

# **Sanibel Plan**

## **VISION STATEMENT**

### **BACKGROUND**

The barrier island of Sanibel comprises a wide variety of natural and altered environments. The community of Sanibel strives to sustain ecological balance and preserve and restore natural settings for residents, visitors, and wildlife. The people of Sanibel are sustained by the beauty and health of the island's natural and restored habitats, and they rely on the coordinated vigilance of residents, government, and private enterprise to protect and enhance these habitats. Over the first two decades of the community's existence as a city, a tenuous balance has been maintained between development and preservation; and between regulatory control and the rights and privileges of individuals. Government and not-for-profit institutions have helped sustain the balance by purchasing and restoring to natural conditions substantial areas of open space and threatened habitats.

Limited new development and redevelopment will occur over the next twenty years. However, growth limits and locations are well established, as are regulations to minimize harm to the natural environment and to the community's character.

The specter of rampant development has diminished as the community has matured. Nevertheless, unwanted changes are occurring; visitation increases as new "attractions" are developed; beaches and refuge areas are becoming stressed by overuse; traffic congestion is turning to gridlock; and formerly "green" scenic corridors are becoming urbanized and commercialized. These and other conditions and trends cause residents to realize that, unless protected, their island's historic and cherished way of life is in jeopardy.

To provide a sense of direction for the future, this Vision Statement is a confirmation of the community's shared values and goals, to guide future decisions.

### **SANCTUARY**

Sanibel is and shall remain a barrier island sanctuary, on which a diverse population lives in harmony with the island's wildlife and natural habitats. The Sanibel community must be vigilant in the protection and enhancement of its sanctuary characteristics.

The City of Sanibel will resist pressures to accommodate increased development and redevelopment that is inconsistent with the Sanibel Plan, including this Vision Statement.

The City of Sanibel will guard against and, where advisable, oppose human activities in other jurisdictions that might harm the island's sensitive habitats, including the island's surrounding aquatic ecosystems.

## **COMMUNITY**

Sanibel is and shall remain a small town community whose members choose to live in harmony with one another and with nature; creating a human settlement distinguished by its diversity, beauty, uniqueness, character and stewardship.

**Diversity:** The city of Sanibel cherishes its cultural, social ecological, and economic diversity, and will endeavor to maintain it.

**Beauty:** The City of Sanibel will foster quality, harmony and beauty in all forms of human alteration of the environment. The community aesthetic is defined as a casual style; one which is adapted to a relaxed island quality of life and respectful of local history, weather, culture and natural systems.

**Uniqueness:** The City of Sanibel chooses to remain unique through a development pattern which reflects the predominance of natural conditions and characteristics over human intrusions. All forms of development and redevelopment will preserve the community's unique small town identity.

**Character:** The City of Sanibel chooses to preserve its rural character in its setting within an urbanizing county. "Auto-urban" development influences will be avoided. The commercialization of natural resources will be limited and strictly controlled.

**Stewardship:** In keeping with the foregoing principles, the City of Sanibel affirms a land ethic that recognizes landholding--both public and private--as a form of stewardship, involving responsibilities to the human and natural communities of the island and its surroundings, and to future generations.

## **ATTRACTION**

The Sanibel community recognizes that its attractiveness to visitors is due to the island's quality as sanctuary and as community. The City of Sanibel will welcome visitors who are drawn by, and are respectful of, these qualities; it will resist pressures to accommodate visitor attractions and activities that compromise these qualities.

## **HIERARCHY OF VALUES**

This three-part statement of the community's vision of its future is hierarchy; one in which the dominant principle is Sanibel's sanctuary quality. Sanibel shall be developed as a community only to the extent to which it retains and embraces this quality of sanctuary. Sanibel will serve as attraction only to the extent to which it retains its desired qualities as sanctuary and community.

**SANIBEL PLAN**  
**CITY OF**  
**SANIBEL, FLORIDA**

**Adopted**

**July 19, 1976**

**Ordinance No. 76-21**

**Extensively Revised**

**November 27, 1985**

**Ordinance No. GA-85-04**

**Extensively Revised**

**February 8, 1989**

**Ordinance No. 89-04**

**Extensively Revised**

**August 5, 1997**

**Ordinance No. 97-16**

## **LIST OF CITY OFFICIALS**

### **1997 City Council**

Robert B. Davison, Mayor

Robert P. Janes, Vice Mayor

Wallace M. Kain

George Madison

Andrew Reding

Former members of City Council that participated in the preparation of the

*1995 Evaluation and Appraisal Report for the Plan*

and the Vision Statement for the Sanibel Plan.

Daphne Miller, Jerrold Muench, Mark A. Westall and Francis P. Bailey

### **1997 Planning Commission**

Richard H. Downes, Chairman

John C. Veenschoten, Vice Chairman

Louise M. Johnson

Edith Slayton

Steve Mullins

Marty Harrity

Steven V. Greenstein

Former members of the Planning Commission that participated in the preparation of the

*1995 Evaluation and Appraisal Report for the Plan*

and the Vision Statement for the Sanibel Plan.

Ernest Klaudt, Deana Turner and James Levy

**City Manager**

Gary A. Price

**City Attorney**

Robert D. Pritt

**Planning Department Director**

Bruce A. Rogers

**PREFACE**

This volume contains the Sanibel Plan, as amended, revised and restated in its entirety, which was adopted by Ordinance No. 97-16.

This plan is published in looseleaf format in order to facilitate incorporation of future revisions. Supplements to the Sanibel Plan will contain an instruction sheet directing the removal of obsolete pages and the insertion of replacement pages. The instruction sheet for the most current Supplement should be placed in the front of the volume, and it is recommended that deleted pages be saved and filed for historical reference.

## TABLE OF CONTENTS

List of City Officials

Preface

Table of Contents

List of Illustrations

Prologue

Preparation of the Plan

### **Article 1. Preamble**

Section 1.01. Short Title

Section 1.1 Purpose, including the **Vision Statement**

Section 1.2. Consistency and Feasibility of the Plan

Section 1.3. Economic Assumptions of the Plan

Section 1.4. Coordination with Plans of Surrounding Areas

Section 1.5. Timeframe for the Plan

Section 1.6. Implementation of the Plan

Section 1.7. Monitoring and Evaluation

### **Article 2. Evaluation and Appraisal**

### **Article 3. Goals, Objectives and Policies**

Part 3.1. Safety

Section 3.1.1. Hurricane Safety Goals, Objectives and Policies

Part 3.2. Protection of Natural, Environmental, Economic and Scenic Resources

Section 3.2.1. Coastal Zone Protection Goals, Objectives and Policies

Section 3.2.2. Conservation Goals, Objectives and Policies

Section 3.2.3. Natural Ground Water Aquifer Recharge Goals, Objectives and Policies

Section 3.2.4. Historic Preservation Goals, Objectives and Policies

Section 3.2.5. Scenic Preservation Goals, Objectives and Policies

### Part 3.3. Human Support Systems

Section 3.3.1. Human Support Systems Goals, Objectives and Policies

Section 3.3.2. Water Supply Goals, Objectives and Policies

Section 3.3.3. Transportation Goals, Objectives and Policies

Section 3.3.4. Wastewater Treatment Goals, Objectives and Policies

Section 3.3.5. Solid Waste Goals, Objectives and Policies

Section 3.3.6. Storm Drainage Goals, Objectives and Policies

Section 3.3.7. Recreation and Open Space Goals, Objectives and Policies

Section 3.3.8. Other Human Support Systems

### Part 3.4. Intergovernmental Coordination

Section 3.4.1. Intergovernmental Coordination Goals, Objectives and Policies

Section 3.4.2. Effect of Plan on Adjacent Areas

Section 3.4.3. Charlotte Harbor Resource Planning and Management

Part 3.5. Capital Improvements

Section 3.5.1. Capital Improvements Goals, Objectives and Policies

Section 3.5.2. Implementation, Monitoring and Evaluation

Part 3.6. Land Use

Section 3.6.1. Housing Goals, Objectives and Policies

Section 3.6.2. Future Land Use Goals, Objectives and Policies

**Article 4. Official Maps**

Part 4.1. Map Status

Section 4.1.1. Future Land Use Map Series

Section 4.1.2. Future Traffic Circulation Map Series

**Article 5. Administrative Regulations**

Part 5.1. Introduction

Part 5.2. Legal Authority

Part 5.3. Local Planning Agency

Section 5.3.1. Designation

Section 5.3.2. Authority of Planning Commission

Part 5.4. Amendments to Plan

Section 5.4.1. Procedure Generally

Section 5.4.2. Persons Entitled to Propose or Request Amendments

Section 5.4.3. Application for Plan Amendment

Section 5.4.4. Standards

Section 5.4.5. Public Participation



Section 5.4.6. Effect on Land Development Code

Part 5.5. Composition of Plan

Section 5.5.1. The Ordinance and Plan Document

Section 5.5.2. Maps

Section 5.5.3. Other Extraneous Documents

**LIST OF ILLUSTRATIONS**

(Not part of this distribution.)

NOTES: The Official Maps of the Sanibel Plan, as identified in Article 4, are a series of looseleaf maps. Reduced scale copies of the Official Maps are contained in a separate second volume of the Sanibel Plan.

The Existing Land Use Map-September 1, 1997 provides an updated inventory of the 1995 Existing Land Use Map that was prepared as part of the *1995 Evacuation and Appraisal Report for the Sanibel Plan*. This map is illustrative and non-regulatory.

**PROLOGUE**

"How wonderful are Islands! Islands in space,  
like this one I have come to,  
ringed by miles of water . . .

An island from the world and the world's life . . ."

Anne Morrow Lindbergh, Gift From the Sea

\* \* \* \* \*

"WHEREAS, RESIDENTS OF SANIBEL ISLAND IN LEE COUNTY, FLORIDA,  
DESIRING TO HAVE THE RIGHTS OF SELF-DETERMINATION, TO THE  
FULLEST EXTENT ALLOWED BY LAW, IN THE PLANNING FOR THE  
ORDERLY FUTURE DEVELOPMENT OF AN ISLAND COMMUNITY KNOWN  
FAR AND WIDE FOR ITS UNIQUE ATMOSPHERE AND UNUSUAL NATURAL  
ENVIRONMENT, AND TO INSURE COMPLIANCE WITH SUCH PLANNING SO  
THAT THESE UNIQUE AND NATURAL CHARACTERISTICS OF THE ISLAND  
SHALL BE PRESERVED, TO SEEK THE BENEFITS CONFERRED ON  
MUNICIPAL CORPORATIONS BY THE CONSTITUTION AND LAWS OF THE  
STATE OF FLORIDA."

from an Act relating to Lee County, establishing and organizing a municipality to be  
known and designated as the City of Sanibel and enacted by the Legislature of the State  
of Florida.

\* \* \* \* \*

## **PREPARATION OF THE PLAN AMENDMENT**

### **I. PARTICIPANTS**

This Sanibel Plan was prepared by the Sanibel Planning Department. Kenneth Pfalzer, Deputy Planning Director, is the project manager for the extensively revised and restated Sanibel Plan. The Sanibel Planning Department staff includes:

Bruce A. Rogers James Jordan

Kenneth Pfalzer Roy Gibson

Jennifer Flavin Deborah Ford

Jean Woodring Sandra Larsen

Raymond Hendzel Joseph Ham

All departments of the City of Sanibel assisted in the preparation of this extensively revised and restated Sanibel Plan. Notable contributions have been made by the following city staff members:

Gary A. Price, City Manager

Bruce A. Rogers, Planning Director

Robert D. Pritt, City Attorney

William A. Mills, Assistant City Manager

Renee M. Lynch, Finance Director

Gates Castle, Public Works Director

Richard A. Noon, Recreation Director

Lew Phillips, Police Chief

John Hefty, Utilities Director

Dianne J. Lynn, Legal Administrative Assistant

Bill Tomlinson, Emergency Management Coordinator

Rob Loflin, Natural Resources Director

Max Anderson, Building Official

The City retained the consulting services of Wallace, Roberts and Todd, Inc. for the preparation of the Vision Statement of the Sanibel Plan.

James C. Nicholas, PhD. analyzed this Plan and the local economy for the preparation of the Economic Assumptions of the Plan.

Jan Hyatt, Executive Director of Community Housing and Resources, Inc. contributed to the preparation of this extensively revised and restated Sanibel Plan.

The Vegetation Committee, Wildlife Committee and Historical Preservation Committee assisted in the preparation of the extensively revised and restated Sanibel Plan.

Sandra Larsen, Information Coordinator, is the ordinance manager for the Sanibel Plan.

The community's participation in the planning process for the preparation of the extensively revised and restated Sanibel Plan is the invaluable component of this community-based Plan.

## **II. PREPARATION DATE**

On January 14, 1997, an extensively revised and restated Sanibel Plan was recommended, by the Sanibel Planning Commission, for approval as a Plan Amendment by the Sanibel City Council.

On February 5, 1997, an extensively revised and restated Sanibel Plan was transmitted as a Plan Amendment, by the Sanibel City Council to the Florida Department of Community Affairs for review.

On August 5, 1997, an extensively revised and restated Sanibel Plan was adopted as a Plan Amendment by the Sanibel City Council.

On September 19, 1997, the Florida Department of Community Affairs published its Notice of Intent to Find this Amendment to the Comprehensive Plan for the City of Sanibel, IN COMPLIANCE, pursuant to Sections 163.3184, 163.3187 and 163.3189, Florida Statutes.

October 11, 1997 is the effective date of the extensively revised and restated Sanibel Plan, adopted by Ordinance No. 97-16.

## ARTICLE 1. PREAMBLE

This Article was amended in 1996 to add a Vision Statement to the Sanibel Plan.

That Vision Statement has been utilized in the continuation of the planning process for amending the Sanibel Plan. For this update of the Sanibel Plan, which considers recommendations of the *1995 Evaluation and Appraisal Report*, objectives and policies to further efforts consistent with the Vision Statement are also included.

### Section 1.01. Short Title

The Comprehensive Land Use Plan of the City of Sanibel shall be known and may be cited as the "Sanibel Plan". All references contained in this document or in any ordinance, resolution or other document of the City of Sanibel, to the "Comprehensive Land Use Plan", shall mean the "Sanibel Plan".

### Section 1.1. Purpose

*Pursuant to Section 163.3161 and 163.3177, Florida Statutes and Chapter 9J-5 of the Florida Administrative Code.*

### I. Background Discussion

In December 1974, Sanibel Island was incorporated as a municipality of Lee County, Florida. Self-determination grew from a perceived need for orderly development to preserve the island's natural features. The Act establishing the City commits it to: ". . . planning for the orderly future development of an Island community known far and wide for its unique atmosphere and unusual natural environment and to ensure compliance with such planning so that these unique and natural characteristics of the island shall be preserved ..." Among the benefits conferred on the City by its charter is the power to prepare and adopt a Comprehensive Plan.

Reinforcing this power, the Local Government Comprehensive Planning and Land Development Regulation Act, Section 163.3161 et seq. Florida Statutes, mandates planning by local governments to "preserve, promote, protect and improve the public health, safety, comfort, good order, appearance, convenience, law enforcement and fire prevention, and general welfare." Among the Act's purposes is to "prevent the overcrowding of land and avoid undue concentration of population; facilitate the adequate and efficient provision of transportation, water, sewerage, schools, parks, recreational facilities, housing and other requirements and services; and conserve, develop, utilize and protect natural resources within their jurisdictions."

*The Initial Comprehensive Land Use Plan.*

The original Sanibel Plan, adopted in 1976, marked a substantial departure from the preexisting Lee County zoning and development standards. These would have permitted

about 30,000 residential units on Sanibel, with virtually no environmental safeguards. The Sanibel Plan aimed to reduce that figure to about 7,800 residential units. It also developed new planning guidelines to reduce the potential threat to life, beaches, and structures from hurricanes; to provide for adequate supplies of good quality water; to design a safe and efficient network of roads and bicycle paths; and to provide for sanitary disposal of sewage. The Sanibel Plan also sought to improve fire protection and police service, and ensure long-term planning to meet future needs for public services.

Development regulations set forth in the Sanibel Plan were incorporated into the Sanibel Land Development Code in 1985. Between 1976 and 1989, the number of allowable dwelling units rose from 7,800 to 9,000, as a result of lawsuits, settlement agreements, and amendments to the Sanibel Plan.

#### *The 1989 Plan Amendment*

The Sanibel Plan addresses perceived problems of environmental protection and planned growth on Sanibel within the limits of anticipated resources available for public improvements. As parts of the plan are put into effect, new conditions and challenges must be addressed in the context of ever-changing budgetary horizons. Accordingly, the Sanibel Plan is reviewed and modified to reflect the local public's responses to new circumstances, and to meet changing state requirements. The Sanibel Plan is part of the continuing planning process.

The current Sanibel Plan was last extensively revised on February 8, 1989. Following modifications to conform with the Stipulated Settlement Agreement with the Department of Community Affairs, the amended plan has been found to be consistent with:

- ✓ Section 163.3177, 163.3178 and 163.3191, Florida Statutes,
- ✓ Chapter 9J-5 of the Florida Administrative Code, which sets minimum standards for the preparation, review and determination of compliance of the Sanibel Plan, pursuant to the Local Government Comprehensive Planning and Land Development Regulation Act, Chapter 163, Florida Statutes,
- ✓ the *Southwest Florida Regional Strategic Policy Plan*, and
- ✓ the *State Comprehensive Plan*.

#### *The 1995 Evaluation and Appraisal Report.*

This *1995 Evaluation and Appraisal Report, for the Sanibel Plan*, adopted on January 2, 1996, identifies actions taken or that need to be taken to address planning issues identified in this report. For the most part, the City of Sanibel has succeeded in implementing the Sanibel Plan, including design and initial implementation of specific plans and programs, such as:

*The Surface Water Management Plan;*

*The Wastewater Management Plan;* and

*The Sanibel Island Beach Management Plan.*

On March 19, 1996, the City Council adopted a resolution to update the Safety Element and the Housing Element of the adopted Evaluation and Appraisal Report.

## **II. Vision Statement for the Sanibel Plan**

As part of the City's preparation of the Evaluation and Appraisal Report, the City Council retained the consulting services of Wallace, Roberts and Todd, Inc. together with LaRue Planning and Management Services, Inc., to prepare a vision statement for the Sanibel Plan. The vision statement that follows reflects both the implicit values of the Sanibel Plan, and the contributions of hundreds of citizens who took part in a series of public workshops and responded to detailed questionnaires that helped identify shared concerns, values and goals.

### *The vision embodied by present policies*

Although the attitudes and values reflected in the 1976 Sanibel Plan and the 1989 Plan Revision were visionary, the documents did not directly and succinctly articulate the underlying "vision". Thus the first step in developing a Vision Statement for the next 20 years was to make the values and goals that are implicit in the existing Sanibel Plan and related ordinances, regulations and policies explicit.

### *Sanibel today: taking stock*

Next came an evaluation of the extent to which the current unarticulated vision had, in fact, been realized. Present conditions on the island were compared with the goals of existing guidelines and policies, taking stock of successes and shortcomings. That also provided an opportunity to identify conditions, trends, or threats not previously anticipated or addressed.

### *Sanibel tomorrow: community aspirations*

Though many of the citizens who contributed to past planning efforts are still around, they have been joined by many newcomers. The community has changed markedly over the past twenty years--in terms of income, age, and household size; in the mix of permanent and seasonal residents; in the relative numbers of employed and retired persons. The City therefore asked its citizens to express themselves in town meetings and written surveys. In yet another demonstration of the civic dedication that has characterized the residents of Sanibel since its incorporation, hundreds took part, articulating their sense of what makes Sanibel special, and identifying concerns and threats to the island's desired character.

This was much more than an opinion survey. The process of drafting a vision and plans for the community calls for a lot more than tallying votes or positions on various issues. Such input is invaluable, however, to distinguish issues on which there is consensus from those where opinions diverge widely.

From this process of focusing on points of consensus, the following Vision Statement has emerged as a foundation for specific modifications to the Sanibel Plan, and to the various regulatory modifications and capital investments which may follow from the amended Plan.

### *City Council Workshop*

At a public workshop, the City Council invited public comment on Preliminary Vision Statement drafted by the consultants. It accepted the consultants' report, and instructed that the Vision Statement be included in the Evaluation and Appraisal Report.

## **VISION STATEMENT**

### **BACKGROUND**

The barrier island of Sanibel comprises a wide variety of natural and altered environments. The community of Sanibel strives to sustain ecological balance and preserve and restore natural settings for residents, visitors, and wildlife. The people of Sanibel are sustained by the beauty and health of the island's natural and restored habitats, and they rely on the coordinated vigilance of residents, government, and private enterprise to protect and enhance these habitats. Over the first two decades of the community's existence as a city, a tenuous balance has been maintained between development and preservation; and between regulatory control and the rights and privileges of individuals. Government and not-for-profit institutions have helped sustain the balance by purchasing and restoring to natural conditions substantial areas of open space and threatened habitats.

Limited new development and redevelopment will occur over the next twenty years. However, growth limits and locations are well established, as are regulations to minimize harm to the natural environment and to the community's character.

The specter of rampant development has diminished as the community has matured. Nevertheless, unwanted changes are occurring; visitation increases as new "attractions" are developed; beaches and refuge areas are becoming stressed by overuse; traffic congestion is turning to gridlock; and formerly "green" scenic corridors are becoming urbanized and commercialized. These and other conditions and trends cause residents to realize that, unless protected, their island's historic and cherished way of life is in jeopardy.

To provide a sense of direction for the future, this Vision Statement is a confirmation of the community's shared values and goals, to guide future decisions.



## **SANCTUARY**

Sanibel is and shall remain a barrier island sanctuary, one in which a diverse population lives in harmony with the island's wildlife and natural habitats. The Sanibel community must be vigilant in the protection and enhancement of its sanctuary characteristics.

The City of Sanibel will resist pressures to accommodate increased development and redevelopment that is inconsistent with the Sanibel Plan, including this Vision Statement.

The City of Sanibel will guard against and, where advisable, oppose human activities in other jurisdictions that might harm the island's sensitive habitats, including the island's surrounding aquatic ecosystems.

## **COMMUNITY**

Sanibel is and shall remain a small town community whose members choose to live in harmony with one another and with nature; creating a human settlement distinguished by its diversity, beauty, uniqueness, character and stewardship.

**Diversity:** The City of Sanibel cherishes its cultural, social ecological, and economic diversity, and will endeavor to maintain it.

**Beauty:** The City of Sanibel will foster quality, harmony and beauty in all forms of human alteration of the environment. The community aesthetic is defined as a casual style; one which is adapted to a relaxed island quality of life and respectful of local history, weather, culture and natural systems.

**Uniqueness:** The City of Sanibel chooses to remain unique through a development pattern which reflects the predominance of natural conditions and characteristics over human intrusions. All forms of development and redevelopment will preserve the community's unique small town identity.

**Character:** The City of Sanibel chooses to preserve its rural character in its setting within and urbanizing county. "Auto-urban" development influences will be avoided. The commercialization of natural resources will be limited and strictly controlled.

**Stewardship:** In keeping with the foregoing principles, the City of Sanibel affirms a land ethic that recognizes landholding--both public and private--as a form of stewardship, involving responsibilities to the human and natural communities of the island and its surroundings, and to future generations.

## **ATTRACTION**

The Sanibel community recognizes that its attractiveness to visitors is due to the island's quality as sanctuary and as community. The City of Sanibel will welcome visitors who are drawn by, and are respectful of, these qualities; it will resist pressures to accommodate visitor attractions and activities that compromise these qualities.

## **HIERARCHY OF VALUES**

This three-part statement of the community's vision of its future is a hierarchy; one in which the dominant principle is Sanibel's sanctuary quality. Sanibel shall be developed as a community only to the extent to which it retains and embraces this quality of sanctuary. Sanibel will serve as attraction only to the extent to which it retains its desired qualities as sanctuary and community.

### **Section 1.2. Consistency and Feasibility of the Plan**

*Pursuant to Chapter 163.3177(2), Florida Statutes and Chapter 9J-5.021 of the Florida Administrative Code.*

The discreet elements of the Sanibel Plan are consistent with one another in that each element is so designed as to promote and protect the health, safety and welfare of existing and future residents and to protect and preserve the unique natural environments of Sanibel.

All elements of the Sanibel Plan are intended to be consistent in that they relate to provisions necessary for planned growth of up to approximately 9,000 dwelling units. Implementing development and administrative regulations shall be consistent with the intent of the Local Government Comprehensive Planning and Land Development Regulation Act, Section 163.3161 et seq., Florida Statutes, and are addressed to critical ecological and special requirements that the unique and natural characteristics of Sanibel be preserved. Elements of the Sanibel Plan are consistent with state and federal regulations, including:

Minimum Criteria for Review of Local Government Comprehensive Plan and Determination of Compliance, Chapter 9J-5 of the Florida Administrative Code

The Coastal Construction Setback Lines of Sections 161.052 and 161.053, Florida Statutes

The Dredge and Fill Regulations of Chapter 253, Florida Statutes

The Florida Air and Water Pollution Control Act, Sections 403.031 et seq., Florida Statutes

The Florida Environmental Protection Act, Section 403.412, Florida Statutes

The Florida Water Resources Act of 1972, Chapter 373, Florida Statutes

The Federal Water Pollution Control Amendments of 1972, Authority of E.P.A. and the Army Corps of Engineers, including Section 404, responsibility for dredge and fill of wetlands

The National Coastal Zone Management Act of 1972 and the National Environmental Policy Act

The Charlotte Harbor Management Plan, 1981

Consistency with other plans and applicable regulations is further addressed in Section 1.4. Coordination with Plans of Surrounding Areas, and in Part 3.4. Intergovernmental Coordination.

Each element of the Sanibel Plan is internally consistent and is based upon research and analyses of available published data and field studies that evaluate problems and opportunities for planned growth and conservation. The Sanibel Plan is consistent with respect to recommendations for allocating future growth and for performance standards that protect the natural environment and Island character. It is important that performance standards be refined and enforced, as experience warrants, to maintain community confidence and resolve and to assure fulfillment of Plan objectives.

The feasibility of the Sanibel Plan is further addressed in Part 3.5. Capital Improvements. Feasibility of implementing the Plan is enhanced by administrative regulations that provide for review and updating of the Plan to meet changing circumstances in the future.

### **Section 1.3. Economic Assumptions of the Plan**

*Pursuant to Chapter 163.3177(7)(j), Florida Statutes and Chapters 9J-5.016 and 9J-5.012(2)(a) of the Florida Administrative Code.*

The most basic of all of the economic assumptions for Sanibel's planning is that Sanibel's economic fortune is directly related to the viability of its natural systems. Sanibel's appeal as a pleasant place to live or visit is based upon vital wildlife, open beaches and a tranquil ambiance. The wildlife needs to extend beyond the refuges so that it is something people live with, rather than visit. Sanibel must protect the environment. It must protect the environment because of the responsibility entrusted to the people of Sanibel to husband these resources, but also as a component of a sound economic policy.

In order for Sanibel to be economically and environmentally sustainable, means must be sought to reduce the demand on the natural infrastructure. Perhaps no other component of demand is more critical than automobile traffic. Although difficult to do, some say impossible, means need to be pursued to reduce automobile traffic. Such a reduction will go far to retain and, where needed, to restore the Sanibel ambiance, while also reducing the demand on the systems.

Demand, preferably internal demand, needs to be found for surplus retail space. It would be counterproductive to attempt to fill these spaces by stimulation of additional activity from off-island. Rather, filling these spaces with activities that are presently based at off-island locations, but already providing services on-island, would be the better policy. Such a policy may require reconsideration of certain of the development regulations relating to permissible uses in such buildings. Supply reduction is another option available to address surplus retail space. This option could be undertaken by the public acquisition of commercially zoned sites.

The City of Sanibel can expect the growth of the tax base to be substantially less than it has been in the past. As Sanibel was developing, property values responded as the value of Sanibel became further recognized. These values have been declining. Prudent planning and management should be able to stop the decline but nothing can restore the growth. The full implementation of the "Save Our Homes" constitutional amendment will result in additional constraints on growth of the tax base.

Sanibel can and should expect that the residential component of the community will grow bigger over time. Many seasonal residents will become permanent residents as they reach retirement. This suggests that Sanibel protect the residential nature of the community to assure that the community has the flexibility to evolve with its population.

The economic base of Sanibel is the environment. It is the base for people wanting to visit as well as live on the island. It is the base for the high property values and thousands of jobs. Without a healthy and sustainable environment, none of these would exist. But the environment is now being used beyond its capacity. This level of use is not sustainable. If means to reduce this over-usage are not found, the community can expect to see further deterioration in property values and the quality of life.

The island that is Sanibel is small, less than 12,000 acres. Over one-half of the land area of the island is devoted to conservation. It is these conservation areas that are the critical economic base of the island's economy. Only some 6,000 acres or less are available for human use and occupation. This means that these areas will have to be judiciously used. It also means that the community of Sanibel must economically exist within the broader communities of Lee County and southwest Florida. The sustainability of Sanibel need not be viewed as distinct or separate from the broader community. Sanibel is a part, and a very important part, of the broader community. Each part of the community has a role to play. Symbolically, Sanibel's is to be a haven for migratory birds and a repository for sea shells. More importantly, in the hearts of its citizenry, as expressed in the Vision Statement of this Plan, Sanibel is and shall remain a barrier island sanctuary. Sanibel need not attempt to play any other role, such as a retail or business center. The role of sanctuary is beneficial, both environmentally and economically, to Sanibel and also to the county, the region and the state.

The future growth of Sanibel will be redevelopment. As redevelopment begins, close attention needs to be paid to how that redevelopment can correct the problems of the present. Planning priority should be given to reducing the need to use motor vehicles as

residents and visitors go about their daily activities. Sanibel needs to reduce vehicular traffic and redevelopment can be an effective means of attaining that end.

Redevelopment is a process that is much more difficult than initial development. The City of Sanibel will need to be more flexible and imaginative with respect to permitted uses and principles of building and site design. This flexibility should not be a lessening of standards. Rather, it should open up new routes to attaining those standards, which ensure that the harmony, general atmosphere and character of the community are retained.

These economic assumptions are based on the analyses of the Sanibel Plan prepared by James C. Nicholas, PhD. in the report *Economic Realities, Possibilities and Assumptions, 1997*. That report concludes that the Sanibel Plan is based on sound economic policy.

It is not the intent of the City of Sanibel that these economic assumptions override the goals and objectives of the Sanibel Plan in order to foster economic growth at all costs. It is the intent of the City of Sanibel that the Sanibel Plan is based on sound economic policy.

#### **Section 1.4. Coordination with Plans of Surrounding Areas**

*Pursuant to Chapter 163.3177(4)(a), Florida Statutes and Chapter 9J-5.021 of the Florida Administrative Code.*

The Local Government Comprehensive Planning and Land Development Regulation Act, Section 163, Florida Statutes (as amended) requires that the "coordination of the local comprehensive plan with the comprehensive plans of adjacent municipalities, the county, adjacent counties or region, with adopted rules pertaining to designated areas of critical state concern and with the State comprehensive plan shall be a major objective of the local comprehensive planning process. To that end, in the preparation of a comprehensive plan or element thereof, and in the comprehensive plan or element as adopted, the governing body shall include a specific policy statement indicating the relationship of the proposed development of the area to the comprehensive plans of adjacent municipalities, the county, adjacent counties, or the region and to the State comprehensive plan, as the case may require and as such adopted plans or plans in preparation may exist."

Sanibel's primary planning goal as stated in its Charter is to plan for the orderly future development of the Island such as to insure that the unique atmosphere and the unusual natural environment of the Island be preserved. It is also the policy of the City, as incorporated in the Sanibel Plan, to regulate future growth in a fashion that takes cognizance of the State, Regional, County and adjacent municipal comprehensive plans.

The goals, objectives and policies of the Sanibel Plan are intended to be consistent with the *State Comprehensive Plan*, the *Southwest Florida Regional Strategic Policy Plan*, the *Lee Plan*, the *Fort Myers Comprehensive Plan*, the *Cape Coral Comprehensive Plan*, and the *Fort Myers Beach Comprehensive Plan*.

It is the policy of the City Council of the City of Sanibel that the Sanibel Plan and any modifications thereto shall be coordinated with and related to the Comprehensive Plans of the State, County, Southwest Florida Regional Planning Council and adjacent municipalities, and the plans of the Florida Department of Environmental Protection, the Florida Department of Transportation and the South Florida Water Management District.

### **Section 1.5. Timeframe for the Plan**

*Pursuant to Chapter 9J-5.005(4) of the Florida Administrative Code.*

Pursuant to Chapter 9J-33 of the Florida Administrative Code, the City of Sanibel prepared an Evaluation and Appraisal Report for the Sanibel Plan, adopted on January 2, 1996.

Section 163.3191, Florida Statutes, requires that the Sanibel Plan be amended, based on the findings and recommendations in the Evaluation and Appraisal Report, within 1 year after the adoption of the report. The City of Sanibel was granted a six-month extension for this amendment by the Florida Department of Community Affairs.

The data and analyses compiled and undertaken for the preparation of the *1995 Evaluation and Appraisal Report for the Sanibel Plan* has subsequently been used in the preparation of this extensive revision to the Plan. This benchmark data was used for establishing the time frame for this revision to the Sanibel Plan. For this Sanibel Plan, amended pursuant to the findings and recommendations of the Evaluation and Appraisal Report, there are 2 planning periods.

The initial planning period is for 5 years, through the year 2000.

The long-range planning period, which includes the initial planning period, is for 20 years, through the year 2015.

The "buildout" of land uses, consistent with the Future Land Use Map and rates of growth projected in this Plan, is expected to be essentially reached in the long-range planning period of this Plan.

### **Section 1.6. Implementation of the Plan**

*Pursuant to Chapter 163.3177(9)(e), Florida Statutes, and Chapter 9J-5.005(6) of the Florida Administrative Code.*

The Sanibel Plan was enacted:

pursuant to authority granted the City of Sanibel under home rule powers by the State of Florida,

as set forth in the Charter of the City, and

as outlined in the Local Government Comprehensive Planning and Land Development Regulation Act, Section 163, Florida Statutes, (as amended).

The goals, objectives and policies of this Plan describe how the programs and activities of the City of Sanibel will be initiated, modified or continued to implement the Sanibel Plan in a consistent manner. In accordance with subsection 163.3161(5) and Sections 163.3194, 163.3201 and 163.3202, Florida Statutes, the implementation of the Plan will be in accordance with the provisions of the adopted Land Development Code, which will be consistent with all elements of the Sanibel Plan. All projects for development or improvement on Sanibel by either the public or private sector must be in conformance with the intent and provisions of the Sanibel Plan and follow procedures outlined in the Land Development Code.

Because the Plan contains elements which require improvements of public services and safety factors; and because funding should be flexible, the Sanibel Plan must be continually evaluated and appraised.

The Local Government Comprehensive Planning and Land Development Regulation Act, Section 163.3191, Florida Statutes, as amended, stipulates that "The planning program shall be a continuous and ongoing process. The local planning agency shall prepare periodic reports on the Comprehensive Plan which shall be sent to the governing body and to the state land planning agency at least once every five years after the adoption of the Comprehensive Plan. Reports may be transmitted at lesser intervals as may be required or upon request of the governing body." Progress of the Plan implementation shall be included in such reports.

The City shall keep accurate records of permits and structures and improvements as built. Supplementary studies shall be undertaken to improve the information base for future planning. These include occupancy census of residences at different seasons, traffic studies, and monitoring of environmental impact from development.

The Sanibel Plan has been and will be implemented at a pace consistent with the City's capability to provide administrative and economic support for development.

### **Section 1.7. Monitoring and Evaluation**

*Pursuant to Chapter 163.3177(9)(e), Florida Statutes and Chapter 9J-5.005(7) of the Florida Administrative Code.*

For the purpose of evaluating and appraising implementation of the Sanibel Plan, the City of Sanibel prepared the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, in accordance with Section 163.3191, Florida Statutes.

The procedures in the Sanibel Plan for preparing the Evaluation and Appraisal Report include:

- ✓ Establishing mechanisms to ensure citizen participation in the evaluation and appraisal process;
- ✓ Updating appropriate baseline data and measurable objectives to be accomplished in the first five-year period of the plan, and for the long-term period;
- ✓ Identifying accomplishments in the first five-year period, describing the degree to which the goals, objectives and policies have been successfully reached;
- ✓ Identifying obstacles or problems which resulted in underachievement of goals, objectives or policies.
- ✓ Developing new or modified and reformulated goals, objectives or policies needed to correct discovered problems;
- ✓ Establishing a means of ensuring continuous monitoring and evaluation of the plan during the five-year period;
- ✓ Identifying the extent to which unanticipated and unforeseen problems and opportunities occurred between the date of adoption of this Plan and the date of the evaluation and appraisal report;
- ✓ Identifying the effect on the Sanibel Plan of changes in state statutes and administrative code, the *State Comprehensive Plan* and the *Southwest Florida Strategic Regional Policy Plan*;
- ✓ Identifying the major problems of development, physical deterioration, and the location of land uses and the social and economic effects of such uses in the area;
- ✓ Identifying any actions that are taken or need to be taken to address the planning issues identified in the evaluation and appraisal report; and
- ✓ Identifying any proposed or anticipated Plan amendments necessary to address or implement the identified changes.

The application of these procedures is reflected throughout the *1995 Evaluation and Appraisal Report for the Sanibel Plan* and will be utilized in future evaluation and appraisal reports.



## **ARTICLE 2. EVALUATION AND APPRAISAL**

The data and analyses from this Article of the Sanibel Plan is briefly summarized in Article 3 of this Plan.

This Article of the Sanibel Plan has traditionally been entitled Elements of the Plan. In this update of the Sanibel Plan, that implements the recommendations of the *1995 Evaluation and Appraisal Report*, the format of the Plan has been changed to provide a clearer distinction between data and analyses and objectives and policies.

The format of the Sanibel Plan, extensively revised in 1989, addressed the minimum review criteria for comprehensive plans here in this Article. Goals, objectives and policies for each element of the Plan were also provided in this Article.

Now, for the Sanibel Plan, the minimum review criteria established by Section 9J-5 of the Florida Administrative Code for data and analyses have been addressed in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*. Therefore, this extensive recitation of data and analyses responsive to regulatory requirements is not repeated in the Sanibel Plan, but is incorporated by reference, as part of the Plan amendment process.

In this update of the Sanibel Plan, goals, objectives and policies are provided in Article 3 of this Plan.

## **ARTICLE 3. GOALS, OBJECTIVES AND POLICIES**

Arranged by elements of the Sanibel Plan, the goals, objectives and policies of this Plan are provided in this Article.

Plans prepared for elements, and components of elements, of the Sanibel Plan are provided in this Article. These plans also contain objectives and policies of this Plan.

A brief discussion of background material for elements of the Sanibel Plan is provided in this Article. This background discussion presents a summary of data and analyses for the Sanibel Plan and describes the purpose of the element and its relationship to other elements of this Plan. For the Sanibel Plan, the minimum review criteria established by Section 9J-5 of the Florida Administrative Code for data and analyses has been addressed in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*.

### **PART 3.1 SAFETY**

This part of the Sanibel Plan establishes goals, objectives and policies for public expenditures in a coastal high-hazard area, for directing population concentrations away from a coastal high-hazard area, for maintaining and reducing hurricane evacuation times, for post-hurricane recovery and for building code requirements.

Hurricane safety has always been a principal tenet of the Sanibel Plan and has influenced development of other Plan elements.

Adequate off-island evacuation routes and shelters are becoming an increasing concern to the City of Sanibel and will be addressed, to the extent possible, in the Intergovernmental Coordination Element of the Sanibel Plan.

#### **Section 3.1.1. Hurricane Safety Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177, Florida Statutes and Chapter 9J-5.012(3) of the Florida Administrative Code.*

#### **Background Discussion**

The purpose of this element, as stated in the Florida Administrative Code, is to protect human life and limit public expenditures in areas that are subject to destruction by natural disaster.

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(7)(h), Florida Statutes and the minimum review criteria of Chapter 9J-5.012(2) and (3) of the Florida Administrative Code, are also provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

The City of Sanibel is subject to periodic passage of hurricanes. Sanibel is located entirely within the evacuation zone for category 1 hurricanes, as predicted by the National Hurricane Center and mapped by the Southwest Florida Regional Planning Council. Therefore, by rule definition, Sanibel Island is entirely within the coastal high-hazard area. The threat of hurricanes is a major influence in the development of the Sanibel Plan.

### *Hurricane Climatology*

Since 1873, there have been approximately 50 tropical cyclones passing within 100 nautical miles of the Fort Myers area. Eighteen of these storms have been hurricanes passing within 75 miles of Sanibel Island, each of which posed a significant threat to property and lives on the island at some point in its life cycle.

For Sanibel the storm tide represents a potentially devastating and dangerous event. The storm tide level predicted for Sanibel during the 100 year storm is 8'-20' above mean sea level, a level that would inundate the entire island. These tides would be accompanied by large scouring and battering waves. The erosive power and battering impact of such a waterflow would seriously threaten the integrity of numerous structures on Sanibel and the life of any person stranded on the island. Of course, lesser storms can and will produce storm tides capable of flooding the entire island. The 1926 hurricane did just that, and forever changed the character of Sanibel's use by wiping out the Island's farming economy.

### *Data and Analyses*

In 1980 the City of Sanibel undertook a comprehensive effort to develop a broad based hazard mitigation program. A study, entitled "Hurricane Evacuation and Hazard Mitigation Study" prepared for the City by the consulting firm of Rogers, Golden & Halpern in association with Simpson Weather Associates and H. W. Lochner, Inc.

In 1987 the South West Florida Regional Planning Council (RPC) prepared comprehensive hurricane evacuation study for Southwest Florida. This study, entitled "Hurricane Evacuation Study", was updated in 1995.

Major findings and recommendations from these studies have been incorporated in this element.

### *Evacuation Population*

In recognition of the hurricane hazard on Sanibel and the inherent deficiencies of on-Island refuges, the City of Sanibel must plan for the evacuation of all persons off the Island and Captiva Island, when a hurricane warning and evacuation order is issued.

The RPC estimates 9,400 dwelling units for Sanibel and Captiva in 1995. The RPC estimated functional population for the Sanibel/Captiva Evacuation Zone at the start of hurricane season in June is 13,600 people and rises to 14,600 people in November 1995.

Captiva population adds 2400 people in June and 2700 in November to the evacuation population.

Also included in the RPC estimates are number of vehicles to be used for evacuation. The estimate for the Sanibel/Captiva Zone was 8,000 vehicles for June, 1995; 6,850 vehicles were estimated for November, 1995.

According to RPC estimates, approximately one-third of the County's functional population would be displaced by evacuation for a category 1 hurricane in July 1995. It is estimated that nearly 100% of the County's functional population would be displaced by evacuation from a category 5 hurricane.

The elderly and handicapped population present special needs for evacuation assistance. The 1990 census estimated that 33% of Sanibel's permanent population was 65 years of age or older. A local service organization, Friends In Service Here (FISH), provides assistance for individuals that require help with evacuation.

### *Hurricane Shelters*

The Lee County School Board is the supplier of most public shelters accessible for Sanibel residents. These shelters are listed in the RPC study and in the Lee County Comprehensive Emergency Management Plan. All public shelters should be available for Sanibel evacuees.

The RPC has concluded that the volume of shelter space available for a category 1 hurricane, which would necessitate Island evacuation is adequate for the City and all other portions of Lee County effected by such categories of storms. Recognizable deficits exist for the entire county for category 2 storms, and these deficits grow as increasing strength storms cause more shelters to stay closed. As deficits increase, Sanibel's residents will need to head to public or private sheltering options in other counties.

Sanibel has attempted to reduce some sheltering issues through a positive effort of identifying hotels and private sheltering providers on the mainland. Further, a portion of City Hall, which is in itself elevated, has been stormproofed to serve as a refuge for City staff and volunteers who would be directing an evacuation and would stay in the City to prepare for the initial steps for recovery.

There are currently designated refuges of last resort on island with the limited capacity to accommodate a limited number of people. Sanibel's "Refuge of Last Resort" Plan helps provide limited areas of refuge from storm conditions for persons stranded on the islands during a hurricane. These refuges are intended to be a better alternative than residences and vehicles when it becomes necessary to discontinue evacuation efforts over the causeway or when evacuation becomes impossible. This type of refuge is in no way meant to encourage people to stay on the island, nor to give a false sense of security to those that do stay.

### *Evacuation Routes and Improvements*

There is one primary evacuation route from Sanibel - across the Causeway and up McGregor/Summerlin Road. This evacuation route will also be used by thousands of mainland evacuees who live in other lowlying coastal areas, severely limiting the capacity of the route that will be available for Sanibel and Captiva evacuees.

Although Summerlin Road and the portion of McGregor Boulevard from the southeastern terminus of Summerlin Road to the Sanibel Causeway were originally planned as controlled access roads, accesses in addition to those originally envisioned have been added in accommodation of development plans. The multiple access points which have been developed along the Summerlin Road and McGregor Boulevard corridor have contributed to this area becoming an extremely hazardous stretch of highway. The hazards of these many access points will be amplified in the event of hurricane evacuation.

Although the local roads used for evacuation routes are constrained during peak season, the City's Emergency Management Program seeks to reduce the number of vehicles on local roads by restricting unnecessary trips to Sanibel prior to issuance of an evacuation order. This effort improves the level of service for the evacuation routes when emergency conditions threaten.

The City's objectives and policies for traffic circulation limit road capacity improvements to those needed for safety and those that are compatible with environmental, scenic and historic resources. Although road capacity improvements are a primary consideration for adequate hurricane evacuation, road capacity improvements are secondary to resource protection. Road improvements which would provide increased capacity for hurricane evacuation would create an impetus for further development and use of the limited and fragile resources of Sanibel.

To address this conflict among objectives in a manner consistent with Sanibel's policy not to widen roads, the City's Emergency Management Plan contains a provision for Causeway lane conversion procedures. Depending on storm type, direction, intensity and calculated clearance time, conversion to two outbound lanes on the Causeway can be ordered by the Emergency Operations Center head in concert with the Lee County Disaster Director. Uniformed police will stop all inbound traffic at the Summerlin Road/McGregor Boulevard intersection, allowing only predetermined vehicles to access the causeway. This increase in road capacity on Sanibel's primary evacuation route can significantly reduce the clearance time component for calculating hurricane evacuation times.

### *Evacuation Times*

The severity of the storm, the number of vehicles evacuating, the capacity of evacuation routes, distance to shelter destination, and behavioral tendencies are factors contributing

to clearance time. Pre-landfall storm conditions, such as flooding and high wind, also add to evacuation time.

The critical link for Sanibel's near shore evacuation is the Sanibel Causeway. This is a two lane facility that is low lying and subject to inundation by tropical storm flooding. Upon reaching the mainland, the route becomes renamed McGregor/Summerlin Road and is a four lane facility to its terminus in Fort Myers. The Causeway is planned to remain two lanes, as is Periwinkle Way, the primary evacuation route within the City. Portions of Summerlin are forecasted to become 6 lanes (from the intersection with SR865 to Boy Scout Road), but not during the next few years.

Recognizing that the Causeway is the critical link for reaching mainland shelters, it is a point of survival for the City to make sure that the Causeway is fully functional with undiminished capacity, and that McGregor/Summerlin's capacity for evacuation is not reduced through growth of surrounding areas beyond that which enables the City to have a timely evacuation. Currently, that time is estimated to be 11.1 hours to clear the island, with an additional 1.1 hours to reach the shelter at the expected reduced rates of speed of service level "D". This estimated time includes the Captiva evacuees, and applies to all categories of hurricanes; however, great hurricanes, requiring the evacuation of major portions of the mainland, will drastically increase the time required to reach shelters.

Evacuation time is of concern for the City of Sanibel because the inclusion of "pre-landfall" wind conditions of up to 8 hours (and, in some circumstances, pre-landfall flooding of similar times), total evacuation of the island to mainland shelter could take 20.2 hours, exceeding the 18 hour goal for evacuation planning. Consequently, there have been alternatives discussed to reduce this time. The most common is "one waying" the Causeway, which could reduce clearance time by as much as 50%.

The estimation and projection for hurricane evacuation clearance times for now and at buildout (existing 1995 development and approximately 1,500 additional dwelling units) on Sanibel and Captiva can be significantly reduced by providing a second lane for evacuation traffic along the evacuation route. It is estimated that increasing road capacity for hurricane evacuation by devoting two lanes to evacuation traffic can reduce clearance times by as much as 50%. This improvement to road capacity for hurricane evacuation is anticipated to reduce evacuation clearance time for existing development and maintain evacuation times through buildout below estimated evacuation times for 1987.

This proposed increase in hurricane evacuation road capacity, which is projected to reduce and maintain evacuation clearance times below 1987 levels, is implemented by operational procedures contained in the Sanibel Emergency Management Plan rather than as a capital improvement. The Sanibel Emergency Management Plan will continue to provide manual control of the hurricane evacuation route to assure that the level of service on the evacuation route is maintained throughout the evacuation period.

The City of Sanibel has undertaken additional operational steps to reduce evacuation times. The public notification program, the enlistment of volunteers for neighborhood

and condominium notification, the identification of persons needing special assistance, have all been coordinated through the Police Department and provide a high level of assurance that the City will react quickly to the hurricane threat.

In 1983 the City and County entered into an interlocal agreement which permits the City to restrict vehicular access to the Sanibel Causeway within 48 hours of a hurricane's forecasted landfall.

Depending upon a storm's intensity and direction of approach, high winds and high tides could make it unsafe to cross the causeway as much as 12 hours in advance of landfall. A tide gauge with remote read-out capability would be appropriate to be installed near the causeway to permit continuous monitoring of the tides. Additional recommendations with regard to evacuations are:

- a. Population, including dwelling units, should be limited on Sanibel, as well as Captiva and other areas subject to tidal flooding, to that which can be safely evacuated under "worst case" conditions.
- b. If an area-wide evacuation is ordered, the evacuation of all zones including the mainland should be initiated at the same time. This would permit manual control of the intersections to obtain the highest evacuation rates. It would also reduce public confusion.

### *Recovery*

The Plan for Recovery from the damage of a hurricane or evacuation of the population due to the threat of a hurricane is contained in the Sanibel Emergency Management Plan.

### *Damage Reduction*

Taking measures to reduce the amount of damage sustained in a hurricane has two primary purposes:

- a. *Saving lives.* Buildings constructed to hurricane resistant standards can be used as refuges of last resort in the event evacuation is not possible.
- b. *Speeding up recovery.* Reducing the amount of property damage that is likely to result from a hurricane permits the community to "get back on its feet" more quickly following a hurricane.

There are approximately 200 dwelling units located seaward of the 1974 Coastal Construction Control Line (CCCL); but, with rare exception, these units were built prior to the adoption of this Plan in 1976. There are few structures in the City of Sanibel that have a history of repeated damage in coastal storms. These structures are located on the Gulf Coast near Blind Pass. The City has acquired some of these properties. Extensively

damaged structures located seaward of this line must be reconstructed landward of the 1974 CCCL.

The northernmost section of Sanibel-Captiva Road (approximately ½ mile immediately south of the Blind Pass bridge) is located seaward of the 1991 Coastal Construction Control Line (CCCL). There is no apparent opportunity to relocate this facility, which is the hurricane evacuation route for the northern extent of Sanibel and all of Captiva. A small section of East Gulf Drive (directly south of Kinzie Island) is also located seaward of the 1991 Coastal Construction Control Line.

Structures are to be elevated above or floodproofed to the 100 year storm's projected wave heights. All structures must be developed in compliance with the Flood and Stormproofing requirements of the Land Development Code.

Sanibel's Building Code has been revised to include standards appropriate to the hazards present on a barrier island. This was done in 1995 with adoption of a code which requires all new construction to be designed and built to withstand the wind loads associated with wind speeds of 120 m.p.h.; to have foundations deep enough to remain stable following maximum anticipated scour depths, and to withstand the battering which accompanies wave action. All building components are to be of a type which will not weaken the structure by rotting, rusting or otherwise deteriorating from exposure.

Additional measures that should be considered for their contribution to a damage reduction program include:

- a. Do not permit fill to be used for elevating structures in locations identified as being especially susceptible to scour, even though the location may be in an "A" Zone area according to the FIRM.
- b. Maintain as much dense vegetation as possible as a means of reducing wave heights and wind velocity, and require revegetation as opportunities arise for the same reasons.
- c. Reduce permitted densities insofar as possible in undeveloped parts of "V" Zones and the most scour-prone parts of "A" Zones.

### **Plan For Hurricane Safety**

The threat to life and property posed by tropical storms and hurricanes necessitates Sanibel having a plan in place which responds to this threat.

It is the policy of the City to develop and improve on- and off-Island evacuation to off-island shelters as the principal means for assuring the safety of its population. On-island refuge is not a substitute for evacuation and is necessary only for those who are unable to leave the island.



Because the components of ensuring adequate means for the safe evacuation from threats of hurricanes extend well beyond the jurisdictional extent of the City of Sanibel, these concerns need to be adequately addressed in the Intergovernment Coordination Element of this Plan.

1. Cooperate with local governments of the region to carry-out the safe evacuation of populations affected by the threat from tropical storms and hurricanes.

a. Work closely with Lee County and State officials to implement a systematic process for making decisions on evacuation during the approach of a tropical storm or hurricane which is based on the probability of the storm striking a particular location.

b. Work with Lee County, the Cities of Fort Myers and Cape Coral and the Town of Fort Myers Beach in the implementation of an off-island emergency plan for evacuation which will control traffic on evacuation routes and identify emergency shelters.

c. Work with Lee County to develop a program to ensure that adequate off-island shelter(s) is open and available during a storm threat to accommodate early evacuees who are evacuating before a mandatory evacuation order is given.

d. In cooperation with Lee County officials, restrict vehicular access to Sanibel via the causeway within 48 hours of a hurricane's forecasted landfall.

e. In cooperation with Lee County, develop an interlocal agreement to develop and implement a plan to operationally provide 2 lanes of outbound evacuation traffic across the Sanibel Causeway, as a means of reducing evacuation clearance times. Develop and implement a plan to operationally provide 2 lanes for outbound evacuation traffic for the on-island evacuation route as a means of reducing clearance times.

f. To satisfy Sanibel's long term need for an evacuation and recovery route to the mainland that is above the level of the anticipated storm surge of a category 3 hurricane and of sufficient width to permit motor vehicle traffic to bypass disabled vehicles, secure needed improvements to Lee County's bridge and causeway facility which runs between the mainland and Sanibel.

2. Continue to consider development of an off-island Emergency Operations Center and Recovery Facility to provide a safe location for emergency operations and short and long-term recovery operations.

3. Continue its educational program to assure citizen understanding of the threat posed by tropical storms and hurricanes and the appropriate responses thereto.
4. Implement an effective warning system to get current information on storms out to island residents.
  - a. Maintain a 24-hour communications link with official weather information sources.
  - b. Develop a communication network which enables the public to obtain relevant information concerning status and procedures during threats from storms and during recovery periods.
5. Continue to evacuate and improve the operational evacuation plan.
  - a. Maintain an up-to-date plan describing actions to be taken at various times during the approach of tropical storms and hurricanes.
  - b. When a hurricane warning is issued, provide each person in the City of Sanibel the opportunity to evacuate from the Island and encourage persons to evacuate in a timely fashion.
  - c. Encourage persons to respond to early warnings and hurricane watches in order to lessen the evacuation burden after a hurricane warning is issued.
  - d. Encourage the early, voluntary evacuation of visitors during a storm threat in order to decrease evacuation time if it becomes necessary to order an evacuation.
  - e. Incorporate a "least regret" factor into the plan for hurricane preparedness to take into account the "bad actor" storm, i.e., the storm that does not behave as forecasted.
  - f. Make arrangements with the owners of all buildings on the Island which could serve as on-island refuge, for the use of hallways and other common areas of buildings as emergency refuges. Such areas should be stocked with emergency food, water and medical supplies. Such structures should be constructed in conformance with Sanibel's hurricane resistant building code and be located back from the areas subject to storm surge and scour.
  - g. Keep in place a method of monitoring the number of vehicles on Sanibel and Captiva during the hurricane season in order to have an accurate approximation of the number of vehicles to be evacuated.

h. Install a tide gauge near the causeway with remote readout capability in the Police Station in order to monitor tides to assure early and timely warning or the need to close the causeway to traffic.

i. Maintain an agreement with a private meteorological firm whose staff is competent in tropical meteorology to provide the City with current information on probable effects from approaching tropical storms and hurricanes.

6. Maintain the facilities and equipment necessary to implement plans for evacuation and recovery.

a. Improve, as necessary, storm drainage along the evacuation route and elevate those portions of the roadway subject to early flooding.

b. Carry out a tree management program to lessen the risk of trees being blown across the evacuation route.

c. Acquire and maintain the equipment necessary to keep evacuation routes open prior to and during an evacuation, and open up roadways following a storm.

d. Keep the City-owned causeway properties available as a recovery staging area in the event the causeway is not useable following a hurricane; and keep the City Hall property available for recovery operations.

7. Keep up-to-date on Federal and State requirements to qualify the City and its residents for disaster relief assistance.

8. Limit and manage growth so that the population on the Island when a hurricane warning is issued will not be in excess of evacuation capabilities. Overloading the emergency system will reduce efficiency and deprive residents and visitors of a reasonable opportunity to reach safe shelter.

a. Ensure that future growth be accompanied by and coordinated with, to the maximum extent practicable, improvements in the evacuation system, both on and off island. It is only in anticipation of such improvements that the present population should be allowed to expand, because the evacuation capacity is already taxed.

9. Based upon experience and additional information, make revisions to Sanibel's Building and Land Development Codes which respond to the threats posed by the high winds and flooding associated with tropical storms and hurricanes.

a. See that all future buildings that are of a type which have common spaces are developed in a manner amenable to use as an emergency refuges. Use of such areas should be agreed upon during the approval of such development.

## **Goals, Objectives and Policies**

### ***GOAL STATEMENT:***

**Reduce the exposure of human life and public and private property to the threat of natural disasters.**

#### ***Objective 1:***

Limit public expenditures in the coastal area subject to storm surge (the V-Zone on the FIRM Map) and scour.

**Policy 1.1.** Public expenditures in coastal areas subject to storm surge and scour will be limited to maintenance, public safety needs, recreation and open space uses, restoration or enhancement of natural resources, or land acquisitions.

#### ***Objective 2:***

Direct population concentrations away from coastal areas subject to storm surge and scour.

**Policy 2.1.** Development intensity for the coastal area subject to storm surge and scour will not be increased above that currently established on the Development Intensity Map.

**Policy 2.2.** Limit and manage growth so that the population on the island does not exceed evacuation capabilities.

**Policy 2.3.** To the maximum practicable, future growth will be accompanied by and coordinated with improvements in the evacuation system, both on and off the island.

#### ***Objective 3:***

Beyond "buildout", hurricane evacuation times will be reduced and maintained at or below levels established in the *1995 Southwest Florida Regional Hurricane Study*. Updates to this study will be employed to determine compliance with this objective.

**Policy 3.1.** Implement a plan to operationally provide two (2) lanes for outbound evacuation traffic on Sanibel's evacuation route as a means of reducing evacuation clearance times.

**Policy 3.2.** In cooperation with Lee County and the Department of Community Affairs, develop an interlocal agreement to develop and implement a plan to operationally provide two (2) lanes of outbound evacuation traffic across the Sanibel Causeway, as a means of reducing evacuation clearance times.

**Policy 3.3.** Cooperate with the Regional Planning Council, Lee County and the Cities of Fort Myers and Cape Coral and the Town of Fort Myers Beach to implement an off-island emergency plan for evacuation which controls traffic on evacuation routes and identifies emergency shelter locations.

**Policy 3.4.** Incorporate a "least regret" factor in the plan for hurricane preparedness to take into account the "bad actor" storm.

**Policy 3.5.** As the threat increases, the city will take a series of protective actions to ensure safe and timely evacuation. The decision to implement protective actions will be coordinated with adjacent local governments.

**Policy 3.6.** Encourage the early, voluntary evacuation of visitors during a storm threat in order to decrease evacuation time if it becomes necessary to order an evacuation. (The City maintains a list of resort/hotel operators; keeping them apprised of severe weather conditions through existing weather alert communication systems.)

**Policy 3.7.** In cooperation with Lee County, restrict visitor and non-essential traffic to Sanibel forty-eight (48) hours prior to hurricane's forecast landfall when possible.

**Policy 3.8.** To satisfy Sanibel's long term need for an evacuation and recovery route to the mainland that is above the level of the anticipated storm surge of a category 3 hurricane and of sufficient width to permit motor vehicle traffic to bypass disabled vehicles, secure needed improvements to Lee County's bridge and causeway facility which runs between the mainland and Sanibel.

**Policy 3.9.** Acquire and maintain the equipment necessary to keep evacuation routes open prior to and during an evacuation and to reopen roadways following a storm.

**Policy 3.10.** Continue implementation of the tree management program to lessen the risk of trees being blown across the evacuation route. The City will identify and trim those trees which pose a potential threat or impediment to evacuation.

**Policy 3.11.** Continue to evaluate and improve the City's operational evacuation plan.

**Policy 3.12.** Cooperate with Lee County's program to provide shelter capabilities adequate to safeguard the public against the effects of hurricanes and tropical storms. On-island refuge is not a substitute for evacuation and is necessary only for those who are unable to leave the island.

**Policy 3.13.** New structures that are of a type which have common spaces will be developed in a manner amenable for use as an emergency refuge of last resort.

***Objective 4:***

Continue implementation of the program to encourage people to evacuate the island when an evacuation order is issued.

**Policy 4.1.** Continue implementation of an education program to inform residents and visitors of proper response to hurricane evacuation orders.

***Objective 5:***

Provide immediate recovery response to post-hurricane situations.

**Policy 5.1.** Continue to evaluate and improve the City's Emergency Management Plan, including post-disaster redevelopment.

**Policy 5.2.** The City will implement its post-disaster redevelopment plan, as applicable.

- ✓ a Recovery Task Force directed by the City Council will conduct a damage assessment.
- ✓ priority in redevelopment permitting will be given to repair and clean-up activities needed to protect public health, safety and welfare.
- ✓ remain up-to-date on Federal and State requirements to qualify the City and its residents for disaster relief assistance.

**Policy 5.3.** Ensure that the Future Land Use Map Series of the Sanibel Plan appropriately coordinates land uses with the results of hazard mitigation reports prepared following natural disasters affecting the City of Sanibel.

***Objective 6:***

Ensure continued implementation of development regulations and building code requirements which are responsive to the threats posed by the high winds and flooding associated with tropical storms.

**Policy 6.1.** New and redevelopment activities will comply with requirements of the federal flood insurance program, as implemented by the Land Development Code.

**Policy 6.2.** Replacement or reconstruction of nonconforming structures which have been substantially damaged in excess of fifty (50) percent of the market value of the structure or destroyed, will be done in conformance with the then existing requirements of the Land Development Code.

**Policy 6.3.** Revise the Land Development Code and Building Code, as appropriate, to ensure their continued responsiveness to threats posed by tropical storms.

## **PART 3.2. PROTECTION OF NATURAL, ENVIRONMENTAL, ECONOMIC AND SCENIC RESOURCES**

The preservation and conservation of resources is a key component of the Sanibel Plan, its Vision Statement and objective to retain the character of the community.

This part of the Sanibel Plan establishes goals, objectives and policies for coastal zone protection, conservation, natural groundwater aquifer recharge, historic preservation and scenic preservation.

### **Section 3.2.1. Coastal Zone Protection Goals, Objectives and Policies**

*Pursuant to Chapters 163.3177(6)(g) and 163.3178, Florida Statutes and Chapter 9J-5.012(3) of the Florida Administrative Code. In particular, requirements stated in Chapters 9J-5.012(3)(b), 5 through 8 and 9J-5.012(3)(c), 4 through 7 of the Florida Administrative Code are addressed in Section 2.1.2. (Safety Goals, Objectives and Policies) of this Plan. Requirements stated in Chapters 9J-5.012(b)11 and 9J-5.012(c)12 of the Florida Administrative Code are addressed in Part 3.3 (Human Support Systems) of this Plan. In addition, requirements stated in Chapters 9J-5.012(3)(c)11 of the Florida Administrative Code are not applicable to the City of Sanibel.*

### **Background Discussion**

The purpose of this element, as stated in the Florida Administrative Code, is to plan for development activities and restrict such activities that would damage or destroy coastal resources and to protect human life and limit public expenditures in areas subject to destruction by natural disaster.

The data and analyses for this element of the Sanibel Plan, pursuant to Chapters 163.3177(6)(g) and 163.3178, Florida Statutes and the minimum review criteria of Chapter 9J-5.012 of the Florida Administrative Code, are provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

The City of Sanibel is in the coastal area. Boundaries of the Coastal Area and Coastal High-Hazard Area:

As defined by the Coastal Zone Management Act of 1972, Volume 16, United States Codes, 1453-a, Sanibel is entirely within the coastal zone.

As defined by the Florida Coastal Management Act of 1978, Section 380, Part II, Florida Statutes, the City of Sanibel is entirely within the coastal zone.



As defined by the Florida Administrative Code, Chapter 9J-5.003, subsections 11 and 12, the City of Sanibel is entirely within the coastal area.

As defined by the Florida Administrative Code, Chapter 9J-5.003(19), the City of Sanibel is entirely within the coastal high-hazard area.

All resources of the island are coastal resources. Therefore, all elements of the Sanibel Plan are concerned with coastal management.

#### *Water-Dependent and Water-Related Uses*

Water-dependent uses in the City of Sanibel consist of recreation beaches, marinas, boat ramps and a fishing pier. Water-related uses in the City consist of residential uses and resort housing uses.

Most of the shoreline of the City of Sanibel is currently developed. The Future Land Use Element projects only conservation, recreation and residential uses on the shoreline. Any new facilities that provide boat access to water must be developed in a manner that is compatible with the preservation of the natural scenic beauty and residential use of the shoreline.

#### *Infrastructure*

The infrastructure in the City of Sanibel includes roadways, wastewater disposal facilities, potable water facilities and drainage facilities. Community facilities, such as, administration buildings, a library, an elementary school, cultural facilities and active recreational facilities are also located in the coastal zone.

The City of Sanibel is connected to the mainland by the Sanibel Causeway and to Captiva Island by a bridge. Both of these facilities are under the jurisdiction of Lee County.

In the City of Sanibel there are no existing or planned public shore protection structures on the Gulf of Mexico. There are existing upland shoreline structures; however, these one-time protection structures are currently located a considerable distance landward of mean high water.

#### *Natural Resources*

Areas of coastal flooding, within the 100-Year Floodplain, include virtually all the land area within the City of Sanibel.

Since all of the City of Sanibel is within the coastal area, and therefore the entire Sanibel Plan addresses coastal management, the balance of the Coastal Zone Protection Element emphasizes Sanibel's near shore coastal zone.

Sanibel Island has approximately 31 miles of shoreline, 14 of which consist of sandy beaches. Beaches are one of the geographical characteristics that distinguish the City of Sanibel as a unique place that has inspired residents to preserve existing natural resources and to restore those which have been compromised by human influences. This effort is apparent in shoreline preservation. Today, Sanibel's coastline contains very little coastal armoring, which may disrupt the natural beach environment in a variety of ways, and may also act as a barrier to recreational access along the beach. The importance of the City' of Sanibel's beaches is both environmental and economic.

Sanibel's near shore coastal zone includes two very divergent plant communities, those of the mangrove forest and those of the beach strand and beach ridges. These are opposite in appearance and in many other characteristics, yet perform many of the same very important functions with regard to environmental equilibrium.

The beach and dune system in the City of Sanibel runs along the Gulf of Mexico from Blind Pass to Point Ybel and along San Carlos Bay from Point Ybel to Tarpon Bay. The elevation of the Gulf beach ridge is generally 5 to 6 feet above mean sea level, with the highest elevation of approximately 12 feet.

The beach is the most obviously dynamic, often ephemeral landscape in man's experience. It absorbs the force of the sea and provides habitat and feeding for myriad life forms along with recreational resources that are greatly valued. Because of the form and location of Sanibel's beaches, during storm sieges they are powerfully battered by wind and water; however, they are exceptionally attractive during long periods of good weather and, as a dividend, yield such a rich array of seashells that they are famous the world over. The intense storms of wind and rain which deposit shells and shell fragments on the beach at the same time inundate and wash away portions of it. These are responsible for dramatic shoreline accretion and erosion.

The value of mangroves for habitat, as a food source and as a wave buffer is becoming universally acknowledged: forming a system which permits highest water quality and the most suitable estuarine habitat.

All species of mangroves are critically important to the Island and estuarine ecosystem and must be preserved as an invaluable resource.

### *Beach Management*

The beach is an area where the effects of man's activities can be either positive and constructive, or damaging.

The overall philosophy of managing beaches is not only for people but for wildlife and in general letting nature take it's course. This includes a nonintervention policy by the City of Sanibel in regard to erosion processes and active encouragement of retreat from eroding stretches of beach. However, the City does encourage dune restoration.

A preference is given to non-structural solutions for shoreline protection and stabilization such as beach renourishment, revegetation, and locating or redeveloping structures sufficiently far back from harm's way, rather than reliance on structural solutions. Structural solutions such as breakwaters, bulkheads and seawalls, while providing at times short-term solutions to shoreline stabilization, do so at the expense of adversely impacting adjoining properties and inhibiting customary access to shorelines.

In 1995, the City of Sanibel completed the *Sanibel Island Beach Management Plan*. Following an extensive study, a comprehensive report was prepared by the City's Natural Resource Director, Robert K. Loflin, Ph.D. and the consulting firm of Humiston and Moore Engineers. The resultant plan contains the following components: Coastal Processes, Natural Resources, Coastal Activities and Impacts, Beach Access and Public Lands, Beach Management Goals and Objectives, and Management Strategies.

#### *Beach Renourishment Areas*

The City of Sanibel relies on the natural functions of the beach and dune system for shoreline protection. The maintenance of the natural function of the Gulf Beach, Gulf Beach Ridge, Bay Beach and Mangrove Forest Zones provides the primary measures to protect beaches and dunes.

The City of Sanibel undertook the shoreline and beach renourishment project in the Blind Pass Area at the extreme northern end of Sanibel, to offset erosion attributed to the Blind Pass groin/jetty, and in the Gulf Pines/Gulf Shores Area. It is anticipated that the north end project will require supplemental renourishment.

Outside the jurisdiction of the City of Sanibel, to the north on Captiva Island, continued beach renourishment is planned. Because the management of beaches on Captiva Island (in unincorporated Lee County) has significantly impacted the shoreline of Sanibel, it is imperative that this situation be addressed in the Intergovernmental Coordination Element of the Plan.

#### *Estuarine Water Quality*

The City of Sanibel contains a large area of Mangrove Forest. The Mangrove Forest is predominantly in the J. N. "Ding" Darling Wildlife Refuge, under the authority of the federal government. The Mangrove Forest abuts the Pine Island Sound Aquatic Preserve.

Stormwater discharge into the estuary is controlled by the Tarpon Bay Weir. Other discharges into coastal waters, although not directly into the estuary, are tidal canals, the Shell Harbor canal inlet, Sanibel Harbors canal inlet and Sanibel Isles canal inlet. However, freshwater enters the estuary principally from outside the jurisdiction of the City.

The Island Water Association operates a brine water discharge into the Gulf of Mexico.

In addition to these limited numbers of point source discharges into coastal waters, there are land uses in the City of Sanibel that may contribute non-point source pollution into coastal waters. These land uses are marinas, boat docks and golf courses.

The City is actively pursuing island-wide conversion from septic systems to central sewage treatment in accordance with the City's *Master Plan for Wastewater Treatment* which is the single most critical need to protect water quality.

The potential for disaster from oil spills looms over every beach community and even more so for areas with mangrove forests. Continued vigilance as practiced by the Sanibel City Council to object to any and all offshore oil exploration plans is necessary to minimize the chance for an oil spill in the Gulf to contaminate local beaches.

There are no proposed facilities in this Plan that will alter the circulation patterns of the estuary.

### *Coastal Access*

The City of Sanibel has a large number of public accesses to the beach. These public beach access facilities are widely distributed throughout the island. All of the beach access facilities are supported by limited parking areas; however, there are large parking areas at the major beach parks. The Resort Housing District provides private beach access for a significant percentage of the seasonal population.

There are two (2) marinas in the City of Sanibel providing docking space for approximately one hundred (100) boats. Canals and waterways adjacent to many private homes and condominiums provide additional boat dockage space.

The City of Sanibel provides a public fishing pier on San Carlos Bay and a public boat ramp facility (two ramps) near the Sanibel Causeway.

A need for additional boat ramps and fishing piers has not been identified in the Recreation and Open Space Element of this Plan. Although not identified as a need, the Plan for Recreation and Open Space suggests the City explore the feasibility of providing additional opportunities for boat access to water, provided that no additional inlets are cut from the gulf or the bay.

### **Plan for Coastal Zone Protection**

The Sanibel Plan, in all its elements establishes policies and regulations necessary to assure orderly and balanced utilization and preservation consistent with sound conservation principles, of all living and non-living coastal resources. The ecological planning principles and assumptions to be used in the determination of suitability and extent of permitted development are established in the Purpose of this Plan, and in the Conservation Element and the Future Land Use Element. The Land Development Code

includes environmental performance standards so that irreversible and irretrievable commitments of coastal zone resources are avoided on Sanibel.

Management and regulatory techniques, consistent with the *Sanibel Island Beach Management Plan*, shall be set forth in the Land Development Code.

It is the intent of this Plan for Coastal Zone Protection to set forth policies which are not inconsistent with the State of Florida regulations and criteria in order to preserve the natural beach and dune system in all beach areas, both natural and developed, and to restore and maintain a natural dune in developed areas by rigorously restricting the use of armoring for erosion control purposes.

1. The City of Sanibel should maintain its program of periodic monitoring of beach profiles.
2. A major objective for the long term ecological health of Sanibel's beaches is to restore the dune system (Upper Beach Zone) to the point where it functions as a contiguous and intact habitat. Such an integrated upper beach will not only provide for the mutually beneficial coexistence of man and natural flora and fauna as fellow coastal residents but will also function in accumulating and stabilizing vital sands in a continuous protective barrier.
3. Maintain natural beaches to accommodate both tourists and residents for recreational purposes, in order to enhance property values and tourism, and to reduce competition for limited beach space between humans and wildlife.
4. Maintain natural beaches for the protection they afford against erosion from severe but non dune-overtopping storms, to avoid damage to upland structures from erosion caused by those storms.
5. Maintain natural beaches for the protection they afford against erosion from severe but non dune-overtopping storms to avoid damage to evacuation routes from erosion caused by those storms.
6. Dune enhancement may be accomplished by regulating activities that are detrimental to natural dune vegetation and sand accumulation, such as illegal landscape trimming of natural vegetation, unrestricted pedestrian access, and beach furniture and recreational equipment deployment and storage. These may be accomplished through more thorough enforcement of restrictions on trimming vegetation, improved pedestrian accessways, and better regulation of beach paraphernalia.
7. It should be the policy of the City of Sanibel to consider coastal armoring only as an alternative of last resort, for the protection of public infrastructure. Additionally, in cases where coastal armoring is considered acceptable it should be accompanied by a beach nourishment project, except in certain site specific

situations on the bay shoreline which involve closing a gap in an otherwise continuously armored section of shoreline. Sandbags may be considered as a temporary solution to erosion in emergency situations, and conventional armoring may be considered for the protection of vital public interests such as hurricane evacuation routes. Under all other circumstances, the use of armoring shall generally be prohibited along the Sanibel Island coastline.

8. Existing bayfront seawalls should have rip-rap revetments placed in front of them to reduce wave interaction with the flat vertical surface as long as such revetments do not interfere with sea grass beds and the seawall alignment is reasonable. Such rip-rap areas as well as existing rip-rap revetments along the bay shoreline should be designed as "planters" to accommodate planting with mangrove and buttonwood.

9. It should be the policy of the City of Sanibel to provide official input to the State during the state permit application review process for activities which have a high potential for effecting the sand budget, including shoreline armoring with seawalls or revetments, groins, and jetty at Blind Pass, breakwaters, and the use of near shore shoals as a source of sand for beach nourishment, to insure that the permit includes conditions for adequate monitoring and mitigation.

10. Roads damaged due to beach erosion should be repaired on a higher priority than the beach, as a safety issue, if the roads serve as hurricane evacuation routes. It is recommended that such evacuation routes be repaired and be protected with armoring. Such sections of shoreline armored out of necessity must be restored with beach nourishment, leaving the armoring buried as defense against future storm damage.

11. Sand overwash deposited in residential areas or on roads that requires removal in the aftermath of a storm should be restored to the beach and dune system.

12. If inlet closure causes environmental degradation in the interior waterway, these inlets should be studied to determine if reopening the inlet through either mechanical or hydraulic dredging would be appropriate. The decision on reopening the inlet should be based on water quality issues, fisheries issues, or mangrove and other sensitive wetland issues. If activities such as sand placement for nourishment of adjacent beaches contribute to the closure, such that the closure can not be considered a natural event, then the inlet should be reopened to restore natural processes.

13. Any dune walkovers destroyed by storms should be repaired because they protect the natural dune and dune vegetation which allows the dune to grow through the trapping of windblown sand.

14. In cases where structures are considered to impede or have the potential to impede pedestrian traffic along the coastline, such structures should be prohibited,

or if existing, altered or removed, so as to maintain lateral access along the shoreline.

15. The prohibition on live-shelling should be continued and widely advertised accompanied by a education program. Severe violations should be considered serious enough to cite and fine perpetrators.

16. The prohibition on docks in San Carlos Bay where they constitute a threat to seagrass should be continued.

17. The use of vehicles on the beach should continue to be regulated with approval only released for beneficial purposes such as turtle patrol and removal of exotic vegetation.

18. To assist both shorebirds and shell-seekers and to maintain the natural function and appearance of the beach, raking and scraping of naturally occurring beach wrack should be prohibited except when undertaken or authorized by the City in the interest of public health, safety and welfare.

19. Permit only lighting that conforms to standards which will not interfere with turtle nesting or hatchlings return to the sea and only lighting that will not interfere with the natural appearance of the beach.

20. Beach areas where nesting pairs of shorebirds are observed should be designated as off limits to recreational beaches users, and the need for removal of predatory feral cats and raccoons should be evaluated.

21. The Lee County Emergency Management Plan for oil spills needs to be evaluated for sufficiency in protecting sensitive mangrove and other wetland areas. The plan should include a provision for rapid deployment of oil booms at strategic locations such as Blind Pass, Clam Pass, and the entrance of Tarpon Bay. The ability to rapidly seal off these strategic locations could prevent contamination of large sections of shoreline, and equipment for this should therefore be available locally. Additionally, any perceived changes in potential for oil spills, either from offshore or inland waterway operations, should trigger a review of the Emergency Management Plan by the Lee County and City of Sanibel staff.

## **Goals, Objectives and Policies**

### ***GOAL STATEMENT:***

**Protect and appropriately manage the natural resources of the coastal area to ensure the conservation or enhancement of the natural functions of the coastal ecosystem as the development anticipated in the Future Land Use Element of the**

**Plan occurs, prohibit development for human habitation in the Gulf Beach and Bay Beach zones.**

***Objective 1:***

To protect, conserve or enhance wetlands, wildlife habitat and living marine resources, ensure that the natural functions of the City's ecological zones are maintained by continued implementation of the development regulations and performance standards established in the Land Development Code.

**Policy 1.1.** Ensure that the Future Land Use Element of this Plan is consistent with the maintenance and enhancement of the natural functions of the City's ecological zones, by including in the Land Development Code varying limitations on development according to the ecological zone.

**Policy 1.2.** Retain low intensity use for the interior (Lowland Wetlands Zone) and tidal (Mangrove Forest Zone) wetlands, prohibit commercial and intensive land uses in these zones.

**Policy 1.3.** Ensure maintenance of the natural functions of the Interior Wetlands Conservation District by continued implementation of the development regulations and performance standards established in the Land Development Code.

**Policy 1.4.** Ensure that dredge and fill activities are undertaken in compliance with Land Development Code requirements, as well as the requirements enforced by the Department of Environmental Protection, the South Florida Water Management District and the Army Corps of Engineers.

**Policy 1.5.** Public and private developments that produce unavoidable damage to wetland areas will implement wetland restoration or mitigation programs.

**Policy 1.6.** Encourage the dedication of portions of wetlands not utilized for development to the City or a non-profit conservation entity by including in the Land Development Code incentives for such dedication.

**Policy 1.7.** General, not site specific, priorities for wetland acquisition will be established for the City's wetland acquisition program.

**Policy 1.8.** Continue the maintenance of wetlands acquired by or dedicated to the City and included in the Environmentally Sensitive Lands Conservation District so as to restore their natural condition, to the extent practicable.

***Objective 2:***



To maintain or improve estuarine environmental quality, ensure that the natural functions of the mangrove and adjacent ecological zones are maintained by continued implementation of the development regulations and performance standards established in the Land Development Code.

**Policy 2.1.** No new point source discharges for wastewater effluent into coastal waters should be permitted.

**Policy 2.2.** New point source discharges for stormwater runoff into coastal waters should be avoided to the extent possible.

**Policy 2.3.** New boat docks in water of the Pine Island Sound Aquatic Preserve will comply with the requirements of the Land Development Code and the requirements of the Department of Environmental Protection.

***Objective 3:***

To protect the beach and dune system, thereby protecting shoreline development from coastal erosion and storm events, ensure that structures are setback landward of the 1974 Coastal Construction Control Line and that the natural functions of the Gulf Beach and Gulf Beach Ridge ecological zones are maintained by continued implementation of the development regulations and performance standards established in the Land Development Code.

**Policy 3.1.** The City will continue to prohibit development seaward of the 1974 Coastal Construction Control Line.

**Policy 3.2.** The City's controlling beach management policy is to not interfere with the natural coastal processes. When intervention becomes necessary, the City will first take measures that work with, not against, the natural coastal processes. Only after this preferred policy has proven unworkable, will any type of shoreline hardening be considered.

**Policy 3.3.** Seawalls, bulkheads and other hardened shoreline structures that reflect rather than absorb wave energy are prohibited in the Gulf Beach Zone and on all properties with frontage on the Gulf of Mexico, except that hardened, rip-rap type structures which absorb wave energy may be installed to protect essential public infrastructure from damage or destruction caused by erosion.

**Policy 3.4.** Hardened shoreline structures, which primarily reflect, rather than absorb wave energy are prohibited. A hardened shoreline structure which primarily absorbs rather than reflects wave energy may be permitted as a temporary and emergency measure, and as the only practical means of protecting upland major habitable structures which are in immediate danger of collapse from damage or destruction caused by coastal erosion. Additional factors to be considered are protection of the beach-dune system; siting and design criteria for

the protective structure; impacts on adjacent properties, preservation of public beach access; protection of native coastal vegetation and nesting marine turtles and their hatchlings. These structures must be removed once the immediate danger has passed and other remedial measures can be taken.

**Policy 3.5.** Excavation which results in lowering the elevation of the gulf beach ridge is prohibited.

**Policy 3.6.** Removal of sand and sediments from the gulf beach is prohibited; however, there may be instances where beach recountouring may be appropriate to support beach preservation efforts.

**Policy 3.7.** Access to the beach for new development will be confined to elevated walkways, subject to approval required by state agencies.

**Policy 3.8.** Australian pines in the Gulf Beach Zone will be selectively thinned and replaced with hardy native dune vegetation.

***Objective 4:***

Give priority to water-dependent and water-related uses which are compatible with the residential and conservation/open space character of the shoreline.

**Policy 4.1.** Priority ranking for water-dependent and water-related uses are as follows:

- ✓ conservation uses
- ✓ residential uses
- ✓ water-oriented recreation that is compatible with the conservation features of the beach, available to the public
- ✓ marinas, available to the public

**Policy 4.2.** Marinas will be located only in a Special Use District to ensure protection for the environment and compatibility with surrounding land uses, by establishing criteria and performance standards for the Special Use District, in accordance with procedures set forth in the Land Development Code.

***Objective 5:***

To accommodate existing and projected public need, the numerous existing public accessways to the beach will be retained through the long-range planning period of this Plan.

**Policy 5.1.** The City will enforce the public access requirements of the Coastal Zone Protection Act of 1985.

**Policy 5.2.** Existing public accessways to the beach will be retained by new developments.

***Objective 6:***

Ensure that development and building standards for new construction and redevelopment are appropriate for structures located in the Coastal High-Hazard Area.

**Policy 6.1.** Implement development and building standards for coastal high-hazard area construction through the Sanibel Land Development Code and the Sanibel Building Code.

**Section 3.2.2. Conservation Goals, Objectives and Policies**

*Pursuant to Chapter 9J-5.013(2) of the Florida Administrative Code*

**Background Discussion**

The purpose of the Conservation Element of the Sanibel Plan, as stated in the Florida Administrative Code, is to promote the conservation, use and protection of natural resources.

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(6)(d), Florida Statutes and the minimum review criteria of Chapter 9J-5.013 of the Florida Administrative Code are provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

The City of Sanibel, located on a 12-mile long barrier island off the coast of Southwest Florida, is in the subtropic region. This unique environment has produced an abundance of natural resources.

Some of these natural resources have been significantly altered by past development activities. However, since the original adoption of the Sanibel Plan, the alteration of natural resources has been reduced and many impacts of this alteration have been mitigated. The conservation and enhancement of natural resources has always been a goal of this Plan.

More than one-half of the total land on Sanibel lies within conservation areas owned by private or governmental conservation agencies. Although this may seem very high, it is not when one considers the Vision Statement of this Plan and the fact that very little of Sanibel's land is suitable for residential and commercial development. Those areas most in need of protection are beaches, mangroves, wetlands and areas of rare and high quality vegetation such as the areas of West Indian flora. Most of the mangroves are included

within existing conservation areas, primarily the J. N. "Ding" Darling National Wildlife Refuge. Most land owned by the Sanibel-Captiva Conservation Foundation is in the interior freshwater wetlands. The gulf beach and bay beach are protected as preservation districts as provided in this Plan. However, in upland areas known as "hardwood hammocks", a disappearing habitat is the "coastal scrub", home to gopher tortoises and unique desert-like plants, including joewoods.

The major thrust of the entire Sanibel Plan is committed to the objective set forth in the City Charter of Sanibel to conserve the "unique atmosphere and unusual natural environment" of this island community. Thus all elements of the Plan are interrelated with the city's major objective to conserve its natural resources for present and future generations to enjoy.

Sanibel's natural environment performs many valuable functions for man at no cost; it buffers storm winds and flood tides, stabilizes the shoreline, purifies water, and maintains a fresh water system which supports a rich wildlife population and lush vegetation. These functions support the health, safety and welfare of every Sanibel resident and must be preserved.

Different parts of the island contribute in varying degrees to each particular function. For planning purposes, the island has been divided into ecological zones, each with individual characteristics, each making specific contributions to health, safety and welfare, and each with varying tolerances to the range of man's activities. Six ecological zones have been identified on Sanibel, three of which are further divided into subareas; Gulf Beach, Gulf Beach Ridge, Freshwater Wetlands, Mid-Island Ridge, Mangrove Forest and Bay Beach. The Gulf Beach Zone is subdivided into Gulf Front Beach and Gulf Back Beach. The Freshwater Wetland is composed of Upland and Lowland subareas. A Blind Pass Zone is designated in the Blind Pass area.

### *Ecological Zones*

In general, Sanibel is a collection of truncated ridge-and-swale systems formed at varying sea levels. Hence, the Mid-Island Ridge is a series of ridge set truncations which forms a nearly continuous ridge of higher elevations. In some places the roadbed of the Sanibel-Captiva Road links or extends these elevations. The Gulf Beach Ridge is also a series of ridge sets which interact with the primary dune to create a nearly continuous ridge of elevation of generally 5 feet or greater. The freshwater wetlands of the interior, while acting as a single basin with a connected surface water table, are actually a collection of ridges and swales. The ridges vary in elevation from approximately six inches to several feet. The swales and low ridges are frequently inundated while the more well defined ridges become submerged only occasionally.

### *Gulf Beach Zone*

The Gulf Beach Zone includes all land seaward of the 1974 Coastal Construction Control Line.

Gulf Front Beach. This is the most active beach zone and includes the area between mean high water and the City's boundary one-half mile offshore. Sand in this zone is in constant motion. Sand migrates between the primary dune and offshore bars and is transported up and down the coast by longshore currents. Examination of historical surveys and aerial photographs shows that erosion and accretion of sand along the beaches is an ongoing dynamic process. This zone maintains several functions critical to public health, safety and welfare. It is the island's first defense in the event of storm and flood, when the impact of waves erodes the sand reservoir in the berm. The natural form of the Gulf Beach Zone is a response to the natural processes of wind, currents and waves. Undisturbed, it is in a state of balance with natural forces, thus "maintaining" the shoreline. This area also supports much of the marine life for which Sanibel is famous, and is an important feeding area for island wildlife.

Gulf Back Beach. This zone, though less volatile than the front beach, also absorbs considerable impact from storm-generated wind and waves. This is the area between mean high water and the 1974 Coastal Construction Control Line. It is a reservoir of sand which may be eroded after the primary dune in a severe storm, thus protecting property further inland on the Beach Ridge. The dunes are an important nesting area for wildlife; the loggerhead turtle being a prime example. The vegetation of the Back Beach is particularly important, as it stabilizes and holds the sand.

Both components of the Gulf Beach Zone have a very low tolerance to man's activities. Removal of sand, disposal of storm water runoff, excessive foot traffic, or any vehicular traffic can quickly induce major erosion and other impacts on the beach. Strict regulations are, therefore, required to maintain this zone. Removal of sediments from the beach should be avoided and construction of any sort which would change the configuration of the beach or inhibit sand movement should be undertaken only as a last resort in efforts to preserve the beach or protect vital infrastructure. Wildlife access to the beach should be maintained and public access to the beach should be confined to narrow paths and elevated walkways in heavily used areas such as resorts and public parks. Because of their shallow root system and propensity to form monocultures, Australian pines (*Casuarina Sp.*) are not suitable plants in this zone and should be selectively thinned and replaced with hardy dune vegetation.

### *Bay Beach Zone*

The Bay Beach Zone, an "active beach" zone, extends along the island's bay shoreline between a fifty (50) foot setback from the mean high water line to the City's boundary one-half mile offshore. Although the Bay Beach is a lower energy beach than the Gulf Beach, it nevertheless serves the same valuable storm and flood protection, shoreline stabilization, marine life and wildlife habitat and feeding functions. The natural processes are similar and so, too, are the constraints to development. Regulations, similar to those outlined for the Gulf Beach Zone are required to maintain the functions of this zone.

### *Mangrove Zone*

The Mangrove Zone includes black (*Avicennia germinans*), red (*Rhizophora mangle*), as well as, all buttonwood (*Conocarpus erecta*) and white (*Laguncularia racemosa*) mangrove areas (that are tidal and less than 3 feet in elevation) and the tidal flats within and around them. This zone includes most of the bay portions of Sanibel. In ecological and energy terms, no zone is more valuable and efficient. The number of jobs done for man at no cost (save the price of preserving mangroves) is not exceeded by any other zone. Mangroves protect public health, safety and welfare by buffering storm winds and flood tides from the bay, by stabilizing and extending the shoreline, by maintaining and improving water quality, by protecting the highly productive marine ecosystem, and providing food, shelter and nesting areas for wildlife. This zone also has a low tolerance for alteration by man. Its existence is dependent on the regulation of activities in adjacent areas.

### *Wetlands Zone*

The Wetlands Zone is the storm water drainage watershed of the Island. Frequently, it forms a fresh surface water reservoir. Much of the island's interior is in this zone which essentially consists of a single large basin. The Freshwater Wetlands Zone is actually composed of parallel systems of ridges and swales with corresponding bands of vegetation that tolerate either persistent inundation within the swales or fluctuating wet/dry conditions on the ridges. There are two subareas within this zone; Lowland Wetlands and Upland Wetlands. The lowland area is composed of low ridges and wide swales; the upland consists of higher, broader ridges and narrower swales. The entire zone is the major recharge area for the shallow freshwater aquifer.

Brazilian pepper trees have infested hundreds of areas of the interior wetlands, drastically reducing their function as wildlife habitat. Exotic plant control programs are ongoing but efforts need to be increased to restore these degraded areas of this vital system.

Lowland Wetlands. The lowland area typically experiences extended periods of immersion each year. Since it is lower than the surrounding area, it serves as a storage area for surface waters until they are absorbed into the aquifer, evaporated, or routed to another location. So long as the elevations in the lowlands are not substantially increased by filling, this area will serve as retention areas and high quality wetland habitat for wildlife while reducing saltwater intrusion into the shallow groundwater aquifer.

This zone has a "fire ecology". Periodic fires burn off accumulated dead plants, release nutrients to the soil and kill invading woody shrubs and trees. These large recurring wild fires are a hazard to human settlement in this area but are essential to the maintenance of this zone. Controlled or prescribed burns intentionally set by land rangers can continue this natural process while limiting risks to private property. This area also has the capacity to maintain and improve water quality, and provides food, shelter, water and nesting areas to many of Sanibel's most renowned wildlife, including the American alligator and numerous species of wading birds.

Excavation of the aquiclude, filling, the impediment or impoundment of natural water flow, the disruption or alteration of natural drainage channels, and the use of septic tanks are either prohibited or controlled through development performance standards. Impervious paving and the clearance of native vegetation is regulated in a fashion to minimize adverse impacts. Storm runoff from paved or developed areas is to be detained and dispersed slowly to the natural hydrologic system. Programs of fire management and water level control should be maintained. Wildlife corridors should be established connecting nature preserves to the Sanibel River, and providing for wildlife movement along the River.

Upland Wetlands. The upland area is characterized by less frequent flooding than the lowland area, and has more upland vegetation types. This area is more tolerant to human activities than the lowlands, and therefore the performance standards need not be as strict as those for the lowlands. Filling, excavation of the aquiclude and the use of septic tanks are prohibited or controlled by City regulations. The impoundment of natural water flow or disruption of natural drainage channels is also controlled. Wildlife corridors should be established connecting nature preserves to the Sanibel River. The *Surface Water Management Plan* adopted by the City in August of 1989 shall continue to be implemented in accordance with the provisions of the plan toward improving the wetland system of the Sanibel River to enhance water quality and vegetative and wildlife habitat, while reducing the severity of major flooding events for those residing in wetland areas.

### *Gulf Beach Ridge Zone*

The Gulf Beach Ridge Zone is the major ridge dividing the Gulf from the Wetlands in the interior. It extends to the western end of the island and includes upland areas of Blind Pass Keys. Much of the Blind Pass area is included in this zone because of its very recent formation. The Gulf Beach Ridge Zone serves many valuable functions in the maintenance of the health, safety and welfare of Sanibel residents. The ridge buffers flood tides and storm winds and prevents increased flooding in the interior (unless overtopped by waves) and contributes to shoreline stabilization. Maintenance of elevation and vegetation are the keys to the protection of these valuable functions. Vegetation stabilizes the ridge and prevents erosion of the soil. Much fresh water runoff enters the ground in the Gulf Beach Ridge Zone, halting inward intrusion of salt water from the Gulf and thus maintaining the extent of the freshwater lens. Soil and vegetation in the ridge filter runoff and protect water quality. Although this zone is crucial to health, safety and welfare, it is more tolerant to residential development than other more sensitive zones on the Island. An exception to this is the coastal scrub habitat, which supports many plant and animal species listed as threatened, and is rapidly being lost to development and intrusion by hardwoods and exotic trees. Another exception is the Blind Pass area, which is extremely dynamic and unstable in nature and hazardous to human settlement and is discussed separately later. Excavation which results in lowering the elevation of the ridge or in penetration of the aquiclude is prohibited. Disruption or alteration of natural drainage channels is restricted; the use of septic tanks is strictly regulated. Storm runoff from paved or developed areas to the beach is strictly controlled. Impervious paving and clearance of native vegetation is restricted. The planting of native beach ridge vegetation

in areas which are not well vegetated or dominated by exotic trees, such as Brazilian pepper, should be strongly encouraged.

### *Blind Pass Zone*

The Blind Pass area is the youngest and the least stable part of the island. It is an inlet system very susceptible to dramatic change both in a storm and over time. One hundred years ago, most of the existing Blind Pass area was non-existent. Over the past century, this area has been constantly changing; the shoreline has shifted and accreted and eroded. "The 'loss' of sand into inlets is, at most, a temporary thing, and even then only where there are 'new' inlets, which do not yet have tidal deltas, does this become a major process. Any sediment that is trapped in the inlet itself is ultimately moved either in or out into the tidal delta storage bins. Since the ebb currents are generally the dominant inlet force, most sand moving into an inlet will ultimately be deposited in an offshore ebb delta. The shape of the ebb delta and the sediment movement within the delta is strongly controlled by the interaction of the ebb and flood currents with the offshore wave system and the longshore currents. The sand stored in the ebb delta is now available for littoral transport onto the downdrift beach system. Also, high energy storms and floods flush out the inlet and move the sand laterally to be used to absorb the storm energy in the adjacent forebeach areas. Thus an inlet system plays an important role in sediment storage for use as an energy sponge during storms and has built-in sediment bypass mechanisms. Consequently, inlet systems represent an integral part of the overall sediment budget of the coastal system and contribute to the overall natural ability of the system to roll with the energy punches with minimal adverse effects. Modification and/or stabilization of an inlet will limit or eliminate this ability, increasing the potential for accelerated shoreline erosion resulting from major storms." All standards for the Gulf Beach Ridge Zone should be applied here with several further restrictions in changing or developing this area. Permanent human settlement in this high hazard area should be restricted to very low density or prohibited. Any activity which would result in the alteration of or interference with inlet dynamics and island-building functions in this area should be carefully evaluated and avoided as much as possible.

### *Mid-Island Ridge Zone*

This zone comprises the major ridges along much of the central axis of the island and includes the island's higher natural topographic elevations. In most areas, this zone divides the Bay-Mangrove watershed from the freshwater wetlands watershed. Like the Gulf Beach Ridge, this zone is important in providing storm and flood protection, in recharging the shallow freshwater aquifer, and in preventing degradation of water quality. This zone is the most tolerant for development with the application of regulations to protect crucial health, safety and welfare functions. Excavation which results in lowering the elevation of the ridge or in penetration of the aquiclude is prohibited. Storm runoff from paved or developed area is to be retarded and dispersed slowly to the natural hydrologic system. Natural drainage channels are not to be disrupted or altered. The use of septic tanks, impervious paving and the clearance of native vegetation is restricted.



### *Altered Land Zone*

This is land altered by man by disturbing the natural topography, hydrology, and vegetation of an area usually for real estate development purposes. In most cases, the area delineated on the Ecological Zones maps has been elevated to approximately four feet above mean sea level either by importing fill or by excavation within the site area. The purpose of such modifications has been to transform low lying land that is often wet and unsuitable for development into high, dry land, associated in some cases with lakes, lagoons and canals formed by dredging below the water table. For planning purposes, only the larger areas of filled, cleared and built-out lands were mapped as Altered, thereby excluding spoil areas from mosquito ditches and canals that did not cover extensive areas. Some areas have been filled for thirty-five years or more, with subsequent reestablishment of grasses and woody plants. In such cases, they were not classified as Altered Land. Areas that were more recently altered and are classified as Altered Land frequently are bare but for the invasion of scattered weeds. Eventually, if left undisturbed, they may return to a natural state. At that time they should be reclassified.

### *Delineation of the Ecological Zones*

The designation of ecological zones is the basis for establishing the Official Zoning Map of the City of Sanibel.

The criteria used to describe each ecological zone is provided in detail in the Evaluation and Appraisal Report of the Sanibel Plan. The key that was used to determine, that is map, ecological zones is provided later in this section in the Plan for the Preservation of Ecological Functions.

### *Vegetation*

The vegetation of Sanibel is a complex of many factors. It contains a surprising number of communities despite its small size and lack of topographic variation. It embraces elements of tropical, subtropical and temperate flora although it is subtropical by location. And it contains a confusion of foreign species established in the wild from cultivation or landscaping activities. These have taken advantage of disturbed areas and caused native species and even entire communities to all but disappear.

Sanibel's natural attributes are responsible for this wide ranging, sometimes lush vegetation. Except for fierce periodic storms, the climate is largely benign, with high seasonal rainfall, dazzling sunlit days, breezes and high humidity. These conditions permit a luxurious, dense subtropical vegetation with rapid rates of succession and the incredible prospering of exotic species.

Because it is an island, its role as a provider of habitat for vegetation and wildlife is quite unique. Traditionally, islands have a more limited flora than their equivalent on the mainland. Although this is true of Sanibel, it is surprisingly diverse for an island. Some

species are represented by only a few individuals, hinting that, at some time, there may have been a marked change in land use in the vicinity. It also indicates that these species might flourish if encouraged here. Islands are sites of specialization and hybridization. As Sanibel is youthful, this may not be evident yet, but it is a process which goes on unless impeded by man.

Development has brought additional indignities to the vegetation on the island. Clearing methods, the introduction of ornamentals and manipulation of the drainage patterns have caused valuable vegetation to disappear. All of these activities have changed the Island. Fortunately, however, small vegetational remnants can still be seen from which the past can be reconstructed, and from which historical vegetation could be increased.

The saline and brackish swampy areas are densely populated by red, black and white mangroves. Because of the nature of the substrate and due to very low light penetration, only special plants can coexist here. However, algae, fungi, a few halophytic shrubs and epiphytes do thrive. These mangrove areas are of such importance to the island's ecosystem that they must be preserved and where they are disturbed, should be reclaimed. All three coastal species, red (*Rhizophora mangle*), black (*Avicenna germinans*) and white (*Laguncularia racemosa*) and buttonwood together form a system indispensable as habitat, wave buffer and major contributor to the marine detrital food web.

Along the Sanibel River and in low swales the buttonwood-wax myrtle and sea oxeye association is very evident. It is probable that woody vegetation was once scarce in the interior. Now that trees line the banks, additional roosts and rookeries for birds, particularly wading birds and anhingas, have been created. In many areas, dense growths of Brazilian peppers block feeding areas for wading birds.

Although cordgrass is still common, it appears in disjunct patches on Sanibel, no longer covering several square miles of the interior as it once did. The Island vegetation at the turn of the century was probably that of an extensive prairie comprised of the very productive association of cordgrass and sawgrass. Together these two species provide both food and refuge for ducks, some song birds, and mammals. The graminola marsh also has an additional charm. Its simplicity of color, texture and pattern provides a pleasantly aesthetic and relaxing experience for many people.

The marsh elder--Brazilian pepper--cordgrass association is much more common in the interior today, due to disturbance of unwitting introductions. This association has exploited every elevation from spoil pile to ditched bank. Brazilian pepper is a noxious weed which in more than thirty years has spread throughout the wetlands and has replaced desirable native vegetation.

There are few areas of "no vegetation" on Sanibel except where paved, since clearing attracts recovery vegetation almost immediately. Included in this category are lawns and non-woody ornamentals. However, the ecologically sterile, fertilized, pesticided and herbicided lawn is becoming more commonplace.

Probably West Indian flora was always relatively scarce, occurring only on Wulfert Point and along narrow upland strips. West Indian flora areas, though not actually endangered, should be protected and reinforced by good management. The most attractive, diverse and healthy tropical plants will flourish in these areas.

The category of Australian pine, melaleuca and Brazilian pepper represents the very worst of the vegetation problems on the Island. Each, when it occurs in a particular area, almost always becomes the dominant plant. These species should be removed where they occur and should not be planted deliberately. The invasive characteristics of the lead tree, air potato, java plum, earleaf acacia, exotic inkberries and bowstring hemp result in unacceptable impacts on vegetation communities and wildlife habitat.

The sea oats, sea purslane, railroad vine, marsh elder, bay cedar and seagrass association includes the best of the beach species. These grow along the level strand and further back along the dunes, including both herbaceous and woody species.

Because of the special contribution which the vegetation makes in a well-functioning ecosystem, certain associations and plants should be given special protection and encouraged wherever possible. Beach species are indispensable for stabilizing dunes and beautifying the beach. The mangroves are vital to many aspects of the ecosystem as a contributor to the food chain, bank stabilizer, and provider of habitat. The wetlands contain vegetation which makes a superior wildlife habitat and the ridge, with a variety of woody vegetation, offers a pleasant habitat to man and wild creatures.

A list of endangered and potentially endangered flora is provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*.

### *Wetlands*

The major wetland basin on Sanibel is a 3500-acre depression located in the island's interior and characterized by a series of very subtle ridges and swales. This ribbed topography is the result of a long history of storms and tides which have alternately deposited sand and shell fragments which form mounds later to be rounded off by erosion.

This basin area has not always looked or behaved quite as it does today. Apparently it once consisted of four separate hydrologic systems, each filling and draining according to independent timetables. Road building and mosquito ditching have altered the drainage pathways considerably, replacing a system of gradual filling and runoff by one given to greater extremes of flooding and drought. However, this system still functions, although less efficiently, to allow downward percolation of fresh water for storage and as a sponge for increased water levels during the wet summer season. Historically when flooding did occur, its duration was brief, excess water finding its way easily over beach ridges to the Gulf.

The wetland areas serve a series of valuable functions on this small island. When they are performing at their peak, they moderate the force of water, which can be devastatingly harsh during storm periods on this low island. Because of the rapid permeability of the low ridges, rain water can and should be allowed to seep in, replenishing the fresh water lens. Although these hydrologic functions are fundamental to the island system, they are strongly dependent on the efficiency of the vegetative cover. This cover, which lends variety to the landscape, is the surface manifestation of the combination of the substrate and the water gradient. In turn, the matted grasses and low shrubs modify runoff. In addition to these hydrologic functions, the wetlands are valuable to Sanibel as superior wildlife habitat that must be protected.

### *Hydrology*

Of the aquifers below Sanibel, only two affect the wetlands. Although the saline aquifer at about 30 feet from surface is beneath the clay stratum, it can still intrude on the fresh water table aquifer and it does through unsealed wells and too deep lagoons. For this reason it is necessary to direct as much fresh water as possible to the water table aquifer so that there is sufficient hydrologic pressure to push back this highly saline intruder. In order to maintain a healthy wetland through long dry winters and despite a high evapotranspiration rate, it is essential that all available fresh water is saved. The Sanibel River, the ditches, ponds, real estate lakes and borrow pits are the visible manifestations of this aquifer and the more rainwater they can retain the less brackish they become.

### *Wildlife*

Sanibel Island abounds in a wide variety of wildlife. Because of its position at the southern end of the Atlantic flyway, and being an island subject to a combination of heavy storms, fluctuating tides, and currents which affect it, this piece of land provides a necessary stopover for many birds, and is a haven for a diverse range of mammals and reptiles, along with a rich environment for marine biota. Sanibel continues to enjoy worldwide renown for seashell collecting. To conserve this tremendously important ecological and economic resource, the taking of live shells within the City limits is now unlawful. Sportfishing in the waters surrounding the island also has a far-reaching reputation, attracting visitors year-round. The wealth of natural resources of this community continues to be vital to its economic viability.

Despite some habitat destruction on the Island, overall wildlife diversity is high, especially within salt water areas. There are at least 280 species of birds, 70 species of marine fish, 48 reptiles and amphibian species and subspecies, and more than two dozen species and subspecies of mammals, not counting marine mammals, which have been recorded for Sanibel. Also the fresh water wildlife community has a moderately varied fauna ranging from insects and crustaceans, a few fish and several mammals and birds.

It is not surprising that Sanibel has such a multitude of creatures. Although it is an island less than 20 square miles in area, there are several factors which contribute to making this a desirable place for birds and fish. Location has a great deal to do with it; it is well

known that species do increase with proximity to the equator. This is especially true of birds, butterflies, insects and marine organisms, while numbers of benthic or burrowing creatures are likely to show some decline in numbers. Apparently, species proliferation in this sub-tropical area is a reflection of a higher vegetational productivity as well as an indulgent climate and geographical location. Many kinds of birds are especially drawn to a wind-blown shoreline and island context, while large numbers of marine organisms aggregate in food-gathering efforts along the shorelines. Needless to say, it is harder for mammals to reach and colonize islands, though once a pathway is established, this process advances rapidly.

Enforced isolation on islands heightens genetic mixing and speciation. Despite the fact that this complex system of interaction and adaptation takes place almost imperceptibly and over long periods of time, it is a most important biological end-product of island life and makes it a fascinating area for naturalists and biologists. The remarkable way in which organisms effectuate dispersal manifests extraordinary ingenuity in their search for a suitable habitat.

They are first attracted by a new environment which provides that measure of ecological opportunity no longer available on the mainland. Island colonization takes place in a variety of ways; a combination of unexpected migrants stop overs to rest, winds carry in unusual seeds, drifting wood transports with it unfamiliar species, and currents and tides bring new and fascinating fish and crustaceans nearer shore. Often these creatures find Sanibel to be a pleasing environment; they stay and contribute to the ever-growing gene pool.

The very complete and informative reports on birds, marine life, mammals, reptiles, and amphibians, and animals of fresh water habitats, have provided the basic data for this account of wildlife on Sanibel. Although an enormous number of birds are quite visible in even a brief visit to the "Ding" Darling Refuge, it takes several years on the Island to become familiar with its total wildlife resources. This report is based upon visits to the Island, reference to scientific studies by the Conservation Foundation and discussions with Island residents who have special knowledge of the subject. Wildlife habitats can and should be closely correlated to the existing vegetation.

An inventory of birds, amphibians and reptiles, and land and aquatic mammals is provided in the Evaluation and Appraisal Report of the Sanibel Plan. A list of endangered and potentially endangered fauna is also provided in that Report.

Unfortunately, the fauna of a small land area almost always suffer as human population increases. It is an objective of the Plan to indicate a way to lessen this negative stress. Basically an attitude of benign co-existence with wild creatures must be wholeheartedly accepted by the public. Attitudes are unlegislable but, with positive education such as that undertaken by Sanibel-Captiva Conservation Foundation, great strides can be made.

Each wildlife group has its own requirements and tolerances. Marine biota is sensitive to excessive sedimentation, toxicity and nutrient pollution and changes in configuration and

vegetation in their nesting and sanctuary areas. Over-harvesting of fish and live shells is, of course, a quick way to extermination. High speed power boats pollute the waters, and can directly harm some species and disrupt the marine environment in general. Larger mammals coexist poorly with humans because they need sizeable undisturbed areas in which to roam, where hiding places are abundant and where smaller prey exists. If these requirements are met, the thrill of seeing a bobcat or panther in the wild could remain a possibility on Sanibel.

Birds coexist well with man as long as their food source is plentiful and uncontaminated, and they have private areas for nesting and raising their young. Unfortunately, this has not been the case with reptiles and amphibians which have been deliberately sought and exterminated. Snakes are very sensitive to human intrusion, many being very secretive and less adaptable to environmental modifications than warm-blooded creatures. Next to deliberate killing of these creatures, habitat destruction has been a major cause of their decline. Most lizards, snakes, turtles and crocodilians have very specific water demands though somewhat less specific food requirements.

Regulations which would set the tone of a sanctuary island can be legislated. Areas cordoned off would allow for non-interrupted nesting; maintenance of every historical habitat would allow for all species to have a place to live; improvement of habitat through encouragement of native vegetation would give desirable species the best chance while rigorous monitoring should inhibit pollution of its air and waters.

### *Surface Water*

The offshore water resources abutting the land area (above sea level) of the City of Sanibel are the Gulf of Mexico, San Carlos Bay, Pine Island Sound, and Blind Pass.

The City of Sanibel is located on a barrier island that spans the mouth of the Caloosahatchee River just offshore of its discharge to the Gulf of Mexico. Sanibel is also located at the southern end of the Pine Island Sound Aquatic Preserve. These regional drainage systems significantly influence the quality of Sanibel's water resources, particularly that of the estuary. Tarpon Bay and numerous bayous are located in the tidal wetlands on the bayside of the island.

The main drainage way of the interior wetlands is the Sanibel River. Other surface water bodies consist primarily of man-made canals and lakes in the dredged areas of the altered land zone.

There are no major industrial or agricultural uses in the City of Sanibel. There are no major water users. Current and projected water needs are based on the demand for potable water by residential and commercial uses. The current and projected demand for potable water is provided in the Water Supply Element of the Plan.

Sanibel's water resources have not been jeopardized by drawdown due to drought or excess demand (use). However, an adequate supply of freshwater could become a serious

economic constraint upon future growth and development in the City of Sanibel. Conservation of this precious resource is critical for meeting future demand.

### *Conservation and Recreational Uses*

The recreational use of natural resources is discussed in the Recreation and Open Space Element of the Plan.

A major segment of Sanibel's natural resources is managed for conservation purposes. The United States Department of the Interior, Fish and Wildlife Services, manages the J.N. "Ding" Darling Wildlife Refuge. This 5,000-acre preserve is predominately tidal wetlands. The Sanibel-Captiva Conservation Foundation manages approximately 1,000 acres, consisting of predominately interior wetlands.

### **Plan for Natural Resources**

Proper management of the natural resources in the City of Sanibel is essential to the maintenance of the economic well-being of the City and to preservation of its quality of life.

### **For the Preservation of Ecological Functions Relating to Health, Safety and Welfare**

The plan for the preservation of the ecological functions of the Island of Sanibel shall be provided for through the development regulations and performance standards set forth in the Land Development Code.

Following is the key that was used to delineate the ecological zones shown on the Official Zoning Map of the City of Sanibel.

Generally, mapping was limited to areas of 2.0 acres, or greater. Land areas less than 2.0 acres were incorporated into the adjacent ecozone. Elevations refer to those shown on the Bosworth Topographic Maps, June 1976. The key is in two parts. First, that for the east, east central and west central sectors. Next, the key for the west sector.

#### ***Key, Ecological Zones Map***

#### ***East, East Central, and***

#### ***West Central Sectors***

- I. Elevation greater than or equal to 4.0 feet.
  - A. Located on the first ridge adjacent to the Gulf.
    1. South of Gulf Drive or an extension of it.

a. Landward of the 1974 Coastal Construction Setback Line.

Ecological Zone: GULF BEACH RIDGE

b. Seaward of the 1974 Coastal Construction Setback Line.

Ecological Zone: GULF BEACH

2. North of Gulf Drive or an extension of it.

a. Dredged, cleared, filled and/or predominantly (50%) built upon. Vegetation will be either landscaped or invading exotics.

Ecological Zone: ALTERED

b. Vegetation predominantly cabbage palm (*Sabal palmetto*), sea grape (*Coccoloba unifera*), wax myrtle (*Myrica cerifera*), wild olive (*Forestiera segregata*), yucca (*Yucca aloifolia*), and with Australian pines (*Casuarina sp.*)

Ecological Zone: GULF BEACH RIDGE

Special Cases--There are three cases where the Gulf Beach Ridge and the Mid-Island Ridge merge. These are: 1) in Section 35, Township 46 South, Range 22 East, 2) Section 21, Township 46 South, Range 23 East, and Section 30, Township 46 South, Range 23 East. In the first case, Tarpon Bay Road is used to separate the Gulf Beach Ridge from the Mid-Island Ridge; in Section 21, Ferry Road separates the two ecological zones. For the final case, Tulipa Way and Loggerhead Cay separate the zones from each other.

B. Within 50 feet of the San Carlos Bay or Pine Island Sound.

Ecological Zone: BAY BEACH

C. All other land:

1. Dredged, cleared, filled and/or predominantly (50%) built upon. Vegetation will be either landscaped or invading exotics.

Ecological Zone: ALTERED

2. Vegetation predominantly cabbage palm (*Sabal palmetto*), gumbo limbo (*Bursera simeruba*), strangler fig (*Ficus aure*), sea grape



(*Coccolobo unifera*), myrsine (*Rapanea quianensis*), stoppers (*Eugenia sp.*), buckthorn (*Bumelia angustifolia*), wild coffee (*Psychotria undata*), Joewood (*Jacquinia Keyensis*), saltbush (*Baccharis halimifolia*), wax myrtle (*Myrica cerifera*), buttonwood (*Conocarpus erecta*), with Brazilian pepper (*Schinus terebinthifolius*), Australian pine (*Casuarina sp.*), Melaleuca (*Melaleuca quinquenervia*).

a. Less than 5 acres in size and not connected to altered land or other land 4 feet or greater in elevation. The immediately surrounding land predominantly less than 3 feet in elevation.

Ecological Zone: UPLAND-WETLAND

b. All other land.

Ecological Zone: MID-ISLAND RIDGE

II. Elevation 3 feet or greater but less than 4 feet.

A. Seaward of the 1974 Coastal Construction Setback Line.

Ecological Zone: GULF BEACH

B. Within 50 feet of San Carlos Bay or Pine Island Sound.

Ecological Zone: BAY BEACH

C. All other land.

1. Dredged, cleared and filled. Vegetation will be either landscaped or exotic invader species.

a. predominantly built upon (50% or over).

Ecological Zone: ALTERED

b. not predominantly built upon (less than 50%).

Ecological Zone: UPLAND-WETLAND

2. Red Mangrove (*Rhizophora mangle*) or Spartina (*Spartina bakerii* and/or *spartina*) judged to be significantly present.

Ecological Zone: LOWLAND-WETLAND

3. All other vegetation.

Ecological Zone: UPLAND-WETLAND

III. Elevation less than 3 feet.

A. Seaward of the 1974 Coastal Construction Setback Line.

Ecological Zone: GULF BEACH

B. Within 50 feet of San Carlos Bay or Pine Island Sound.

1. Tidal mangroves, often red (*Rhizophora mangle*), black (*Avicenni nitida*), and white (*Languncularia racemosa*), with buttonwood (*Conocarpus erecta*) at slightly higher elevations.

Ecological Zone: MANGROVES

2. Without tidal mangroves.

Ecological Zone: BAY BEACH

C. All other land:

1. Dredged, cleared and filled and/or predominantly (50%) built upon. Vegetation will be either landscaped or exotic invader species.

Ecological Zone: LOWLAND-WETLAND

2. Tidal mangroves, often red (*Rhizophora mangle*), black (*Avicenni nitida*), and white (*Languncularia racemosa*), with buttonwood (*Conocarpus erecta*), usually at slightly higher elevations.

Ecological Zone: MANGROVES

3. Not tidal mangroves; any other vegetation. Often found will be spartina (*Spartini bakerii* and *spartini*), sea purslane (*Sesuvium portulacastrum*), with salt bush (*Baccharis halimifolia*), leather fern (*Acrosticum donaefolium*), buttonwood (*Conocarpus erecta*), wax myrtle (*Myrica cerifera*) and invaded by Brazilian pepper (*Schinus terebinthifolius*) and Melaleuca (*Melaleuca quinquenervia*).

Ecological Zone: LOWLAND-WETLAND

***Key, Ecological Zones Map***

*West Sector*

I. Located on an Island or small peninsula not present on the 1833 map by Edward Armstrong.

A. Elevation greater than or equal to 3.0 feet.

1. Seaward of the 1974 Coastal Construction Setback Line.

Ecological Zone: GULF BEACH

2. Landward of the 1974 Coastal Construction Setback Line.

Ecological Zone: BLIND PASS

B. Elevation less than 3.0 feet.

1. Seaward of the 1974 Coastal Construction Setback Line.

Ecological Zone: GULF BEACH

2. Landward of the 1974 Coastal Construction Setback Line.

REFER TO AND APPLY THE KEY FOR EAST, EAST CENTRAL AND WEST CENTRAL SECTORS OF THE ISLAND.

II. Located on the Sanibel-Captiva highway peninsula west of a meander line herein described: FROM INTERSECTION OF WEST LINE OF GOVERNMENT LOT II AND NORTHEASTERLY RIGHT-OF-WAY LINE OF SANIBEL-CAPTIVA ROAD, RUNNING NORTH 26°48'55" EAST 360.90 FEET TO POINT OF BEGINNING, THEN SOUTH 64°20'58" EAST 492.36 FEET, THEN SOUTH 19°08'40" WEST 66.93 MORE OR LESS TO THE NORTHWEST CORNER OF PARCEL 12-46-21-J0-00007.0010, THEN SOUTHEASTERLY ALONG NORTH LINE OF SAID PARCEL TO THE NORTHEAST CORNER OF SAID PARCEL, THEN SOUTHERLY ALONG EAST LINE OF SAID PARCEL TO THE WATERS OF CLAM BAYOU.

A. Seaward of the 1974 Coastal Construction Setback Line and a northward prolongation of said line.

Ecological Zone: GULF BEACH

B. Located east of the 1974 Coastal Construction Setback Line and a northward prolongation of said line and located west of the centerline of Coconut Drive and a southward and northward prolongation of said centerline.

Ecological Zone: BLIND PASS

C. Located elsewhere on the Sanibel-Captiva highway peninsula.

REFER TO AND APPLY THE KEY FOR THE EAST, EAST CENTRAL AND WEST CENTRAL SECTORS OF THE ISLAND.

III. Located on Wulfert Peninsula.

REFER TO AND APPLY THE KEY FOR THE EAST, EAST CENTRAL AND WEST CENTRAL SECTORS OF THE ISLAND.

IV. Located in Section 13, Township 46 South, Range 21 East or Section 18, Township 46 South, Range 22 East, or west of Jamaica Drive, Section 19, Township 46 South, Range 22 East.

A. Greater than or equal to 3 feet and less than or equal to 5 feet in elevation, landward of the 1974 Coastal Construction Setback Line, judged to be predominantly Australian pines.

Ecological Zone: BLIND PASS

B. Any other land.

REFER TO AND APPLY THE KEY FOR THE EAST, EAST CENTRAL AND WEST CENTRAL SECTORS OF THE ISLAND.

*The Ecological Zones Map*

The Ecological Zones Map, a series of maps by section, township, range, was developed from the "key" described above.

1. Format

(a) Official maps, by section, at a scale of 1"=400' depicting ecological zones, water boundaries, roads, unimproved roads, trails, survey areas, local drainage areas.

(b) Unofficial reference maps.

(c) A "key" by which land is classified into each ecological zone.

2. Special mapping considerations

(a) Survey areas--where the existing vegetation indicates an elevation different than the topographic map. A survey area may be reclassified once additional topographic information is available.

(b) Local drainage areas--these occur in ridges and are denoted by depression contours on the topographic maps.

### **For the Interior Wetlands Conservation District**

In July of 1984 the Sanibel City Council adopted an ordinance creating "The Interior Wetlands Conservation District", in order to extend a higher degree of protection to the interior wetlands than had been accorded under the development regulations in effect since 1976, on 2,000 acres of interior wetlands.

The need for the Conservation District was evidenced by development trends that occurred after adoption of the Comprehensive Land Use Plan in 1976. These trends generally included:

1. Increased development pressures in the interior wetlands as lands more suitable for development became less available;
2. Development taking place in proximity to the Sanibel River with the potential to pollute ground and surface waters;
3. Lack of requirements contained in the regulations to direct development away from sensitive portions of the site;
4. Excessive amounts of vegetation clearing permitted to support assigned development intensities, particularly for large parcels;
5. Lack of prohibitions against dredging and filling of wetlands, leading to alteration of natural features and functions;
6. Development taking place in subdivisions platted prior to the adoption of this Plan, with inadequate infrastructure and sub-standard lot sizes which were unable to conform with the standards of this Plan.

The purpose of the ordinance, as set forth therein, is as follows:

The purpose and intent of this district is (a) to protect public health, safety and welfare; (b) to protect and conserve interior wetlands in the Freshwater Management Area so as to restore and maintain the integrity of these lands in as near a natural state as possible; (c) to set forth standards and limitations on the placement of fill on and the excavation of wetlands in the Freshwater Management Area; (d) to prohibit development activity within 200 feet of the

banks of the Sanibel River; (e) to identify areas suitable and unsuitable for development within the Sanibel Gardens, Tarpon Bay, and Sanibel Highlands Subdivisions, and to specify the standards at which development may take place in these locations; (f) to identify suitable development activities to be permitted and standards to be applied in the development of wetlands in the Freshwater Management Area; (g) to ensure that, where development activity does take place in the wetland area, it will be located on those portions of the site and in a manner that will be the least disruptive to the natural functions of these environmentally-sensitive lands; and (h) to ensure that the maintenance and restoration of wetlands is an integral part of the wetlands management program.

In order to fulfill the above-stated purpose and the objectives as set forth in the Interior Wetlands Conservation District ordinance, the following additional actions should be undertaken:

1. Explore the feasibility of additional incentives in the development regulations, such as the transfer of development rights, to further remove development potential from sensitive lands.
2. Proceed with the program of public acquisition as opportunities, or the need, arise, based upon, but not limited to:
  - a. Lands or lots rendered undevelopable by the standards of the Interior Wetlands Conservation District ordinance.
  - b. Lands or lots within 200 feet of the Sanibel River.
  - c. Lands with little or no elevation above 3 feet for the placement of dwelling units, in accordance with the standards of the Interior Wetlands Conservation District ordinance.
  - d. Lands abutting parcels currently under public or quasi-public ownership.
3. Continue to encourage the dedication of those portions of lands, not utilized for development under the standards of the Interior Wetlands Conservation District ordinance, to the City of Sanibel or a non-profit conservation entity.
4. Continue to implement a program for the maintenance and restoration of lands dedicated to the City and, to the extent possible, to nonprofit conservation entities, so as to approximate their natural condition, to the extent practical.
5. To implement the plan for sewage treatment, undertake a program to upgrade existing septic tank systems where there is evidence that they are improperly designed, installed or maintained, and that they pose the potential to pollute ground or surface waters of the interior wetlands system.

## **For Environmentally Sensitive Lands**

There are many environmentally sensitive lands in the City of Sanibel that are owned and managed for conservation purposes.

As stated in the Future Land Use Element of the Plan, the principal use of over 50% of the area in the City of Sanibel is conservation use. More than 8 square miles of the city are owned and managed by the federal government as a wildlife refuge. The Sanibel-Captiva Conservation Foundation owns more than a square mile of additional land which is managed for conservation purposes.

The Future Land Use Element contains a projection that approximately 1,400 acres of undeveloped land in the city are located in the tidal and interior wetlands. A major use of this acreage, even if developed at very low residential density, is projected as conservation lands.

The City of Sanibel began a funded program in 1987 to acquire environmentally sensitive lands for conservation purposes. As of 1995, the City has acquired over 550 small parcels of land, totaling 200 acres, that will be preserved and protected. An estimated \$1 to \$1.5 million worth of environmentally sensitive lands remains to be purchased through this program. As the City's acquisition program winds down, focus will be shifted to the restoration and management of these environmentally sensitive lands.

The 1976 Comprehensive Land Use Plan initiated development regulations and performance standards based on the ability of each ecological zone to tolerate future development. In 1984, the city established the Interior Wetlands Conservation District to provide a higher degree of protection from development impacts for two thousand (2,000) acres of interior wetlands. In 1991, to provide for the use and preservation, maintenance, enhancement and restoration of environmentally sensitive lands, the City of Sanibel established an Environmentally Sensitive Lands Conservation District.

With over 50% of the area in the City of Sanibel owned and managed for conservation purposes, and Environmentally Sensitive Lands Conservation District is needed to ensure the protection and preservation of these lands and the coordinated management of these natural resources that function as an ecological system.

The purpose of the Environmentally Sensitive Lands Conservation District is:

- To ensure the preservation of environmentally sensitive lands owned and managed for conservation purposes;

- To restrict development in environmentally sensitive lands that is not consistent with conservation purposes;

- To promote coordinated management of environmentally sensitive lands; and

To encourage enhancement and restoration of disrupted natural systems.

In order to fulfill the purpose of the Environmentally Sensitive Lands Conservation District, permitted uses, required conditions and performance standards have been established in the Land Development Code. The district may include environmentally sensitive lands owned and managed for conservation purposes whether publicly or privately owned. The district incorporates lands that have been acquired in the past and will be acquired in the future by the city for conservation purposes. The district map for the Environmentally Sensitive Lands Conservation District is included in the Land Development Code.

### **For Vegetation Preservation**

In order to protect the vegetation values identified, it is necessary that the City of Sanibel:

1. Prohibit the introduction of exotic species of plant which tend to out-compete or otherwise displace native species of plant;
2. Encourage the removal of undesirable exotics currently existing on the island;
3. Limit clearing of native vegetation;
4. Protect valuable native species of plant from destruction; and
5. Encourage the use of native species of plant in the landscaping of future developments.

To achieve those ends, performance standards shall be set out in the Land Development Code which set forth certain restrictions on the development of land in regard to exotic and native species of plant. However, the standards and criteria for development activity are not sufficient to achieve island-wide protection of vegetation values. Therefore, the City should encourage sound ecological management of vegetative resources in those portions of the City for which future development is not proposed.

### **For Wetland Protection**

In order to establish the most suitable water level, detailed topographic and engineering studies have been done. The Tarpon Bay and Beach Road weir control structures are now set at elevations of 3.2 and 2.7 feet NGVD, respectively. These elevations may be manipulated in the event of a flood or potential flood occurrence in accord with the City's Weir Control Policy, adopted by City Council Resolution No. 94-75.

It is also imperative that the river, the ditches, the ponds, lakes and wetlands be freed from any sewage pollution. These water bodies are now largely eutrophic showing low levels of oxygen at depth and wide fluctuations at the surface. The cause (and remedy) for this is not immediately apparent. Obviously, it is due to the organic materials reaching the water (whether from pollution, natural plant decay, fertilizers or other). In any event,



this should be studied and appropriate remedial action taken (such as dredging out deposits, etc.). The filling-in with undesirable vegetation is an inescapable outcome of high nutrient levels; this is now evident in scattered places along the river where algae bloom can be seen. Not only is this unsightly vegetation, but it has negligible value for wildlife.

The cumulative impacts of small-scale projects on wetlands should be assessed. When public or private projects produce unavoidable damage to wetland areas, restoration or mitigation programs should be implemented.

As an additional measure for achieving maximum ecological preservation of vegetative values, the City implements a program for replacing with more beneficial vegetation all prohibited exotic species of plant, including Australian pines, and Brazilian pepper tree, from City-owned land. The City supports the efforts of other levels of government and private individuals with land ownership on Sanibel, doing the same. Although the melaleuca tree has already been virtually eradicated, the community must continue to be alert to eliminate volunteers of this species.

### **For Wildlife Preservation**

The City should give further consideration to enacting regulations which would encourage the preservation of the island's natural wildlife and would set the tone appropriate for an island designated as a sanctuary. Special consideration should be given to endangered and protected species.

Habitat preservation plays a key role in the plan for wildlife preservation. Pursue means to obtain local control over the use of fertilizers, pesticides and other chemicals that may result in the degradation of wildlife habitat, and where possible, develop a program to appropriately regulate their use in order to protect wildlife and wildlife habitat.

### **For Water Resources**

The plan for the water supply is provided in the Water Supply Element of this Plan. In addition, the plan for stormwater management is provided in the Storm Drainage Element of this Plan.

### **For Water Quality**

In order to protect the quality of water resources, the City of Sanibel regulates development activities to protect natural water-cleansing processes and to reduce or prevent the discharge of contaminants into the water system.

The plan for stormwater management is provided in the Storm Drainage Element of this Plan.



2. To use surface water management as one of many tools in undeveloped areas in order to encourage and support the return to savannah and marsh vegetation as well as other native habitat types, including but not limited to ridge hammocks, buttonwood sloughs and transition zones, and to discourage the continued invasion of exotic plants.
  - a. To identify undeveloped areas for habitat preservation and restoration that are large enough to support representative plant and animal populations, economically and physically feasible to manage, and compatible with the water management needs of developed areas.
  - b. To increase rainfall detention in undeveloped areas to encourage the recharging of the water table aquifer, and to return to conditions of environmental extremes in surface water and water table elevations which had controlled natural characteristics in the past.
3. To utilize natural drainage methods wherever possible with minimum change to the environment, using minimal amounts of manmade structures and arriving at a system requiring minimal maintenance.

### **Goals, Objectives and Policies**

#### ***GOAL STATEMENT:***

**Protect and appropriately manage Sanibel's natural resources to ensure the conservation of ecosystems by maintaining air quality, water quality, native vegetation and native habitats and species diversity.**

#### ***Objective 1:***

Sanibel is and shall remain a barrier island sanctuary.

**Policy 1.1.** Evaluate all local plans and programs for conservation and natural resource protection to ensure that they are consistent and compatible with one another and that they are unified in their efforts.

**Policy 1.2.** Prior to adoption of the next Evaluation and Appraisal Report for the Sanibel Plan, evaluate local conservation and natural resource protection plans and programs to ensure that they are consistent and compatible with one another and that they are unified in their objectives.

**Policy 1.3.** Strive to sustain ecological balance and preserve and restore natural settings for residents, visitors and wildlife.

**Policy 1.4.** The adequate and appropriate protection and conservation of natural resources, including wetlands, shall be accomplished through:

- ✓ maintenance, and appropriate expansion, of the Environmentally Sensitive Lands Conservation District, and
- ✓ maintenance, and appropriate revisions, to regulations, such as the Interior Wetlands Conservation District and environmental performance standards of the Land Development Code.

***Objective 2:***

When the Florida Department of Environmental Protection (DEP) notifies the City of Sanibel that minimum established air quality levels are being exceeded within the City, a program approved by the DEP will be implemented to bring air quality into compliance with minimum established standards.

**Policy 2.1.** Achieve minimum air quality standards by implementing an air quality improvement program within one year of notification by DEP that minimum established air quality standards are not being met.

***Objective 3:***

Protect and conserve water resources and prevent impairment of the quality and quantity of surface and groundwater resources.

**Policy 3.1.** To provide filtration of stormwater runoff into surface waters, ensure that setback requirements from open bodies of water are maintained by continued implementation of the development regulations and performance standards established in the Land Development Code.

**Policy 3.2.** With cooperation from the Department of Environmental Protection, establish a surface water quality monitoring program. Seek further cooperation from Lee County, the Department of Environmental Protection and the South Florida Water Management District.

**Policy 3.3.** Assist the Sanibel-Captiva Conservation Foundation with their groundwater quality monitoring program.

**Policy 3.4.** With cooperation from the South Florida Water Management District in establishing cones of influence for well heads, establish a well head protection program for existing and future wells.

***Objective 4:***

Protect and conserve soils and native vegetation communities, and maintain the natural functions of the City's ecological zones by continued implementation of the adopted

development regulations and performance standards established in the Land Development Code.

**Policy 4.1.** To limit clearing of native vegetation, including the under story and ground cover, ensure the continued enforcement of the environmental performance standards of the Land Development Code.

**Policy 4.2.** Protect valuable native species of plants from destruction by requiring a City vegetation permit for vegetation removal.

**Policy 4.3.** The planting or seeding of prohibited exotic plants which tend to out compete or otherwise displace native species of plants is prohibited.

**Policy 4.4.** In conjunction with the development of any site, prohibited species of vegetation are to be removed from the site and prevented from reestablishing on the site.

**Policy 4.5.** Reduce the spread of prohibited exotic plants and noxious aquatic vegetation by implementing regulations prohibiting the planting of these species and by requiring their removal when land is developed.

**Policy 4.6.** Consider development of a program of removal, from developed property, all prohibited exotic plants except for Australian pines.

**Policy 4.7.** Restrict human settlement in the Blind Pass Zone by including regulations in the adopted Land Development Code that limit development intensity in a manner that is consistent with the unstable dynamics of this zone.

**Policy 4.8.** Seek authority from the state to implement local regulations to better protect mangroves.

***Objective 5:***

Protect and conserve wildlife and its habitat including marine habitat, and maintain the natural functions of the City's ecological zones by continued implementation of the adopted development regulations and performance standards established in the Land Development Code.

**Policy 5.1.** Natural wildlife corridors will be established and maintained to connect wildlife habitat to the Sanibel River and to provide for wildlife movement along the River.

**Policy 5.2.** Prior to adoption of the next Evaluation and Appraisal Report for the Sanibel Plan, develop a program for the enhancement of marine resources.

**Policy 5.3.** Wildlife access to and from the beach will be maintained by restricting the location of fences.

**Policy 5.4.** Commercial uses of natural resources, except for those incidental to recreation use that is compatible with scenic preservation and conservation uses, will be prohibited.

**Policy 5.5.** Protect sea turtle nesting areas by prohibiting the disturbance of nests, prohibiting mechanical beach cleaning and controlling the emission of light from structures on or near the beach.

**Policy 5.6.** Protect the habitat of gopher tortoises, eastern indigo snakes, eagles, ospreys, loggerhead turtles, alligators, pileated woodpeckers and river otters by continued implementation of the development standards and performance standards established in the Land Development Code.

**Policy 5.7.** Protect manatees by enforcing low boat speed in the primary habitat of the manatee.

***Objective 6:***

To ensure protection and preservation of environmentally sensitive lands and the coordinated management of these natural resources that function as an ecological system, retain and expand the Environmentally Sensitive Lands Conservation District for lands owned and managed for conservation purposes.

**Policy 6.1.** Restrict permitted use in the Environmentally Sensitive Lands Conservation District to environmental preservation, passive recreation, surface water management, minor utilities, installations primarily for transmission, enhancement and restoration.

**Policy 6.2.** Coordinate management of lands in the Environmentally Sensitive Lands Conservation District in recognition that these natural resources function as an ecological system.

**Policy 6.3.** Include all lands purchased by the City of Sanibel with Environmentally Sensitive Lands Acquisition Funds in the Environmentally Sensitive Lands Conservation District.

**Section 3.2.3. Natural Groundwater Aquifer Recharge Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177, Florida Statutes and Chapter 9J-5.011(2) of the Florida Administrative Code.*

**Background Discussion**

The purpose of this element, as stated in the Florida Administrative Code, is to provide for maintenance of the functions of natural drainage features and groundwater recharge areas.

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(6)(c), Florida Statutes and the minimum review criteria of Chapter 9J-5.011 of the Florida Administrative Code, are provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

The location of Sanibel is such that local recharge of the Florida aquifer is nonexistent. The water quantity and quality of the groundwater table aquifer is the major aquifer recharge issue for this community. The protection of wellheads is another.

The groundwater system underlying the City of Sanibel consists of the water table aquifer and the Floridian aquifer (Lower Hawthorne and Suwanee aquifers). The upper and lower Floridian aquifers lie below the water table aquifer and are separated by confining layers with relatively low permeability. A very low percentage of local average annual rainfall percolates into the Floridian aquifer. The South Florida Water Management District has not designated any areas in the City of Sanibel as a recharge area for the Floridian aquifer.

The most significant problem related to groundwater recharge in the City of Sanibel is localized contamination of the water table aquifer from wastewater disposal systems and stormwater runoff.

Penetration of confining layers of the aquifers for well installation creates the potential for interchange of water between aquifers at well sites, thereby effectively creating potential recharge sites. Consumptive use permits from the Water Management District require protection of well field areas to prevent contamination of the aquifers. However, withdrawal from the aquifers for private irrigation purposes can have an adverse impact on the quality of water in the aquifers utilized by Island Water Association (IWA). This degradation of the water quality of the aquifers results in costlier treatment to produce potable water and thus increases costs to IWA's customers.

The major drainage feature of the City of Sanibel is the Freshwater Management Area. The Interior Wetlands Conservation District has been established within the Freshwater Management Area to regulate development within this major drainage feature of the City. Existing regulations and programs which govern land use and development of natural drainage features, the Freshwater Management Area and the Wetlands Conservation Lands, are adequate for maintaining the functions of Sanibel's natural drainage features and groundwater recharge areas.

The *Surface Water Management Plan* was developed to control flooding and to enhance the water quality and quantity of this Freshwater Management Area.

### **Plan for Aquifer Recharge**

1. The City of Sanibel's stormwater drainage programs and regulations should continue to emphasize the preservation of natural drainage features.
2. The City of Sanibel should also continue to encourage the reuse of treated effluent for irrigation as a means of increasing recharge of the water table aquifer.
3. The City and IWA should pursue some means of allowing local regulation of shallow wells.

## **Goals, Objectives and Policies**

### ***GOAL STATEMENT:***

**Protect the natural recharge of the groundwater aquifer to ensure the conservation of water resources and the maintenance of water quality.**

### ***Objective 1:***

The quality and quantity of Sanibel's groundwater resources will not be degraded.

**Policy 1.1.** Excavation which results in penetration of the aquiclude is prohibited.

**Policy 1.2.** Pursue means to obtain local control over the use of fertilizers, pesticides and other chemicals that may result in the degradation of the quality of groundwater, and where possible, develop a program to appropriately regulate their use in order to protect the quality of the groundwater.

## **Section 3.2.4. Historic Preservation Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177, Florida Statutes and Chapter 9J-5.012(3) for the Florida Administrative Code.*

### **Background Discussion**

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(7)(I), Florida Administrative Code, are provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

Sanibel has a rich historical heritage dating from the first settlements of the Caloosa Indians to the small agricultural, fishing and resort community of the first half of the twentieth century. Historic remnants are testimonies of successful adaptations by past generations and can thus act as beacons to guide present and future generations in their striving to attain a fitting adaptation to the environment. This is particularly true on a barrier island such as Sanibel where structures are vulnerable to destructive tropical storms and hurricanes.



Sanibel's history over the past century has been one of alternate growth and decline. About 1888 agricultural development started and spread over the next 40 years to all of the Island's arable land. During this period several hurricanes, with accompanying flood tides ranging from 9 to 13 feet high, struck Sanibel. The last, in 1926, changed the course of the Island's history, inundating the entire island with salt water. After this disaster, many of the residents of the Island were financially ruined and forced to leave. The remainder stayed to seek a livelihood serving winter visitors and tourists.

Little growth occurred between 1927 and 1944, when the permanent resident population is reported to have been 100, except for a gradual increase in the number of visitors and development of cottages along the shore. In the fifties, Sanibel's reputation for shell collecting and tourism grew, with a parallel development of residents and services.

Until this time, most buildings were constructed on the Island's higher elevations, above 5 feet. This pattern changed radically after construction of the Causeway in 1963, when a development boom began on the Island. Land was developed which earlier residents had wisely avoided. The full impact of this development is yet to be seen, as the latest hurricane to strike the Island was in 1960. Stimulated by the development of the Sanibel Plan and flood regulations, there has been a return to the use of piling structures, including multi-storied buildings.

Historic remnants are not merely objects of interest to a pedantic chronicler, an antiquary, or a passing tourist; they are testimonies of successful adaptations by past generations, and thus can act as beacons to guide present and future generations in their striving to attain a fitting adaptation to the environment. This is particularly true on a barrier island such as Sanibel where structures are vulnerable to destructive tropical storms and hurricanes. Many of the remaining structures are of historic significance because they are irreplaceable as resources of educational importance and evidence of human survival through past disasters. Those structures which remain provide an important lesson in survival. The Indians obtained additional elevation for their houses by building mounds of shells, and most surviving structures from the late nineteenth century were built on high ground or elevated above flood tides on piling. The Lighthouse Keeper's Quarters (1884), the Bailey House (1896), the Cooper Homestead (1891) are all examples of successful adaptation. These historic sites and structures, among others, are irreplaceable resources which should be maintained for future residents and visitors.

The Historical Preservation Committee has been formed to establish guidelines for registration, classifying and setting priorities for preservation. The following sites and structures have been placed on the historic site list.

The following sites and structures were identified in the 1976 Sanibel Plan.

There are additional sites and structures that may be considered by the Sanibel Historical Society for inclusion in the Local Register of Historic Sites and Structures. The City should protect these and other historic sites by making historical evaluations in accordance with the priorities recommended by the State of Florida Division of Historic Resources. Those not protected by Federal or State law should be covered by City Ordinance.

The City's roadways, particularly the arterial and collector roads, still retain their rural character. As two lane roads, these up-to-date transportation facilities contribute significantly to the historical character of the City of Sanibel.

The Sanibel Historical Committee operates the Sanibel Historical Village located on the City Hall site.

### **Plan for Historic Preservation**

1. Maintain a list of Sanibel's historic sites and places with a historical resume of each, and documentation.
2. This list should be sent by the city to each of the city departments and official committees with the requirement that historic resources receive the same consideration and protection as natural resources.
3. Periodically review this list for updating, additions or deletions.
4. Make historical evaluations in accordance with the priorities recommended by the Division of Historic Resources.
5. Work with the Division of Historic Resources to nominate the most valuable historic structures, sites or areas to the National Register of Historic Places, the State Inventory of Historic Sites or another list or designation as appropriate.
6. Notify owners of the property of its historic value and seek their cooperation utilizing the incentive program established by City Council Resolution 92-111.
7. Continue to protect and preserve the irreplaceable historic resources of Sanibel.
8. Maintain an Island museum which would include historical and archeological exhibits. (The Clarence Rutland House, moved to the City Hall site in 1982, was officially dedicated as the Island Historical Museum on November 10, 1984.)

### **Goals, Objectives and Policies**

#### ***GOAL STATEMENT:***

**Protect and appropriately use historic resources to ensure their preservation as the development anticipated in the Future Land Use Element of the Plan occurs.**

***Objective 1:***

Protect historic and archaeological resources, including structures, sites and roadways, to ensure continued preservation and sensitive use and reuse of these resources.

**Policy 1.1.** First consideration should be given to retaining the designated historical structure in its historical setting and context.

**Policy 1.2.** Maintain the requirements of the Land Development Code and the City's historical preservation program designed to protect and preserve the archeological and historical resources on Sanibel.

**Policy 1.3.** Ensure continued public access to cultural and historic resources.

**Policy 1.4.** Retain a design in the historic roadway system that preserves the historic character of the roadways and surrounding land uses.

**Section 3.2.5. Scenic Preservation Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177(7)(I), Florida Statutes*

**Background Discussion**

The development of a Vision Statement for the Sanibel Plan emphasizes the importance of scenic resources in the preservation of the character of the community.

Sanibel is renowned for the natural beauty of its gulf beaches and subtropical landscape. These are important economic as well as aesthetic resources for residents, businesses and visitors. Sanibel's reputation as a unique retreat of unspoiled beauty continues to attract more residents and tourists annually. The resources of the island experienced by most residents and visitors are subject to degradation and therefore require some measure of protection and regulation. These resources are the beaches, wetlands, waterways and water bodies, the wildlife refuge and the major roadways that provide access to them.

The beaches in the east and east central sectors of the island are to some degree impacted by large condominiums which are constructed close to the beach with no visual screen. As a result, to some extent these are no longer the "unspoiled" beaches which have long attracted visitors to Sanibel. However, at the western end of the island and some areas of single-family homes on the eastern end, single-family houses are set back sufficiently from the beach and surrounded by dense vegetation so that they do not impair the scenic

values of the beach. In this way the "natural" character of the shoreline is preserved for all to enjoy, resident and visitor alike.

A beach setback and buffer of dense vegetation should be employed in any new development near the beach whatever the density or land use. In addition to the scenic impact, storm protection is enhanced by such a strategy. It also benefits marine and wildlife that use the beach for nesting and feeding.

A limitation on building heights of approximately forty-five (45) feet above mean sea level is also important with respect to scenic preservation of the beach zones as are several other regulations designed to conserve the coastal environment. A lower building height limitation is appropriate for single-family residential areas in order to retain the character of the community.

Scenic preservation of the J.N. "Ding" Darling Wildlife Refuge is within the aegis of the U.S. Federal Government. To date this has been accomplished with a beneficial impact on the Island. It is most important that the Sanibel-Captiva Conservation Foundation exercise maximum control of scenic resources in its several land holdings in mangrove and wetland areas so that these are enjoyed in their natural state by residents and visitors.

Another major advantage for the island's scenic resources is that of the major roadways which give access to all environments and land uses. These scenic roads generally follow the island's two natural ridges and are connected by several roads which cross the interior. Periwinkle Way, Gulf Drive, and the Sanibel-Captiva Road, are the city's main collector streets and commercial arteries with fairly high traffic volumes. These two-lane roadways, which are rural in character, contribute significantly to the scenic resources of Sanibel.

Most island businesses are located along Periwinkle Way and many of the island's tourist accommodations are on Gulf Drive. Land along the Sanibel-Captiva Road is relatively less developed except for the Blind Pass commercial area and scattered residential subdivisions. The variety of visual experience along these roads today is due to the alteration of man-made environment and the natural landscape. This pattern of intermittent commercial development separated by dense trees and shrubs close to the road gives a casual atmosphere to even the busiest roads.

In order to preserve the casual scenic quality, future commercial and other non-residential uses should be concentrated in nodes along the road, separated by open spaces, recreational and residential uses in much the same manner as they are today. Existing trees or plants in the road right-of-way should not be removed except where they are a traffic or storm hazard, are a nuisance, or where necessitated by limited street improvements. If removal of trees becomes necessary, provision should be established to preserve scenic quality even as further development or road improvements occur. Such buffers can also accommodate bicycle and pedestrian paths. In commercial areas, curb cuts should be kept to a minimum and shell should be used in parking lots instead of impervious paving such as asphalt. These standards will contribute to the preservation of

the "casual" retreat atmosphere and serve safety and storm drainage purposes simultaneously. Signs for commercial establishments should be clearly legible and integrated with the vegetation buffer.

Major cross-island routes, Casa Ybel Road, Tarpon Bay Road and Rabbit Road, provide a totally different experience of the island's various natural landscapes. These roads cross through the heavily treed upland wetlands to the grass lowland and the Sanibel River, to the Gulf Beach Ridge and Gulf Drive. Vegetation buffers should be established and residential uses should be concentrated in upland areas where houses can be screened by trees.

### **Plan for Scenic Preservation**

These guidelines for maintaining scenic quality are consistent with other objectives of the plan, and are, in many cases, also recommended for other reasons such as storm protection, traffic safety and water quality maintenance. Guidelines of scenic preservation allows Sanibel to accommodate growth while preserving the beauty of its natural areas and roadways.

The following are the general policies for scenic preservation which shall be implemented in the Land Development Code:

1. Establish vegetated buffer strips on major roadways. These buffers should include space for ornamental planting, bicycle and pedestrian circulation.
2. Consideration should be given to the historical and scenic benefits of mature Australian pines along some segments of Periwinkle Way and some open space and recreational areas and these trees should be retained for their historical and scenic attributes.
3. Concentrate future commercial uses on Periwinkle Way and Sanibel-Captiva Road in nodes, rather than spreading them out in a continuous strip.
4. Encourage the use of shell surfacing, or alternatively, other suitable pervious surfacing, for parking areas in order to maintain a casual retreat atmosphere. Concrete and asphalt paving of parking areas should be minimized.
5. Integrate signs with the roadway buffers.
6. Prohibit neon and flashing signs.
7. Require vegetation buffers between commercial developments and roadways and along property lines to enhance compatibility of buildings with community as a whole.

8. Encourage architectural compatibility of buildings within established neighborhoods and community as a whole.

9. In order to maintain the dark sky of this nonurban community, minimize outdoor lighting.

## **Goals, Objectives and Policies**

### ***GOAL STATEMENT:***

**Protect or enhance scenic resources to ensure their preservation as the development anticipated in the Future Land Use Element occurs.**

### ***Objective 1:***

Ensure the preservation of scenic resources by continued implementation of the development regulations and performance standards of the Land Development Code and other City programs.

**Policy 1.1.** The height of buildings will not exceed three (3) stories above the base flood elevation.

**Policy 1.2.** Encourage beach front property owners to maintain native vegetation between upland structures and the gulf and bay beaches so that the view of Sanibel from its beaches is not dominated by human-made structures.

**Policy 1.3.** Implement measures leading to maintenance of the gulf beach dune system with hardy native plant species.

**Policy 1.4.** Vegetated buffer strips will be established along major roadways. Within the right-of-way, these buffers will provide space for the ornamental plantings and for bicycle and pedestrian circulation.

**Policy 1.5.** The scenic roadway system, established in the Transportation Element of the Plan, will retain a design that preserves the scenic character of the roadway.

**Policy 1.6.** Vegetation buffers will be established and maintained between commercial developments and roadways and along commercial property lines.

**Policy 1.7.** Commercial uses along Periwinkle Way will be concentrated in nodes, rather than spreading them out in a continuous strip.

**Policy 1.8.** Signs will be integrated with the roadway buffer. Neon signs and flashing signs are prohibited.

**Policy 1.9.** Buildings and structures will be architecturally compatible with the general atmosphere and character of the established neighborhood; or, if there is no established neighborhood, the City as a whole.

***Objective 2:***

Prior to the adoption of the next Evaluation and Appraisal Report for the Sanibel Plan, develop a comprehensive program for the preservation and enhancement of scenic resources.

**Policy 2.1.** Incorporate the natural resources of the Preservation District of the Gulf Beach Zone, the Environmentally Sensitive Lands Conservation District and the corridors of the rural roadway network into this program.

### **PART 3.3. HUMAN SUPPORT SYSTEMS**

To protect the public health, safety and welfare, the water supply, transportation system, wastewater treatment, solid waste disposal, storm drainage, recreation and open space, police services, libraries, city administration, fire protection, power, education, medical facilities and public health and insect control are human support systems provided for residents and visitors within the City of Sanibel.

This section of the Sanibel Plan establishes minimum level of service standards for potable water facilities, roads, wastewater treatment facilities, solid waste disposal, storm drainage systems and recreation facilities. For municipally provided facilities, capital improvements that are needed to maintain conformance with the minimum level of service standards established by these standards are to be included in the Five-Year Schedule of Capital Improvements of the Capital Improvements Element of this Plan. For municipally provided facilities, capital improvements for human support systems that are not needed to maintain minimum level of service standards are not included in the Five-Year Schedule of Capital Improvements, but are to be included in the City's Capital Improvements Program.

This part of the Sanibel Plan includes the Plan elements pertaining to the delivery of human support systems, i.e., public facilities. The purpose of this part of the Plan, as stated in the Florida Administrative Code, is to include in the Plan a concurrency management system to establish an ongoing mechanism which ensures that public facilities and services needed to support development are available concurrent with the impacts of such development.

Pursuant to Chapter 163.3180, Florida Statutes and Chapter 9J-5.055 of the Florida Administrative Code, the concurrency management system is intended to ensure that issuance of a development order or development permit is conditioned upon the availability of public facilities and services necessary to serve that development. Water supply, transportation (roads), wastewater treatment, solid waste, storm drainage, and recreation and open space are the public facilities subject to concurrency requirements.

### **Section 3.3.1. Human Support Systems Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177(3), Florida Statutes and Chapters 9J-5.055, 9J-5.007(3), 9J-5.011(2) and 9J-5.014(3) of the Florida Administrative Code.*

The following goal, objective and policies are applicable to all human support systems, addressed in this Part of the Sanibel Plan. Additional goals, objectives and policies are provided for specific elements of this Human Support Systems Part of the Plan. These objectives, policies and standards establish the concurrency management system for the Sanibel Plan. This concurrency management system is implemented by provisions of the Sanibel Land Development Code.

#### ***GOAL STATEMENT:***

**Provide adequate human support systems for the residents and land uses in the City of Sanibel, in a manner that protects public health, safety and welfare, promotes orderly, environmentally sensitive growth while protecting investment in public facilities.**

#### ***Objective 1:***

Ensure the continued maintenance of an adequate level of service for human support systems through the initial and long-range planning periods of this Plan.

**Policy 1.1.** The Planning Department will prepare an annual summary of capacity and demand information for each human support system.

**Policy 1.2.** The City will maintain, in the Capital Improvements Element of this Plan, a Five-Year Schedule of Capital Improvement needs for human support systems provided by the municipality that are needed to comply with level of service standards established in this Section of the Plan. The Five-Year Schedule of Capital Improvements will be updated annually in conformance with the review process for the Capital Improvements Element of this Plan.

**Policy 1.3.** Capital improvements for human support systems provided by the municipality that are not needed to comply with level of service standards, and, therefore, not included in the Five-Year Schedule of Capital Improvements, are to be included in the City's Capital Improvements Program.

**Policy 1.4.** Capital improvements projects for human support systems will be undertaken in accordance with the Five-Year Schedule of Capital Improvements provided in the Capital Improvements Element of this Plan.



## ***Objective 2:***

Ensure that human support systems needed to support development are available, at or above the adopted level of service standards for roads, sanitary sewer, solid waste, drainage, potable water, and parks and recreation, concurrent with the impacts of such development.

**Policy 2.1.** No permits will be issued for new development which would result in an increase in demand for facilities that do not comply with the minimum level of service standards established in this section of the Plan.

**Policy 2.2.** Pursuant to the requirements for the concurrency management required by statute and rule, on an on-going basis, the Sanibel Land Development Code will be reviewed and amended, as required, to ensure that development orders and development permits are issued in a manner that will not result in a reduction in the levels of service below the adopted level of service standards. The concurrency management system of the Land Development Code will retain requirements that, at the time of the issuance of a certificate of occupancy, water supply facilities, roadways, wastewater treatment facilities, solid waste disposal facilities, storm drainage systems and recreation facilities, are in place and available to serve the new development, in accordance with the level of service standards for public facilities (human support systems) established in the Plan.

### **Section 3.3.2. Water Supply Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177(3), Florida Statutes and Chapter 9J-5.011(2) of the Florida Administrative Code*

#### **Background Discussion**

The purpose of this element, as stated in the Florida Administrative Code, is to provide for adequate potable water delivery facilities and services to support existing land uses and future land use projections.

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(6)(c), Florida Statutes and the minimum review criteria of Chapter 9J-5.011 of the Florida Administrative Code, are provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

Adequate supply of fresh water could become a serious economic constraint upon future growth and development in the City of Sanibel.

The Island Water Association (IWA), a nonprofit community cooperative with exclusive franchise serving Sanibel and Captiva Islands, owns and operates the public water system on Sanibel. In 1995, the IWA operated 5 storage tanks which have a total capacity of 15 million gallons of water. The reverse osmosis (RO) plant, currently has the capability of

manufacturing 4.7 million gallons of water daily (MGD). The IWA distributes the treated water from its treatment facilities directly to all areas of Sanibel and Captiva. The IWA owns and operates three remote pumping stations to boost the pressure in the outlying areas of the distribution system.

The Lower Hawthorn Aquifer and the Suwannee Aquifer are the current principal source of the domestic water supply for City residents. The subaqueous line connection to the Pine Island Water Association was reestablished in 1994.

Routine maintenance keeps the reverse osmosis plant and routine maintenance in good operating condition. The life expectancy of the water delivery system, including plant, pumping stations, storage tanks and distribution lines, is anticipated to extend well beyond the next 20 years, the planning period of this Plan.

The potable water treatment and delivery system that serves the City of Sanibel also serves Captiva, which is outside the City's jurisdiction. The City of Sanibel's proportionate share of demand on the water system is approximately 80%. Existing and projected demand for potable water is derived in a manner that is consistent with the population estimates and projections of this Plan. Demand is presented on the basis of dwelling units and equivalency units for land uses other than residential uses.

Average and maximum demand, both existing and projected, are provided in the following table.

The Island Water Association operates in accordance with a consumptive use permit from the South Florida Water Management District. The consumptive use permit allows a maximum daily allocation of 6.16 million gallons per day, which is adequate for both existing and projected demand for potable water.

The production of potable water for distribution is limited by the capacity of the treatment plants. The Island Water Association has no plans to expand the capacity of the reverse osmosis plant; however, the plant can be expanded if unforeseen contingencies arise. The existing treatment plant's capacity is adequate to maintain the current level of service standard and to meet existing demand and projected demand through the planning period.

The actual level of service of the potable water delivery system is approximately 400 gallons per day per unit (dwelling units and equivalency units). This level of service includes surplus system capacity and is, therefore, higher than the level of service requirement established in this element of the Sanibel Plan.

Storage capacity to augment flow and pressure for peak demand and fire flow needs, is adequate for current and future needs.

Growth in Lee County, especially in the western portion of the County, will involve increased extraction of water from the Lower Hawthorn Aquifer. Quality and quantity of water are major concerns.

The reverse osmosis treatment plant has sea water desalting capability should that need ever arise. Plant modifications would be required for this desalination process. Because of the possible limitations on adequate future water supply, several alternatives for supply and conservation were considered. These included desalination of sea water and such conservation measures as dual plumbing systems involving "gray water systems" for toilets and irrigation. At this time these are either economically unacceptable, hazardous to public health, or inapplicable or impractical on Sanibel and are, therefore, not now acceptable as policy for planning. It is important to note that should it become necessary to use the Gulf or Bay for source water, the recovery rate would be very low and the cost of producing potable water would increase significantly.

One important conservation element needing urgent attention is the plugging of existing unused wells tapping the Lower Hawthorn and Suwanee formation. These wells are contributing to the deterioration of the City's water supply resource which, along with other factors, might ultimately render it useless. The IWA plugs its wells promptly on abandonment.

### **Plan for Water Supply**

1. The City should maintain a close relationship with the Island Water Association, whose members largely are property owners and residents of the City, assuring accord in dealing with community problems, while remaining alert to any advantages of municipal ownership or franchise, should the City so determine.
2. The capital improvement program prepared by IWA should be coordinated with the City's capital improvement program.
3. The IWA shall provide and upgrade service at locations where growth is projected to occur.
4. The treatment process for and the delivery of potable water for the City of Sanibel should be supported by backup power sources for use during periods for prolonged electrical outages.
5. The City should require, as a part of the development permitting process, that all private wells be identified, so they can be considered for incorporation into the well plugging program. The City should continue to implement a program which would lead to plugging of all existing unused wells and phasing out of existing private wells which draw water from the Lower Hawthorn aquifer.

6. The City should continue to monitor and investigate the general hydrology of the Island.
7. The City should encourage IWA to implement and continue policies that discourage over consumption of potable water.
8. The City should assist in the implementation of the improvements necessary to upgrade the fire protection system of the City of Sanibel.
9. Maintain minimum pressure in the distribution system when hurricane evacuation order is given.

## **Goals, Objectives and Policies**

### ***GOAL STATEMENT:***

**Provide adequate potable water supply facilities for residents and land uses in the City of Sanibel in a manner which serves existing development, promotes orderly growth, protects investment in existing facilities, and conserves water resources.**

#### ***Objective 1:***

Ensure the continued maintenance of an adequate level of service for potable water supply facilities.

**Policy 1.1.** Preserve and maintain existing potable water supply facilities through implementation of proper maintenance and upkeep procedures.

**Policy 1.2.** Provide adequate potable water supply facilities. At a minimum, potable water supply facilities will be provided in accordance with the following level of service standard.

**Policy 1.3.** Improvements for replacement, expansion or increase in capacity of potable water supply facilities will be consistent with maintaining the level of service standard for potable water supply facilities.

#### ***Objective 2:***

To ensure the maximum feasible use of existing potable water supply facilities, the expansion of these facilities, including the distribution system, will be consistent with the Future Land Use Element of this Plan.

**Policy 2.1.** Developments that require the use of potable water must connect to the Island Water Association potable water delivery system.

**Policy 2.2.** Development orders for new developments, or the expansion of existing developments which require additional potable water, will not be issued until the developer furnishes proof from the Island Water Association of the availability of potable water to serve the development and makes provision for the infrastructure to deliver the water.

***Objective 3:***

Ensure the conservation of potable water resources through the preservation and protection of the water supply.

**Policy 3.1.** Through regulations in the Land Development Code, continue to preserve native vegetation within developments and require the use of native vegetation for landscaping and revegetation efforts.

**Policy 3.2.** Private wells, identified on sites proposed for development will be incorporated in the City's/IWA's well plugging program.

**Policy 3.3.** Implement the water shortage plan when appropriate, for the purpose of allocating and conserving water resources during periods of water shortage.

**Policy 3.4.** The City and the Island Water Association should pursue some means of allowing local regulation of shallow wells.

**Section 3.3.3. Transportation Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177(3), Florida Statutes and Chapter 9J-5.019(4) of the Florida Administrative Code*

**Background Discussion**

The purpose of the Transportation Element, as identified by state statute, is to establish the desired and projected transportation system in the jurisdiction and particularly to plan for future motorized and non-motorized traffic circulation systems.

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(6)(b), Florida Statutes and the minimum review criteria of Chapter 9J-5.019 of the Florida Administrative Code, are provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996, in the 1995 Transportation Study by HNTB, Inc., and in the 1988 Transportation Study by David Plummer and Associates.

This Transportation Element is founded on the City's belief that ever-increasing volumes of automobile traffic are not something like rainfall that has to be accepted. The Transportation Element is also coordinated with the long range transportation plan of the Lee County Metropolitan Planning Organization.

Sanibel is a barrier island with attractive features for both residents and visitors. As is often the case with areas of exceptional natural beauty, there is a tendency to exploit or over use the land to the ultimate detriment to that beauty and natural values. Therefore, a primary goal of the City has been to develop and implement a comprehensive plan for controlling and directing growth in the city so that the natural beauty and unique atmosphere is preserved while satisfying the needs of city residents, businesses and visitors.

Land use controls and the development and maintenance of transportation facilities are interrelated to the extent that new developments usually require increased transportation capacity and additional transportation capacity tends to encourage more development. A specific objective of prior land use plans, and continued in this plan, is the development of a transportation plan that supports and is consistent with the existing and desired development of the city. This is a particular challenge in Sanibel since the desired character of the city does not lend itself to many standard traffic engineering and transportation solutions.

Transportation problems in Sanibel are further aggravated by the transportation demands of approximately 3,000,000 visitors per year, most of whom arrive during the winter tourist season. An additional dimension to the transportation problem is that the existing road system grew in a manner without consideration of the ultimate circulation requirements of the community. The impact of this road network is that there are few alternative routes to any site on the island. Roads are used both for access to property and to carry through traffic.

Modes of transportation used within the City include private automobiles, recreational vehicles, rental cars, trucks, bicycles, mopeds, motor scooters, taxis, walking, boats, trolleys and tour buses. The automobile is the primary mode of transportation to Sanibel and for movement within the City.

The existing street and road network within the city is depicted on the Existing Traffic Circulation Map. All streets and roads are 2 lanes. There are no limited and controlled access facilities, public transit terminals and transfer stations, port facilities, airports, rail lines and the like in the City of Sanibel.

### *Roadways*

The City of Sanibel is traversed by one major arterial roadway, Periwinkle Way, which connects to Sanibel-Captiva Road in the center of the city. This arterial runs east and west from the eastern tip of Sanibel to Captiva and generally follows the mid-island ridge. Periwinkle Way and Sanibel-Captiva Road are two-lane roads serving most of the major commercial uses in the city and characterized by numerous private and commercial driveways.

There are 7 major intersections along Periwinkle Way which provide access to major residential, commercial and recreational areas. These intersections are at Causeway

Boulevard, Bailey Road, Donax Street, Dixie Beach Boulevard, Casa Ybel Road, Palm Ridge Road and Tarpon Bay Road.

A bike path parallels Periwinkle Way on the south side from approximately the Sanibel Lighthouse to Tarpon Bay Road.

The westerly continuation of Periwinkle Way is Sanibel-Captiva Road which is a two-lane arterial road. This continuous route provides the only access road to Captiva Island to the west across Blind Pass Bridge.

Gulf Drive is a collector roadway which consists of East, Middle and West Gulf Drives and generally follows the gulf beach ridge along the southern edge of the City of Sanibel. Gulf Drive is connected to Periwinkle Way and the Sanibel-Captiva Road by several north-south collectors such as Lindgren, Donax, Casa Ybel, Tarpon Bay and Rabbit Roads.

The only motor vehicle access to the city from the mainland is the Sanibel Causeway (not within the city's jurisdiction) which is an extension of McGregor Blvd./Summerlin Road. The causeway is a four-lane undivided arterial with wide paved shoulders along most of the roadway. The 3 bridge structures along the causeway are two-lane facilities.

#### *Alternative Transportation Modes*

Bicycles are used extensively within the city primarily for recreation and, to a lesser extent, as a form of transportation to school, work, shopping and recreational sites. The City has an extensive system of bicycle paths.

Pedestrian traffic is generally accommodated by use of the bike paths and/or unimproved roadway shoulders and streets. Private taxi service is available to, from and within the City of Sanibel.

Mopeds and motorized scooters are used on City streets and roads. Due to the fact that the vast majority of these scooters are rental units with drivers generally unfamiliar with their operation and with lower average speed than the autos, they add to traffic delays and can represent a safety hazard.

A privately owned and operated trolley system has operated at various times during the past several years, catering primarily to tourists and visitors. The future of a trolley system as a mode of public transit is the subject of continuing studies and public discussion.

#### *Hurricane Evacuation*

Planning for an evacuation for hurricanes remains a major concern for the city. Designated hurricane evacuation routes include Periwinkle Way, Sanibel-Captiva Road,

combinations of Tarpon Bay Road, Casa Ybel Road, Middle Gulf Drive and Lindgren and Causeway Boulevards, and the Sanibel Causeway.

Trimming of Australian pines along Periwinkle Way is a current city policy to facilitate hurricane evacuation along this route. Because of concern with Australian pines overturning and limb breakage in high winds, the City has implemented a "Casuarina Management Program" in order to minimize this hazard while maintaining as much beauty as possible. The City has underway a planting program to gradually replace the trees as they become over-mature and have to be removed.

### *Traffic Volumes*

The 1995 peak season, average weekday traffic volumes on Periwinkle Way exceed 20,000 vehicles per day, likely contributing to the observed increase in traffic diverted to alternative routes.

Since 1990, over 3,000,000 vehicles have crossed the Sanibel Causeway annually. The yearly total of vehicles increased in each of the 15 years from 1975 through 1990 at an annual average rate of 9.4%. The yearly total of vehicles decreased in 1991 from the 1990 total, but has increased each year since 1991. The growth in total causeway traffic has slowed from historic growth rates since 1990.

### *Existing Level of Service*

Roadway capacity is generally defined as the maximum number of vehicles that can reasonably travel through a roadway segment, based upon local conditions for various road categories. The principal parameters affecting capacity are: roadway functional classification, area type and number of lanes.

Level of service is a measure of the operational conditions on a roadway and the perception of those conditions by motorists. Since the amount of traffic using the road affects operations, level of service is usually determined by comparing traffic volumes against capacity (volume to capacity ratio - V/C). The ranges for LOS span from "A" being free flow to "F" being forced flow (bumper-to-bumper). LOS ranging from "A" to "C" is generally considered acceptable delay and "D" to "F" as unacceptable delay. For roadway segments a generalized LOS can be obtained using daily volumes, however, peak period/peak direction analysis provides a better estimate of a roadway operation.

Causeway Boulevard, Periwinkle Way from Causeway Boulevard to Tarpon Bay Road, and portions of Casa Ybel Road operate at level of service "E" and "F" under peak season, peak hour existing conditions. The other arterial and collector roadways within Sanibel operate at level of service "D" or better under peak season, peak hour existing conditions.

Police Department personnel typically control the intersection of Periwinkle Way with Causeway Boulevard during the midday and afternoon peak hour time periods. Police



also control the intersections of Periwinkle Way with Casa Ybel Road and Gulf Drive with Tarpon Bay Road during the afternoon peak hour time period. Therefore, the levels of service at these intersections during the time periods when they are police controlled experience a higher, or better, level of service.

There is a diversion of traffic flow that presently exists along Gulf Drive/Casa Ybel Road to avoid the congestion of Periwinkle Way. The magnitude of this cannot be fully determined without an origin/destination survey along Gulf Drive/Casa Ybel Road. Significant increases along the diversion route indicate that traffic is seeking alternative routes to the congestion of Periwinkle Way. As traffic on the island continues to grow, the traffic on the diversion routes can be expected to increase during the peak season.

### *Origin/Destination*

In February 1988, an origin/destination roadside survey was conducted on the Sanibel Causeway. The purpose of that study was to determine the primary destination of motorists crossing the Sanibel Causeway (i.e., either Sanibel or Captiva) and of those motorists destined for Sanibel to identify whether they are residents, overnight visitors or day visitors.

On both a winter weekday and weekend, the immediate destination for most motorists was Sanibel, approximately 87 to 89% with the higher percentage found during the weekday. However, considering those motorists who travel on to Captiva Island after first stopping in Sanibel, approximately 25 to 27% would be destined for Captiva Island.

Of the Sanibel destined trips, almost 45% on a weekday and 30% on a weekend had no specific destination in mind when crossing the causeway. Rather, those motorists were entering with a general sightseeing/recreation trip purpose. Of the Sanibel destined trips, approximately 37% had a recreation trip purpose.

The vast majority of the Sanibel destined trips were day visitors, followed by Sanibel residents and visitors (i.e., 1 night or more) during the weekday and followed by visitors and residents during the weekend. The percentage of day visitors was higher on a winter weekday than a winter weekend.

Of the Sanibel resident component, 63% on a weekday and 60% on a weekend were permanent residents. Thus, of the traffic entering Sanibel, with Sanibel as the immediate destination, 89 to 90% are day visitors, overnight visitors and short term residents. Only 11 to 10% of the Sanibel traffic is made up of permanent long-term residents (in residency more than 9 months of the year).

### *Volume Projections*

Historic growth trends from the toll facility on the Sanibel Causeway and land use projections for the City of Sanibel and Captiva Island are utilized in projecting future traffic conditions. One of the principle criteria for the transportation element of the plan

is consistency with the land use element. The City of Sanibel does not use traffic projections for purposes of deciding how much vehicle capacity is needed for the future. The City's decisions with respect to transportation planning are not dictated by traffic projections.

With this in mind, the City of Sanibel has recognized that both the city's residential and commercial components are already developed at almost 85% and the City is approaching "buildout". The city estimates that under the current trend of decreasing growth rates, the city will be completely developed by the year 2010 or prior to the horizon year of the Sanibel Plan. Drastic changes in residential and nonresidential development trends are not expected, under a continuation of current policies, to alter this decreasing growth rate.

As the city approaches "buildout" conditions, it can be expected that historic growth rates as represented by the causeway's historic volumes will decline further based on capacity limits of local roads. Future traffic growth in Sanibel is, therefore, expected to be between the historic growth rates and the residential rate of growth. A composite traffic growth rate consistent with these factors was developed and applied to the available data.

Very little of the traffic volume through the Sanibel causeway toll facility is associated with Sanibel residents. The 1988 origin-destination study showed that only 17% of the toll facility traffic volume was from Sanibel residents. This figure is significant because it demonstrates that the number of building permits issued, within current density limitations, for new residences in the City of Sanibel will have minimal impact on toll facility traffic volume. However, off island visitors and service providers to new residents do add to toll facility traffic volumes.

For purposes of projecting future toll facility volumes, primary weight was given to historic toll facility growth rates during the winter season, particularly during recent years.

Traffic growth at the toll facility is primarily sensitive to external factors such as visitors which represent a significant component of the travel to, from and within Sanibel.

#### *Level of Service/Future Conditions*

Roadways already operating at LOS "F", i.e., Periwinkle Way and Causeway Boulevard, are projected to continue to operate in that fashion. Several additional roadway segments are projected to experience LOS "E" and LOS "F" operations in the future as a result of the overall area growth and growth in visitor traffic. These roadways are portions of Sanibel-Captiva Road, Tarpon Bay Road, Lindgren Boulevard, Casa Ybel Road and Gulf Drive.

## **Plan for Transportation**

The traffic study conducted in March, 1995 shows that vehicular traffic volumes in the City of Sanibel have grown from their 1988 peaks to further degrade traffic flow at many critical locations with extended periods of metered flow conditions during the peak season. Options to improve this condition fall into two basic categories, capacity enhancement and demand reduction. These issues are not new to Sanibel and many options were offered in the 1989 Sanibel Plan and previous studies. Yet, over the years, the only capacity enhancements have been the Gulf Drive connector, extended hours of police control at critical intersections and some minor intersection improvements. With the continued, albeit slowing rate of growth in vehicular travel demand to Sanibel, the City needs to consider capacity enhancement and demand reduction options, singly or in combination, in an effort to maintain Sanibel's desired quality of life and community character.

Serious peak season traffic congestion problems and capacity constraints are apparent today under existing conditions. Those capacity constraints and congestion problems are concentrated in several locations and for several hours during the day.

Traffic congestion and capacity constraints are projected to intensify in the next 5 and 20 years under the existing transportation network and in the absence of significant change. The increased traffic congestion and capacity constraints will tend to extend the hours of peak congestion and necessitate the city's police department to direct traffic at more intersections and for a longer period than under present conditions.

From years of dealing with and analyzing peak season traffic congestion, it has become clear that the provisions of additional road capacity through road widening or a bypass route is not in the best interests of the city.

Increased roadway capacity comes at the expense of the permanent residential community. There is ample, existing roadway capacity to permit LOS "C" or better on all of Sanibel's roads if only residential and overnight visitor related traffic used the roads. Also, during the "off-peak" season, even when all visitor traffic is added there is roadway capacity to operate at LOS "D" or better.

Increased roadway capacity would make Sanibel a less attractive place to both live and visit because there would be decreased opportunities for person-to-person contact and less area for vegetation and wildlife habitat -- all of which would make Sanibel a less attractive place for visitors and businesses as well.

Planning for Sanibel's future cannot afford to only react to the past.

Increases in roadway capacity usually come at the expense of walking and cycling space. Sanibel does not intend to hand over more and more of its living space to cars.

Because it is the City's policy to encourage use of alternatives to the private motor vehicle, including public or mass transportation, the City will take no actions to increase roadway capacities by adding lanes to the existing two-lane street and road system because increases in roadway capacities encourage more people to use their cars, making public transportation even less viable.

In addition to not accommodating the demand for roadway capacity, the City will implement the concept of "traffic calming". "Traffic calming is a form of traffic planning that seeks to equalize the use of streets between automobiles, pedestrians, bicyclists, and playing children. This is accomplished through the use of devices and techniques that reduce traffic volume and speed in neighborhoods while maintaining maximum mobility and access. Traffic calming also attempts to make drivers aware of the fact that they are sharing the space of a street with other users."

The City will take steps in its streets and road designs and traffic management techniques to make it apparent that streets and roads are not just for cars, but are to contribute to a pleasant residential life as well.

The City will attempt through design or redesign to create a sense of place on streets and roads, consistent with the Vision Statement's expression of the Sanibel community's sense of place. "Recognizing the street as a place rather than as a channel designed for the benefit of the car and driver will change the psychological feel of the street for all uses."

The City will take measures to discourage the use of predominately residential streets for through traffic. Special attention will be given to implementing measures to reduce vehicular speeds on Sanibel's streets and roads. Slower speeds will reduce the frequency and severity of accidents, and provide increased opportunities for pedestrians and bicyclists to share the rights-of-way and driving surface with motor vehicles.

Ultimately the City will look for opportunities to reduce the amount of land area devoted to streets, roads and parking areas for private motor vehicles.

Therefore, consistent with the other elements of the Sanibel Plan and reflective of the Future Land Use Map, and in spite of projected increases in traffic volumes (associated primarily with increases in traffic crossing the Sanibel Causeway), there are no changes proposed for the Future Traffic Circulation Map. Only existing road facilities are depicted on the Future Traffic Circulation Map.

There are no port facilities, airports or rail lines anticipated in the City of Sanibel. The long-term alternative to be selected, therefore, would be the pursuit of measures to reduce auto ridership. Towards that end, the Sanibel Plan and this Transportation Element are directed. The policies identified in the transportation element are directed towards reducing auto ridership (volume) rather than significantly increasing the roadway capacity component of the volume to capacity ratio. There are three general categories of policies, which work together.

1. Creation of and identification of roadways which will not be widened due to environmental, scenic, historic and aesthetic characteristics and for which lower levels of service will be accepted.
2. Implementation of capacity enhancement/operational improvements at selective intersections.
3. Identification and implementation of measures to reduce auto ridership.

#### *Scenic, Historic, Environmentally Sensitive Roadways*

The designation of "scenic, historic, environmentally sensitive roadway segments" on which reduced levels of service are accepted recognizes that Sanibel has a constrained transportation network resulting from the community's desire to maintain and preserve the scenic and natural beauty of the city and protect environmentally sensitive areas by not widening roadways.

This lower level of service standard does not by itself solve existing and/or future traffic problems. However, it can be used in combination with other alternatives. Given the other policies of this plan and the transportation element, it is the desire of the community that the acceptance of lower levels of service on roadways will be temporary in nature. However, it is the intent of the city to accept lower levels of service on those roadways as a tradeoff for protecting the scenic, historic and environmental character of the city.

#### *Capacity Enhancement/Operational Improvements*

Recent capacity enhancement/operational improvements have been intersection improvements implemented at selective locations to facilitate operations and improve safety within the constraints of the existing transportation system and policies. The improvements optimize the use of existing facilities while minimizing right-of-way acquisition and environmental, drainage and land use impacts.

Operational improvements can generally include: left and right turn lanes, improved roadway/intersection markings, intersection geometric configuration changes, improved directional signage and improved vehicular, pedestrian, bicycle interface and reduced conflicts. The identification, programming and construction of these type improvements reflect a continuation of city policies.

Based on existing plans and policies, it was determined that a continuous center turn lane along Periwinkle Way would not in the best interests of the city from a safety, environmental, scenic and aesthetic standpoint.

A major reconstruction of the Periwinkle Way/Bailey Road/Causeway Boulevard intersection has been the subject of community concern and discussion for several years. That reconstruction requires special aesthetic, environmental and engineering study.

### *Auto Ridership Reduction*

It is clear that the existing transportation system's capacity to substantially improve service can only be accomplished by reducing the use of motor vehicles to and within the city. To preserve the City's scenic, historic, environmental and small town qualities, it has become a well established City policy not to expand capacity, either by road widening or by building a by-pass. The long-term alternative, therefore, is efforts to reduce auto ridership. The city has clearly indicated that the desired long-term approach to manage traffic is to reduce volume rather than increase capacity.

Measures to reduce auto ridership (i.e., reduce demand for road capacity) include but are not necessarily limited to the following. Some of the options can be individually implemented while others need to be implemented simultaneously.

1. Provide effective mass transit systems.
2. Expand bikepath system throughout city; increase safety of existing system.
3. Expand pedestrian network.
4. Reduce tourist rental car needs.
5. Implement transit system to/from Sanibel.
6. Provide off-island day visitor intercept parking facilities in combination with transit solutions.
7. Restrict auto access and auto travel within city: both daily/weekly restrictions and hourly restrictions.
8. Reserve rights-of-way and implement personal non-auto vehicular system.
9. Stagger on-island employment work hours.
10. Restrict beach access parking.
11. Advanced information signage.
12. Radio broadcast of traffic conditions.

## *Mass Transportation*

Sanibel does not lend itself very well to typical mass transit operations. Although it is the City's expressed policy to encourage alternatives to use of the private auto, mass transit poses special challenges.

Mass transit works most effectively when there are large numbers of people traveling on a regular schedule along fixed routes. The vast majority of existing auto traffic on Sanibel's roads is made up of visitors. The 1988 origin - destination study showed that approximately one-third of the vehicles coming through the toll facility were "just looking around", with no specific destination.

Another factor compounding the challenge of operating an effective mass transit system is the fact that nearly all persons arrive in Sanibel with a private auto at their disposal.

Because of the resort nature of Sanibel, the City can expect to be besieged with requests to operate trolley or tram tourist attractions masquerading as mass transit. These offers need to be carefully evaluated on a case-by-case basis. Generally, these attractions are more likely to add vehicle trips to Sanibel's roads, than to reduce private auto use.

Opportunities for mass transit to reduce traffic volumes by reducing use of private motor vehicles in a measurable way are not readily available or apparent without further restrictions on private auto access and use.

The City will continue to seek ways in which public and mass transit can be made available to both reduce traffic congestion and to provide an alternative to use of the private motor vehicle.

The City will work with Lee Tran to provide scheduled service to and from Sanibel to connect to Lee Tran's mainland routes. Also, the City will encourage Lee Tran to provide regularly scheduled route service on Sanibel and Captiva Islands.

## **Summary**

There are numerous economic, legal and practical issues associated with each of the alternatives to reduce auto ridership. No attempt has been made in this plan to identify, quantify and resolve every issue. Implementation of many of the alternatives is not within the control of the city, requires philosophical changes and has possible impacts on neighboring areas adjacent to the City of Sanibel.

This transportation element does reconfirm that the objective of the city is to address its traffic problems through traffic calming techniques and measures to: first, implement intersection capacity enhancement improvements so as to more effectively manage the projected traffic volume increases within the city, and second, to reduce auto ridership rather than to pursue measures to expand roadway capacity. The transportation element identifies the priorities and direction to be taken to thoroughly explore the issues

associated with efforts to reduce auto ridership. A direction is established so that alternatives selected for implementation will be thoroughly evaluated to ensure the highest degree of success.

## **Goals, Objectives and Policies**

### ***GOAL STATEMENT:***

**Provide a safe, convenient and efficient motorized and non-motorized transportation system for all residents and visitors to the City of Sanibel while preserving the natural beauty and unique atmosphere of the island.**

#### ***Objective 1:***

The location and design of Sanibel streets and roads, as well as the traffic control techniques used, should take into consideration the non-urban, tropical, barrier island environment of the community to ensure, within the limits of safety, that this character is maintained.

**Policy 1.1.** Conventional traffic control techniques such as traffic signals are not desired on the island and the City of Sanibel has determined that they should not be implemented even if signal warrants as defined in the Manual on Uniform Traffic Control Devices are met. Manual traffic control is the desired technique.

**Policy 1.2.** The City will implement street and roadway design techniques that are intended to produce traffic calming, appropriate for the City's classification of the street or roadway segment.

**Policy 1.3.** To facilitate the manual control of intersections and to provide a measure of protection for the City's police officers, ensure that each intersection has clear and legible intersection marking with safety lighting for the officer, as necessary.

**Policy 1.4.** The City will continue to implement current standards, as identified in the Land Development Code, for safe and efficient ingress and egress to adjoining properties, as well as encouraging safe and convenient on-site traffic circulation.

#### ***Objective 2:***

A balanced transportation system is desired which is compatible with other elements of the Sanibel Plan. It should provide, to the extent possible, transportation alternatives to the automobile, compatible with the City's character, that create the higher level of service through reduced traffic demand rather than increased roadway capacity.

**Policy 2.1.** Due to scenic, historic, environmental and aesthetic characteristics and consideration, the City of Sanibel has determined that roadways and roadway



segments will not be widened. Therefore, reduced peak hour and daily (peak season and off-season) Levels of Service will be accepted on those constrained roadways and roadway segments as a tradeoff for the preservation of the scenic, historic, environmental and aesthetic character of the City.

**Policy 2.2.** The capacity, safety and operations of the intersections of arterial roadways with arterials, arterials with collectors, and collector roadways with collector roadways should be improved through a continuing program of intersection capacity enhancement/operational improvements. The City will in the Capital Improvement Program process prioritize the improvements identified in the Transportation Element, conduct detailed engineering surveys of the priority locations, prepare drawings and program the improvements for construction, if warranted, in the Capital Improvement Program.

**Policy 2.3.** The City should study alternatives to improve the efficiency, safety and appearance of the Periwinkle Way, Causeway and Lindgren Boulevards intersection. The selected improvement, if warranted, should be programmed for construction in future Capital Improvements Programs.

**Policy 2.4.** All new developments will be reviewed for consistency with the policies of this Sanibel Plan and to ensure that such development provides adequate access to the local, collector and arterial roadway network. New developments will be assessed a share of the costs to provide roadway improvements to serve the development and, in particular, the improvements identified in the Transportation Element.

**Policy 2.5.** Encourage private enterprise to continue to provide and expand, during the peak season, daily service to the Southwest Florida International Airport. Work with area hotels, commercial establishments and resorts to undertake an advertising campaign to encourage tourists to the City to utilize other modes of travel once in the City.

**Policy 2.6.** Work with Lee County to phase in, over time, appropriate adjustments to the current causeway toll structure.

**Policy 2.7.** Continue to expand the City's bikepath system whenever it can be accomplished in a fiscally sound manner and whenever it can be accomplished in a manner compatible with surrounding land uses.

**Policy 2.8.** Improved protection for the bicyclists should be provided throughout the City, and in particular, along Periwinkle Way.

- ✓ At intersections of the bikepath with arterials and collectors provide bikepath markings.

✓ For those segments of the bikepath that cannot be physically separated from the auto traveling lane, consider painting those bikepaths to clearly delineate the auto versus bike areas and/or improve bikepath markings to clearly delineate the separation.

✓ Where possible, provide a physically separated bike path along or parallel to Periwinkle Way from the Causeway Boulevard to Tarpon Bay Road.

**Policy 2.9.** Develop pedestrian pathways to serve activity areas and internal traffic in residential and commercial areas, interconnect residential and commercial areas where appropriate, so as not to encourage through pedestrian and bicycle traffic and serve the recreational facilities on Sanibel. When financially and physically feasible, these pathways should be similar but separated from those proposed for bikes.

**Policy 2.10.** Support and encourage Lee County in its continuing effort to locate and develop expanded public beach opportunities within Lee County to relieve some of the strain on Sanibel beaches.

**Policy 2.11.** Limit the number, size and location of private attractions that, by their nature, contribute to an over-use of limited capacity roadways. Within the context of this policy, an attraction is a land use that generates a significant number of its daily and overall automobile trips from off-island locations.

**Policy 2.12.** Discourage further special events that are anticipated to increase traffic volumes on Sanibel during the peak season. Restrict the issuance of special event permits to only those events that are clearly in the best interest of the entire City.

**Policy 2.13.** Enforce the prohibition on the use of sidewalks and bikepaths by mopeds and motorized scooters. Enforce the use of the extreme right-hand side of the roadway by those vehicles.

**Policy 2.14.** As the Summerlin Road corridor continues to develop, cooperate with and encourage Lee Tran to provide "park and ride" service and expanded public transit service to this area of the County and in the vicinity of the Sanibel Causeway. Coordinate that "park and ride" service with the other policies of this Plan to reduce auto ridership implemented by the City including an off-island trolley/transit system to and from those facilities and Sanibel.

**Policy 2.15.** Evaluate the feasibility of providing park and ride facilities close to Sanibel. If determined to be feasible, encourage Lee County to provide such facilities.

**Policy 2.16.** Maintain services, such as those provided by the vital volunteer organization, Friends In Service Here, to provide assistance to the transportation disadvantaged. Work with public agencies and private providers to ensure that this need is adequately addressed.

**Policy 2.17.** Continue to explore the economic, legal and practical feasibility of measures to reduce auto ridership, including, but not limited to:

- ✓ Expanded off-island intercept parking
- ✓ Expanded off-island and on-island trolley system
- ✓ Restricted auto access and auto travel within Sanibel
- ✓ Restricted Sanibel access to a maximum vehicular hourly "cap"

Review the status of the previously identified objectives and policies and the progress to date on the above measures. After thorough issue resolution and public input, implement appropriate solutions.

***Objective 3:***

The parking strategies of the Sanibel Plan are to ensure the provision of adequate on-site and off-site parking for existing and future land uses, in a manner that promotes transportation goals and objectives of the Sanibel Plan.

**Policy 3.1.** Provide adequate on-site or off-site parking for the support of existing and future land uses.

**Policy 3.2.** Provide adequate on-site or off-site parking for special events.

**Policy 3.3.** Provide parking spaces for people with disabilities and provide, in accordance with building code requirements, at a minimum, barrier-free access for the disabled and elderly.

**Policy 3.4.** The amount of parking, public and private, will not overwhelm the resources of individual sites and land uses and will not overwhelm the human-made and natural resources of the City.

**Policy 3.5.** Parking areas, public and private, will be designed and constructed in a manner that is compatible with the character of the community.

**Objective 4:**

Ensure continued protection of existing and future rights-of-way from building encroachment by continuing to implement the setback requirements of the Land Development Code.

**Policy 4.1.** Through the Land Development Code, reserve 100' of right-of-way along Periwinkle Way and Sanibel-Captiva Road for such future use, exclusive of major roadway widening, that the City may determine to be in the public interest and compatible with the historic, scenic, environmental and aesthetic characteristics and restrictions of the City.

**Objective 5:**

The City will coordinate the Transportation Element with the plans and programs of the State, Region, County and other local jurisdictions.

**Policy 5.1.** The Transportation Element will incorporate, to the greatest degree possible, the long range plans of the Lee County Metropolitan Planning Organization.

**Policy 5.2.** The Transportation Element will consider any and all applicable roadway plans of the Florida Department of Transportation and Lee County.

**Policy 5.3.** The Transportation Element will consider the Florida Department of Transportation adopted Five Year Work Program, the Florida Transportation Plan, the State Land Development Plan and the *Southwest Florida Regional Planning Council's Regional Policy Plan*.

**Policy 5.4.** To satisfy Sanibel's long term need for an evacuation and recovery route to the mainland that is above the level of the anticipated storm surge of a category 3 hurricane and of sufficient width to permit motor vehicle traffic to bypass disabled vehicles, secure needed improvements to Lee County's bridge and causeway facility which runs between the mainland and Sanibel.

**Section 3.3.4. Wastewater Treatment Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177(3), Florida Statutes and Chapter 9J-5.011(2) of the Florida Administrative Code*

**Background Discussion**

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(6)(c), Florida Statutes and the minimum review criteria of Chapter 9J-5.011 of the Florida Administrative Code, are also provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

The collection, treatment, and disposal of generated sewage in Sanibel are currently handled by the City and by individual owners and operators of package treatment plants or individual septic tank systems. The City government supplements the efforts of other public agencies to protect the health, safety and welfare of its citizens from the impacts of wastewater disposal.

#### *Municipal Sewer Service:*

##### *the Sanibel Sewer System*

The City of Sanibel is served by two major wastewater treatment plants which are owned by the city: the Donax Wastewater Reclamation Facility (WRF) and the Wulfert Advanced Wastewater Reclamation Facility (AWRF). The Donax WRF has a capacity of 1,600,000 gallons per day. The Donax WRF serves approximately 5700 equivalent residential connects (ERC) with the permitted capacity to serve approximately 1850 more. The Wulfert AWRF currently has a capacity of 125,000 gallons per day. The site and design for this facility is suitable for expansion to 500,000 gallons per day. Golf courses are used for effluent disposal by these facilities. The Donax WRF generally serves the eastern 2/3 of the island which has the preponderance of commercial and multifamily development. The Wulfert AWRF serves the remaining low density westerly third of the island.

The Sanibel Sewer System service area and plan for expansion is depicted on the Map entitled Wastewater Master Plan.

##### *Package Treatment Plants*

In addition to municipal facilities, there are currently 4 package wastewater treatment plants in the City. All of these package plants were constructed prior to incorporation of the City. A brief description of each of these package plants is listed below:

The location of these package treatments plants and the approximate area which they serve is shown on the map entitled existing service area for package treatment plants. These service areas are incorporated in the planned expansions of service areas for the Sanibel Sewer System.

##### *Septic Tank Systems*

Septic tank systems provide on-site wastewater treatment for both residential and small-scale commercial development. Residences outside (as well as some inside) of the various service areas for the Sanibel Sewer System and for package treatment plants are served by septic tanks. Septic tanks of this nature typically range in capacity from 500 to 1,000 gallons.

Soils on the island are generally unsuitable for installation of septic tank systems due to the high groundwater table and poor treatment capability of the soil. These limitations

can partially be overcome through the special design of a mounded septic tank system whereby suitable soil type and depth provides treatment prior to contacting the groundwater table. Concentration of many of these systems within a small area can often cause a pooling of untreated sewage on the ground between homes, creating a potential health hazard. Older systems installed prior to adoption of the land development code generally have the drainfield located within the groundwater table. Newer systems are required to maintain a minimum separation from groundwater and the bottom of the drainfield and generally require mounding. Several areas have been identified in which groundwater tables are high relative to the existing ground and in which septic tank installations should be discouraged in the future.

With the planned expansion of the service areas for the Sanibel Sewer System, in accordance with the *Master Plan for Wastewater Treatment*, virtually all existing and new septic systems are essentially temporary wastewater disposal units awaiting abandonment when Sanibel Sewer Service becomes available.

### *Level of Service*

The level of service standard for the various wastewater service areas is based on an equivalent residential connection (ERC) flow rate of 240 gpd of average sewage generation. This ERC flow rate is based on historical peak flow data for the Sanibel Sewer System and incorporates residential, commercial, and infiltration/inflow factors, as well as seasonal fluctuations in the functional population. The average per capita daily flow (2.2 persons per ERC) is 109 gallons per person.

### *Master Plan for Wastewater Treatment*

In 1994, the City adopted an Island-wide *Master Plan for Wastewater Treatment*.

### **Plan For Wastewater Treatment**

1. Continue to regulate all sewage collection, treatment and disposal systems to ensure that the fragile environment of the island remains protected.
2. Implement the Island-wide *Master Plan for Wastewater Treatment*.

Continue the properly planned expansion of the Sanibel Sewer System to reduce the number of private package treatment plants and individual septic tank systems.

Discourage the construction of new package treatment plants.

Improvements to existing package treatment plants should be allowed only to correct existing problems or to provide additional capacity up to that currently permitted by the Florida Department of Environmental Protection, under the provisions of the Land Development Code.

3. The Sanibel Bayous, Sea Oats and Gulf Pines package treatment plants should be monitored by the City on a periodic basis for fecal coliform counts in the groundwater adjacent to the plants. It is recommended that these plants be given a high priority for connection to the Sanibel Sewer System.

4. If opportunities arise in the future, consideration of the reuse of treated effluent for irrigation of residential homes and green areas should be utilized in connection with the creation or enhancement of wetland areas on the island.

5. Sludge disposal through contract haulers to approved sludge disposal sites is recommended as the only alternative available.

6. A level of service standard for wastewater treatment, based on historic operating data, of 240 gallons per day per equivalent residential connection is recommended.

## **Goals, Objectives and Policies**

### ***GOAL STATEMENT A:***

**Ensure that wastewater facilities or septic systems are available for all citizens which provide a high degree of wastewater treatment ensuring the protection of the environment and the health of the community.**

### ***Objective A1:***

The City will utilize procedures which ensure that, prior to issuance of a development permit, an adequate level of service for wastewater facility capacity is available or will be available or that an approved septic system can be installed at the time of development through implementation of the City's Land Development Code section requiring wastewater disposal permits.

**Policy A1.1.** Preserve and maintain existing wastewater treatment facilities that meet design and capacity standards, through implementation of proper maintenance and upkeep procedure, until such time as these facilities are integrated into a central sewer system.

**Policy A1.2.** Provide adequate wastewater treatment facilities in compliance with State regulations and the requirement of the Land Development Code. At a minimum, wastewater treatment facilities will be provided in accordance with the following level of service standards.

**Policy A1.3.** Improvements of the wastewater facilities for replacement, expansion, or increase in capacity will be consistent with the adopted level of service.

**Policy A1.4.** The City will require proof of capacity availability, as well as operation of wastewater facilities within regulations, from any person applying to extend sewer lines to obtain wastewater service from an existing package plant.

***Objective A2:***

To ensure the maximum feasible use of existing wastewater treatment facilities, that meet design and capacity standards, the expansion of these facilities, including collection lines, and service areas, will be consistent with the *Master Plan for Wastewater Treatment* and the Future Land Use Element and require a City wastewater disposal permit pursuant to the standards of the Land Development Code prior to expansion of an existing facility or installation of a new facility.

**Policy A2.1.** Permits will be required for the expansion of the service areas for existing wastewater facilities and when issued will be consistent with the Future Land Use Element and the City's *Master Plan for Wastewater Treatment Facilities*.

**Policy A2.2.** The City will implement the Land Development Code section requiring wastewater disposal permits and will keep federal, state and county regulatory agencies informed of City regulations so that these other agencies will regulate wastewater disposal in such a manner as to ensure that the provision of wastewater services is consistent with the City's Land Development Code, Future Land Use Element, and the City's *Master Plan for Wastewater Treatment Facilities*.

***Objective A3:***

The City will ensure that septic tank systems and other individual treatment facilities on the island are designed and maintained to afford a high degree of protection to the environment and the health of the island's residents.

**Policy A3.1.** By requiring a City wastewater disposal permit, the City will ensure that proper design and construction methods are utilized when the use of septic tanks and/or other individual treatment facilities becomes necessary prior to the issuance of development permits.

**Policy A3.2.** The City will require a wastewater disposal permit for all construction and/or repair of existing septic systems so that the work is done in a manner that will ensure effective wastewater treatment.

**Policy A3.3.** Minor additions to existing dwelling units that do not increase the potential for an increase in wastewater generation will not necessitate the upgrading of existing septic systems.



**Policy A3.4.** Land Development Code regulations will be adopted to minimize the cost to existing owners who are required to make repairs to their existing septic or individual treatment systems, when the repairs needed to make the existing systems functional are minimal and service from the Sanibel Sewer System is scheduled to be available in a short period of time.

**Policy A3.5.** The City will establish an educational program to disseminate information on the proper maintenance of septic systems to ensure effective wastewater treatment.

**Policy A3.6.** Consider establishing a program to monitor septic systems located in marginal or environmentally inappropriate areas to ensure effective wastewater treatment.

***Objective A4:***

The City will monitor the effectiveness of all wastewater treatment and the impact that the wastewater disposal has on the environment and the health of its residents.

**Policy A4.1.** The City will monitor the activities of the Public Service Commission and the Department of Environmental Protection with respect to the operation of wastewater treatment plants in order to be in a position to take corrective action in anticipation of potential problems; and will bring problems to the attention of the appropriate agency.

**Policy A4.2.** Existing wastewater facility deficiencies will be corrected by implementing the Land Development Code section requiring the facility be brought into conformance with current standards at the time the facility owner applies for a City wastewater permit, or at the time the facility malfunctions as defined in the Land Development Code.

**Policy A4.3.** The City will continue to work, in conjunction with regulatory agencies, to monitor the health and environmental risks associated with wastewater pollution sources.

**Policy A4.4.** The City will establish an on-going monitoring program to determine the effects of treated sewage disposal on the groundwater table.

***GOAL STATEMENT B:***

**On an island-wide basis, provide for the coordination and integration of wastewater treatment through a comprehensive wastewater master planning effort.**

***Objective B1:***

The City will implement the *Master Plan for Wastewater Treatment* which provides a timetable for development of and coordination of wastewater facilities.

**Policy B1.1.** The City will continue to utilize a City-wide approach to growth management, by implementation of the *Master Plan for Wastewater Treatment*..

**Policy B1.2.** The City will implement the *Master Plan for Wastewater Treatment* to ensure that needed wastewater system improvements are conducted in a cost effective and timely manner.

**Policy B1.3.** For the purpose of providing the proper services to all of its citizens, in conjunction with orderly growth, the City will continue to implement regulations and programs to encourage installation of a central sewer system to serve developments in environmentally sensitive areas and areas of high density and concentrated wastewater flows in order to obtain better control over existing and future development throughout the City.

**Policy B1.4.** The City will continue to investigate additional means of effluent disposal, particularly those which reuse the nutrient laden reclaimed water for irrigation and wetlands enhancement.

**Policy B1.5.** The City will continue to promote the conservation of water in an effort to reduce the production of wastewater by the community.

***Objective B2:***

To the extent feasible, the City will phase out package plants and septic systems in environmentally inappropriate areas by establishing centralized sewer systems.

**Policy B2.1.** Implement the *Master Plan for Wastewater Treatment* to ensure that improvements, system expansions and deficiency corrections will be prioritized with respect to:

- (1) protection of public safety and health;
- (2) providing service to developed areas lacking full service;
- (3) optimum integration of existing facilities, and;
- (4) increasing the efficiency of use of existing facilities.

**Policy B2.2.** The City will require connection to the Sanibel Sewer System when this service is available.

### **Section 3.3.5. Solid Waste Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177(3), Florida Statutes and Chapter 9J-5.011(2) of the Florida Administrative Code*

#### **Background Discussion**

The purpose of this element, as stated in the Florida Administrative Code, is to provide for adequate disposal of solid waste in support of existing land uses and future land use projections.

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(6)(c), Florida Statutes and the minimum review criteria of Chapter 9J-5.00 of the Florida Administrative Code, are provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

There are no solid waste facilities located on Sanibel. Florida Statutes preclude the establishment of a landfill within Sanibel city limits, thereby imposing a dependency for sites in other parts of the county. The City of Sanibel contracts with a private solid waste hauler for the provision of trash collection service. The solid waste facilities for this disposal system are located outside the City in Lee County. Current law permits the City to seek service for solid waste facilities outside of Lee County.

The franchise for solid waste collection for Sanibel is held by Browning-Ferris Industries (BFI), Inc. The County provides a landfill area off the Island, in the vicinity of Buckingham near Lehigh Acres, approximately 40 miles from Sanibel. As this facility is approaching capacity, the County is exploring a new facility in Hendry County. Lee County has contracted the operation of its resource recovery facility with Ogden-Martin, Inc.

BFI, Inc., charges customers on a per-year basis, or a per-yard basis for commercial and condominium customers with dumpsters. Pickups are made weekly for both residential and commercial uses. A separate weekly pickup is made for vegetation debris. Residential uses receive a weekly curbside pick-up for recyclable materials and this service is also available to commercial uses.

The analysis of solid waste facility needs, including design capacity, current and projected demand, general performance and facility life expectancy, are contained in the comprehensive plan for Lee County. An analysis of the problem and opportunities for solid waste facilities replacement, expansion and new facility siting is also contained in the Lee Plan. Lee County will maintain control of administrative functions and franchises under a contractual arrangement for solid waste disposal.

For the functional population of the City of Sanibel, the average level of service for solid waste disposal has been 3.2 pounds of garbage per capita per day and 0.9 pounds of vegetation debris per capita per day. This level of service can be expected to be required

throughout the planning period. At "buildout", 9,000 dwelling units are projected to generate approximately 70,000 pounds of garbage per day during peak season occupancies.

### **Plan for Solid Waste Disposal**

As long as solid wastes can be disposed of by the present arrangements, no major problem exists, and no alternatives need be considered except for those affecting Lee County's operation and maintenance of solid waste facilities. The franchised disposal service is prepared to increase collection equipment to meet the growing population on Sanibel up to the approximately 9000 living units anticipated in the Plan. Direct costs for providing services for solid waste disposal will continue to be absorbed by the private sector through user service charges.

In providing services for the disposal of solid waste, the City of Sanibel will cooperate with Lee County for the continued provision of adequate solid waste disposal services.

1. The City should continue to entertain bids for franchise service for solid waste disposal to ensure that this service is being provided in a cost efficient manner.
2. The City should continue to employ its user pays system of solid waste disposal.
3. The City should strive to achieve State goals for recycling by enhancing and expanding its recycling services.
4. The City should monitor legislative issues related to solid waste disposal.
5. The City should monitor the cost of its interlocal agreement with Lee County to ensure that services for solid waste disposal are being provided in a cost efficient manner.

### **Goals, Objectives and Policies**

#### ***GOAL STATEMENT:***

**Provide for adequate solid waste disposal for the residents and land uses in the City of Sanibel, in cooperation with Lee County's provision of adequate solid waste disposal facilities.**

#### ***Objective 1:***

Ensure cooperation with Lee County for the provision of an adequate level of service for solid waste disposal facilities.

**Policy 1.1.** Cooperate with Lee County in its provision of adequate solid waste disposal facilities, its program for determining the cost of solid waste disposal and in implementing a recycling program.

**Policy 1.2.** At a minimum, solid waste disposal facilities will be provided in accordance with Lee County's level of service standards for solid waste disposal facilities.

***Objective 2:***

Continue implementation of the program for the proper storage, collection and disposal of hazardous wastes.

**Policy 2.1.** Implement the program for proper storage, collection and disposal of hazardous wastes.

**Section 3.3.6. Storm Drainage Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177(3), Florida Statutes and Chapter 9J-5.011(2) of the Florida Administrative Code*

**Background Discussion**

The purpose of this element, as stated in the Florida Administrative Code, is to provide for the management of stormwater drainage to control flooding of developed areas and to enhance the wetlands and natural drainage features of Sanibel.

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(6)(c) Florida Statutes and the minimum review criteria of Chapter 9J-5.011 of the Florida Administrative Code, are provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996 and in the *Surface Water Management Plan*, adopted in August 1989.

All of the City of Sanibel is located in the coastal floodplain. No other regulatory floodplains, such as for rainfall flooding, have been established within the City.

Stormwater runoff characteristics are a direct function of the amount of precipitation, condition and density of vegetation or other ground cover, and the structure and texture of the soil or other surface material and its saturation level. Topography also affects stormwater flow, percolation, and overflow rates. Water infiltrates each soil type at a specific rate, characteristically rapid at first, then leveling off until it is no longer absorbed. If precipitation continues, depressions fill, water accumulates, and overland flow occurs.

The infiltration rate on Sanibel's shell and sand substrate is exceedingly high and, as a result, overland flow is almost negligible. Under natural conditions, rainwater quickly

replenishes the ground water table and overland flow of water from one area to another would be virtually negligible. This condition, however, is not maintained in development areas unless stormwater is managed by having adequate areas of permeable soil and vegetation.

In accordance with the Future Land Use Element of this Plan, over 80% of the development permitted in the City of Sanibel has already occurred. Therefore, the stormwater management requirements, established in the original Sanibel Plan, are retained in this Plan. However, developments that are not exempt from permitting requirements of the South Florida Water Management District are required to provide stormwater drainage systems in compliance with the requirements of the District.

The environmental damage caused by inadequate human devised storm drainage systems on Sanibel represents a real threat to several valuable ecological functions, including maintenance and recharge of the freshwater lens, maintenance of water quality, and maintenance of natural vegetation and wildlife habitats. To preserve these valuable ecological functions, the City of Sanibel requires that stormwater drainage systems reflect the natural drainage system in a manner that preserves natural processes and causes the least environmental disruption.

The method of dealing with storm water drainage so as to minimize harmful impact of development on the environment is to preserve and utilize the inherent capabilities of the site to absorb water effectively with minor modifications to land configuration. By careful site planning and maximizing the areas that retain and absorb storm water, costly piping, channels and culverts can be reduced. A natural drainage system that is sympathetic to natural processes causes the least environmental disruption, and can be less costly to build and maintain. Most importantly, the problems and solutions are localized to the project site and not imposed on adjacent land.

In order to retain Sanibel's native vegetation and wildlife habitats, the existing ground water system must not be disrupted. It is, therefore, a policy of the City in this Plan that the storm water produced by five-year storm conditions will be collected, retained, and recharged on the site of any development.

The Natural Storm Drainage system can achieve the following:

- maximize recharge of the shallow groundwater aquifer;
- minimize runoff;
- minimize erosion and siltation;
- minimize vegetation removal;
- minimize maintenance and drainage system costs;

improve water quality; and  
enhance flow in Sanibel River.

An invaluable resource to the Island-wide natural drainage system is the interior wetland. This 3,500-acre depression in the central area of the Island roughly bordered by Periwinkle Way and Sanibel-Captiva Road on the north, and Gulf Drive on the south, plays an important role in terms of storm water storage, during both high frequency as well as more intense storms. The main drainage way of the interior wetland is the Sanibel River.

Historically, the Sanibel River was a semi-continuous slough system that originated in the vicinity of the present Tradewinds Subdivision and near the present Colonnades Condominiums. During extreme high water conditions, the river would break over the beach and empty into the Gulf of Mexico at several locations along its path. In 1960, the river was channelized for mosquito control purposes. The primary objective was to concentrate the surface water in one channel and to maintain as constant a water level as possible. Water level control structures at Tarpon Bay and Beach Road were constructed at this time and continue to be the only river outlets to salt water under normal conditions.

County roads through the interior wetlands crossed the river over bridges early in the island's development. However, these bridges were eventually replaced by culverts and fill. In many cases the culverts were woefully undersized and the inverts of the culverts were placed at elevations higher than the normal level of the water in the river. Most of these bottlenecks have since been corrected by the City or in association with private development.

More importantly in terms of storm drainage and the health, safety and welfare of the island's residents, constrictions in the interior drainage system may cause flooding. During periods of heavy rainfall, moderate to severe flooding once occurred in some areas. At times, substantial portions of major roads were covered often to a depth of six to eight inches for extended periods of time. This was partly due to incorrectly sized and improperly placed culverts. The combination of improving intra-basin flow in the interior wetlands as well as raising the roads gives greater flood protection to emergency evacuation routes in the event of a hurricane. Constricting culverts can also reduce the velocity of the flow in the river, and effectively prevent adequate flushing of salt water from the interior of the island because of the density relationship between fresh and salt water. Typically this results in the discharge from the island of the overlying fresh water and the retention of the lower strata of salt water, thus greatly reducing water quality in the interior wetlands. The Sanibel *Surface Water Management Plan* has addressed these concerns.

*Surface Water Management Plan*

A long-apparent need for an island-wide surface water management plan was primarily by the project's dual goals of flood protection and environmental enhancement.

### The Goal and Objectives of the *Surface Water Management Plan*.

#### Goal

To safeguard human health and welfare, and to maintain and improve the wetland system of the Sanibel River and its tributaries in order to enhance and promote water quality as well as vegetative and wildlife habitat diversity.

#### *Objectives*

1. To reduce extreme flooding in developed areas and the length of time of flooding in order to keep roads, driveways, house pads and septic systems drained to the greatest extent possible.
2. To use surface water management as one of many tools in undeveloped areas in order to encourage and support the return to savannah and marsh vegetation as well as other native habitat types, including but not limited to ridge hammocks, buttonwood sloughs and transition zones, and to discourage the continued invasion of exotic plants.
  - a. To identify undeveloped areas for habitat preservation and restoration that are large enough to support representative plant and animal populations, economically and physically feasible to manage, and compatible with the water management needs of developed areas.
  - b. To increase rainfall detention in undeveloped areas to encourage the recharging of the water table aquifer, and to return to conditions of environmental extremes in surface water and water table elevations which had controlled natural characteristics in the past.
3. To utilize natural drainage methods wherever possible with minimum change to the environment, using minimal amounts of manmade structures and arriving at a system requiring minimal maintenance.

The plan was design in accordance with South Florida Water Management District criteria, which is a 25 year, 3 day storm event, that drops approximately 8.5 inches of rainfall.

In order to implement the revised *Surface Water Management Plan (SWMP)*, City Council authorized a number of capital improvements along the Sanibel River. Included in those improvements were the replacement of the old Tarpon Bay and Beach Road Weirs. The old weirs did not have outfall crests high enough to achieve the environmental restoration objectives of the Plan, nor did they have the drainage capacity



to satisfy the flood control objectives of the Plan. The new weirs, which are both in place, have considerably longer weir crests set at the optimum water elevation levels of 3.2 feet NGVD at Tarpon Bay and at 2.7 feet NGVD at Beach Road to hold surface water at those desired levels. The new weirs also have greatly increased drainage (sluice) gates which will allow the rapid release of storm water when the optimum water levels are exceeded.

The final phase of the *SWMP* is the restoration of the Sanibel River itself. This project calls for the removal of vegetative and subsurface constrictions in the river, and the creation of a number of wildlife habitat restoration areas along the river's path.

The *SWMP* is administered and managed by a Council approved Weir Control Policy. The current policy was adopted by City Council through Resolution No. 94-75 on April 19, 1994 and approved by both the Florida Department of Environmental Protection and South Florida Water Management District.

The principal drainage way of the City of Sanibel is the Sanibel River. The eastern reach of the Sanibel River system discharges stormwater runoff at the Beach Road weir into the Shell Harbor/Sanibel Estates canal system. This upland canal system, which drains the altered land area at the eastern end of the island, discharges stormwater runoff into San Carlos Bay. The western reach of the Sanibel River system discharges stormwater runoff at the Tarpon Bay Weir into Tarpon Bay. The area north of Periwinkle Way/Sanibel-Captiva Road (the roadway is generally located along the mid-island ridge) drains into the estuary. The bayous near Blind Pass drain the western end of the island.

Permitting of surface water management systems is subject to the regulations of the South Florida Water Management District.

The City of Sanibel has operational responsibility for public drainage facilities of Sanibel. Private property owners have operational responsibility for private drainage facilities, including outfall structures to public drainage features.

The Sanibel Land Development Code requires that post development rates of discharge not exceed predevelopment rates. To provide flexibility in site planning, no specific design standards for on-site stormwater management systems are specified in the Code. Retention rather than detention is required to promote recharge of the groundwater table aquifer. The volume of retention is based on runoff from a five-year, one-hour duration storm. The rainfall intensity for this storm is 2.8 inches. The occurrence of greater storm events result in flooding as retention area capacity is exceeded. However, the impacts of storm drainage systems to handle greater retention outweigh additional benefit achieved.

The City of Sanibel is located in a coastal zone. Since 1979, all residential and commercial structures have been required to be elevated or floodproofed above a baseflood elevation established in the Land Development Code in accordance with elevations prescribed by the Federal Emergency Management Agency and depicted on the adopted Flood Insurance Rate Maps.

## Plan for Storm Drainage

1. In the preparation of plans for surface water management, in conjunction with development, the following principles should be observed:
  - a. A storm drainage system should provide for the gradual and dispersed drainage of excess surface runoff such that runoff from within the boundaries of the proposed development will approximate natural rates, volumes, quality and direction of flow from that parcel.
  - b. A storm drainage system should not reduce the volume or quality, or increase the rate of water flow from any parcel draining to the interior wetland or Fresh Water Management Area.
  - c. A storm drainage system should not result in any surface runoff across or onto the beach.
2. Inventory existing drainage problems on an area by area basis, and identify needed water management improvements.
3. Develop area-wide stormwater management plans on a priority basis and integrate these into the adopted *Surface Water Management Plan*. Require future development to be consistent with these plans. Bring existing development into conformance with these plans as opportunities arise, e.g., by attaching conditions to development permits.
4. Require acceptable long term operation and maintenance programs for stormwater drainage systems.
5. Include drainage improvements on a priority basis in the City's 5-year capital improvements program and budget.
6. Minimize the placement of fill below elevation +3.0 feet mean sea level (NGVD) in the Fresh Water Management Area.
7. Property owners should be encouraged to periodically remove debris, sand, topsoil and other material from the bottom of swales on their property to maintain proper depth and increase storage capacity.
8. At least twice a year, inspect and maintain the publicly owned portions of the surface water management system, which includes the Sanibel River, weirs, culverts, catch basins, roadside swales and detention and retention ponds.
9. The Tarpon Bay and Beach Road weirs shall be maintained at an elevation that is consistent with the Weir Policy of the *Surface Water Management Plan*.

10. Manage the surface water management system in accordance with the City Council approved weir control policy to maximize the water management objectives of improved flood control and environmental enhancement.

11. Consider establishing, in the Land Development Code, a minimum elevation for the floors of building entryways, garages and storage areas located below the base flood elevation.

In general after heavy rainfall events there may be periods of several days' duration with standing water in some locations. This standing water will result in inconveniences to residents and visitors, but is necessary to sustain native wildlife and its habitat, to recharge the groundwater aquifer, to impede salt water intrusion, and to nourish the native vegetation.

### **Goals, Objectives and Policies**

#### ***GOAL STATEMENT:***

**Provide adequate stormwater drainage facilities and systems for the residents and land uses in the City of Sanibel in a manner which provides protection from flooding while preserving natural drainage features, the recharge of the groundwater aquifer, native vegetation and wildlife habitat.**

#### ***Objective 1:***

Require stormwater drainage facilities and systems to be designed to the established level of service standard in order to provide protection from flooding for life and property within the City of Sanibel.

**Policy 1.1.** Preserve, maintain and upgrade existing stormwater drainage facilities and systems by scheduling the needed work as a part of the City annual work program.

**Policy 1.2.** Provide stormwater drainage systems that retain the rates, volumes and direction of flow of stormwater runoff consistent with predevelopment conditions. At a minimum, stormwater drainage facilities and systems will be provided in accordance with the following level of service standards:

**Policy 1.3.** Improvements for replacement, expansion or increase in capacity of stormwater drainage facilities and systems will be consistent with maintaining the level of service standard for stormwater drainage systems.

**Policy 1.4.** Stormwater management facilities will be coordinated with adjoining facilities when such coordination will help or enhance maintenance of the island's natural drainage system.

**Policy 1.5.** Prior to the adoption of the next Evaluation and Appraisal Report for the Sanibel Plan, the City will analyze the need to readdress local water quality standards and take appropriate actions.

***Objective 2:***

Require stormwater management facilities and systems to be designed to preserve the valuable ecological functions of the natural drainage system in order to protect natural drainage features and the natural recharge of the groundwater aquifer.

**Policy 2.1.** The regulations in the Land Development Code will be retained to ensure that:

- ✓ the Plan for Storm Drainage and these objectives and policies are incorporated in the requirements of the Land Development Code,
- ✓ new developments are required to manage runoff from the five-year, one hour duration storm event so that post development runoff rates, volumes and pollutant loads do not exceed predevelopment conditions,
- ✓ erosion and sediment controls are used during construction, and
- ✓ periodic inspection and maintenance of on-site stormwater drainage systems and facilities is provided.

**Policy 2.2.** When a development order (permit) is issued, require, at a minimum, retention of a five-year, one hour duration storm to provide for the recharge of the groundwater aquifer.

**Policy 2.3.** Require surface water retention areas to be planted with types of native species that can survive in the wet/dry conditions of these areas.

**Policy 2.4.** The Public Works Department will ensure that the public stormwater management system is inspected and maintained on at least an annual basis.

**Policy 2.5.** When the South Florida Water Management District identifies prime groundwater recharge areas on Sanibel, the City will establish regulations for the protection of these resources.

***Objective 3:***

Implement the *Surface Water Management Plan* for the Freshwater Management Area of the Sanibel River.

**Policy 3.1.** Implement the surface water management program and wetlands enhancement features recommended in this Plan.

**Policy 3.2.** The Tarpon Bay and Beach Road weirs will be maintained so that the elevation of the weir crest of the Beach Road weir and the Tarpon Bay weir is consistent with the *Surface Water Management Plan*.

**Policy 3.3.** Stormwater drainage facility and system improvements warranted by this study are to be included in the City's Capital Improvements Program.

### **Section 3.3.7. Recreation and Open Space Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177(3), Florida Statutes and Chapter 9J-5.014(3) of the Florida Administrative Code*

#### **Background Discussion**

The purpose of the recreation and open space element, as stated in the Florida Administrative Code, is to plan for a comprehensive system of public and private recreation and open space sites which are available to the public.

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(6)(e), Florida Statutes and the minimum review criteria of Chapter 9J-5.014 of the Florida Administrative Code, are also provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

In an attempt to ensure that the demand for recreation facilities does not exceed their availability, level of service standards for some recreation facilities have been established. These recreation facilities standards provide a basis for quantitative evaluation of recreation opportunities. Although these standards do not fully assess recreation opportunities, they do assist in the assessment of need for recreation sites and facilities. The level of service standards for recreation facilities that are established in this Plan are based on the resident population. However, the seasonal population was considered and is reflected in these standards.

In the City of Sanibel there are a variety of open spaces and recreation sites and facilities. An abundance of Federal, county, municipal, and private recreation facilities and open space exist on Sanibel. The federally owned and administered J. N. "Ding" Darling Wildlife Refuge attract thousands of visitors from all over the world.

It is anticipated that Sanibel will always attract tourists to its famous beaches and other natural resources. This situation produces a major impact on the island and must be planned for so that the social and environmental values and the character of the

community are protected and so that the commerce generated by such visits can be a benefit to the City and its residents.

When the city was incorporated it was recognized that recreational facilities required upgrading and plans were made for improving existing and providing for additional facilities. Since incorporation recreational facilities have been provided to such an extent that no deficiencies have been identified in 1995, and no deficiencies are projected through 2015. Although no specific facility needs are projected prior to buildout, recreation facility needs will be monitored and revised to reflect changes in the population and in demands for recreation.

Proximity and access to recreation facilities is essential to ensure that recreation needs are adequately met. However, because of the relatively small size of the City and the low density of residential areas outside the Resort Housing District, Sanibel is comprised of a single service area for recreation facilities. Many resource based open spaces, such as beaches and wetlands, are widely distributed throughout the City.

As the City of Sanibel has matured, open spaces provide the increasingly important function of conservation and protection of natural resources. Furthermore, open spaces contribute to the non-urban atmosphere desired by the residents of Sanibel.

The abundance of open spaces in the City of Sanibel has attracted people to the island in large numbers. These natural resource based features of the community create a demand that, at times, seem to exceed the supply. Although the City and other conservation oriented organizations continue to acquire and manage environmentally sensitive lands, the best means of retaining quality open spaces is through the proper management of the seemingly unlimited demand on the resource.

It can easily be assumed, with the City's 15 miles of Preservation Districts along the Gulf Beach and Bay Beach and 6,000 acre Conservation District on environmentally sensitive lands, that there is a sufficient amount of open spaces on Sanibel. Yet the quality of these extensive resources is threatened by a level of demand for use that can produce over-use.

A stable portion of this demand comes from residents, both permanent and seasonal, but a significant and increasing demand for use of these open spaces comes from day visitors. As the City of Sanibel continually adjusts to its role in the region, the City's management and participation in the management of these treasured resources must include programs to protect against their overuse and consequent degradation. This is true for Sanibel's beaches, its wildlife refuge and other conservation lands.

The demand for recreation facilities comes largely from permanent and seasonal residents and has been well addressed since the City's incorporation. Consequently, the City of Sanibel has adequately provided for its existing and foreseeable needs for active recreational facilities. An exception to this situation is the increasing use of the City's bike path system by day visitors.

## **Plan for Recreation and Open Space**

The components of the City's Plan for Recreation and Open Space are as follows:

1. Maintain existing recreational facilities.
2. Operate recreational facilities and programs in a fiscally responsible manner, employing user fees when this funding is found to be equitable and appropriate.
3. Continue to provide bicycle paths throughout the island outside the pavement of major streets and in the right-of-way within the vegetation buffers.
4. Finalize plans for future use of the Causeway and Gulfside City Park properties.
5. Maintain all existing beach access easements and restrict public access across private property except where such easements exist.
6. Provide bicycle racks at beach access points as a means of encouraging use of bicycles for transportation to the beach.
7. Provide restrooms and changing areas at heavily used beach access areas where they can be compatible with surrounding land uses.
8. Restore dunes and beach ridges and dune and beach ridge vegetation in areas of erosion near the beach access points.
9. Explore the feasibility of providing a launching facility for non-motorized water craft, such as canoes and kayaks. This task is to be carried out in a manner that is both consistent with the carrying capacity of the impacted water body and compatible with surrounding land uses.
10. Continue the ongoing commitment to provide easy access to recreation facilities, for the general population and particularly for the very young, senior citizens and the handicapped.
11. Continue to provide a youth center on Sanibel.
12. Continue to provide a seniors center on Sanibel.
13. Continue to promote cultural activities in the City.
14. Consider development of a Town Center/Town Square in the area of City Hall to serve as a focal point for community activity, special events and informal assembly.

15. Support the continued provision of private recreational facilities available to the public (such as the Community Center and golf courses) which are compatible with the goals, objectives and policies of the Sanibel Plan. The private sector is expected to continue to play a major role in providing recreation and leisure opportunities to residents as well as visitors.

16. Include preservation and conservation areas in the City of Sanibel, such as tidal wetlands, and beaches as the heart of the City's open space network. This resource is a vital component in the Plan for Scenic Preservation.

## **Goals, Objectives and Policies**

### ***GOAL STATEMENT:***

**Ensure that adequate recreational facilities and open spaces are provided to satisfy the recreational needs of residents to the extent practicable, in a manner that preserves and protects the fragile natural resources of the island.**

### ***Objective 1:***

The City of Sanibel's system of recreational facilities will continue to provide adequate recreational opportunities for its residents and visitors through the initial and long-range planning periods of this Plan.

**Policy 1.1.** Preserve and maintain existing recreational facilities by providing proper management supported by an adequate operating budget.

**Policy 1.2.** Provide adequate recreational facilities for the residents of the City of Sanibel. At a minimum, recreational facilities will be provided in accordance with the following level of service standards:

**Policy 1.3.** Acquisitions of parks and major improvements to recreational facilities, needed to comply with level of service standards for recreational facilities, are to be scheduled in the Five-Year Schedule of Capital Improvements of the Capital Improvements Element of this Plan.

**Policy 1.4.** Acquisition of parks and major improvements to recreational facilities, not needed to comply with level of service standards for recreational facilities, and, therefore, not included in the Five-Year Schedule of Capital Improvements, are to be included in the City's Capital Improvement Program.

### ***Objective 2:***

The City of Sanibel's system of open spaces will continue to provide scenic resources and recreational opportunities for its residents through the initial and long-range planning periods of this Plan.



**Policy 2.1.** Open spaces will be protected from incompatible land uses by requiring a development permit (order) for development of adjacent lands.

**Policy 2.2.** Retain requirements in the Land Development Code that open spaces (undeveloped areas) be provided within private developments.

**Policy 2.3.** Use preservation and conservation areas as scenic resources, in a manner that is compatible with the principal purpose of these areas.

***Objective 3:***

Encourage people to use alternatives to the private automobile as a means of transportation to public recreational facilities and open space areas.

**Policy 3.1.** Limit parking spaces for motorized vehicles (automobiles), as to number and location, in a manner that is consistent with natural resource conservation objectives and compatible with surrounding land uses.

**Policy 3.2.** Provide bike paths and routes and secure bike racks as a means of encouraging the use of bicycles as a method of transportation to public recreation facilities and open space areas.

**Policy 3.3.** Provide safe and convenient walking paths and routes as a means of encouraging pedestrian access to public recreation facilities and open space areas.

***Objective 4:***

The numerous public accessways to the beaches in the City of Sanibel will be preserved and maintained, as well as improved, if warranted.

**Policy 4.1.** Public accessways to the beaches should maintain a limited number of parking spaces in order to accommodate access to and use of the beaches in a manner that preserves and protects the fragile beach environment.

**Policy 4.2.** Reserve a portion of the beach access parking spaces for use by residents.

**Policy 4.3.** The exploration of programs for reducing auto ridership within the City, identified by the Transportation policies of this Plan, should consider providing continued and improved accessibility to public accessways to the beaches.

***Objective 5:***

All levels of government and the private sector will provide recreational opportunities to achieve a balanced recreation system.

**Policy 5.1.** Satisfaction of recreational needs, identified by the application of level of service standards that are not fulfilled by the private sector, will be shared by the public and private sectors.

**Policy 5.2.** The City of Sanibel will coordinate its efforts to provide recreation opportunities, including the preservation of open spaces, with those of the

J. N. "Ding" Darling Wildlife Refuge,

Sanibel-Captiva Conservation

Foundation,

Lee County School Board,

Lee County Government,

Sanibel Community Association, and

private sector.

**Policy 5.3.** Encourage private developments to provide recreation facilities and open spaces, in accordance with the goals, objectives and policies of this Plan by including land development regulations in the Land Development Code that provide incentives for this.

**Policy 5.4.** Encourage private developers to set aside undeveloped lands suitable for passive recreation or conservation uses by adopting land development regulations which provide incentives to do this.

### **Section 3.3.8. Other Human Support Systems**

*Pursuant to Chapter 163.3177(7)(e), Florida Statutes*

#### **Background Discussion**

In addition to roads, water, wastewater treatment, solid waste, storm drainage and parks, there are other essential human support services provided within the City of Sanibel. These human support systems and services are inventoried and analyzed in this element of the Plan.

#### **Police Services**

On February 18, 1975, the Sanibel Police Department was formed. The Sanibel Police Department is located in a wing of the City Hall complex. In conjunction with the public assembly room, this wing (designed to withstand storm flooding and winds) operates as

the control center for natural disaster response and operation. There are no detention facilities in the Police Department; all prisoners are transported to the Lee County Jail. Sanibel Police Department has state of the art police equipment in its communication room and police vehicles.

Police responsibilities include the following: The protection of life, limb and property; enforcement of State and Federal laws and City ordinances; apprehension of offenders; general keeping of the peace; twenty-four hour per day police dispatch; traffic control; and truck weigh station. The Sanibel Police Department, as part of the Lee County enhanced 9-1-1 system and in cooperation with other local providers of emergency services, has implemented this emergency response program. The Sanibel Police Department has mutual aid agreements with other local police departments. In addition, the Sanibel Emergency Management Plan (SEMP), under the control of the Police Department reporting directly to the City Manager, provides operational procedures for responding to emergency situations, including hurricane evacuation.

### **Fire Protection**

The Sanibel Fire Control District provides fire protection services within the City of Sanibel. This independent District operates in cooperation with City Administration, but is not part of the City's capital and operating budget. The service area of the Sanibel Fire Control District coincides with the boundaries of the City of Sanibel plus a portion of the Causeway up to the drawbridge area. Fire fighting equipment is located at the main station on Palm Ridge Road and at the station at Bowman's Beach and Sanibel-Captiva Roads.

The Fire Control District has paid personnel and volunteers on 24-hour call. The Fire Control District has a mutual aid program with Captiva for fire protection.

Sanibel has a fire rating of 6, on a scale of 1 to 10 with 1 being the best rating, for fire insurance purposes.

The Fire Control District should continue to work toward achieving a fire insurance rating of 5 for the City, by adding and upgrading equipment and personnel.

The Fire Control District and the Island Water Association should continue with their cooperative fire hydrant installation program with the objective of having a fire hydrant within five hundred (500) feet of all developed property.

The City should continue to work closely with the Fire District in examining the feasibility and advisability of the City assuming responsibility for fire protection services, if this would be in the best interests of Sanibel residents.

### **City Administration**

The City Hall Complex, completed in 1983, may require additional administration space. A public works facility, located adjacent to this site, has met the operational needs for public works.

The City is studying the need for an Emergency Operations Center on the mainland.

The Sanibel Library, the Sanibel Historical Village and the Barrier Islands Center for the Arts are located at the City Hall site.

### **Plan for City Hall**

Due to the significant amount of additional development at the City Hall site, a conceptual plan for the longer-term "buildout" use of the site should be developed. Consider development of a Town Center/Town Square in the area of City Hall to serve as a focal point for community activity, special events and informal assembly.

### **Libraries**

The library on Sanibel was organized in 1962 by a citizen's group and incorporated under Florida Statutes as a nonprofit organization. A new 18,000 s.f. library was constructed next to the Sanibel City Hall in 1994.

### **Power**

The City of Sanibel receives electric power service from the Lee County Electric Cooperative, Inc., (LCEC), North Fort Myers, transmitted by overhead high voltage lines across Pine Island Sound to the Sanibel substation. The LCEC currently purchases all power through Seminole Electric Cooperative, Inc., located in Tampa, Florida.

Electric power is distributed from the existing forty thousand (40,000) kilowatt substation located on Sanibel, which at an assumed 0.95 power factor equates to a thirty thousand (30,000) kilowatt substation. Four (4) main distribution feeders are strung aerially on the island.

### **The Plan for Electric Utility**

1. All future electrical transmission lines should be installed underground when the state of the art makes it practical and economically feasible.
2. All new local service and to-the-house lines will be required to be installed underground in new subdivisions, when practical and economically feasible.
3. Existing utility service should be placed underground where legally appropriate, practical and economically feasible.

4. The City of Sanibel and the Lee County Electric Cooperative will need to consider where a second substation should be located so that a site will be available when the present substation reaches capacity.
5. In the event of a hurricane or other potential disaster, the city should work closely with the cooperative to keep electric service available as long as it is deemed safe; however, the electrical system should shut down in advance of a hurricane landfall to further encourage evacuation.
6. If a hurricane or other disaster destroys a substantial part of our overhead power distribution system, the city and the power supplier should consider rebuilding underground so as to reduce vulnerability in the future.
7. The city should periodically arrange for a study of residential and commercial power rates charged by the cooperative and other suppliers.
8. The Lee County Electric Cooperative is encouraged to upgrade its existing lines and electrical systems to improve reliability.
9. Encourage more efficient use of electrical energy.

### **Medical Facilities and Public Health**

There are a number of health care professionals on Sanibel. For health care requiring hospitalization, or more intensive care than that which can be provided locally, Sanibel residents and visitors have Health Park, Columbia Gulf Coast Hospital, the Columbia Regional Medical Center, the Lee Memorial Hospital, or the Cape Coral Hospital available. These facilities are located approximately 30 to 45 minutes driving time from Sanibel, when traffic is light.

There is and it is anticipated that there will continue to be ample medical care as well as hospital beds in Lee County to serve the medical needs of Sanibel residents.

Emergency medical assistance is provided by the Lee County Emergency Medical Technicians. Qualified technicians are available to handle medical emergencies and provide public ambulance service via air or road to nearby hospitals if required. There is at least one ambulance on service 24 hours a day.

There are a number of private nursing homes and one County nursing home located in the Fort Myers area. Shell Point Village Nursing Pavilion, Beacon Manor Nursing Home, Lee Convalescent Center and Shady Rest Nursing Home are nursing homes available in Lee County.

### **Plan for Medical Facilities and Public Health**

1. The City shall provide for the expansion of private and public health care facilities on the Island as the need arises.
2. Public health continues to be a matter of vital concern on Sanibel. It is essential that City policy be formulated which not only conforms to State and County provisions for public health and preventive medicine, but exceeds those provisions and addresses the particular needs of the island's residents, the island environment, and special considerations regarding hurricane evacuation.

## **Education**

Public education for Sanibel is administered and financed by the Lee County School District. Sanibel has 1 elementary school and 3 private schools for preschool children, located on the island. Middle and high school students are bussed to public schools or attend private schools off the Island.

The number of Sanibel Elementary School (grades Kindergarten-5) students reached a high in the late 1980's and is now declining. Neither the City of Sanibel nor the Lee County School District project the need for any additional public school sites in the short and long range planning periods of this Plan.

### **Plan for Education**

1. Public education of school children from Sanibel will continue to be financed and administered by the Lee County School District.
2. The City should encourage the multiple use, and as the situation arises, the adaptive reuse of existing structures for educational purposes by being alert to this potential in the development permitting process.

## **Insect Control**

In 1958, the Lee County Mosquito Control District was created to provide control of mosquitoes in most of Lee County, including Sanibel. Responsibility for suppressing mosquitoes is in the hands of the Board of Commissioners of the Lee County Mosquito Control District. Chapter 67-1630, Laws of Florida, creates the Lee County Mosquito Control District and authorizes the Board to

"do any and all things necessary for the control and elimination of all species of mosquitoes and other arthropods of public health importance . . ."

"The Board is authorized to use any and all mechanical, physical, chemical or biological control measures as the Board may deem necessary to accomplish the purposes of this chapter."

The District is governed by a board of 6 commissioners who are elected on a nonpartisan basis to serve four-year terms. By law, one (1) member of the Board must reside on either Sanibel or Captiva Island. Activities of the District are coordinated closely with those of the Lee County Health Department.

The Lee County program considers the potential for reducing overall pest mosquito populations as well, and is the first large scale attempt to use biological controls in an organized mosquito abatement program. Cooperative work of this type assures the residents that the program carried out by the Lee County Mosquito Control District is constantly updated, and that the benefits of new research are incorporated here, even as they are being developed.

### **Plan for Mosquito Control on Sanibel**

An integrated pest management approach requires strict adherence to the following:

1. A consistent high water table in the interior wetlands should be maintained, in general, the higher the better, consistent with developed land uses. This will virtually eliminate salt marsh mosquito breeding in these areas.
2. Drainage patterns should be kept as natural as possible. The proposed improvements to the drainage system should be carried out in order to increase intra-basin flow. The drainage improvements will enable retention of a more consistent water level in the interior wetlands, thus exposing less area to the successful hatching of mosquito larvae.
3. A population of larvivorous fish should be maintained wherever possible on the island.
4. Mosquitoes should be controlled in the larval stages whenever possible, generally keeping the island free of biting adults. Larvicides should be chosen on the basis of safety both to humans and wildlife and applied in a lawful manner.
5. Chemical control of adults should be kept to a minimum, consistent with acceptable control and lawful application.
6. Continued research should be encouraged which will lead to alternate additional methods of control, thereby avoiding dependence on a chemically-oriented mosquito control program.

### **Goals, Objectives and Policies**

#### ***GOAL STATEMENT:***

**Provide adequate police, fire protection, city administration, library, power, health, education and insect control services for residents and land uses in the City of Sanibel.**

***Objective 1:***

Ensure continued maintenance of an adequate level of service for these other human support systems.

**Policy 1.1.** Preserve and maintain existing facilities through implementation of proper maintenance and upkeep procedures.

**Policy 1.2.** Expand and add facilities as needed to provide adequate service.

**PART 3.4. INTERGOVERNMENTAL**

**COORDINATION**

The purpose of this part of the Sanibel Plan, as stated in the Florida Administrative Code, is to resolve incompatible goals, objectives, policies and development proposed in this Plan and to respond to the need for coordination processes and procedures with local, county, regional and state agencies.

In addition to the stated purpose of this part of the Sanibel Plan, this element responds to the needs for coordination procedures with the public and private sector providers of human support systems.

**Section 3.4.1. Intergovernmental Coordination Goals, Objectives and Policies**

*Pursuant to Chapters 163.3177, Florida Statutes and Chapter 9J-5.015(3) of the Florida Administrative Code.*

**Background Discussion**

This section of the Sanibel Plan establishes goals, objectives and policies for the implementation of the Plan in coordination with the plans and programs of state, regional, county and municipal units of government and with the public and private sector providers of human support systems.

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(6)(h) and (9)(h), Florida Statutes and the minimum review criteria of Chapter 9J-5.015 of the Florida Administrative Code, are also provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

*Local Taxing Authorities*



On Sanibel there are eight (8) units of government which provide services to the City and have authority to levy taxes but which do not have regulatory authority over the use of land. These eight (8) units of government are Lee County, the Lee County School District, the Sanibel Fire Control District, the South Florida Water Management District, Lee County Library Fund, the West Coast Inland Navigation District, the Lee County Mosquito Control District and the Hyacinth Control District.

### *Implementation of the Sanibel Plan*

The implementation of the Sanibel Plan depends on the coordination of a variety of public and private entities. A summary of the participants and procedures of this coordination is presented.

### *Safety*

Operational procedures for response to natural disasters, including hurricane evacuation, are implemented by the Sanibel Emergency Management Plan. The Sanibel Emergency Management Plan is coordinated with Lee County's and Southwest Florida Regional Planning Council's hurricane plans. The City Manager has primary responsibility for coordination of natural disaster planning with the county and region. The Sanibel Emergency Management Plan assigns operational responsibility for emergency situations.

In addition to coordination with county and regional hurricane plans, the Sanibel Emergency Management Plan has established coordination mechanisms with area police departments, the Sanibel Fire Control District and area fire departments, and emergency services. The recovery section of the Sanibel Emergency Management Plan is consistent with Federal and State disaster relief programs.

### *Preservation of Natural, Environmental, Economic and Scenic Resources*

The United States Department of the Interior, Fish and Wildlife Service, which manages the J. N. "Ding" Darling Wildlife Refuge, and the Sanibel-Captiva Conservation Foundation provide resource management for over half the land area within the City of Sanibel. The City has maintained cooperative mechanisms with the Refuge and foundation directed toward resource preservation.

To preserve natural resources, the following federal, state and regional agencies have land use review and environmental regulatory authority over specific activities:

The United States Army Corps of Engineers

The Florida Department of Environmental Protection

The Florida Game and Freshwater Fish Commission

The Florida Department of Community Affairs

The Florida Department of State

The South Florida Water Management District

The Southwest Florida Regional Planning Council

The City Manager has primary responsibility for intergovernmental coordination with these federal, state and regional regulatory agencies and coordinates permitting for public and private development activities in the City of Sanibel that are under the jurisdiction of these agencies.

City permitting procedures require that permits required from federal, state and regional agencies be obtained and submitted to the City prior to issuance of Sanibel building permits.

### *Human Support Systems*

The provision of human support systems for the residents and visitors of the City of Sanibel is linked to cooperation with the private sector, Lee County, regional agencies and the State of Florida. The following federal, state, regional, county and private sector entities cooperate with the City of Sanibel in the provision of human support systems:

The Island Water Association

The Florida Department of Transportation

The Lee County Department of Transportation and Engineering

The Lee County Public Works Department

The Lee County Department of Parks and Recreation

The United States Department of the Interior: Fish and Wildlife Service

The Sanibel-Captiva Conservation Foundation

The Sanibel Library

The Sanibel Community Association

The Beachview Country Club

The Dunes Country Club

Package Treatment Plant owners  
The Lee County Electric Cooperative  
The Sanibel Fire Control District  
The Florida Department of Children and Families  
The Lee County School District  
The Lee County Mosquito Control District  
United Telephone of Florida  
Private Health Care Providers  
Sanibel Disposal, Inc. (BFI)  
Waste Management, Inc. of Florida

In the provision of human support systems within and supporting the City of Sanibel, the following state, regional, and county agencies have land use review and environmental regulatory authority over specific activities:

The South Florida Water Management District  
The Florida Department of Transportation  
The Lee County Department of Transportation and Engineering  
The Florida Department of Environmental Protection  
The Public Service Commission  
The Lee County Health Department  
The Florida Department of Children and Families

The City Manager has primary responsibility for coordination with state, regional, county and private sector providers and regulators of human support systems and coordinates permitting for public and private development activities in the City of Sanibel that are under the jurisdiction of these agencies.

City permitting procedures require that permits required from state, regional and county agencies be obtained and submitted to the City prior to issuance of Sanibel building permits.

### *Capital Improvements*

The coordination of facilities location and service delivery, as well as construction activities, contribute to the effective use of capital improvements funding. The City Manager has primary responsibility for the coordination of municipal capital improvements projects with capital improvements projects of federal, state, regional, county and private sector entities.

### *Land Use*

The coordination of the Sanibel Plan, with the comprehensive plans of adjacent municipalities, Lee County, the Southwest Florida Regional Planning Council and the State of Florida is addressed in Section 1.4 (Coordination of Plan with Plans of Surrounding Areas) of the Plan.

The City Manager has primary responsibility for coordinating the Sanibel Plan with the comprehensive plans of adjacent municipalities, Lee County, the Southwest Florida Regional Planning Council and the State of Florida.

The City of Sanibel and Lee County have entered into an intergovernmental cooperative planning agreement effecting substantial change in zoning for land on Captiva or land located within the Summerlin Road Corridor (an area bordered on the north by Cypress Lake Drive, on the west by the Caloosahatchee River, on the south by San Carlos Bay and Estero Bay and on the east by Cleveland Avenue and Hendry Creek).

### **Conclusion**

The City of Sanibel's foremost concern for intergovernmental coordination is for the safe evacuation and shelter of its residents in the event of hurricane threat or other natural disaster. A regionally coordinated program to address the identified deficiencies in adequate off-island evacuation routes and shelters is a critical challenge requiring the cooperation of all local governments in Southwest Florida.

An emerging intergovernmental coordination issue important to the City of Sanibel is the need to address the State's Affordable Housing Needs Assessment. It is evident from an analyses of the existing housing stock and the vacant developable land inventory of the City of Sanibel that the private sector is unable, without a major philanthropic effort, to provide housing on Sanibel that is affordable to very low, low and moderate income households. In fact, because of the high cost of housing and land, assistance programs are generally unable to cost effectively bridge the gap between the money available for housing by very low, low and moderate income households and the high cost of housing in the City of Sanibel. Since housing is a regional resource, the City of Sanibel intends to participate with other local governments through intergovernmental coordination activities, to address, on a countywide and regional basis, affordable housing needs identified by the State.

Continued effort must be made with Lee County and the Cities of Fort Myers, Fort Myers Beach and Cape Coral to ensure technical coordination of comprehensive plans and to instill a spirit of coordination and cooperation in intergovernmental policies.

### **Plan for Intergovernmental Coordination**

1. Continue and improve interlocal cooperation with Lee County to ensure technical coordination of comprehensive plans and attempt to instill a spirit of coordination and cooperation in intergovernmental policies.
2. Continue coordination of Sanibel hurricane evacuation and warning plans with Lee County, its cities, and the Southwest Florida Regional Planning Council.
3. Cooperate with proper authorities, through appropriate means, to secure needed improvements to the bridge and causeway facility between the mainland and Sanibel, now owned and operated by Lee County.
4. Encourage Lee County to develop criteria by which to review the appropriateness of land use decision making, particularly on Captiva and in the Summerlin Road corridor, with respect to its impact on Sanibel.
5. Work with State and Lee County officials to help ensure that costs incurred by Sanibel residents for Lee County taxation are equivalent to the benefits Sanibel residents receive.
6. Work with Lee County and the Town of Fort Myers Beach toward the public acquisition or conservation of vital estuaries and environmentally sensitive lands along the mainland coastline in proximity to Sanibel and Estero Islands.
7. Identify all regional and state resources and facilities identified in the *State Comprehensive Plan* and the *Southwest Florida Strategic Regional Policy Plan*.
8. Identify local resources which could be significantly impacted by development located within the City of Sanibel, such as:

the J. N. "Ding" Darling Federal Wildlife Refuge;

Sanibel-Captiva Conservation Foundation, Inc. Lands;

hurricane evacuation routes and hurricane shelters;

the nearshore coastline of the Gulf of Mexico, San Carlos Bay and Pine Island Sound; and

the Pine Island Aquatic Preserve.

9. Identify local resources which could be significantly impacted by development located outside the City of Sanibel, such as

The J. N. "Ding" Darling National Wildlife Refuge;

Hurricane evacuation routes;

The coastline of the Gulf of Mexico, San Carlos Bay and Pine Island Sound; and

The Pine Island Aquatic Preserve.

10. Identify community characteristics which could be impacted by development within another jurisdiction, such as:

Captiva;

Punta Rassa;

nearby mainland estuaries;

the Summerlin Road corridor; and

the Sanibel Causeway.

11. Establish criteria for determining what constitutes a significant impact.

12. Determine if development proposals would have significant impacts on identified resources, facilities or community characteristics; and to mitigate such impacts.

13. Establish a dispute resolution process for bringing to closure, in a timely manner, the resolution of issues that would have impacts on other local governments or identified state and regional resources or facilities. The dispute resolution process shall incorporate the dispute resolution process of the Southwest Florida Regional Planning Council established pursuant to Section 186.509, Florida Statutes.

14. Transmit to the Department of Community Affairs, a certified copy of every development order and accompanying supporting documentation for developments which meet or exceed the thresholds established by Section 380.0651, Florida Statutes and Rule 28-24 of the Florida Administrative Code, and any amended development orders.

## **Goals, Objectives and Policies**

***GOAL STATEMENT:***

**Maintain and establish coordination among governmental, public and private entities:**

**to facilitate the delivery of services**

**to effectively conserve and use available resources, and**

**to implement the Sanibel Plan**

***Objective 1:***

Coordinate implementation of the Sanibel Plan with the comprehensive plans of:

The City of Cape Coral,

The City of Fort Myers,

Town of Fort Myers Beach,

Lee County,

The Southwest Florida Regional Planning Council, and

The State of Florida,

on matters of mutual interest.

**Policy 1.1.** Maintain the Intergovernmental Cooperative Planning Agreement with Lee County for Captiva Island and the area along the Summerlin Road corridor.

**Policy 1.2.** If the City is unable to meet Sanibel-determined affordable housing needs on-island, through its Below Market Rate Housing program, the City will request that Lee County incorporate the unmet need in the county's affordable housing program.

**Policy 1.3.** Through county, regional, state and federal agencies, pursue adequate off-island hurricane evacuation routes and shelter.

**Policy 1.4.** To satisfy Sanibel's long term need for an evacuation and recovery route to the mainland that is above the level of the anticipated storm surge of a category 3 hurricane and of sufficient width to permit motor vehicle traffic to bypass disabled vehicles, secure needed improvements to Lee County's bridge and causeway facility which runs between the mainland and Sanibel.

**Policy 1.5.** In cooperate with Lee County, develop an interlocal agreement to develop and implement a plan to operationally provide two (2) lanes of outbound evacuation traffic across the Sanibel Causeway, as a means of reducing evacuation clearance times.

**Policy 1.6.** Develop an agreement with Lee County that ensures that use of the Sanibel Causeway and causeway islands is compatible with the community character of the City of Sanibel.

**Policy 1.7.** Develop an agreement with the Captiva Erosion Prevention District that ensures that there will be no negative impacts to the Sanibel shoreline associated with any Captiva Island beach preservation projects.

**Policy 1.8.** Seek creation of jobs and job training, by contributing to the efforts of other jurisdictions and agencies in the region.

**Policy 1.9.** Continue to assist in updating of the *Southwest Florida Regional Strategic Policy Plan*.

**Policy 1.10.** Incorporate into the Land Development Code regulations which further the attainment of the objectives of the *Southwest Florida Regional Strategic Policy Plan* and the *State of Florida Comprehensive Plan*, when consistent with the objectives and interests of the City of Sanibel.

***Objective 2:***

Ensure that implementation of the Sanibel Plan is coordinated with the plans and programs of:

The United States Department of the Interior: Fish and Wildlife Service-  
the J. N. "Ding" Darling Wildlife Refuge,

The Sanibel-Captiva Conservation Foundation,

Lee County,

The Lee County School Board,

The Island Water Association,

The Florida Department of Transportation,

The Florida Department of Children and Families,

The Sanibel Fire Control District,



and other providers of sites, facilities and services (human support systems) not having regulatory authority over the use of land.

**Policy 2.1.** Support implementation of the plans and programs of public and private providers of human support systems, in a manner consistent with the objectives of the Sanibel Plan by requiring approval from public and private providers prior to the City's authorizing commencement of development activities.

**Policy 2.2.** Maintain the Interlocal Cooperative Agreement with Lee County for the operation of Bowman's Beach Park.

**Policy 2.3.** Maintain coordination with the Lee County School Board for the shared operation of the recreation complex.

***Objective 3:***

Ensure that implementation of the Sanibel Plan is coordinated with the programs and permitting requirements of:

The United States Army Corps. of Engineers,

The Florida Department of Environmental Protection, including the Charlotte Harbor Resource Management Plan,

The Charlotte Harbor National Estuary Program,

The Florida Department of Transportation,

The Florida Department of Community Affairs,

The Florida Department of Children and Families,

The Florida Public Service Commission,

The South Florida Water Management District,

The Lee County Metropolitan Planning Organization,

The Lee County Department of Health,

and other agencies with land use or regulatory authority for the conservation and use of facilities and resources by requiring applicants for development orders (permits) to obtain approval from these other agencies prior to the City's authorizing commencement of development activities.

**Policy 3.1.** Periodically talk to representatives of federal, state, regional and local agencies that have regulatory authority in the City, and periodically review those agencies' written rules in order to keep up-to-date and informed on how other agencies' regulatory activities affect implementation of the Sanibel Plan.

**Policy 3.2.** Ensure that development activities that require permits from state, regional and county regulatory authorities obtain applicable permits and submit copies to the City, prior to issuance of Sanibel Building Permits.

***Objective 4:***

Maintain coordination mechanisms to ensure that full consideration is given to the impacts of development permitted by the Sanibel Plan upon adjacent municipalities, the county, the region and the state.

**Policy 4.1.** Further the management objectives of the Pine Island Aquatic Preserve by reviewing applications for development orders (permits) for consistency with the adopted Charlotte Harbor Management Plan.

**Policy 4.2.** Pursuant to Chapter 9J-11 of the Florida Administrative Code, consider comments, objections and recommendations of:

The Florida Department of Community Affairs,

The Southwest Florida Regional Planning Council,

Lee County,

The Florida Department of Environmental Protection,

The Florida Department of Transportation,

The South Florida Water Management District,

The Florida Department of State, and

The Florida Game and Freshwater Fish Commission

**Policy 4.3.** Resolve conflicts with Lee County, the City of Fort Myer, the City of Cape Coral, and the Town of Fort Myers Beach through the Southwest Florida Regional Planning Council's informal mediation process.

**Policy 4.4.** For the purpose of improving attainment of the objectives of the Sanibel Plan, consider the expansion of the corporate limits of the City of Sanibel on state submerged lands and the Sanibel Causeway. Coordinate this activity with appropriate state, regional and county agencies.

### ***Objective 5:***

In establishing level of service standards for public facilities, with a state, regional, or county entity having operational and maintenance responsibility for such facilities, ensure that the level of service standards in the Sanibel Plan are coordinated with the standards of the appropriate governmental entity.

**Policy 5.1.** Level of service standards for public facilities, are to be coordinated with level of service standards of state, regional and county governmental entity having operational and maintenance responsibility for the facility.

### **Section 3.4.2. Effect of Plan on Adjacent Areas**

*Pursuant to Chapter 163.3177(4)(a), Florida Statutes*

The greatest effect that the Sanibel Plan of 1976 has had during 1976-95 was in reducing the amount and pace of growth that was projected for Sanibel within Lee County's Comprehensive Plan of 1973.

Aside from the 1976 Plan's effect on the amount and rate of growth on the Island, little of Sanibel's Plan affected any other parts of Lee County. However, subsequent issues, policy decisions and studies have had effects upon other areas outside of the jurisdiction of the City of Sanibel.

#### *Hurricane evacuation*

The City of Sanibel's policy, as set forth in the Safety Element, that the City should limit and manage growth so that the population on the Island when a hurricane warning is issued will not be substantially in excess of the evacuation and off-Island refuge capacity of the area, has significantly reduced the impact on evacuating mainland populations.

An improved warning system put in place by the county with technical coordination and assistance from the City of Sanibel, with provisions for traffic control and restrictions placed on causeway access during a hurricane evacuation, has also reduced potential conflicts and untimely actions that might further jeopardize human safety.

#### *Potable water*

The City and the IWA have worked together to develop an adequate supply of potable water with construction of a reverse osmosis water treatment plant. As a result of the strides made in the Island's potable water supply capabilities, Sanibel has had an effect on adjacent areas by reducing its dependence upon receiving water from fresh water aquifers on the mainland through the Pine Island Water Association.

#### *General Considerations*

It is recognized that the City of Sanibel does have a responsibility to make provisions for families and individuals wishing to live and work within its municipal boundaries, providing that satisfaction of this goal does not pose a threat to the health, safety and welfare of the residents. It is also recognized that Lee County as an entity can better accommodate major population growth in areas other than Sanibel at less risk to the public. It has already been pointed out that Sanibel represents both a high risk and high cost area for developments. Therefore, the City's first responsibility is to provide for the health, safety and welfare of the existing population and to accommodate future growth within the constraints of public responsibility.

The people of Captiva share with the people of Sanibel a common fresh water resource and a common problem of hurricane safety. The elements of this Plan in regard to these and other issues have taken into account the City's vital relationship to the health, safety and welfare of the people of Captiva.

Slower, less intensive urbanization on Sanibel is consistent with the goals of the Southwest Florida Regional Planning Council, which is attempting to coordinate growth in the region.

The Sanibel Plan has been coordinated with the Southwest Florida Regional Strategic Policy Plan, the Lee Plan and the Charlotte Harbor Management Plan.

### **Section 3.4.3. Charlotte Harbor Resource Planning and Management**

*Pursuant to Chapter 163.3177(4)(b), Florida Statutes and Chapter 9J-5.015(2)(d) of the Florida Administrative Code*

In order to protect barrier islands, estuarine areas and coastal wetlands in Southwest Florida, Charlotte Harbor, including its estuary and watershed, was declared an Area of Critical State Concern in 1975, pursuant to Chapter 380, Florida Statutes.

The Objectives of the comprehensive policy plan prepared by the Charlotte Harbor Resource Planning Management Committee addressed intergovernmental coordination, research, stormwater management, flood plains, wastewater, wetlands, beaches and barrier islands, water supply, land development, site alternatives, dredge and fill restoration, coastal floodplains, and monitoring implementation. These objectives combined with goals and implementation actions, form the Charlotte Harbor Management Plan, adopted on June 5, 1981 by the Committee.

### **Charlotte Harbor Management Plan**

#### *GOAL*

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.

## *GOAL*

To identify and address the impact of growth so as to minimize or eliminate any adverse effects on the Charlotte Harbor area.

### *Objective:*

Policy consistent with the Charlotte Harbor Committee goals and objectives should be incorporated in all public plans relating to the Charlotte Harbor area.

### *Objective:*

A process of effective intergovernmental coordination to pursue the goals and objectives of the Charlotte Harbor area is to be established.

### *Objective:*

The data needed for decision making affecting the estuarine areas are to be provided through an ongoing effective and efficient program.

### *Objective:*

Future development in floodplain areas is to occur only in a manner consistent with the function of floodplains.

### *Objective:*

The stormwater and drainage systems of the Charlotte Harbor area are to function in a manner that protects and preserves the Charlotte Harbor estuarine system.

### *Objective:*

Permitting and inspection processes for wastewater management should be improved to assure that future development does not result in unavoidable pollution of estuarine and freshwater systems.

### *Objective:*

Predictable impacts of development within wetland areas should be mitigated or prevented through a prior planning process.

### *Objective:*

The barrier islands and beaches of the Charlotte Harbor area should be managed as a whole, recognizing that any developmental activity potentially affects the processes of the entire barrier beach, barrier island, and pass system.

*Objective:*

Existing and future water needs of the natural systems, areas of existing and projected population growth, and agricultural areas are to be met.

*Objective:*

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.

*Objective:*

Mitigation and prevention of development impacts should be initiated during site planning and site alteration processes.

*Objection:*

Predictable dredge and fill impacts within the Charlotte Harbor area should be minimized through a prior planning process.

*Objective:*

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.

*Objective:*

Coastal areas should be managed in a manner which minimizes the threat to life and property caused by tidal flooding.

**National Estuaries Program**

The City of Sanibel supports the Environmental Protection agencies initial efforts to fund implementation of the Charlotte Harbor Management Plan through the National Estuaries Program.

## **PART 3.5. CAPITAL IMPROVEMENTS**

The purpose of this element of the Sanibel Plan is to ensure the economic feasibility of the Plan.

### **Section 3.5.1. Capital Improvements Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177, Florida Statutes and Chapter 9J-5.016(3) of the Florida Administrative Code.*

#### **Background Discussion**

The purpose of the Capital Improvement Element, as stated in the Florida Administrative Code, is:

- ✓ to evaluate the need for public facilities, for each type of public facility, as identified in the Sanibel Plan,
- ✓ to estimate the cost of improvements for which the City of Sanibel has fiscal responsibility,
- ✓ to analyze the City of Sanibel's fiscal capability to finance and construct improvements,
- ✓ to adopt financial policies to guide the funding of improvements, and
- ✓ to schedule the funding and construction of improvements in a manner which ensures that public facilities are provided, when required, based on needs identified in this Plan.

For the purpose of this element, needed capital improvements or capital improvement deficiencies, are defined as those capital improvements required to achieve and maintain adopted level of service standards for public facilities established in Part 3.3 Human Support Systems Goals, Objectives and Policies of the Plan.

The data and analyses of this element of the Sanibel Plan, pursuant to Chapter 163.3177(3), Florida Statutes and the minimum review criteria of Chapter 95-5.016 of the Florida Administrative Code, are also provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

The City of Sanibel currently prepares a Five-Year Capital Improvements Program and an annual capital budget. The City's Capital Improvements Program, distinct from this Capital Improvements Element, is to be consistent with the Capital Improvements Element. The Capital Improvements Program is to reflect the goals, objectives and policies of the Capital Improvements Element and its implementation strategy.

Because of the City's successes in avoiding the occurrence of deficiencies in public facilities, implementation of level of service standards has not significantly impacted the City's Capital Improvements Program.

Any projects from the Five-Year Schedule of Capital Improvements (those public facilities needed to maintain or attain adopted level of service standards for public facilities), established in this Plan, are to be incorporated into the City's Capital Improvements Program.

Currently, well over 90% of the residential and commercial sectors of the Future Land Use Map are developed or located in or adjacent to developed and serviced areas. In response to Sanibel's growth into a mature stage of its future land use, local practices for capital improvements have emphasized correcting past deficiencies and improving current service. With the exception of Wastewater Treatment, there is virtually no need to expand the service areas of public facilities (human support systems).

In 1985, the Florida Legislature mandated that local governments plan for the availability of public facilities and services to support development concurrent with the impacts of that development. This Capital Improvement Element is included in the Sanibel Plan to comply with this mandate.

This section of the Sanibel Plan establishes goals, objectives and policies for capital improvements, particularly those capital improvements required to attain and maintain minimum level of service standards for municipally provided public facilities, established in Part 3.3 Human Support Systems Goals, Objectives and Policies of the Plan.

The State of Florida requires that level of service standards for public facilities be included in comprehensive land use plans. These level of service standards are established to ensure that adequate facility capacity will be maintained and provided for existing and future development.

Level of service standards are established for the following public facilities (including potable water delivery which is provided by the private sector and solid waste disposal facilities which is provided by Lee County).

- ✓ Roadways in the Transportation Element (See Section 3.3.3)
- ✓ Recreation facilities in the Recreation and Open Space Element (See Section 3.3.7)
- ✓ Drainage facilities in the Storm Drainage Element (See Section 3.3.6)
- ✓ Wastewater treatment facilities in the Wastewater Treatment Element (See Section 3.3.4)
- ✓ Potable water facilities in the Water Supply Element (See Section 3.3.2)



✓ Solid waste facilities in the Solid Waste Element (See Section 3.3.5)

Level of service standards indicate the acceptable capacity per unit of demand for each public facility. These level of service standards are to be employed in the issuance of development orders and permits.

The City of Sanibel has been successful in providing public facilities in advance of the occurrence of deficiencies in the adopted level of service for these facilities. The updated analysis for this element concludes that there are no capital improvement projects needed to attain or maintain the adopted level of service standards for public facilities.

Any municipally provided facilities that would be needed to attain compliance with adopted level of service standards would be included in the Five-Year Schedule of Capital Improvements in this Element of the Plan.

Any projects that would be needed to attain adopted level of service standards, from the Five-Year Schedule of Capital Improvements, would also be included in the City's Capital Improvements Program. The City's Capital Improvements Programs also include other capital projects; those not needed to attain minimum level of service standards.

An analysis of capital improvement needs and funding is provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*.

There are no capital improvement projects needed to attain or maintain the adopted level of service standards for public facilities. The capital improvement projects included in the 1988 Five-Year Schedule of Capital Improvements have been completed. Therefore, there are no capital improvement needs (required to attain or maintain adopted level of service standards for public facilities) projected for the initial timeframe of this Plan, that is through the year 2000.

The City of Sanibel will continue to fund capital improvement projects before deficiencies in level of service for public facilities arise. The City is capable of funding the capital improvements identified on the Five-Year Schedule of Capital Improvements and the Five-Year Capital Improvements Program.

### **Goals, Objectives and Policies**

The goals, objectives and policies of this section of the Sanibel Plan direct the implementation, evaluation and monitoring of the Capital Improvements Element.

#### ***GOAL STATEMENT:***

**Needed public facilities (human support systems) are to be provided to Sanibel residents and land uses within its jurisdiction, in a manner that protects and maximizes use of existing facilities, maintains adequate levels of service and promotes orderly and environmentally sound growth.**

***Objective 1:***

Schedule capital improvements for facilities needed to replace obsolete or worn out facilities and accommodate existing development and desired future growth.

**Policy 1.1.** Capital improvements projects will be evaluated to determine their impact on attaining the objectives of the Sanibel Plan. This evaluation, directly related to the individual elements of the Plan, is also based on the following criteria:

- ✓ contribution to the elimination of public hazards,
- ✓ contribution to the elimination of facility capacity deficits or obsolete facilities,
- ✓ impact of the improvement on the City's budget,
- ✓ the financial feasibility of the improvement,
- ✓ locational requirements of the facility,
- ✓ contribution to serving projected growth patterns as illustrated on the Future Land Use Map, and
- ✓ compatibility with the plans of State agencies and the South Florida Water Management District.

***Objective 2:***

Limit public expenditures in the coastal area subject to storm surge (the velocity zone identified on the Federal Flood Insurance Rate Map) and scour.

**Policy 2.1.** Public expenditures in coastal areas subject to storm surge (the velocity zone identified on the Federal Flood Insurance Rate Map) and scour will be limited to maintenance, public safety needs, recreation and open space uses, restoration or enhancement of natural resources or land acquisitions.

***Objective 3:***

Development orders and amendments to the Sanibel Plan are to be coordinated with the availability of human support systems needed to maintain adopted level of service standards.

**Policy 3.1.** No permits will be issued for future development which would result in an increase in demand for facilities that do not comply with the minimum level of service standards established in this Plan.

**Policy 3.2.** Prior to the issuance of certificates of occupancy, public facilities (human support systems) needed to serve the development will be available. This policy applies to developments that have obtained development orders or development permits prior to adoption of this policy as part of the Sanibel Plan.

**Policy 3.3.** Pursuant to Part 3.3. of the Sanibel Plan, Human Support System, the Land Development Code will ensure that development orders and permits include conditions ensuring that adequate facility capacity is available or will be available when needed to serve the development.

***Objective 4:***

Ensure that fiscal resources are available to provide needed human support systems, in accordance with the Five-Year Schedule of Capital Improvements in order to maintain adopted level of service standards and meet current and future facility needs.

**Policy 4.1.** The City of Sanibel will continue to maintain a Capital Improvements Program and an Annual Capital Budget as part of its budgeting process.

**Policy 4.2.** The City's Capital Improvement Program and Annual Capital Budget will include the projects identified in the Five-Year Schedule of Capital Improvements provided in the Capital Improvements Element of the Plan.

**Policy 4.3.** Maintain the Interlocal Agreement with Lee County for the disbursement of Causeway Surplus Revenue.

***Objective 5:***

Manage land development in the City of Sanibel so that public facility needs created by future development do not exceed the City's ability to fund and provide needed capital improvements.

**Policy 5.1.** The ratio of outstanding capital indebtedness to the property tax base for the City of Sanibel will not exceed a maximum of 1:1.

***Objective 6:***

Future development will bear a proportionate cost of facility improvements necessitated by the development in order to adequately maintain adopted level of service standards.

**Policy 6.1.** The adequate facility ordinance, if adopted, will employ assessments for new development of a pro rata share of the costs necessary to finance public facility improvements necessitated by the development in order to adequately maintain adopted level of service standards.

**Section 3.5.2. Implementation, Monitoring and Evaluation**

*Pursuant to Chapter 163.3177, Florida Statutes and Chapter 9J-5.016(4) and (5) of the Florida Administrative Code*

Implementation, monitoring and evaluation is vital to the effectiveness of the Sanibel Plan. Because the City's revenues and expenditures are subject to fluctuations in the economy, the Capital Improvements Element will be reviewed on an annual basis to ensure that required fiscal resources are available to provide public facilities (human support systems) needed to maintain adopted level of service standards.

A Five-Year Schedule of Capital Improvements provides a mechanism for implementing the Capital Improvements Element of the Plan.

A Five-Year Schedule of Capital Improvements derived from the Elements of the Sanibel Plan is provided in the following Table. Revenue projections by funding source are provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*.

The Capital Improvements Element requires a continuous program for monitoring and evaluation. This element will be reviewed on an annual basis to ensure that required fiscal resources are available to provide public facilities needed to maintain level of service standards.

The Planning Commission (Local Planning Agency) will conduct an annual review of the Capital Improvement Element of the Plan and present findings and recommendations to the City Council. City Council will direct appropriate action for any required amendments.

The annual review of the Capital Improvements element will consider:

1. Corrections, updates and modifications concerning costs and revenues.
2. The element's consistency with other elements of the Sanibel Plan.
3. The economic feasibility of the Sanibel Plan.
4. The City's progress in reducing existing deficiencies (obtaining an acceptable level of service).
5. The priority assignment of scheduled capital improvements.
6. The City's effectiveness in maintaining adopted level of service standards.

## **PART 3.6. LAND USE**

The Land Use Element of the Sanibel Plan is a product derived from the other elements of the Plan; from the preceding parts of this Article.

This Land Use Element contains the Housing Element.

### **Section 3.6.1. Housing Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177, Florida Statutes and Chapter 9J-5.010(3) of the Florida Administrative Code.*

#### ***Background Discussion***

The purpose of the housing element, as stated in the Florida Administrative Code, is to develop appropriate plans and policies which demonstrate the commitment of the City of Sanibel in meeting existing and projected deficits that are identified in the supply of housing. These plans and policies address government activities as well as provide direction and assistance to the efforts of the private sector.

The data and analyses for this Element of the Sanibel Plan, pursuant to Chapter 163.3177(6)(f), Florida Statutes and the minimum review criteria of Chapter 9J-5.010 of the Florida Administrative Code, are provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

Private sector activities are currently effective in conserving and maintaining the existing housing stock. There is virtually no substandard housing in the City of Sanibel.

In accordance with the Development Intensity Map, a limited number of additional dwelling units, approximately 1400, are projected.

Limited land resources, available to satisfy all housing demands, presents a significant constraint to the provision of housing for very low, low and moderate income people. Partially in response to this situation, the City has implemented a Below Market Rate Housing Program.

The City of Sanibel is a small, distinct component of the regional housing market. The City supports the provision of housing to meet special needs. Yet, some housing needs are best satisfied by the housing stock outside the City in the larger regional housing market.

The housing inventory is comprised of data from both the *1990 Census of Population and Housing* and local sources. The information from these distinct sources is consistent but not readily compatible. Census data excludes motels and units for short-term occupancy from the housing stock and does not reflect the seasonal population component of the functional population. Local data includes the housing stock for both the resident and

seasonal population. The Sanibel housing stock totaled approximately 7600 dwelling units in 1995, compared with an estimated 2600 resident households. This wide disparity dramatizes the seasonal nature of occupancy and the accompanying high vacancy rates.

### *Characteristics of the Housing Stock*

In the regional housing market, the City of Sanibel represents a small yet distinct component. The number of dwelling units in Sanibel comprise a small percentage (less than 5%) of the total number of dwelling units in Lee County. This percentage is projected to decline, as indicated by the projected growth rates for Lee County and for the City of Sanibel.

Nearly 60% of the housing stock is in multi-family structures, chiefly condominiums. Approximately 40% of the housing stock is in single family houses. Mobile homes are only one percent of the housing stock. A few (250) camp sites are located in the trailer park.

Approximately 30% of the housing stock in the City of Sanibel has been constructed since 1980.

Sanibel has virtually no substandard housing and no pockets of housing deterioration or abandonment.

### *Affordable Housing*

The Sanibel Plan continues to provide opportunity for a diverse housing stock with a wide range of housing types permitted. Single family and multi-family structures are specifically permitted. Mobile homes are discouraged, however, because, despite the safety measures set out which take cognizance of the extreme vulnerability of the island to storm conditions, such housing would be very dangerous in heavy weather.

Development of all housing units is affected by the Land Development Code, building codes and other land use regulations, which are designed to accommodate the island's housing needs with the environmental fragility of its natural systems and its vulnerability to tropical storms of prime concern. Because of high land costs, and the need for construction techniques that provide storm protection, housing costs on Sanibel tend to be well above the average for residential building.

The *1995 Evaluation and Appraisal Report for the Sanibel Plan* identifies approximately 7600 dwelling units currently in the City of Sanibel. Over 60% of these units are occupied by tourists and the nonresident seasonal population. The participation of nonresidents and businesses in the Sanibel housing market has significantly contributed to the high cost of housing in Sanibel.

The cost of housing is high in the City of Sanibel. *The 1990 Census* identified only 48 (non-condominium) dwelling units in the City valued under \$100,000. The median value

of \$292,500 was reported in *the 1990 Census* for (non-condominium) dwelling units. *The 1990 Census* reported median rent at \$827, with only 103 units with contract rent under \$600 for the City of Sanibel.

In spite of the large percentage of high valued dwellings in the existing housing stock, there are units in the City of Sanibel that are available to moderate income households. There are approximately 35 modest apartments located in association with commercial developments, and one 13 bedroom employee housing complex with shared kitchen facilities. There are 80 manufactured homes in the Periwinkle Park. There are also approximately 70 moderate-value non-waterfront condominium units.

The high cost of housing is impacted by the limited supply of vacant developable land. Only an additional 1400 dwelling units are projected to be added to Sanibel's housing stock at "buildout". Approximately 1000 of the additional units are anticipated as infill development on existing residential lots. The other approximately 400 units are anticipated on undeveloped (unsubdivided) lands.

In the inventory of 1000 existing vacant residential lots, there are a few lots valued under \$50,000 with virtually no lots valued under \$25,000. In the inventory of raw undeveloped residential land, estimated to allow a total of 400 units, land values under \$50,000 a unit would be hard to find and the cost of improvements would increase the per unit cost.

The situation of high land values is an important factor in assessing opportunities for providing affordable housing. The high cost of vacant land has contributed to the lack of moderate cost housing provided by the private sector.

It is evident from an analysis of the existing housing stock and the vacant developable land inventory, that the private sector is unable, without a major philanthropic effort, to provide housing on Sanibel that is affordable to very low, low and moderate income households. In fact, assistance programs are generally unable to cost effectively bridge the gap between the money available for housing by very low, low and moderate income households and the high cost of (to purchase or rent) housing in the City of Sanibel.

### *Subsidized Housing*

In the City of Sanibel, there are few privately owned renter-occupied housing units currently using Federal Section 8 rental subsidies. There are 42 renter-occupied units currently in the City's Below Market Rate Housing Program (BMRH).

### *City of Sanibel's Below Market Rate Housing Program*

Provision for moderate-income housing has had to rely on assistance from the City in cooperation with the private sector. In response to the need, and in compliance with the provisions of this Plan and the State's Local Government Comprehensive Planning Act of 1975, the City of Sanibel enacted a Below Market Rate Housing (BMRH) program. This program, established more than 15 years before the Vision Statement was added to the

Sanibel Plan, is consistent with that expression of the community's aspiration for its future. The Below Market Rate Housing program, reflective of the values of the community, provides affordable housing opportunities for residents of moderate incomes or less.

Sanibel is nationally known for its dedication to remaining a "sanctuary" island for humans and wildlife. Less well-known, but just as important, is the City's commitment to maintaining a strong, diversified sense of community.

As specified in its Vision Statement, Sanibel "cherishes its ... economic diversity," and "will endeavor to maintain it." Though the City might hypothetically satisfy state standards by providing low-income housing opportunities in nearby jurisdictions, it would in so doing fail to meet its own higher standard. Through the adoption of a Vision Statement in 1996, the citizens of Sanibel have reiterated their desire to maintain an economically diverse community.

To require that lower-income members of the community move to other jurisdictions to benefit from the City's Below Market Rate Housing program would contradict the City's Vision Statement, and defeat the very purpose of the BMRH program. Given the reality of Sanibel's status as a prosperous municipality that borders on far less prosperous communities, the effect of having an off-island housing program would be to establish a two-tier system. Providing for affordable housing off-island would mean that some of the lower income members of this community may be denied the opportunity to participate as full voting citizens. Additionally, the children of lower income members of the community may be denied the opportunity to associate with children of more prosperous residents at the Sanibel Elementary School. Senior members of our community with limited assets and lower incomes may be denied the opportunity to remain among lifelong friends and associates.

Sanibel's BMRH program deliberately breaks with many of the patterns established by public housing programs elsewhere. To underscore the fundamental equality of all citizens, BMRH units are constructed and landscaped to be virtually indistinguishable from the rest of the community. That eliminates the stigma that is usually attached to being in public housing, ensures that such housing conforms to the aesthetic standards of the community, and thereby fosters a well-earned sense of civic pride. It is the City's goal to maintain that emphasis, as expressed in the Goal Statement for Housing and Policy 3.1 in this section.

The BMRH program has evolved to the present 42 units, 39 of which are owned by the nonprofit organization, Community Housing and Resources, Inc., acting as the City's Housing Foundation. Community support of the City's relationship with Community Housing and Resources, Inc. in the administration of the Below Market Rate Housing Program was affirmed in a November 1996 referendum.

The City funds most of the organization's administrative costs and provides the nonprofit organization with loans or grants for land or building acquisition, construction, or other



purposes on a case-by-case basis. Key elements of the BMRH ordinance permit relaxation of density in specified ecological zones and allow residential use in connection with commercial development, all on a case-by-case basis. City contributions toward infrastructure (e.g. roads, sewer, water) would be additionally supportive of moderate income housing.

The present 42 units, 40 of which are committed to the City's BMRH program in perpetuity, provide affordable rental housing to approximately 100 adults and children. The City is acquiring a site for 12 additional BMRH units which are targeted to provide affordable housing opportunities to seniors.

### *Other Housing*

In the City of Sanibel there are currently no group homes or foster homes licensed by the State of Florida. Group homes and foster homes are permitted in residential districts. Due to concerns for hurricane evacuation safety, only small scale group homes or foster homes are appropriate on the island. Large and medium size congregate living facilities are inappropriate on a barrier island, with evacuation constraints such as those present on Sanibel.

There is one mobile home park in the City of Sanibel. This lawfully existing use contains 80 mobile homes and 246 park sites for recreational vehicles. Unless constructed in strict compliance with the Sanibel Building Code, new mobile homes, as defined by Chapter 9J-5.003(52) of the Florida Administrative Code, are inappropriate for a barrier island such as Sanibel.

In the City of Sanibel there are no historic districts. An inventory of historically significant housing is provided in the Historic Preservation Element of the Plan.

### **Housing Needs**

To achieve consistency with other elements of this Plan, particularly the Safety, Coastal Zone Protection and Conservation Elements, the supply of additional housing must be controlled. In 1995, approximately 85% of the housing stock anticipated in the City of Sanibel at buildout has already been constructed.

In general, there is a demand for Sanibel housing that has produced high property values and resulted in scarcity of very low, low and moderate income housing on the island. Because of the high value of the existing housing stock, and exceptionally high land and construction costs, government assistance will continue to be necessary to address the need, by young and old alike, for this type of housing on Sanibel.

The City's Housing Foundation has identified the need to provide affordable housing units for independent seniors who do not require assisted living arrangements.

### *Land Requirements for Housing Needs*

The Future Land Use Element, reflecting all the elements of this Plan, has incorporated the concept of buildout which has always been a foundation of the Sanibel Plan. The concept of buildout was established in recognition of constraints imposed by the need for hurricane safety, adequate delivery of services and natural resource protection. These constraints clearly demonstrate that unlimited future growth would be hazardous to health, safety, and welfare of the public. This discussion of density and intensity of use, used to establish the objectives of the Sanibel Plan, helps demonstrate the limited land resources available in the City of Sanibel. Housing needs can be satisfied only within the constraints imposed by limited land resources. This limit on future growth, always part of the Sanibel Plan, is reflected in the Development Intensity Maps.

The supply of additional housing, permitted in accordance with the Development Intensity Map, is expected:

- ✓ to be predominately single family residences and a small amount of relatively small scale multi-family structures,
- ✓ predominately high value (cost and rent) units for middle and upper income households.

The provision of moderate cost housing will continue to require the cooperation of the public and private sectors. The provision of housing for households with very low, low and moderate incomes will continue to require the cooperation of other local governments where land is more available and affordable.

#### *Adequate Sites for Very Low, Low and Moderate Income Housing*

As clearly established by the Sanibel Plan, there are many valid reasons for limiting the intensity of land use in the fragile ecosystem of the City of Sanibel. Valid reasons that have not only received extensive community support, but reasons that have been accepted, and to some extent endorsed by, the Southwest Florida Regional Planning Council and the Florida Department of Community Affairs. Consequently, as the City of Sanibel reaches 85% of its projected buildout for residential and non-residential land uses, there are few opportunities to provide affordable housing in a community where land use patterns are so established and land values are so high.

Pursuant to Florida Statutes Section 163.3177(6)(f)(2), the Florida Department of Community Affairs conducted an "affordable housing needs assessment". The City has received and reviewed this needs assessment as one basis for the preparation of this Housing Element. *The User's Guide for the Affordable Housing Need Assessment Methodology* states that, "If local communities do not feel that these estimates and projections reflect their expectations for their community, then they may propose alternatives to be considered." There are many factors that must be considered, incorporated and reflected in a realistic affordable housing needs assessment for the City of Sanibel. These factors include valid limitations on the intensity of land use throughout the island, valid growth management regulations for the protection of natural resources

and valid concerns for safe hurricane evacuation, all resulting in a valid threshold for community "buildout". Other factors, such as the high cost of existing housing, the predominant occupancy of existing housing by nonresidents and the limited availability and high cost of vacant land must also be reflected.

The *User's Guide* for the methodology for the State's need assessment states, "...projections for small areas such as cities,..., are difficult because of the influence of ..., land availability, zoning, ... and other factors that have a large impact at the local level." The *User's Guide* for the methodology also states that, "Other factors...to consider when applying this methodology include the influence of ..., buildout,...and changes in the demographic character of the area."

The data and analyses from this needs assessment is being used as one basis for this Housing Element. However, it is critical to note that in, and consistent with the Sanibel Plan, are projections for about 1400 additional dwelling units. The State's needs assessment for affordable housing identifies a deficiency of about 1000 dwelling units by 2010. Historically the waiting list for the BMRH program averages 30-50 very low, low and moderate income households, well below the State's estimates of Sanibel's affordable housing needs. For all the reasons cited above, the State's needs assessment is inappropriate for this community and does not reflect the historically documented need for affordable housing on Sanibel.

A limited amount of affordable housing can continue to be available within the community through continuation of the Below Market Rate Housing Program. Currently there are 42 BMRH units, representing about 1.6% of Sanibel resident households. A program target suggested in the 1995 Evaluation and Appraisal Report was for BMRH units available for 2.2% of Sanibel resident households. This target results in an existing deficiency of 16 additional BMRH units; and a projected deficiency of 14 more BMRH units at "buildout". These 29 additional BMRH units would increase the total number of units in the program to 69 units at "buildout". However, the achievement of this program target will be dependent on the availability of sites that can be developed in a cost-effective manner consistent with the objectives and policies of the Sanibel Plan. This needs assessment was prepared to provide a minimum and achievable target for the City's Below Market Rate Housing Program. However, it is not intended to place a limit on the program. If fiscally sound opportunities arise to provide units in excess of these targets then these opportunities should be considered for their value in maintaining diversity within the community. In fact, the Board of Community Housing and Resources suggests using a 3% of households as a realistic program target. This target, at 3%, indicates an existing need for an additional 36 BMRH units and the need for a minimum and achievable target of 55 additional units over the next 20 years (i.e., through buildout). The City will continue to fine-tune its determination of affordable housing needs, in accord with its Vision Statement and changing local conditions.

To assist in providing sites for moderate-income housing, the City allows density increases, in accordance with specified conditions, for dwelling units in the City's Below Market Rate Housing Program. To provide additional sites for very low, low and

moderate income housing, the City has considered leasing or purchasing land for below market rate housing construction by the Housing Foundation, and is acquiring a site for affordable housing for seniors, in keeping with the goals and provisions of the Sanibel Plan.

There are no regulatory barriers created by the City that are intended to prevent the provisions of affordable housing in the City of Sanibel. There are no local public sector impediments pertaining to fair housing.

There can be adequate sites in the region to meet state identified housing need of very low, low and moderate income households. Since housing is a regional resource, the City of Sanibel will cooperate with other local governments, to address housing needs identified on a countywide and regional basis. However, the City's focus will continue to be on its on-island BMRH program, in accord with Sanibel's adopted Vision Statement supporting a community which "cherishes its... economic diversity" and "will endeavor to maintain it".

The City of Sanibel will continue to evaluate its Below Market Rate Housing Program to seek opportunities for its continuation in a manner that is both cost effective in its use of available local subsidies and consistent with the objectives and policies of the Sanibel Plan.

### **Plan for Housing**

No community housing goal is complete without concern for equity which few communities can claim to have achieved. Sanibel is not alone in having grown without specific attention to housing for people with varying means. The City of Sanibel's plan for housing is to include the following activities:

1. Actively pursue ways to ensure equal access to an open housing market for all persons regardless of age, race, religion, sex, color, national origin, marital status, disability or place of birth.
2. Avoid establishing regulatory barriers to the provision of affordable housing.
3. Discourage additional resort housing from occurring outside of currently established resort housing areas.
4. Restrict development intensity in the resort housing areas that is in excess of levels upon which the Sanibel Plan was predicated.
5. Allow for provision of adequate sites for foster family homes, adult congregate living homes, residential child care, and similar specialized housing facilities, while assuring that these facilities are small-scale and appropriately coordinated in the City's Hurricane Evacuation Plan.

6. Consider introducing a mechanism for providing assistance in assembling the necessary rights-of-way and easements for certain infrastructure, such as road and drainage improvements, that may be required for BMRH projects.

## **Goals, Objectives and Policies**

### ***GOAL STATEMENT:***

**Provide safe and decent housing in adequately serviced neighborhoods to meet the needs of the present and future residents of the City of Sanibel.**

#### ***Objective 1:***

Incorporate into the adopted Land Development Code, consistent with the Sanibel Plan, incentives for the private sector to provide adequate and affordable housing to meet the needs of the present and future residents of the City of Sanibel.

**Policy 1.1.** While providing for the health, safety and welfare of the residents of Sanibel, improve coordination with private, including nonprofit, sector efforts to provide housing which meets the needs of present and future residents, particularly those with special housing needs, by reviewing the regulations contained in the Land Development Code.

**Policy 1.2.** The Planning Commission will annually review the permitting process for private sector housing to determine if improvements in the permit process are warranted.

**Policy 1.3.** Prior to issuing a development permit for new housing, the developer will demonstrate to the City that the infrastructure and public facilities needed to support that housing are in place or will be in place prior to occupancy of the housing.

#### ***Objective 2:***

Conserve and maintain the City's sound and aesthetic housing stock by requiring permits for work done on existing structures and inspections for compliance with the Land Development Code and the Building Code.

**Policy 2.1.** Maintain standards in the Sanibel Land Development Code and Building Code which ensure quality housing that is safe and structurally sound and promotes stable neighborhoods.

#### ***Objective 3:***

Increase the total number of housing (dwelling) units that are available to persons of very low, low and moderate income.

**Policy 3.1.** Provide for Sanibel-determined affordable housing needs on-island, through continuation of the City's Below Market Rate Housing Program.

**Policy 3.2.** Annually review the effectiveness of the City's Below Market Rate Housing (BMRH) (affordable housing) program and implement warranted revisions.

**Policy 3.3.** Support and assist the efforts of the Housing Foundation to increase the number of Below Market Rate Housing (affordable housing) units based on identified need.

**Policy 3.4.** Maintain the provision of the Land Development Code allowing conditional use increased density (additional unit bonus) for Below Market Rate Housing (affordable housing).

**Policy 3.5.** Distribute Below Market Rate Housing (affordable housing) units on Sanibel to provide a variety of residential settings and avoid undue concentration for very low, low and moderate income housing.

**Policy 3.6.** Apply for assistance under federal and state housing programs when it appears the City may qualify for assistance.

**Policy 3.7.** Ensure that Below Market Rate Housing units continue to be developed and maintained in a manner that is compatible with the character of the community.

**Policy 3.8.** Due to unusually high property values in the City, the City's location entirely within the coastal high-hazard area and the City's nearness to "buildout", there are a very limited number of sites available for any additional housing, much less for private sector-provided affordable housing. Consequently, if the City is unable to meet Sanibel-determined affordable housing needs on-island, through its BMRH program, the City will request that Lee County incorporate the unmet need in the county's affordable housing program.

***Objective 4:***

Make provisions for small-scale group homes and foster care facilities licensed or funded by the Florida Department of Children and Families by permitting them in accordance with the standards and requirements of the Land Development Code.

**Policy 4.1.** Allow for provision of adequate sites for group homes and foster care homes that are small-scale and appropriately coordinated in the City's Hurricane Evacuation Plan. Due to concerns for hurricane evacuation safety, large and medium size congregate living facilities and facilities which provide custodial care are inappropriate for location within the City of Sanibel.

**Policy 4.2.** Ensure that, by continued implementation of the development regulations of the Land Development Code, group homes and foster care facilities are not excluded from, or over-concentrated in, any residential district or area.

***Objective 5:***

Consistent with State Statutes and the Lee County Comprehensive Plan, new mobile home parks, mobile home condominiums, mobile home cooperatives and mobile home subdivisions, are not permitted on barrier islands, that is within the City of Sanibel.

**Policy 5.1.** New mobile home, as defined by Chapter 9J-5.003(52) of the Florida Administrative Code, construction or installation will comply with the regulations and standards of the Sanibel Land Development and Building Codes.

***Objective 6:***

Historically significant housing will be protected and preserved for residential use, by incorporating into the Land Development Code incentives for the private sector.

**Policy 6.1.** Incorporate in the Land Development Code regulations which will permit the preservation, improvement and continued residential use of historically significant housing.

**Policy 6.2.** Maintain historically significant housing as identified on the Local Register of Historic Sites and Structures.

***Objective 7:***

Require substandard housing conditions to be eliminated when work is done on a house under a City permit.

**Policy 7.1.** For any substandard dwelling unit (i.e., structurally unsound and an immediate threat to health, safety and welfare) in the City of Sanibel, the owner will be cited for the violations and ordered to comply with the appropriate requirements of the Sanibel Building Code.

**Policy 7.2.** Continue code enforcement activities.

***Objective 8:***

Although no household (dwelling unit) displacement is projected in this Plan, if people are ever displaced by City programs, ensure that equitable treatment is provided to displaced people consistent with Section 421.55, Florida Statutes.

**Policy 8.I.** Should displacement by City programs occur, a program will be developed to ensure that standard housing is available to people displaced by City programs, prior to their displacement.

### **Section 3.6.2. Future Land Use Goals, Objectives and Policies**

*Pursuant to Chapter 163.3177, Florida Statutes and Chapter 9J-5.006(3) of the Florida Administrative Code*

#### ***Background Discussion***

The data and analyses for this element of the Sanibel Plan, pursuant to Chapter 163.3177(6)(a) and (7)(f), Florida Statutes and the minimum review criteria of Chapter 9J-5.005(2), .006 and .009 of the Florida Administrative Code, are also provided in the *1995 Evaluation and Appraisal Report for the Sanibel Plan*, adopted January 2, 1996.

Sanibel, located on a barrier island, is approximately 17.5 square miles in area (11,600 acres). The principal use of over 50% of the area in the City of Sanibel is conservation use. More than 8 square miles of the City are owned and managed by the federal government as the J. N. "Ding" Darling Wildlife Refuge. The Sanibel-Captiva Conservation Foundation owns more than a square mile of additional land which is managed for conservation purposes.

The City of Sanibel is located entirely within the Coastal Floodplain. The City has participated in the federal flood program since 1979. Flood and stormproofing regulation, which implement this program, are part of the Sanibel Land Development Code.

In accordance with Chapter 9J-5.009 of the Florida Administrative Code, a Ports, Aviation, and Related Facilities Element is not required for the Sanibel Plan. There are no ports, harbors, or aviation facilities in the City of Sanibel. Air access for emergency vehicles is maintained.

There are no areas of designated critical state concern, pursuant to Section 380.05, Florida Statutes, within or adjacent to the City of Sanibel. The Sanibel tidal wetlands are part of the Pine Island Sound Aquatic Preserve.

#### ***Land Uses Adjacent to Sanibel***

State submerged lands are the adjacent land use to the City of Sanibel. The southern end of Captiva, adjacent to the Blind Pass Bridge, is public beach and low density single-family residential use. Punta Rassa, adjacent to the Sanibel Causeway, is high density hotels and condominiums, a tennis stadium and Resource Protection Lands. The McGregor/Summerlin Road Corridor, Sanibel's hurricane evacuation route, is expected to receive a large portion of the County's new development during the planning period for this Plan.



### *Annexation/Expansion of Corporate Boundaries*

In 1990, the City expanded of its corporate limits to ½ mile offshore; into the coastal waters on State owned submerged land. The City is considering further expansions of its corporate limits to include submerged land and of the Sanibel Causeway.

### *Population Estimates and Projections*

The constraints imposed by the need for hurricane safety, adequate delivery of services and natural resource protection clearly demonstrate that unlimited future population growth would be hazardous to health, safety and welfare of the public. To minimize these hazards it is essential to limit the total number of dwelling units, including hotel and motel units, trailer spaces, condominiums, timeshare units, duplexes and single family houses to approximately nine thousand (9,000) units, until such time it can be demonstrated that the community's ability to provide public facilities and services necessary for health, safety and welfare could reasonably accommodate increased numbers of dwelling units, while continuing to provide for hurricane safety, adequate delivery of services, protection of natural resources and maintenance of the character of the community.

It is important that the City of Sanibel manage future growth by maintaining current development controls, particularly intensity of use requirements, as buildout is approached, in order to prevent overcrowding of land and avoid undue concentration of population; to facilitate the adequate and efficient provision of transportation, water, sewage, schools, recreational facilities, housing and other requirements and services; to ensure adequate hurricane evacuation capabilities; and to conserve, develop, utilize and protect natural resources,

Sanibel, although a newly-incorporated city (1974), has reached a mature stage in its development. In 1995, eighty-five percent (85%) of the dwelling units permitted on Sanibel, in accordance with the Development Intensity Map have already been constructed.

The population estimates and projections for the Sanibel Plan are provided in the following table. These population projections utilize the same methodology as used in the 1989 Plan.

During peak season, the seasonal population of the City of Sanibel is approximately twice as large as the resident population. For this reason, the functional population (comprised of the resident population and the seasonal population) is the important population to consider for the analyses and evaluation of service delivery systems and impacts of development.

In addition to the functional population, the City of Sanibel is impacted by the daily influx of day visitors. This population, which does not utilize overnight accommodations

within the jurisdiction of Sanibel, is mentioned here because of its potential impact on service delivery and maintenance of adequate level of service standards.

On an average day in peak season, the City of Sanibel estimates that approximately 13,000 day visitors enter the jurisdiction. This estimate was derived from the origin/destination survey conducted on the Sanibel Causeway in February, 1988. It would be difficult to project the number of day visitors for future years, but it is reasonable to expect that the number will increase.

For the planning purpose of analyzing and evaluating service delivery systems, the medium range functional population estimates and projections are utilized in this Plan. However, to retain consistency with development of the Sanibel Plan, the number of dwelling units may be utilized for the preparation of level of service standards.

### *Land Use Projections*

At buildout, an additional 1,400 dwelling units are projected to be constructed in the City of Sanibel. One thousand of these units are expected to be located within existing developments. The remaining 400 units are projected to be located on the vacant and undeveloped land shown on the Existing Land Use Map.

Approximately 70,000 square feet of additional commercial floor area can be developed in the City of Sanibel, in accordance with the Commercial District Map and regulations of the Land Development Code.

### **Permitted Uses**

The use of land and buildings in the City of Sanibel should be determined by the capacity of natural and human-made environments to accommodate such uses without hazard to health, safety and welfare of the citizens and visitors to the City. The determination of permitted uses also should take into account existing patterns of development, the need to maintain compatibility with existing uses and the desire to retain the character of the community.

The Sanibel Plan provides that the type and intensity of future land uses permitted will be determined by the capacity of the City to accommodate further development in an orderly manner with minimum negative impact. In addition to these overall considerations, environmental factors intrinsic to each ecological zone, compatibility with existing land uses, availability of adequate human support systems and compatibility with all elements of the Plan influenced the choice of permitted uses and development intensity.

### **Plan for Permitted Uses**

This section of the Plan discusses the general principles from which future permitted uses are derived. It is the intent of the Plan to allow the continuation of existing uses in the

manner set out in the Land Development Code. The regulations controlling permitted uses are set forth in the Land Development Code.

The Land Development Code may permit certain conditional uses in various ecological zones, which uses are not specified herein, provided such uses are of a type and intensity consistent with the intent and purpose of the Plan, and provided such uses are limited and controlled by performance standards sufficient to accomplish the objectives of the Plan.

Consider development of a means of restricting permitted uses in certain residential areas to single family residential structures.

The following chart provides a guide for permitted uses established in the Land Development Code.

### **Development Intensity**

The constraints imposed by the need for natural resources protection, hurricane safety and adequate delivery of services, clearly demonstrate that unlimited future population growth and unregulated use of land would be hazardous to health, safety and welfare of the public. To minimize these hazards and to maintain the character of the community, it is essential to limit the total number of dwelling units, including hotel and motel units, trailer spaces, condominiums, time share units, duplexes and single family houses to a total of approximately 9000 units.

This will represent a growth of more than double the 4,000 units existing in 1975. In 1982 there were approximately 6,000 dwelling units existing. (The plan for residential development intensity adopted in 1976 contemplated approximately 7,800 dwelling units if the city built out in conformance with all the regulations in effect with adoption of the 1976 Comprehensive Land Use Plan.)

If dwelling units are kept within a range of approximately 8,900 units, the water consumption and sewage generation can probably be handled in a manner consistent with the public health, safety and welfare, based on present knowledge. Further data could, of course, indicate a need to reduce or the ability to increase these limits.

Moreover, by keeping the number of persons using the island to these levels, it should be possible with careful planning to safeguard the lives of the people on Sanibel and Captiva in case of all but the most extreme hurricanes.

The formula used to allocate densities throughout the city in the 1976 Comprehensive Land Use Plan is described in the appendix to the March 1976 draft of the plan, which took into account the municipal economy, physical land capability and the adequacy of human support systems including the proximity of land to them. Policies were developed that future growth should be directed to areas where services are available and that environmentally valuable or hazardous areas should have proportionately less growth. The formula also took into account capital investments already made to prepare land for

development and the degree to which a project or subdivision was improved and built out. The result of this process allocated 2,000 dwellings across the island in densities ranging from 1 dwelling unit per 33 acres to 5 dwelling units per acre, depending upon the location, ecological zone and the extent of improvement to the land. Once the units were allocated under the formula, the planning commission made adjustments taking into account consideration of existing development patterns and the extent to which existing subdivisions and projects are consistent with the goals, objectives, and policies of the comprehensive plan. In some cases adjustments were made to ensure that the density allocation would not permit higher densities than would be consistent with the character of existing residential areas.

No development is permitted in the Gulf Beach and Bay Beach Preservation zones but these areas were allocated a residential density, all of which must be built landward of the 1974 Coastal Construction Control Line.

Because of increases granted in residential development intensity between 1976 and 1988 which increased the potential number of dwelling units from approximately 7,800 to approximately 8,900, further island-wide increases in density are not readily supportable. However, some modest adjustments in density, either increases or decreases, may need to be considered on a case-by-case basis to achieve other objectives of the comprehensive land use plan. The following factors indicate why island-wide increases in density are not generally supportable in the upcoming planning period:

1. Changes made by City Council, where warranted, to residential densities during 1976-1988. Examples include relief granted to owners of pairs of contiguous lots meeting certain standards, increased residential densities along Periwinkle Way to provide alternatives to commercial development, and adjustments made as a result of remapping of the city's ecological zones and where unique circumstances relating to a parcel were found to exist that had not been fully considered at the time the land use plan was adopted.
2. It is projected that by the year 2000, portions of Periwinkle Way, the island's main artery, will be used by more vehicles than it is capable of supporting.
3. The capability of the city to achieve the objectives outlined in the safety element of the plan, particularly to provide the opportunity for everyone to evacuate safely. The capability to evacuate safely has deteriorated since the adoption of the comprehensive plan, with the construction of additional dwelling units on-island, and as a result of unchecked development along the city's evacuation corridors in Lee County. Recent studies by city staff and its consultants are generally consistent with findings of the Southwest Florida Regional Planning Council which indicate that in excess of 18 hours are currently required to evacuate the islands, while only 12 hours' warning time can be expected from the National Hurricane Center. Projected increases in mainland densities along evacuation routes will result in further increase in time needed to evacuate, even with the construction of major new transportation arteries.

4. The goals of the comprehensive plan that are aimed at the conservation of natural resources. An inventory of vacant land in 1988 indicated that almost two-thirds of the vacant land on the island is located in either the mangrove, lowland-wetland or upland-wetland ecological zones, which are not readily developable unless the environmental precepts of the plan are aside.

5. Since 1899 there have been 36 tropical cyclones, 19 of them hurricanes, that passed within 75 miles of Sanibel, each of which posed significant threat to lives and property on the island most vulnerable to storm damage from sustained high winds, scouring due to wave action, battering from floating debris, and flooding due to storm surge.

6. The electors have amended the City Charter to require a supermajority vote of the members of City Council for increases in residential density.

There are circumstances, however, under which residential density could be increased for a specific site if mitigating considerations are found to exist which would outweigh potential drawbacks and work toward achieving other objectives of the Sanibel Plan. These are:

- a. where opportunities are provided for below market rate housing.
- b. to implement the Plan for Commercial Development by providing alternatives to commercial development through increased residential densities.
- c. to promote further conservation of environmentally sensitive lands by creating incentives to set aside sensitive land from development, such as the transfer of development rights.
- d. where unique circumstances are found to exist on a parcel, which had not been fully considered at the time of the initial adoption of the Development Intensity Map in 1976.
- e. where there is a resultant, overall city-wide decrease in the number of permitted dwelling units, provided that the density decrease does not originate on lands in the Environmentally Sensitive Lands Conservation District.

Intensity of non-residential uses are measured in a number of ways, including number of vehicular trips generated, number and type of uses located on a parcel, floor area, size and number of structures, hours of operation, water consumption, wastewater generation, and the like. Regulating intensity of use in commercial districts and for all non-residential land uses is important:

1. To assure that adverse impacts on adjacent lands and developments are minimized;
2. To assure that sufficient land area is available to accommodate the parking, drainage, waste water disposal and service needs of the commercial development;
3. To assure that enough native vegetation for the development is preserved or planted to have a pleasing appearance to both passers-by and customers; and
4. To assure that the level of activity is in keeping with the maintenance of the character of the community.

### **Plan for Development Intensity**

The distribution of residential development intensity shall be in accordance with the density allocation on the Development Intensity Maps of this Plan. The implementation of the Development Intensity Map is incorporated in the Land Development Code. A listing of Modern Platted Subdivisions established in the initial Sanibel Plan is provided in the following chart.

Residential density computations are based on the assumption that dwelling units will have an average occupancy of two and two-tenths (2.2) persons per unit. To the extent that dwelling units are of a type or size that will increase the average occupancy rate, the permissible number of units may vary from the number shown on the Development Intensity Maps in a manner to be determined by implementing development regulations in the Land Development Code.

By such implementing development regulations, the City Council may also permit residential densities in excess of those shown on the Development Intensity Maps as incentives to the provision of below market rate housing.

Through implementing ordinances, to be incorporated into a Land Development Code, the City Council may also permit development of lands in excess of the residential densities shown on the Development Intensity Maps in order to recognize vested rights and constitutional limitations with respect to lands individually owned prior to adoption of the initial Sanibel Comprehensive Land Use Plan.

The plan for controlling the intensity of commercial uses has several components. The first is to measure intensity of use as a floor area ratio, defined as the ratio of floor area to parcel size. In order to provide incentives in the development regulations for achieving planning objectives, the floor area ratios (FAR) reflect the need to:

1. Differentiate development intensity between Periwinkle Way and the Palm Ridge Road area so as to reduce the impact of commercial development on turning movements and traffic flow on Periwinkle Way and to preserve the ambience of Periwinkle Way;

2. Make distinctions in commercial floor area ratios for parcel size and road frontage to encourage consolidation of small adjoining parcels; and
3. Make reductions in the supply of commercially zoned land and limit creation of additional commercially zoned lands in accordance with the city's retail market analysis, which indicates that not all vacant commercial land can support retail uses without risking consequences of overbuilding.

Limit the intensity of conditional uses to the extent that these uses generate traffic impact to a significantly greater extent than permitted uses.

Limit the intensity of non-residential uses, permitted to be located in residential areas, to the extent that these uses are not disruptive of the residential character of surrounding community.

### **Commercial Development**

For the past twenty years, the Sanibel Plan and its Land Development Code, have been directed to ensure that the commercial sector of the community serves and blends in with the residential sector and natural resources of the community. Neither the commercial sector or any of its components should be out of character with the Vision Statement of this Plan.

#### *Commercial Districts*

Unlike most communities, Sanibel is located on a relatively isolated barrier island and therefore attracts almost no casual travelers passing through on their way elsewhere. Thus Sanibel needs fewer of the typical roadside types of commercial use than most communities its size.

Sanibel attracts a variety of tourists with special interests, such as shell collectors, beachgoers, birdwatchers, fishermen, tennis players, etc. Because few other communities attract a similar mix of tourists, it is difficult to provide a pattern on which commercial land uses can be based.

Because of the potential for retail overbuilding and its related adverse impacts, the potential supply of retail space has been reduced, consistent with reasonable demand considerations. Because of limited retail demand relative to the existing retail supply, the potential for retail overbuilding and associated adverse impact is great. Given the modest increase in retail demand likely to occur, applicants for development of centers larger than 12,000 square feet of retail floor area must demonstrate that no adverse economic or other consequence would result to the community from development of the center.

Incentives and disincentives should be incorporated into land use regulations to guide commercial development into clusters, rather than in a continuous commercial strip. Several commercial areas (nodes) along Periwinkle Way that are consistent with the

City's existing land use pattern were mapped, including outlying locations at the east and west ends of the island.

Alternative land uses to commercial development on Periwinkle Way, between the commercial nodes, have been encouraged. These land use alternatives are needed in order to discourage the expansion of commercial development outside designated Commercial Districts.

Further retail development should be discouraged on Periwinkle Way and encouraged in the Palm Ridge area because of the latter area's relatively good access from Periwinkle Way, Palm Ridge Road and Tarpon Bay Road, and because it is the geographical center of the Island. Development regulations designed for the Palm Ridge area should provide incentives to combine substandard (smaller) lots and to promote commercial development that primarily serves the needs of residents. In addition, a master plan should be developed for this area, as a further guide to development and to reinforce the town center concept.

On land located outside designated Commercial Districts, opportunities should be provided for development of special uses that are generally not either retail or office in nature, in instances where their development will not negatively impact adjoining land uses. The purpose of this district is to enable such special uses opportunities to locate on Sanibel in order to provide convenience services to island residents and businesses.

Opportunities should be provided for the provision of limited amounts of residential development in commercial zones, under controlled conditions, to provide opportunities for affordable housing and offer additional alternatives to commercial development.

The City desires to maintain a balance between the residential and resort (tourist) segments of the community, so that Sanibel remains an attractive and desirable residential community. It is apparent that the commercial developer views Sanibel as primarily a nonresident commercial market. And, left unregulated, this trend can be expected to continue to the point that Sanibel could become a destination shopping area, contrary to public desires.

The suitability of the Periwinkle Way corridor for residential development is being recognized, but the pressure for additional commercial zoning can be expected to continue.

The benefits that accrue to the community's public health, safety and welfare, through implementation of the above strategy, are:

- the development of an attractive residential environment that maintains the ambience and aesthetic charm of Sanibel;
- the reduction of the likelihood of retail overbuilding; and



- the improvement of traffic flow by reducing the potential for curb cuts and turning movements on Periwinkle Way likely to result from unchecked commercial development.

A current issue that needs to be further addressed is to ensure that commercial and non-residential structures are compatible with the character of the community.

### *Resort Housing*

Another type of income-producing use in the City of Sanibel is resort housing. Prior to the construction of the Causeway, such housing took the form of small motels and cottages and beach resorts. The construction of the Causeway brought more and bigger beach resorts.

The late sixties saw a statewide boom in the construction of condominiums extending into the early 1970s. Lee County permitted the construction of numerous condominium complexes some of which were constructed at locations dangerously close to the water and built at densities that detracted from the character of the Island as a desirable residential environment. Meanwhile, other condominium projects moved more and more into the resort hotel business with widely advertised short-term rentals.

These dramatic and rapid changes in the nature of the tourism business on Sanibel have had numerous impacts on the environment. The entire character of the community as a low-density settlement compatible with the natural environment was threatened. The unique environmental character of the Island, which provided the primary attraction for both tourists and permanent residents, was then in danger.

The protection of the character and long range base of the tourism industry demanded a significant reduction in the potential density of resort housing accommodations. The City had no desire and little capacity to cater to tourists, who preferred to vacation in a high-density, urbanized type of environment. Many other areas in this State willingly provide for and eagerly solicit the trade of such visitors. Sanibel offers unique charms, for which some people will pay a premium while they exist--but if they are destroyed by overuse, the City will have little to offer. Many of the finer beach resorts in Florida and throughout the world have been developed at low densities of 5 or 6 units per acre. Such densities permit the provision of amenities and services that will attract more selective tourists willing to pay a premium for Sanibel's special character.

With few exceptions, resort housing uses are permitted only in the Resort Housing District.

In order to maintain the residential character of the resort housing area, and to preserve to the maximum extent possible the natural features of this area, commercial development should be permitted only to the extent that it complements and serves primarily the needs of the residents of resort housing on site without disrupting the preservation of the scenic beauty of the natural beach.

Resort housing developments, particularly the larger ones, depend in large part on non-guests to help support their accessory commercial uses, especially restaurants. If resort housing developments are permitted to continue supporting their commercial developments by providing service to non-guests, a further expansion of Sanibel's commercial districts will result. The City has modified its regulations for future commercial development in the Resort Housing District to assure that the type and size of commercial uses permitted are supportable by the resort's guest.

A current issue that needs to be further addressed is to ensure that existing and new commercial developments are compatible with the Sanibel Plan's objectives for scenic preservation and maintenance of the character of the community.

### **Plan for Commercial Development**

- I. Encourage, through the Plan for Commercial Development, implementation of the Economic Assumptions of the Plan.
  - a. Require commercial uses to locate in the areas designated as Commercial Districts on the Commercial District Map and to develop in conformance with development regulations set forth in the Land Development Code and the guidelines established in the Plan for Commercial Development.
  - b. Discourage existing commercial uses that do not conform to the Commercial District Map and the Land Development Code from further expansion. These non-conforming uses should revert to a use permitted in the district in which they are located.
  - c. Continue to seek alternatives to commercial development on Periwinkle Way by monitoring the feasibility of the incentives contained within the development regulations.
  - d. Reduce the potential for future commercial development by providing developers with an incentive to develop commercial parcels as residential, providing the residential development is consistent with the purpose and objectives of the Sanibel Plan and is consistent and compatible with surrounding land uses and furthers the objectives of the Sanibel Plan.
  - e. Attempt to maintain a balance between various types of commercial activities by discouraging commercial development that exceeds the amount that can be supported on Sanibel based on retail market analysis, the capabilities of human support systems, hazard mitigation objectives, and other planning considerations. Periodically update the market and economic analysis in order to maintain its viability as a guide for commercial development.

2. Designate land for commercial development sufficient to serve the needs of residents and guests of the resort housing segment of the community, and adopt development standards to assure opportunities are available for a wide range of commercial activities to serve the needs of the resident and seasonal population.
3. Adopt development standards which take into account the full range of factors which contribute to intensity of use.
4. Restrict future commercial uses in the Resort Housing District, including the size of these uses, to only those that are designed to be entirely supportable by the resort's guests and that do not disturb the scenic beauty of the natural beach or cause degradation of the natural environment.
5. Adopt development standards which assure commercial developments contribute to maintenance of the character of the community by maintaining substantial vegetation buffers and by presenting architectural features that are compatible with the community as a whole.
6. Adopt development standards which assure commercial structures do not employ what is often referred to as "cookie-cutter" architecture and do employ architecture that contributes to the character of the community.
7. Apply development standards to existing conforming and non-conformings as well as new, commercial development, to assure that the standards will have a desirable long-term effect on commercial development in terms of the community's goals.
8. Develop a master plan for the Palm Ridge Area to reinforce the town center concept and to enhance the scenic appearance of this area. Consider the development of a Town Center/Town Square in the area of City Hall for linkages to the Palm Ridge Area Master Plan.

### **Community Design**

The community design element establishes the physical design policies of the City which will complement the other elements of the plan, pursuant to Chapter 163.3177(7)(f), Florida Statutes.

### **Plan for Community Design**

Analyze, and appropriately revise, the regulations of the Land Development Code to better address local concerns for the adequate protection of the character of the community.

Consider development of a Town Center/Town Square in the area of City Hall to serve as a focal point for community activity, special events and informal assembly.

Consider establishing a maximum size limitation for the amount of living area and floor area of single family dwelling units. This requirement could be citywide with further restrictions based on neighborhood characteristics and the size and characteristics of the site.

#### *Historic Preservation for Structures*

Historic structures should be preserved and maintained in a condition that represents their historic and architectural features.

#### *Historic Preservation of Roadways*

The Sanibel road system has historically served an area that is rural in character. Improvements to this road network should be consistent with the maintenance of the historic rural nature of this roadway system and the surrounding land uses.

People experience Sanibel by driving its streets and roads. The appearance of these streets and roads does as much to set the tone for the community as does any element of community design. Traffic calming and other techniques should be incorporated into the design and maintenance of Sanibel's streets and roads to reinforce the community's desired sanctuary quality and to alert motorists that the roadway is shared with non-motorists.

#### *Bicycle Path System*

Bike paths should be constructed for bicycles, tricycles, pedestrians and wheelchairs, setback from the edge of the road where possible, meandering in the right-of-way without sharp curves or obstructions to vision.

Major arterial and collector roads should all have bike paths connecting residential areas to other residential and commercial and non-residential sections of the Island. Wherever possible the City should acquire sufficient right-of-way to permit a buffer between the edge of the road and the bike path. Neighborhood roads can be used for bicycle travel and the automobile speeds should be regulated in all neighborhood areas to maintain safety for the health and welfare of all citizens. Traffic calming techniques should be employed to let the motor vehicle operator know that non-motorists share the streets and roads.

#### *Beach Access Walkovers:*

Beach walkovers should be constructed to protect beach vegetation essential for continued preservation of shorelines.

#### *Signs*

The visual appearance and physical construction of sign systems are not only determined by the graphic elements of type and style, but also by the environment in which the signs

appear and the function the signs are expected to play. The most important factors are legibility and the overall uniformity and consistency in application. Information should be communicated in a straightforward and aesthetically pleasing manner. Three basic systems for public signs for the Island are:

Circulation Components - directional in nature, to aid in control and guidance of vehicular and pedestrian traffic.

Identification Components - to reveal the functions of buildings, open space, etc.

Information Components - to make traveler aware of services, amenities and the environment around him.

All public signs should conform to designs and information characters of the international traffic signs whenever practicable.

Private signs should be restricted in size and be designed to be in character with the Island. In order to avoid obstruction of evacuation routes, free standing private signs should be set back from the right-of-way. Such signs should be limited in size to withstand local wind forces, and be constructed in such a manner as to preclude dislodgment during a storm and encroachment on the right-of-way evacuation routes if toppled over by wind.

### *Utilities*

The design of utility systems should consider ecological implications and minimize detrimental effects. All utility lines should be installed underground where soil and topographic conditions permit. Overhead poles can become a hazard in this hurricane-prone area.

### *Vegetation Buffers*

Vegetation buffers should be installed and maintained on both sides of all arterial and collector roads, in conformance with traffic safety considerations. Vegetation buffers should be installed and maintained on all sides of commercial development. Vegetation along streets and roads should be an integral component of traffic calming techniques.

### *Adaptive Design*

In a landscape as dynamic and varied as Sanibel's, building form should be adapted to the opportunities and constraints of the Island's climate, soils, vegetation and hydrology. Island-wide and ecological zone performance standards should insure that the human-made environment will preserve the valuable functions of the Island's ecosystem and that the safety and welfare of residences will be protected to a certain degree from storms by adequate setbacks and building elevations. However, the buildings can be oriented to maximize natural ventilation through the design of porches and breezeways. Shade can

be increased by the size of overhangs and natural drainage enhanced by avoiding gutters. These design strategies can increase human comfort and decrease maintenance cost.

### *Community Character*

All residential and non-residential structures should be designed and constructed in a manner that is compatible with the character of the community. For non-residential buildings, "cookie-cutter" architecture should be avoided.

### *Regulatory Elements*

The elements of this Plan are designed to direct and control use of the Island's natural resources as a human habitat in a fashion commensurate with the goals and objectives of the Charter of the City of Sanibel. In addition to the requirements of this Plan, therefore, the health, safety and welfare of the citizens of the City of Sanibel require that the City have a land development code, building code, plumbing code, electrical code and life safety code. These codes are necessary to ensure that the best engineering and construction practices are employed on the Island, and should be updated periodically to reflect advances and improvements in engineering and construction techniques.

## **Goals, Objectives and Policies**

### ***GOAL STATEMENT A:***

**The three-part statement of the community's vision of its future is a hierarchy; one in which the dominant principle is Sanibel's sanctuary quality. Sanibel shall be developed as a community only to the extent to which it retains and embraces this quality of sanctuary. Sanibel will serve as attraction only to the extent to which it retains its desired qualities as sanctuary and community.**

### ***Objective A1:***

Sanibel is and shall remain a small town.

**Policy A1.1.** The City of Sanibel will foster quality harmony and beauty in all forms of human alteration of the environment. The community aesthetic is defined as a casual style; one which is adapted to a relaxed island quality of life and respectful of local history, weather, culture and natural systems.

**Policy A1.2.** The City of Sanibel chooses to remain unique through a development pattern which reflects the predominance of natural conditions and characteristics over human intrusions. All forms of development and redevelopment will preserve the community's unique small town identity.

**Policy A1.3.** The City of Sanibel chooses to preserve its rural character. "Auto-urban" development influences will be avoided. The commercialization of natural resources will be limited and strictly controlled.

***GOAL STATEMENT B:***

**Future Land Uses, their character and location, in the City of Sanibel will:**

**promote safety and maintain evacuation capabilities,**

**promote the protection of natural, environmental, economic and scenic resources,**

**promote adequate provision of human support systems,**

**promote intergovernmental coordination, and**

**reflect the City's Capital Improvements Program**

**to ensure implementation of the objectives and policies of the Sanibel Plan.**

***Objective B1:***

Ensure that development intensities are maintained in a manner consistent with the City's Hurricane Evacuation Plan to permit evacuation to take place within times specified in the Southwest Florida Regional Hurricane Evacuation Study.

**Policy B1.1.** Maintain the residential densities on the Development Intensity Map that are consistent with adequate evacuation capabilities.

***Objective B2:***

As development anticipated in the Future Land Use Element occurs, protect natural resources, including soils, by limiting development as a percentage of total land area.

**Policy B2.1.** Protect natural resources by continued implementation of the development regulations and performance standards of the Land Development Code.

***Objective B3:***

Ensure that public facilities and services (human support systems) which are necessary to meet adopted level of service standards are available concurrent with the impacts of future development.

**Policy B3.1.** No permits (development orders) will be issued for future development which would result in an increase in demand for facilities that do not comply with the minimum level of service standards of the Plan.

***Objective B4:***

Ensure the availability of suitable land for public facilities (human support systems) necessary to support development consistent with the Future Land Use Map, that is consistent with the densities and permitted uses regulated by the Development Intensity Maps, Ecological Zones Maps, Commercial District Map, Wetlands Conservation Lands Maps, and Resort Housing District Map.

**Policy B4.1.** Through implementation of the Land Development Code, support the provision and expansion of needed public facilities.

**Policy B4.2.** Public schools are permitted in the Altered Lands and Mid-Island Ridge zones designated on the Ecological Zones Maps of the Future Land Use Maps series of the Sanibel Plan.

***Objective B5:***

Ensure the protection of historic resources.

**Policy B5.1.** Incentives for the preservation of identified historic resources will continue to be incorporated in the adopted Land Development Code.

***Objective B6:***

Development, consistent with the Future Land Use Map, that is consistent with densities and permitted uses regulated by the Development Intensity Maps, the Ecological Zones Maps, the Commercial District Map, Wetlands Conservation Lands Maps and the Resort Housing District Map, will be managed by implementation and enforcement of the Land Development Code.

**Policy B6.1.** To implement the Sanibel Plan, including Future Land Use objectives, continue to maintain regulations and standards in the Land Development Code which

regulate the use of land and water

regulate the subdivision of land

ensure compatibility of adjacent land uses

provide for open space



ensure safe on-site traffic flow

provide for on-site parking

***Objective B7:***

To discourage sprawl, ensure that future development is consistent with the Future Land Use Map, that is consistent with the densities and permitted uses regulated by the Development Intensity Maps, the Ecological Zones Maps, Commercial District Map, Wetlands Conservation Lands Maps, and Resort Housing District Map.

**Policy B7.I.** The Plan for Permitted Uses, the Plan for Residential Development Intensity, the Plan for Commercial Development and the Plan for Community Design will continue to be implemented by the development regulations and performance standards of the Land Development Code.

***Objective B8:***

Existing land uses that are nonconforming with the Future Land Use Map, that is, nonconforming with permitted uses regulated by the Ecological Zones Maps, Commercial District Map, Wetlands Conservation Lands Maps and the Resort Housing District Map will not be expanded.

**Policy B8.I.** Permits will not be issued for the expansion of nonconforming land uses.

***Objective B9:***

Continue the implementation of innovative land development regulations to achieve the objectives of the Plan.

**Policy B9.I.** Annually review the Land Development Code to consider innovative techniques that can improve achievement of Plan objectives.

***Objective B10:***

Coordinate with any appropriate resource planning and management plan prepared pursuant to Chapter 380, Florida Statutes, and approved by the Governor and Cabinet.

## **ARTICLE 4. OFFICIAL MAPS**

### **PART 4.1. MAP STATUS**

The Future Use Map series and the Future Traffic Circulation Map series are the adopted maps of the Sanibel Plan. These Official Maps are a readoption of the Official Maps adopted on February 8, 1989 by Ordinance No. 89-04, as amended by:

Ordinance No. 89-30 to add 1 dwelling unit at Whisperwood Cove;

Ordinance No. 90-25 to include 11.5 acres in the Special Use District

for the Beachview Golf Course;

Ordinance No. 91-49 to reclassify Island Inn Road as a local road; and

Ordinance No. 92-22 to remove 0.33 acres from the Commercial District Map.

Unless noted otherwise, these maps have been prepared by the Sanibel Planning Department.

Unless noted otherwise, the timeframe for these maps (previously noted 1988-2008) is through the year 2015.

### **FUTURE LAND USE MAP**

The regulatory maps of the Future Land Use Map series consist of the following maps

- ✓ ECOLOGICAL ZONES MAPS
- ✓ COMMERCIAL DISTRICT MAP
- ✓ RESORT HOUSING DISTRICT MAP
- ✓ WETLAND CONSERVATION LANDS MAPS
- ✓ DEVELOPMENT INTENSITY MAPS

These maps, which are incorporated into the Sanibel Land Development Code as a means of implementing the Sanibel Plan, regulate permitted use and development intensity in the City of Sanibel.

### **FUTURE TRAFFIC CIRCULATION MAP**

The Future Traffic Circulation Map Series is provided on the following maps:

✓ EXISTING TRAFFIC CIRCULATION MAP

✓ FUTURE TRAFFIC CIRCULATION MAP

The Scenic, Historic, Environmentally Sensitive Roadway Segment Map is repealed and no longer a component of the Future Circulation Map Series.

#### **Section 4.1.1. Future Land Use Map Series**

*Pursuant to Chapter 163.3177(7)(h), Florida Statutes and Chapter 9J-5.006(4) of the Florida Administrative Code.*

The City of Sanibel's FUTURE LAND USE MAP is an aggregation of the maps provided with the Sanibel Plan.

The distribution, extent and location of the following land uses,

Residential use,

Commercial use,

Agricultural use,

Recreation use,

Conservation use,

Educational use,

Public buildings and grounds, and

Other public facilities

are regulated by the FUTURE LAND USE MAP.

The official maps, identified in the following list, constitute the FUTURE LAND USE MAP of the Sanibel Plan.

I. ECOLOGICAL ZONES MAPS

II. COMMERCIAL DISTRICT MAP

III. RESORT HOUSING DISTRICT MAP

IV. WETLANDS CONSERVATION LANDS MAPS

## V. DEVELOPMENT INTENSITY MAPS

### I. ECOLOGICAL ZONES MAPS

These maps (by section, township and range), which indicate the ecological zones of the City, are hereby designated and entitled the Ecological Zones Maps. The Ecological Zones Maps, which control the permitted use of land, are also designated as the Zoning Map of the City of Sanibel by the Land Development Code.

The following overlay districts,

the Commercial District Map,

the Resort Housing District Map, and

the Wetlands Conservation Lands Maps,

further control permitted use of land and are also incorporated in the Land Development Code.

Notes: Surface waters, whether natural water bodies or man-made, that are not categorized by the designations of the Official Maps, are restricted in use to those accessory uses which are normal and incidental to the principal permitted uses of the adjacent ecological zone.

The Gulf Beach and Bay Beach zones, which extend on submerged lands to the corporate limits, are restricted in use to those uses permitted in these respective zones.

### II. COMMERCIAL DISTRICT MAP

The map, which indicates commercial district boundaries, is hereby designated and entitled the Commercial District Map.

The Commercial District Map designates properties that are included within the various commercial districts in the City of Sanibel. The Commercial District Map designates the same commercial areas as the Commercial Zoning Map, which is a component of the Zoning Map of the City of Sanibel as identified in the Land Development Code.

### III. RESORT HOUSING DISTRICT MAP

The map which indicates areas where resort housing (short-term occupancy) uses are permitted, is hereby designated and entitled the Resort Housing Map. The Resort Housing Map is incorporated in the Land Development Code.

#### **IV. WETLANDS CONSERVATION LANDS MAPS**

These maps (by section, township and range), which indicate the boundaries of the Interior Wetlands Conservation District, are hereby designated and entitled the Wetlands Conservation Lands Maps.

The Wetlands Conservation Lands Maps control the permitted use of land within the district. These maps are incorporated in the Land Development Code.

#### **V. DEVELOPMENT INTENSITY MAPS**

These maps (by section, township and range), which indicate the maximum number of dwelling units permitted for each parcel of land throughout the City of Sanibel, are hereby designated and entitled the Development Intensity Maps. These maps are incorporated in the Land Development Code.

#### **Section 4.1.2. Future Traffic Circulation Map Series**

*Pursuant to Chapter 163.3177, Florida Statutes and Chapter 9J-5.007(4) of the Florida Administrative Code.*

The City of Sanibel's FUTURE TRAFFIC CIRCULATION MAP series identifies the general location of arterial roads and collector roads. The proposed number of lanes for each roadway is also identified.

This official map is not intended to restrict capacity enhancement/operational improvements which facilitate operations and improve safety for the existing transportation system.

The official map, identified as the Existing Traffic Circulation Map and Future Traffic Circulation Map constitutes the Future Traffic Circulation Map of the Sanibel Plan.

Notes: There are no limited access facilities, ports, airports, rail lines, high speed rail lines and related facilities in the City of Sanibel.

This map identifies the general location of arterial and collector roads and the number of lanes for each roadway, through the year 2015.

## **ARTICLE 5. ADMINISTRATIVE REGULATIONS**

### **PART 5.1. INTRODUCTION**

The Local Government Comprehensive Planning and Land Development Regulation Act of 1985, as amended, Section 163.3161, et seq., Florida Statutes, requires that all local governments prepare and adopt comprehensive plans and subsequently make land use decisions on the basis of those plans. The act also gives local governments some important new powers. For example, state and county agencies are bound by local plans and must obtain a permit from local government before any development is undertaken. "Development" as used in this Plan, and in Section 163.3161, et seq., Florida Statutes, has the same broad meanings as set forth in Section 380.04, Florida Statutes. Also local governments are entitled by law to receive technical assistance from state, regional and other local agencies through a review and comment process for local plans and amendments to these plans.

Prior to the Local Government Comprehensive Planning Act (of 1975), local comprehensive plans were purely advisory in nature and, although many local governments had adopted comprehensive plans, they ignored them in developing and administering land use regulations. Under that Act and the Local Government Comprehensive Planning and Land Development Regulation Act of 1985, however, the comprehensive plan has a definite legal status. Land use regulations and development activities must be consistent with the requirements of the plan and designed to help achieve the goals and objectives of the plan.

Land use regulations have traditionally appeared in the form of separate and independent codes, such as zoning and subdivision codes. It is the intent of the Local Government Comprehensive Planning and Land Development Regulation Act of 1985 that local authorities implement the comprehensive plan at least in part through the adoption and enforcement of a "Land Development Code". This Plan will continue to be so implemented and enforced. The Land Development Code is not, however, intended to eliminate the need for detailed building, plumbing, fire, housing, and other similar codes which supplement the Plan.

The basic principles and standards governing development are set out in Articles 1, 2, 3 and 4 of this Plan. All provisions of the implementing Land Development Code will be consistent with the principles and standards of the Plan. Any ambiguity in provisions of the Land Development Code will be interpreted and enforced in a manner consistent with the principles and standards of this Plan.

The Land Development Code may establish the actual permitted uses within various ecological zones, within various commercial districts, within Wetlands Conservation Lands, within the Environmentally Sensitive Lands Conservation District, and within the Resort Housing District. However, the ecological zone designation of any parcel or the wetlands conservation lands designation may not be changed through the Land Development Code without a corresponding amendment to this Plan and Ecological

Zones Map adopted herewith or the Wetlands Conservation Lands Map adopted herewith. Land not designated for commercial use on the Commercial District Map adopted herewith may not be zoned, through the Land Development Code, for commercial use without a corresponding amendment to this Plan and the official Commercial District Map, except for rezoning to a Special Use District. Further, Sanibel Charter amendments adopted in 1989 require supermajority votes of Council for density increases and for removing land from the Environmentally Sensitive Lands Conservation District, the Wetland Ecological Zones, the Mangrove Forest Zone and the Interior Wetlands Conservation District.

Except as permitted in this Plan, no land may be developed under the Land Development Code at a residential development intensity greater than that designated on the official Development Intensity Map adopted herewith. Nor may the permitted residential development intensity of any land be increased through the Land Development Code without a corresponding amendment to this Plan and the Development Intensity Map.

Lands not designated for resort housing use on the Resort Housing District Map adopted herewith may not be zoned, through the Land Development Code, for resort housing use without a corresponding amendment to this Plan and the official Resort Housing District Map.

## **PART 5.2. LEGAL AUTHORITY**

*Pursuant to Chapter 163, Florida Statutes.*

This Plan and the implementing Land Development Code are enacted pursuant to the authority of the City of Sanibel as granted to home rule municipalities pursuant to the Constitution of the State of Florida, Chapter 166, Florida Statutes, as set forth in the Charter of the City of Sanibel, and as delineated in the Local Government Comprehensive Planning and Land Development Regulation Act of 1985, as amended, Section 163.3161, et seq., Florida Statutes.

## **PART 5.3. LOCAL PLANNING AGENCY**

*Pursuant to Chapter 163.3161, 163.3174 and 163.3191 Florida Statutes.*

### **Section 5.3.1. Designation**

The designation of the Sanibel Planning Commission as the local planning agency pursuant Section 163.3174 Florida Statutes is hereby affirmed and notice of such affirmation and designation is hereby given pursuant to Section 163.3161, et seq., Florida Statutes.

The City Council reserves the power granted under Section 163.3174, Florida Statutes, to designate itself or another entity to serve as the local planning agency, through an appropriate ordinance.

### **Section 5.3.2. Authority of Local Planning Agency**

The local planning agency shall have all of the authority and responsibility granted to local planning agencies in Chapter 163. It shall:

-- Review, hold a public hearing on, and make recommendations to the City Council regarding amendments to the Sanibel Plan and the Land Development Code.

-- Prepare periodic reports on the Sanibel Plan for transmittal to the City Council, pursuant to Section 163.3191, Florida Statutes.

In addition, is shall have such other duties and responsibilities as granted to it by the Sanibel City Charter or delegated to it by the City Council.

## **PART 5.4. AMENDMENTS TO PLAN**

*Pursuant to Chapters 163.3184 and 163.3187, Florida Statutes and Chapter 9J-5.004 of the Florida Administrative Code*

### **Section 5.4.1 Procedure Generally**

The procedure for reviewing, considering and adopting proposed amendments to this Plan, including notice and hearing requirements, shall be in accordance with Part II, Chapter 163 Florida Statutes, most notably Sections 163.3164, 163.3181, 163.3184, 163.3187 and 163.3189, Florida Statutes; sections related to those sections; controlling case law; and provisions of the Sanibel Charter, where applicable.

### **Section 5.4.2. Persons Entitled to Propose or Request Amendments**

The following may propose amendments to this Plan:

- a. the city council, or any member;
- b. an owner of real property which would be substantially affected by an amendment, as to that interest;
- c. any other person specifically authorized to do so, under Chapter 163, Florida Statutes.

The local planning agency, the city manager or the city attorney may request an amendment to this Plan.



### **Section 5.4.3. Application for Plan Amendment**

- a. An amendment proposed by council or a member shall be filed with the city manager.
- b. An amendment proposed by a property owner or other person entitled to propose an amendment shall be on a form supplied by the City, accompanied by the filing fee established by city council and filed with the city manager.
- c. A request for an amendment shall be referred to city council for a determination as to whether to proceed. If the council determines to proceed, the request shall be filed with the city manager.
- d. Upon receiving a proposal for amendment under this part, the city manager shall conduct a timely review and prepare and submit a report to the local planning agency.
- e. The local planning agency shall conduct one or more hearings on the amendment in accordance with the requirements of the Sanibel Plan, the Land Development Code, and Chapter 163, Florida Statutes.
- f. The city council shall conduct one or more hearings after due public notice on the proposed amendment in accordance with the requirements of the Sanibel Charter, the Sanibel Plan, the Sanibel Land Development Code, and Part II, Chapter 163, Florida Statutes.
- g. After the transmittal hearing, if a proposed amendment to the Sanibel Plan is rejected by city council, or a determination is made that the council will not transmit or otherwise adopt the proposed amendment, no application for the same proposed amendment shall be accepted or processed for consideration for one (1) year after the rejection.

### **Section 5.4.4. Standards**

The criteria to be considered, where appropriate, and whether and to what extent the proposed amendment:

- a. is consistent with the city charter;
- b. will preserve and enhance present advantages;
- c. will encourage the most appropriate use of land, water and resources consistent with the public interest;
- d. will overcome present handicaps;

- e. will deal effectively with future problems that may result from the use and development of land within the city.
- f. will preserve, promote, protect and improve the public health, safety, comfort, good order, appearance, convenience, law enforcement and fire prevention, and general welfare;
- g. will prevent the overcrowding of land and avoid undue concentration of population;
- h. will facilitate the adequate and efficient provision of transportation, water, sewerage, school, parks, recreational facilities, housing and other requirements and services;
- i. will conserve, develop, utilize and protect natural resources within the city;
- j. will protect human, environmental social and economic resources;
- k. will maintain through orderly growth and development the character and stability of present and future land use and development;
- l. is consistent with the Vision Statement of this Plan.

Additional criteria for amendments proposing residential density increases are whether mitigating circumstances are found to exist which would outweigh potential drawbacks and work toward achieving other purposes of this plan, including the following:

- a. where opportunities are provided for below market rate housing;
- b. to implement the plan for commercial development by providing alternatives to commercial development through increased residential densities;
- c. to promote further conservation of environmentally sensitive lands by creating incentives to set aside sensitive land from development, such as transfer of development rights;
- d. where unique circumstances are found to exist upon a parcel, which had not been fully considered at the time of the adoption of the development intensity map in 1976.
- e. where there is a resultant, overall city-wide density decrease in the number of permitted dwelling units, provided that the density decrease does not originate on lands in the Environmentally Sensitive Lands Conservation District.

#### **Section 5.4.5. Public Participation**

a. It is the intent of the City that the public participate in the comprehensive planning process to the fullest extent possible. Toward this end, the local planning agency and City Council will provide for effective public participation and will provide real property owners with notice of all official actions which will regulate the use of their property. This will be done through the notice requirements set forth in Chapter 163 Florida Statutes, where applicable, or through notice requirements set forth in the Sanibel Charter or Chapter 166, Florida Statutes, where applicable. In addition, the Sanibel Land Development Code shall continue to provide for personal or mail notification of property owners contiguous to and in the vicinity of a parcel proposed for development sufficiently in advance of a public hearing before the local planning agency, on long form development permits.

b. Relevant public comment, both written and oral, shall be received and considered by the local planning agency and City Council, to the extent required or allowed under statutory or case law. The staff may be directed to respond, either orally, or in writing, to legitimate public comment.

c. Copies of proposed Plan amendments, or summaries thereof, staff reviews or similar documents, shall be kept on file with the City, and shall be subject to review by any member of the public during working hours. Additionally, members of the public shall be promptly provided copies of the Plan, proposed Plan amendments, summaries of the same, staff review and similar documents, at the fee established by city council pursuant to state law.

d. At least annually, the local planning agency shall prepare or cause to be prepared a report of planning activities for the previous year. Such report shall be discussed publicly in at least one local planning agency meeting, shall be disseminated to the local news media, and shall be available for public review and comment.

#### **Section 5.4.6. Effect on Land Development Code**

This Plan, as extensively revised and restated, does not repeal or otherwise affect any provision of the Land Development Code. However, the Land Development Code shall be amended to conform to this Plan within the period of time required by Section 163.3202, Florida Statutes.

### **PART 5.5. COMPOSITION OF THE PLAN**

### **Section 5.5.1. The Ordinance and Plan Document**

The Ordinance incorporating the plan document, together with the plan document constitute the Sanibel Plan.

### **Section 5.5.2. Maps**

Those maps enumerated in Article 4, OFFICIAL MAPS, are specifically incorporated as part of the Sanibel Plan. However, only those maps or portions thereof, which are specifically listed in Article 4 as being adopted maps or portions, shall be considered the adopted maps or portions thereof. Treatment of maps shall be in accordance with the explanations set forth in said Article 4.

### **Section 5.5.3. Other Extraneous Documents**

Although many other resources have been used over the years to formulate this plan, or to provide data in its amendments, no such resource, study, map or other document shall become or be construed as a part of this Plan by its reference. The mention of the name of a study, report, document, map or other resource will not, make such study, report, document, map or other resource a part of this Plan, nor will the fact that it is kept on file in City Hall or that it is quoted at length in this Plan.