U.S. 41 (S.R. 45)	U.S. 301 to Proctor Road	FDOT	PA	6	3.1	18.6
100	U.S. 41 (S.R. 45)	Proctor Road to S.R. 681 (V.C.)	FDOT	PA	4	10.75	43.0
101	U.S. 41 (S.R. 45)	S.R. 681 to Laurel Road	FDOT	PA	6	1.0	6.0
102	U.S. 41 (S.R. 45)	Laurel Road to U.S. 41 By-Pass	FDOT	PA	4	2.5	10.0
103	U.S. 41 (S.R. 45)	U.S. 41 By-Pass to Venice Avenue	FDOT	PA	2	0.65	1.3
104	U.S. 41 (S.R. 45)	Venice Avenue to Turin Street	FDOT	PA	4	0.45	1.8
105	U.S. 41 (S.R. 45)	Turin Street to Palermo	FDOT	PA	2	0.15	0.3
106	U.S. 41 (S.R. 45)	Palermo to U.S. 41 By-Pass	FDOT	PA	2	0.2	0.4
107	U.S. 41 (S.R. 45)	U.S. 41 By-Pass to N. Port Cty.	FDOT	PA	4	14.5	58.0
108	U.S. 41 By-Pass	U.S. 41 to U.S. 41	FDOT	PA	4	3.2	12.8
109	Venice Avenue	Bus. U.S. 41 to Jacaranda Blvd.	Sarasota Co.	UCOL	4	3.95	15.8
110	Venice Avenue	Jacaranda Blvd. to River Road	Sarasota Co.	RMCAL	2	2.6	5.2

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Traffic Circulation

Appendix E

ID #	Roadway Name	Roadway Segment	Jurisdiction	Func. Class.	# of Lanes	Segment Length	Lane Miles
111	Verna Road	County Line to Fruitville Road	Sarasota Co.	RMCAL	2	3.5	7.0
112	Webber Street	U.S. 41 to McIntosh Road	Sarasota Co.	UCOL	4	2.95	11.8
113	Webber Street	McIntosh Road to Lalani Drive	Sarasota Co.	UCOL	2	0.9	1.8
114	Wilkinson Road	Swift Road to McIntosh Road	Sarasota Co.	UCOL	2	2.0	4.0
115	Border/Hollywood Blvd.	Beachwood Avenue to U.S. 41	Sarasota Co.	UCOL	2	0.4	0.8
116	S. Venice Boulevard	Lemon Bay Drive to U.S. 41	Sarasota Co.	UCOL	2	1.3	2.6
117	Bayshore Boulevard	North City Limits to U.S. 41	Sarasota Co.	UCOL	2	0.2	0.4
118	DeLeon Drive	U.S. 41 to Ortiz Boulevard	Sarasota Co.	UCOL	2	1.3	2.6
119	Sweetland/Ingram Ave.	Webber St. to Bahia Vista St.	Sarasota Co.	UCOL	2	1.0	2.0
120	Beechwood Avenue	Stickney Point Road to U.S. 41	Sarasota Co.	UCOL	2	0.7	1.4
121	Toledo Blade Blvd.	County Line to I-75	Sarasota Co.	RMACL	2	4.6	9.2
122	Jackson Road	Venice Avenue to Border Road	Sarasota Co.	RMCOL	2	1.6	3.2
123	Beach, Columbus, Avenida Messina	Midnight Pass Rd. to Ocean Blvd.	Sarasota Co.	UCOL	2	1.9	3.8

Key: PA-Principal Arterial; MA-Minor Arterial; UCOL-Urban Collector; RMACL-Rural Major Collector; RMCOL-Rural Minor Collector

Source: Sarasota County Planning Department, 1988.

Section 2: Level of Service Analysis Methodology

Introduction

The purpose of this technical report is to provide a summary of the level of service analysis methodology, procedures, and assumptions utilized by Sarasota County in analyzing existing and future levels of service on those roadways under the jurisdictional responsibility of Sarasota County.

Level of Service Analysis Methodology

The analysis of existing and future level of service conditions on those functionally classified arterial and collector roadways under the jurisdictional responsibility of Sarasota County was accomplished through the utilization of the appropriate analysis procedures contained within the 1985 Highway Capacity Manual (Transportation Research Board Special Report No. 209, 1985). Implementation of these procedures was done through the development and application of a series of computer spreadsheet analysis templates developed by Sarasota County Planning Department staff. The level of service analysis templates were then used to develop "generalized" level of service tables for each of four (4) roadway facility types: (1) freeways; (2) multi-lane highways; (3) two-lane rural highways; and (4) urban/suburban arterials. The Generalized Level of Service Hourly Service Volume Tables and the assumptions used in developing the tables are presented in Attachment A, Pages E-10 through E-12.

For each facility type, levels of service are described in terms of hourly volumes, where the volumes presented in the tables delineate the maximum traffic volume sustainable while maintaining a given level of service. It is important to note that levels of service are defined based on other "measures of effectiveness" that best describe the quality of operation on a particular facility type (e.g., traffic stream "density" for freeways and multi-lane highways; percentage time delay for

two-lane rural highways; and average travel speed for arterials). Due to limitations on data collection and availability, "volume" is used as a surrogate for each measure of effectiveness, where the service volumes indicated in the tables reflect those volumes expected to exist under ideal conditions for each particular level of service as defined by the appropriate measure of effectiveness.

Use of the generalized level of service tables enabled staff the ability to easily and accurately (given the use of local data in developing the tables) assess level of service conditions on those roadways within Sarasota County, while avoiding the impracticability of manually implementing the appropriate procedures for each of the approximately three-hundred (300) roadway segments (comprising approximately 1000 lane/miles being analyzed).

Due to variations in traffic patterns that reflect "peaking" characteristics with respect to time (e.g., hourly, daily, weekly, and monthly), roadway level of service and/or design studies are not based on a roadway's ability to function properly during periods of average traffic volume, but rather on its ability to function properly during periods of peak volume. However, evaluating and/or designing a roadway based on its ability to accommodate periods of peak traffic demand may result in: (1) underutilization of excess roadway capacity during all but one period throughout the entire year; and (2) economic inefficiency, where the cost of providing the excess capacity is greater than an equivalent amount of derived benefit. Therefore, selection of an appropriate design period (typically an hour or "design hour" as it is referred to) for use in preparing level of service evaluations and design studies takes into account the various types of traffic volume variation, and reflect a compromise between providing adequate capacity (at acceptable levels of service) throughout an entire year and achieving/maintaining some degree of both economic efficiency and cost affordability.

Based on an analysis of traffic conditions and traffic volume variation characteristics displayed throughout Sarasota County, the 100th highest hour has been identified as the appropriate "design hour" that best provides an acceptable compromise between achieving/maintaining economic efficiency and providing acceptable levels of service throughout most of the year. Therefore, the level of service analyses were based on an evaluation of traffic volume conditions estimated or projected to occur during the 100th highest hour in the analysis year (e.g., the analysis year for "existing" conditions was 1987).

Level of Service Analysis Procedure

The following procedure was followed in preparing the analysis of existing and future level of service conditions on those roadways within Sarasota County using existing and projected 100th highest hourly traffic volumes and the Generalized Level of Service Hourly Service Volume Tables presented in Attachment A, Pages E-10 through E-15.

Step 1. Identify Roadway Facility Types and Roadway Segments to be Analyzed

Given the various roles or functions that roadways can serve (i.e., providing access vs. providing mobility) and the fact that actual levels of service are only critical on roadways having some degree of mobility as their primary or secondary function, only those roadways functionally classified as major/minor arterials and collectors were included in the analysis of existing and future levels of service.

Recognizing that varying traffic volume, roadway geometric, and traffic control characteristics that prevail along an entire roadway can have a significant affect on levels of service regardless of facility type (e.g., freeway, arterial) or functional classification (e.g., major arterial, collector), each roadway analyzed was divided into discrete roadway "segments" and "sections."

Roadway "segments" represent the actual linear distance between points of fixed interruption, such as signalized or stop-controlled intersections

along arterials, multi-lane and two-lane highways, and ramp junctions along freeways. Defining roadway segments using points of fixed interruption was done: (1) because traffic count information collected within Sarasota County is collected on a segment-by-segment basis, where each segment is defined using similar points of fixed interruption; and (2) in order to accurately assess levels of service along roadways where significant variations in traffic volume may reflect different levels of service at different locations along those roadways. Roadway "segment" length was one of the primary determinants in identifying the appropriate analysis procedure (and in turn the appropriate generalized level of service table) to be used in assessing levels of service.

Roadway "sections" represent the average linear distance of all component segments that were aggregated into sections, where each component segment displayed comparable traffic volume, roadway geometric, traffic control, and adjacent land use activity along the segment. Roadway "sections" were also based on points of fixed interruption, where different sections were defined by:

- a change in laneage (e.g., 2 to 4 lanes); or
- a significant variation in length of adjacent segments (a difference of 20 percent or more); or
- a significant variation in traffic volume on adjacent segments (i.e., a difference of 20 percent or more); or
- a significant number of turning movements (i.e., equal to or greater than 20 percent of total roadway volume).

Given that only arterial levels of service are sensitive to segment length (typically an inverse function of the signalized intersection density along an arterial), dividing roadways into "sections" was only important for purposes of evaluating arterial roadway level of service, where the "section" lengths were used simply to identify the appropriate generalized service volume table.

Step 2. Identify Appropriate Roadway Analysis Procedure

Each functionally classified major/minor arterial and collector was then classified into one of four (4) general facility types, each having a corresponding level of service analysis procedures: (1) freeway; (2) multi-lane highway; (3) two-lane rural highway; and (4) urban/suburban arterial. Each roadway was classified and assigned a particular analysis procedure based on the following roadway characteristic criteria.

Analysis Procedure/Facility Type and Roadway Characteristic Criteria

Freeway

- divided roadway; and
- two (2) or more travel lanes per direction; and
- full access control (limited to grade-separated ramp junctions).

Multi-Lane Highway

- divided or undivided roadway; and
- more than two (2) travel lanes per direction; and
- lack of full access control (where points of fixed interruption are generally spaced at intervals equal to or greater than two (2) miles).

Two-Lane Rural Highways

- undivided roadway; and
- one (1) travel lane per direction; and
- lack of full access control (where points of fixed interruption are generally spaced at intervals equal to or greater than two (2) miles).

Urban/Suburban Arterials

- divided or undivided roadway; and
- two (2) or more travel lanes per direction; and
- lack of full access control (where points of fixed interruption are generally spaced at intervals less than or equal to two (2) miles).

Step 3. Identify Appropriate Generalized Level of Service Table

The Generalized Level of Service Hourly Service Volume Tables presented in Attachment A are divided into four (4) major categories, each corresponding to a general roadway facility type (i.e., freeway, multi-lane highway, two-lane highway, or arterial). The generalized level of service tables under each facility type are divided further based on specific traffic and roadway geometric characteristics that have a significant affect on levels of service.

In order to identify the appropriate generalized level of service table, it was necessary to identify those specific traffic and roadway characteristics for each roadway segment, based on its facility type classification that was determined in Step 2 above. The specific traffic and roadway geometric information required for each facility type is summarized and discussed below.

Required Traffic and Roadway Geometric Information by Facility Type

1. Freeway

- number of lanes (both directions)
- character of adjacent development

2. Multi-Lane Highways

- number of lanes (both directions)
- character of adjacent development

3. Two-Lane Rural Highways

- percentage of No-Passing Zones

4. Urban/Suburban Arterials

- number of lanes (both directions)
- segment length (miles)
- free-flow speed (mph)
- Arterial Class

1. Freeways

For freeway segments, general information regarding the number of lanes (both directions) and adjacent development was required. The generalized level of service tables for freeways are broken down for 4, 6, and 8-lane segments. Adjacent development was assumed to have "rural" characteristics along all freeway segments in Sarasota County.

2. Multi-Lane Highways

Similar to freeway segments, information regarding the number of lanes and adjacent development was required for multi-lane highway segments. The generalized tables of multi-lane highways are broken down for 4 and 6-lane segments, having either "rural" or "suburban" adjacent development characteristics.

3. Two-Lane Rural Highways

Information regarding the percentage of No-Passing Zones was required; however, 20 percent no-passing zones were assumed to prevail on all rural two-lane highway segments in Sarasota County.

4. Urban/Suburban Arterials

Information regarding number of lanes, segment length, Arterial Class, and free-flow speed was required for all arterial segments. The generalized tables are broken down for 2, 4, and 6-lane segments having free-flow speeds of 30, 35, 40, and 45 mph, and segment lengths (i.e., analysis "section" lengths) of: (1) .1 to .25 miles; (2) .26 to .5 miles; (3) .51 to .75 miles; (4) .76 to 1.0 miles; (5) 1.01 to 1.5 miles; and (6) 1.5 to 2.0 miles.

Arterial Class designations (i.e., Class I or Class II) were assigned based on the following criteria:

Class I Arterials:

1. functionally classified Major Arterials; or
2. functionally classified Minor Arterials, having:
 - posted speed equal to or greater than 35 mph; and
 - segment length equal to or greater than .25 miles.

Class II Arterials:

1. functionally classified Collectors; or
2. functionally classified Minor Arterials, having:
 - posted speed less than 35 mph; and
 - segment length less than .25 miles.

Step 4. Adjust Average Daily Traffic (ADT) and Peak-Hour Traffic Volume to Annual Average Daily Traffic (AADT) Volume

Sarasota County collects traffic volume data for 24-hour 7-day periods at approximately 265 count stations throughout the year. The first step toward converting the 24-hour average daily traffic (ADT) volumes to the 100th highest hourly "design" volumes was to adjust the ADT volumes to an equivalent base. The conversion from ADT volumes to annual average daily traffic (AADT) volumes was accomplished using weekly Seasonal Adjustment Factors, as presented in Attachment B. Weekly seasonal adjustment factors for three (3) general roadway facility types (i.e., major arterials, minor arterials, and collectors) were derived based on an analysis of 24-hour 365-day traffic volume data collected from two (2) permanent traffic count stations located in Sarasota County.

The conversion of ADT volumes to AADT volumes was accomplished by dividing the 24-hour ADT volumes by the appropriate weekly seasonal adjustment factor that corresponded to the week during which the ADT volume count was taken.

While Sarasota County and the Florida Department of Transportation (FDOT) generally collect traffic volume data on a 24-hour (ADT) basis, only peak-hour volume counts were available at some locations being analyzed. In order to adjust the peak-hour volumes to represent AADT volumes, the peak-hour volumes were first converted to ADT volumes using a Peak-Hour to Daily Volume Percentage Factor. Peak-hour to daily volume percentage factors were derived based on an analysis of 24-hour traffic volume data from twenty (20) count stations located throughout Sarasota County. Peak-hour to daily percentage factors ranged from .076 to .101, with a countywide average of .088.

The conversion of peak-hour volumes to ADT volumes was accomplished by dividing the peak-hour volumes by the average peak-hour to daily

percentage factor (.088). The ADT volumes were then converted to AADT volumes following the procedure identified above.

Step 5. Adjust Average Annual Daily (AADT) Volume to the 100th Design Hourly Volume (DHV)

The conversion from AADT volumes to the 100th design hourly volume (DHV) was accomplished using Design-Hour Adjustment Factors (a.k.a. "K-Factors"), as presented in Attachment C. The design-hour adjustment factors were derived based on an analysis of 24-hour 365-day traffic volume data (factored up from 24-hour 7-day traffic volume data using the seasonal adjustment factors) from twenty (20) count stations throughout Sarasota County. "K-Factors" ranged from .1107 for roadways having AADT volumes equal to or less than 2,000 vehicles to .0832 for roadways having AADT volumes equal to or greater than 60,000 vehicles.

The conversion of AADT volumes to DHV volumes was accomplished by multiplying the AADT volumes by the appropriate "K-Factor" that correspond to the roadway AADT volumes.

Step 6. Identify Roadway Level of Service

For each roadway segment, the 100th design hourly volume (DHV) as identified in Step 5 was then compared to the service volumes presented in the appropriate generalized level of service table as identified in Step 3. Because levels of service are defined along a continuum of operational conditions, the hourly service volumes presented in the generalized level of service tables define the boundaries, or maximum volume sustainable that the given level of service. As an example, consider a 4-lane arterial roadway segment having a 45 mph free-flow speed and a 2 mile analysis section length. Looking at the appropriate generalized level of service table (as presented below), if the design-hour volume (DHV) was 3300 vehicles, then the level of service would be LOS "D." A DHV volume of 4100 vehicles would indicate LOS "F."

Arterial Class: 1

Free-Flow Speed: 45 mph

Segment Length: 1.51 to 2.0 miles

Lanes	Level of Service				
	A	B	C	D	E
2	1320	1480	1650	1730	1900
4	2640	2970	3220	3460	3790
6	4040	4450	4780	5190	5610

Attachment A: Generalized Level of Service Hourly Service Volume Tables*Assumptions Used in the Development of the Generalized Level of Service Hourly Service Volume Tables*

Parameters	Freeway	Arterial	Multi-Lane Highway	Two-Lane Highway
Area Type	NA	non-CBD	NA	NA
Terrain	level	level	level	level
Adjacent Development	NA	NA	(see Note 6)	NA
Facility Type	NA	NA	divided	NA
Lane Width	12 feet	12 feet	12 feet	12 feet
Design Speed	70 mph	NA	60 mph	NA
Shoulder Width	NA	NA	> 6 feet	> 6 feet
Lateral Clearance	> 6 feet	NA	NA	NA
Side Obstructions	one side	NA	one side	NA
Arterial Class	NA	(see Note 1)	NA	NA
Free-Flow Speed	NA	(see Note 2)	NA	NA
% No Passing Zones	NA	NA	NA	20 percent
Progression/Arrival Type	NA	Type 4	NA	NA
Signal Type	NA	pre-timed	NA	NA
Cycle Length	NA	(see Note 3)	NA	NA
% Green Time (g/C)	NA	(see Note 4)	NA	NA
Service (Saturation) Flow Rates	(see Note 5)	(see Note 5)	(see Note 5)	(see Note 5)
% Trucks	0.09	.05	.06	.06
% Buses	0.00	.00	.00	.00
% RV's	0.01	.01	.01	.01
% Left-turns	NA	.25	NA	NA
Number of Buses	NA	none	NA	NA
Number of Parking Manuevers	NA	none	NA	NA
Driver Population Factor	90% of reg. user	NA	90% of reg. user	NA
Directional Distribution (D-Factor)	.57	.57	.57	.57
Design-Hour Factor (K-Factor)	(see Note 7)	(see Note 7)	(see Note 7)	(see Note 7)
Peak-Hour Factor (PHF)	.92	.94	.91	.88

Notes:

(1) Arterial Class: I and II

(2) Free-Flow Speeds: Arterial Class I-35, 40, and 45 mph; Arterial Class II-30 and 35 mph

(3) Cycle Length: Arterial Class I-108 seconds; Arterial Class II-95 seconds

(4) % Green Time (g/C): Arterial Class I-.45; Arterial Class II-.35

(5) Service Flow Rates: Freeway-1,700 veh/ln/hr; Arterial-1,765 veh/ln/hr; Multi-Lane Highway-1,550 veh/ln/hr; Two-Lane Rural Highway-2,625 veh/ln/hr

(6) Adjacent Development-Rural and Suburban

(7) Design-Hour Factor: See Attachment C, Design-Hour Adjustment Factors ("K-Factors"), Page E-17

Generalized Level of Service-Hourly Service Volumes

Arterial Class I

Free-Flow Speed: 35

<u>Segment Length: .1 to .25 miles</u>						<u>Segment Length: .76 to 1.0 miles</u>					
Level of Service						Level of Service					
Lanes	A	B	C	D	E	Lanes	A	B	C	D	E
2	NA	NA	NA	1070	1320	2	NA	1070	1400	1480	1650
4	NA	NA	NA	2140	2640	4	NA	2310	2800	2970	3220
6	NA	NA	NA	3300	3960	6	NA	3550	4200	4540	4860
<u>Segment Length: .26 to .5 miles</u>						<u>Segment Length: 1.01 to 1.5 miles</u>					
Level of Service						Level of Service					
Lanes	A	B	C	D	E	Lanes	A	B	C	D	E
2	NA	330	1150	1320	1480	2	NA	1320	1480	1650	1730
4	NA	580	2470	2720	2890	4	NA	2640	2970	3220	3460
6	NA	820	3790	4120	4370	6	NA	3960	4370	4780	5190
<u>Segment Length: .51 to .75 miles</u>						<u>Segment Length: 1.51 to 2.0 miles</u>					
Level of Service						Level of Service					
Lanes	A	B	C	D	E	Lanes	A	B	C	D	E
2	NA	990	1320	1400	1570	2	NA	1320	1570	1730	1810
4	NA	2060	2640	2890	3130	4	NA	2720	3050	3380	3710
6	NA	3130	4040	4370	4620	6	NA	4040	4620	5030	5520

Arterial Class 1

Free-Flow Speed: 40

<u>Segment Length: .1 to .25 miles</u>						<u>Segment Length: .76 to 1.0 miles</u>					
Level of Service						Level of Service					
Lanes	A	B	C	D	E	Lanes	A	B	C	D	E
2	NA	NA	410	1070	1320	2	330	1320	1400	1570	1650
4	NA	NA	820	2310	2640	4	580	2640	2800	3050	3300
6	NA	NA	1150	3550	3960	6	910	3960	4290	4620	4950

Segment Length: .26 to .5 miles

Lanes	Level of Service				
	A	B	C	D	E
2	NA	910	1240	1400	1480
4	NA	1900	2560	2720	2970
6	NA	2800	3880	4120	4370

Segment Length: 1.01 to 1.5 miles

Lanes	Level of Service				
	A	B	C	D	E
2	990	1400	1480	1650	1810
4	2060	2720	3050	3300	3550
6	3130	4120	4540	4860	5280

Segment Length: .51 to .75 miles

Lanes	Level of Service				
	A	B	C	D	E
2	NA	1150	1320	1480	1570
4	NA	2390	2720	2890	3130
6	NA	3630	4120	4370	4700

Segment Length: 1.51 to 2.0 miles

Lanes	Level of Service				
	A	B	C	D	E
2	1070	1400	1570	1730	1900
4	2310	2890	3130	3460	3710
6	3550	4290	4700	5110	5610

Arterial Class I**Free-Flow Speed: 45**Segment Length: .1 to .25 miles

Lanes	Level of Service				
	A	B	C	D	E
2	NA	NA	660	1150	1320
4	NA	NA	1240	2390	2640
6	NA	NA	1900	3630	3960

Segment Length: .76 to 1.0 miles

Lanes	Level of Service				
	A	B	C	D	E
2	1070	1320	1480	1570	1650
4	2140	2640	2890	3130	3300
6	3300	4040	4370	4620	4950

Segment Length: .26 to .5 miles

Lanes	Level of Service				
	A	B	C	D	E
2	NA	990	1240	1400	1480
4	NA	2140	2640	2800	2970
6	NA	3220	3960	4200	4450

Segment Length: 1.01 to 1.5 miles

Lanes	Level of Service				
	A	B	C	D	E
2	1240	1400	1570	1650	1810
4	2560	2800	3050	3300	3550
6	3880	4290	4620	4950	5360

Segment Length: .51 to .75 miles

Lanes	Level of Service				
	A	B	C	D	E
2	NA	1150	1320	1480	1570
4	NA	2470	2720	2970	3130
6	NA	3790	4120	4370	4700

Segment Length: 1.51 to 2.0 miles

Lanes	Level of Service				
	A	B	C	D	E
2	1320	1480	1650	1730	1900
4	2640	2970	3220	3460	3790
6	4040	4450	4780	5190	5610

Arterial Class II
Free-Flow Speed: 30

Arterial Class II
Free-Flow Speed: 35

Segment Length: .1 to .25 miles

Segment Length: .1 to .25 miles

Level of Service					
Lanes	A	B	C	D	E
2	NA	NA	580	910	1070
4	NA	NA	1240	1900	2140

Level of Service					
Lanes	A	B	C	D	E
2	NA	NA	660	910	1070
4	NA	NA	1480	1980	2140

Segment Length: .26 to .5 miles

Segment Length: .26 to .5 miles

Level of Service					
Lanes	A	B	C	D	E
2	NA	NA	990	1070	1150
4	NA	NA	1980	2140	2390

Level of Service					
Lanes	A	B	C	D	E
2	NA	820	990	1070	1240
4	NA	1650	2060	2230	2390

Segment Length: .51 to .75 miles

Segment Length: .51 to .75 miles

Level of Service					
Lanes	A	B	C	D	E
2	NA	740	1070	1150	1320
4	NA	1570	2140	2310	2560

Level of Service					
Lanes	A	B	C	D	E
2	NA	910	1070	1150	1320
4	NA	1900	2230	2390	2560

Segment Length: .76 to 1.0 miles

Segment Length: .76 to 1.0 miles

Level of Service					
Lanes	A	B	C	D	E
2	NA	910	1150	1240	1320
4	NA	1810	2230	2390	2640

Level of Service					
Lanes	A	B	C	D	E
2	490	990	1150	1240	1400
4	910	2060	2310	2470	2720

Segment Length: 1.01 to 1.5 miles

Segment Length: 1.01 to 1.5 miles

Level of Service					
Lanes	A	B	C	D	E
2	NA	990	1150	1320	1480
4	NA	2060	2390	2640	2890

Level of Service					
Lanes	A	B	C	D	E
2	820	1070	1240	1320	1480
4	1650	2230	2470	2640	2970

Segment Length: 1.51 to 2.0 miles

Segment Length: 1.51 to 2.0 miles

Level of Service					
Lanes	A	B	C	D	E
2	NA	1070	1240	1400	1570
4	NA	2140	2470	2720	3050

Level of Service					
Lanes	A	B	C	D	E
2	910	1150	1320	1400	1570
4	1980	2310	2560	2800	3130

Facility Type: Multi-Lane Divided Highway

<u>Adjacent Development: Rural</u>						<u>Adjacent Development: Suburban</u>					
Level of Service						Level of Service					
Lanes	A	B	C	D	E	Lanes	A	B	C	D	E
4	1810	2740	3570	4390	5480	4	1630	2470	3210	3950	4940
6	2710	4110	5350	6580	8230	6	2440	3700	4810	5920	7400

Facility Type: Two-Lane Rural Highway**Facility Type: Freeway**

<u>No Passing Zones: 20 Percent</u>						<u>Adjacent Development: Rural/Suburban</u>					
Level of Service						Level of Service					
Lanes	A	B	C	D	E	Lanes	A	B	C	D	E
2	280	540	880	1430	2310	4	1900	2930	4180	5060	5440
						6	2850	4400	6280	7580	8150
						8	3800	5870	8370	10110	10870

Notes:

Maximum volumes are based on capacity/level of service analysis procedures contained in the 1985 Highway Capacity Manual (Transportation Research Board Special Report No. 209) and Sarasota County traffic characteristic, roadway geometric, and traffic signal control data.

NA indicates level-of-service is not achievable under the given traffic, roadway, and traffic control conditions.

Source: Sarasota County Planning Department, August, 1988.

Attachment B: Seasonal Adjustment Factors

Major Arterial			Minor Arterial/Collector								
Week	Month	Factor	Week	Month	Factor	Week	Month	Factor	Week	Month	Factor
1	Jan	1.025	27	Jul	0.981	1	Jan	1.038	27	Jul	1.081
2		1.017	28		0.977	2		1.045	28		1.161
3		0.963	29		0.984	3		0.954	29		1.097
4		0.999	30		1.095	4		0.958	30		1.092
5	Feb	0.966	31		1.164	5	Feb	0.941	31		1.106
6		0.959	32	Aug	1.032	6		0.931	32	Aug	1.089
7		0.939	33		0.997	7		0.962	33		1.095
8		0.934	34		1.022	8		0.931	34		1.074
9		0.923	35		1.040	9		0.939	35		1.012
10	Mar	0.935	36	Sep	0.996	10	Mar	0.940	36	Sep	1.092
11		0.944	37		0.994	11		0.943	37		1.026
12		0.963	38		1.023	12		0.929	38		1.033
13		0.960	39		1.005	13		0.921	39		1.017
14	Apr	0.933	40	Oct	1.013	14	Apr	0.935	40	Oct	1.029
15		0.902	41		1.040	15		0.949	41		0.995
16		0.923	42		1.032	16		0.976	42		1.025
17		0.947	43		1.037	17		0.979	43		1.003
18	May	0.964	44		1.059	18	May	0.991	44		0.982
19		0.980	45	Nov	1.052	19		1.002	45	Nov	0.972
20		0.975	46		1.052	20		1.005	46		0.957
21		1.049	47		1.151	21		1.020	47		0.958
22		0.973	48		1.031	22		1.090	48		0.943
23	Jun	0.979	49	Dec	1.033	23	Jun	1.033	49	Dec	1.021
24		0.982	50		1.015	24		1.045	50		0.921
25		0.967	51		1.114	25		1.069	51		0.917
26		0.993	52		1.132	26		1.076	52		0.889

Source: Sarasota County Planning Department, August, 1988.

*Apoossee - The Revised and Updated Sarasota County
Comprehensive Plan*

Attachment C: 100th Design-Hour Adjustment Factors ("K-Factors")

Average Annual Daily Traffic (AADT)	100th Hour Adjustment Factor (K-Factor)	Average Annual Daily Traffic (AADT)	100th Hour Adjustment Factor (K-Factor)
0 to 1999	0.1107	3000 to 31999	0.0965
2000 to 3999	0.1106	32000 to 33999	0.0964
4000 to 5999	0.1105	34000 to 35999	0.0958
6000 to 7999	0.1094	36000 to 37999	0.0914
8000 to 9999	0.1093	38000 to 39999	0.0912
10000 to 11999	0.1092	40000 to 41999	0.0911
12000 to 13999	0.1043	42000 to 43999	0.0901
14000 to 15999	0.1041	44000 to 45999	0.0899
16000 to 17999	0.1040	46000 to 47999	0.0898
18000 to 19999	0.1030	48000 to 49999	0.0849
20000 to 21999	0.1029	50000 to 51999	0.0848
22000 to 23999	0.1027	52000 to 53999	0.0846
24000 to 25999	0.0978	54000 to 55999	0.0836
26000 to 27999	0.0977	56000 to 57999	0.0835
28000 to 29999	0.0976	58000 to 59999	0.0834
		60000 +	0.0832

Source: Sarasota County Planning Department, August, 1988.

Section 3: Year 2010 Future Thoroughfare Plan

Facility	Facility Location	Laneage
Freeways/Expressways		
1. I-75 (S.R.93)	University Parkway to S.R. 681	8
2. I-75 (S.R.93)	S.R. 681 to DeSoto County Line	6
3. S.R. 681 (Venice Connector)	I-75 (S.R. 93) to U.S. 41 (S.R. 45)	6
Major Arterials		
1. 17th Street	Lockwood Ridge Road to Beneva Road	4
2. Airport Connector	DeSoto Road to University Parkway	6
3. Bee Ridge Road (S.R. 758)	U.S. 41 (S.R. 45) to I-75	6
4. Bee Ridge Road	I-75 to Bee Ridge Extension	4
5. Beneva Road	17th Street to U.S. 41 (S.R. 45)	4
6. Center Road	U.S. 41 (S.R. 45) to River Road	4
7. Clark Road (S.R. 72)	Swift Road to I-75 (S.R. 93)	6
8. Clark Road (S.R. 72)	I-75 (S.R. 93) to DeSoto County Line	2
9. DeSoto Road	U.S. 41 (S.R. 45) to Airport Connector	6
10. Englewood Road (S.R. 775)	U.S. 41 (S.R. 45) to Keyway Road	6
11. Englewood Rd./Indiana Ave.(S.R.775)	Keyway Road to Charlotte County Line	4
12. Fruitville Road (S.R. 789)	U.S. 301 (S.R. 683) to I-75 (S.R. 93)	6
13. Fruitville Road (S.R. 789)	I-75 (S.R. 93) to Bee Ridge Extension	4
14. Fruitville Road (S.R. 789)	Bee Ridge Extension to Verna Road	2
15. Honore Avenue	University Parkway to S.R. 681 (Venice Connector)	6
16. Jacaranda Boulevard	Laurel Road to Center Road	4
17. Keyway Road	Englewood Road (S.R. 775) to Pine Street	4
18. Laurel Road	U.S. 41 (S.R. 45) to Jacaranda Boulevard	4
19. Lockwood Ridge Road	University Parkway to 17th Street	4
20. Pine Street	River Road to Charlotte County Line	6
21. Pinebrook Road	S.R. 681 (Venice Connector) to Center Road	6
22. River Road	I-75 (S.R. 93) to Pine Street	4
23. Stickney Point Road (S.R. 72)	U.S. 41 (S.R. 45) to Swift Road	6
24. Toledo Blade Boulevard	I-75 (S.R. 93) to Charlotte County Line	4
25. University Parkway	Airport Connector to I-75 (S.R. 93)	6
26. University Parkway	I-75 (S.R. 93) to unnamed rd. 1.5 ml. east	4
27. U.S. 301 (S.R. 683)	University Parkway to 17th Street	6
28. U.S. 301 (S.R. 683)	17th Street to U.S. 41 (S.R. 45)	4
29. U.S. 41 By-Pass	U.S. 41 (S.R. 45) to U.S. 41 (S.R. 45A)	6
30. U.S. 41 (S.R. 45)	Manatee County Line to U.S. 301 (S.R. 683)	4
31. U.S. 41 (S.R. 45)	U.S.301 (S.R. 683) to Charlotte County Line	6
32. Venice Avenue	U.S. 41 By-Pass (S.R. 45A) to River Road	4
33. Verna Road	Fruitville Road to Manatee County Line	2

Continued on next page

Facility	Facility Location	Laneage
Minor Arterials		
1. 17th Street	U.S. 301 (S.R. 683) to Lockwood Ridge Road	4
2. 17th Street	Beneva Road to Honore Avenue	4
3. Bahia Vista Street	U.S. 41 (S.R. 45) to Cattlemen Road	4
4. Bee Ridge Rd./Bay Street (S.R. 758)	Osprey Avenue to U.S. 41 (S.R. 45)	4
5. Brown Road	University Parkway to Fruitville Road (S.R. 789)	4
6. Cattlemen Road	Fruitville Road (S.R. 789) to Proctor Road	4
7. Dearborn Street	Indiana Avenue (S.R. 775) to River Road	4
8. DeSoto Road	Airport Connector to Brown Road	4
9. Englewood Road	Indiana Avenue (S.R. 775) to Dearborn Street	2
10. Gulf of Mexico Drive (S.R. 789)	Manatee County Line to Ringling Boulevard	2
11. Higel Avenue	Siesta Drive (S.R. 758) to Midnight Pass Road (S.R. 758)	2
12. Jacaranda Boulevard	Center Road to Englewood Road (S.R. 775)	4
13. McIntosh Road	17th Street to U.S. 41 (S.R. 45)	4
14. Midnight Pass Road	Higel Avenue (S.R. 758) to Stickney Point Road (S.R. 758)	2
15. Proctor Road	U.S. 41 (S.R. 45) to Clark Road (S.R. 72)	4
16. Ringling Boulevard	Gulf of Mexico Drive (S.R. 789) to U.S. 41 (S.R. 45)	4
17. Siesta Drive (S.R. 758)	Higel Avenue (S.R. 758) to Osprey Street	2
18. Stickney Point Road (S.R. 72)	Midnight Pass Road (S.R. 758) to U.S. 41 (S.R. 45)	4
19. Swift Road	Bee Ridge Road (S.R. 758) to Clark Road (S.R. 72)	4
20. Tuttle Avenue	University Parkway to Bee Ridge Road (S.R. 758)	4
21. Bee Ridge Extension	Fruitville Road to Clark Road (S.R. 72)	4
22. Unnamed Road	University Parkway to Bee Ridge Road (S.R. 758)	4
23. Gissinger Boulevard	Indiana Avenue (S.R. 775) to North Port City Limits	4
24. Venice East Avenue Ext.	U.S. 41 (S.R. 45) to Keyway Road	4
Major Collectors		
1. 17th Street	U.S. 41 (S.R. 45) to U.S. 301 (S.R. 683)	2
2. Albee Farm Road	Laurel Road to U.S. 41 (S.R. 45)	4
3. Capri Isles Boulevard	Laurel Road to Venice Avenue	4
4. Colonia/Border/River Road	U.S. 41 (S.R. 45) to I-75 (S.R. 93)	4
5. Dearborn Street	Englewood Road to Indiana Avenue (S.R. 775)	2
6. Gantt Road	Proctor Road to Clark Road (S.R. 72)	4
7. Harbor Drive	Venice Avenue to Beach Road	4
8. Jackson Road	Venice Avenue to Center Road	4
9. Lockwood Ridge Road	17th Street to 12th Street	2
10. Lockwood Ridge Road	Webber Street to Clark Road (S.R. 72)	2
11. Longmeadow Boulevard	17th Street to Honore Avenue	4
12. Myrtle Street	U.S. 41 (S.R. 45) to Honore Avenue	4
13. Palmer Boulevard	Honore Avenue to Bee Ridge Extension	2
14. Palmer Ranch Parkway	Beneva Road to Honore Avenue	4
15. Livingstone Extension	U.S. 41 (S.R. 45) to Honore Avenue	4
16. Shade Avenue	Fruitville Road (S.R. 789) to Proctor Road	2
17. Webber Street	U.S. 41 (S.R. 45) to Cattlemen Road	4

Continued on next page

Facility	Facility Location	Laneage
18. Wilkinson Road	Swift Road to Cattlemen Road	2
19. Bay Street	U.S. 41 (S.R. 45) to Honore Avenue	4
20. Rockley Boulevard	Center Road to U.S. 41 (S.R. 45)	4
21. Beach Access Drive	U.S. 41 (S.R. 45) to Harbor Drive	4
22. Artists Avenue	Englewood Road to North Port City Limits	2
23. Auburn Road	Border Road to Venice Avenue	2
24. Hatchett Creek Boulevard	Pinebrook Road to Jacaranda Boulevard	2
25. Sarasota Square Boulevard	Beneva Road to McIntosh Road	4
26. Sawyer Road	Bee Ridge Road (S.R. 758) to Clark Road (S.R. 72)	2
27. Venice Avenue	Gulfwater to U.S. 41 By-Pass (S.R. 45A)	4
Minor Collectors		
1. 27th Street	U.S. 301 (S.R. 683) to Lockwood Ridge Road	2
2. Albee Road	Casey Key Road to U.S. 41 (S.R. 45)	2
3. Baffin Drive	Shamrock Drive to U.S. 41 (S.R. 45)	2
4. Beach Road	Ocean Boulevard to Midnight Pass Road	2
5. Blackburn Point Road	Casey Key Road to U.S. 41 (S.R. 45)	2
6. Casey Key Road	Blackburn Point Road to Albee Road	2
7. DeLeon Drive	U.S. 41 (S.R. 45) to Ortiz Boulevard	2
8. Gateway Avenue	Stickney Point Road (S.R. 72) to Gulf Gate Drive	2
9. Gulf Gate Drive	U.S. 41 (S.R. 45) to Beneva Road	4
10. Jackson Road	Border Road to Venice Avenue	2
11. Manasota Beach Road	Manasota Key Road to Englewood Road (S.R. 775)	2
12. Manasota Key Road	Manasota Beach Road to Charlotte County Line	2
13. Midnight Pass Road	Stickney Point Road (S.R. 72) to end	2
14. Ocean Boulevard	Higel Avenue (S.R. 758) to Beach Road	2
15. Old Venice Road	Bay Street to U.S. 41 (S.R. 45)	2
16. Ortiz Boulevard	DeLeon Drive to U.S. 41 (S.R. 45)	2
17. Richardson Road	Honore Avenue to Brown Road	2
18. Sawyer Loop Road	Clark Road (S.R. 72) to Clark Road (S.R. 72)	2
19. Shamrock Boulevard	U.S. 41 (S.R. 45) to Center Road	2
20. Shamrock Drive	Baffin Drive to U.S. 41 (S.R. 45)	2
21. Beach/Airport Drive	Harbor Drive to Airport Avenue	2
22. South Venice Boulevard	Lemon Bay Drive to U.S. 41 (S.R. 45)	2
23. Venice East Boulevard	Center Road to U.S. 41 (S.R. 45)	4
24. Hatchett Creek Drive	Hatchett Creek Boulevard to Center Road	2
25. Longwood Run Boulevard	DeSoto Road to University Parkway	2
26. Ashton Road	Sawyer Road to Gantt Road	2
27. Lockwood Ridge Road	Clark Road (S.R. 72) to Gulf Gate Drive	2
28. Haul Road	Laurel Road to Rustic Road	2

Section 4: Operating Levels Of Service Standards For The State Highway System



POLICY STATEMENT

Effective: November 28, 1988
Topic No.: 000-525-005-a
Reference: s. 339.155(6), F.S.
s. 334.044(2), F.S.
s. 334/044(21).F.S.

**OPERATING LEVEL OF SERVICE STANDARDS
FOR THE STATE HIGHWAY SYSTEM**

The Florida Department of Transportation shall plan, manage and operate the State Highway System consistent with the Florida Department of Transportation standards adopted in Standards # 525-000-005-a.

Kaye N. Henderson, P.E.,
Secretary



Approved:

Kaye N. Henderson, P.E.

Effective: November 28, 1988

Responsible Off.: Policy

Topic No.: 525-000-005-a

**Florida Department of Transportation
Operating Level of Service Standards for the State Highway System**

PURPOSE: To update the department's acceptable minimum operating level of service standards for the State Highway System.

AUTHORITY: Section 339.155(6), s. 334.044(2), and s. 334.044(21), F.S.

BACKGROUND: In September 1986, the department established, through the Florida Transportation Plan, acceptable minimum operating level of service standards for the State Highway System. These standards require updating to provide direction to department personnel on issues related to the preparation and implementation by local governments of the comprehensive plans required by Chapter 163, F.S. These updated standards shall be published in the next update of the Florida Transportation Plan and reflected in the agency operating policies in the next update of the Program and Resource Plan. The standards reflect a broad consensus on land-use/transportation relationships, and were developed in cooperation with each of the FDOT districts, other state agencies, MPO's, RPC's, professional organizations, and local governments.

STANDARDS: The following standards are hereby adopted for use by central and district offices for developing long-range transportation plans, program policies, procedures, and guidelines; for providing technical assistance; for reviewing and commenting on local government comprehensive plans and developments of regional impacts; and for reporting system conditions on the State Highway System.

Topic No.: 525-000-005-a
Page 2 of 3

STATEWIDE MINIMUM ACCEPTABLE OPERATING LEVEL
OF SERVICE STANDARDS FOR THE STATE HIGHWAY SYSTEM¹

Roadway Type ²	Existing Urbanized Areas ³	Other Existing Cities ⁴	Transitioning Urbanized or Incorporated Areas ⁵	Rural Areas ⁶
Freeways	D	C	C	C
Principal Arterials	D	C	C	C
Minor Arterials & Others	E	D	D	D
SPECIAL CONSIDERATIONS				
	Special Transportation Areas ⁷	Parallel to Exclusive Transit Facility ⁸	Constrained Facility ⁹	Backlogged Facility ¹⁰
Freeways	D	D	Maintain ¹¹	Maintain & Improve ¹²
Principal Arterials	E	E	Maintain	Maintain & Improve
Minor Arterials & Others	E	E	Maintain	Maintain & Improve

1 - The operating levels of service designate lowest quality design hour (30th highest hour) operating conditions from the present through a 20-year planning horizon. These standards are to be used for general planning applications and should not be used for detailed design or traffic operation analyses. For corresponding traffic volumes for each level of service, consult the Department's level of service maximum volumes tables.

The following table gives the general relationship between the level of service letters (A,B,C,D,E, and F) and the average travel speed during the peak hour on typical sections of freeways and arterial highways in Florida.¹³

AVERAGE TRAVEL SPEED DURING THE PEAK HOUR

LEVEL OF SERVICE	FREEWAYS/INTERSTATE HIGHWAYS (IN MILES PER HOUR)	ARTERIAL HIGHWAYS (IN MILES PER HOUR)
A	greater than 59	greater than 34
B	from 57 to 59	from 28 to 34
C	from 54 to 56	from 22 to 27
D	from 46 to 53	from 17 to 21
E	from 30 to 45	from 13 to 16
F	less than 30	less than 13

Explanatory footnotes 2-13 are on the back.

STATEWIDE MINIMUM ACCEPTABLE OPERATING LEVEL OF SERVICE
STANDARDS FOR THE STATE HIGHWAY SYSTEM (cont.)

2. Roadway type is based on functional classification categories as presented in Chapter 334 F.S.; freeways are fully controlled limited access principal arterials.
3. An area consisting of an incorporated place and adjacent densely settled surrounding area that together have a minimum population of 50,000. These areas are initially established by the U.S. Bureau of Census with the decennial census and for transportation purposes adjusted slightly by MPO's/FDOT/FHWA. For transportation planning purposes, the present day boundaries may be updated by an MPO using U.S. Bureau of Census urbanized area criteria.
4. Any incorporated city outside an existing urbanized area.
5. Existing generally undeveloped areas projected to become parts of urbanized areas or other cities (see footnotes 3 and 4) in the next approximately 20 years. In general, these boundaries may be obtained from the urbanized boundaries established by MPO's using U.S. Bureau of Census urbanized area criteria in urbanized areas and from "urban" land use boundaries in the future land use map of local government comprehensive plans developed by local governments for other areas.
6. Areas currently and projected in the next approximately 20 years not having urban or urbanized characteristics described in footnotes 3, 4 and 5.
7. Compact geographic areas in which growth management considerations outweigh the Department's policy of operating the State Highway System at the minimum acceptable levels of service appearing in this table. Conceptually, STAs may include central business districts, outlying business districts, Area-wide Developments of Regional Impact and regional activity centers; they do not apply to whole cities or to strip development along individual highway corridors.
8. Roadways generally parallel to and within one half mile of a transit facility operating on exclusive transit facility and serving home/work trips. Currently this category includes Tri-County Commuter Rail and Metrorail. Highway with exclusive bus lanes could be included. Downtown people mover facilities and highways with high occupancy vehicle lanes are not included.
9. A roadway, regardless of transportation needs, which is constrained from adding at least two additional through lanes. Physical constraints primarily involve intensive land use development adjacent to the roadway making expansion cost prohibitive or when the Department's maximum through lane standards are already achieved. Only if the constrained facility is not currently operating at a minimum acceptable operating speed, does the maintain standard apply.
10. A roadway which is not constrained, is not scheduled for major capacity improvements in the Department's 5-Year Work Program and which does not currently meet the minimum acceptable levels of service appearing in this table.
11. The Department and local governments will commit to not further degrade operating conditions of the roadway below the current average travel speed.
12. The Department and local governments will commit to not further degrade operating conditions of the roadway below the current average travel speed until the roadway is upgraded. After roadway or operational improvements are made, the roadway should operate at or above the adopted minimum standards.
13. Level of service criteria and definitions are obtained from the 1995 Highway Capacity Manual.

APPENDIX F: AVIATION, PORT AND RAIL

Section 1: Aviation Planning Efforts, 1968-1987

1968

"Long-Range Airport Master Plan," Bristol-Staford-Thomson Associated Planners and Engineers.

Recommends existing airport be expanded to satisfy area needs until 1975, and that a new site for a commercial airport be chosen to commence operations in 1975. The present facility would then be used to accommodate general aviation needs in the area.

1969

"Regional Airport System Plan," Tampa Bay Regional Planning Council.

Tampa Bay Regional Planning Council reinforces the 1968 plan; recommends selection of a new airport site.

1970

"Airport Site Selection Study," Connell Associates, Inc.

Recommends a site ten times greater in size than Sarasota-Bradenton Airport be located nine miles further east. (In subsequent Sarasota County referendum, voters chose to expand the existing facility in lieu of such relocation.)

1972

"National Airport System Plan," Federal Aviation Administration, (FAA).

Identifies airport development projects on which federal funds may be spent; indicates major expansion projects at present site; recommends a new general aviation airport for the area, but not a new air carrier airport.

1975

"Florida Aviation System Plan for the Tampa Bay Region" (FASP), Florida Department of Transportation.

Based upon projected demand, a reliever airport for Sarasota-Bradenton is recommended: a general aviation airport having one runway, located along I-75 east of Sarasota-Bradenton Airport, with the capacity to expand into an air carrier facility if and when air service demands require such expansion.

1976

"Airport Master Plan," Greiner Engineering Sciences, Inc., and Adley Associates, Inc.

Proposed improvement and utilization of Sarasota-Bradenton Airport until 1995, when needs and opportunities for a new airport would be investigated. (Public opposition led the Airport Authority to seek a grant to further study the entire relocation problem.)

1979

"Master Plan Report for Sarasota-Bradenton Airport," Greiner Engineering Sciences, Inc., and Adley Associates, Inc.

Proposes several alternative development strategies to Citizens Advisory Board and Airport Authority. Consultants subsequently directed to prepare the long-range master plan based upon continued, but controlled growth of air carrier and general aviation services through 1995 at the present site while planning for reliever general aviation satellite airport(s) in the Sarasota-Manatee area.

1980

"Surface Transport," Florida Department of Transportation.

Examines problems created by intensive use of U.S. Highways 41 and 301, which provide primary access to the Sarasota-Bradenton Airport; evaluates possible impact of I-75 as an airport access.

"Sarasota-Manatee Area Transportation Study" (SMATS), SMATS staff and Technical Advisory Committee members.

Purpose of study (as related to the airport) is to ensure that airport-generated traffic does not further stress the counties' transportation facilities; the SMATS Unified Work Program monitors the Airport's activities.

"Future Airport Capacity and Site Investigation Study," Sarasota-Manatee Airport Authority.

Outlines the scope of work necessary to determine whether a new airport site is desirable; establishes organization and procedures for undertaking the proposed study; provides cost estimates of a work program for the study.

1982

"Future Airport Capability and Site Investigation Study," Greiner Engineering Sciences, Inc.

Determines the most efficient way in which the Sarasota-Manatee Airport Authority can provide facilities for the safe, efficient operation of aviation within the two-county area; examines relocation possibilities, the construction of satellite airport(s), and the role of the existing airport site, and presents the pro's and con's of each scenario.

1983

"Addendum to the Future Airport Capability and Site Investigation Study," Greiner Engineering Sciences, Inc.

Presents preferred sites for a general aviation airport in the Sarasota-Manatee area, based on the 1982 study.

"Airport Noise Control and Land Use Compatibility Study for Sarasota-Bradenton Airport, Technical Report and F.A.R. Part 150 Submission Documents," Coffman Associates.

Identifies the areas negatively impacted by aircraft noise and evaluates alternatives for mitigation.

1985

"Development of Regional Impact, Sarasota-Bradenton Airport, New Terminal Complex," Sarasota-Manatee Airport Authority.

Proposes an airport improvement project entailing the construction of a replacement terminal; the modification of the internal roadway network; the expansion of existing parking lots; the relocation of several on-site facilities; the expansion and replacement of the aircraft apron area; and the replacement of the airport sewer collection system and surface drainage improvements.

1986

"Airport Noise Control and Land Use Compatibility Study for Sarasota-Bradenton Airport, Noise Exposure Maps, F.A.R. Part 150 Submission Documents," Coffman Associates.

Addresses aircraft noise controls and land use compatibility.

"Continuing Florida Aviation System Planning Process, Statewide Forecast Technical Supplement," Reynolds, Smith and Hills; COMSIS Corporation; and PRC Engineering.

Provides an overview of State, County, and demand center socio-economic forecasts and future land use patterns. Additionally, the document develops forecast for Statewide aviation demand.

1987

"West Central Florida Metropolitan Aviation System Plan, Report for the Continuing Florida Aviation System Planning Process," (CFASPP), Reynolds, Smith and Hills; COMSIS Corporation; and PRC Engineering.

The report documents the planning process used to achieve consensus on area aviation needs, and presents these needs in a system context.

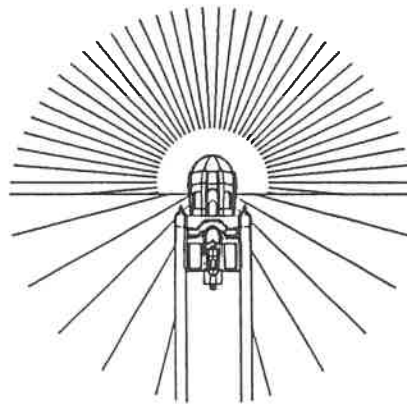
"Sarasota-Bradenton Airport Master Plan," Delta and Associates, Inc.

The Plan provides recommendations to assist the Sarasota-Manatee Airport Authority in making decisions concerning airport operations, defining types of development needed to meet the short and long term air transportation needs of the area, and ensuring the Airport's compatibility with its environs.

Section 2: Sarasota-Bradenton Airport - Obstructions

The following correspond with obstructions indicated on Figure 55: Sarasota-Bradenton Airport - Existing Facilities, and Figure 57: Sarasota-Bradenton Airport - Future Aviation Facilities, 2004 (Chapter 7, Pages 318 and 326):

1	U.S. 41	17	Sign
2	Trees	18	Tree
3	Tree	19	Trees
4	Tree	20	Fence
5	Trees	21	Obstruction Light on Fence
6	Approach Light	22	U.S. 301
7	Cocoanut Avenue	23	Trees
8	Railroad Tracks	24	U.S. 301
9	Tank	25	Building Vent
10	Antenna	26	Building
11	Antenna	27	Antenna
12	Antenna	28	Tree
13	Water Tank	29	Building
14	U.S. 41	30	Building
15	Tree	31	Building
16	Sign on Building		



APPENDIX G: HOUSING

Section 1: Housing Planning Efforts, 1970-1987

1970

When Apoxsee was compiled prior to its adoption in 1981, the "1970 Census of Housing" by the U.S. Department of Commerce was the latest comprehensive source of housing information for Sarasota County derived from actual house-to-house surveys. It was updated by the 1980 Census of Housing.(4)

1971

"Neighborhood Analysis," by Milo Smith & Assoc., Inc., was prepared as part of Sarasota County's comprehensive planning process. The report provides an evaluation of 32 sub-County planning units, and includes the housing conditions in each. The report finds few housing deficiencies and recommends normal code enforcement procedures as remedies to those few.(5)

1975-1976

The Sarasota County HUD Programs Office was established in 1975, and in 1976 the Sarasota County Low Income Advisory Board was formed by County Resolution. As part of the federally funded Community Development Block Grant Program (CDBG) a Housing Assistance Plan (HAP) was developed, which indicated "Target Areas" of low income households requiring neighborhood improvements.(6)

1977

The Southwest Florida Regional Planning Council published "Housing Report" in this year. It identified housing needs of the Southwest Florida Region (Charlotte, Collier, Hendry, Glades, Lee, and Sarasota Counties), projected the region's needs to the year 2000, and provided amendments to the Council's housing goals, objectives, and policies.

The Florida Departments of Community Affairs and Administration published the "Housing and Community Development Element" of the State comprehensive plan. This document established goals, objectives and policies relating to housing and community development concerns in Florida.(7)

1979

The Sarasota County Property Appraiser's Office published the first annual "Sarasota County Survey of Real Estate Economic Indicators." Included is information on the number and type of housing units in Sarasota County as of 1978.

The Southwest Florida Regional Planning Council released the first draft of an "Areawide Housing Opportunity Plan" (AHOP). This was designed to distribute available housing assistance funds throughout Southwest Florida.(8)

The Southwest Regional Planning Council published The Impact of Local Codes and Ordinances on Housing in Southwest Florida.(9)

1980

The Southwest Florida Regional Planning Council published the following reports:

Area Wide Housing Opportunity Plan, Draft, June 1980, a continuation of the effort initiated in 1979.

Migrant and Farmworker Housing Report, 1980, the report identifies the farmworker housing situation, recent trends, and presents solutions to problems.

Southwest Florida Mobile Home Report, 1980, which examines pertinent issues regarding mobile home living in Southwest Florida.(10)

1981

Neighborhood Investment - Priority Program, by the Southwest Florida Regional Planning Council. The report intends to further National Urban Policies at the regional level.(11)

1982

Housing Assistance in Southwest Florida, 1982, by the Southwest Florida Regional Planning Council. An updated (1982) inventory of government-assisted housing units available to very low and low income residents of Southwest Florida.(12)

1983

Sarasota County adopted the Southern Standard Building Code, 1982 edition, through Ordinance No. 83-63. The Code was modified to reflect the County's needs, and to address occupancy safety of buildings. This is of particular importance, as the County does not have a Housing Code.

Further, the Sarasota County Property Appraiser's Office published annually from 1979 to 1987 the Statistical Report for Sarasota County, which include real estate surveys, and economic indicators, and general information regarding the local housing market.(13)

1985

HRS District Eight Homeless Task Force Report, April 17, 1985. Documents the problem in the southwest region of Florida, describes existing programs and resources and includes recommendations.(14)

1987

Federal Regulations Governing the Emergency Shelter Grants Programs as Authorized by the Stewart B. McKinney Homeless Assistance Act of 1987. Housing and Urban Development, October, 1987. Describes the type of assistance HUD can provide to states, local governments and non-profit organizations for the provision of emergency housing needs of the homeless.(15)

A Comprehensive Homeless Assistance Plan for the State of Florida. Department of Health and Rehabilitative Services, Tallahassee, October 1987. A Statewide plan for the homeless condition in Florida. (16)

The Federal Emergency Shelter Grants Program. Department of Health and Rehabilitative Services of the State of Florida, December 24, 1987. Describes assistance to local governments in their housing efforts towards the homeless.(17)

Final Report, Affordable Housing Study Commission, December 31, 1987. Analyzes solutions and programs which address Florida's acute need for housing for the very low, lower and moderate income households.(18)

Section 2: Housing Costs

Rapidly increasing housing costs in Sarasota County represent a decrease in the availability of affordable housing particularly for the very low, lower, and moderate income households, as documented in the following Tables:

- G-1: 1980 Monthly Owner Costs as a Percentage of Income for Owner-Occupied Housing Units;
- G-2: 1980 Monthly Costs for Owner-Occupied Units, Sarasota County;
- G-3: Monthly Gross Rent for Renter-Occupied Units;
- G-4: 1980 Rent To Income Ratio for Renter-Occupied Housing Units; and

- G-5: Value of Owner-Occupied Housing Units.

In 1980, the median Countywide household income was \$15,069. The affordability factor in 1980 was 25 percent of monthly income for monthly housing expenses. In the early 1980's this affordability factor increased to 30 percent.

Please note that the total number of housing units vary (less than 1 percent). The information of these tables was available through various Tables of the 1980 Census; however, some of these tables presented actual counts and other represented estimates based on samples.

Table G-1: 1980 Monthly Owner Costs as a Percentage of Income for Owner-Occupied Housing Units

Total Sarasota County - Selected Monthly Costs										
Income Range	Less than 25% of Income		25% to 29% of Income		30% of More of Income		Not Computed		Total Owner-Occup. Units	Median %
	Units	%	Units	%	Units	%	Units	%		
<\$10,000	5,063	47.2	1,006	8.5	4,621	39.0	632	5.3	11,862	25.1
\$10,000- - \$19,999	11,409	72.6	1,564	9.9	2,773	17.5	0	0	15,836	16.0
\$20,000 or more	16,895	90.8	879	4.7	841	4.5	0	0	18,615	12.2
Total									46,313	
Unincorporated Sarasota County - Selected Monthly Costs										
Income Range	Less than 25% of Income		25% to 29% of Income		30% of More of Income		Not Computed		Total Owner-Occup. Units	Median %
	Units	%	Units	%	Units	%	Units	%		
<\$10,000	3,700	46.6	658	8.3	3,102	39.1	472	6.0	7,932	24.7
\$10,000- - \$19,999	8,247	71.7	1,167	10.2	2,086	18.1	0	0	11,500	15.4
\$20,000 or more	12,302	89.9	665	4.9	717	5.2	0	0	13,684	12.2
Total									33,116	

Source: 1980 Census, Table H-8 (Estimates based on a sample), Table P-11; and Sarasota County Planning Department, 1987.

Table G-2: 1980 Monthly Costs for Owner-Occupied Units, Sarasota County

	Number	%		Number	%
Owner Occupied Housing Units	46,313	100.0			
With a Mortgage	26,477	57.2	Not Mortgaged	19,836	42.8
Less than \$100	366	0.8	Less than \$100	9,472	20.5
\$100 - \$199	4,002	8.6	\$100 - \$199	8,828	19.1
\$200 - \$299	6,706	14.6	\$200 or more	1,536	3.2
\$300 - \$399	6,322	13.6	Median	\$103	-
\$400 - \$599	6,112	13.2			
\$600 or more	2,969	6.4			
Median	\$331	-			

Source: 1980 Census, Table H-8 (Based on Estimates); and Sarasota County Planning Department, 1987.

Table G-3: Monthly Gross Rent for Renter-Occupied Units

Year		Sarasota County		Unincorp. County	
		No.	%	No.	%
1970	Median	\$102	-	\$123	-
1980	Specified Renter Occupied Units	19,536	100.0	9,143	100.0
	Less then \$ 80	242	1.2	16	0.2
	\$ 80 to \$ 99	330	1.7	81	0.9
	\$100 to \$149	1,044	5.3	385	4.2
	\$150 to \$199	1,992	10.2	631	6.9
	\$200 to \$249	2,888	14.8	1,177	12.9
	\$250 to \$299	3,752	19.2	1,824	19.9
	\$300 to \$349	2,643	13.6	1,178	12.9
	\$350 to \$399	2,240	11.5	1,225	13.4
	\$400 or more	3,128	16.0	1,841	20.1
	No Cash Rent	1,277	6.5	785	8.6
	Median	\$ 286	-	\$ 306	-
1986	Median	\$ 440	-	N/A	-

Source: U.S. Census, 1970, 1980; and Sarasota County Property Appraiser's Office, 1987.

Table G-4: 1980 Rent To Income Ratio for Renter-Occupied Housing Units

Total Sarasota County - Rent to Income Ratio										
Income Range	Less than 25% of Income		25% to 29% of Income		30% of More of Income		Not Computed		Total Renter Occup. Units	Median %
	Units	%	Units	%	Units	%	Units	%		
< 10,000	626	7.6	516	6.2	6,086	73.8	1,019	12.4	8,247	40.8
\$10,000 - \$19,999	3,310	45.2	1,372	18.8	2,305	31.5	329	4.5	7,316	25.7
\$20,000 or more	3,256	82.0	344	8.6	71	1.8	302	7.6	3,973	16.5
Total									19,536	
Unincorporated Sarasota County - Rent to Income Ratio										
Income Range	Less than 25% of Income		25% to 29% of Income		30% of More of Income		Not Computed		Total Renter Occup. Units	Median %
	Units	%	Units	%	Units	%	Units	%		
< 10,000	161	4.7	178	5.2	2,573	75.8	482	14.2	3,394	50.4
\$10,000 - \$19,999	1,431	39.3	786	21.6	1,232	33.8	194	5.3	3,643	26.8
\$20,000 or more	1,622	77.0	197	9.4	48	2.3	239	11.3	2,106	17.0
Total									9,143	

Source: 1980 Census, Table H-8 (Estimates based on a sample), and Table P-11; and Sarasota County Planning Department, 1987.

Table G-5: Value of Owner-Occupied Housing Units

Year	Value	Sarasota County		Unincorp. County	
		No.	%	No.	%
1970	Median	\$17,200	-	N/A	-
1980	Value of Specified Owner-Occupied Units	46,419	100.0	33,084	100.0
	Less than \$10,000	243	0.5	126	0.4
	\$10,000 to \$19,999	1,540	3.3	760	2.3
	\$20,000 to \$29,999	4,146	9.0	2,295	6.9
	\$30,000 to \$39,999	6,984	15.0	4,385	13.2
	\$40,000 to \$59,999	15,781	34.0	11,591	35.0
	\$60,000 to \$99,999	12,138	26.2	9,914	30.0
	\$100,000 to \$199,999	4,638	10.0	3,459	10.5
	\$200,000 or more	949	2.0	554	1.7
	Median	\$51,900	-	\$54,400	-
1986	Mean	\$104,421*	-	N/A	-

Source: U.S. Census 1970, 1980; (Table H-1); and Sarasota County Planning Department, 1987.

*Sarasota County Property Appraiser's Office, 1987

Section 3: Housing Conditions

Housing condition refers to the classification of a housing unit as standard or substandard (deteriorated or dilapidated) based on the locally determined definitions of "standard" and "substandard" housing conditions. Sarasota County's definition for "substandard" housing is:

- "a dwelling unit that does not meet the criteria for an acceptable standard of living, i.e., through lack of maintenance, age of unit, neglect, lack of (part or all) plumbing facilities, or overcrowded conditions."

The extent of the indicator included in this definition determines whether a unit is just deteriorated or dilapidated. Due to lack of current housing information, this section demonstrates the presence of these indicators without presenting a count of dilapidated or deteriorated units.

This section includes:

- Table G-6: 1980 Structural Condition of Housing, Unincorporated Sarasota County; and
- Figure G-1: Concentrations of Substandard Housing Conditions In Unincorporated Sarasota County.

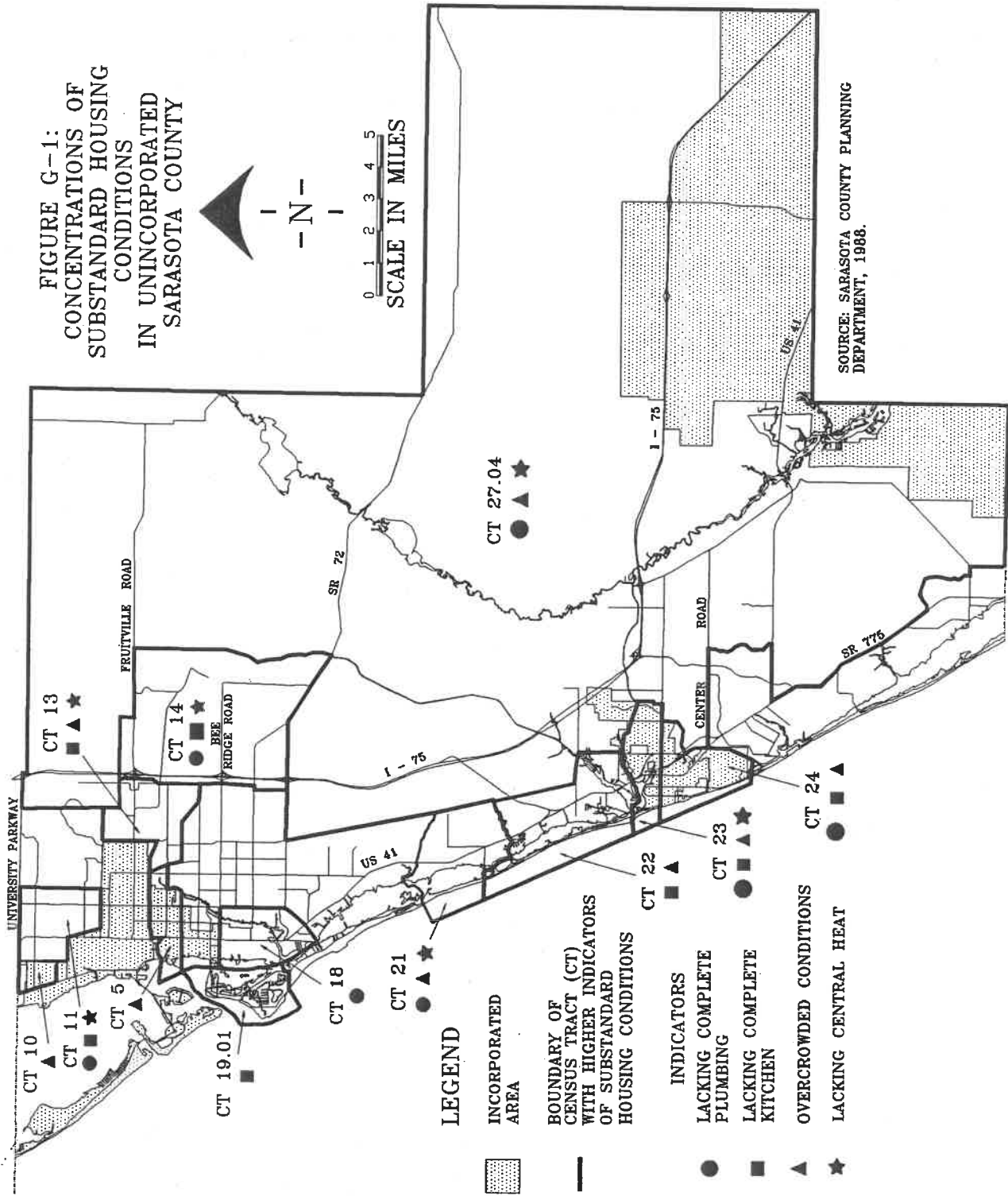
Table G-6: 1980 Structural Condition of Housing, Unincorporated Sarasota County

Census Tract	Year-Round Housing Units	<i>Substandard Conditions</i>							
		Lacking Complete Plumbing (1)		Lacking Complete Kitchen Facilities (1)		Lacking Central Heating (1)		Overcrowding More than 1 Person/Rm. (2)	
		No.	%	No.	%	No.	%	No.	%
Total Unin. County	70,288	191	0.3	357	0.5	461	0.7	929	1.3
4(pt)	17	-	-	-	-	-	-	-	-
5(pt)	1,218	12	0.1	6	0.5	37	3.0	15	1.2
6(pt)	981	1	0.1	-	-	-	-	4	0.4
9(pt)	59	-	-	-	-	-	-	-	-
10(pt)	18	-	-	-	-	8	44.4	-	-
11	3,144	17	0.5	18	0.6	33	1.0	187	5.9
12	2,947	2	0.01	12	0.4	25	0.8	30	1.2
13	866	7	0.8	-	-	22	2.5	23	2.6
14	2,077	11	0.5	11	0.5	24	1.2	77	3.7
15	4,987	3	0.1	28	0.6	13	0.3	67	1.3
16	3,970	6	0.1	22	0.5	-	-	10	0.2
17	3,687	8	0.2	7	0.2	12	0.3	56	1.5
18	5,228	27	0.5	67	1.3	46	0.9	58	1.1
19.01 (pt)	3,452	5	1.4	7	0.2	20	0.5	23	0.6
19.02	5,342	6	0.1	17	0.3	24	0.4	14	0.2
20	7,341	11	0.1	38	0.5	-	-	49	0.6
21	1,196	7	0.6	6	0.5	23	2.0	28	2.3
22	5,204	23	0.4	11	0.2	52	10.0	81	1.6
23(pt)	221	1	0.4	7	3.1	11	5.0	1	0.4
24(pt)	682	2	0.3	7	1.0	18	2.6	7	1.0
25	7,746	5	0.1	10	0.1	35	0.5	60	0.8
26	4,690	18	0.4	14	0.3	39	0.8	59	1.3
27.04(pt)	4,706	19	0.4	50	1.0	19	0.4	80	1.7

Note: (1) 1980 Census, Table H-7 (Estimates based on a sample); (2) 1980 Census, Table H-1.

Source: U.S. Census, 1980; and Sarasota County Planning Department, 1987.

FIGURE G-1:
CONCENTRATIONS OF
SUBSTANDARD HOUSING
CONDITIONS
IN UNINCORPORATED
SARASOTA COUNTY



Section 4: Mobile Homes

The number of mobile homes is increasing in Sarasota County. The increasing costs of "conventional" housing encourages the use of mobile homes. The mobile home is the private sector's affordability response to the ever-increasing "conventional" housing costs.

This section includes:

- Table G-7: Mobile Home Parks In Unincorporated Sarasota County, 1986; and
- Figure G-2: Location of Mobile Home Parks in Unincorporated Sarasota County, 1986.

Table G-7: Mobile Home Parks In Unincorporated Sarasota County, 1986

Site No.*	Name	Location	Census	
			Tract	Capacity
1	Meadows Motel and Trailer Park	9071 South Tamiami Trail, Venice	21	20
2	Sara Bay Trailer Park	718 South Tamiami Trail, Osprey	21	24
3	Sarasota Bay Mobile Home Park	42 West Oak Street, Osprey	21	60
4	Palm N Pines Trailer Village	255 North Tamiami Trail, Nokomis	22	100
5	Shady Haven Mobile Home Park	150 Englewood Road, Englewood	26	102
6	Hostetler's Trailer Park	3471 Bahia Vista Street, Sarasota	13	21
7	Sarasota Mobile Home Park	2100 East Laurel Street, Englewood	22	677
9	Oak Grove Trailer Park	1800 Englewood Road, Englewood	26	181
10	Estrada Trailer Park	3512 Estrada Street, Sarasota	19.01	8
11	Sarasota Land N Trailer Park	1400 South Kaufman Avenue, Sarasota	16	15
12	Mobile Estates-Noria Corp.	6741 South Tamiami Trail, Sarasota	20	281
13	Spanish Lakes Mobile Home Park	1340 North Tamiami Trail, Nokomis	22	396
14	Cedar Cove Trailer Court	7020 Captain Kidd Avenue, Sarasota	20	72
17	Whispering Pines Trailer Court	7042 South Tamiami Trail, Sarasota	20	27
18	Gulf Beach Trailer Park	8862 Midnight Pass Road, Sarasota	19.02	46
20	Royal Palms Mobile Home Park	8705 South Tamiami Trail, Sarasota	20	163
21	Shady Oaks Trailer Park	1350 File Street, Sarasota	5	7
22	Sarasota Millers Trailer Park	3300 Bahia Vista Street, Sarasota	5	9
23	Earl's Sunny South Trailer Park	2100 Doud Street, Sarasota	20	36
24	Southwinds Mobile Home Park	6103 South Tamiami Trail, Sarasota	18	274
26	Pine Ridge Ct. Mobile Home Park	2320 Bee Ridge Road, Sarasota	4	126
27	Phillippi Shores Village and Yacht	500 Phillippi Shores Drive, Sarasota	18	143
28	Crescent Beach Trailer Park	6620 South Tamiami Trail, Sarasota	20	112
30	Arbors Mobile Home Park	515 South Tamiami Trail, Osprey	21	185
31	Camelot Lakes	5700 Camelot Lakes Parkway	14	534
34	Sarasota Ringling Oaks MHP	2736 Old Bradenton Road, Sarasota	11	58
36	Myakka Mobile Home Court	9051 South Tamiami Trail, Venice	21	73
37	Alameda Isles Mobile Home Park	1 Alameda Grande Street, Englewood	26	355
42	Deer Creek Trailer Park	201 Horton Avenue, Englewood	26	94
43	Laurel Mobile Home Park	1390 Laurel Park, Laurel	22	17

Note: *HRS assigned numbers to each site; also, the numbers correspond with those on Figure G-2

Table G-7: Mobile Home Parks In Unincorporated Sarasota County, 1986 (Continued)

Site No.*	Name	Location	Census	
			Tract	Capacity
45	Sarasota Palm Terrace MHP	3223 N. Lockwood Ridge Rd., Sarasota	11	223
48	Venice Ranch Mobile Home Est.	2496 Sylvia Lane, Venice	27.04	213
50	Terra Cove Mobile Home Park	1060 Laurel Road East, Nokomis	22	108
52	Florida Pine Mobile Home Court	150 Satulah Circle, Venice	27.04	129
53	Windmill Village South	3000 North Tuttle Avenue, Sarasota	11	306
55	Rusty's Trailer Park	2911 N. Lockwood Ridge Rd., Sarasota	11	20
56	Aristocrat Trailer Court	Nokomis	22	25
57	Englewood Greens Mobile Village	250 North McCall Road, Englewood	26	30
59	Sarasota Orange Acres MHP	5800 Clark Road, Sarasota	27.04	235
60	Buckingham Club	1919 Buccaneer Drive, Sarasota	20	104
64	Bay Front Trailer Park	922 Sarabay Drive, Osprey	21	26
65	Alston's Cottages Trailer Park	2179 South Tamiami Trail, Venice	25	7
66	Havener Trailer Park	6637 Avenue A, Sarasota	18	17
67	Bahia Vista Estates	3901 Bahia Vista Street, Sarasota	16	251
68	Venice Isle Mobile Estates	600 Cortina Boulevard, Venice	27.04	1003
69	Brook to Bay Trailer Ranch	1891 Englewood Road, Englewood	27.04	166
75	Sarasota Japanese Gardens	6181 Teahouse Road, Venice	27.04	414
76	Happy Haven Mobile Home Park	124 Happy Haven Drive, Osprey	21	65
77	Tri State Trailer Park	24 East Bay, Osprey	21	41
79	Pine Shores Trailer Park	6450 South Tamiami, Trail, Sarasota	18	330
80	Lake Village Mobile Home Park	400 Lake Drive, Nokomis	22	395
83	Windmill Village of Sarasota	4000 North Tuttle Avenue, Sarasota	11	471
84	Windward Isle Mobile Home Park	1 Catamaran Drive, Sarasota	14	157
85	Sarasota Park East MHP	8333 South Tamiami Trail, Sarasota	20	173
90	Karl Wallenda Trailer Park	3209 Henrietta Place, Sarasota	11	6
91	Bay Lakes Estates MHP	1200 East Colonia Lane, Nokomis	22	226
92	Sandalwood Family MHP	300 Sandpiper Drive, Venice	27.04	239
97	Venetian Mobile Home Park	8885 South Tamiami Trail, Sarasota	20	197
99	La Casa Mobile Community	300 El Prado, Venice	27.04	932
100	Polynesian Village MHP	1495 Alamander Street, Englewood	26	246
101	Lazy River Mobile Home Village	10500 South Tamiami Trail, Venice	21	354
102	King's Gate Club, Inc.	1800 Castle Drive, Nokomis	27.04	331
106	Camelot East Mobile Home Park	Intersection of I-75 and SR 72	14	134

Note: *HRS assigned numbers to each site; also, the numbers correspond with those on Figure G-2

Source: Department of Health and Rehabilitative Services, Sarasota County Public Health Unit, 1986; and Sarasota County Planning Department, 1987.

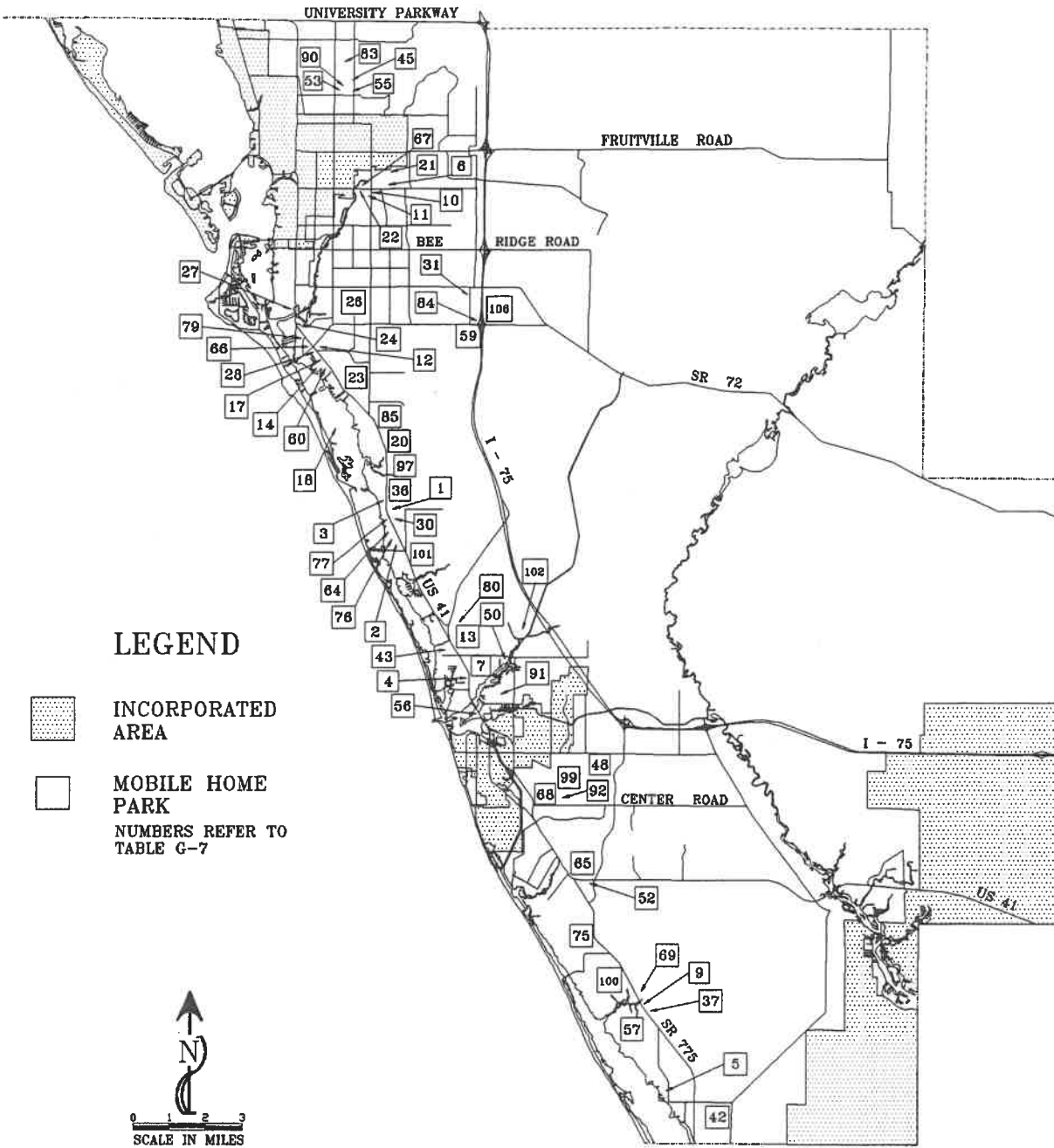


Figure G-2: Location Of Mobile Home Parks In Unincorporated Sarasota County, 1986

Source: Sarasota County Planning Department, 1988.

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Section 5: Group Home Facilities

Table G-8: Group Home Facilities In Unincorporated Sarasota County, 1987

Site No.*	Name	Location	Census		# Beds
			Tract	Type	
1	Bay Village of Sarasota	8400 Vamo Road, Sarasota	20	Nursing Home	107
2	Heritage Health Care Center	1026 Albee Farm Road, Venice	22	Nursing Home	120
3	Hillhaven Convalescent Center	5640 Rland Boulevard, Sarasota	27.04	Nursing Home	77
4	Manor Care of Sarasota	5511 Swift Road, Sarasota	17	Nursing Home	120
5	Regents Park of Sarasota	7848 Beneva Road, Sarasota	20	Nursing Home	53
6	Springwood Nursing Center	4602 Northgate Court, Sarasota	11	Nursing Home	120
7	Sunnyside Village Nursing Center	5201 Bahia Vista Street, Sarasota	13	Nursing Home	60
8	Antilles Manor	2466 Constitution Boulevard, Sarasota	18	ACLF	3
9	Beverly's Geri-Inn of Sarasota	75 St. Lucie Avenue, Sarasota	27.04	ACLF	3
10	County Aire	286 Havana Road North, Venice	27.04	ACLF	8
11	Crestwood Manor I	737 Crestwood Road, Englewood	26	ACLF	8
12	Crestwood Manor II	733 Crestwood Road, Englewood	26	ACLF	14
13	Elmrose Home	670 North Elm Street, Englewood	26	ACLF	10
14	Elsa's Home	4284 Arrow Avenue, Sarasota	4	ACLF	3
15	Home Sweet Home	Hyde Park (Between Tuttle/Beneva)	16	ACLF	3
16	La Casa Grande of Englewood	925 South River Road, Englewood	26	ACLF	64
17	Lakehouse East	4540 Bee Ridge Road, Sarasota	15	ACLF	197
18	Lakehouse West	3435 Fox Run Road, Sarasota	17	ACLF	225
19	Lemon Bay ACLF	Englewood	26	ACLF	16
20	Mary's Mini Manor	4104 King Richard Drive, Sarasota	4	ACLF	3
21	Perry West	445 West Perry Street, Sarasota	26	ACLF	8
22	Sabo's ACLF	324 South Drive, Nokomis	22	ACLF	3
23	Venwood Estates	2211 Englewood Road, Englewood	26	ACLF	7
24	Yates Retirement Home	4317 Arcade Street, Sarasota	15	ACLF	3
25	Eldercare Retirement Home	401 Albee Road West, Nokomis	22	ACLF	12
26	Fame Haven	6100 Palmer Boulevard, Sarasota	14	Runway Shltr/ ChldCr	20

Note: *Refers to Site No. on Figure G-3

Source: Department of Health and Rehabilitative Services, Sarasota County Public Health Unit; and Sarasota County Planning Department, 1987.

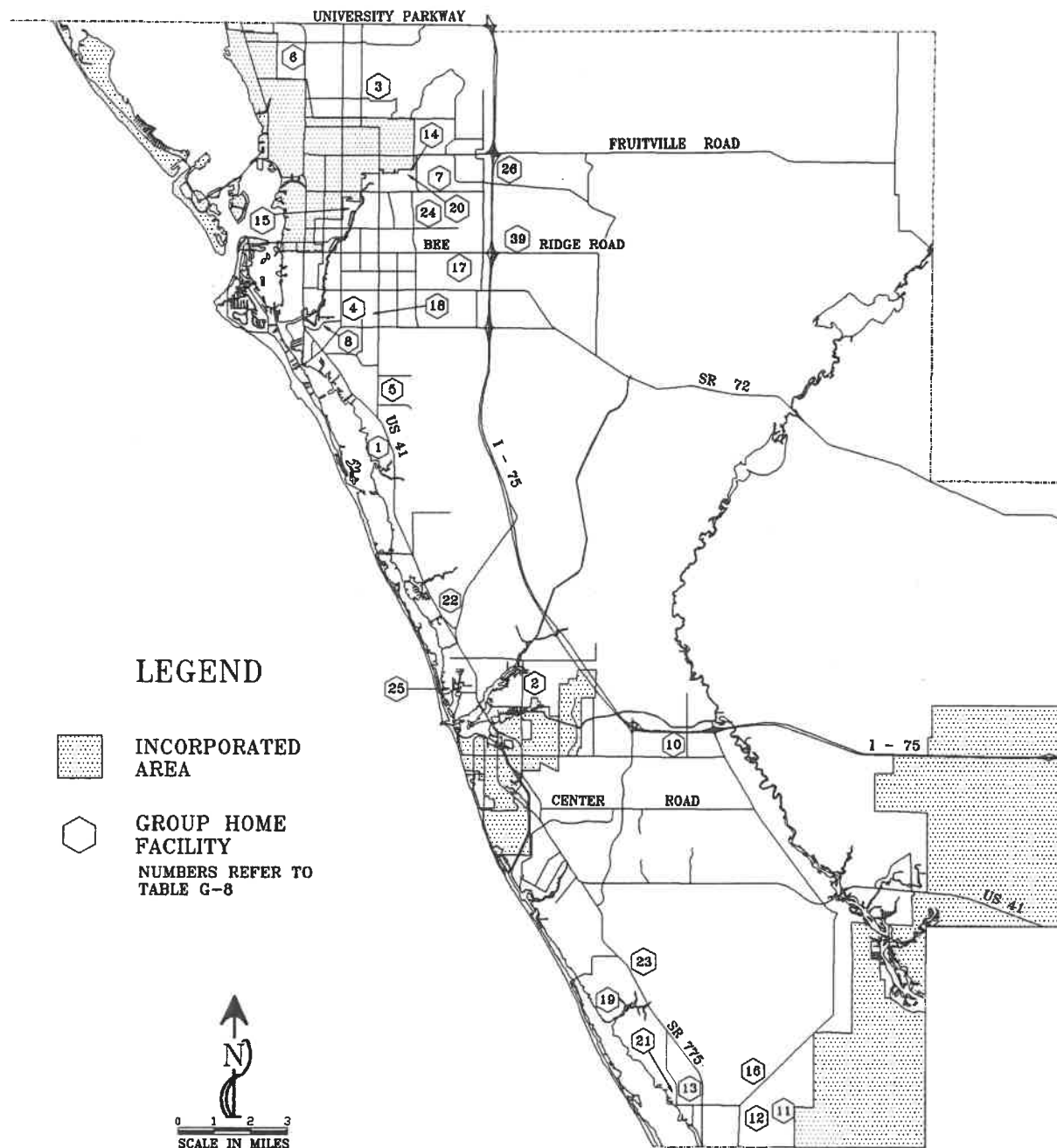


Figure G-3: Location Of Group Home Facilities In Unincorporated Sarasota County, 1987

Source: Sarasota County Planning Department, 1988
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Section 6: Household Size

Table G-6 shows the 1980 distribution of households by size and the average number of persons per household for Sarasota County.

The projected household size for the entire County is estimated by Woods and Poole, Consultants, Washington, D.C., 1987. The average persons per household (P/H) of the unincorporated County in 1980 was 2.33, while that of the entire County was 2.25, a difference of 4.0 percent. It is assumed that this 4.0 percent difference will continue in the fu-

ture. An application of the projected Countywide average persons per household yields the projected average persons per household for the unincorporated areas. Based on the declining projections of Countywide average household size, it is assumed that the ratio of the "3-4" persons and the "5+ persons" households to the total households will decline, while the ratio of the "1 person" and "2 person" households will increase. The household size was determined as follows:

If **A** = "1 person" households; **B** = "2 persons" households; **C** = "3-4 persons" households; and **D** = "5+ persons" households; then:

$$A_y = A_{1980} \left(\frac{\text{Average } P/H_{1980}}{\text{Average } P/H_y} \right) \left(\frac{\text{Total households}_y}{\text{Total households}_{1980}} \right)$$

where y is the year of projection (i.e., 1990, 1995, etc.)

$$\text{Example: } A_{1990} = A_{1980} \left(\frac{\text{Average } P/H_{1980}}{\text{Average } P/H_y} \right) \left(\frac{\text{Total households}_{1990}}{\text{Total households}_{1980}} \right)$$

$$B_y = B_{1980} \left(\frac{\text{Average } P/H_{1980}}{\text{Average } P/H_y} \right) \left(\frac{\text{Total households}_y}{\text{Total households}_{1980}} \right)$$

$$D_y = D_{1980} \left(\frac{\text{Average } P/H_y}{\text{Average } P/H_{1980}} \right) \left(\frac{\text{Total households}_y}{\text{Total households}_{1980}} \right)$$

$$C_y = \text{Total projected households } y = (A_y + B_y + D_y)$$

Table G-9: Households By Size, Sarasota County

Persons/Household	<i>Total Sarasota County</i>					
	1980	1990	1995	2000	2005	2010
Average	2.25	2.21	2.19	2.18	2.14	2.07
1 Person	22,552	31,974	36,469	39,953	44,991	51,375
2 Persons	42,506	60,265	68,736	75,304	84,799	96,833
3-4 Persons	18,375	24,430	26,350	29,088	29,671	27,278
5+ Persons	5,306	6,860	7,669	8,315	9,090	9,683
Total	88,739	123,529	139,224	152,660	168,551	185,169
	<i>Unincorporated County</i>					
Average	2.33	2.29	2.27	2.26	2.22	2.15
1 Person	12,157	18,050	20,832	23,040	25,913	29,016
2 Persons	27,600	40,978	47,295	52,307	58,829	65,876
3-4 Persons	12,728	18,690	20,368	21,806	22,259	21,682
5+ Persons	3,570	5,143	5,818	6,306	6,885	7,258
Total	56,055	82,861	94,313	103,459	113,886	123,832

Source: 1980 Census, Table H-1 (Estimates based on a sample); and Sarasota County Planning Department, 1988.

Section 7: Household Incomes

Table G-10 shows Sarasota County's 1980 household incomes (2.2 persons per household). The 1988 household incomes are estimated on the Housing and Urban Development (HUD) median

household income for Sarasota County (adjusted for a household of 2.2 persons per household), as reported in HUD Circular Letter 88-18, February 25, 1988.

Table G-10: Household Incomes, Sarasota County, 1980 and 1988

Income Group	Ratio to Median Income	Range	
		1980	1988
Median Income		\$15,069	\$25,480
Very Low	Less than 50% of Median	Less than \$7,535	Less than \$12,740
Lower	Between 50% and 80%	\$7,535 - 12,055	\$12,740 - 20,389
Moderate	Between 80% and 120%	\$12,055 - 18,083	\$20,389 - 30,576
Middle	Between 120% and 150%	\$18,083 - 22,603	\$30,576 - 38,220
Upper Middle/High	Higher than 150%	More than \$22,603	More than \$38,220

Source: 1980 Census, Table P-11 (1979 dollars); and Sarasota County Planning Department, 1988.

Section 8: Projected Households By Income Group

Table G-11 and Figure G-4 show projections of unincorporated Sarasota County's households by income group. The following assumptions were considered in the preparation of these projections.

- The Bureau of Economic and Business Research of the University of Florida projects that Sarasota County's population will reach 383,300 by the year 2010, a 90.5 percent increase over the 1980 population. The same source projects that the older population (65+ years) will decrease from 36 percent in 1980 to 32.6 percent in 2010; however, it will remain a predominant age group in the County. This group generally is not included in the labor force, however, it requires services.
- Economic projections indicate that commercial activities, which include the trade and service sectors of Sarasota County's economy, will remain the predominant sector, representing 67 percent of the local economy through the year 2010 (see Economy Chapter). The majority of the employees in the service sector earn very low, lower, and moderate incomes.
- The ratio of households (by income group) living in the incorporated County to the Countywide households (by income group) will remain the same as in 1980. Although the incorporated areas of the City of Sarasota, Longboat Key and Venice will reach, or closely approach, their buildout capacities, employees will attempt to live near their workplaces. As the majority of the service sector jobs will remain in the incorporated areas, the majority of the very low, lower, and moderate income households - through the filter down process - will be buying housing units in the incorporated areas, as houses are vacated by moderate (high range), and middle income households who would be moving to new housing stock in the unincorporated areas.

- Sarasota County will encourage housing affordability for the very low, lower, and moderate income households through development incentives and through increased participation in federal and State housing assistance programs.

Although all income groups will increase in numbers of households, the ratios of each group to the total number of households are projected to experience the following changes in the unincorporated areas of the County:

- Very Low Income Households: A decrease from 19.0 percent in 1980 to 8.9 percent in 2010, a result of federal and State assistance.
- Lower Income Households: An increase from 29.2 percent in 1980 to 38.9 percent in 2010. The increase is a result of in-migration for employment in the service sector, plus the advancement of a portion of the very low income households to the lower income range, minus the portion of the lower income households which will advance to the moderate income range. These advancements could be the result of a number of factors, including two income households, wage increases, etc.
- Moderate Income Households: An increase from 15.8 percent in 1980 to 20.1 percent in 2010. The increase is a result of in-migration of labor for positions which offer moderate incomes, plus advancement of a portion of the lower income households to the moderate income range, minus the moderate income households which would advance to the middle income range.
- Middle Income Households: An increase from 11.7 percent in 1980 to 12.2 percent in 2010. The increase is a result of in-migration of labor for positions which offer middle incomes, the advancement of moderate income households to the middle income range, minus the advancement of some middle income households to the upper middle income range.

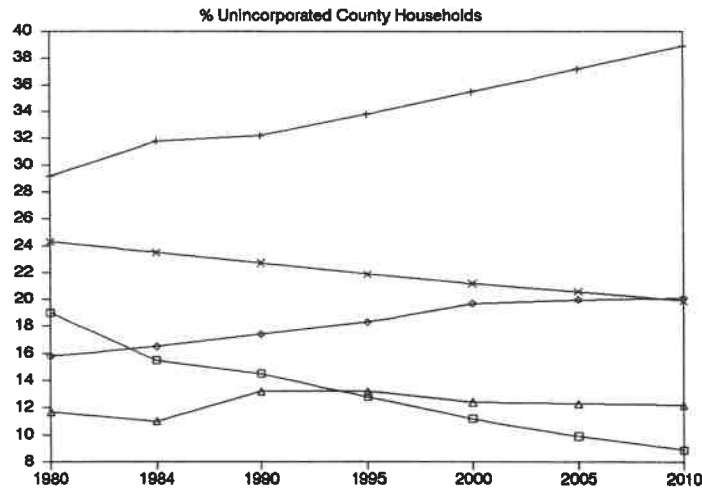
- Upper Middle/High Income Households:
The majority of these households consist of wealthy households whose ratio to the total number of households will decline as

the labor force increases. Therefore, a decrease is projected from 24.3 percent in 1980 to 19.9 percent in 2010.

Table G-11: Households By Income Group, Unincorporated Sarasota County

Income Group	1980		1990		1995		2000		2005		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Very Low	10,849	19.0	12,015	14.5	12,072	12.8	11,587	11.2	11,275	9.9	11,021	8.9
Lower	16,608	29.2	26,681	32.2	31,878	33.8	36,728	35.5	42,366	37.2	48,171	38.9
Moderate	9,041	15.8	14,418	17.4	17,259	18.3	20,381	19.7	22,777	20.0	24,890	20.1
Middle	6,707	11.7	10,938	13.2	12,449	13.2	12,829	12.4	14,008	12.3	15,108	12.2
Upper Middle/High	13,854	24.3	18,809	22.7	20,655	21.9	21,934	21.2	23,460	20.6	24,642	19.9
Total	57,059	100.0	82,861	100.0	94,313	100.0	103,459	100.0	113,886	100.0	123,832	100.0

Source: 1980 Census, Table H-1; and Sarasota County Planning Department, 1988.



Legend:

- Very Low Income
- + Lower Income
- ◇ Moderate Income
- △ Middle Income
- × Upper Middle/High Income

Figure G-4: Households By Income Group

Source: Sarasota County Planning Department, 1988.

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Section 9: Projected Substandard Housing Units

Table G-12 shows projections of substandard housing units in the unincorporated areas of Sarasota County. The projections are based on the following assumptions.

- Based on the 1980 Census reported presence of substandard conditions indicators in the unincorporated County (Housing Appendix Section 3), it is estimated that approximately 1 percent of the unincorporated area housing stock was substandard. It is assumed that substandard units will continue to represent 1 percent of the unincorporated housing stock through the year 2010.

- According to Sarasota County's definition, substandard housing units are those without complete plumbing, complete kitchen facilities, or central heating, or those with overcrowded conditions. The first three indicators relate to the structural condition of the housing units, which could be rehabilitated, if the inadequacy of these conditions is not extensive. Due to the relatively new housing stock in the unincorporated areas (the majority constructed after 1960), it is estimated that 4/5 of these units will qualify for rehabilitation (deteriorated), while 1/5 of them will require demolition (dilapidated).

Table G-12: Substandard Housing Units, Unincorporated Sarasota County

Factor	1986	1990	1995	2000	2005	2010
Total Housing Units (1) (2)	94,896	103,576	117,891	129,323	142,358	154,791
Total Substandard Units (1%)	949	1,036	1,179	1,293	1,424	1,548
Substandard Units in Need for Removal (1/5)	190	207	23	259	285	310
Substandard Units Removed		52	63	65	65	65
Substandard Units Removed Annually	13	13	13	13	13	13

Source: (1) Figures for Total Housing Units, 1986, Table 33, Housing Chapter (Estimates); (2) Figures for Total Housing Units, 1990-2010, Table 45, Housing Chapter (Projections based on functional population); and Sarasota County Planning Department, 1988.



APPENDIX H: LOCATION QUOTIENTS AND STANDARD INDUSTRIAL CODE DATA FOR SARASOTA COUNTY AND THE UNITED STATES

To determine quantitatively whether an industry is basic or non-basic, location quotients are used. This technique is a comparison made by grouping the various economic activities into major industrial classifications as defined by the Standard Industrial Classification Manual (SIC). The area's employment within a certain industry is then measured against the national employment within the same industry. If the percentage of that industry's employment compared to total employment is the same for both the local area and the nation, the location quotient equals one (1.0) and it is assumed that the local industry is supplying just sufficient goods or services to meet the area's consumption needs. If the local ratio is higher than the national average, then the location quotient will be greater than one (1.0) and a portion of the industry's total production is exported to other areas and the industry is considered "basic." If, however, the location quotient is less than one (1.0), then the community's needs are not being

met by local industries, and importation of that commodity is required, and the industry is called a "non-basic" industry.

The following table provides the number of employees for Sarasota County and the nation by industry, and the resulting location quotients. Employment totals are not available for several local industries because of the small number of businesses in these categories. Exact figures are suppressed for confidentiality purposes. Employment ranges for the industries are denoted by the following codes:

- (B) - 20-99 employees
- (C) - 100-249 employees
- (E) - 250-499 employees
- (F) - 500-999 employees
- (G) - 1000-2499 employees

Economy
Number Of Employees

SIC #	Total Employees	Sarasota	U.S.	Location
		County		Quotient
		80,516	77,995,565	
Agricultural Services, Forestries, Fisheries				
07 Agricultural Services		578	356,881	1.57
		F	327,811	N/A
Mining				
		35	974,285	.03
Contract Construction				
15 General Contruction and Builders		9,301	4,171,763	2.16
16 Heavy Construction Contractors		3,147	1,051,008	2.90
17 Special Trade Contractors		F	698,745	N/A
		5,465	2,403,017	2.20
Manufacturing				
		8,902	19,325,352	.45
23 Apparel and other textile products		119	1,192,578	.10
24 Lumber and Wood Products		536	661,454	.78
25 Furniture and Fixtures		379	482,014	.76
27 Printing and Publishing		1,287	1,355,907	.92
28 Chemicals and Allied Products		113	851,573	.13
30 Rubber and Misc. Plastic Products		557	744,543	.73
32 Stone, Clay and Glass Products		524	545,812	.93
34 Fabricated Metal Products		1,176	1,468,937	.77
35 Machinery, Except Electrical		486	2,071,342	.23
36 Electrical and Electronic Equipment		2,051	2,049,334	.95
37 Transportation Equipment		953	1,716,396	.54
38 Instruments and Related Products		395	616,980	.62
39 Misc. Manufacturing Industries		220	382,713	.56
Transportation and Other Public Utilities				
		3,411	4,675,385	.71
41 Local and Interurban Passenger Transit		60	261,999	.22
42 Trucking and Warehousing		497	1,238,332	.39
44 Water Transportation		73	191,342	.37
45 Transportation by Air		284	447,724	.61
47 Transportation Services		241	254,001	.92
48 Communication		1,391	1,286,751	1.05
49 Electric, Gas, and Sanitary Services		865	810,386	1.03
Wholesale Trade				
		2,790	5,387,724	.50
50 Wholesale Trade-Durable Goods		1,706	3,007,034	.55
51 Wholesale Trade-Nondurable Goods		G	2,104,639	N/A

Continued on next page

	Sarasota County	U.S.	Location Quotient
Retail Trade	24,647	16,080,832	1.49
52 Building Material and Garden Supplies	1,227	553,355	2.15
53 General Merchandise Stores	2,854	1,868,903	1.48
54 Food Stores	3,416	2,498,788	1.32
55 Automobile Dealers and Service Stations	2,380	1,779,133	1.30
56 Apparel and Accessory Stores	G	969,837	N/A
57 Furniture and Home Furnishing Stores	1,271	586,822	2.10
58 Eating and Drinking Places	8,679	5,053,676	1.66
59 Misc. Retail	3,030	2,021,224	1.45
Administration and Auxiliary	E	749,092	N/A
Finance, Insurance, and Real Estate	6,572	5,783,275	1.10
60 Banking	1,631	1,569,041	1.01
61 Credit Agencies Other Than Banks	1,051	699,673	1.46
62 Security, Commodity Brokers and Services	536	332,278	1.56
63 Insurance Carriers	374	1,241,324	.29
64 Insurance Agents, Brokers and Services	531	523,339	.98
65 Real Estate	2,328	1,051,474	2.14
67 Holding and Other Investment Offices	99	180,508	.53
Services	22,821	20,349,322	1.09
70 Hotels and Other Lodging Places	1,787	1,200,435	1.44
72 Personal Services	1,549	1,029,003	1.46
73 Business Services	3,994	3,833,744	1.01
75 Auto Repair, Services and Garages	781	626,067	1.21
76 Misc. Repair Services	401	310,095	1.25
78 Motion Pictures	C	202,174	N/A
79 Amusement and Recreation Services	1,914	739,514	2.51
80 Health Services	6,552	6,202,435	1.02
81 Legal Services	940	645,354	1.41
82 Education Services	596	1,476,430	.39
83 Social Services	1,230	1,198,265	.99
86 Membership Organizations	1,590	1,507,452	1.02
89 Misc. Services	1,274	1,118,944	1.10
Nonclassified Establishments	1,438	890,799	1.56

N/A - Not Available

Source: U.S. Department of Commerce, "County Business Patterns 1984 United States" and "County Business Patterns: Florida"; U.S. Office of Management and Budget.

APPENDIX I: FUTURE LAND USE

Section 1: Derivations of Net Available Acreage and Residential Capacities

Urban	North County (Acres)		Myakka/Venice/ Englewood
	7,380	Vacant	10,330
	-860	Designated Industrial	-200
	-200	Designated Commercial	-450
	-1,480	20% Infrastructure	-2,070
	<u>-1,210</u>	25% Market Factor	<u>-1,900</u>
	3,630	Net Available for Housing	5,710
	<u>x3</u>	D.U./Acre	<u>x3</u>
	10,890	Total D.U.'s	17,130
Semi-Rural	North County (Acres)		South County
	7,890	Vacant	14,690
	-300	Designated Industrial	-
	-790	10% Infrastructure	-1,470
	<u>-1,700</u>	25% Market Factor	<u>-3,300</u>
	5,100	Net Available for Housing	9,920
	<u>x.5</u>	D.U./Acre	<u>x.5</u>
	2,500	Total D.U.'s	4,960

Source: Sarasota County Planning Department, 1988.

Section 2: Sarasota County and Municipal Population Projections

		1985	1990	1995	2000	2005	2010
City of Sarasota	Resident Population	50,782	52,311	54,114	55,979	57,909	59,905
	Functional Population	53,782	55,311	57,114	58,979	60,909	62,905
	Multiplier (+ 3,000)						
City of Venice	Resident Population	14,218	16,436	18,370	20,062	21,810	22,322
	Functional Population	20,047	23,175	25,902	28,287	30,752	31,474
	Multiplier (1.41)						
City of North Port	Resident Population	8,331	10,830	14,046	18,054	23,265	29,945
	Functional Population	10,278	13,361	17,329	22,274	28,703	36,944
	Multiplier (1.234)						
Town of Longboat Key	Resident Population	3,592	3,671	4,230	4,888	4,888	4,888
	Functional Population	8,039	8,434	9,833	11,230	11,230	11,230
	Multiplier (2.30)						
Total Municipalities	Resident Population	76,923	83,248	90,810	98,983	107,872	117,060
	Functional Population	92,147	100,281	110,178	120,770	131,594	142,553
Unincorporated County	Resident Population	161,090	189,752	214,090	233,817	252,828	266,240
	Functional Population	201,363	237,190	267,613	292,271	316,035	332,800
	Multiplier (1.25)						
Resident Population	Total County	238,013	273,000	304,900	332,800	360,700	383,300
	Municipalities	76,923	83,248	90,810	98,983	107,872	117,060
	Unincorporated	161,090	189,752	214,090	233,817	252,828	266,240
	% Unincorporated	67.68	69.51	70.22	70.26	70.09	69.46
Functional Population	Total County	293,509	337,471	377,790	413,041	447,629	475,353
	Municipalities	92,147	100,281	110,178	120,770	131,594	142,553
	Unincorporated	201,363	237,190	267,613	292,271	316,035	332,800
	% Unincorporated	68.61	70.28	70.84	70.76	70.60	70.01

Source: University of Florida, Bureau of Economic and Business Research, 1987; Municipal Planning Departments, 1988; and Sarasota County Planning Department, 1988.

Section 3: Sarasota County Employment Projections and Land Use Allocations

Projections for needed acreage for non-residential commercial and office and industrial acreage were made through the year 2010. Acreage projections for these uses were based on projected employment, local employee per square foot averages and average floor area ratios (F.A.R.) of gross leasable area. The following discussion outlines the assumptions made, the methodologies selected along with the rationale for such selections, and a description of the iterative process whereby needed acreages for commercial and office uses and industrial or non-retail employment uses were derived.

Employment Projections

Estimating Sarasota County's employment growth requires the identification of the causes of the County's employment growth and the utilization of the methodology which most closely mirrors the identified growth effect. Various methodologies were examined along with their assumptions regarding the dynamics of the local economic activity. The following discussion outlines the rationale for selecting the constant-share methodology for projecting Sarasota County's employment.

Four methodologies were initially examined for their usefulness in projecting employment for Sarasota County. These methodologies were: shift-share, constant-share, export-base, and linear regression. All four methods were developed in attempts to describe the effects on future employment by key factors. The first method, shift-share analysis is used to describe the different responses of the regional to national economic change (Chapin and Kaiser, Urban Land Use Planning, Third edition, 1979, page 143). Shift-share analysis was used to see how Sarasota County's employment, or competitive share of employment would change in relation to the national change of employment.

The second methodology examined, constant-share analysis, assumes that the rate of growth in the local economy or economic subcomponent will grow at a rate of a similar or larger area. Use of the constant-share methodology for projecting future employment in a local economy neutralizes the effect of fluctuations within a small analysis area.

The export-base methodology assumes that employment growth in a few industries, typically value added industries, determines the growth in those non-value added industries. Projection of Sarasota County's future employment using the export-base methodology was performed by Woods and Poole Economics, Incorporated, using a regional model and data base. Furthermore, the employment forecasts for Sarasota County were performed simultaneously with other counties in the country and constrained within the context of the United States employment projections. Further discussion of the export-base employment projections can be found in the Woods and Poole, Inc. "Sarasota County, Florida Data Pamphlet," May 1987.

The linear regression methodology looks only at the historical growth in employment and assumes a straight line. Essentially, the past growth rates of each industry are held constant for future employment growth.

The constant-share approach was selected based on the assumption that the local economy would grow proportionate to the State's economy. Both the shift-share and the export-base approach were determined to be less reliable because these techniques were more geared to those industries which historically considered base or value-added industries and are more export oriented than in an economy such as Sarasota County's. The major employment sectors in Sarasota County exhibiting a location quotient greater than one, which is typically used to identify base industries, have historically been considered service oriented and geared

to serving the needs of the residential and seasonal population of the County. The export-base approach therefore was considered even less useful because it was felt that employment in service oriented industries was less dependent on employment in value-added industries than on the overall dynamics of the economy of the State of Florida. Conversely, recognizing the relationship of Sarasota County's employment growth with the employment growth of the State of Florida reduces the usefulness of the linear regression approach which does not take into account any of the factors other than the past economic growth in that particular sector.

The constant-share approach to projecting employment for Sarasota County was felt to be more reliable because it more closely replicates the historically documented gradual increase in the proportion of the population in the civilian labor force as shown in Table I-1 and Figure I-1.

Allocation of Employment Projections to the Unincorporated County

The employment projections were allocated to jurisdictions based on the locational assumptions for each of the three employment categories: office, commercial and industrial (see Table I-2). It was assumed that 33 percent of the projected office growth would occur in the unincorporated County due to the current location of specific types of office uses within cities, specifically, the City of Sarasota.

Commercial uses were assumed to locate within reasonable proximity to the supporting population. Therefore, allocation of commercial employment to the unincorporated County is commensurate with the proportion of population growth accorded to the unincorporated County.

Presently, there is very limited industrial activity in any of the incorporated areas. Furthermore, none of the comprehensive plans for each of the incorporated areas encourage any further industrial growth within their jurisdictions. It is conceivable that existing industrial sites within incorporated areas may be encouraged to convert to less intensive uses such as office particularly within the City of Sarasota. Therefore, all additional industrial growth is projected to occur within the unincorporated Sarasota County.

Projection of Non-Residential Land Uses

Projecting needed land for commercial, office and industrial uses needs to be based on employment projections and employment densities. Estimating the future land needed in order to accommodate Sarasota County's expanding economy requires an understanding of not only employment trends but also future space needs and the intensity to which development occurs. This discussion focuses on the later two criteria needed to estimate future land needs, future space needs and intensity

Table I-1: Changes In Labor Force - Sarasota County and Florida

	1960	1970	1980	1985
Sarasota				
% of Population	34	39	35	43
Labor Force	26,113	46,720	70,928	102,255
Florida				
% of Population	38	39	40	49
Labor Force	886,833	2,647,873	3,800,800	5,337,672

Source: Southwest Florida Regional Planning Council; Southwest Florida Economy. A Survey of the Region (1979) and Regional Comprehensive Policy Plan, Regional Description Element, Ft. Myers, 1987.

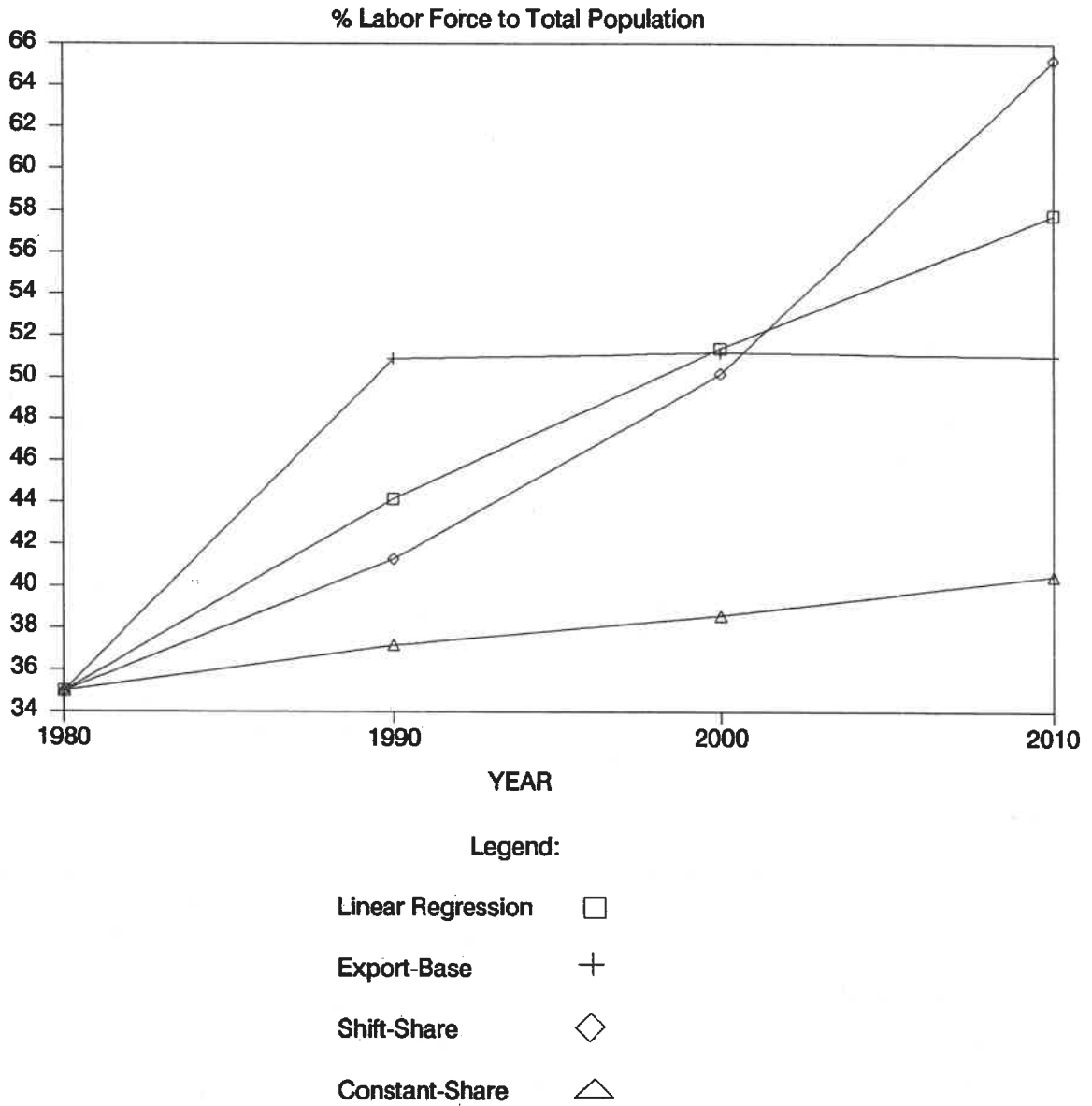


Figure I-1: Comparison Of The Proportion Of Civilian Employment To The Population of Sarasota County By Employment Projection Methodologies

Source: Sarasota County Planning Department, 1988.
*Apoxsee-The Revised and Updated Sarasota County
Comprehensive Plan*

Table I-2: Allocation of Projected Employment Growth.

Employment Sectors	Sarasota County Total	Unincorporated County	
<i>Commercial (1986 base)</i>	53,343		
New Employment 1986-1990	3,490	2,424	(69.46%)
New Employment 1990-2000	15,928	11,314	(71.03%)
New Employment 2000-2010	<u>15,928</u>	<u>11,505</u>	(72.23%)
Cumulative	88,689	25,243	
<i>Office (1986 base)</i>	11,467		
New Employment 1986-1990	1,194	394	(33%)
New Employment 1990-2000	3,607	1,190	(33%)
New Employment 2000-2010	<u>3,608</u>	<u>1,191</u>	(33%)
Cumulative	19,876	2,775	
<i>Industrial (1986 base)</i>	14,991		
New Employment 1986-1990	3,233	3,233	(100%)
New Employment 1990-2000	4,367	4,367	(100%)
New Employment 2000-2010	<u>4,378</u>	<u>4,378</u>	(100%)
Cumulative	26,969	11,978	

Source: Sarasota County Planning Department, 1988.

of development. Future space needs relate to the amount of space needed to accommodate future employment and for this purpose, is translated into employee per square foot averages.

The intensity which development occurs depends upon the concentration of gross leasable area per acreage, in other words the floor area ratio (F.A.R.) of gross leasable area (G.L.A.). Standards of intensity for non-residential uses may vary by type of use or location of uses. Combining the average employee per square foot average with the intensities of development yield employee densities needed to project future land needed to accommodate Sarasota County's economic needs.

Employment Per Acre Ratios

In order to determine the average employee per acre ratio for each major employment sector, one can either use accepted ratios or, lacking such, determine local average employee per acre ratios. For Sarasota County, it was determined to be appropriate to develop local average employee

per square foot ratios coupled with the average F.A.R. of G.L.A. Accordingly, the average employee per acre in Sarasota County by major employment sector is as follows:

- Commercial-30.6 employees per acre
- Office-20.0 employees per acre
- Industrial-16.5 employees per acre

Projected Acreage Needed for Non-Residential Land Uses for Unincorporated Sarasota County

The projected additional acreage needed for commercial and office and industrial activity for the unincorporated area was calculated by dividing the projected incremental employment by the employee per acre ratio for each of the three activities.

In addition to providing for related infrastructure needs, one should consider the possible need to provide sufficient land to account for unforeseen increases in demand for land or to reduce the potential for speculation. With regard to industrial

land, Apoxsee in 1981, provided for a four times amount (4 x) of industrial land in order to reduce the potential for speculation which a tight supply of land might cause. However, no additional buffer was included for commercial and office use. Therefore an unresolved question remains; should the projected additional acreage needed for commercial office activity in the unincorporated Sarasota County include such a buffer, and if so, how should the amount of buffer needed be determined?

Presently, the total estimated additional land needed to accommodate the projected commercial, office and industrial growth through the year 2010 is shown in Table I-3.

Table I-3: Projected Demand for Additional Non-Residential Land, Unincorporated Sarasota County

<u>Commercial and Office</u>	<u>Acreage</u>
1986-1990	119
1990-2000	515
2000-2010	<u>523</u>
Cumulative	1,157
<u>Industrial</u>	<u>Acreage</u>
1986-1990	784
1990-2000	1,060
2000-2010	<u>1,060</u>
Cumulative	2,904
<u>Total</u>	<u>Acreage</u>
1986-1990	903
1990-2000	1,575
2000-2010	<u>1,583</u>
Cumulative	4,061

Source: Sarasota County Planning Department, 1988.

Section 4: Apoxsee Existing Land Use Map Codes

Low Density Residential (Less than Two Dwelling Units per Acre [du/a])

- 111 Fixed Single Family Units
- 112 Mobile Home Units
- 113 Mixed Units (Fixed and Mobile Homes)
- 114 Low Density Golf Course Community

Medium Density Residential (Two to Five du/a)

- 121 Fixed Single Family Units
- 122 Mobile Home Units
- 123 Mixed Units (Fixed and Mobile Homes)
- 124 Residential Medium Density Golf Course Community

Moderate Density Residential (Six or More du/a)

- 131 Fixed Single Family Units
- 132 Mobile Home Units
- 133 Multiple Family Units, Low Rise (two stories or less)
- 134 Multiple Family Units, High Rise (three or more stories)
- 135 Mixed Units (Fixed And Mobile Homes)
- 136 Residential High Density Golf Course Community
- 137 Recreational Vehicle Parks

Commercial

- 141 Retail Sales and Services
- 142 Wholesale Sales and Services
- 143 Professional Services
- 144 Cultural and Entertainment
- 145 Tourist Services
- 146 Oil and Gas Storage (not associated with industrial or manufacturing uses)
- 147 Mixed Commercial and Services
- 148 Cemeteries

Industrial

- 151 Food Processing
- 152 Timber Processing
- 153 Mineral Processing
- 154 Oil and Gas Processing
- 155 Other Light industrial
- 156 Other Heavy Industrial

Extractive

- 161 Strip Mines
- 162 Sand and Gravel Pits, including active borrow pits
- 163 Rock Quarries
- 164 Oil and Gas Fields
- 165 Reclaimed Lands
- 166 Holding Ponds

Institutional

- 171 Educational Facilities
- 172 Religious
- 173 Military
- 174 Medical and Health Care
- 175 Governmental
- 176 Correctional
- 177 Other Institutional
- 178 Commercial Child Care

Recreational

- 181 Swimming Beach
- 182 Golf Course
- 183 Race Tracks
- 184 Marinas and Fish Camps
- 185 Parks and Zoos
- 186 Community Recreational Facilities
- 187 Stadiums (not associated with educational facilities)
- 188 Historical Sites
- 189 Other Recreational

Vacant

Open Land

- 191 Undeveloped Land Within Urban Areas
- 192 Inactive Land With Streets, Without Structures
- 193 Urban Land In Transition, No Positive Indicators Of Intended Activity
- 194 Other Open Land
- VIII B Xeric Hammocks
- IX A Pine Flatwoods
- IX B Dry Prairies

Disturbed Vegetation

- XII A Australian Pine
- XII B Brazilian Pepper

Waterbodies

- 523 Lakes 10-100 acres
- 524 Lakes under 10 acres
- VA Coastal Streams
- VB Myakka River

Facilities

- 811 Airports
- 812 Railroads
- 814 Roads and Highways
- 833 Water Supply Plants

- 834 Sewage Treatment Plants
- 835 Solid Waste Disposal

Preservation/Conservation

Sandy Coasts

- IA Beaches
- IB Dunes

Barrier Backbones

- IIA Coastal Hammocks

Estuarine Edges

- IIIA Mangrove Swamps
- IIIB Tidal Marshes

Brackish Bays

- IVA Seagrass Beds
- IVB Oyster Beds
- IVC Bay Waters

Shady Hammocks

- VIIIA Mesic Hammocks

Pine Prairies

- IXC Grassy Dry Prairies

High Dry Scrubs

- XA Sand Pine Scrub
- XB Scrubby Flatwoods
- XC Turkey Oak Ridges

Freshwater Wetlands (Contiguous)/Freshwater Wetlands

- VIA Swamps
- VIB Marshes and Sloughs

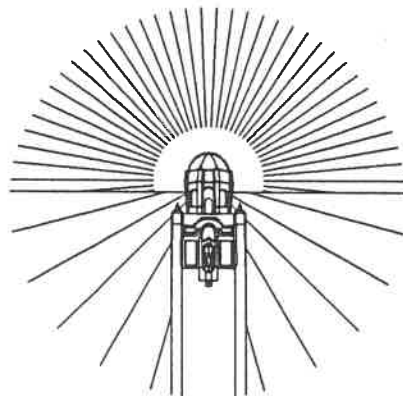
Freshwater Wetlands (Isolated)

- VIIA Wet Prairies
- VIIB Heads

Agriculture

- XI Intensive Agriculture Areas

Note: The classification numbers for each of the land uses or land covers correspond to the number used in the interpretation of the aerial photography and the preparation of the land use overlay for the USGS quadrangle maps.



APPENDIX J: INTERGOVERNMENTAL COORDINATION AND CITIZEN PARTICIPATION

Section 1: Public Participation Procedures Ordinance (Ordinance No. 87-50)

ORDINANCE NO. 87-50

AN ORDINANCE OF SARASOTA COUNTY, FLORIDA, RELATING TO COMPREHENSIVE LAND USE PLANNING; PROVIDING FOR RATIFICATION OF EXISTING PUBLIC PARTICIPATION PROCEDURES IN THE COMPREHENSIVE PLANNING PROCESS, INCLUDING ADOPTION OF THE COMPREHENSIVE PLAN, CONSIDERATION OF COMPREHENSIVE PLAN AMENDMENTS AND EVALUATION AND APPRAISAL REPORTS; REQUIRING SUBSTANTIAL RATHER THAN STRICT COMPLIANCE WITH SUCH PUBLIC PARTICIPATION PROCEDURES; AND PROVIDING AN EFFECTIVE DATE.

87 JUL 16 PM 3:16
FILED
CLERK

BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF SARASOTA COUNTY, FLORIDA;

Section 1. Findings. The Board of County Commissioners of Sarasota County, Florida, makes the following findings:

A. In compliance with the provisions of Section 163.3181, Florida Statutes, Sarasota County adopted procedures through administrative policies to encourage public participation in the planning process to the fullest extent possible before both the local planning agency and the governing body in the adoption of the Sarasota County Comprehensive Plan, Sarasota County Ordinance No. 81-30, and all amendments thereto.

B. It is the intent of this Ordinance to ratify and confirm Sarasota County's existing procedures, before both the local planning agency and the local governing body, designed to provide effective public participation in the planning process, including the adoption of the comprehensive plan, the consideration of comprehensive plan amendments, and comprehensive plan evaluation and appraisal reports.

Section 2. Definitions. As used in this Ordinance, unless the context clearly indicates otherwise:

"Comprehensive plan" means a plan that meets the requirements of Sections 163.3177 and 163.3178, Florida Statutes.

"Evaluation and appraisal report" means a report that meets the requirements of Section 163.3191, Florida Statutes, as amended.

"Governing body" means the Sarasota County Board of County Commissioners.

"Local planning agency" means the Sarasota County Planning Commission.

"Person" means an individual, corporation, governmental agency, business trust, estate, trust, partnership, association, two or more persons having a joint or common interest, or any other legal entity.

"Planning Department" means the Sarasota County Planning Department.

"Public notice" as used in connection with the phrase "public hearing" or "hearing to be held after due public notice" means such notice as is consistent with applicable general law.

The singular usage includes the plural and the plural the singular.

Section 3. Public Participation Procedures in the Comprehensive Planning Process. The following public participation procedures are hereby ratified and approved to encourage public participation in the planning process before both the local planning agency and the local governing body.

FILED
OFFICE DEPUTY CLERK
HC OF CO COMMR'S.

JUL 21 6 12 AM '87

STATE OF FLORIDA)
COUNTY OF SARASOTA)
I HEREBY CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT COPY OF THE ORIGINAL FILED IN THIS OFFICE. WITNESS MY HAND AND OFFICIAL SEAL THIS DATE JUL 13 1987
R. M. HACKNEY, JR., CLERK OF THE CIRCUIT COURT
CO. OFFICER CLERK TO THE BOARD OF COUNTY COMMISSIONERS - SARASOTA COUNTY, FLORIDA
BY [Signature] DEPUTY CLERK

A. Dissemination of Proposals and Alternatives. The Planning Department is directed to make available for public inspection proposals for the adoption of the comprehensive plan, amendments to the comprehensive plan, and evaluation and appraisal reports, at the following locations, and is directed to publicize the availability of same at such locations:

1. Sarasota County Planning Department, 101 South Washington Boulevard, (7th floor), Sarasota, Florida.
2. Sarasota County Clerk to the Board's Office, 101 South Washington Boulevard, (4th floor), Sarasota, Florida.
3. South Sarasota County Courthouse Annex, 4000 South Tamiami Trail, Venice, Florida.
4. Selby Library, 1001 Boulevard of the Arts, Sarasota, Florida.
5. Gulf Gate Library, 7112 Curtiss Avenue, Sarasota, Florida.
6. Venice Library, 300 South Nokomis Avenue, Venice, Florida.
7. Elsie Quirk Library, 101 Cocoanut Avenue, Englewood, Florida.
8. North Port Library, 108 East South Highway Drive, North Port, Florida.

B. Opportunity for Written Comments. Notification that written comments may be filed with the Planning Department regarding proposals for the adoption of the comprehensive plan, amendments to the comprehensive plan and evaluation and appraisal reports shall be provided in the appropriate advertised public notices for public hearings on such proposals. The Planning Department shall review and consider all written comments and respond to such comments in a timely manner during the comprehensive planning process.

C. Public Hearings. Public hearings shall be held by the local planning agency and the local governing body after public notice, pursuant to the requirements of Part II of Chapter 163, Florida Statutes, for consideration of, and action regarding, the adoption of the comprehensive plan, amendments to the comprehensive plan, and evaluation and appraisal reports. Public hearings pertaining to comprehensive plan amendments shall be as detailed in Sarasota County Ordinance No. 86-15, as the same may be amended from time to time.

D. Provisions for Open Discussions.

1. The public shall be encouraged to express their views regarding proposals related to the adoption of the comprehensive plan, amendments to the comprehensive plan, and the evaluation and appraisal reports during the required public hearing process. The Planning Department shall prepare summaries of the public comments during public hearings on speaker sheets following the general format attached hereto as Exhibit "A," and will prepare a response to these comments in a timely manner.

2. The Planning Department shall establish and maintain central files for public comments submitted and received during the comprehensive planning process.

E. Communications Programs and Information Services.

1. Pursuant to the comprehensive plan's Intergovernmental Coordination and Citizen Participation Plan, General Intergovernmental Coordination, Program 2, Sarasota County will "Continue the information exchange program entitled 'Coordination by Notification' as a communication vehicle when updating or revising Apoxsee." The Planning Department shall maintain a Coordination by Notification mailing list, which includes units

STATE OF FLORIDA 7
COUNTY OF SARASOTA 1

HEREBY CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT COPY OF THE ORIGINAL FILED IN THE OFFICE WITNESSED BY HAND AND OFFICIAL SEAL THIS DATE JUL 13 1987

R. H. WICKNEY, JR., CLERK OF THE CIRCUIT COURT OF THE COUNTY OF SARASOTA, FLORIDA

S. Taylor

of local government, governmental agencies, special districts, community groups, civic associations and general public. The Planning Department shall transmit to these entities notices and agendas of public hearings or workshops, and upon request, minutes, preliminary drafts, final drafts and other relevant information regarding the preparation of evaluation and appraisal reports, and amendments to the comprehensive plan.

2. The Planning Department shall develop and maintain mailing lists for all comprehensive planning processes. Interested persons may request to be included in the mailing list of their interest by contacting the Planning Department. These mailing lists shall be maintained by the Planning Department for the duration of the process for which they are developed.

3. During the preparation of evaluation and appraisal reports to the comprehensive plan, the Planning Department shall periodically contact the media for discussions regarding the processes involved, including progress at that particular time, anticipated public hearings, workshops, completion date(s), etc. Interested groups may request presentations by Planning Department staff regarding particular aspects of the documents under preparation.

F. Notification of Affected Real Property Owners. During the consideration of the comprehensive plan, comprehensive plan amendments and evaluation and appraisal reports, real property owners shall be put on notice, through advertisement in a newspaper of general circulation in the area, pursuant to the applicable public notice provisions of Part II, Chapter 163, Florida Statutes.

Section 4. Requirement of Substantial Compliance with Procedures. The public participation procedures ratified and adopted by this Ordinance shall be substantially complied with in carrying out the comprehensive planning process, including the adoption of the comprehensive plan, and the consideration of comprehensive plan amendments and evaluation and appraisal reports. Such procedures are directory in nature and are not jurisdictional.

Section 5. Effective Date. This Ordinance shall take effect immediately upon receipt of official acknowledgement from the office of the Secretary of State of Florida that this Ordinance has been filed with said office.

PASSED AND DULY ADOPTED BY THE BOARD OF COUNTY COMMISSIONERS OF SARASOTA COUNTY, FLORIDA, this 7th day of July, 1987.

BOARD OF COUNTY COMMISSIONERS
OF SARASOTA COUNTY, FLORIDA

By: [Signature]
Chairman

ATTEST:

R. H. HACKNEY, JR., Clerk of the
Circuit Court and Ex-Officio Clerk
of the Board of County Commissioners
of Sarasota County, Florida

By: [Signature]
Deputy Clerk

STATE OF FLORIDA ; ;
COUNTY OF SARASOTA ; ;
I HEREBY CERTIFY THAT THE FOREGOING IS A
TRUE AND CORRECT COPY OF THE ORIGINAL FILED
IN THIS OFFICE, WITNESS MY HAND AND OFFICIAL
SEAL THIS DATE JUL 13 1987
R. H. HACKNEY, JR., CLERK OF THE CIRCUIT COURT
AND EX-OFFICIO CLERK TO THE BOARD OF COUNTY
COMMISSIONERS OF SARASOTA COUNTY, FLORIDA
By: [Signature]
DEPUTY CLERK 0 87-50

EXHIBIT "A"

SPEAKER SHEET

<u>Public Hearing Regarding:</u> Comprehensive Plan Comprehensive Plan Amendment No _____ Evaluation and Appraisal Report Other (please specify)	Date _____
	Speaker Number _____

(please print)

Name _____

Address _____

_____ Zip _____

Subject Area

Citizen Comment

0 87-50

STATE OF FLORIDA }
 COUNTY OF SARASOTA }

I HEREBY CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT COPY OF THE ORIGINAL FILES IN THIS OFFICE. WITNESSED MY HAND AND OFFICIAL SEAL THIS 03RD JUL 13 1987

BY _____ CLERK OF THE CIRCUIT COURT
 COUNTY OF SARASOTA, FLORIDA

S. Kayser

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Staff Comment

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Action

[Empty rectangular box for Action]

STATE OF FLORIDA)
COUNTY OF SARASOTA)
I HEREBY CERTIFY THAT THE FOREGOING IS A
TRUE AND CORRECT COPY OF THE ORIGINAL FILTS
IN THIS OFFICE. JUL 13 1987
SEAL THIS DATE
R. H. HICKNEY, JR., CLERK OF THE CIRCUIT COURT
EX. OFFICIO CLERK TO THE BOARD OF COUNTY
COMMISSIONERS, SARASOTA COUNTY, FLORIDA
BY *J. Taylor*
RECORD CLERK

Section 2: National Association of Counties Achievement Award

NATIONAL ASSOCIATION of COUNTIES

440 First St. NW, Washington, DC 20001
202/393-6226



June 2, 1988

Mr. Jerry Gray
Planning Director
101 S. Washington Blvd.
Sarasota, FL 34237

Dear Mr. Gray:

We are pleased to announce that your application has been selected for a 1988 NACo Achievement Award for Citizen Participation Program For The Update Of APOXSEE.

We felt that your proposal provided an innovative solution and I would like to commend you on your ingenuity and creativity in establishing this useful program.

In order for other county governments to benefit from programs like yours, we keep the files as a resource for any inquiries we may receive. During the next year you may receive calls from other counties interested in implementing a program similar to yours.

I hope you will join us in Orange County (Anaheim), California, August 6-9, to receive your Achievement Award Certificate. In addition to a special recognition of this year's Achievement Award Winners, the conference will provide you with the opportunity to discuss critical issues with other county officials during this important Presidential election year. I have enclosed a registration form for your convenience.

Again, we congratulate you and thank you for participating in the 1988 Achievement Award Program. We look forward to hearing about other projects you may develop in the future.

Sincerely,

A handwritten signature in cursive script that reads "John P. Thomas".

John P. Thomas
Executive Director

*ApoXsee - The Revised and Updated Sarasota County
Comprehensive Plan*

APPENDIX K: CONSISTENCY OF LOCAL GOVERNMENT COMPREHENSIVE PLAN WITH THE STATE COMPREHENSIVE PLAN

Pursuant to Rule 9J-5.021, Florida Administrative Code, this section presents a listing of the State Comprehensive Plan (Chapter 187.201, Florida Statutes) goals and policies which are addressed in "Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan". During the course of updating its Comprehensive Plan, Sarasota County has determined that the other State Comprehensive Plan goals and policies which are not included in this list are not relevant to the scope of the Comprehensive Plan.

CHAPTER 187, FLORIDA STATUTES

187.201

(5) HOUSING.-

(a) Goal.-The public and private sectors shall increase the affordability and availability of housing for low-income and moderate-income persons, including citizens in rural areas, while at the same time encouraging self-sufficiency of the individual and assuring environmental and structural quality and cost-effective operations.

Housing Plan-Goal Statement, Page 387

(b) Policies.-

1. Eliminate public policies which result in housing discrimination, and develop policies which encourage housing opportunities for all Florida's citizens.

Housing Plan-Objectives 1.1, 1.4 and 1.5, Pages 387-389

2. Diminish the use of institutions to house persons by promoting deinstitutionalization to the maximum extent possible.

Housing Plan-Policies 1.4.5. and 1.4.6., Page 389

3. Increase the supply of safe, affordable, and sanitary housing for low-income and moderate-income persons and elderly persons by alleviating housing shortages, recycling older houses and redeveloping residential neighborhoods, identifying housing needs, providing incentives to the private sector to build affordable housing, encouraging public-private partnerships to maximize the creation of affordable housing, and encouraging research into low-cost housing construction techniques, considering life-cycle operating costs.

Housing Plan-Pages 387-389

Future Land Use Plan-Policy 1.7.2., Page 443

4. Reduce the cost of housing construction by eliminating unnecessary regulatory practices which add to the cost of housing.

Housing Plan-Policies 1.1.3. and 1.1.11. and Objective 1.5 and its Policy Cluster, Pages 387 and 389

(8) WATER RESOURCES.-

(a) Goal.-Florida shall assure the availability of an adequate supply of water for all competing uses deemed reasonable and beneficial and shall maintain the functions of natural systems and the overall present level of service and ground water quality. Florida shall improve and restore the quality of waters not presently meeting water quality standards.

Environment Plan-Goals 2, 3 and 5, Pages 108, 109 and 111

Public Facilities Plan-Goals 1, 2, 3 and 4, Pages 239, 242, 243 and 245

(b). Policies.-

1. Ensure the safety and quality of drinking water supplies and promote the development of reverse osmosis and desalinization technologies for developing water supplies.

Environment Plan-Objectives 5.2 and 5.3 and their Policy Clusters, Pages 112 and 113

Public Facilities Plan-Objective 1.1 and Policies 1.1.8. and 1.1.10.; Objective 1.2 and Policies 1.2.1., 1.2.6. and 1.2.7.; Objective 2.3 and Policies 2.3.1. and 2.3.2.; Objective 2.4; Objective 3.1 and Policy 3.1.1.; Objective 3.2 and Policy 3.2.1.; and Objective 4.1 and Policy 4.1.4., Pages 239-246

2. Identify and protect the functions of water recharge areas and provide incentives for their conservation.

Environment Plan-Objective 5.3 and its Policy Cluster, Pages 112 and 113

Public Facilities Plan-Objective 3.1 and Policies 3.1.1., 3.1.3., 3.1.4., 3.1.5. and 3.1.6.; Objective 3.2 and Policy 3.2.1., Pages 243 and 244

3. Encourage the development of local and regional water supplies within water management districts instead of transporting surface water across district boundaries.

Public Facilities Plan-Policies 1.2.4., 1.2.5., 1.2.6., 1.2.7., 2.1.4., 2.1.5. and Objective 3.1 and Policy 3.1.1., Pages 241-243

4. Protect and use natural water systems in lieu of structural alternatives and restore modified systems.

Environment Plan-Objective 5.2 and its Policy Cluster, Page 112

Public Facilities Plan-Policy 1.1.3., Page 240

5. Ensure that new development is compatible with existing local and regional water supplies.

Environment Plan-Policies 5.3.1. and 5.3.8., Pages 112 and 113

Public Facilities Plan-Objective 1.2 and Policies 1.2.1. and 1.2.2.; Policies 2.3.2. and 2.3.3.; Objective 2.4 and Policy 2.4.1.; Objective 3.1 and Policy 3.1.1.; Objective 3.2 and Policies 3.2.1. and 3.2.2., Pages 241 and 243-245

6. Establish minimal seasonal flows and levels for surface watercourses with primary consideration given to the protection of natural resources, especially marine, estuarine, and aquatic ecosystems.

Environment Plan-Objectives 2.1, 2.2 and 5.2 and their Policy Clusters, Pages 108, 109 and 112

7. Discourage the channelization, diversion, or damming of natural riverine systems.

Environment Plan-Policy 2.1.2., Page 108

8. Encourage the development of a strict floodplain management program by state and local governments designed to preserve hydrologically significant wetlands and other natural floodplain features.

Environment Plan-Policy 3.1.1. and Objectives 5.2 and 5.3 and their Policy Clusters, Pages 109, 112 and 113

9. Protect aquifers from depletion and contamination through appropriate regulatory programs and through incentives.

Environment Plan-Policies 5.3.1., 5.3.4., 5.3.5. and 5.3.9., Pages 112 and 113

10. Protect surface and groundwater quality and quantity in the state.

Environment Plan-Objective 5.3 and its Policy Cluster, Pages 112 and 113

Public Facilities Plan-Objective 1.1 and Policies 1.1.2. and 1.1.10.; Objective 1.2 and Policies 1.2.1., 1.2.2., 1.2.3., 1.2.5., 1.2.6. and 1.2.8.; Objective 2.3 and Policies 2.3.1. and 2.3.2.; Objective 2.4 and Policy 2.4.1.; Objective 3.1 and Policies 3.1.1., 3.1.3. and 3.1.6.; Objective 3.2 and Policies 3.2.1., 3.2.3. and 3.2.4., Pages 239-245

11. Promote water conservation as an integral part of water management programs as well as the use and reuse of water of the lowest acceptable quality for the purposes intended.

Environment Plan-Policies 5.3.2., 5.3.6., 5.3.7. and 5.5.11., Pages 112, 113 and 115

Public Facilities Plan-Policies 1.1.10., 1.2.8., 2.1.4. and 2.1.5., Pages 240-242

12. Eliminate the discharge of inadequately treated wastewater and stormwater runoff into the waters of the state.

Environment Plan-Objective 2.1 and its Policy Cluster, Pages 108 and 109

Public Facilities Plan-Objective 1.1 and Policies 1.1.2., 1.1.3, 1.1.6, 1.1.7. and 1.1.8.; Objective 1.2 and Policies 1.2.1., 1.2.2., 1.2.3. and 1.2.8.; Objective 2.1 and Policies 2.1.2., 2.1.3., 2.1.4. and 2.1.5.; Objective 3.2 and Policies 3.2.1., 3.2.2. and 3.2.3. and Policy 4.1.3., Pages 239-242 and 244-246

13. Identify and develop alternative methods of wastewater treatment, disposal, and reuse of wastewater to reduce the degradation of water resources.

Environment Plan-Policies 5.3.2. and 5.3.6., Pages 112 and 113

Public Facilities Plan-Policies 1.1.10. and 1.2.8. and Objective 2.1 and Policies 2.1.2., 2.1.3. and 2.1.4., Pages 240-242

14. Reserve from use that water necessary to support essential nonwithdrawal demands, including navigation, recreation, and the protection of fish and wildlife.

Environment Plan-Objective 2.1 and its Policy Cluster, Pages 108 and 109

(9) COASTAL AND MARINE RESOURCES.-

(a) Goal.-Florida shall ensure that development and marine resource use and beach access improvements in coastal areas do not endanger public safety or important natural resources. Florida shall, through acquisition and access improvements, make available to the state's population additional beaches and marine environment, consistent with sound environmental planning.

Environment Plan-Goals 1, 2, 3, 4 and 5, Pages 106, 108, 109 and 111

(b) Policies.-

1. Accelerate public acquisition of coastal and beachfront land where necessary to protect coastal and marine resources or to meet projected public demand.

Environment Plan-Objectives 1.2 and 1.3 and their Policy Clusters, Pages 107 and 108

2. Ensure the public's right to reasonable access to beaches.

Environment Plan-Policies 1.3.1., 1.3.2. and 1.3.3., Page 107

3. Avoid the expenditure of state funds that subsidize development in high-hazard coastal areas.

Environment Plan-Policy 4.1.3. and Objective 4.3 and its Policy Cluster, Pages 110 and 111

Traffic Circulation Plan-Policy 1.1.3., Page 271

4. Protect coastal resources, marine resources, and dune systems from the adverse effects of development.

Environment Plan-Policies 1.1.1., 1.1.2., 1.1.4., 1.2.2., 1.2.3., 2.1.2., 2.1.3., 2.1.4., 5.2.2., 5.2.3., 5.4.2., 5.4.5., 5.4.7., 5.5.5., 5.5.8. and Objective 2.2 and its Policy Cluster, Pages 106-109 and 112-115

5. Develop and implement a comprehensive system of coordinated planning, management, and land acquisition to ensure the integrity and continued attractive image of coastal areas.

Environment Plan-Policies 1.2.3., 1.3.1., 1.3.2., 1.3.3., 1.3.5., 4.1.3., 4.3.2., 5.5.3. and 5.5.8., Pages 107, 108, 110, 111, 114 and 115

6. Encourage land and water uses which are compatible with the protection of sensitive coastal resources.

Environment Plan-Policies 1.1.4., 1.2.1., 1.3.2., 1.3.3., 1.3.4., 1.3.5., 2.1.3., 2.1.4., 4.1.3., 4.1.5., 4.3.1., 5.2.2., 5.4.5., 5.4.7. and 5.5.9., Pages 107, 108, 110, 111, 112, 114 and 115

7. Protect and restore long-term productivity of marine fisheries habitat and other aquatic resources.

Environment Plan-Policies 1.3.5., 2.1.2., 2.1.3., 2.1.9., 2.1.10. and Objective 2.2 and its Policy Cluster, Pages 108 and 109

8. Avoid the exploration and development of mineral resources which threaten marine, aquatic, and estuarine resources.

Environment Plan-Policies 1.1.4. and 5.2.5., Pages 107 and 112

9. Prohibit development and other activities which disturb coastal dune systems, and ensure and promote the restoration of coastal dune systems that are damaged.

Environment Plan-Policies 1.2.1., 1.2.2., 1.2.3., 1.3.1. and 4.3.2., Pages 107 and 111

10. Give priority in marine development to water-dependent uses over other uses.

Environment Plan-Policies 1.3.3. and 1.3.5., Pages 107 and 108

(10) NATURAL SYSTEMS AND RECREATIONAL LANDS.-

(a) Goal.- Florida shall protect and acquire unique natural habitats and ecological systems, such as wetlands, tropical hardwood hammocks, palm hammocks, and virgin longleaf pine forests, and restore degraded natural systems to a functional condition.

Environment Plan-Goals 1, 2, 3, 4 and 5, Pages 106, 108, 109 and 111

Recreation and Open Space Plan-Goal Statement, Page 152

(b) Policies.-

1. Conserve forests, wetlands, fish, marine life, and wildlife to maintain their environmental, economic, aesthetic, and recreational values.

Environment Plan-Policies 5.3.5., 5.3.8., 5.4.3., 5.5.1., 5.5.3., 5.5.6., 5.5.8., 5.5.10. and 5.6.7., Pages 113-116

2. Acquire, retain, manage, and inventory public lands to provide recreation, conservation, and related public benefits.

Environment Plan-Policies 1.2.3., 1.3.1., 4.1.3., 5.2.3., 5.2.4., 5.4.3., 5.5.3., 5.5.4. and 5.5.8., Pages 107, 110 and 112-115

Future Land Use Plan-Objective 1.2 and its Policy Cluster, Page 440

Recreation and Open Space Plan-Policies 1.1.6., 1.1.10., 1.2.4. and 1.2.5., Pages 153 and 154

3. Prohibit the destruction of endangered species and protect their habitats.

Environment Plan-Objective 5.4 and its Policy Cluster, Pages 113 and 114

4. Establish an integrated regulatory program to assure the survival of endangered and threatened species within the state.

Environment Plan-Objective 5.4 and its Policy Cluster, Pages 113 and 114

5. Promote the use of agricultural practices which are compatible with the protection of wildlife and natural systems.

Environment Plan-Policies 5.4.2., 5.4.3. and 5.5.2., Pages 113 and 114

6. Encourage multiple use of forest resources, where appropriate, to provide for timber production, recreation, wildlife habitat, watershed protection, erosion control, and maintenance of water quality.

Environment Plan-Policies 5.5.3., 5.5.4. and 5.5.6., Page 114

7. Protect and restore the ecological functions of wetland systems to ensure their long-term environmental, economic, and recreational value.

Environment Plan-Policies 5.1.3., 5.2.2., 5.2.3., 5.2.4., 5.2.6., 5.4.7., 5.5.1. and 5.5.3., Pages 111, 112 and 114

Recreation and Open Space Plan-Objective 1.2 and its Policy Cluster, Page 154

8. Promote restoration of the Everglades system and of the hydrological and ecological functions of degraded or substantially disrupted surface waters.

Environment Plan-Policies 2.1.1., 2.1.5., 2.1.6., 2.1.7., 2.1.8. and 3.1.1., Pages 108 and 109

9. Develop and implement a comprehensive planning, management, and acquisition program to ensure the integrity of Florida's river systems.

Environment Plan-Policies 3.1.1., 5.2.3., 5.2.4., 5.3.8., 5.5.4. and 5.5.12., Pages 109 and 112-115

Recreation and Open Space Plan-Policies 1.1.5. and 1.3.4., Pages 153 and 155

10. Emphasize the acquisition and maintenance of ecologically intact systems in all land and water planning, management, and regulation.

Environment Plan-Policies 5.5.3., 5.5.4., 5.5.6., 5.5.10. and 5.5.12., Pages 114 and 115

Recreation and Open Space Plan-Policies 1.1.5., 1.1.6., 1.1.10, 1.2.4. and 1.2.5., Pages 153 and 154

11. Expand state and local efforts to provide recreational opportunities to urban areas, including the development of activity-based parks.

Recreation and Open Space Plan-Objective 1.1 and its Policy Cluster and Policy 1.6.1., Pages 152-154 and 156

12. Protect and expand park systems throughout the state.

Recreation and Open Space Plan-Objective 1.2 and its Policy Cluster and Policies 1.1.1., 1.1.5., 1.1.6. and 1.1.10., Pages 153 and 154

13. Encourage the use of public and private financial and other resources for the development of recreational opportunities at the state and local level.

Recreation and Open Space Plan-Objective 1.5 and its Policy Cluster and Policy 1.6.2., Pages 155 and 156

(11) AIR QUALITY

(a) Goal.-Florida shall comply with all national air quality standards by 1987, and by 1992 meet standards which are more stringent than 1985 state standards.

Environment Plan-Goal 5, Page 111

(b) Policies.-

1. Improve air quality and maintain the improved level to safeguard human health and prevent damage to the natural environment.

Environment Plan-Policy 5.1.1., Page 111

2. Ensure that developments and transportation systems are consistent with the maintenance of optimum air quality.

Environment Plan-Policies 5.1.2. and 5.1.3., Page 111

3. Reduce sulfur dioxide and nitrogen oxide emissions and mitigate their effects on the natural environment.

Environment Plan-Policy 5.1.1., Page 111

4. Encourage the use of alternative energy resources that do not degrade air quality.

Environment Plan-Policy 5.1.3., Page 111

5. Ensure, at a minimum, that power plant fuel conversions does not result in higher levels of air pollution.

Environment Plan-Policy 5.1.1., Page 111

(12) ENERGY.-

(a) Goal.-Florida shall reduce its energy requirements through enhanced conservation and efficiency measures in all end-use sectors, while at the same time promoting an increased use of renewable energy resources.

Mass Transit Plan-Goal Statement, Page 305

Housing Plan-Objective 1.1 and its Policy Cluster, Page 387

(b) Policies.-

1. Continue to reduce the per capita energy consumption.

N/A

2. Encourage and provide incentives for consumer and producer energy conservation and establish acceptable energy performance standards for buildings and energy consuming items.

Housing Plan-Policies 1.1.2., 1.1.6. and 1.1.7., Page 387

3. Improve the efficiency of traffic flow on existing roads.

Traffic Circulation Plan-Policies 1.3.1.,1.3.2., 1.3.3., 1.3.4., 1.3.5., 1.3.6. and 1.3.9., Pages 271 and 272

4. Ensure energy efficiency in transportation design and planning and increase the availability of more efficient modes of transportation.

Traffic Circulation Plan-Objective 1.4 and its Policy Cluster and Policy 1.7.3., Pages 272-274

Mass Transit Plan-Objectives 1.1 and 1.5 and their Policy Clusters, Pages 305-307

5. Reduce the need for new power plants by encouraging end-use efficiency, reducing peak demand, and using cost-effective alternatives.

N/A

6. Increase the efficient use of energy in design and operation of buildings, public utility systems, and other infrastructure and related equipment.

Housing Plan-Policies 1.1.6. and 1.1.7., Page 387

7. Promote the development and application of solar energy technologies and passive solar design techniques.

Housing Plan-Policy 1.1.6., Page 387

8. Provide information on energy conservation through active media campaigns.

N/A

9. Promote the use and development of renewable energy resources.

N/A

10. Develop and maintain energy preparedness plans that will be both practical and effective under circumstances of disrupted energy supplies or unexpected price surges.

N/A

**(13) HAZARDOUS AND NONHAZARDOUS
MATERIALS AND WASTE.-**

(a) Goal.-All solid waste, including hazardous waste, wastewater, and all hazardous materials, shall be properly managed, and the use of landfills shall be eventually eliminated.

Public Facilities Plan-Goals 1, 2, 3 and 4, Pages 239, 242, 243 and 245

(b) Policies.-

1. By 1995, reduce the volume of nonhazardous solid waste disposed of in landfills to 55 percent of the 1985 volume.

Public Facilities Plan-Objectives 2.2 and 2.5 and their Policy Clusters, Pages 242 and 243

2. Encourage and expedite the development of environmentally safe hazardous waste treatment, storage, and disposal facilities.

Public Facilities Plan-Policy 3.1.4., Page 244

3. Identify and clean up hazardous waste sites.

Public Facilities Plan-Policy 3.2.4., Page 245

4. Enforce and strengthen regulation of the generation, storage, treatment, disposal, and transportation of hazardous waste.

Public Facilities Plan-Policy 3.1.4., Page 244

5. Establish a system for identifying the location, type, and quantity of hazardous materials.

N/A

6. Require all hazardous waste generators to properly manage their own wastes.

N/A

7. Encourage the research, development, and implementation of recycling, resource recovery, energy recovery, and other methods of using garbage, trash, sewage, slime, sludge, hazardous waste, and other waste.

Public Facilities Plan-Policies 2.2.1., 2.2.2. and 2.2.3.; Objective 2.5 and Policies 2.5.1. and 2.5.3., Pages 242 and 243

8. Encourage coordination of intergovernmental and interstate waste management efforts.

Public Facilities Plan-Policy 1.1.1., Page 239

9. Identify, develop, and encourage environmentally sound wastewater treatment and disposal methods.

Environment Plan-Policies 5.3.6. and 5.3.9., Page 113

Public Facilities Plan-Objective 1.1 and Policies 1.1.6., 1.1.7., 1.1.8. and 1.1.10.; Objective 1.2 and Policies 1.2.1., 1.2.2., 1.2.7. and 1.2.8.; Objective 2.1 and Policies 2.1.1., 2.1.3. and 2.1.4.; Objective 3.1 and Policies 3.1.2., 3.1.3. and 3.1.6.; Objective 3.2 and Policies 3.2.1., 3.2.2. and 3.2.3.; Objective 4.1 and Policy 4.1.3., Pages 239-246

10. Develop a permanent system for households, small business, and other low-volume generators of hazardous waste to safely dispose of these materials in a convenient manner.

Public Facilities Plan-Policy 3.1.4., Page 244

11. Encourage strict enforcement of hazardous waste laws and swift prosecution of violators.

N/A

(14) MINING.-

(a) Goal.-Florida shall protect its air, land, and water resources from the adverse effects of resource extraction and ensure that the disturbed areas are reclaimed or restored to beneficial use as soon as reasonably possible.

Environment Plan-Policies 5.2.5. and 5.3.10., Pages 112 and 113

(b) Policies.-

1. Develop a comprehensive approach to the regulation of resource extraction.

Environment Plan-Policies 5.2.5. and 5.3.10., Pages 112 and 113

2. Require mining operations to provide evidence of financial responsibility to ensure the reclamation of mined lands.

N/A

3. Require that disturbed areas, except those selected to be reclaimed by nature, be reclaimed to productive and beneficial use within a period determined by the state to be reasonable and practical.

N/A

4. Require state reclamation standards to be simple and well-coordinated and to be consistent with the protection of the public interest and conservation of natural resources.

N/A

5. Prohibit resource extraction which will result in an adverse effect on environmentally sensitive areas of the state which cannot be restored.

Environment Plan-Policy 5.2.5., Page 112

6. Minimize the effects of resource extraction upon ground and surface waters.

Environment Plan-Policies 5.2.5. and 5.5.8., Pages 112 and 115

7. Protect human health from radiological or other adverse impacts associated with resource extraction.

N/A

8. Reduce the adverse impacts of waste disposal associated with resource extraction.

N/A

9. Require that mining and reclamation regulation recognizes the geological constraints and inherent differences in the types and locations of resources to be mined.

N/A

(15) PROPERTY RIGHTS.-

(a) Goal.-Florida shall protect private property rights and recognize the existence of legitimate and often competing public and private interests in land use regulations and other government action.

Future Land Use Plan-Goal Statement, Page 440

(b) Policies.-

1. Provide compensation, or other appropriate relief as provided by law, to a landowner for any governmental action that is determined to be an unreasonable exercise of the state's police power so as to constitute a taking.

Future Land Use Plan-Policies 1.7.7. and 1.7.8., Page 443

2. Determine compensation, or other appropriate relief by judicial proceeding rather than by administrative proceeding.

N/A

3. Encourage acquisition of lands by state or local government in cases where regulation will severely limit practical use of real property.

Environment Plan-Policy 4.3.2., Page 111

(16) LAND USE.-

(a) Goal.-In recognition of the importance of preserving the natural resources and enhancing the quality of life in the state, development shall be directed to those areas which have in place, or have agreements to provide, the land and water resources, fiscal abilities, and service capacity to accommodate growth in an environmentally acceptable manner.

Future Land Use Plan-Goal Statement, Page 440

(b) Policies.-

1. Promote state programs, investments, and development and redevelopment activities which encourage efficient development and occur in areas which will have the capacity to service new population and commerce.

Future Land Use Plan-Policy 1.12.1., Page 446

2. Develop a system of incentives and disincentives which encourages a separation of urban and rural land uses while protecting water supplies, resource development, and fish and wildlife habitat.

Future Land Use Plan-Policies 1.7.2., 1.7.3., 1.8.1., 1.8.4., 1.8.6. and 1.8.7., Pages 443 and 444

3. Enhance the liveability and character of urban areas through the encouragement of an attractive and functional mix of living, working, shopping, and recreational activities.

Future Land Use Plan-Objective 1.9 and its Policy Cluster, Page 445

4. Develop a system of intergovernmental negotiations for siting locally unpopular public and private land uses which considers the area of population served, the impact on land development patterns or important natural resources, and the cost-effectiveness of service delivery.

Future Land Use Plan-Policies 1.1.3., 1.10.2. and 1.10.3., Pages 440 and 446

Intergovernmental Coordination and Citizen Participation Plan-Policies 1.3.4. and 1.4.4., Pages 505 and 506

5. Encourage and assist local governments in establishing comprehensive impact-review procedures to evaluate the effectiveness of significant development activities in their jurisdictions.

Intergovernmental Coordination and Citizen Participation Plan-Objective 1.4 and its Policy Cluster, Page 506

6. Consider in land use planning and regulation, the impact of land use on water quality and quantity; the availability of land, water, and other natural resources to meet demands; and the potential for flooding.

Future Land Use Plan-Objectives 1.6, 1.8 and 1.9, Pages 442, 444 and 445

7. Provide educational programs and research to meet state, regional, and local planning and growth-management needs.

N/A

(17) PUBLIC FACILITIES.-

(a) Goal.-Florida shall protect the substantial investments in public facilities that already exist and shall plan for and finance new facilities to serve residents in a timely, orderly, and efficient manner.

Public Facilities Plan-Goals 1, 2, 3 and 4, Pages 239, 243, 243 and 245

(b) Policies.-

1. Provide incentives for developing land in a way that maximizes the uses of existing public facilities.

Future Land Use Plan-Policies 1.7.2. and 1.7.3. and the Urban Area Residential Checklist, Pages 443 and 447-449

2. Promote rehabilitation and reuse of existing facilities, structures, and buildings as an alternative to new construction.

N/A

3. Allocate the cost of new facilities on the basis of the benefits received by existing and future residents.

Capital Improvements Plan-Objective 1.4 and its Policy Cluster, Page 472

4. Create a partnership among state government, local governments, and the private sector which would identify and build needed public facilities and allocate the costs of such facilities among the partners in proportion to the benefits accruing to each of them.

N/A

5. Encourage local government financial self-sufficiency in providing public facilities.

Capital Improvements Plan-Objective 1.5 and its Policy Cluster, Pages 472 and 473

6. Identify and implement innovative but fiscally sound and cost-effective techniques for financing public facilities.

Capital Improvements Plan-Policies 1.4.4., 1.4.5., 1.5.2., 1.5.3. and 1.5.4., Pages 472 and 473

7. Encourage the development, use, and coordination of capital improvement plans by all levels of government.

Capital Improvements Plan-Policy 1.1.3., Page 471

8. Take into consideration, in the assessed value of property, increased property values directly related to infrastructure expenditures by government.

N/A

9. Identify and use stable revenue sources which are also responsive to growth for financing public facilities.

Capital Improvements Plan-Objectives 1.4 and 1.5 and their Policy Clusters, Pages 472 and 473

10. Encourage development of graywater systems to extend existing sewerage capacity.

Public Facilities Plan-Policy 1.1.9., Page 240

(18) CULTURAL AND HISTORICAL RESOURCES.-

(a) Goal.-By 1995, Florida shall increase its historical and cultural resources and programs and encourage the development of cultural programs of national excellence.

Historic Preservation Plan-Goal Statement, Page 20

(b) Policies.-

1. Promote and provide access throughout the state to performing arts, visual arts, and historic preservation and appreciation programs at a level commensurate with the state's economic development.

Historic Preservation Plan-Policies 1.3.6. and 1.3.7., Page 22

Economy Plan-Policy 1.1.4., Page 410

2. Develop a strategy for the construction of arts facilities based on an assessment which ranks regional and statewide capacities and needs.

N/A

3. Ensure the identification, evaluation, and protection of archaeological folk heritage and historic resources properties of the state's diverse ethnic population.

Historic Preservation Plan, Pages 20-22

4. Stimulate increased private-sector partnership and support for historical and cultural programs.

Historic Preservation Plan-Policies 1.2.1., 1.2.5. and 1.3.2., Page 21

Economy Plan-Policy 1.1.4., Page 410

5. Encourage the rehabilitation and sensitive, adaptive use of historic properties through technical assistance and economic incentive programs.

Historic Preservation Plan-Policies 1.3.2., 1.3.3., 1.3.4. and 1.3.5., Pages 21 and 22

Housing Plan-Objective 1.2 and Policy 1.2.5, Page 388

6. Ensure that historic resources are taken into consideration in the planning of all capital programs and projects at all levels of government and that such programs and projects are carried out in a manner which recognizes the preservation of historic resources.

Historic Preservation Plan-Policy 1.1.8., Page 21

(19) TRANSPORTATION.-

(a) Goal.-Florida shall direct future transportation improvements to aid in the management of growth and shall have a state transportation system that integrates highway, air, mass transit, and other transportation modes.

Traffic Circulation Plan-Goal Statement, Page 270

Mass Transit Plan-Goal Statement, Page 305

Aviation Plan-Goals 1, 2, 3, 4 and 5, Pages 339-341; Port and Rail Plan-Goal Statement, Page 342

(b) Policies.-

1. By 1995, establish a high-speed rail system that links the Tampa Bay area, Orlando, and Miami.

Port and Rail Plan-Policy 1.2.2., Page 343

2. Coordinate transportation investments in major travel corridors to enhance system efficiency and minimize adverse environmental impacts.

Mass Transit Plan-Objective 1.5 and its Policy Cluster, Page 307

Aviation Plan-Goal 3 and its Objectives and Policies, Page 340

3. Promote a comprehensive transportation planning process which coordinates state, regional, and local transportation plans.

Traffic Circulation Plan-Policy 1.5.1., Page 273

Mass Transit Plan-Policy 1.3.1., Page 307

Aviation Plan-Goal 5 and its Objective and Policies, Page 341; Port and Rail Plan, Policy 1.2.1., Page 342

4. Allow flexibility in state and local participation in funding of public transit projects and encourage construction and use of toll facilities in order to meet transportation needs.

Mass Transit Plan-Objective 1.6 and its Policy Cluster, Pages 307 and 308.

Port and Rail Plan, Policy 1.2.1., Page 342

5. Ensure that existing port facilities and airports are being used to the maximum extent possible before encouraging the expansion or development of new port facilities and airports to support economic growth.

Port and Rail Plan, Objective 1.1 and Policy 1.1.1., Page 342

6. Promote timely resurfacing and repair of roads and bridges to minimize costly reconstruction and to enhance safety.

Traffic Circulation Plan-Policy 1.1.1., Page 270

Aviation Plan-Goal 2 and its Objectives and Policies, Pages 339 and 340

7. Develop a revenue base for transportation which is consistent with the goals and policies of this plan.

Capital Improvements Plan-Policies 1.4.1., 1.4.5., 1.5.3., 1.5.4. and 1.5.5., Pages 472 and 473

8. Encourage the construction and utilization of a public transit system, including, but not limited to, a high-speed rail system, in lieu of the expansion of the highway system, where appropriate.

Mass Transit Plan, Pages 305-308

Port and Rail Plan-Policy 1.2.2., Page 343

9. Ensure that the transportation system provides Florida's citizens and visitors with timely and efficient access to services, jobs, markets, and attractions.

Mass Transit Plan-Objective 1.1 and its Policy Cluster, Pages 305 and 306

Aviation Plan-Goals 1, 2, 3, 4 and 5, Pages 339-341; Port and Rail Plan-Goal Statement, Page 342

10. Promote ride sharing by public and private sector employees.

N/A

11. Emphasize state transportation investments in major travel corridors and direct state transportation investments to contribute to efficient urban development.

N/A

12. Avoid transportation improvements which encourage or subsidize increased development in coastal high-hazard areas or in identified environmentally sensitive areas such as wetlands, floodways, or productive marine areas.

Traffic Circulation Plan-Policy 1.1.3., Page 271

13. Coordinate transportation improvements with state, local, and regional plans.

Traffic Circulation Plan-Policy 1.5.2., Page 273

Mass Transit Plan-Policy 1.3.1., Page 307

Aviation Plan-Goal 5 and its Objective and Policy Cluster, Page 341; Port and Rail Plan, Policy 1.2.1., Page 342

14. Acquire advanced rights-of-way for transportation projects in designated transportation corridors consistent with state, regional, and local plans.

Traffic Circulation Plan-Policy 1.2.1., Page 271

Port and Rail Plan-Policy 1.2.3., Page 343

15. Promote effective coordination among various modes of transportation in urban areas to assist urban development and redevelopment efforts.

Traffic Circulation Plan-Objective 1.4 and its Policy Cluster, Pages 272 and 273

(20) GOVERNMENTAL EFFICIENCY.-

(a) Goal.-Florida governments shall economically and efficiently provide the amount and quality of services required by the public.

Mass Transit Plan-Objective 1.3, Page 307

Aviation Plan-Objective 2.2 and its Policy Cluster, Page 340; Port and Rail Plan-Policy 1.2.1., Page 342

Intergovernmental Coordination and Citizen Participation Plan-Goal 1, Page 504

(b) Policies.-

1. Encourage greater cooperation between, among, and within all levels of Florida government through the use of appropriate interlocal agreements and mutual participation for mutual benefit.

Intergovernmental Coordination and Citizen Participation Plan-Goal 1 and its Objectives and Policies, Pages 504-506

2. Allow the creation of independent special taxing districts which have uniform general law standards and procedures and do not overburden other governments and their taxpayers while preventing the proliferation of independent special taxing districts which do not meet these standards.

N/A

3. Encourage the use of municipal services taxing units and other dependent special districts to provide needed infrastructure where the fiscal capacity exists to support such an approach.

Capital Improvements Plan-Policy 1.4.1., Page 472

4. Eliminate regulatory activities that are not tied to specific public and natural resource protection needs.

N/A

5. Eliminate needless duplication of, and promote cooperation in, governmental activities between, among, and within state, regional, county, city, and other governmental units.

Intergovernmental Coordination and Citizen Participation Plan-Policy 1.5.1., Page 506

6. Ensure, wherever possible, that the geographic boundaries of water management districts, regional planning councils, and sub-state districts of the executive departments shall be coterminous for related state or agency agreements in order to reduce the number of districts and councils with jurisdiction in any one county.

N/A

7. Encourage and provide for the restructuring of and county political jurisdictions with the goals of greater efficiency and high-quality and more equitable and responsive public service programs.

Intergovernmental Coordination and Citizen Participation Plan-Policy 1.5.1., Page 506

8. Replace multiple, small scale, economically inefficient local public facilities with regional facilities where they are proven to be more economical, particularly in terms of energy efficiency, and yet can retain the quality of service expected by the public.

Public Facilities Plan-Objective 2.1, Page 242

9. Encourage greater efficiency and economy at all levels of government through adoption and implementation of effective records-management, information-management, and evaluation procedures.

Intergovernmental Coordination and Citizen Participation Plan-Goal 1, Page 504

10. Throughout government, establish citizen management efficiency groups and internal management groups to make recommendations for greater operating efficiencies and improved management practices.

N/A

11. Encourage governments to seek outside contracting on a competitive-bid basis, when cost-effective and appropriate.

N/A

12. Discourage undue expansion of state government and make every effort to streamline state government in a cost-effective manner.

N/A

13. Encourage joint venture solutions to mutual problems between levels of government and private enterprise.

Intergovernmental Coordination and Citizen Participation Plan-Objective 1.1 and its Policy Cluster, Page 504

(21) THE ECONOMY.-

(a) Goal.- Florida shall promote an economic climate which provides economic stability, maximizes job opportunities, and increases per capita income for its residents.

Economy Plan-Goal Statement, Page 409

(b) Policies.-

1. Attract new job-producing industries, corporate headquarters, distribution and service centers, regional offices, and research and development facilities to provide quality employment for the residents of Florida.

Economy Plan-Policy 1.3.2., Page 410

2. Promote entrepreneurship and small minority-owned business start-up by providing technical and information resources, facilitating capital formation, and removing regulatory restraints which are unnecessary for the protection of consumers and society.

N/A

3. Maintain, as one of the state's primary economic assets, the environment, including clean air and water, beaches, forests, historic landmarks, and agricultural and natural resources.

Environment Plan, Pages 106-116

Historic Preservation Plan, Pages 20-22

4. Strengthen Florida's position in the world economy through attracting foreign investment and promoting international banking and trade.

N/A

5. Build on the state's attractiveness to make it a leader in the visual and performing arts and in all phases of film, television, and recording production.

Economy Plan-Policies 1.1.4. and 1.3.8., Pages 409 and 411

6. Promote economic development for Florida's residents through partnerships among education, business, industry, agriculture, and the arts.

Economy Plan-Policies 1.2.1., 1.3.2. and 1.3.5., Pages 410 and 411

7. Provide increased opportunities for training Florida's work force to provide skilled employees for new and expanding business.

Economy Plan-Policies 1.2.1. and 1.2.2., Page 410

8. Promote economic self-sufficiency through training and educational programs which result in productive employment.

N/A

9. Promote cooperative employment arrangements between private employers and public sector employment efforts to provide productive, permanent employment opportunities for public assistance recipients through provisions of education opportunities, tax incentives, and employment training.

N/A

10. Provide for non discriminatory employment opportunities.

Economy Plan-Policy 1.2.1., Page 410

11. Provide quality child day care for public assistance families and others who need it in order to work.

N/A

12. Encourage the development of a business climate that provides opportunities for the growth and expansion of existing state industries, particularly those industries which are compatible with Florida's environment.

Economy Plan-Policies 1.3.1. and 1.3.2., Page 410

13. Promote coordination among Florida's ports to increase their utilization.

N/A

14. Encourage the full utilization by businesses of the economic development enhancement programs implemented by the Legislature for the purpose of extensively involving private businesses in the development and expansion of permanent job opportunities, especially for the economic disadvantaged, through the utilization of enterprise zones, community development corporations, and other programs designed to enhance economic and employment opportunities.

Economy Plan-Policy 1.3.2., Page 410

(21) AGRICULTURE.-

(a) Goal.-Florida shall maintain and strive to expand its food, agriculture, ornamental horticulture, aquaculture, forestry, and related industries in order to be a healthy and competitive force in the national and international marketplace.

Economy Plan-Policy 1.3.5., Page 411

(b) Policies.-

1. Encourage diversification within the agriculture industry, especially to reduce the vulnerability of communities that are largely reliant upon agriculture for either income or employment.

N/A

2. Promote and increase international agricultural marketing opportunities for all Florida agriculture producers.

N/A

3. Stimulate research, development, and application of agricultural technology to promote and enhance the conservation, production, and marketing techniques available to the agriculture industry.

Economy Plan-Policy 1.3.5., Page 411

4. Encourage conservation, wastewater recycling, and other appropriate measures to assure adequate water resources to meet agricultural and other beneficial needs.

Economy Plan-Policy 1.3.5., Page 411

5. Promote entrepreneurship in the agricultural sector by providing technical and informational services.

Economy Plan-Policy 1.3.5., Page 411

Environment Plan-Policy 5.5.2., Page 114

6. Stimulate continued productivity through investment in education and research.

Economy Plan-Policy 1.3.5., Page 411

7. Encourage development of biological pest controls to further the reduction in reliance on chemical controls.

N/A

8. Conserve soil resources to maintain the economic value of land for agricultural pursuits and to prevent sedimentation in state waters.

Environment Plan-Policy 5.5.2., Page 114

9. Promote the vitality of Florida's agricultural industry through continued funding of basic research, extension inspection, and eradication of diseases and infestations.

Economy Plan-Policy 1.3.5., Page 411

10. Continue to promote the use of lands for agricultural purposes by maintaining preferential property tax treatment through the greenbelt law.

Future Land Use Plan-Policy 1.5.3., Page 441

11. Ensure that coordinated state planning of road, rail, and waterborne transportation systems provides adequate facilities for the economical transport of agricultural products and supplies between producing areas and markets.

N/A

(23) TOURISM.-

(a) Goal.-Florida will attract at least 55 million tourists annually by 1995 and shall support efforts by all areas of the state wishing to develop or expand tourist-related economies.

N/A

(b) Policies.-

1. Promote statewide tourism and support promotional efforts in those parts of the state that desire to attract visitors.

N/A

2. Acquire and manage public lands to offer visitors and residents increased outdoor experiences.

Future Land Use Plan-Objective 1.2 and its Policy Cluster, Page 440

Environment Plan-Policy 5.5.3., Page 114

Recreation and Open Space Plan-Objective 1.2 and Policies 1.1.1., 1.1.5., 1.1.6. and 1.1.10., Pages 153 and 154

3. Promote awareness of historic places and cultural and historical activities.

Economy Plan-Policy 1.1.4., Page 410

Historic Preservation Plan-Policies 1.2.4., 1.2.5., 1.3.6. and 1.3.7., Pages 21 and 22

(24) EMPLOYMENT.-

(a) Goal.-Florida shall promote economic opportunities for its unemployed and economically disadvantaged residents.

N/A

(b) Policies.-

1. Achieve by 1995, a 70 percent job placement rate for state training program graduates and a 50 percent reduction in the gap between the unemployment rate for disadvantaged groups and the average state unemployment rate.

N/A

2. Provide training opportunities for the unemployed which are based upon documented labor market needs.

Economy Plan-Policy 1.2.1., Page 410

3. Provide training and job placement assistance to hard-to-employ groups encountering special barriers.

Economy Plan-Policy 1.2.1., Page 410

4. Encourage economic development in economically distress areas.

N/A

5. Ensure that the transportation system provides maximum access to jobs and markets.

Economy Plan-Policy 1.2.1., Page 410

6. Promote interagency coordination and cooperation to maximize the impact of employment and training services on target groups.

N/A

7. Provide services which assist students to make informed career decisions.

N/A

8. Encourage innovative arrangements such as onsite day care facilities and flexible hours of employment to increase the access of working parents to the job market.

N/A

9. Ensure that all training programs focus on providing each student with lifetime employment skills, including the ability to communicate, compute, and think critically.

N/A

(25) PLAN IMPLEMENTATION.-

(a) Goal.-Systematic planning capabilities shall be integrated into all levels of government in Florida, with particular emphasis on improving intergovernmental coordination and maximizing citizen involvement.

Intergovernmental Coordination and Citizen Participation Plan-Goals 1 and 2, Pages 504 and 507

(b) Policies.-

1. Establish strong and flexible agency and regional planning functions at all levels of government capable of responding to changing state policies and goals.

N/A

2. Ensure that every level of government has the appropriate operational authority to implement the policy directives established in the plan.

Intergovernmental Coordination and Citizen Participation Plan-Objective 1.3 and its Policy Cluster, Pages 505 and 506

3. Establish effective monitoring, incentive, and enforcement capabilities to see that the requirements established by regulatory programs are met.

N/A

4. Simplify, streamline, and make more predictable the existing permitting procedures.

Housing Plan-Policy 1.1.11., Page 387

5. Ensure that each agency's functional plan and management process is designed to achieve the policies and goals of the state plan consistent with state law.

N/A

6. Encourage citizen participation at all levels of policy development, planning, and operations.

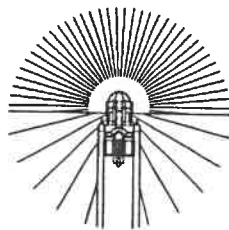
Intergovernmental Coordination and Citizen Participation Plan-Goal 2 and its Objective and Policy Cluster, Page 507

7. Ensure the development of comprehensive regional policy plans and local plans that implement and accurately reflect state goals and policies and that address problems, issues, and conditions that are of particular concern in a region.

Intergovernmental Coordination and Citizen Participation Plan-Objective 1.3 and its Policy Cluster, Pages 505 and 506

8. Encourage the continual cooperation among communities which have a unique natural area, irrespective of political boundaries, to bring the private and public sectors together for establishing an orderly, environmentally, and economically sound plan for future needs and growth.

Intergovernmental Coordination and Citizen Participation Plan-Goal 1 and its Objectives and Policies, Pages 504-506



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Sarasota County Area Transit
 Sarasota County Arts Council
 Sarasota County Board of County Commissioners Office
 Sarasota County Board Records Office
 Sarasota County Building and Zoning Department
 Sarasota County Chamber of Commerce
 Sarasota County Cooperative Extension Service
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