



# **SARASOTA COUNTY MANATEE PROTECTION PLAN**

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Sarasota County Board of County Commissioners  
1660 Ringling Boulevard  
Sarasota, Florida 34236

*Mote Marine Laboratory Technical Report No. 894*  
Prepared for Sarasota County Government by  
Mote Marine Laboratory in consultation with  
Sarasota County Staff and  
the Florida Fish and Wildlife Conservation Commission

## EXECUTIVE SUMMARY

This document represents a comprehensive Manatee Protection Plan (MPP) for Sarasota County, designed to reduce human-related threats to manatees and their habitat. While the primary concern of the MPP is manatee protection, other issues addressed in this document include protection of wetlands and seagrasses; recreational waterway use, zoning and future land use, future boat facility siting, and other issues related to potential impacts to marine and coastal resources. Along with providing a summary of available information on manatees, the MPP is designed to establish protection criteria, provide strategies, and initiate management actions aimed at reducing manatee-related threats within Sarasota County. The plan does not pertain to single family docks; only projects proposing expansion/construction of five or more slips are governed by the Manatee Protection Plan. Among the components of a comprehensive MPP are:

- An inventory of boat facilities (marinas, docks, boat ramps, etc.).
- An assessment of boating activity patterns.
- Manatee sighting and mortality information.
- A boat facility siting plan to determine the best areas for new marinas, boat ramps, etc.
- Information on aquatic preserves, Outstanding Florida Waters, manatee refuges, etc.
- Manatee protection measures, such as boating speed zone regulations.
- An education and awareness program for the public and boaters, divers, and schools.
- A water quality and habitat protection program.
- An implementation schedule / timeline for completion.

Existing data on manatees in Sarasota County were extensively reviewed. These data included population aerial surveys, land- and boat-based field studies, manatee mortality data, and telemetry data. Based upon these data, the following areas were considered to be priority manatee habitat in Sarasota County:

1. Upper Myakka River, including Salt Creek
2. Pansy Bayou / City Island Grassflats
3. Lemon Bay, including Forked Creek
4. Roberts Bay, particularly the area north of Skiers Island
5. South Sarasota Bay, including the waters inside Big Sarasota Pass
6. Buttonwood Harbor
7. Hudson Bayou

In addition, a suite of secondary manatee habitat sites was also identified. These areas included:

1. West shore of Sarasota Bay, Longboat Key Moorings to New Pass
2. East shore of Sarasota Bay, Stephens Point to the Hyatt Boat Basin
3. Little Sarasota Bay
4. Blackburn Bay
5. Venice Inlet, including Dona Bay, Lyons Bay, and Roberts Bay
6. Venice Bypass Canal

A primary component of this document was the development of a facility siting criteria, which addresses future boat-related construction and expansion as it relates to manatees and other at-risk natural resources. The criteria specified within this document are relatively easy to apply to large geographic regions of the bay. The four principal factors which were used for facility siting consideration were:

- Location of the facility with relation to established manatee habitat.
- Projected sphere of influence of the proposed facility with relation to established manatee habitat.
- Size of the proposed facility expansion or construction.
- Distance to the nearest tidal inlet.

Other screening processes related to zoning, present and future land use, water depth and water quality issues, and other natural resource issues (seagrasses, wetlands, etc.) will also need to be taken into consideration as part of a comprehensive facility siting plan. The recommendations in this document do not pre-empt existing rules or ordinances, or create requirements outside the authority of local, state, and federal regulations. Based upon the results of the siting criteria, a relatively large number of areas within Sarasota County could be either Recommended or Conditional for small construction or expansion projects (less than 10 slips). These areas include the southern portions of Longboat Key; the Sarasota bayfront north of the Ringling Causeway to the Manatee County line, portions of Roberts Bay (Sarasota), all of Little Sarasota Bay, Blackburn Bay, the majority of waterfront property within the City of Venice, and the areas in close proximity to the all three tidal inlets (New Pass, Big Sarasota Pass, and Venice Inlet). As the size of the proposed facility increases, the size of the Recommended areas is reduced or eliminated in these areas. Other screening processes related to zoning, present and future land use, water depth and water quality issues, and other natural resource issues (seagrasses, wetlands, etc.) will also need to be taken into consideration as part of a comprehensive facility siting plan.

Facility siting criteria does not apply to single family residences, or facility construction or expansion of fewer than five wet or dry slips.

Boating and boating-related industries are an important facet of our coastal community. At present the waterfront of Sarasota County is near build-out and waterfront docks for single and multifamily residences are near saturation. Additional docks will undoubtedly be requested for those units presently without facilities. However, the bulk of the demand will result from population increases from the inland unincorporated areas. Inland boaters will have two choices for water access; 1) marina or dry storage, or 2) boat ramp access. The County Apoxsee Plan projects that existing boat ramps will satisfy the boating need through 2015. However, the County recognizes that this estimate is no longer realistic and that enhancements to waterway access, including improvements to many ramps are needed.

Finally, recommendations to improve law enforcement capabilities and manatee education and awareness were made. These recommendations included improved regulatory signage, allocation of additional resources for law enforcement agencies, improvement of Sarasota County boaters' guides, creation of informational kiosks, and development of manatee-related curricula for the Sarasota County School System. The formation of both a Law Enforcement Task Force and a Waterways Education Committee were also recommended in order to coordinate both law enforcement and education efforts in Sarasota County.

## Acknowledgements

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## LIST OF ABBREVIATIONS

<b>BCC</b>	Board of County Commissioners
<b>BFSP</b>	Boat Facility Siting Plan
<b>FDEP</b>	Florida Department of Environmental Protection
<b>WCIND</b>	West Coast Inland Navigation District
<b>DLE</b>	The Division of Law Enforcement
<b>FWC</b>	Florida Fish and Wildlife Conservation Commission
<b>ICW</b>	Intracoastal Waterway
<b>MML</b>	Mote Marine Laboratory
<b>PWC</b>	Personal Watercraft (e.g., Jet Ski, Sea Doo)
<b>SBNEP</b>	Sarasota Bay National Estuary Program
<b>SWFWMD</b>	Southwest Florida Water Management District
<b>SCW</b>	Sarasota County Waterways
<b>USACE</b>	U.S. Army Corps of Engineers
<b>WNCA</b>	Sarasota County Water & Navigation Control Authority

## LIST OF DEFINITIONS

Following are the definitions for use in this plan:

**Aquaculture** - any activity devoted to the hatching, raising, and breeding of fish, aquatic plants or animals for sale or personal use.

**Anchorage** - Term used by Antonini (1998) to identify in-water vessel storage either by anchor or fixed mooring device without an associated dock or boat slip.

**Blatant Non-compliance** - Blatant non-compliance was defined as a vessel in-use at a speed greater than one speed category faster than the posted limit through a significant portion of a speed-regulated area. (Example: a vessel traveling at Planing Speed within a Slow Speed Zone).

**Boat** - a vehicle designed for operation as a watercraft propelled by sails, or one or more electric or internal combustion engine(s). A boat shall not be considered as a recreational vehicle even though it has facilities for temporary living quarters. For the purpose of this plan, the word "boat" does not include canoes and kayaks.

**Boat Facility** - a public or private structure or operation where boats are moored and/or launched, including commercial, recreational, and residential marinas, and public boat ramps. A dry storage facility is considered part of a boat facility if the dry storage facility has the capability of launching vessels into adjacent waters. For the purpose of this plan, docks with less than five (5) wet slips are not considered boat facilities.

**Boat Facility Siting Plan** – A component of a Manatee Protection Plan, which is a county wide guidance document for future development, construction and expansion, of boat facilities. The plan specifies preferred locations for boat facility development based upon an evaluation of manatee protection needs, potential natural resource impacts, and zoning and future land use compatibility. The purpose of developing a boat facility siting plan is to reduce threats to manatees and other living resources, such as seagrasses, mangroves, wetlands and oysters, from boating activities and infrastructure development impacts.

**Boat Ramp** - A sloped surface structure, or man-made improvement to a shoreline area that facilitates the launching and landing of boats into a water body.

**Build-out** - A term referring to maximum planned development for a community, in terms of the physical structures, use of land and approximate number of people which can be accommodated within the community.

**Channel of the Intracoastal Waterway** - all waters within the navigable channel of the Gulf of Mexico Intracoastal Waterway in Sarasota County, Florida, and which navigable channel is a part of the inland waterways, and which said navigable channel is located by buoys or other markers placed by the U.S. Coast Guard (USCG) or West Coast Inland Navigation District (WCIND) together with the area extending a distance of one hundred (100) feet from each side of said channel in a direction away from the center of such channel.

**Compliance (compliant)** - Any vessel in-use that was determined to maintain a speed that was consistent with the posted speed at a study site.

**Dry Slip** - a space designed for the storage of single watercraft in an upland location with access to a waterway from the upland location.

**Dry Storage Facility** - an upland structure used for storing watercraft. A dry storage facility may be either a water-dependent or a water-related use.

**Existing Facility** - A boat facility that is permitted and/or authorized, constructed, and in operation as of the effective date of this plan. Permits and authorizations must be in place from state and local permitting agencies. Facilities permitted but not yet constructed are also considered existing. This definition does not include unauthorized structures.

**Lane** - A part of a boat ramp that allows for the launching and landing of one boat at a time. A boat ramp can have more than one lane.

**Manatee Protection Plan** – a State-approved summary of manatee data, strategies, and management actions aimed at protecting manatees in a specific area or county. They are important for the long-range planning necessary to insure the survival of the manatee in a rapidly growing state.

**Marina, Commercial** - a commercial watercraft complex on and/or adjacent to a waterway which provides services available to the general public including but not limited to: rental of wetslips or dry storage space and associated boat lifting and/or launching, boat rentals, sale of marine fuel and lubricants, wastewater pump-out facilities, sale of fishing bait and equipment, and/or charter boat operations. Additional services may include the construction, reconstruction, repair, or maintenance of boats, marine engines and/or marine equipment; sale or lease of watercraft and seafood processing.

**Marina, Recreational** - a commercial watercraft complex on and/or adjacent to a waterway which provides services available to the general public including but not limited to: rental of wetslips or dry storage space and associated boat lifting and/or launching, boat rentals,

sale of marine fuel and lubricants, wastewater pump-out facilities, sale of fishing bait and equipment, charter boat operations, and/or providing for minor repair services for watercraft, that do not involve removal of watercraft from the water or removal of inboard or outboard engines from the watercraft. Accessory service uses may include on-shore restaurants and bars, hotels, or motels.

**Marina, Residential** - a watercraft complex containing five (5) or more wet slips located on a waterway used primarily for recreational purposes, and where vessel mooring is clustered in a common area, rather than docks located behind individual residences. No sales, fueling or repair facilities shall be associated with these marinas. A private residential marina contains wet slips and/or dry slips used only as accessory to a principal multi-family development use. A public/private residential marina has a portion of its wet slips and/or dry slips designated for rental by the general public, with the remaining wet slips and/or dry slips used accessory to a principal multi-family development use.

**Mean High Waterline** - the intersection of the tidal plain or mean high water with the shore. Mean high water is the average height of high waters over a nineteen-year period.

**Mooring** - a location where one vessel is berthed or stored when not in use. Types of moorings identified by Antonini (1998) include anchorage, beached or blocked, dry stack, hoist, ramp, seawall, trailer, or wet slip.

**Powerboat** - a boat propelled or powered by machinery or any mechanical devices.

**Priority Manatee Areas** - documented areas of recurrent use by manatees based upon aerial survey data, telemetry data, mortality data, and/or photo-identification studies.

**Ramp (as a mooring)** – refers to the trailer parking capacity of a boat ramp facility.

**Regularly Moored Watercraft** - any watercraft vessel habitually or methodically moored or anchored in the same general location for a continual period greater than seventy-two (72) hours or any watercraft vessel which is habitually or methodically moored or anchored in the same general location for a total of four (4) days within any given seven-day period.

**Secondary Manatee Areas** - Documented areas of recurrent, though somewhat less frequent use by manatees, based upon aerial, telemetry data, mortality data and/or photo identification studies. This may include areas that have been determined to be travel corridors to and from higher priority areas.

**Single-Family Dock** - a fixed or floating structure, including moorings, used for berthing buoyant vessels, accessory to a single-family residence, with no more than two (2) boat

slips per residence. Notwithstanding, a shared single-family dock may contain up to four (4) boat slips. Said docks cannot be rented, leased or sold to a party unless said party rents, leases, or buys the associated single-family residence. A single-family dock may include a fishing or observation pier.

**Technical Non-compliance** - A vessel that was considered to be in technical violation of the posted speed at a study site, as defined by:

- ▶ *A vessel traveling at a speed which was determined to be one speed category faster than the posted speed limit (Example: a vessel traveling at Slow Speed within the Idle Speed Zone).*
- ▶ *A vessel traveling at any excessive speed, but for only a relatively small distance within the posted area (Example: a speeding vessel extending a short distance into an Idle Speed Zone before slowing to the posted speed, or a vessel which accelerates out of an Idle Speed Zone before leaving the posted area).*

**Trailer** - term used by Antonini (1998) to distinguish between various types of moorings. A trailer-type of mooring refers to a boat with trailer that was visible from a waterway. While this provides an estimate of trailered vessels in Sarasota County, it is understood that the term is both subjective and provides only a rough estimate of trailered vessels in the County

**Water-Dependent Uses** - Water-dependent uses shall include those uses whose primary function is derived by direct water access such as, but not limited to commercial marinas, commercial charter fishing, touring and diving boat piers, water-skiing, sailing, and similar instructional operations, dredging, hauling, marine repair and other related uses.

**Wet Slip** - a Space designed for the mooring of a single watercraft in water. Such spaces may extend from a dock or pier, however any piers authorized for fishing or observation are not considered wetslips.

## I. INTRODUCTION

The cumulative effects from both natural and human-related mortalities, combined with habitat loss and low reproductive capacity, continue to jeopardize the long-term existence of the Florida manatee population. Florida is one of the fastest growing states in the nation, with approximately 500 - 1,000 new residents per day moving into the State (Source U.S. Census Bureau). This has resulted in a conflict of use between increasing human-related pressures and increasingly limited coastal resources. As population increases, there will be an increase in boat traffic. The adverse impact of watercraft on manatees is well documented. It has been demonstrated that the vast majority of adult manatees in Florida bear wounds that are representative of either single or repeated collisions with watercraft (Reynolds and Gluckman, 1988), and a correlation between the number of registered vessels in Florida and the number of watercraft-related manatee mortalities has been shown to be statistically significant (Wright *et al.*, 1995). Habitat destruction and/or degradation caused by widespread development are also generally accepted as a significant threat to the long-term survival of manatees in the wild (USFWS, 1989).

Manatees are protected under the Marine Mammal Protection Act of 1972 (as amended in 1996), the Endangered Species Act (ESA) of 1973, and the Florida Manatee Sanctuary Act (1978), through the Florida Fish & Wildlife Conservation Commission (FWC).

As a result of concerns over the long-term survival of the Florida manatee population, a Manatee Recovery Plan was developed through the U.S. Fish and Wildlife Service (Florida Manatee Recovery Plan, 1989, 1996 and 2001). The objective of the Recovery Plan is the downlisting and ultimate delisting of the Florida manatee from its endangered and/or protected status. The Manatee Recovery Plan states that prior to consideration of downlisting, the following criteria must be met:

Reduce threats to manatee habitat or range, as well as threats from natural and man-made factors by:

- Identifying minimum spring flows
- Protecting selected warm water refuge sites
- Identifying for protection foraging habitat associated with warm-water refuge sites
- Identifying for protection other important manatee areas; and
- Reducing unauthorized human caused "take"

Achieve the following population benchmarks in each of the four regions over the most recent 10 year period of time:

- Statistical confidence that the average annual rate of adult survival is 90% or greater,
- Statistical confidence that the average annual percentage of adult female manatees accompanied by first or second year calves in winter is at least 40%; and
- Statistical confidence that the average annual rate of population growth is equal to or greater than zero

The plan was revised in 1996 (Florida Manatee Recovery Plan, 1996) and a third revision was completed in October 2001. In conjunction with the Recovery Plan, the State of Florida identified twelve key Florida counties with an ecologically-significant manatee population (Citrus, Collier, Dade, Palm Beach, Lee, Brevard, Volusia, Duval, Martin, St. Lucie, Indian River, and Broward). The Florida Governor and Cabinet directed the counties to develop a comprehensive Manatee Protection Plan (MPP) in order to minimize human-related threats to manatees. Based upon well-documented aerial survey data, Sarasota County voluntarily joined the twelve key counties in 1990.

Along with providing a summary of available information on manatees, the MPP is designed to establish protection criteria, provide strategies, and initiate management actions aimed at reducing manatee-related threats within a specific county. Among the components of a comprehensive MPP are:

- ▶ An inventory of boat facilities (marinas, docks, boat ramps, etc.).
- ▶ An assessment of boating activity patterns.
- ▶ Manatee sighting and mortality information.
- ▶ A boat facility siting plan to determine the best areas for new marinas, boat ramps, etc.
- ▶ Information on aquatic preserves, Outstanding Florida Waters, manatee refuges, etc.
- ▶ Manatee protection measures, such as boating speed zone regulations.
- ▶ An education and awareness program for the public and boaters, divers, and children.
- ▶ A water quality and habitat protection program.
- ▶ An implementation schedule / timeline for completion.

An amendment to the Florida Manatee Sanctuary Act 370.12 requires that key counties adopt a Manatee Protection Plan and incorporate the boat facility siting provisions into their Comprehensive Plan. The individual components of the Plan must be compatible with local policies and ordinances while addressing manatee concerns. For this reason, the MPP is a collaborative effort between county agencies, law enforcement agencies, researchers, planners,

and municipalities. Public involvement is also encouraged. In setting policies to safeguard manatees and their habitats, the MPP will also have the parallel effect of increasing boater safety, facilitating future recreation planning, and protecting environmentally sensitive marine and estuarine habitat.

As of July 1, 1999, the Florida Game and Freshwater Fish Commission (GFC), was merged with those sections of the Department of Environmental Protection (DEP) involving any marine-related activities (including the Bureau of Protected Species Management), forming the Florida Fish and Wildlife Conservation Commission (FWC). The FWC has the authority to review and approve Manatee Protection Plans (MPP) developed by individual counties. The state has also coordinated with the USFWS to receive comments on some MPPs.

This document fulfills the requirements for completion of a comprehensive Manatee Protection Plan in Sarasota County. Sarasota County has developed a strategy for implementation of the MPP incorporation into their Comprehensive Plan as required by Florida Statute. The creation of this plan is not related to the recent litigation and settlements between State of Florida and various environmental organizations.

## **I.1 SARASOTA COUNTY WATERWAYS**

Sarasota County, located on the southwest central Florida coast, has a mostly unincorporated land area of 572 square miles and encompasses a water area of 50.6 square miles, **Table I.1**. Incorporated areas include, the City of Sarasota, the Town of Longboat Key, The City of Venice and the City of North Port, which together encompass 100 square miles of land area and 38.3 square miles of water jurisdiction.

The subjects of this evaluation are the navigable waterways of Sarasota County which are accessible by manatees. The principal area of concern is Sarasota Bay from the Manatee County line south to the Charlotte County line near the midpoint of Lemon Bay at Englewood. In addition to the unincorporated areas of Sarasota County this plan encompasses the southern half of the Town of Longboat Key, the City of Sarasota, the City of Venice, and a small portion of the City of North Port along the Myakka River and Big Slough. It also included the Sarasota County portions of the Myakka River which are frequented by manatees.

The bayfront portions of the County are mostly developed. The National Estuary Program, Sarasota Bay Project (SBNEP) State of the Bay Report (1990) reported that only 22 percent of the Sarasota Bay shoreline remained in a natural state. Of the developed portions 45 percent had been bulkheaded, 10 percent riprapped and 23 percent artificially filled. Much of the remaining mangrove shoreline has been altered by pruning or ditching for mosquito control. Exotic invasive species, such as Brazilian pepper and Australian pine, are a continuing threat to native coastal vegetation. There have been several successful small wetlands habitat restoration

projects within Sarasota Bay, such as Quick Point Nature Preserve on the southern tip of Longboat Key and Hog Creek near the City of Sarasota's Centennial Park (10th Street boat ramp). Other restoration projects are in the planning stages, such as the restoration of ICW dredged material spoil islands in Little Sarasota Bay and Roberts Bay. Some of these projects have proved to be contentious, however, with small vocal groups of citizens fearful of reduced access to recreational areas, or preferring the esthetic view of exotic invasive vegetation over natural wetlands.

Exclusive of the Myakka River watershed, there are no remaining significant vacant lands within the Bay system which can be restored to natural habitats. With pressures from increasing population, it may be necessary to further limit various activities on and adjacent to the waterways (such as boat facility development or expansion) if manatees and other natural resources in Sarasota County are to thrive over the next century.

**Table I.1.** Sarasota County Area Statistics.

	<u>Land Area Square Miles</u>	<u>Water Area Square Miles</u>	<u>Land/Water Area Square Miles</u>
Town of Longboat Key (Sarasota County Portion)	2.73	5.41	8.14
City of North Port*	74.77	0.77	75.54
City of Sarasota	14.89	11.04	25.93
City of Venice	9.12	0.55	9.66
Municipal Sub-Total	101.51	17.76	119.27
Unincorporated County	474.04	135.87	609.91
<b>Total</b>	<b>575.55</b>	<b>153.63</b>	<b>729.18</b>

**Source:** U.S. Census Bureau, Census 2002  
*The accuracy of the area measurement is limited by the inaccuracy inherent in the mapping of the various boundary features in the Census TIGER file.*

\* - North Port numbers are prior to recent land/water annexations. Post-annexation values for the City of North Port are as follows: Land area =98.37 square miles ; Water area =5.11 square miles ; Total area = 103.48 square miles

## I.2 SARASOTA COUNTY DEMOGRAPHICS

### I.2.1 County Summary

Sarasota County consists of 571.75 square miles (1,481 sq. km) of land area and 50.6 square miles (131 sq. km) of water area (total area 623.35 square miles, 1,614 sq. km). The unincorporated County accounts for 82.6 percent of the land area (472.2 square miles) and 24 percent of the water area (12.3 square miles) with the remainder encompassed by the municipalities.

The U.S. Census Bureau lists the population of Florida at 15,982,378 residents based on the 2000 census (48.8 percent male and 51.2 percent female). Of the 67 counties in Florida, Sarasota County ranked 14th with a resident population of 325,957 people (2.1 percent of the state total, 47.4 percent male, 52.6 percent female) as of 1999. Of this number 227,669, or 70 percent of the residents, lived within the unincorporated areas. The remaining 30 percent of the residents lived in the four municipalities, consisting of the Town of Longboat Key, the City of Sarasota, the City of Venice and the City of North Port. Countywide 81.5 percent of the population is age 21 or greater and 35.5 percent of the population is age 62 or greater. Countywide the average annual household income was \$41,957 (2000 census data).

**Table I.2** illustrates the population growth in Sarasota County since 1930. There were several periods when there were above average influxes of new residents. This included the years in the decade of the 1960's which showed an annualized increase of 16.6 percent per year, and the years 1973 (10.5 percent increase, +14,049), 1978 (7.5 percent increase, +12,805) and 1990 (5.2 percent increase, +13,839). Since 1991 the rate of growth has slowed to an annual average of approximately 1.6 percent per year.

**Figure I.1** illustrates percentage population growth of Sarasota County since 1930 projected to 2020. The City of Sarasota and the Town of Longboat Key are at or near the projected limits of population. The City of Venice has recently annexed additional lands which will substantially increase the population within this municipality. Any further population increases within the Town of Longboat Key and the City of Sarasota would require zoning and density changes to accommodate additional housing units. In contrast the City of North Port is projected to have a 162 percent rise in population by 2020, an increase of 31 thousand people. Within the unincorporated areas of the County a population increase of more than 59,000 people is projected by the year 2020, an increase of 26 percent over 2000 population. The total increase in County population over the next 20 years is projected as 93,200 people. The Sarasota County population distribution has implications for boating facility needs. Historically population growth has been greatest in areas adjacent to bay waters in the vicinity of passes. **Figures I.2, I.3 and I.4** illustrate the growth of Sarasota County, and show the greatest growth in the vicinity of New Pass, Big Pass and Venice Inlet. The Town of Longboat Key and the City of Sarasota

are at or near build-out and therefore the need for new multifamily docks should diminish to a point near zero within a few years. Waterside docking facilities for residents of these communities are near the saturation point. However, the continued growth of Venice, North Port, and other portions of the county will increase the overall demand for water access facilities; boat storage/marinas, and ramps. For non-waterfront citizens and moderate to low income families the principal access to boating is through public boat ramps.

**Table I.2.** Sarasota County annual resident population estimates - County and Municipal. (N/A indicates data not available).

Year	Sarasota	Venice	North Port	Longboat Key	County	Total County	Annual % Increase	Annual # Increase
1930	8,498	N/A	N/A	N/A	N/A	12,000	N/A	N/A
1940	11,141	507	N/A	N/A	N/A	16,160	3.5	416
1950	18,896	727	N/A	N/A	N/A	28,827	7.8	1,267
1960	34,083	3,444	178	158	38,695	76,558	16.6	4,773
1970	40,237	6,648	2,244	1,453	69,831	120,413	5.7	4,386
1971	N/A	N/A	N/A	N/A	N/A	127,700	6.1	7,287
1972	41,870	8,856	2,837	3,262	77,468	134,293	5.2	6,593
1973	44,638	9,962	4,282	3,844	85,616	148,342	10.5	14,049
1974	46,459	10,641	4,689	4,537	91,412	157,738	6.3	9,396
1975	47,134	11,180	4,691	4,667	95,500	163,172	3.4	5,434
1976	47,156	12,133	4,275	4,611	96,879	165,054	1.2	1,882
1977	47,416	11,479	4,452	4,649	102,625	170,621	3.4	5,567
1978	50,136	11,914	4,744	3,579	113,053	183,426	7.5	12,805
1979	51,023	12,225	5,292	3,794	119,990	192,324	4.9	8,898e
1980	48,868	12,153	6,205	2,383	132,642	202,251	5.2	9,927
1981	49,154	12,568	6,807	2,592	138,331	209,452	3.6	7,201
1982	49,492	12,886	7,208	2,743	143,114	215,443	2.9	5,991
1983	50,157	13,136	7,661	2,836	149,672	223,462	3.7	8,019
1984	50,767	13,770	8,006	3,017	155,593	231,153	3.4	7,691
1985	50,782	14,218	8,331	3,592	161,090	238,013	3.0	6,860
1986	50,871	14,585	8,490	3,686	167,002	244,634	2.8	6,621
1987	51,259	14,941	8,828	3,782	172,443	251,253	2.7	6,619
1988	51,442	15,252	9,145	3,884	177,944	257,667	2.6	6,414
1989	51,781	15,554	9,655	4,032	182,915	263,937	2.4	6,270
1990	50,961	16,922	11,973	3,393	194,527	277,776	5.2	13,839
1991	50,740	17,216	12,558	3,563	199,063	283,140	1.9	5,364
1992	51,058	17,491	13,038	3,651	201,965	287,203	1.4	4,063
1993	50,820	17,768	13,581	3,716	204,717	290,602	1.2	3,399
1994	51,031	18,093	14,282	3,764	208,832	296,002	1.9	5,400

**Table I.2 (continued).**

Year	Sarasota	Venice	North Port	Longboat Key	County	Total County	Annual % Increase	Annual # Increase
1995	51,143	18,450	15,161	3,806	212,968	301,528	1.9	5,526
1996	51,311	18,619	15,905	3,907	216,106	305,848	1.4	4,320
1997	51,315	18,886	16,708	3,957	220,177	311,043	1.7	5,195
1998	51,650	19,069	17,672	4,074	223,558	316,023	1.6	4,980
1999*	51,659	19,232	18,749	4,048	227,356	321,044	1.6	5,021
2000	52,219	21,2461	19,392	4,695	228,348	325,900	1.5	4,856
2005	52,790	22,556	24,679	4,695	244,980	349,700	1.5	4,760
2010	53,326	22,556	31,407	4,695	260,016	372,000	1.3	4,460
2015	53,326	22,556	39,970	4,695	274,553	395,000	1.2	4,620
2020	53,326	22,556	50,867	4,695	287,656	419,100	1.2	4,800

*\*1999 data are preliminary, and data thereafter are projected increases. Data and projections from the City of Venice COMP Plan, permanent population of 30,941. Source: BEBR Annual Estimate, Bureau of Economic and Business Research College of Business Administration, University of Florida.*

**Table I.3** presents the 1990 census income data by municipality, and County totals (year 2000 data were not available for municipalities). Based on median income levels the most affluent area was Longboat Key followed by the unincorporated County, the City of Venice, the City of Sarasota and the City of North Port.

**Table I.3.** 1990 census income data by municipality, and County totals. 1990 latest data available from the County.

	Average Per Capita	Median Family	Median Household	Average Household
Countywide	\$ 18,441	\$ 35,322	\$ 29,919	\$ 40,357
City of Sarasota	\$ 16,151	\$ 30,236	\$ 24,884	\$ 35,254
Town of Longboat Key	\$ 51,669	\$ 71,069	\$ 55,530	\$ 94,005
City of Venice	\$ 19,940	\$ 33,024	\$ 27,834	\$ 36,496
City of North Port	\$ 11,391	\$ 26,036	\$ 23,099	\$ 26,585

A total of 8,859 moorings were inventoried by the 1996 and 1998 Antonini study for the unincorporated county. "Moorings" are defined as a location where one vessel is typically stored or accommodated when not in use. Types of moorings identified by Antonini (1998) include anchorage, beached or blocked, dry stack, hoist, ramp, seawall, trailer, or wet slip.

### **I.2.2 Longboat Key - Demographics**

Longboat Key is the principal barrier island which separates Sarasota Bay from the Gulf of Mexico. The entire island is incorporated as the Town of Longboat Key. Approximately one half of the island is within Sarasota County and the remainder is contained within Manatee County. The island is 10.8 miles (17.4 km) in length, has a total area of 4.26 square miles (11.03 sq. km), is narrow, ranging from 0.05 to 1.0 mile in width, and low lying with elevations ranging from 3 to 18 feet (0.9 to 5.5 m) above sea level. There are maintained deepwater passes at both the north end, Longboat Pass, and south end, New Pass, of the island. New Pass shoals over rapidly between dredging periods becoming navigable for moderate and shallow draft vessels only during these periods.

There are approximately 7,603 full time residents (~5,012 within Sarasota County portions of Longboat, consistent with the 2000 Census) with a seasonal influx of approximately 11,360 additional people and a peak seasonal population of approximately 20,000 people. Longboat Key is a retirement/resort community comprised of 46 percent males and 54 percent females with a mean age of 68. The community is considered affluent with an average household income of \$104,255 (2000). In 1999 the average sale price for a single family home was \$597,000 and a condominium \$411,000. Housing is comprised primarily of condominiums 5,687 units followed by single family homes 1,679 units, manufactured homes 286 units, and tourist accommodations 1,612 units. (Data Source: Longboat Key Chamber of Commerce).

The Town of Longboat key is considered to be built-out, meaning there are no additional tracts of property open for new development. Any changes in the characteristics of the island's development, such as the type or number of housing units on a parcel, would require a change in zoning, the comprehensive plan, and a referendum to modify development density.

Existing Moorings - A total of 1,523 moorings were inventoried by the 1996 Antonini study for the Town of Longboat Key.

### **I.2.3 City of Sarasota - Demographics**

The mainland portion of the City of Sarasota is located on the eastern shore of Sarasota Bay across from Big Pass and New Pass. Being adjacent to the two passes the City was the principal focus for development in the early through mid 1900's. City limits also encompass, the barrier island of Lido Key, City Island located on New Pass, Bird Key a dredge and fill island located in the bay and the north end of Siesta Key, which borders Big Pass, and Island Park a dredged and

fill park. The City of Sarasota consists of 14.6 square miles (37.9 sq. km) of land and 11.1 square miles (28.7 sq. km) of water. The City bayfront property is mostly developed for single or multifamily residences.

In the year 2000 there were approximately 52,715 residents and 26,898 housing units. Information on seasonal influx was unavailable. The number of male residents was approximately 25,627 (48.6%) and females were 27,088 (51.4%). The median age of the City residents was 41.1 years.

The City of Sarasota is considered to be a community of mixed interests with retirement/resort, business and light industrial components. Recreational access to Sarasota Bay and artistic and cultural interests are highlighted by the Chamber of Commerce. The City has a range of income levels from poverty status to affluent with an average household income of \$34,077 (2000). There are 26,898 housing units within the City consisting of a mix of single family, condominiums, apartment rentals and mobile homes. There are also a large number of motel/hotel accommodations.

The City of Sarasota is considered to be near build-out with respect to population. Population projections show the City with a peak population of 53,326 by the year 2010. Changes in the characteristics of the City's development would require changes in zoning, the comprehensive plan, and development density.

Existing Moorings - A total of 2,766 moorings were inventoried by the 1996 Antonini study for the City of Sarasota.

#### **I.2.4 City of Venice - Demographics**

The City of Venice, a planned city from its inception in 1926, is located on the Gulf of Mexico and is centered on the Venice Inlet and the ICW. Two small bays, Roberts and Dona Bays, which receive flows from Shakett and Curry Creek, are the principal water bodies. Being centered on a Gulf inlet the community advertises itself as its Italian namesake a water-based community. The City of Venice consists of 9.66 square miles (25.02 sq. km) of land and 0.55 square miles (1.42 sq. km) of water which includes two linear miles of bay shores that are part of a major estuary and approximately four miles of ICW. The City waterfront property is mostly developed for single or multifamily residences although a long section of ICW bordering is industrial property. This area will be studied by the City for potential redevelopment. The present zoning code was adopted in 1978, and provides the basic guidelines for land use. The code includes two environmental zoning districts, "OUC" (Open Use Conservation) district and "MP" (Marine Park) district. The OUC district is intended to preserve and protect open spaces, park lands (where not otherwise zoned "GU" (Government Use), wilderness areas, marsh lands, water sheds, water recharge areas, scenic areas, and beaches. Another purpose of this zoning district is to conserve fish and wildlife areas. This district is also responsible for the protection

of life and property in areas subject to flooding. The MP district is intended to protect and preserve water areas within the jurisdiction of the city. All designated waters, including, but not limited to all boat basins, bays, bayous, canals, lakes, rivers, streams, waterways, and waters of the Gulf of Mexico and all publicly and privately owned submerged lands extending from the mean high water line or bulkhead line are in this district.

In the year 2000, the U.S. Census reported that there were approximately 17,764 residents including an approximate additional 6,000 seasonal residents. The number of male Venice residents was approximately 7,717 (43.4%) and the number of females 10,047 (56.6%). The median age of the City residents was 68.8 years. There are currently approximately 13,516 housing units and an additional 11 registered motel/hotel facilities within the city limits.

The City of Venice is considered to be a retirement/vacation community of mixed interests with retirement/resort, business and light industrial components. Recreational access to the waterways is somewhat limited to residents that do not live directly on the water. There are ten marinas and two public boat ramps within the City. Income levels and average housing costs for the City of Venice were not available.

The City of Venice annexed 4.06 square miles of properties in 2001, consisting primarily of a property referred to as the Henry Ranch, which extends east to the Myakka River. This will add significant numbers of new residents to the city, primarily on properties east of the existing developed areas. Population projections show the City with a resident population of 22,556 and a permanent population of 30,941 by the year 2010, which does not take into consideration the recent annexation lands. To make changes in the characteristics of the City's waterfront development would require revising zoning, the comprehensive plan, and development density. The city's comprehensive plan recognizes the need to provide additional public access to beach and waterways; "Public access to the waterways should be enhanced through additional facilities such as beach accesses and boat ramps, but only where these facilities will not negatively impact water quality, vegetation and wildlife."

Existing Moorings -A total of 1,806 moorings were inventoried by the 1998 Antonini study for the City of Venice.

### **I.2.5 City of North Port - Demographics**

The City of North Port, located in the southeastern portion of Sarasota County, encompasses nearly 75 square miles (194 sq. km) of land and a very small area, 0.8 square miles (2.07 sq. km) of small vessel navigable water. Direct access to Sarasota County waterways is limited to the lower Myakka River via the tributary known as Big Slough. Myakka River flows into the Charlotte County portion of Charlotte Harbor.

In the year 2000 there were approximately 22,797 residents consisting of 10,895 males and 11,902 females with a median age of 40.8 years. There are approximately 10,302 housing units and 786 units classified as seasonal use. There is one licensed motel/hotel facility located in Warm Mineral Springs. There is one mobile home park with 865 units, with approximately half occupied year round.

The City of North Port is considered to be a middle income working class family and retirement community. It has the third largest land mass for a city in the state of Florida and is the fourth fastest growing community in the state and accounts for nearly 80 percent of the growth in Sarasota County Schools.

By the year 2020 the City of North Port is projected to have the second largest municipal population in Sarasota County. A large proportion of those residents desiring to undertake boating activity will be required to access waterways in other portions of Sarasota County or to the south in Charlotte County via the lower Myakka River.

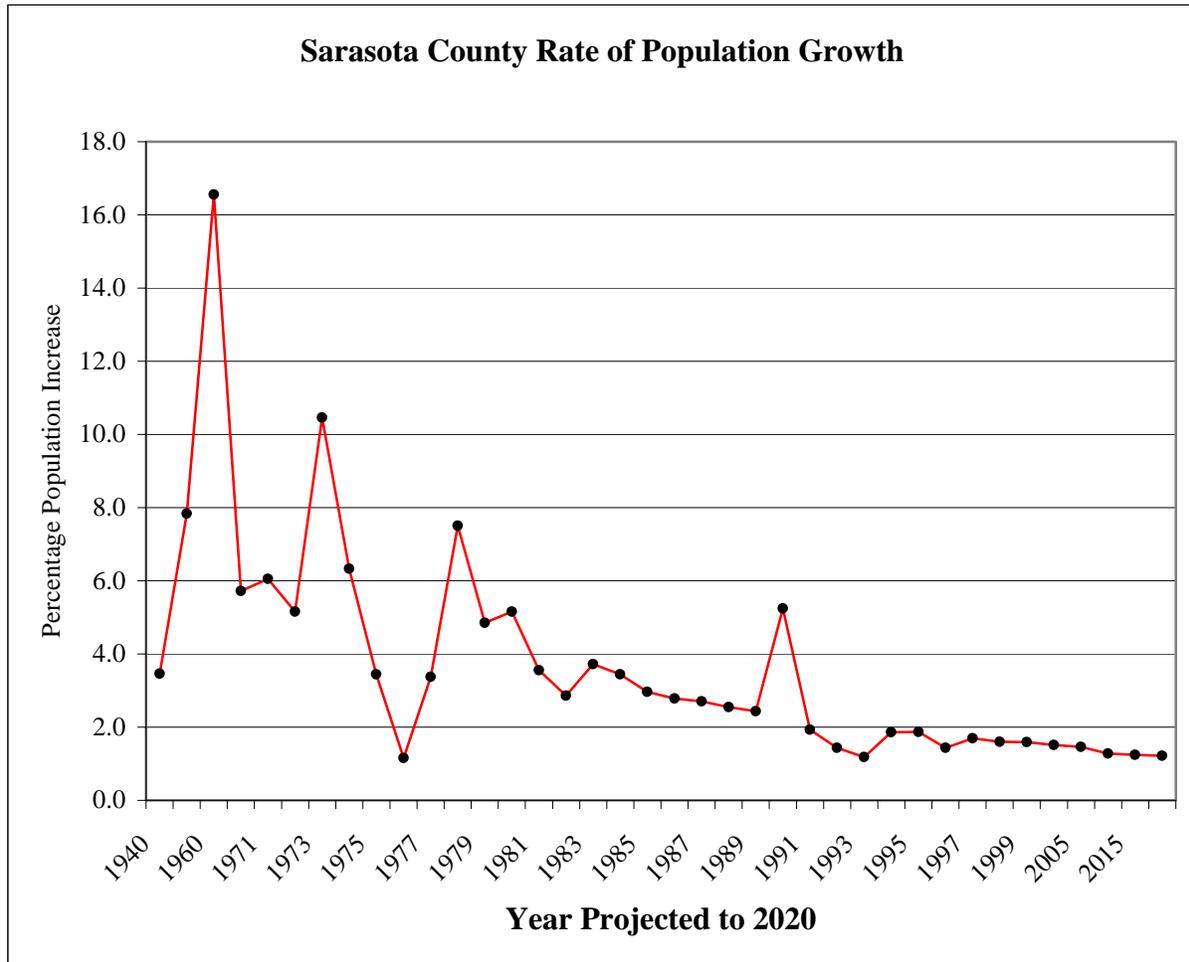
Existing Moorings - A total of 922 moorings were inventoried by the 1998 Antonini study for the City of North Port.

An illustration of existing moorings for all Sarasota County Municipalities is provided in **Figures I.5 through I.8, and Table I.4.**

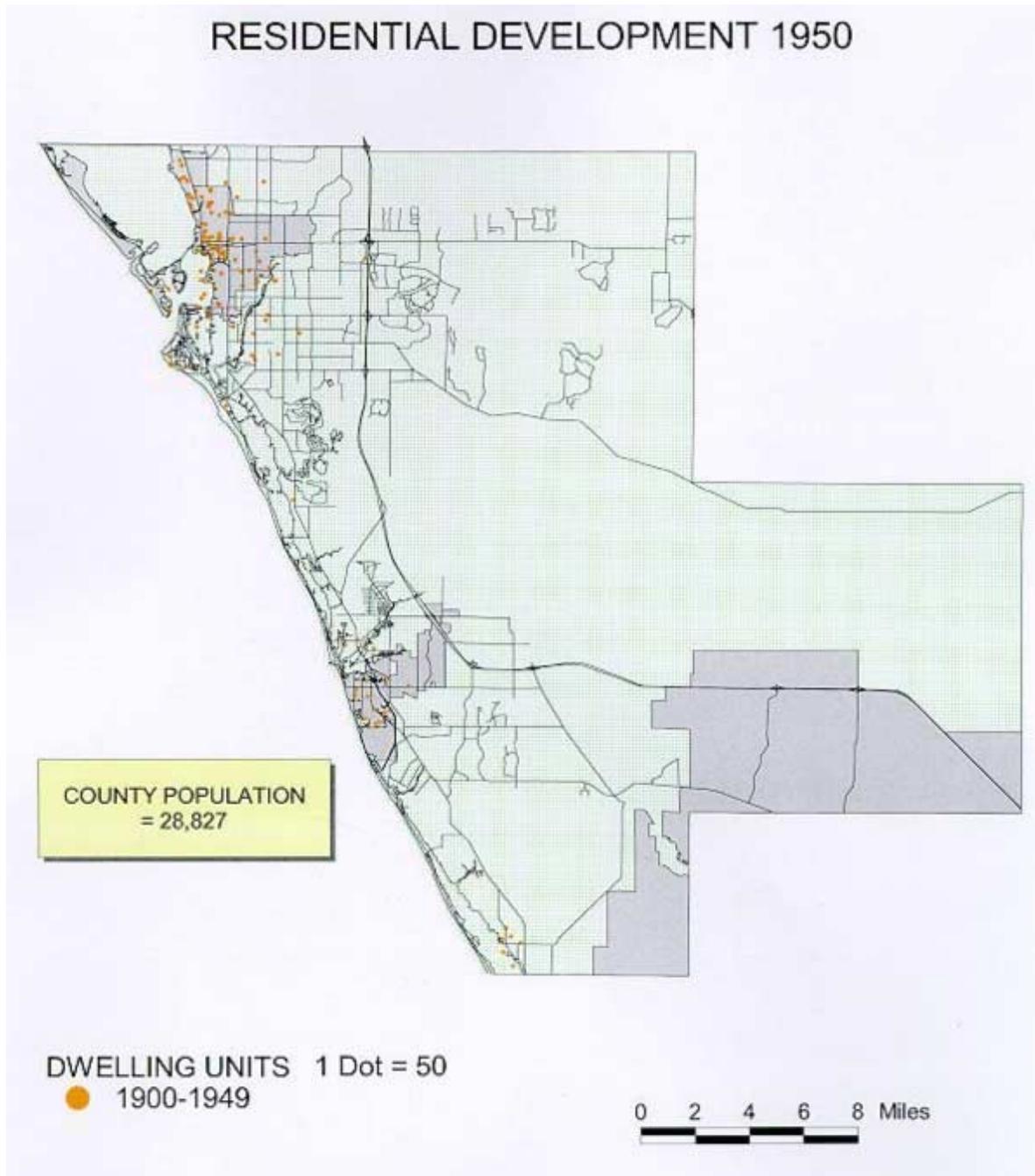
**Table I.4.** Number of boat moorings and type by municipality and unincorporated Sarasota County (Source: Antonini, 1996 and 1998).

Area	Wet Slips	Dry Stacks	Seawall	Beached or Blocked	Trailer	Ramp	Anchorage
Town of Longboat Key	1,059	415	37	0	1	11	0
City of Sarasota	1,334	568	54	348	235	27	200
City of Venice	977	423	21	166	130	72	16
City of North Port	702	112	13	62	19	14	0
Unincorporated County	4,589	3,026	149	675	273	147	4
<b>Total</b>	<b>8,661</b>	<b>4,544</b>	<b>274</b>	<b>1,251</b>	<b>658</b>	<b>271</b>	<b>220</b>
<b>Total All Categories: 15,879</b>							

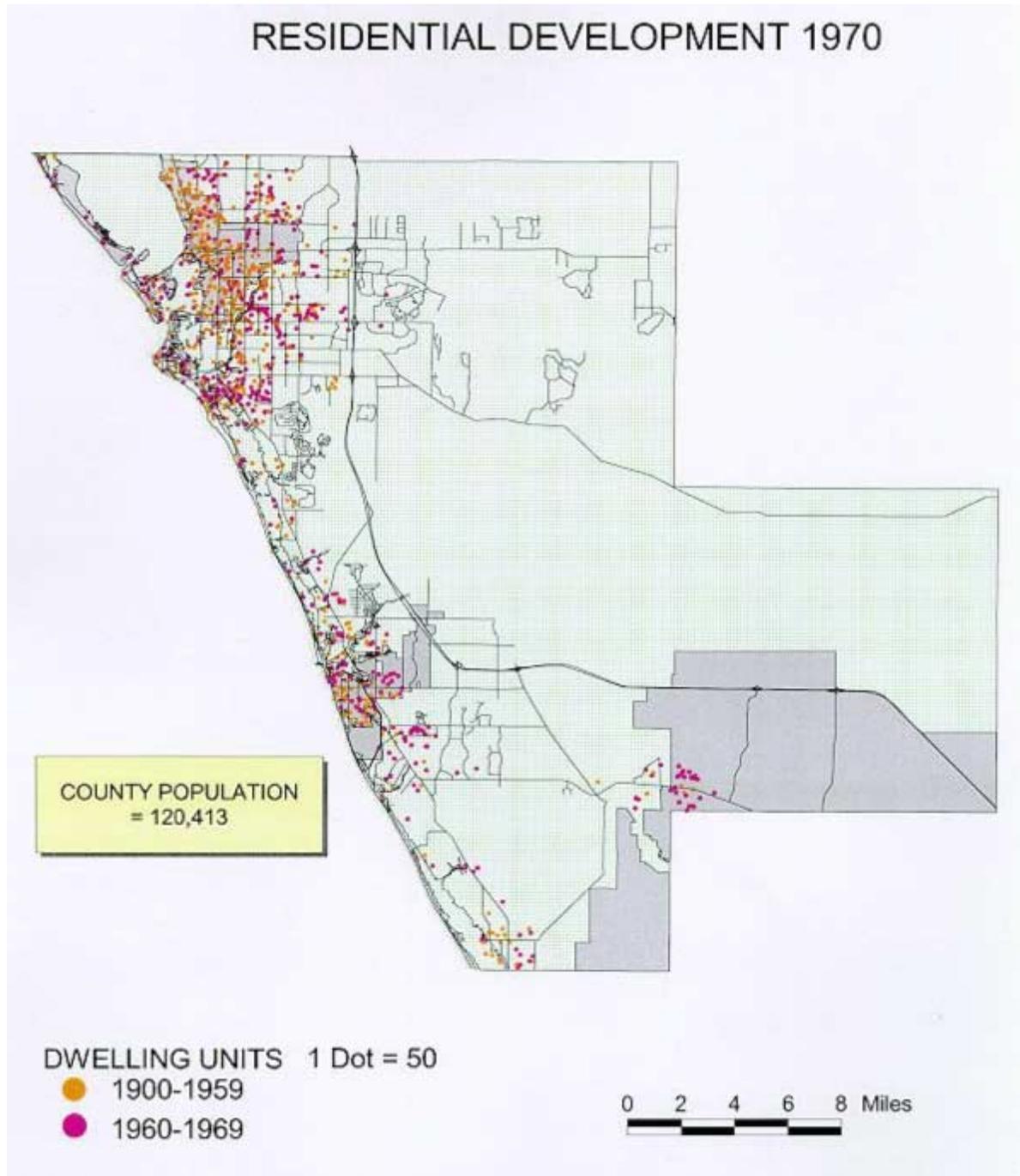
**Figure I.1.** Rate of Sarasota County population growth since 1930, projected to 2020.



**Figure I.2.** Sarasota County population centers as represented by number of dwelling units built for the period 1900 - 1949. (Source Sarasota County Planning).



**Figure I.3.** Sarasota County population centers as represented by number of dwelling units through 1970. (Source Sarasota County Planning).



**Figure I.4.** Sarasota County population centers as represented by number of dwelling units through 1997. (Source Sarasota County Planning).

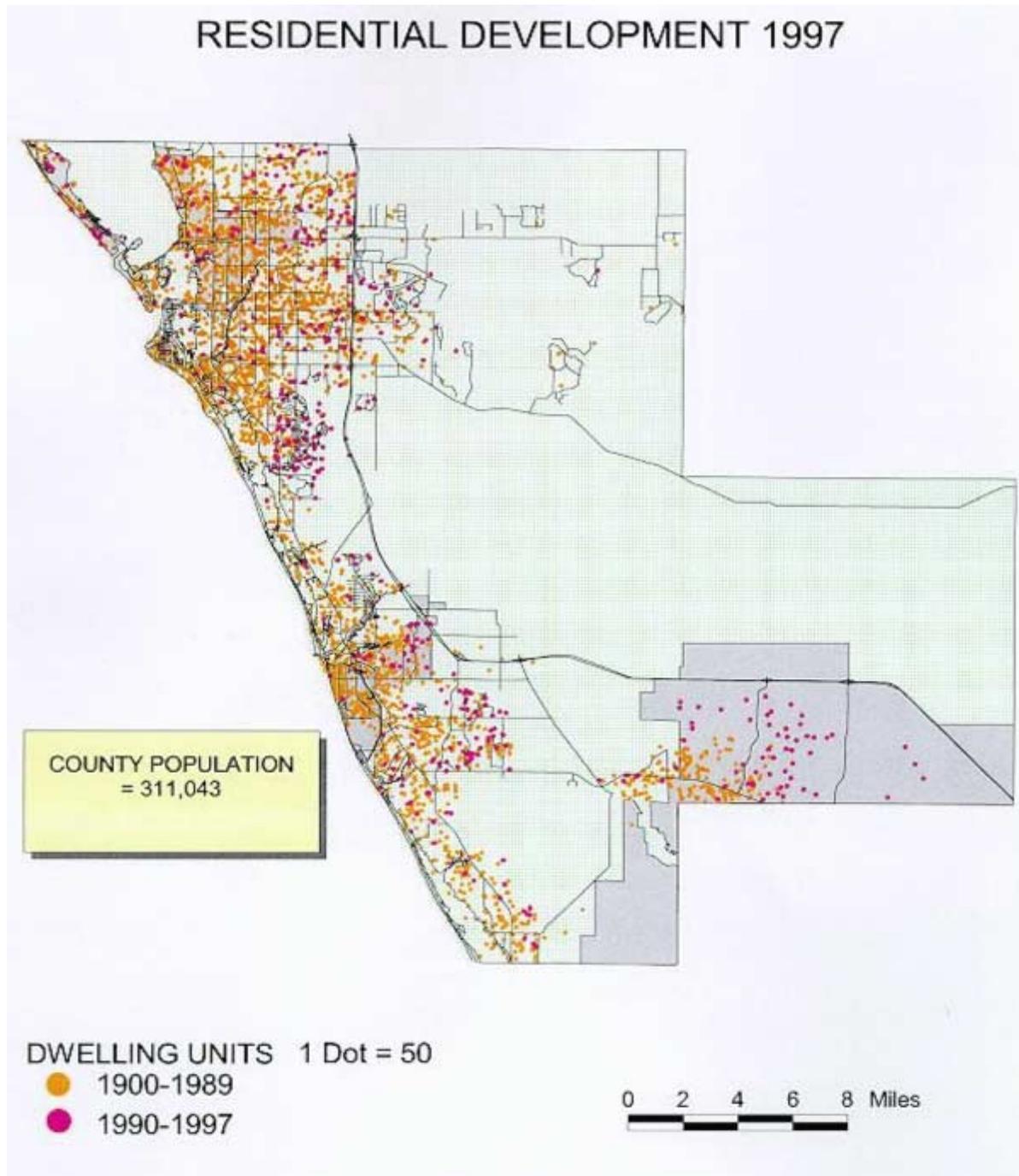
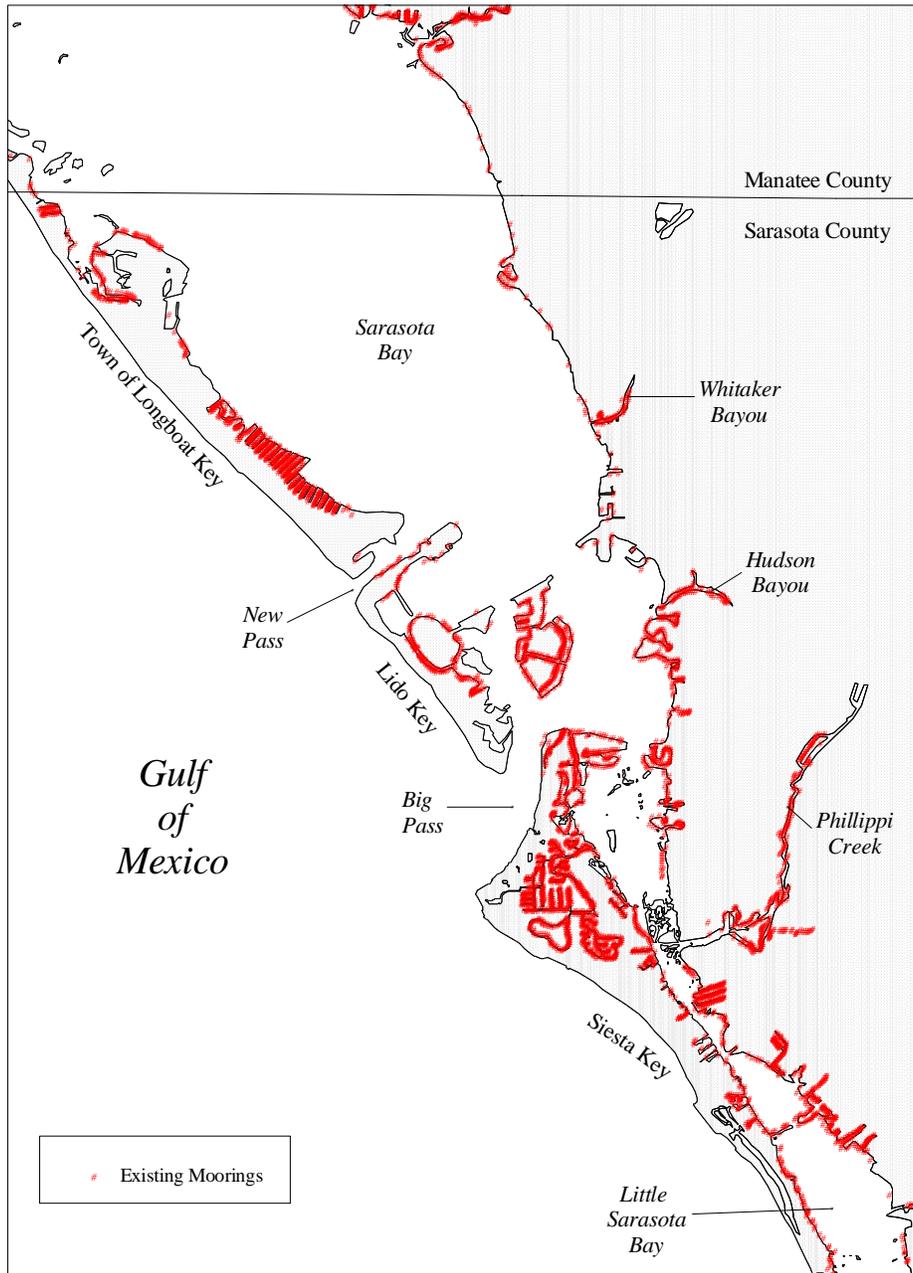


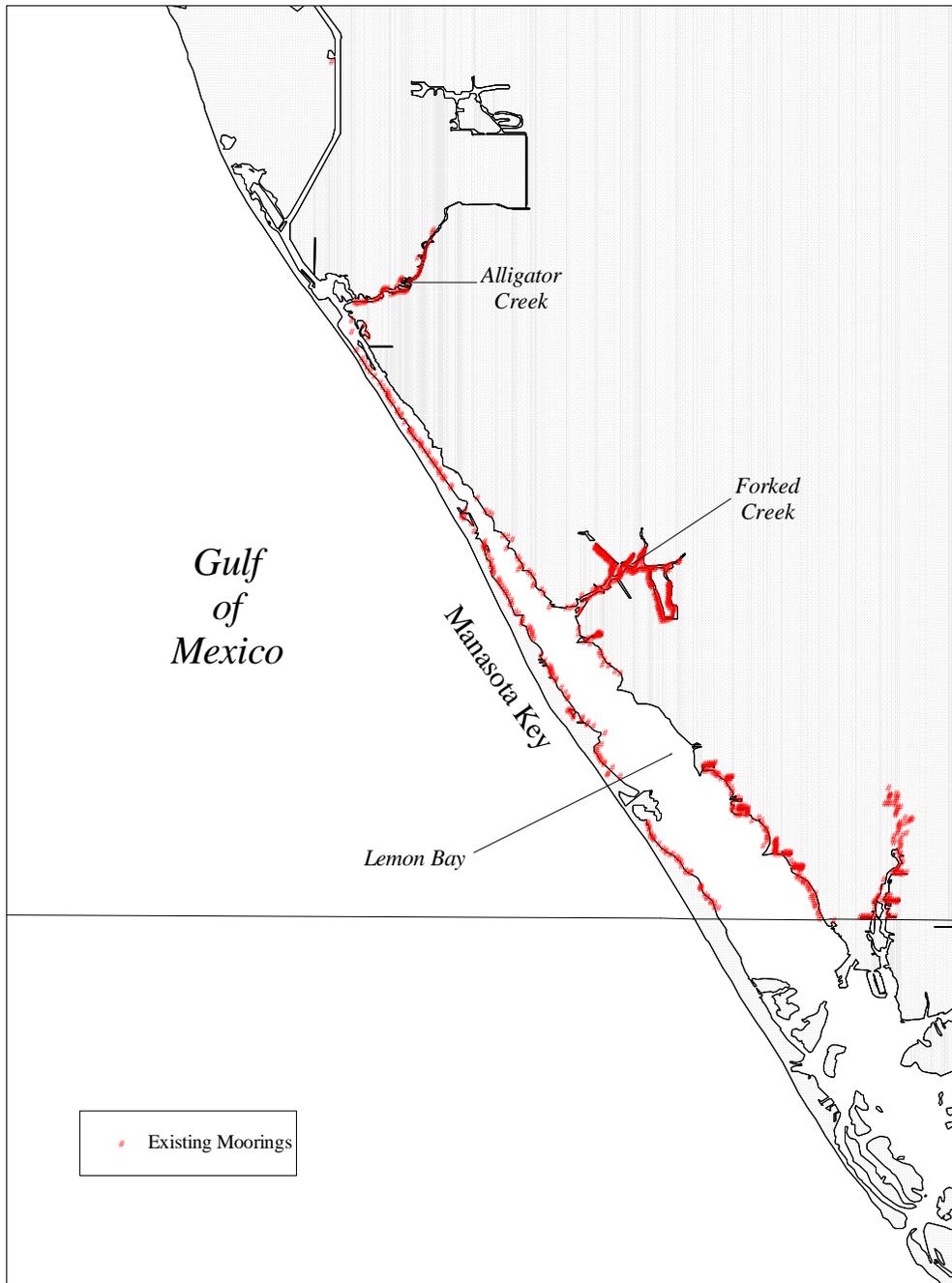
Figure I.5. Existing moorings within northern Sarasota County. Antonini 1998.



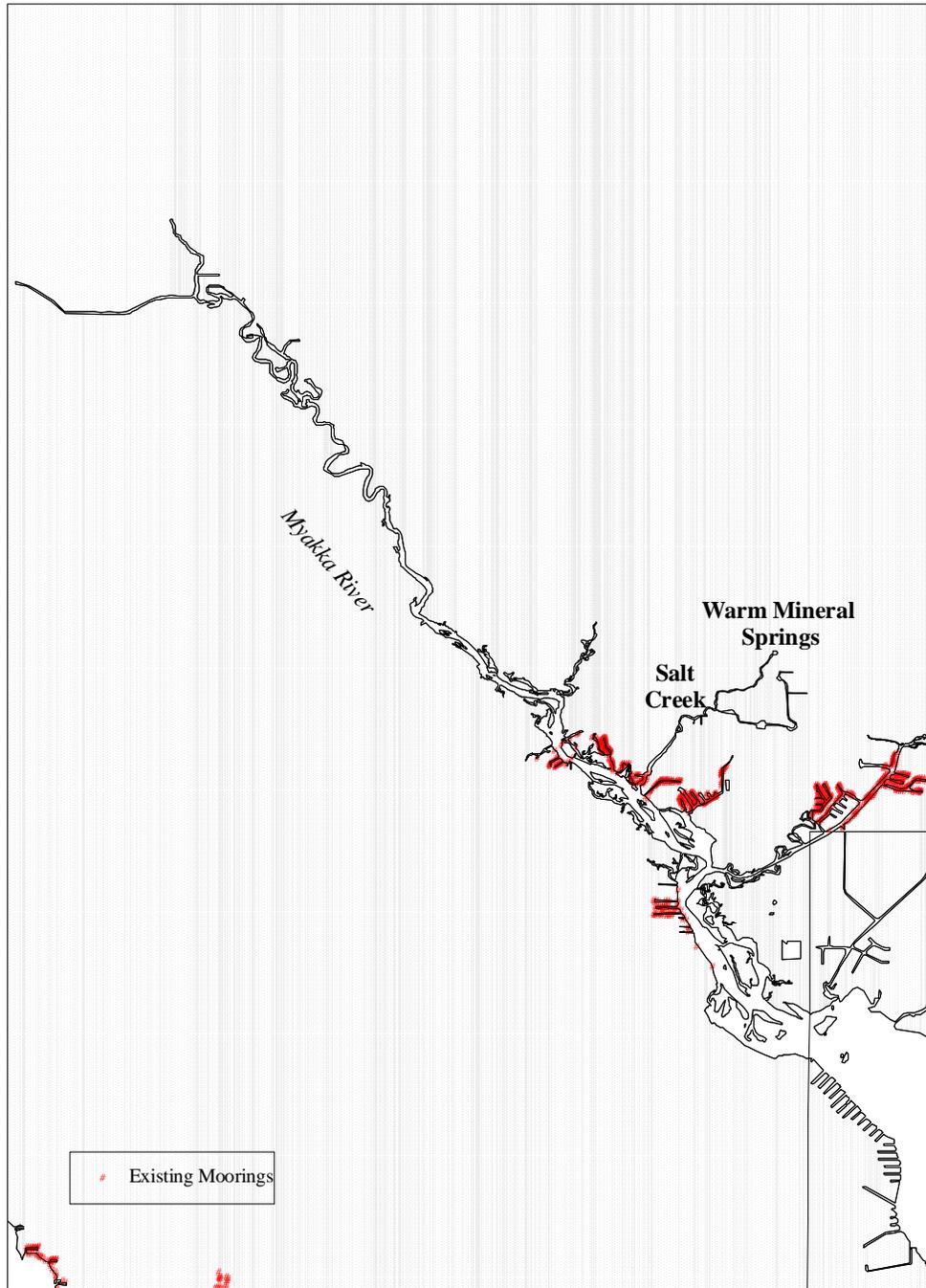
**Figure I.6.** Existing moorings within Central Sarasota County. Antonini 1998.



**Figure I.7.** Existing moorings within southern Sarasota County. Antonini 1998.



**Figure I.8.** Existing moorings within Myakka River area. Antonini 1996.



## II. INFORMATION ASSESSMENT AND EVALUATION

The following information was utilized in order to select areas appropriate for boat facility development:

- Existing County and municipality zoning. Existing upland land use designations that currently allow marine and boat facility development were located. (Current zoning and land use maps for Sarasota County may be found at Sarasota County Government web site at:

<http://www.scgov.net/Frame/ScgWebPresence.aspx?AAA498=C2B3BCB9B7B3C3AAC7837AA9C16FC0A6C7B3BFB5C6A27BABC180C1B9>

Or

Visit Sarasota County Government web site [at www.scgov.net](http://www.scgov.net)

Select "Look Up Property Maps" on right side tool bar

Select "Property Maps" under Related Links

Select Zoning look up

- Sarasota County Future Land Use Classification. Those properties for which future land use changes will allow for new boat facility sites were also identified. Criteria were developed to be used by local governments to evaluate if a land use change allowing future boat facility development is appropriate. This information is also available from the above link.
- The 1996 boater (speed) compliance study conducted by Mote Marine Laboratory within five representative areas of Sarasota County waterways: New Pass, Pansy Bayou/City Island grass flats, Skiers Island, Venice Inlet, and the Myakka River.
- Sarasota County inventories of marine facilities, multi-family residential docks of 5 or more slips, boat ramps, and marine industrial facilities.
- Information on manatees has come primarily from Mote Marine Laboratory sighting (aerial surveys and FMRI telemetry), as well as USGS Telemetry Data and FWC mortality plot data.
- Inventories of wetlands, bird rookery islands, seagrass beds, prop scarring, freshwater submerged aquatic vegetation, shellfish areas, existing water depths, dredge spoil locations, and water circulation patterns were reviewed.

- Specially-designated areas, such as Outstanding Florida Waters, aquatic preserves, federal, state and local parks, sanctuaries and research reserves, wildlife refuges, and any other lands set aside for preservation and/or open space.
- Review of local government comprehensive plan policies regarding the siting of boat facilities to determine if there are any limitations or restrictions to development in each area.
- An evaluation of existing local government dock and marina design regulations, permitting criteria, and codes.
- Review of other Manatee Protection Plans which have been submitted to the State.

## II.1 MANATEES IN SARASOTA COUNTY

Due in part to a limited number of field studies, the coastal waters between Tampa Bay and Charlotte Harbor were historically disregarded as sustaining a significant manatee population. In 1985 low level aerial surveys between Anna Maria Island and Venice Inlet were initiated by Mote Marine Laboratory (MML). As a result, a significant seasonal population of manatees was first described (Patton, 1986; Nabor and Patton, 1988). Sarasota County is now a site of one of the most comprehensive, longest-running manatee population studies in Florida. Aerial survey data have been collected continuously since 1987, and boat- and land-based manatee photo-identification and habitat studies have been ongoing since 1993. In addition, more than 1,400 citizen sighting reports have been logged since 1986 and additional information has been gathered on manatees from field response, rescues, and telemetry studies over the past 15 years. Much of this research is still underway. The following summarizes available information on manatees in Sarasota County.

### II.1.1 Overall Abundance and Population Trends

Aerial surveys have been the most reliable data collection technique for the determination of relative manatee abundance and distribution (Hartman, 1979; Irvine and Campbell, 1979; Packard *et al.*, 1986; Ackerman, 1995). Manatee aerial surveys of Sarasota County were initiated in 1985, and were performed on a regular (monthly) basis beginning in 1987. Aerial survey techniques are described by Patton (1986) and Nabor and Patton (1988). While the frequency of aerial surveys has varied with available funding (monthly *vs.* twice-monthly in some years), the methodology has remained essentially the same. These studies documented a significant population of manatees in Sarasota County waters, with as many as 103 individuals sighted during a single aerial survey (16 November, 2000). Aerial survey data also suggest that the number of manatees utilizing Sarasota County appears to be increasing (**Figure II.1**). Linear regression analysis indicates an increase of 5.4 percent to 7.2 percent per year between 1987 and 1998 (Koelsch and Quintana-Rizzo, in prep.) This increase suggests a shift in habitat use by

manatees along the Florida West Coast. Manatee use within Sarasota County is now well-documented, and information from aerial surveys has contributed to the designation of Sarasota County as a “key” Florida county for manatee protection and conservation.

### **II.1.2 Seasonal Patterns**

Not surprisingly, manatee abundance and distribution in Sarasota County are strongly correlated with water temperature. **Figure II.2** displays the mean number of manatees observed by month, along with mean water temperature data collected at New Pass. Lowest counts of manatees typically occur in December, January, and February, when water temperatures are coldest. The Sarasota County manatee population is considered seasonally migratory, though relatively significant numbers of animals remain in the southern portions of the county throughout much of the winter. Clearly there is a seasonal shift in habitat use within the county, as is displayed in **Figure II.3**. During the “warmer” months (typically March through October), manatees are regularly observed in northern Sarasota County at sites such as Pansy Bayou and Buttonwood Harbor. During the “colder” months (November through February), however, habitat use shifts to the southern portions of the county, in areas such as the Myakka River and Forked Creek.

### **II.1.3 Areas of Recurrent Use**

Aerial and boat-based field studies indicate that manatee use in Sarasota County is widespread, particularly during the warmer months of the year. During 1995 and 1996, summer field studies of manatees documented animals at 31 different locations within Sarasota County (Koelsch, 1997). While manatees are widely distributed throughout the county, specific areas of recurrent use have been identified. Distribution changes dramatically during the winter, as the majority of the population migrates to warm water refugia to the north and south. Some animals remain in Sarasota County waters but redistribute themselves at sites in the south county, particularly the Myakka River. One location of particular interest is Salt Creek/Warm Mineral Springs, a tributary of the Myakka River. This area has been recently designated as a primary winter refuge site for manatees, with as many as 147 individuals counted during a single land survey conducted in November, 2002 (Source: Florida Marine Research Institute).

Based upon aerial survey data, as well as land- and boat-based field studies, a suite of recurrent-use areas for manatees in Sarasota County have been identified. These areas are defined as locations where manatees are regularly sighted either seasonally or year-round. These areas are listed from north to south, as follows:

#### Buttonwood Harbor

Buttonwood Harbor is an important non-winter site for manatees, and individuals have been sighted during 76 percent of all aerial surveys conducted during the months of April through September (1996-2000 MML aerial survey data). The boat basins to the north

(Longboat Harbor) and south (Dock On The Bay) are also areas of recurrent manatee use during the summer.

#### Pansy Bayou / City Island Grass Flats

Pansy Bayou, along with the adjacent grass flats between St. Armand's Key and City Island have been well documented as important manatee habitat in Sarasota County. Manatees have been observed in this area during 80% of all aerial surveys conducted during the months of April through September (1996-2000 MML aerial survey data). Pansy Bayou has also been identified as an important nursery area, with numerous mothers and dependant calves observed. It also appears to be an important area for newly independent subadults, with groups of 2-6 individuals commonly observed in the summer and fall (Koelsch, pers. comm.).

#### Big Sarasota Pass / South Sarasota Bay

The grassbeds inside Big Sarasota Pass are frequently used by manatees for feeding throughout the non-winter portion of the year. Other activities, including mating, have also been observed. Both larger groups (8-12 individuals) and smaller groups (2-5 individuals) are commonly dispersed across the shoals.

#### Hudson Bayou

Manatees are often observed in this narrow, muddy creek, particularly in the vicinity of the Orange Avenue Bridge. This is the most regularly used site along the eastern shore of Sarasota Bay (Koelsch, pers. comm.). Use of this area has been somewhat reduced recently, probably in association with construction activities within the bayou.

#### Roberts Bay (Sarasota)

Manatees are observed throughout Roberts Bay during the non-winter months, most often in the area north of Skiers Island. They are frequently observed both along the eastern shore of Roberts Bay (inside the bird rookery spoil islands) and the western shore (inside Edwards Island and the entrance to Hansen's Bayou). Other areas of recurrent use include Coconut Bayou and Netti Bayou on the western shore, and the residential canals along the eastern shore. Manatees (including mothers and calves) are also frequently observed feeding on the grassbeds outside the entrance to San Remo Shores, and are also frequently observed resting and socializing within the basin.

#### Forked Creek

Forked Creek is a relatively small tributary consisting of a series of man-made canals at the northern end of Lemon Bay. Manatees have been observed in Forked Creek during each month of the year, with as many as 30 individuals sighted during a single survey (this is particularly significant due to the relatively small size of the creek). Manatees are most abundant in Forked Creek in the fall and spring, and are typically found in this area

on all but the coldest days of the year, when they probably migrate to more well established, primary winter refuge sites.

#### Lemon Bay

Lemon Bay offers extensive favorable manatee habitat, including highly productive seagrass beds. While manatees are most frequently observed just north of the Tom Adams Bridge off Indian Mound Park, they are also widely dispersed throughout Lemon Bay. Manatees are most commonly observed in Lemon Bay during the spring and fall.

#### Myakka River, including Salt Creek

The Myakka River has been identified as one of the most important manatee sites, as well as the single most important year-round manatee area in Sarasota County. As many as 39 manatees have been sighted in the Myakka River during a single aerial survey (Mote Marine Laboratory data; 10 March, 1999), though these data are likely an underestimate due to relatively poor sighting conditions in the river (dark, tannic water and large amount of vegetative cover). As many as 147 manatees have been sighted during a single land-based survey of Salt Creek. (Florida Marine Research Institute data; November, 2002). The Myakka River is also unique in that it sustains a significant population of manatees year-round due to the presence of a primary warm water source from Warm Mineral Springs. Although manatees are present year-round, use appears highest in the winter in the vicinity of Salt Creek, Big Slough, and adjacent waters. The Myakka River was designated as a Wild and Scenic River by the state legislature in 1985 (Hunter Services, Inc., 1990).

Locations of recent aerial sightings of manatees within Sarasota County are shown in **Figures II.4 through II.11**. Additional information from Sarasota County aerial surveys is available from the Florida Marine Research Institute Atlas of Marine Resources (1999) and from Mote Marine Laboratory.

### **II.1.4 Movement Patterns and Site Fidelity**

While aerial survey data provide useful information on manatee abundance and distribution, they are limited in their inability to identify and monitor individuals through time. In order to collect supplemental information on manatee site fidelity, residency time, behavior, habitat use, and short-term movement patterns within Sarasota County, photo-identification studies were initiated by Mote Marine Laboratory in 1993. Data from this effort have been incorporated into the southeastern U.S. photo-identification catalog (MIPS-Manatee Individual Photo-Identification System; Beck and Reid 1995) maintained by the U.S. Geological Survey Sirenia Project and Florida Fish and Wildlife Conservation Commission. Based upon photo-identification studies, it has been determined that Sarasota County is an area of recurrent use by a significant number of manatees. Between 1993 and 2000 a total of 217 unique individuals was identified, with 143 individuals resighted over more than one field season and more than 45 individuals resighted

over five or more field seasons. It is likely that a number of animals have returned to Sarasota County over a significantly longer period of time, however the data is limited by the duration of the photo-identification project (seven years). A 60 percent rate of return was calculated for Sarasota manatees observed between 1993 and 1996, which is similar to the rate of return at well-established winter refuge sites (Koelsch, 1997). A summary of sighting data from recent photo-identification studies is provided in **Appendix A**.

Both seasonal residents (individuals which spend a significant amount of time in an area for a portion of the year) and seasonal transients (individuals which transition briefly through an area on their way to and from other regions) are found in Sarasota County (Koelsch, 1997). These animals originate from a variety of locations along the Florida west coast, and Sarasota County appears to represent a transition zone between north/south migratory routes. Thus far, catalogued animals from Sarasota County have been documented at sites as far north as Crystal River, and as far south as the Florida Everglades. Many cataloged manatees from the Sarasota area have been identified at warm water refuge sites in Tampa Bay (including the TECO Power Plant) and Charlotte Harbor, including the FPL Power Plant on the Caloosahatchee River. The number of sites that have been documented to date is largely a function of survey effort.

Manatees in Sarasota County move freely among sites, in many cases on a daily basis. **Figures II.12, II.13, and II.14** display satellite telemetry information for three tagged manatees that have been known to reside in Sarasota County. Results indicate that manatees are not restricted to specific sites, but instead move freely and regularly between different sites within the county. For animal TB27 (“TECO”), a range of movement primarily in the southern portions of the county is indicated. Animal FM243 (“Englewood”) demonstrates that for some animals the range may be countywide, as this particular animal was observed from northern Sarasota Bay to the Myakka River. For animal SB22 (“Jemp”), seasonal range extends from the northern county line south to Venice (and southward to the Everglades during the winter). Perhaps more striking are the short-term movement patterns of animals in Sarasota County. **Figure II.15** displays the locations of animal FM243 over a ten-day period, during which time the animal ranged from northern Sarasota Bay to the Myakka River. **Figure II.16** demonstrates a range of more than 20 miles for animal FM243 within a 24 hour period.

Recent focal animal studies performed by Mote Marine Laboratory have also provided information on movement patterns of manatees within Sarasota County. During these studies, a specific animal is identified and monitored for a period of time throughout the day. This information provides additional evidence of short-term movement within portions of Sarasota County. Preliminary results are consistent with other findings, and demonstrate that manatees move freely among various sites within the county on a short-term basis. Plotted travel corridors from eight focal animal tracks are provided in **Figure II.17**.

### II.1.5 Manatee Mortality

Statewide, Sarasota County ranks 7<sup>th</sup> in manatee mortality and ranks 6<sup>th</sup> (tied) in watercraft-related manatee mortality for the years 1999-2001 (**Table II.1**). While manatee mortality in Sarasota County is still well below the leading Florida counties such as Lee and Brevard, there is still cause for concern due to a general trend of increasing numbers of both watercraft-related deaths (**Figure II.18**) and total deaths (**Figure II.19**). In addition, the location of carcass recovery may provide some indication on specific areas of concern within the county. **Table II.2** summarizes manatee mortality data from different areas in Sarasota County. These data suggest that areas such as Lemon Bay may be of particular concern, due to the fact that these areas have sustained relatively large numbers of both watercraft-related deaths and total manatee deaths between 1976 and 2001. Specific locations of all recovered manatee carcasses in Sarasota County between 1976 and 2001 are provided in **Figures II.20** and **II.21**.

**Table II.1.** Summary of manatee mortality statistics by county, 1999-2001.

<b>Water Craft Mortality</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>Total</b>
LEE	10	13	23	46
BREVARD	12	13	7	32
COLLIER	10	5	8	23
VOLUSIA	5	3	11	19
CHARLOTTE	5	5	2	12
<b>SARASOTA</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>11</b>
BROWARD	5	2	4	11
HILLSBOROUGH	4	2	4	10
DADE	1	2	5	8
PALM BEACH	2	3	3	8
MONROE	3	3	2	8
GLADES	4	3	0	7
INDIAN RIVER	1	4	1	6
CITRUS	4	1	1	6
DUVAL	0	4	1	5
DIXIE	2	2	0	4
MARTIN	2	1	1	4
MANATEE	3	0	1	4
ST JOHNS	2	1	0	3
PINELLAS	2	0	1	3
PASCO	1	0	1	2
CLAY	0	0	1	1

**Table II.2.** Manatee mortality data from Sarasota County, by location (1976-2001).

<b>Location</b>	<b>Total Mortality</b>	<b>Location</b>	<b>Watercraft-Related Mortality</b>
Myakka River	22	Lemon Bay	6
Lemon Bay	19	Roberts Bay (Sarasota)	4
Sarasota Bay	18	Little Sarasota Bay	3
Forked Creek	7	Philippi Creek	3
Roberts Bay (Sarasota)	7	Sarasota Bay	3
Blackburn Bay	6	Gulf Of Mexico	2
Gulf Of Mexico	5	Blackburn Bay	1
Little Sarasota Bay	4	Buttonwood Harbor	1
Lyons Bay	4	Hudson Bayou	1
Philippi Creek	4	Lyons Bay	1
Shackett Creek	3	Myakka River	1
Buttonwood Harbor	3	Whittaker Bayou	1
Roberts Bay (Venice)	3	Forked Creek	0
Hudson Bayou	2	Roberts Bay (Venice)	0
South Creek	1	Shackett Creek	0
Venice - ICW	1	South Creek	0
Venice Inlet	1	Venice - ICW	0
Whittaker Bayou	1	Venice Inlet	0
<b>TOTAL</b>	<b>111</b>	<b>TOTAL</b>	<b>27</b>

As a recreational management tool, however, manatee mortality data should be approached with some caution. Clearly counties (or areas within counties) that have extraordinarily and consistently high numbers of dead manatees are cause for concern, however serious problems may occur in other areas as well. The most obvious limitation of manatee mortality data is that under most circumstances it will not provide the location where the animal died, but rather the location where the carcass was recovered. Using a watercraft collision as an example, an animal may be recovered a significant distance from where a collision occurred (in some cases, even across county lines). It is also possible and has been well documented that manatees may

initially survive a watercraft impact, but may die several days or weeks later from secondary complications, far removed from the site of the original incident. Secondly, death is only the most extreme example of harm that a manatee may endure. Many surviving manatees bear the scars from multiple collisions with powerboats, though it is nearly impossible to determine where these injuries occur. Animals may also be forced to abandon areas of refuge due to increased boat traffic or other human activities. Areas that are poised for significant coastal development may threaten existing manatee habitat. While watercraft-related mortality data may provide an indication of the most severe problems, other natural and human-related factors (habitat loss, cold stress, red tide) also may adversely impact the already precarious situation for these animals.

### II.1.6 Manatee Habitat

Manatees are herbivores, and primarily consume a variety of submerged, emergent, and floating vegetation. In marine and estuarine habitats, manatees most often consume seagrasses (Etheridge et. al, 1985). Sarasota Bay supports five of the seven known seagrass species in Florida; *Thalassia testudinum* (turtle grass), *Syringodium filiforme* (manatee grass), *Halodule wrightii* (shoal grass), *Ruppia maritima* (widgeon grass), and *Halophila engelmannii* (star grass). While seagrass habitat in Sarasota Bay has declined historically, there has been evidence of some recovery, primarily in the past two decades. It has been estimated that approximately 8,300 acres of seagrass habitat exists within the Sarasota Bay ecosystem (Culter and Leverone, 1993). Recent maps of seagrass coverage in Sarasota County are provided in **Figures II.22** through **II.25**.

In-water studies of manatee habitat were conducted in Sarasota Bay by Mote Marine Laboratory from 1993 to 1996. These studies were designed to characterize habitat where manatees frequently occur. *Thalassia testudinum* was the most abundant seagrass species identified, followed by *H. wrightii* and *S. filiforme*. While seagrasses are typically considered to be “manatee habitat,” manatees are in fact distributed over a variety of habitat types, including grassbeds, dredged basins, dredged channels, shoals/bars, tidal inlets, and open bays (Koelsch, 1997). When comparing the relative proportion of habitat availability with habitat use in Sarasota Bay, manatees were found to use dredged basins and channels more than expected, but used open bays, passes, and the Intracoastal Waterway less than expected. Seagrass habitat and shoals/sand bars were also utilized slightly less than expected. Different habitat preferences were also indicated between males and females, and between different size and age classes. Manatees were observed traveling in all habitats, but most often in channels. This is particularly important for manatee conservation, because it confirms the use of corridors for manatees that are traveling between different sites. Manatees appeared to differentially select certain species of seagrasses in Sarasota Bay over others (Koelsch, 1997). *Thalassia testudinum* was consumed by manatees in greater proportion than its availability, while *H. wrightii* and *S. filiforme* were used less than they were available. Results were not statistically significant when all three seagrass species were present in the same area. Selectivity indices, however, showed significant

differences in seagrass preference with *T. testudinum* as the preferred seagrass species to manatees during pairwise comparisons.

A second field study was performed in Sarasota Bay in order to evaluate key habitat characteristics that may serve as either attractants or deterrents to manatees (Gorzelay and Koelsch, 1994). Unlike the distribution of manatees at winter refuge sites which is primarily driven by water temperature, the study revealed that distribution of animals at non-winter sites appears highly complex and involves many factors. Manatees may be attracted to a location for a variety of reasons, and the level of importance of a specific characteristic may vary significantly from site to site. The level of shelter, refuge, and/or retreat from human disturbance appeared to be an important factor in site selection at Sarasota sites; perhaps more important than the abundance or composition of seagrasses. As a result, availability of food was not considered to be a limiting factor to manatees in the Sarasota area. The most commonly observed behavior in sheltered areas was resting. This indicates that the selection of more sheltered habitats not only serves as a refuge from disturbance, but also provides a suitable habitat where manatees have reduced their physiological maintenance and energy demands.

### **II.1.7 Freshwater Sources**

Attraction to freshwater by manatees has been well-documented, though whether or not this is a physiological requirement is still unclear. Though manatees inhabit a wide range of salinity regimes, they tend to prefer habitats where osmotic stress is minimal and/or where freshwater is periodically available (Ortiz *et al.*, 1998). Compared with many other south Florida counties (Dade, Broward, Palm Beach, Martin, Collier), Sarasota County waters are somewhat limited in their availability of freshwater. Rivers and creeks are tidally influenced, and all but the most upstream portions remain relatively saline during significant portions of the year. Isolated sources of freshwater may be found periodically along stormwater outfalls. Unlike many south Florida counties, there are only a limited number of water control structures and those that exist are passive in nature (spillways) as opposed to mechanical (gate-controlled). As a result, accessibility to freshwater by manatees is essentially limited to periods of high rainfall or either the intentional or unintentional freshwater discharge from individual homeowners or businesses. The Myakka River represents the only significant, though not necessarily reliable, natural source of freshwater in Sarasota County. The river has a relatively unique “zero flow” characteristic, resulting from a combination of tidal influence and low levels of freshwater runoff during the annual dry season. As a result, salinities fluctuate widely depending upon the amount of rainfall. The river may be essentially fresh to Charlotte Harbor during periods of heavy rainfall, and may have salinities as high as 15 parts per thousand upstream of River Mile 16 (near Snook Haven) during periods of drought. Under average rainfall conditions, the upper portions of the river (upstream of River Mile 16) remain essentially fresh while the middle and lower portions of the river are more tidally influenced and probably do not provide significant source of freshwater. Flows from Warm Mineral Springs are highly mineralized and probably do not contribute a significant source of freshwater to the Myakka River. While freshwater presumably plays a role

in the attraction of manatees to the river, its role among other potential attractants, such as food availability, warm water refuge, and shelter from disturbance, is still uncertain.

### **II.1.8 Warm water Refugia**

Portions of the Myakka River (Salt Creek/Warm Mineral Springs) represent the only significant warm water refugia in Sarasota County. As many as 147 manatees have been sighted during a land-based survey (Source: Florida Marine Research Institute data; November, 2002). This area is considered by the State of Florida to be a primary warm water refuge site for manatees. A secondary warm water refuge is located within Forked Creek, a small tributary off of Lemon Bay. While this creek does not have a significant natural or artificial warm water source, temperatures along the upper portions of the creek are slightly elevated in the winter, resulting in small winter aggregations of manatees on all but the coldest periods of the year. No man-made sources of warm water exist in Sarasota County.

Generally, boat facilities have two potential direct impacts on seagrass habitat. During construction, SCW's substrate is disturbed by installation of the pilings and water clarity may decline due to suspension of fine sediments. Once completed, boat facilities and single-family docks create shade that has the potential to adversely affect existing seagrass beds or prevent the establishment of new seagrass beds. Older docks and roofed boat structures along SCW that were constructed close to the mean high water line (MHWL) have resulted in degraded seagrass beds. Under Chapter 18-20, of the Florida Administrative Code (F.A.C), new boat facilities and single-family docks permitted in aquatic preserves are required to be elevated a minimum of five (5) feet above the MHWL, where the dock crosses over a seagrass bed, and are required to be a maximum of four (4) feet in width to reduce shading potential. Also, walkway planking is required to be no more than eight (8) inches wide and spaced no less than one-half (1/2) inch apart to increase light penetration. Boat facilities also have significant indirect adverse effects. Dredging (both mechanically and *via* boat propellers) immediately adjacent to docks and the associated travel corridors to and from the docks may significantly affect seagrass beds if appropriate turbidity controls are not used. Additionally, the shading caused from moored boats and boats on boatlifts can substantially increase the associated seagrass damage.

### **II.1.9 Conclusions Based on Manatee Data**

Based upon aerial, boat, and land-based field data collected primarily by Mote Marine Laboratory in Sarasota County over the past 15+ years, the following conclusions are made regarding the current status of manatees in Sarasota County:

1. Sarasota County supports a significant seasonal manatee population. While this population is in greatest abundance during non-winter months (March–November), there are also a significant number of manatees that occupy well-documented winter refuge

sites in the southern portions of the county, primarily in the Myakka River. The highest single-day aerial survey counts of Sarasota County were collected on November 16, 2000 (103 animals).

2. The population of manatees in Sarasota County appears to have increased over the past 15 years. This may be due to a shift in habitat use from other areas along the Florida west coast.
3. Site fidelity has been well documented for manatees in Sarasota County, with a significant number of animals returning to specific locations within the County on an annual basis. More than 60 percent of manatees that have been identified during field studies are known to return to the Sarasota area on an annual basis. This establishes Sarasota County as an important seasonal habitat for the Florida west coast manatee population.
4. While manatee mortality in Sarasota County may be relatively low compared with other key counties such as Brevard and Lee, increasing numbers of watercraft-related mortality and total mortality in recent years are cause for concern. Specific areas within the county, primarily Lemon Bay and the Myakka River have experienced relatively high numbers of manatee deaths, and should be considered priority areas of protection.
5. Several areas of recurrent use by manatees have been identified. These areas should be considered as key manatee habitat in Sarasota County. Based upon a review of available data on manatees in Sarasota County, including aerial, boat, and land-based survey data, mortality data, and telemetry data, the priority areas for protection of manatees in Sarasota County are determined to be:

- Upper Myakka River, including Salt Creek
- Pansy Bayou / City Island Grassflats
- Lemon Bay, including Forked Creek
- Roberts Bay, particularly the area north of Skiers Island
- South Sarasota Bay, including the waters inside Big Sarasota Pass
- Buttonwood Harbor
- Hudson Bayou

Secondary protection areas are also identified. These are areas of recurrent, though somewhat less frequent manatee use, or probable travel corridors to and from higher priority areas. These areas are:

- West shore of Sarasota Bay, Longboat Key Moorings to New Pass
- East shore of Sarasota Bay, Stephens Point to the Hyatt Boat Basin

- Little Sarasota Bay
- Blackburn Bay
- Venice Inlet, including Dona Bay, Lyons Bay, and Roberts Bay
- Venice Bypass Canal

Priority and secondary manatee areas are displayed in **Figures II.26, II.27, II.28 and II.29**. It is important to re-emphasize that manatees in Sarasota County are widely dispersed over a variety of locations and move freely between sites, particularly during non-winter months. Animals have been documented to range throughout the county over short periods of time (1-10 days). While several priority sites have been identified, Sarasota County as a whole may be considered manatee habitat. This makes recreational management more complicated, since travel corridors also must be taken into consideration along with well-documented areas of recurrent use.

## **II.2 BOATING ACTIVITY PATTERNS IN SARASOTA COUNTY**

### **II.2.1 Boat Registrations**

Sarasota County currently ranks 6<sup>th</sup> in number of registered vessels on the Florida west coast, and 15<sup>th</sup> in overall abundance statewide (**Table II.3**). A general increase in registered vessels over the past thirteen years is clearly seen (**Figure II.30**), with an increase in more than 5,000 registered vessels in Sarasota County over the past six years. This trend is consistent with boat registration statistics statewide. Over the past 15 years, the number of registered vessels statewide has increased at an average rate of 2.8 percent per year. During the same time period, registered vessels in Sarasota County have increased at an average rate of 2.5 percent per year. Over the past 6 years, however, registered vessels in Sarasota County have exceeded the rate of increase observed statewide (4.6 percent in Sarasota County vs. 3.9 percent statewide).

**Table II.3.** Boat registration information by county, 2001 data. Source: State of Florida.

County	Recreational	Commercial/Dealer	Total
Miami-Dade	54,991	2,857	57,848
Pinellas	53,354	2,363	55,717
Broward	45,603	2,381	47,984
Hillsborough	44,449	1,404	45,853
Lee	41,918	1,734	43,652
Palm Beach	40,700	1,592	42,292
Brevard	35,488	2,137	37,625
Orange	33,886	761	34,647
Polk	30,205	714	30,919
Monroe	25,669	3,535	29,204
Volusia	27,189	1,066	28,255
Pasco	22,022	666	22,688
Collier	21,485	1,010	22,495
<b>Sarasota</b>	<b>21,662</b>	<b>790</b>	<b>22,452</b>
Charlotte	20,793	971	21,764
Manatee	19,093	1,159	20,252
Bay	18,419	980	19,399
Lake	18,924	386	19,310
Marion	18,614	402	19,016
Seminole	18,561	387	18,948
Okaloosa	17,694	702	18,396
Escambia	17,560	542	18,102
Martin	15,379	1,014	16,393
Citrus	14,874	0	14,874
Leon	13,466	0	13,466
Santa Rosa	12,781	333	13,114
St. Lucie	12,104	0	12,104
Clay	11,710	0	11,710
St. Johns	10,394	456	10,850
Indian River	9,805	493	10,298
Alachua	9,893	330	10,223
Highlands	9,159	170	9,329
Putnam	8,171	311	8,482
Osceola	8,048	180	8,228
Hernando	7,994	217	8,211

**Table II.3 (continued).**

County	Recreational	Commercial/Dealer	Total
Okeechobee	5,292	238	5,530
Nassau	4,984	196	5,180
Columbia	4,739	66	4,805
Jackson	4,375	39	4,414
Levy	3,757	493	4,250
Walton	4,138	104	4,242
Flagler	3,907	127	4,034
Wakulla	3,661	318	3,979
Taylor	3,437	183	3,620
Sumter	3,323	74	3,397
Hendry	3,059	208	3,267
Gulf	2,527	313	2,840
Suwanee	2,710	33	2,743
Dixie	2,392	333	2,725
Gadsen	2,461	68	2,529
DeSoto	2,275	73	2,348
Bradford	2,113	27	2,140
Washington	2,004	31	2,035
Baker	2,013	5	2,018
Holmes	1,790	21	1,811
Hardee	1,690	18	1,708
Gilchrist	1,519	33	1,552
Calhoun	1,298	22	1,320
Glades	1,198	115	1,313
Jefferson	1,281	24	1,305
Liberty	1,031	18	1,049
Hamilton	813	0	813
Lafayette	798	15	813
Union	718	4	722
<b>Total</b>			<b>902,602</b>

## II.2.2 Boating Accident Statistics

A summary of boating accident statistics for Sarasota County for the year 2001 is provided in **Table II.4**. While Sarasota County ranked in the top one-third of Florida counties in boating accidents, the total number of reported accidents in Sarasota County (15) was well below the leading Florida counties of Monroe (127), Broward (106), Palm Beach (104), and Miami-Dade

(73). In addition, when the number of registered vessels is taken into consideration, Sarasota County ranks in the bottom half of all Florida counties with an average of less than one boating accident per 1,000 registered vessels.

**Table II.4.** Boating accident statistics by county for the year 2001. Source: State of Florida.

County	Registered Vessels	Reported				# Accidents Per 1000 Registered Vessels
		Accidents	Fatalities	Injuries	Damages	
Monroe	29,204	127	5	49	2,003,830	4.35
Glades	1,313	5	0	2	5,000	3.81
St. Johns	10,850	38	1	10	137,076	3.50
Franklin	3,254	11	1	2	50,650	3.38
Bay	19,399	54	0	30	817,031	2.78
Palm Beach	42,292	104	3	22	574,480	2.46
Broward	47,984	106	1	25	1,218,760	2.21
Okaloosa	18,396	36	0	16	131,108	1.96
Dixie	2,725	5	1	6	27,250	1.83
Martin	16,393	30	1	19	118,160	1.83
Gulf	2,840	5	0	9	67,600	1.76
Flagler	4,034	7	0	0	30,650	1.74
Volusia	28,255	43	1	29	245,650	1.52
Taylor	3,620	5	2	2	8,600	1.38
Indian River	10,298	14	2	5	53,850	1.36
Gilchrist	1,552	2	0	1	500	1.29
Escambia	18,102	23	0	12	32,350	1.27
Miami-Dade	57,848	73	1	34	548,844	1.26
Duval	33,763	40	3	13	116,291	1.18
Nassau	5,180	6	0	2	15,200	1.16
Pinellas	55,717	64	4	33	481,150	1.15
Brevard	37,625	43	2	15	322,386	1.14
Putnam	8,482	9	2	7	33,150	1.06
Osceola	8,228	8	0	4	11,650	0.97
Liberty	1,049	1	0	1	0	0.95
St. Lucie	12,104	11	2	3	17,471	0.91
Collier	22,495	20	0	9	145,864	0.89
Jefferson	1,305	1	0	2	1,000	0.77
Manatee	20,252	15	0	14	73,357	0.74
Citrus	14,874	11	1	5	34,260	0.74

Table II.4 (continued).

County	Registered Vessels	Reported Accidents	Fatalities	Injuries	Damages	# Accidents Per 1000 Registered Vessels
Okeechobee	5,530	4	0	5	1,000	0.72
Walton	4,242	3	0	1	3,250	0.71
Levy	4,250	3	1	0	9,800	0.71
Clay	11,710	8	0	8	18,350	0.68
<b>Sarasota</b>	<b>22,452</b>	<b>15</b>	<b>2</b>	<b>12</b>	<b>15,300</b>	<b>0.67</b>
Lee	43,652	29	7	25	320,456	0.66
Highlands	9,329	5	2	4	1,200	0.54
Lake	19,310	10	2	9	24,000	0.52
Charlotte	21,764	11	0	4	41,800	0.51
Orange	34,647	17	1	16	19,150	0.49
Marion	19,016	9	3	3	6,072	0.47
Jackson	4,414	2	0	2	1,500	0.45
Pasco	22,688	10	0	4	35,800	0.44
Columbia	4,805	2	1	1	3,000	0.42
Santa Rosa	13,114	<b>5</b>	<b>1</b>	<b>2</b>	19,500	0.38
Seminole	18,948	7	0	4	8,650	0.37
Suwanee	2,743	1	0	1	500	0.36
Hillsborough	45,853	16	0	3	64,650	0.35
Hernando	8,211	2	0	0	6,000	0.24
Polk	30,919	6	1	7	1,000	0.19
Alachua	10,223	1	0	0	2,800	0.10
Baker	2,018	0	0	0	0	0.00
Bradford	2,140	0	0	0	0	0.00
Calhoun	1,320	0	0	0	0	0.00
Gadsen	2,529	0	0	0	0	0.00
Hamilton	813	0	0	0	0	0.00
Holmes	1,811	0	0	0	0	0.00
Leon	13,466	0	0	0	0	0.00
Madison	1,163	0	0	0	0	0.00
Sumter	3,397	0	0	0	0	0.00
Union	722	0	0	0	0	0.00
Wakulla	3,979	0	0	0	0	0.00
Washington	2,035	0	0	0	0	0.00

Personal watercraft (PWC) have become increasingly popular in recent years becoming the fastest growing segment of the maritime industry. A PWC is defined by the USCG as a Class “A” vessel (i.e., less than 16 feet) powered by an inboard motor. A PWC is operated by a person sitting, standing or kneeling on the vessel, as opposed to inside the vessel.

There were 1,924 PWC registered in Sarasota County in 2001 or 8.6 percent of the total registrations. The accident rate for PWC (2.6 per 1,000 registered vessels) was greater than three times the rate for all other vessels (0.7 per 1,000 registered vessels).

The Division of Law Enforcement (DLE) statistics indicate that PWC comprise 9.5 percent of registered watercraft, and were involved in 28 percent of all accidents reported statewide in 2001. This statistic may be misleading as it does not take into account the accident rate per hour of on-water use.

PWC issues are primarily based on user activity rather than inherent problems with vessel design. Concerns about safety most often relate to PWC conflicts relating to operation in high traffic and multi-use areas, “buzzing” or jumping the wakes of larger boats, and other reckless practices referred to as “hotdogging” (weaving in and out of boat traffic). Recklessness can mostly be attributed to “second tier” users (i.e., inexperienced operators that have borrowed or rented a PWC). A large percentage of PWC accidents are attributed to PWC that were rented and/or were operated by users with less than 20 hours of experience.

Nuisance is another common complaint directed toward PWC operators. Noise level for PWC’s averages 70 decibels (dB), and due to their design characteristics, PWCs can operate in shallow water areas near the shore, exacerbating noise levels.

The jet drive of PWC and the shallow draft, and lack of a motor skeg, make these vessels less likely to impact a manatee or run aground in open water. However, because of the shallow draft they are more often operated in very shallow water and over seagrass beds which may increase the probability of manatee impact and potential seagrass damages. Fully 60 percent of manatee deaths are the result of impact which can result even with the most shallow draft vessels. Unless there are future documented studies that illustrate PWC have significant and different environmental impacts than other vessels there is no need to isolate this group for purposes of the marine facilities siting plan. PWC generally are launched from waterfront homes, boat ramps and beach access facilities. PWC do not increase the demand for in-water moorings, marinas or on water facilities as most PWC are stored out of water on trailers.

### **II.2.3 Boating Studies in Sarasota County**

Two sources of information on boating use patterns are available for Sarasota County. The first series of studies involved the development of a regional waterway management system for

Sarasota County (Antonini and Box, 1996; Antonini *et al.*, 1998). These studies provided detailed inventories of boat facilities, identification of navigable channels and traffic sheds, inventories of signage, bathymetry data, and habitat (seagrass and mangrove) data. The second study involved boats in use in Sarasota County (Gorzelany, 1996). While this study was essentially a boater compliance study at selected locations within the county, some general trends in boating activity were extracted from the survey data. A summary of information on boating activity in Sarasota County is provided as follows:

#### **II.2.3.1 Seasonal Patterns**

Five areas were surveyed in Sarasota County (New Pass, Venice Inlet, City Island Grass Flats/ Pansy Bayou, Roberts Bay/Skiers Island, and the Myakka River). In general, higher levels of boat traffic were noted during the spring and summer, with decreases at most sites during the fall and early winter (**Figure II.31**). No clear seasonal pattern was observed, however. This is likely due in part to short-term variations in boating conditions on different survey days or at different locations. Such conditions included wind speed and direction, wave height, water temperature, and levels of red tide that occurred sporadically during the summer and fall of 1995 in Sarasota Bay. These conditions most noticeably influenced boating at the Pansy Bayou and Skiers Island survey sites, due to the fact that these stations were associated with recreational (water sports) activities. The general trend toward higher levels of boat use during the warmer months of the year is of particular concern because it directly overlaps with seasonal use in Sarasota County by manatees.

#### **II.2.3.2 Vessel Composition (size)**

A summary of vessel size data from survey locations in Sarasota County is shown in **Figure II.32**. Locations represent a compilation of individual boater compliance sites sampled in 1995 (Gorzelany, 1996). The area identified as “Water Sports” is composed of two popular water sports areas in Sarasota County known locally as “Skiers Island”, and the “Pansy Bayou / City Island Grass Flats.” The area identified as “Inlet” represents two survey sites in New Pass and Venice Inlet. The area identified as “ICW” represents four survey sites along the Intracoastal Waterway in Sarasota Bay, Roberts Bay, and Little Sarasota Bay. Finally the area identified as “River” represents a single survey site in the upper Myakka River, in the vicinity of Tarpon Point. The vessel size class most frequently observed in Sarasota County overall was Class 1 (16’ to 25’ length). This is consistent with boat traffic studies conducted in other counties (Ward, 1988; Morris, 1994; Gorzelany, 1997; 1998; 1999). Vessel size composition varied somewhat between survey areas, with a high proportion of small vessels observed at river and water sports area sites, and a higher proportion of larger vessels observed at inlet and ICW sites. Note that these data do not necessarily correspond to the relative proportion of registered vessels in Sarasota County, or the inventories of vessels reported by Antonini *et al.*, but instead provide specific information on the composition of vessels in use in Sarasota County waters at a particular point in time.

### **II.2.3.3 Vessel Composition (type)**

Vessel type also varied somewhat between survey locations (**Figure II.33**). Not surprisingly, smaller powerboats were in the highest relative proportion in water sports areas and within the Myakka River. Within these two areas, personal watercraft were in higher abundance in water sports areas, while pontoon-type boats were in higher abundance in the river. While small powerboats were the most abundance vessel type overall, a higher proportion of larger, deeper draft vessels (including sail boats) were observed at the inlet sites, and along the ICW. These data represent a slight underestimate in the number of Sail boats due to the fact that only Sail boats under power were recorded (Gorzelany, 1996). As is the case with vessel size, this information refers to the relative proportion of various vessel types in use on a given day, and does not necessarily reflect the relative composition of vessels that are registered in Sarasota County.

### **II.2.3.4 Vessel Abundance by Location**

While the Sarasota County boater compliance study conducted by Gorzelany (1996) did not specifically address spatial distribution of vessels, some trends were observed. Survey sites with the highest levels of boat traffic were observed in the vicinity of tidal inlets (New Pass and Venice Inlet), followed by the Intracoastal Waterway (ICW), Water Sports Areas, and the Myakka River respectively (**Table II.5**). Traffic exceeded 200 boats per hour at Venice Inlet during some weekend surveys. Sites which were surveyed along the ICW also indicated higher levels of traffic from locations in closer proximity to inlets.

### **II.2.3.5 Vessel Abundance – Weekday vs. Weekend**

Boat survey data from the 1995 Sarasota County Boater Compliance Study was also extracted in order to examine trends in weekday versus weekend traffic patterns. In general, there was approximately a two to threefold increase in vessel traffic on weekends, although there was a significant amount of variability between individual survey sites (**Table II.5**). These results are consistent with data collected in Lee County (Gorzelany, 1998), which concluded that vessel traffic in Lee County also increases two to threefold on weekends. Holiday weekend traffic (Memorial Day, Independence Day, Labor Day) in Lee County was not significantly higher than the busiest non-holiday weekends. Though no holiday surveys were conducted in Sarasota County, traffic patterns would be expected to be similar.

**Table II.5.** Comparison of weekday vs. weekend boat traffic at various locations in Sarasota County. Source: Gorzelany, 1996.

Location	Avg. # Boats Observed Per Hour		Ratio
	Weekend	Weekday	Weekend/Weekday
Intracoastal Waterway	48.8	19.0	2.57
Myakka River	4.4	2.0	2.20
New Pass	56.4	20.1	2.81
Pansy Bayou / City Island	7.4	4.5	1.64
Venice Inlet	91.1	35.6	2.56
Skiers Island	35.6	13.0	2.74

#### II.2.3.6 Daily Variations in Boat Traffic

A portion of the 1995 Sarasota County Boater Compliance Study was specifically targeted at determining variations in vessel compliance over a 24-hour period. From this, an indication of daily variation in boat traffic was determined. **Figure II.34** displays a compilation of boat traffic data collected at New Pass over a series of 24-hour periods between January and December 1995. These data indicate that peak boating hours were between 1200 hrs and 1500 hrs, ranging between 30 and 40 vessels observed per hour. Lowest levels of boat traffic were observed between 0200 hrs and 0500 hrs, with an average of less than 1 vessel observed per hour. Because New Pass is primarily a transition area for vessels traveling to and from the Gulf of Mexico, these data are not necessarily representative of other areas in Sarasota County. In general, however, this information is a reasonable indication of daily boating activity in the county.

#### II.2.3.7 Boater Compliance

A one-year study was conducted in Sarasota County from January in 1995 in order to evaluate the level of boater compliance in conjunction with posted speed zones (Gorzelany, 1996). More than 1,200 hours of field data were collected from boat and land-based observations, aerial surveys, and use of a laser-targeted speed gun, resulting in 32,780 observations. For all sites combined, it was determined that 62.7 percent of vessels observed were compliant with posted speed regulations. While an overall level of compliance at the five selected study sites was determined to be 62.7%, a high level of variability was observed from one site to another. Differences in sites were determined to

be statistically significant, as were comparisons between compliance and vessel type, size, and activity. Areas with the lowest level of compliance and the highest level of blatant non-compliance were observed in the vicinity of two water sports areas (Skiers Island, Roberts Bay and the Pansy Bayou/City Island Grass Flats area. The least amount of blatant non-compliance was observed at tidal inlets (New Pass and Venice Inlet). Venice Inlet also had the highest level of boater compliance overall (greater than 70%). Enforcement vessels were seen most frequently in these two areas. In general boater compliance decreased with decreasing vessel size, with personal watercraft operators identified as having the lowest level of compliance and highest level of blatant non-compliance. Overall levels of blatant non-compliance for these vessels was greater than 50 percent higher than for any other vessel type observed. This study has demonstrated that the collection of boater compliance data can provide important supplemental information to recreational management plans. With concerns over the increasing amount of additional restrictions in Florida coastal waters, boater compliance studies can be used to help “fine tune” current plans without necessarily placing additional restriction on waterways (Gorzelany, 1996).

#### **II.2.4 Existing Speed Zones, Refuges, Sanctuaries, and Aquatic Preserves**

Certain water bodies are provided with special heightened protection as a result of outstanding natural attributes. In order to conduct activities within these waters, classified as “Outstanding Florida Waters,” additional standards must be satisfied. In particular, it must be demonstrated that the proposed activity will not result in a lowering of existing water quality, and that the proposed activity is “clearly in the public interest.” Certain Outstanding Florida Waters are of such exceptional beauty and ecological significance that the Florida Legislature has designated such waters as “Aquatic Preserves.” The management objectives for the Aquatic Preserves are to maintain and improve existing resources such as seagrasses, mangroves, aquatic plants, birds and fish. In practice, construction activities within Aquatic Preserves are regulated even more severely than those activities within Outstanding Florida Waters.

Most of the bay waters in Sarasota County are classified as “Outstanding Florida Waters,” including the Intracoastal Waterway in Venice (excluding the Venice Bypass Canal), Sarasota Bay, New Pass, Big Sarasota Pass, Roberts Bay, Little Sarasota Bay, Dryman Bay, Blackburn Bay, Lyons Bay, Venice Inlet, and Dona Bay. Typically, neither natural nor artificial tributaries to such water bodies have been designated as “Outstanding Florida Waters.” The waters of Lemon Bay in Sarasota have been designated as an “Aquatic Preserve.”

In 1992, the Florida Department of Natural Resources (DNR) Division of Marine Resources, Office of Protected Species Management, in cooperation with Sarasota County, established boating speed zones throughout most of the Sarasota County waters. These speed zones were previously approved by the Governor and Cabinet in 1991. **Figures I.35(a)** through **I.35(g)** depict the current posted manatee speed zones in Sarasota County.

## II.3 INVENTORY/DESCRIPTION OF LOCAL LAND DEVELOPMENT INFORMATION

The most recent database of boating facilities and moorings in Sarasota County was developed by Antonini *et al.* (1996, 1998) in two phases; 1) 1996 describing North Sarasota County, from the Siesta Key north bridge to the Manatee County line, and; 2) 1998 describing south county, from the Siesta Key bridge to the southern County line in Lemon Bay and including the lower Myakka River. Data for commercial and private marinas and multifamily docking facilities were extracted from the Antonini 1996 and 1998 data sets.

There have been no new marinas or multifamily facilities developed within the County since the Antonini data collection. In August of 1999 Sarasota County surveyed the boat ramps within the county for the purpose of identifying ramp capacities and evaluating additional needs. The following list of boat ramps was taken from the report to the County Commissioners. Descriptions of the ramps were taken from that report with additional notations from the authors of this report. None of the County maintained ramps currently have user fees. For the south county there are 188.6 miles of navigable waterways, 6,385 boats, 11,654 moorings located at 4,771 shore facilities. There are 4,026 moorings in the north county, although a similar breakdown of navigable waters and boat numbers was not available in the database. The county ratio of registered boats to moorings observed for the data collection period was 1.3 to 1. The number of boats in the south county represent 32 percent of the total number of registered boats in Sarasota County.

With the SCW shoreline largely saturated for docks, the increased demand for facilities will largely be for increased marina space for large vessels, increased dry storage and boat ramps for smaller vessels. **Figures II.36 through II.39** illustrate the locations of existing boating facilities excluding single family residential moorings. Information on existing facilities is summarized as follows.

### II.3.1 Sarasota County Boat Ramps

The Sarasota County Comprehensive Plan (Apoxsee) lists a total of 13 boat ramp sites with a total of 33 ramp lanes (25 public and 8 private) within the county waters. Capacity of the ramps was listed at 2,830 persons per day. A demand of 2,213 persons per day (average peak day) through the year 2015 was based upon 1987 projections. Descriptions of specific ramps are provided as follows:

#### II.3.1.1 North County Ramps

- 1) Centennial Park - is located at 10<sup>th</sup> Street and U.S. 41. It is a very popular site for local boaters conveniently located on the mainland with direct access to the ICW and good vehicular access controlled with a traffic signal. Parking is good during weekdays, however there is insufficient parking during weekends and holidays.

- There are slightly greater than 85 marked parking slots for vehicles with trailers and 14 designated automobile parking spots. Weekends are often filled to capacity and weekday use is approximately 25-50 percent of capacity. Facilities include lights and portable toilets. Facilities do not include Freshwater and full restrooms. Docks are in good condition and there are a total of six ramp lanes capable of launching small to very large boats
- 2) Causeway Park - is located on the south side of the mainland approach to the Ringling Bridge. With one graded shell ramp and very limited parking, it is used primarily for personal watercraft (PWC). Recently the site has been reduced in size due to construction of a bayfront condominium. Facilities include a bait stand (with restroom). Facilities do not include a separate Restroom facility or Freshwater.
  - 3) Ken Thompson Park - is located on City Island, Ken Thompson Parkway. Not as accessible as Centennial Park for local boaters but has ample parking, ready access to Sarasota Bay, the Gulf of Mexico and less than 1/4 mile to the ICW. Getting on and off of the island can be difficult with seasonal traffic. There are currently 40 marked parking spaces plus approximately 20 overflow spaces (grass). Weekends are often full to capacity with weekday use approximately 25-50 percent capacity. The facility has recently been renovated and is considered to be in good condition. There are two relatively wide ramp lanes, though only the northernmost lane is capable of launching large boats. Facilities including lights, Freshwater, and newly constructed Restrooms.
  - 4) Turtle Beach - is located at the south end of Siesta Key on Blind Pass Lagoon. It is very popular, but lacks sufficient parking during weekends and holidays with no room for expansion and is not readily accessible. It is one mile from the dock to the ICW, all at idle speed. There are 35 parking spaces plus 10 overflow. On weekends the facility is typically 3/4 full with weekday use approximately 25 percent of capacity. Facilities include lights, Restrooms, and Freshwater. There are two docks and a total of two ramp lanes in fair condition.

### **II.3.1.2 South County Ramps**

- 5) Blackburn Point Park - is located between the two bridges on Blackburn Point Road. The site has ample parking, but it is limited to small boats during high tide. Parking spots are not marked but there is space for approximately 50 rigs. Weekend use is typically 50-75 percent of capacity and weekday use about 25 percent of capacity. There is one concrete block ramp and no access channel to the ICW. Facilities do not include lights, Restrooms, or Freshwater.
- 6) Nokomis Beach - is located on an island adjacent to the ICW. It has excellent parking and ready access to the bay and Gulf. Site has 70 parking spaces plus 40

- overflow spaces. Weekends are often 100 percent occupied and weekdays approximately 50 percent of capacity. Facilities include Freshwater, but do not include Restrooms or lights. There are two relatively steep ramp lanes. Both ramp lanes and associated docks are considered to be in good condition.
- 7) Higel Marine Park - is located on Tarpon Center Drive in the City of Venice. It has easy access to the bay and Gulf, has a dock/boardwalk, and a picnic area, but lacks sufficient parking and no room to expand. There are approximately 18 parking spots with 2-4 reserved for government use. On many weekends the facility is 100 percent occupied and approximately 50 percent on weekdays. Facilities include lights and Restrooms, but do not include Freshwater. Docks and ramps are in good condition, with two ramp lanes capable of launching any size boat.
  - 8) Venice Marine Park - is adjacent to the Venice Train Depot. This is a new ramp which provides direct access to the ICW, however parking is slightly limited during peak use times. Location has approximately 40 spaces with overflow parking on the grass. Weekend use is typically 50 percent of capacity and about 25 percent capacity on weekdays. It is approximately 1/4 mile from U.S. 41. Facilities include one portable toilet. Facilities do not include lights or Freshwater. Docks and ramps are in good condition, though both ramps are relatively steep.
  - 9) Manasota Beach - is located on the north end of Manasota Key adjacent to the ICW. The site is easily accessible, has ample parking and provides direct access to Lemon Bay. The single ramp and dock are in fair condition. There are 24 parking spaces with 20 overflow spaces. Use on weekends is typically 100 percent of capacity with about 25 percent capacity during weekdays.
  - 10) Indian Mound Park - is located on Lemon Bay in Englewood. This popular site has ample parking and provides direct access to the bay. There are 58 parking spaces plus 20 overflow spaces. Weekend use is typically 100 percent of capacity and weekday use approximately 50 percent of capacity. The park has two ramp lanes in good condition.
  - 11) Marina Park - is located on Chancellor Boulevard in the City of North Port. This site has ample parking and provides boaters with access to the Myakka River and Charlotte Harbor. There is one ramp lane at this park in good condition.
  - 12) Dallas White Park - is located on the Myakkahatchee Creek. There is one ramp lane at this park in good condition.

- 13) Snook Haven Inn - is located on the Myakka River. A public accessible (fee) single ramp with four slips for small boats is available. Facilities include a restaurant and lodging. Facilities do not include separate Restrooms.

### **II.3.2 Marinas and Recreational Boat Facilities**

Commercial marinas were considered to be watercraft related non-residential facilities generally accessible to the public including private clubs. Our determination resulted in the tabulation of thirty-seven (37) commercial marinas. This differs from the Sarasota County Comprehensive Plan which states there are sixty (60) marinas throughout the County. The discrepancy is a difference in the definition of what constitutes a marina. A number of the facilities counted as marinas in the Comprehensive Plan may be small groupings of rental moorings with no additional amenities or associated facilities typically attributed to a marina. These facilities are not listed as marinas in public telephone directories. A second reason may be the counting of separate businesses occupying the same mooring facilities as multiple marinas.

#### **II.3.2.1 Town of Longboat Key Marinas**

Within the Sarasota County portion of Town of Longboat Key there are four (4) commercial public accessible marinas and approximately eighteen (18) private multifamily facilities/marinas. The bulk of the facilities (12) are located in the Buttonwood Harbor area near the Sarasota/Manatee county line.

##### Commercial or Public Accessible Marinas and Moorings

- 1) Longboat Bay Club - Middle Longboat Key
- 2) Longboat Key Moorings - Middle Longboat Key
- 3) Sailboat Square - Southeast Longboat Key
- 4) The Boathouse - Southeast Longboat Key

#### **II.3.2.2 City of Sarasota Marinas**

Nine (9) facilities were identified within the City. The largest of these are located on City owned property and these facilities and City property offer the largest tracts of appropriately zoned land for future expansions.

##### Commercial or Public Accessible Marinas and Moorings

- 5) Gulfwind Marina - City Island Park
- 6) Sarasota Sailing Squadron - City Island Park
- 7) The Yacht Center - Whittaker Bayou
- 8) Fishtale Marina - Whittaker Bayou
- 9) Chermar - Whittaker Bayou
- 10) Helmsmen Marina - City of Sarasota (land-locked)
- 11) Marina Jack - Island Park
- 12) Sarasota Yacht Club - Coon Key
- 13) Bird Key Yacht Club - Bird Key

### **II.3.2.3 City of Venice Marinas**

Seven commercial facilities were identified within the City, most of relatively small size. The City's re-development plan provides for future opportunity of additional facility siting.

#### Commercial or Public Accessible Marinas and Moorings

- 14) Crow's Nest Marine Restaurant - Venice Inlet
- 15) Tarpon Center Marina - Tarpon Center Drive
- 16) Venice Yacht Club - Roberts Bay
- 17) Fisherman's Wharf Marina - Tamiami Trail North
- 18) Gulf Liner Marina - Tamiami Trail North
- 19) Tampa Street Wharf - Venice ICW
- 20) Gulfwind Marina - Venice ICW

### **II.3.2.4 City of North Port Marinas**

North Port has no commercial or public marinas and moorings.

### **II.3.2.5 Unincorporated County Marinas**

#### Commercial or Public Accessible Marinas and Moorings

- 21) The Field Club - Roberts Bay
- 22) Marina at the Landings - Little Sarasota Bay
- 23) Phillippi Shores Marina - Phillippi Creek
- 24) CB's Saltwater Outfitters - Siesta Key
- 25) Siesta Key Marina, Siesta Key, Stickney Point Bridge
- 26) Southpointe Marina - South Tamiami Trail
- 27) Hidden Harbor Marine - Little Sarasota Bay
- 28) Midnight Pass Marina - Siesta Key
- 29) Blackburn Point Marina - Casey Key
- 30) Caroline's on the Bay - Osprey
- 31) Osprey Marine Center - Blackburn Bay at Blackburn Point Road
- 32) Casey Key Marina - Blackburn Point Road
- 33) Royal Palm - Lemon Bay
- 34) The Boat Works - Lemon Bay
- 35) Gulf Harbor Marina, Nokomis - Albee Road, across the ICW from Nokomis Beach
- 36) Dona Bay - Dona Bay
- 37) Coastal Marine Center - Shackett Creek

A listing of marinas and moorings for all municipalities is shown below in **Table II.6**.

**Table II.6.** Listing of marinas and moorings for all municipalities.

MARINA	TOTAL CAPACITY	SLIPS	WET STACKS	DRY SEAWALL	BLOCKED	TRAILER	SLIPS @ RAMP	ANCHORAGE	PERCENT OCCUPANCY
<b>TOWN OF LONGBOAT KEY</b>									
Longboat Bay Club	No response								
Longboat Key Moorings	279	279	No	180'/11 slips	No	No	No	No	100
Sailboat Square	No information								
The Boathouse	202	8	194	No	No	No	No	No	85
<b>CITY OF SARASOTA</b>									
Gulfwind Marina	320	15	300	4	10-12	No	No	No	100
Sarasota Sailing Squadron	707	6	190	15' / 1 slip	No	386	No	~100	100
Yacht Center	100	25	50	No	20-25	No	No	No	
Fishtale Marina	~30	No	No	Room for 3-4	3-4	~20	No	No	N/A - sales
Chermar	19	19	No	No					100
Helmsmen Marina	10	No	No	No	10	No	No	No	100
Marina Jack	357	257	No	1250' / 78 slips	No	No	No	100	100
Sarasota Yacht Club	110	97	13	0	0	0	0	0	
Bird Key Yacht Club	40	No	No	No	No	No	No	No	100
<b>CITY OF VENICE</b>									
Crow's Nest Marina	44	24	No	200' / 13 slips	No	No	No	No	-
Tarpon Center Marina	15	15	No	No	No	No	No	No	-
Venice Yacht Club	46	46	No	330' / 21 slips	No	No	No	No	100
Fisherman's Wharf Marina	~45	36	No	300' / 19 slips	No	No	No	No	80
Gulf Liner Marina	12	Yes- 8/9 service	No	No	Yes- 4	No	No	No	N/A - sales/service
Tampa Street Wharf	Unoccupied								
Gulfwind Marina	~300	89	210	3-4	20	No	No	No	99
<b>Unidentified Owner</b>	<b>16</b>	<b>0</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>16</b>	<b>unknown</b>
<b>UNINCORPORATED COUNTY</b>									
The Field Club	34	29	No	No	No	4	1	No	-
Marina at the Landings	40	40	No	No	No	No	No	No	-
Phillippi Shores Marina	100-110	No	No	No	6	Yes- 100	240' of dock	No	90
CB's Saltwater Outfitters	14	14	No	Room for 2	No	No	No	No	100
Siesta Key Marina	245	No	240	Room for 5 vessels	Yes	No	No	No	80
Southpointe Marina	20-22	20-22	No	No	No	No	No	No	large turn around
Hidden Harbor Marine	~60	No	50	No	service dept.	Yes	10	No	85
Midnight Pass Marina	160	24	136	No	4-5	6	No	No	75
Blackburn Point Marina	12 slips + dock	12	No	100'	No	No	No	No	80
Caroline's on the Bay	49	49	No	Room for 3 vessels	No	No	No	No	95
Osprey Marine Center	150-160	20	130-140	fuel dock	No	No	No	No	70
Casey Key Marina	all transient								
Royal Palm Marina	~230	over 100	almost 100	Room for 20	30	No	No	No	80
The Boat Works	175	18	85	No	33	39	No	No	-
Gulf Harbor Marina	269	No	269	~7'	2-8	No	No	No	75
Dona Bay	30	No	No	No	No	No	No	No	-
Coastal Marine Center	50-60	No	50-60	No	No	No	No	No	-

### II.3.3 Development Standards

Marina construction permits are required by Sarasota County, the Army Corps of Engineers, the Florida Department of Environmental Protection, Water Management Districts, and any municipality in which the project is located. A submerged land lease or other form of authorization is required by the State Board of Trustees for marina development upon or over state-owned submerged land. Permitting criteria related to manatee protection are listed as follows:

- New or expanding marinas with powerboat slips are currently permitted only where the applicant can prove that the facility and associated powerboats will not adversely affect manatees or their habitat.
- The facility must be designed to eliminate or minimize adverse impacts to mangrove wetlands, seagrass beds and any other ecologically important marine communities. Any unavoidable impacts must be offset by substantial mitigation.
- Vessel draft shall be restricted so as to maintain a minimum clearance of one foot as measured at mean low water over any submerged bottomlands or tops of any existing seagrasses.
- During construction, on-site manatee and habitat protection guidelines must be followed.

### II.3.4 Comprehensive Land Use Plan

The Sarasota County Comprehensive Plan, *Apoxsee*, provides the goals, objectives, and policies to guide future development and conservation activities in Sarasota County. Among the policies listed under Chapter 2 – Environment, are a series of directives that are consistent with the protection of manatees and manatee habitat, specifically;

#### Policy 1.3.5:

*By 1999, the County shall adopt and implement an ordinance that contains siting, design and construction criteria for marinas, boat ramps, and other boat facilities to minimize impacts on estuarine waters and the endangered West Indian manatee. The expansion of existing boating facilities in suitable areas shall occur over the construction of new facilities. New and expanded motorized boating facilities shall not be located in or adjacent to areas of significant manatee habitat and travelways as defined by said ordinance. No new motorized boating facilities shall be allowed, at a minimum, within the Pansy Bayou and the Warm Mineral Springs and Creek. (RU-30, Ord. 97-061, July 8, 1997).*

Policy 2.1.2:

*Continue to prohibit dredge and fill activities in the Gulf of Mexico, bays, rivers, and streams of the County except to maintain existing drainage canals, existing or future County-approved navigation channels and beach nourishment projects, and silt or obstruction removal, when environmentally sound. The dredging of new navigation channels other than those just described shall be prohibited.*

Maintenance dredging of channels is addressed in the County's WNCA Code (**Appendix B**).

Policy 2.1.3:

*Develop techniques to orient boating activities to suitable areas away from sensitive habitats, and restrict boat access in areas of marginal navigability in order to prevent bottom scour or damage to sensitive habitats. (RU-30, Ord. 97-061, July 8, 1997).*

Policy 5.4.6:

*Development in areas of critical manatee habitat shall not adversely impact the manatee.*

The intent of the Comprehensive Plan is to ensure that environmental quality is maintained and, where possible, enhanced. While the policies listed above are directly or indirectly related to manatee conservation, other sections of the Comprehensive Plan (such as the Future Land Use Section) are intended to be used together, and land development proposals must conform to the relevant Plan sections of the Environment Chapter as well as those sections of the Future Land Use section. Sarasota County is in the midst of an Evaluation and Appraisal Review (EAR) of their Comprehensive Plan. Relevant policies will be amended to reflect the requirements of FS-370.1. during the upcoming amendment cycle.

### **II.3.5 Analysis of Future Demand for Facilities**

Waterfront or near-waterfront boating facilities within Sarasota County provide space for approximately 15,680 vessels (Section I.2, **Table I.4**) or 77 percent of the registered vessels in the county. Off-water storage facilities were not considered by the Antonini studies nor were they documented for this report. Off-water facilities will become more important as the number of boaters increases within the County.

At present the waterfront of Sarasota county is near build-out and waterfront docks for single and multifamily residences are near saturation. Additional docks will undoubtedly be requested for those units presently without facilities. However, the bulk of the demand will result from population increases from the inland unincorporated areas. Inland boaters will have two choices

for water access; 1) marina or dry storage and 2) boat ramp access. The County *Apxsee* Plan projects that existing boat ramps will satisfy the boating need through 2015. However, the County recognizes that improvements are necessary for many ramps. The County also recognizes the need to plan for increased needs beyond 2015.

Based on the County's evaluation of distribution and total number of ramps, the need for additional ramps appears greatest in the north county. The south county has nine (9) boat ramp locations, while the north county has only four (4), one of which (Causeway Park) is a shell ramp that may become unavailable when the new Ringling Bridge is constructed. This site was altered and made less accessible for small watercraft in 2001 as a result of a new condominium encroaching on and modifying a portion of the land.

The only publicly owned waterfront site in north county that has potential for boat launching is Phillippi Estate Park, however, this is an historic site which is highly visible from U.S. 41. The construction of boat ramps and boat trailer parking would alter most of the grassed portion of the site that borders U.S. 41. This would not only destroy the historic view of the Edson Keith House, but would also eliminate the use of the site for many outdoor events and activities.

A recommended alternative to constructing boat ramps on existing public land may be to enhance existing sites or to acquire private property that has potential for such use. The latter choice would be costly, but given the limited selection of existing sites it may be the most practical approach. The City of Sarasota has recently completed work to upgrade the launching facilities at Ken Thompson Park, and a second location at Blackburn Point Park has been identified by County staff for potential enhancement. This park has ample space for parking, has good accessibility, and would fill a void in the central portion of the county. The potential impacts of bridge replacement on this site are unknown at present.

There is an average of approximately one registered vessel for every 16 residents in Sarasota County. There are no estimates of additional boats brought into the area by seasonal visitors, whose boats would not be registered with Sarasota County. The annual average increase since 1987 has been 324 registrations per year over the record period, with an annual average increase of 1.75 percent. Extrapolation of the trend line through the year 2020, using the annual increase of 1.7 percent, indicates that as many as 28,622 boats may be registered in the County by 2020, an increase of over 8,400 boats (42%). If we calculate the increase based on the number of residents per boat, then for the projected population in the year 2020 there will be approximately 25,996 registered boats (an increase of 29 percent). This is somewhat less than the trend line estimate. Some existing mooring space may accommodate this increase, however the remainder will require additional facilities or access points to the water.

## II.4 INTER-GOVERNMENTAL COORDINATION

The permitting of dockage facilities and coastal dredge and fill activities located along the Sarasota County shoreline area and/or within the submerged lands affecting manatees is conducted by many agencies. Specifically, proposed dockage facilities are reviewed by local municipalities (Town of Longboat Key, City of Sarasota, City of North Port), the Sarasota County Water & Navigation Control Authority (WNCA), the Florida Department of Environmental Protection (FDEP), the Fish and Wildlife Conservation Commission (FWC), the Southwest Florida Water Management District (SWFWMD), the U.S. Army Corps of Engineers (ACOE), and the U.S. Fish & Wildlife Service (USFWS). While local municipalities may require that applicants meet performance standards requirements, they typically review structural and zoning aspects of permits, while WNCA, FDEP, FWC, SWFWMD, ACOE, and USFWS typically address environmental issues.

The Sarasota County WNCA issues permits for all coastal dredge and fill activities (including but not limited to, retaining walls, bulkheads, rock revetments, dredges, bridges, boat ramps, groins, etc.) and for dockage facilities of any size (single-family, commercial, multi-family, etc.), fishing pier structures, etc. located within the unincorporated areas of the County and within the City of Venice. The Sarasota County WNCA also maintains jurisdiction of dredge and fill projects located within the City of Sarasota.

All proposed dockage facilities located within the jurisdiction of the Sarasota County WNCA are reviewed for consistency with the WNCA Code (Sarasota County Code, Chapter 54, Article XX) criteria and the policies of the Sarasota County Comprehensive Plan, *Aproxsee*. According to the WNCA Code and *Aproxsee*, all proposed dockage facilities shall meet public interest criteria, which includes, but is not limited to, navigation, water quality, water depth restrictions, and the protection and conservation of natural habitats (including marine grass beds and mangrove swamps), marine life, and wildlife (including the endangered manatee).

The ACOE and the FDEP have a joint application for proposed dockage facilities. The ACOE issues permits under Section 10 of the Rivers and Harbors Act of 1899 for projects located in navigable waters and structures that would alter or modify the condition, capacity, or channel of any navigable water. The ACOE is required to consult with the USFWS when an “individual” permit application is received, to insure that the proposal is not likely to result in the destruction or adverse modification of designated critical habitat or jeopardize the continued existence of any endangered species or threatened species.

Pursuant to the Florida Statutes, either the FDEP or the SWFWMD regulates the construction, alteration, maintenance, removal, modification, and operation of all activities in uplands, wetlands, and other surface waters that will alter, divert, impede, or otherwise change the flow of

surface waters, including but not limited to, coastal dredge and fill activities and the construction of dockage facilities. The regulation of these activities ensures that water quality is not degraded, and that wetlands and other surface waters continue to provide healthy levels of wildlife habitat, including those of threatened and endangered species.

For all new proposed mooring areas located within the jurisdiction of the Sarasota County WNCA, the ACOE, SWFWMD and FDEP permits are required prior to the issuance of a WNCA permit.

Existing local ordinances related to the protection of manatees and manatee habitat are provided under **Section II.3.4**

## **II.5 FUTURE PROGRAMS AND PLANNED BOAT RAMP PROJECTS IN SARASOTA COUNTY**

The following have been identified by the City of Venice as potential future marina construction projects in Sarasota County:

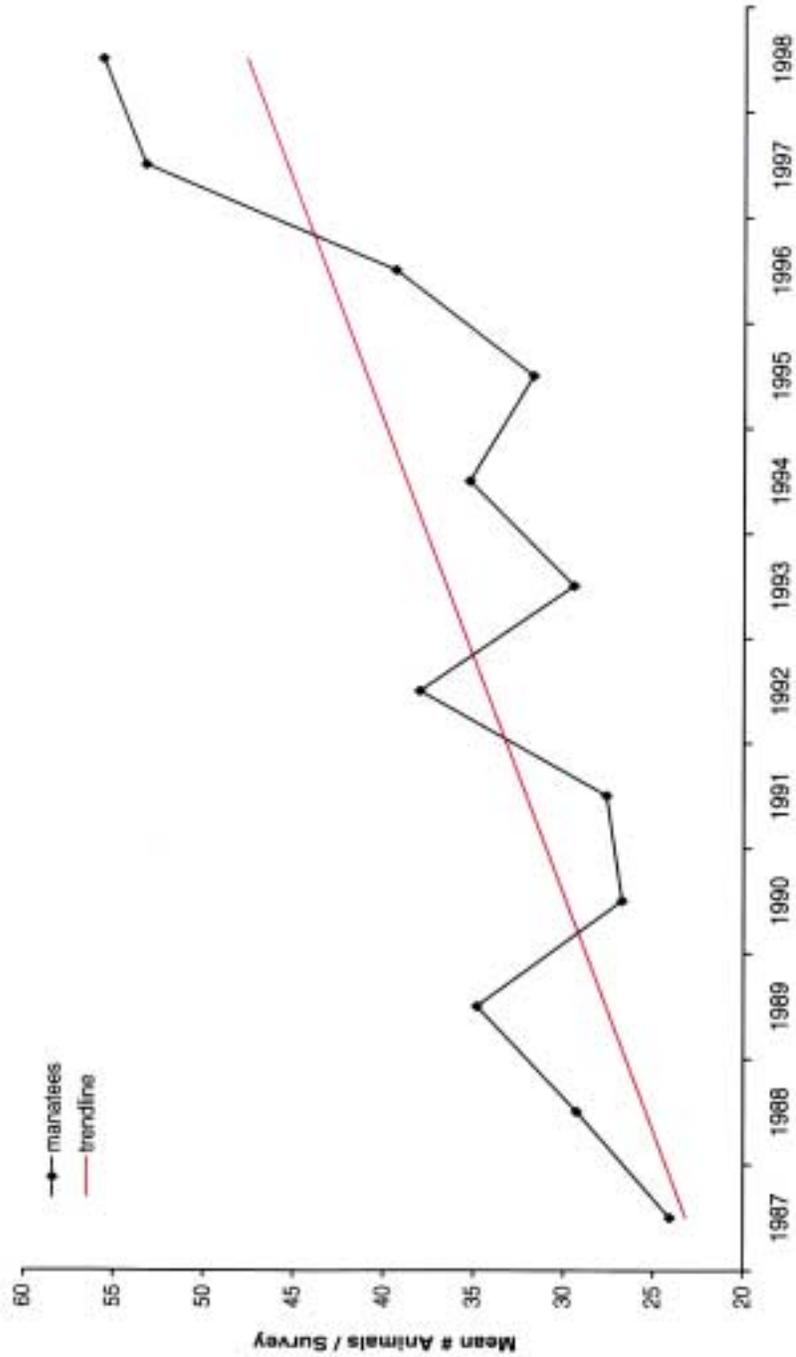
### Proposed Venice Waterfront Enhancement

A proposed downtown waterfront enhancement project for the City of Venice is in the very early stages of planning and review. Among the proposed waterway improvements projects are new dockage facilities for a small number of vessels that would serve as commercial ferries for passengers in the downtown area. No conceptual plan has been developed as of yet.

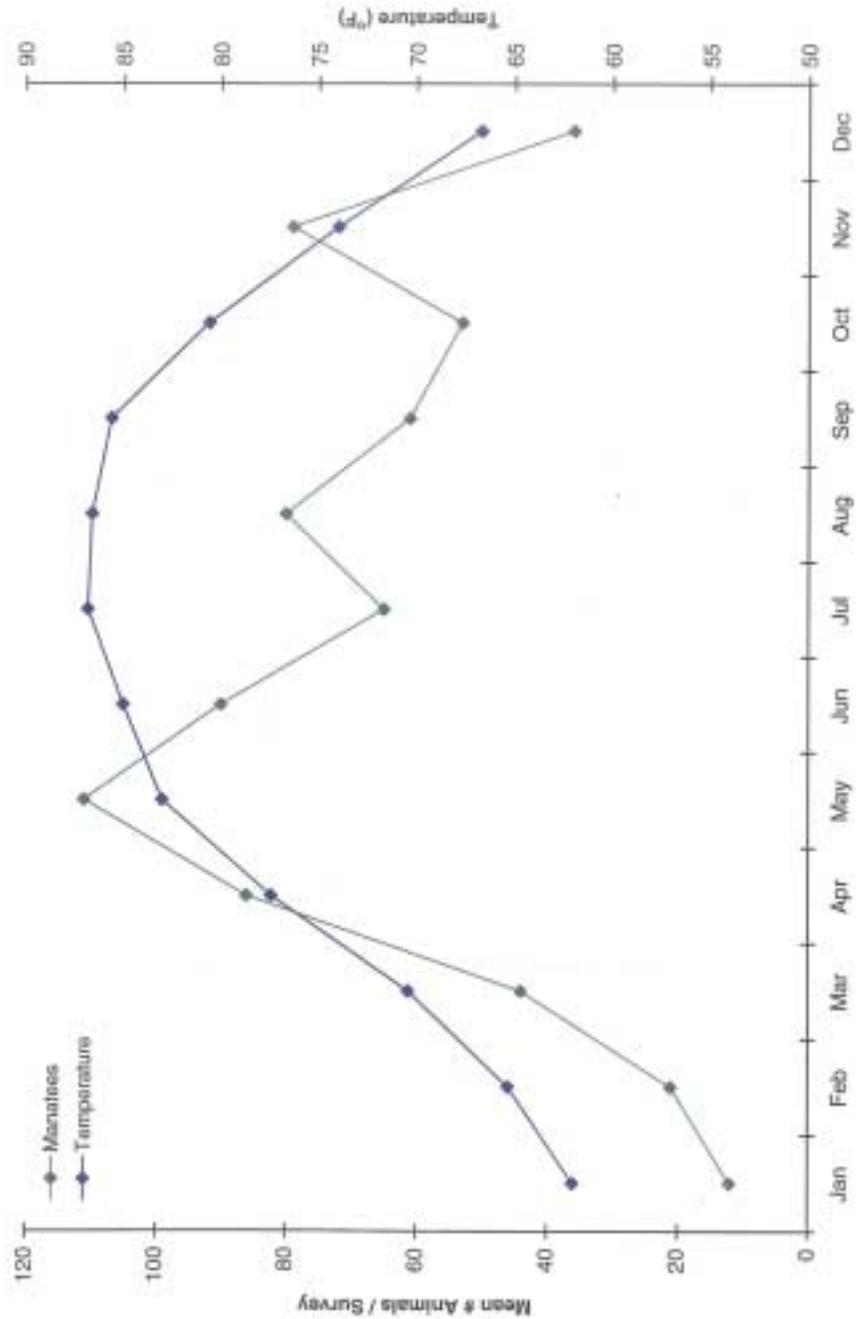
### Conceptual Marina for Venice Airport Business Park

The City of Venice has been working with planning and engineering consultants concerning a master plan for Venice airport property. A conceptual plan has been drafted that includes a 13 acre marina site located along the west side of the Intracoastal Waterway, within the Venice City limits. The proposed marina is projected to include 199 boat slips with a dry dock facility to accommodate approximately 100 boats, along with dry dock repair facilities. Adjacent to the proposed marina is an approximately 7-acre site for a proposed 5-story, 200 unit condominium. This conceptual plan has been provided to both Sarasota County and FWC for informational purposes. This project will need undergo the standard review process among all regulatory agencies with jurisdiction when the formal application is submitted.

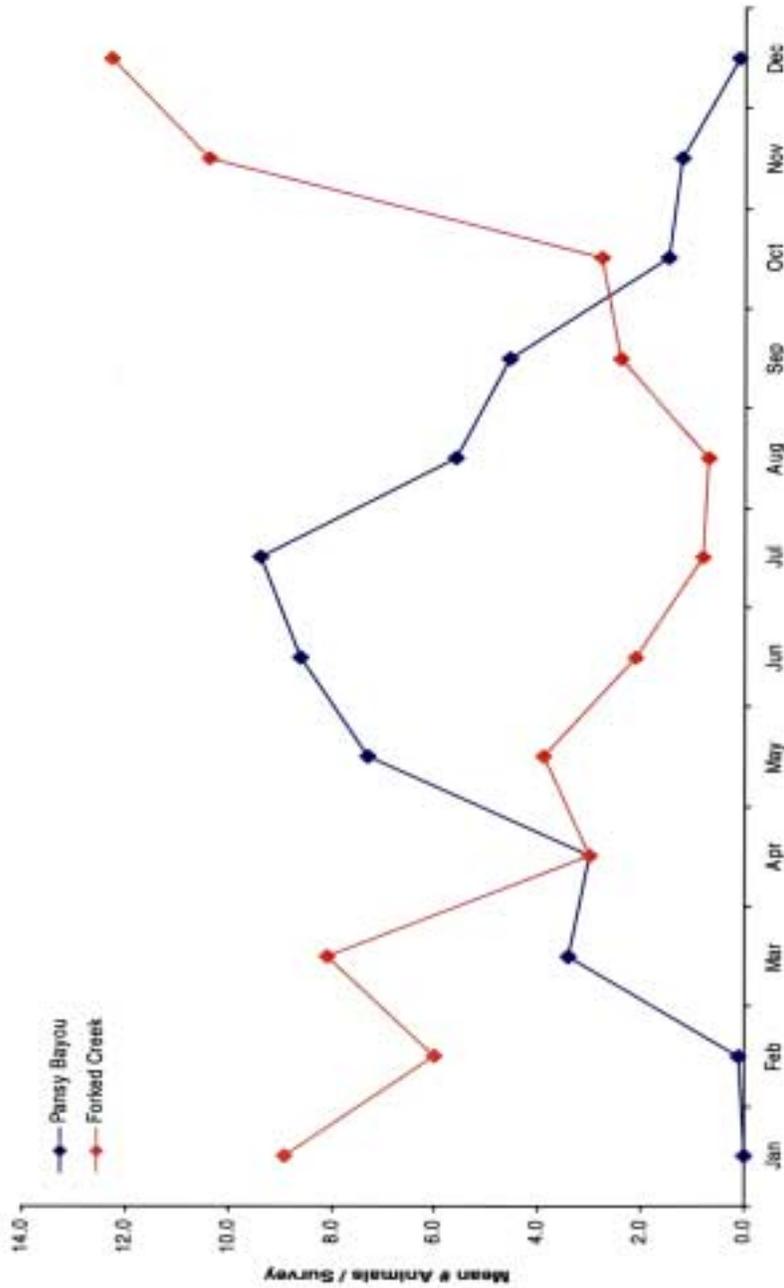
**Figure II.1.** Mean number of manatees observed in Sarasota County by year, including trend line.



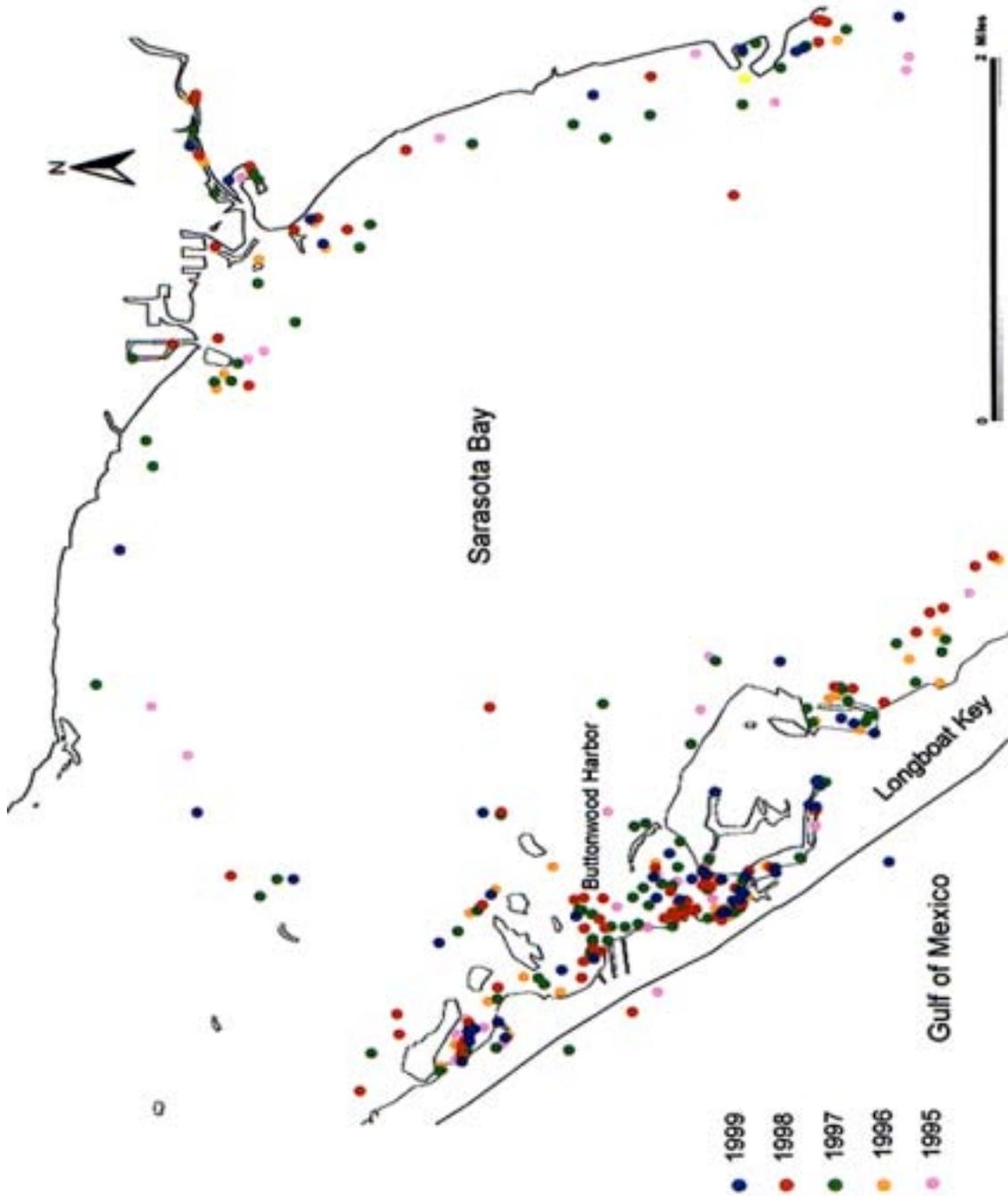
**Figure II.2.** Monthly comparison of water temperature (New Pass) and manatee counts in Sarasota County, 1993–1995 data.



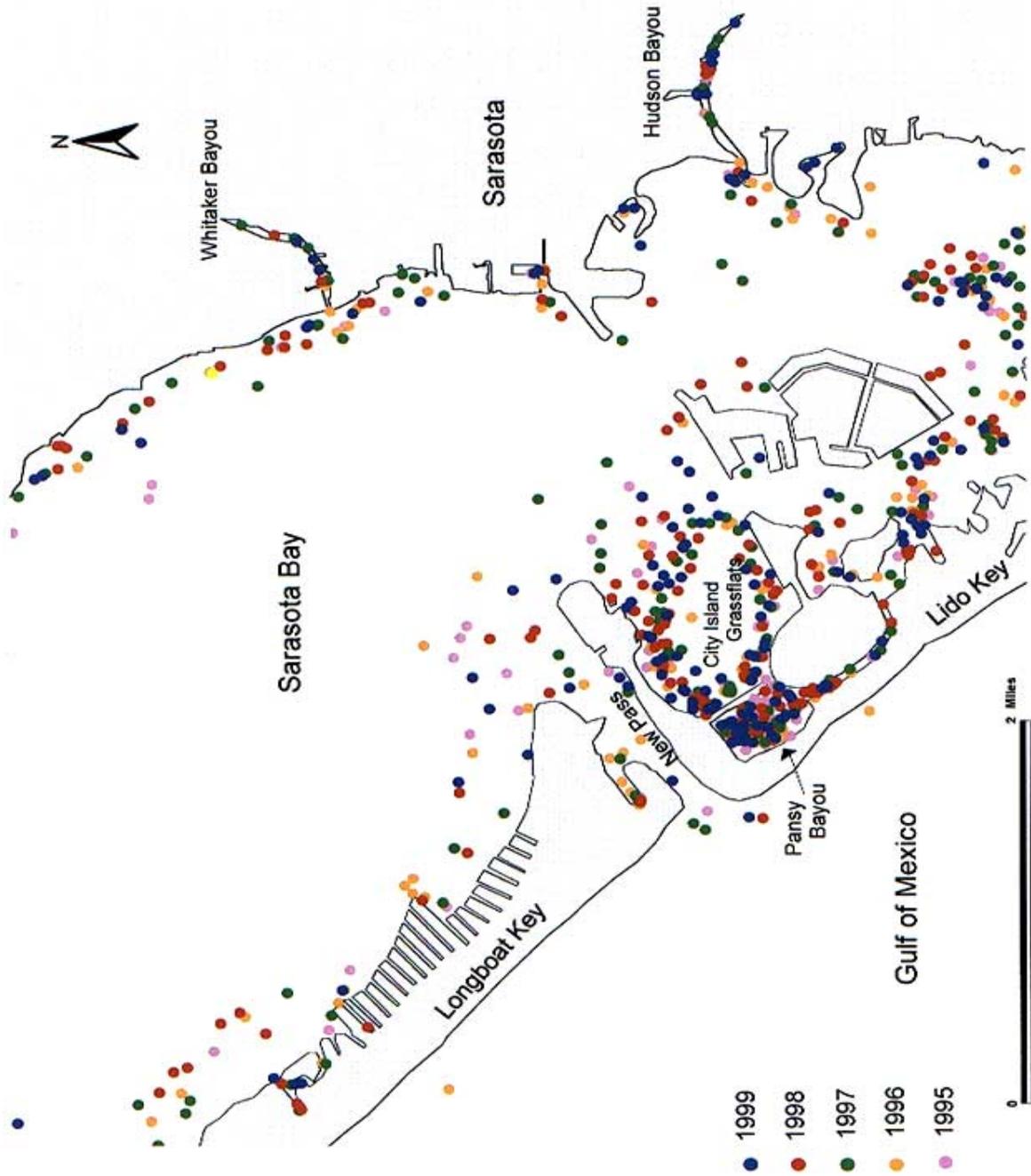
**Figure II.3.** Comparison of monthly variation in manatee abundance at two Sarasota County sites, 1996–2000 data; Source: Mote Marine Laboratory.



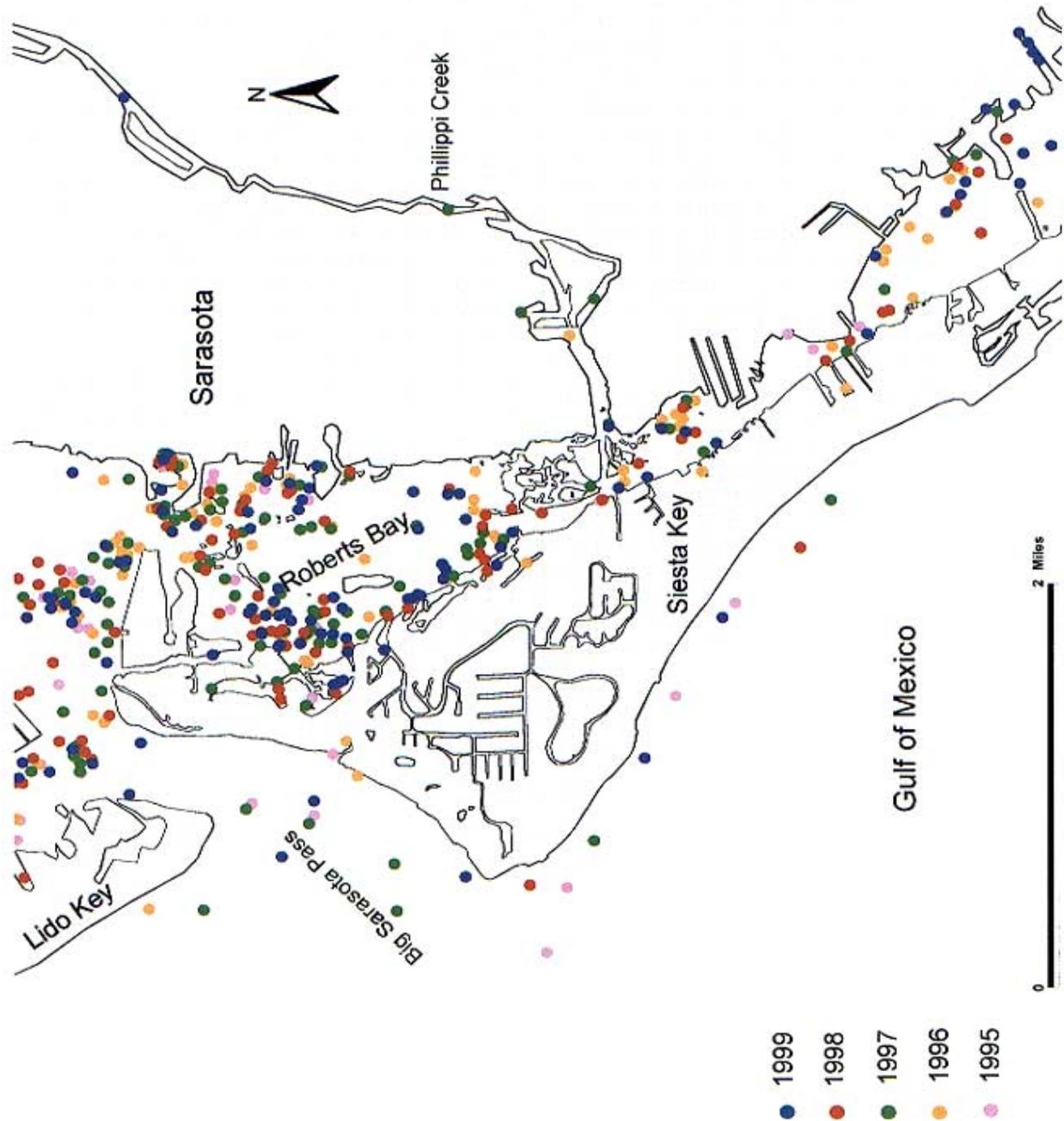
**Figure II.4.** Location of manatee sightings from Mote Marine Laboratory aerial survey data, 1995–1999; north Sarasota County line to Stephens Point. Each point represents a sighting of one or more animals.



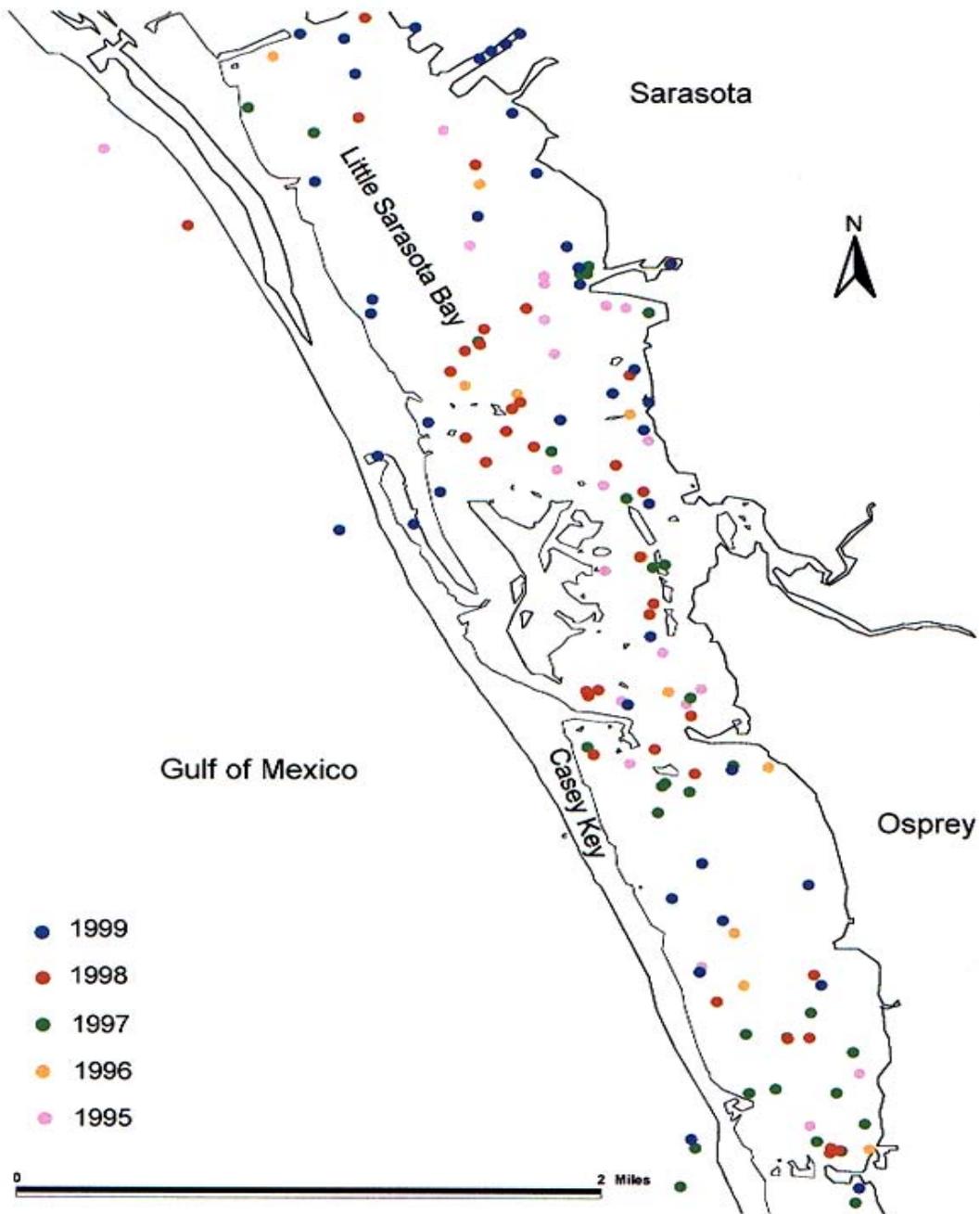
**Figure II.5.** Location of manatee sightings from Mote Marine Laboratory aerial survey data, 1995–1999; Stephens Point to South Lido Key. Each point represents a sighting of one or more animals.



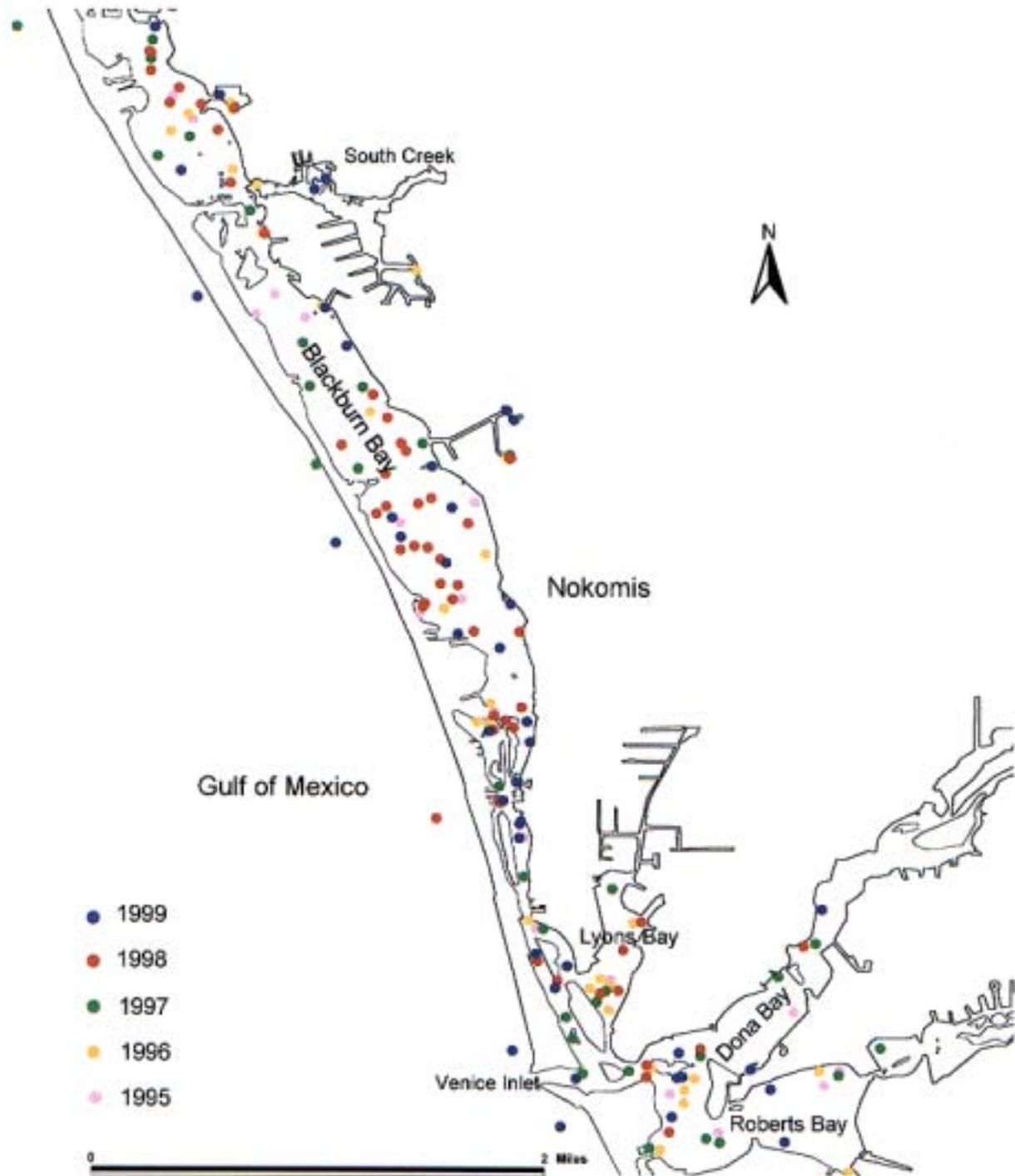
**Figure II.6.** Location of manatee sightings from Mote Marine Laboratory aerial survey data, 1995-1999; Big Sarasota Pass to Little Sarasota Bay. Each point represents a sighting of one or more animals.



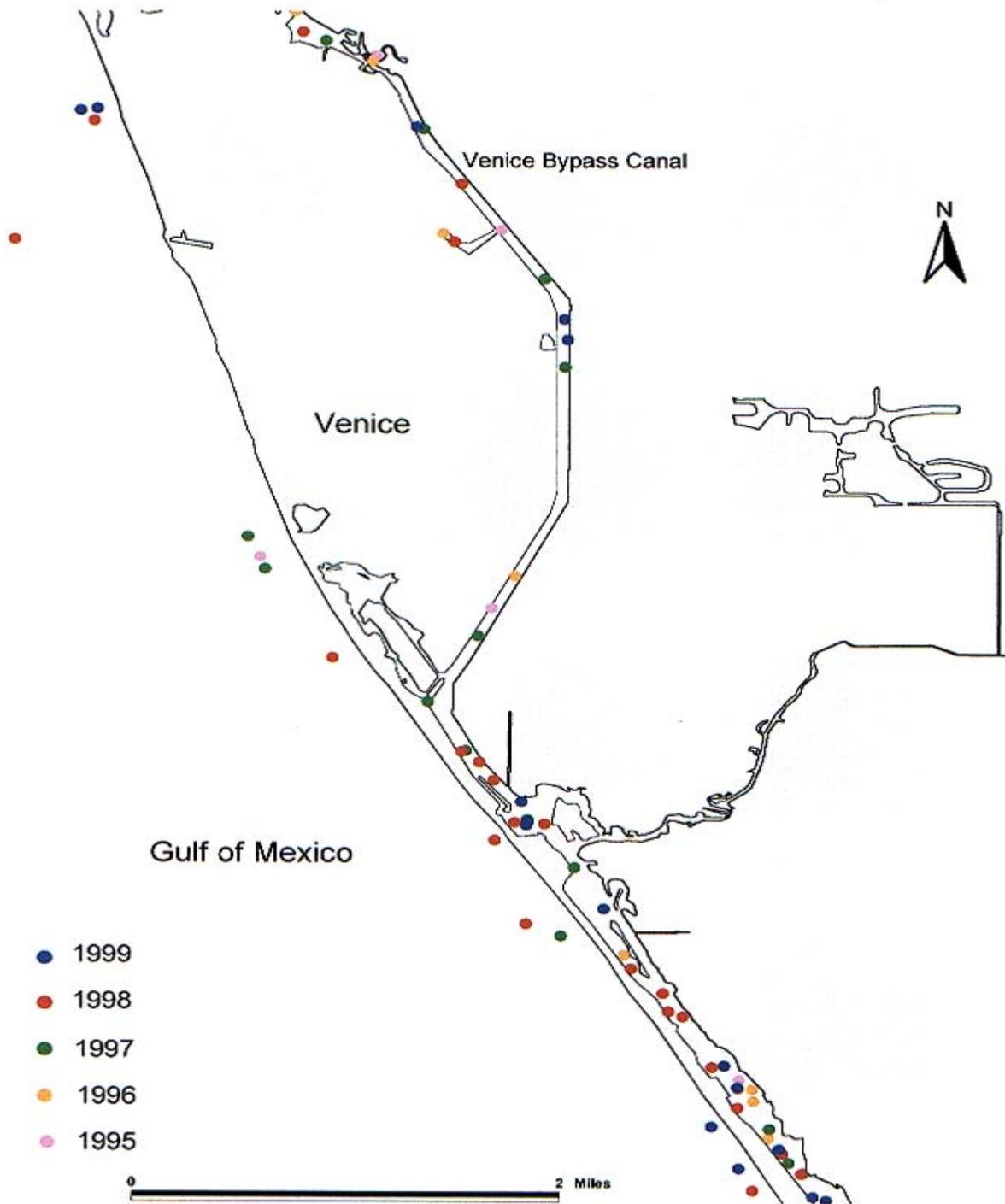
**Figure II.7.** Location of manatee sightings from Mote Marine Laboratory aerial survey data, 1995-1999; Little Sarasota Bay to Blackburn Bay. Each point represents a sighting of one or more animals.



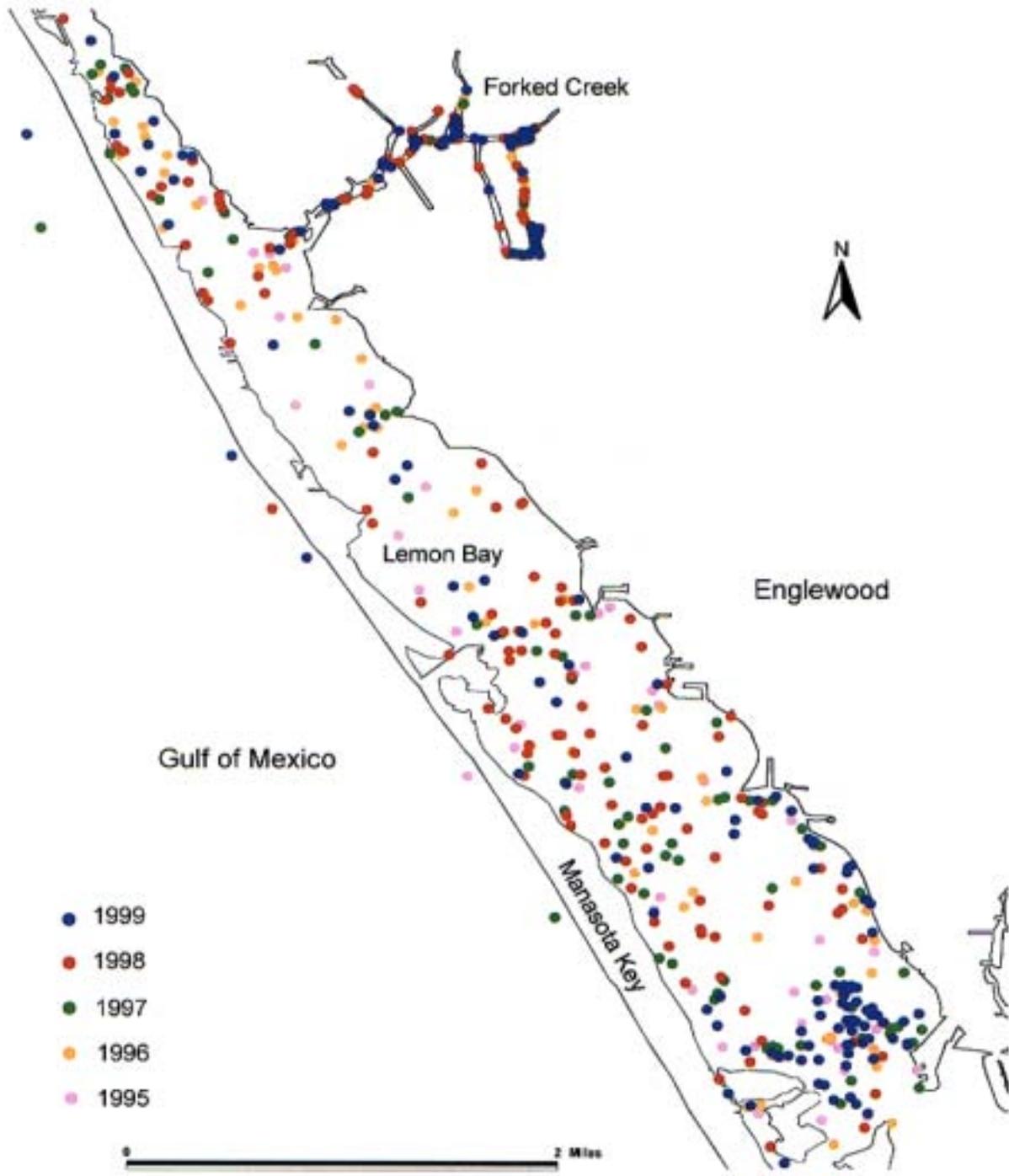
**Figure II.8.** Location of manatee sightings from Mote Marine Laboratory aerial survey data, 1995-1999; Blackburn Bay to Venice inlet. Each point represents a sighting of one or more animals.



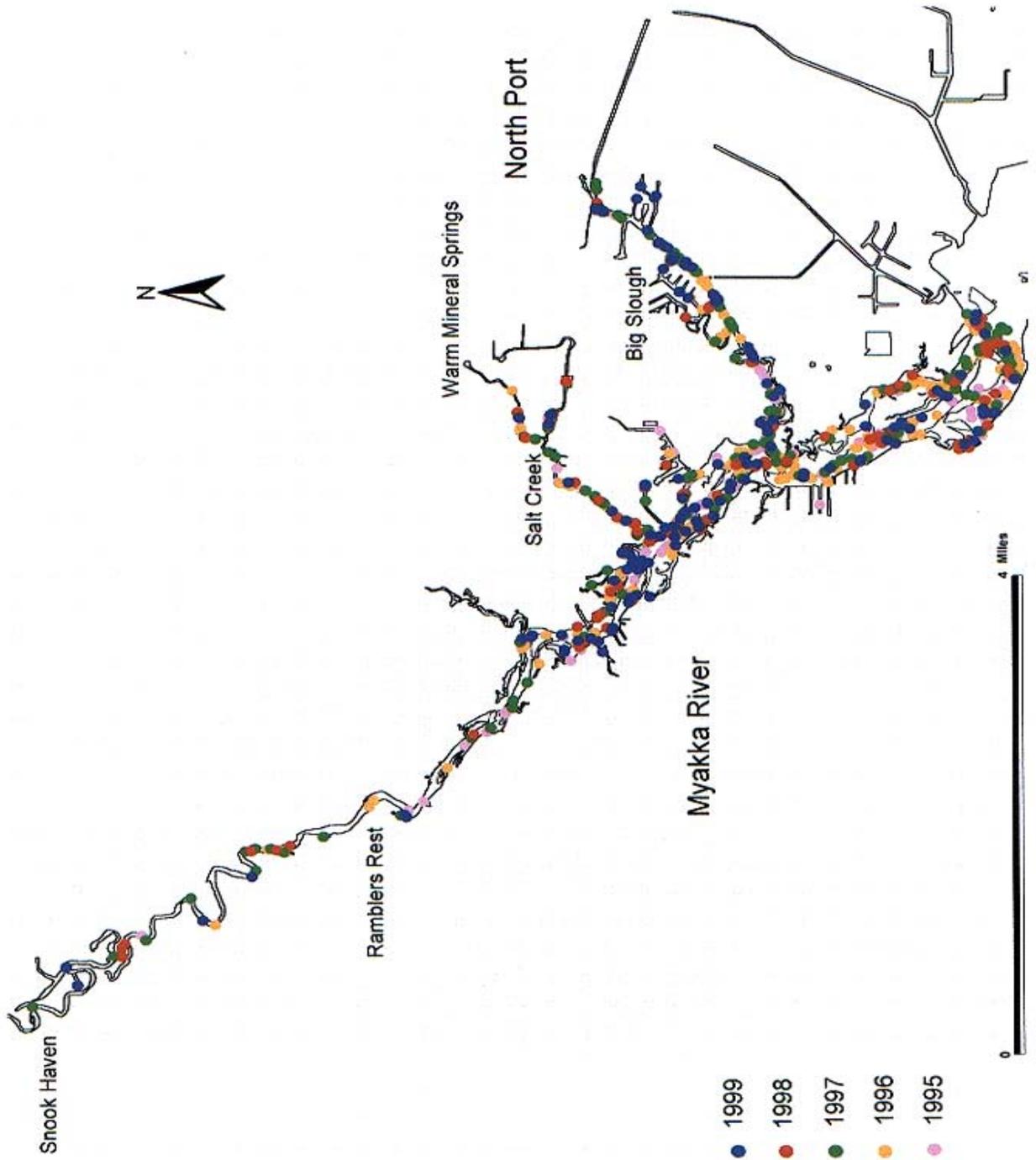
**Figure II.9.** Location of manatee sightings from Mote Marine Laboratory aerial survey data, 1996-1999; Venice Bypass Canal to Lemon Bay. Each point represents a sighting of one or more animals.



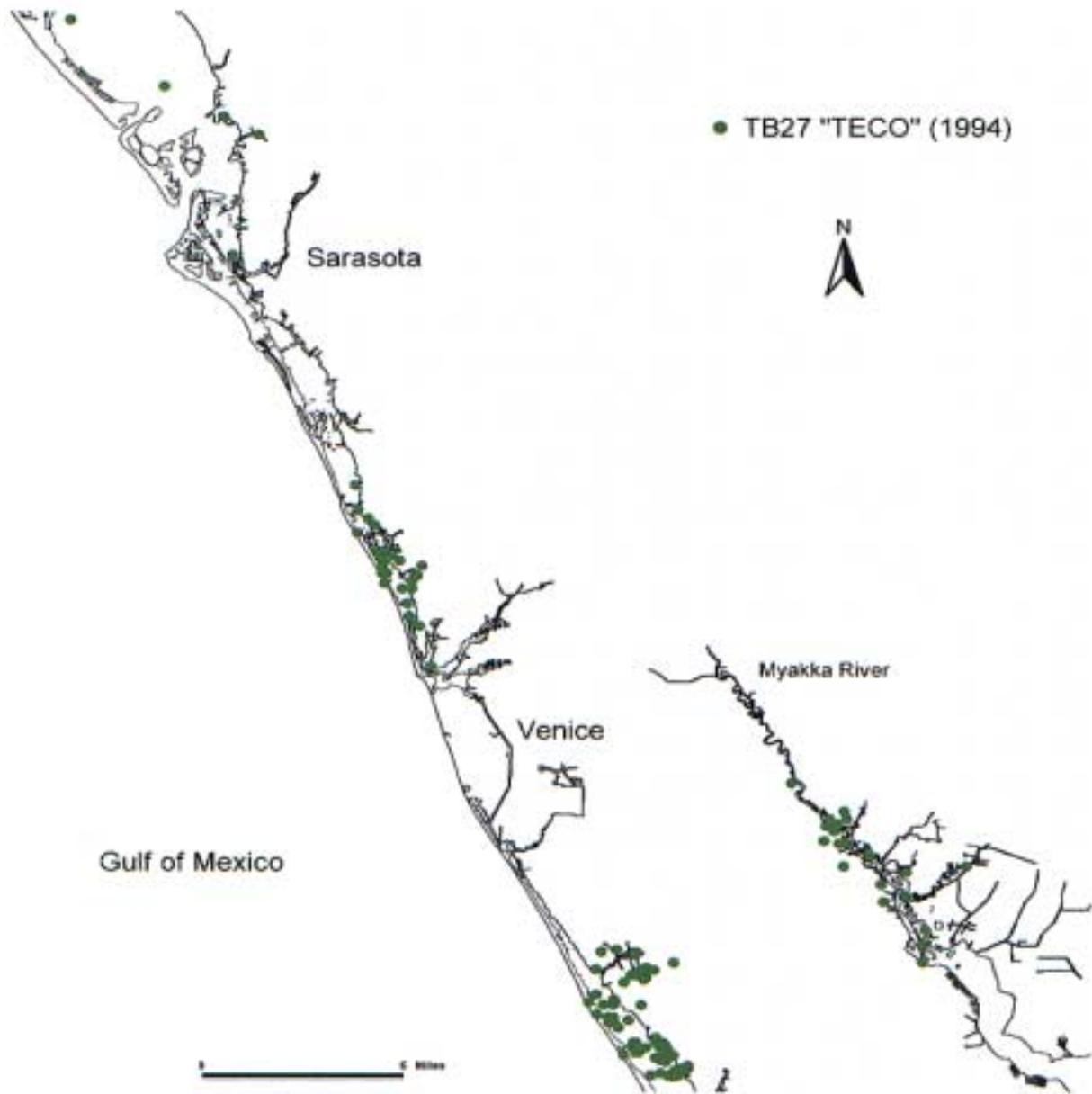
**Figure II.10.** Location of manatee sightings from Mote Marine Laboratory aerial survey data, 1995-1999; Lemon Bay to south Sarasota County line. Each point represents a sighting of one or more animals.



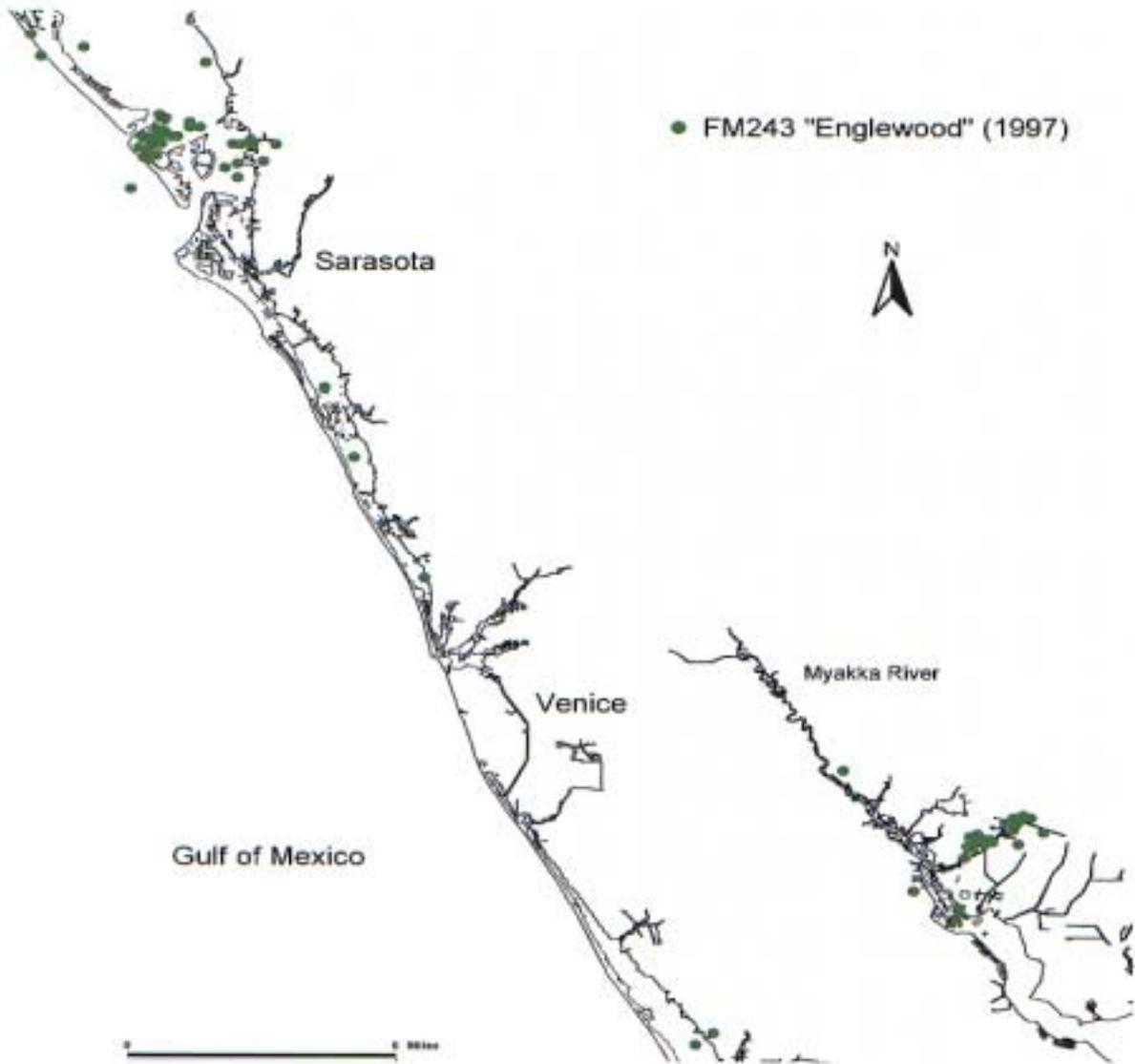
**Figure II.11.** Location of manatee sightings from Mote Marine Laboratory aerial survey data, 1995-1999; Upper Myakka River to south Sarasota County line. Each point represents a sighting of one or more animals.



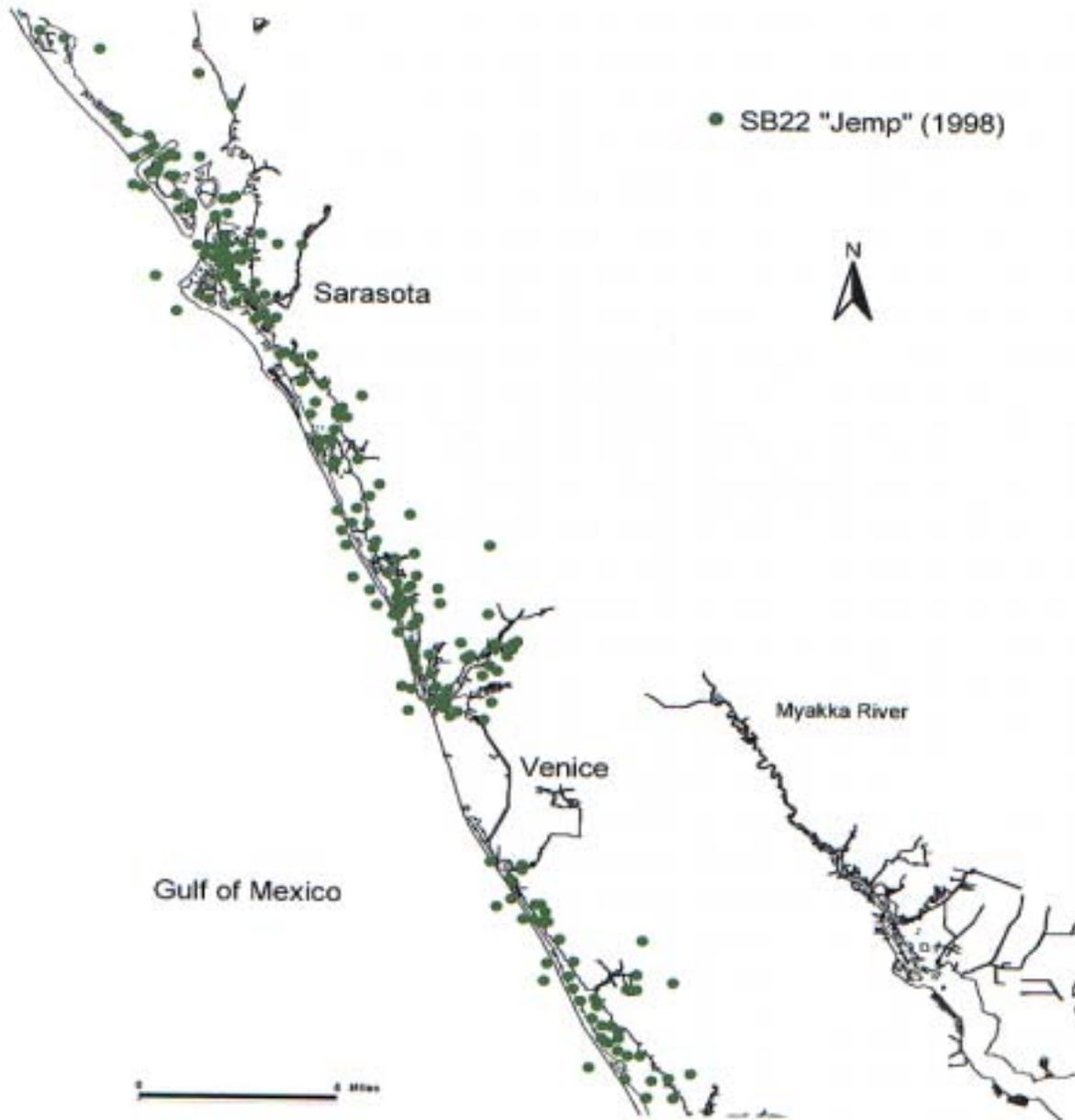
**Figure II.12.** Telemetry data for tagged manatee TB27 (TECO) over a one-year period during 1994. Source: Florida Marine Research Institute.



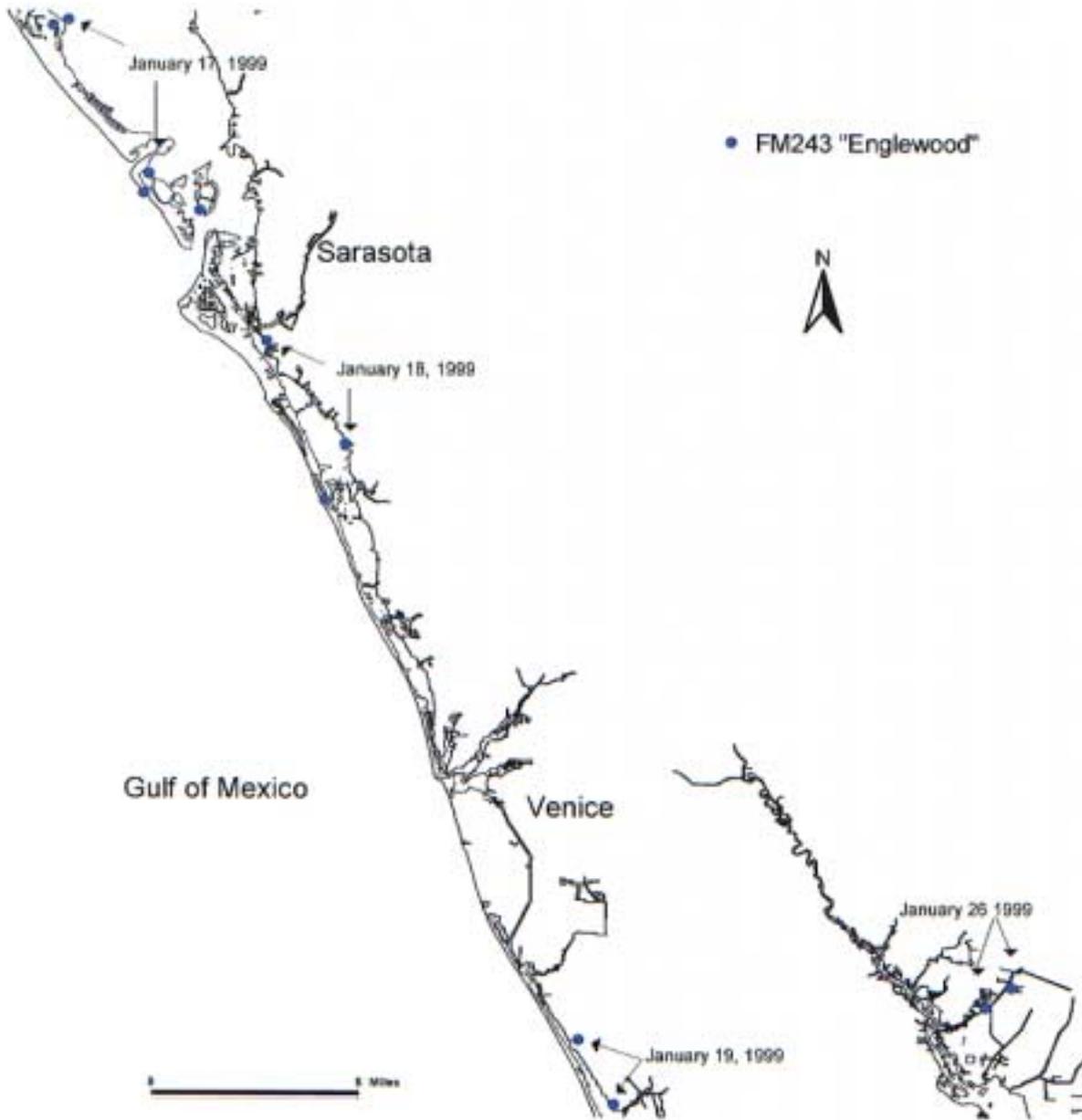
**Figure II.13.** Telemetry data for tagged manatee FM243 (Englewood) over a one-year period During 1997. Source: Florida Marine Research Institute.



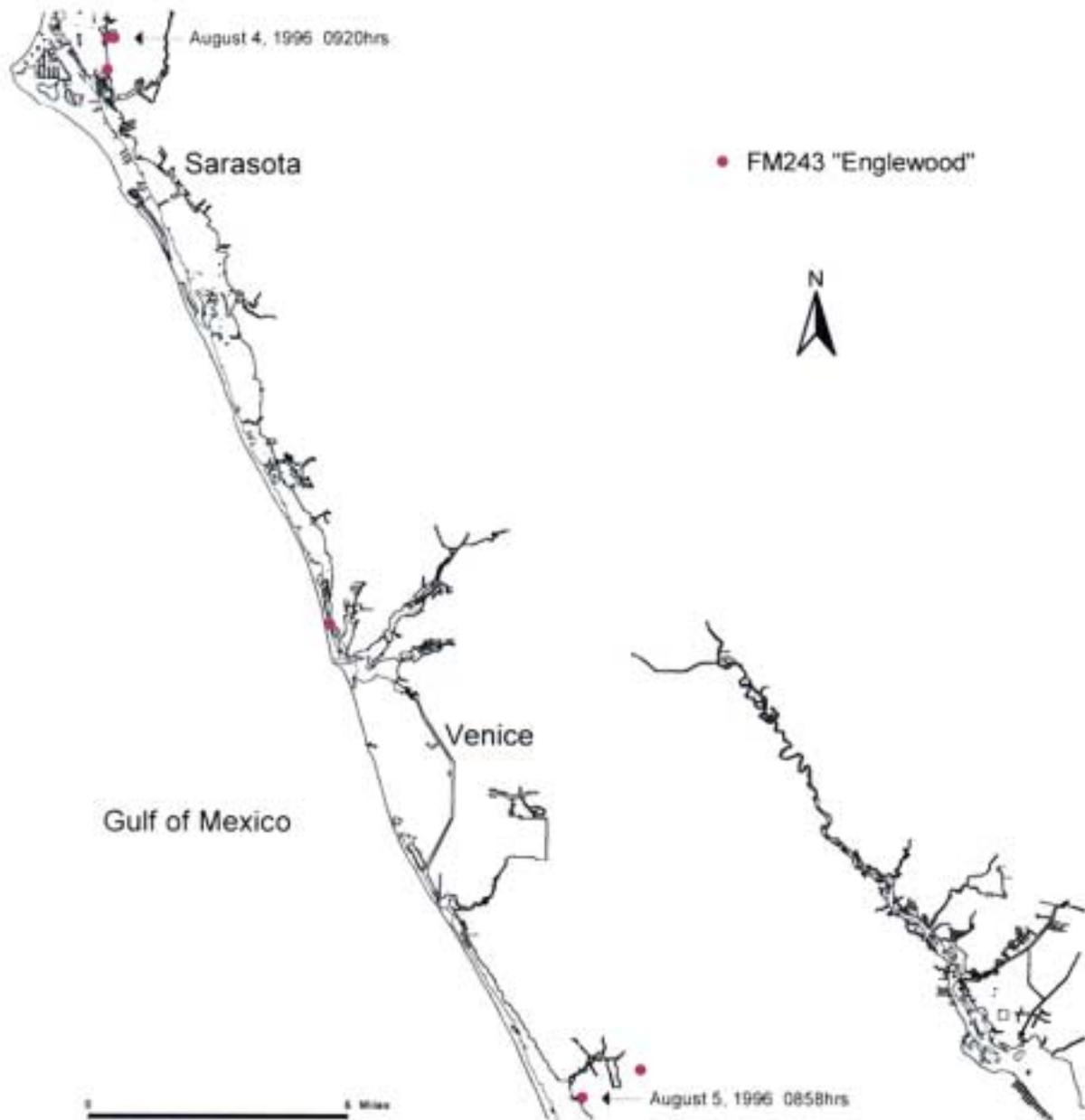
**Figure II.14.** Telemetry data for tagged manatee SB22 (Jemp) over a one-year period during 1998. Source: Florida Marine Research Institute.



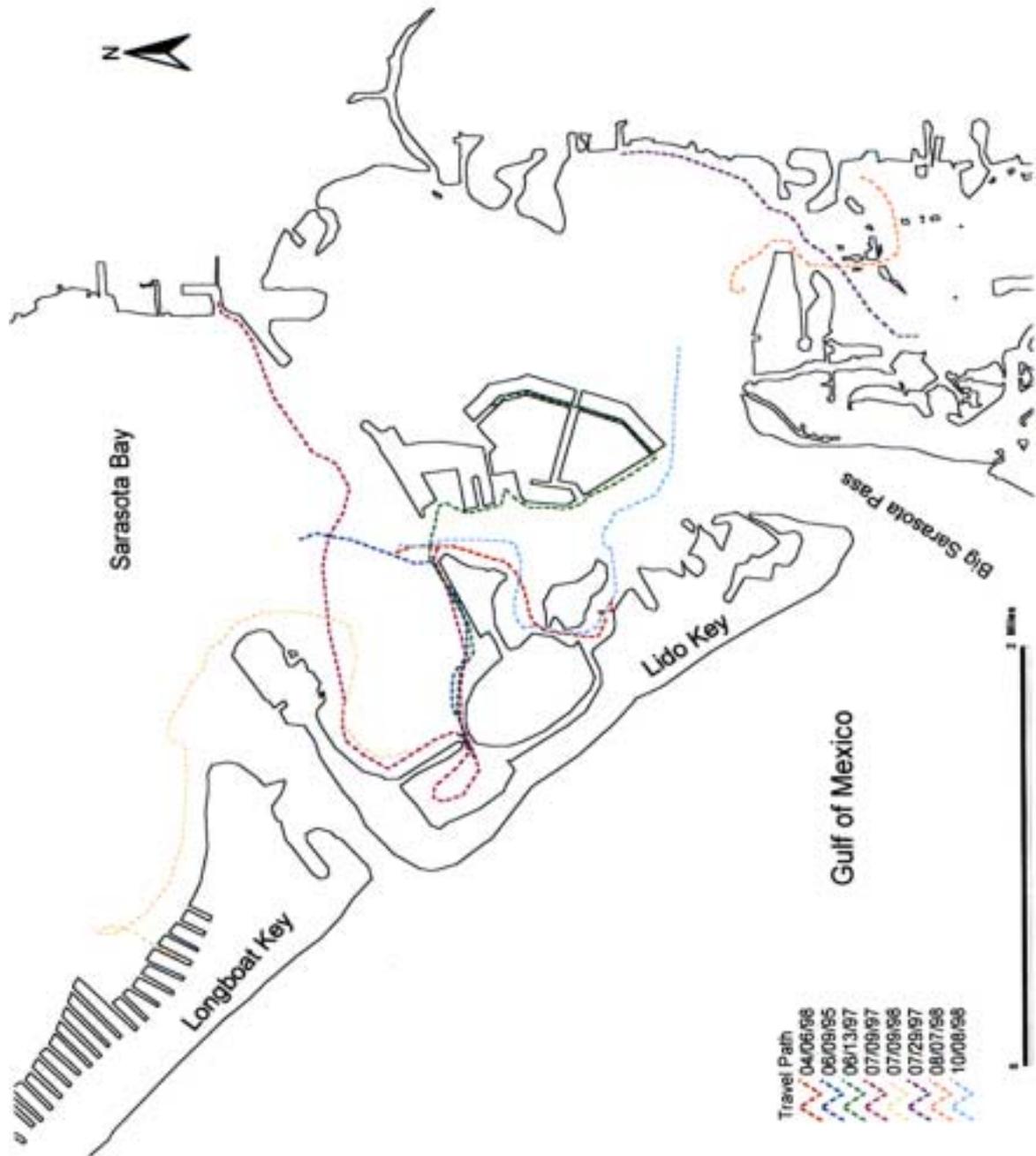
**Figure II.15.** Telemetry data for tagged manatee FM243 (Englewood) over a ten-day period during 1999. Source: Florida Marine Research Institute.



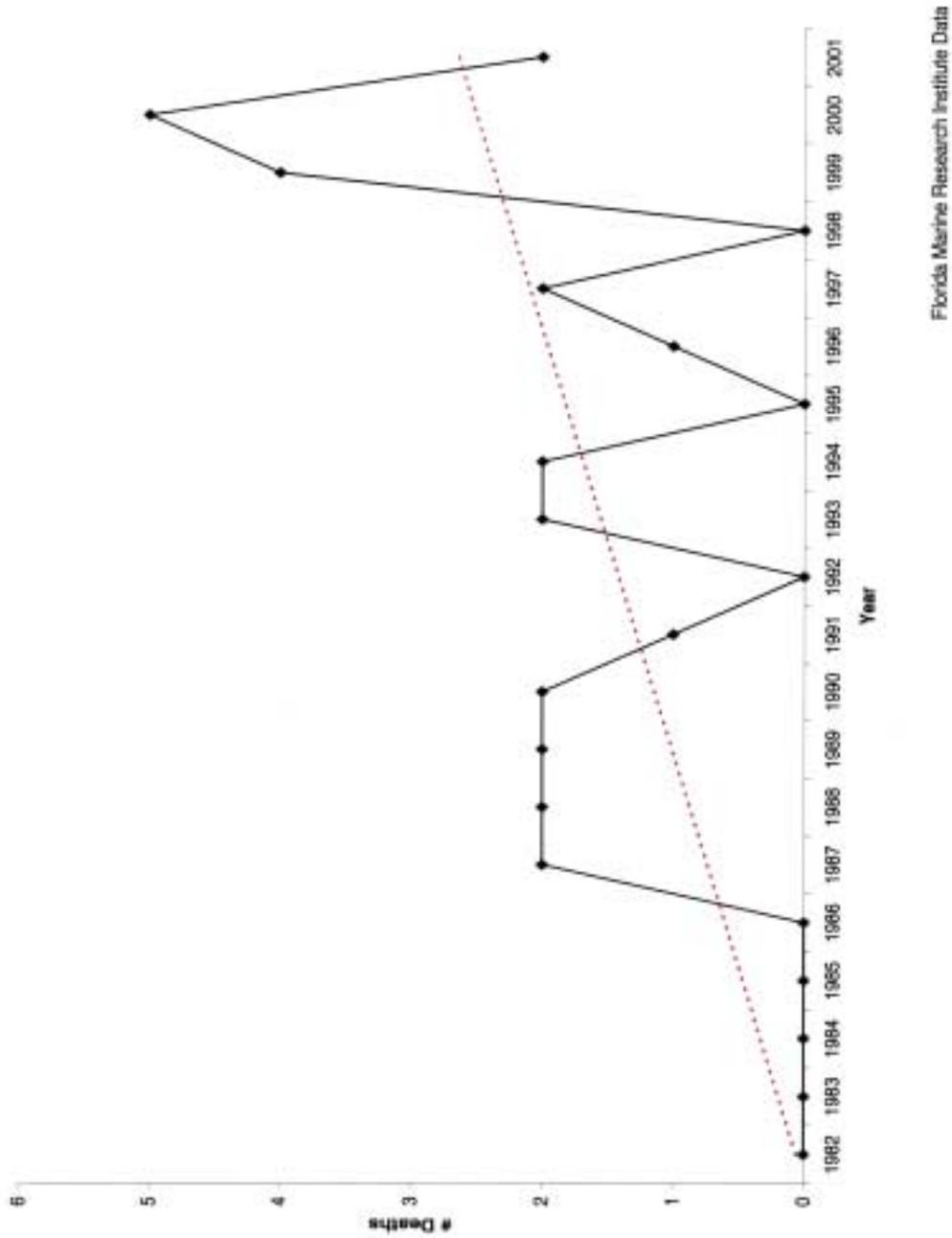
**Figure II.16.** Telemetry data for tagged manatee FM243 (Englewood) over a 24-hour period during 1996. Source: Florida Marine Research Institute.



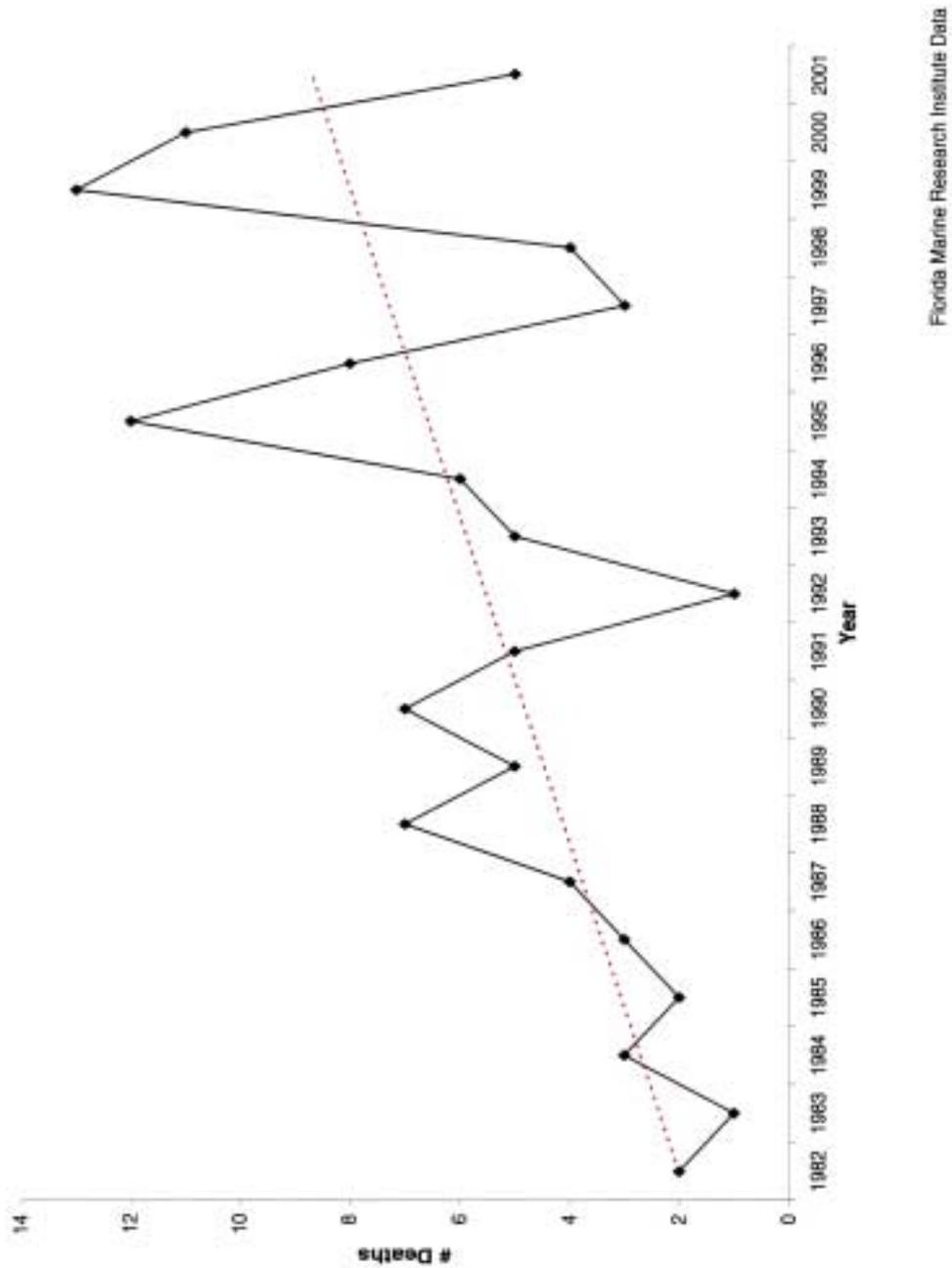
**Figure II.17.** Travel paths from eight boat-based focal animal follows in southern Sarasota Bay.  
Source: Mote Marine Laboratory.



**Figure II.18.** Watercraft-related manatee mortality in Sarasota County, 1982-2001, including trend line. Source: Florida Marine Research Institute.



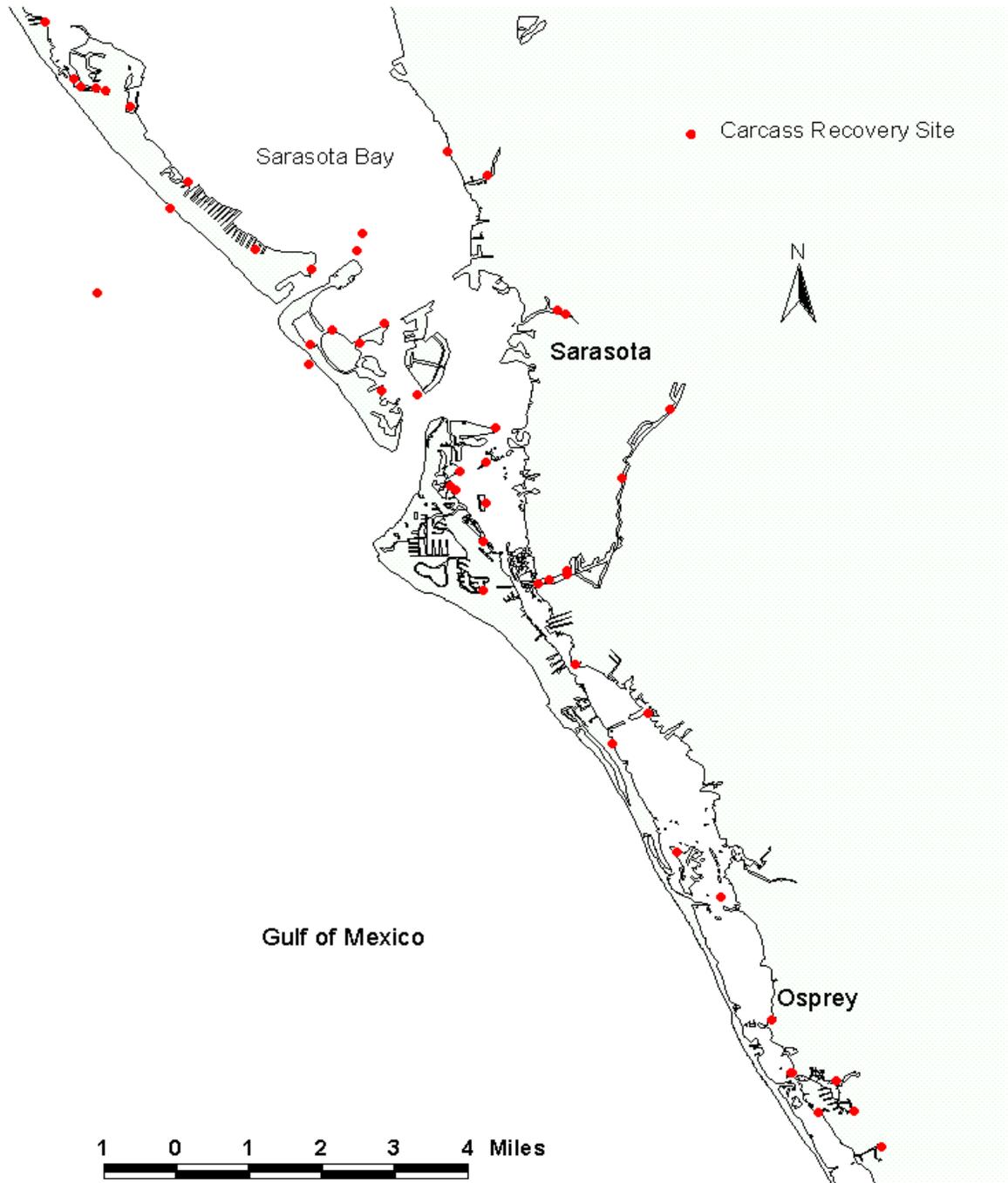
**Figure II.19.** Total mortality in Sarasota County by year, 1982-2001, including trend line.  
Source: Florida Marine Research Institute.



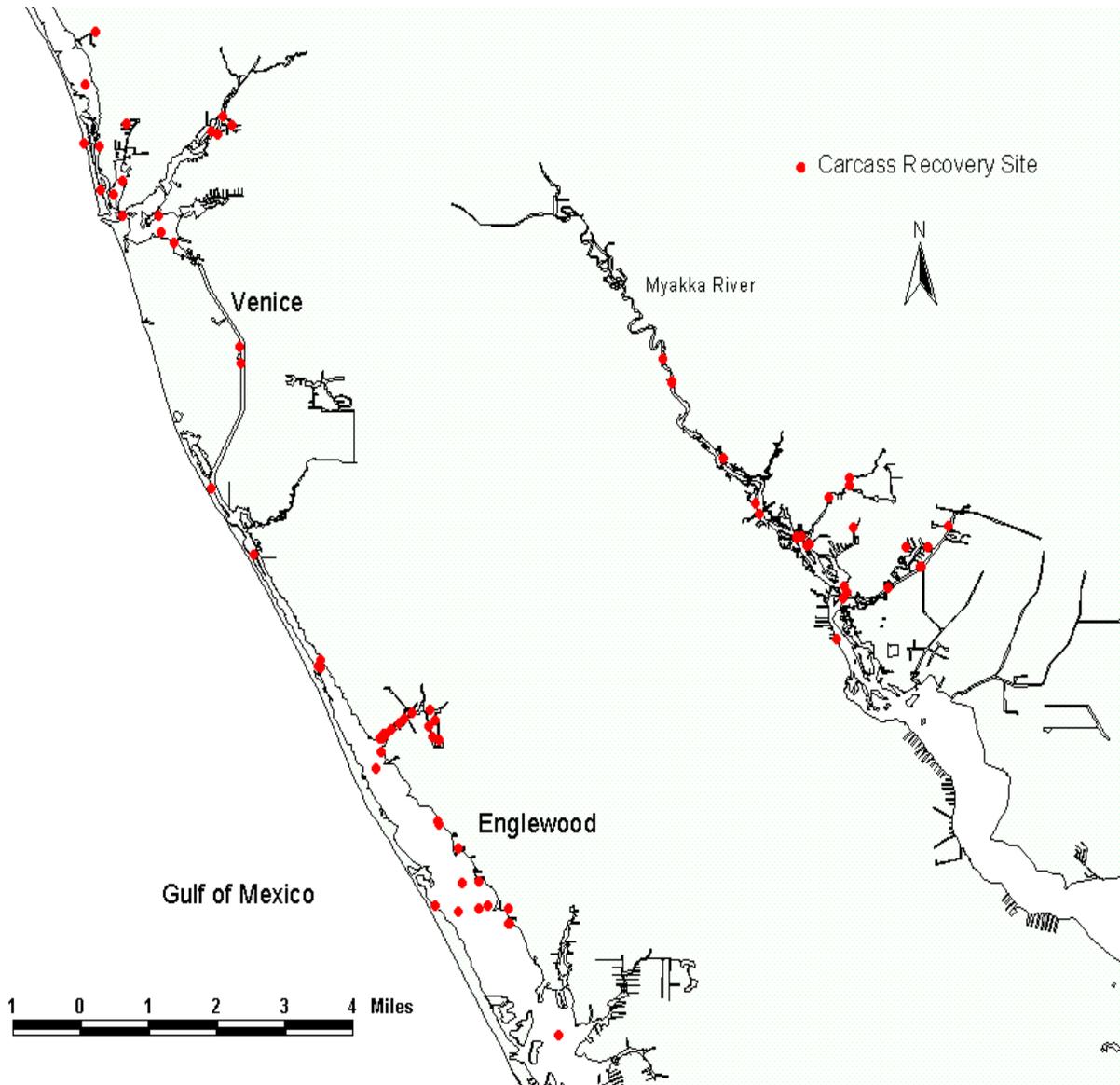
Florida Marine Research Institute Data

**Figure**

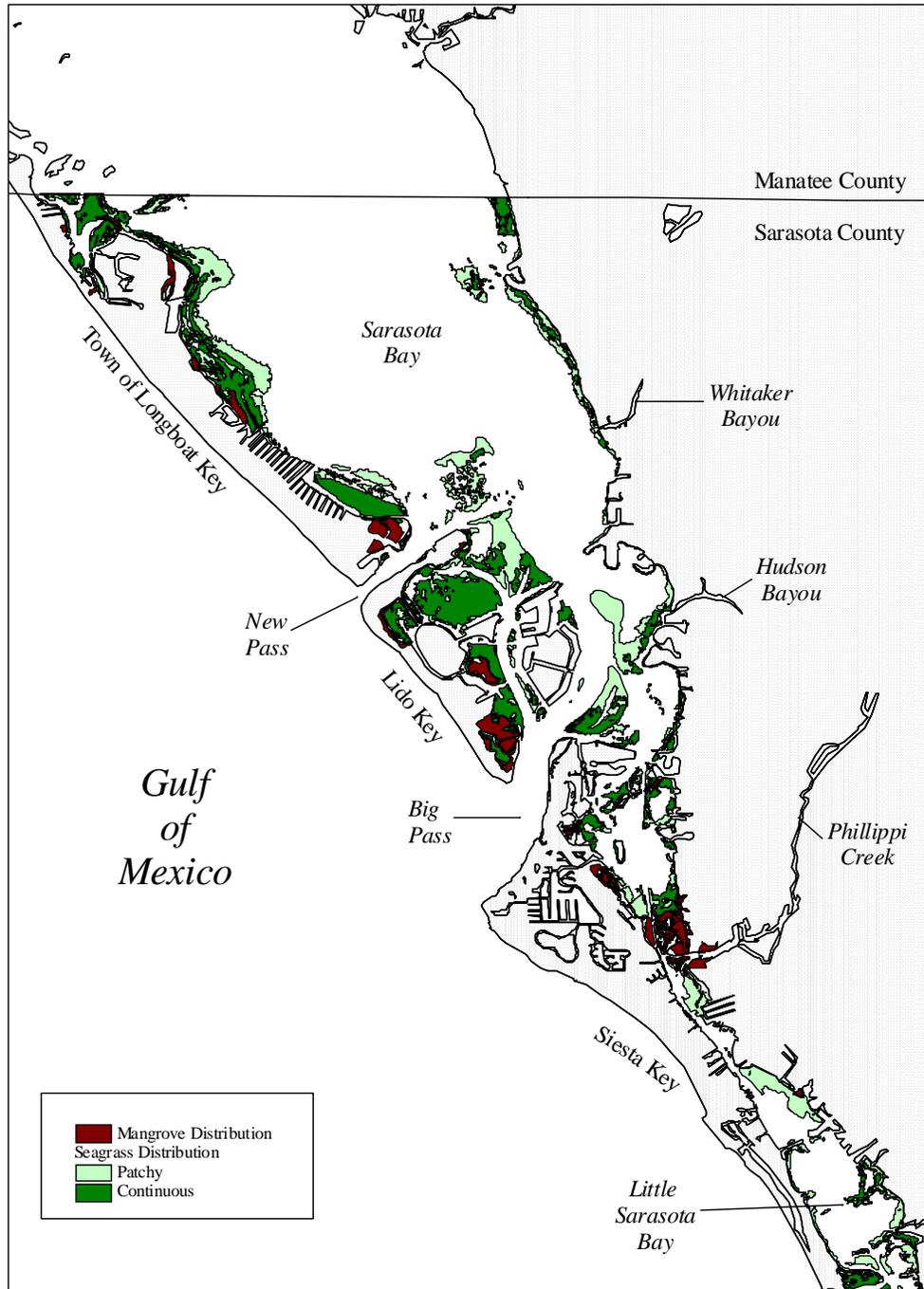
**II.20.** Location of recovered carcasses in northern Sarasota County; 1976–2001.  
Source: Florida Marine Research Institute.



**Figure II.21.** Location of recovered carcasses in southern Sarasota County; 1976-2001. Source: Florida Marine Research Institute.



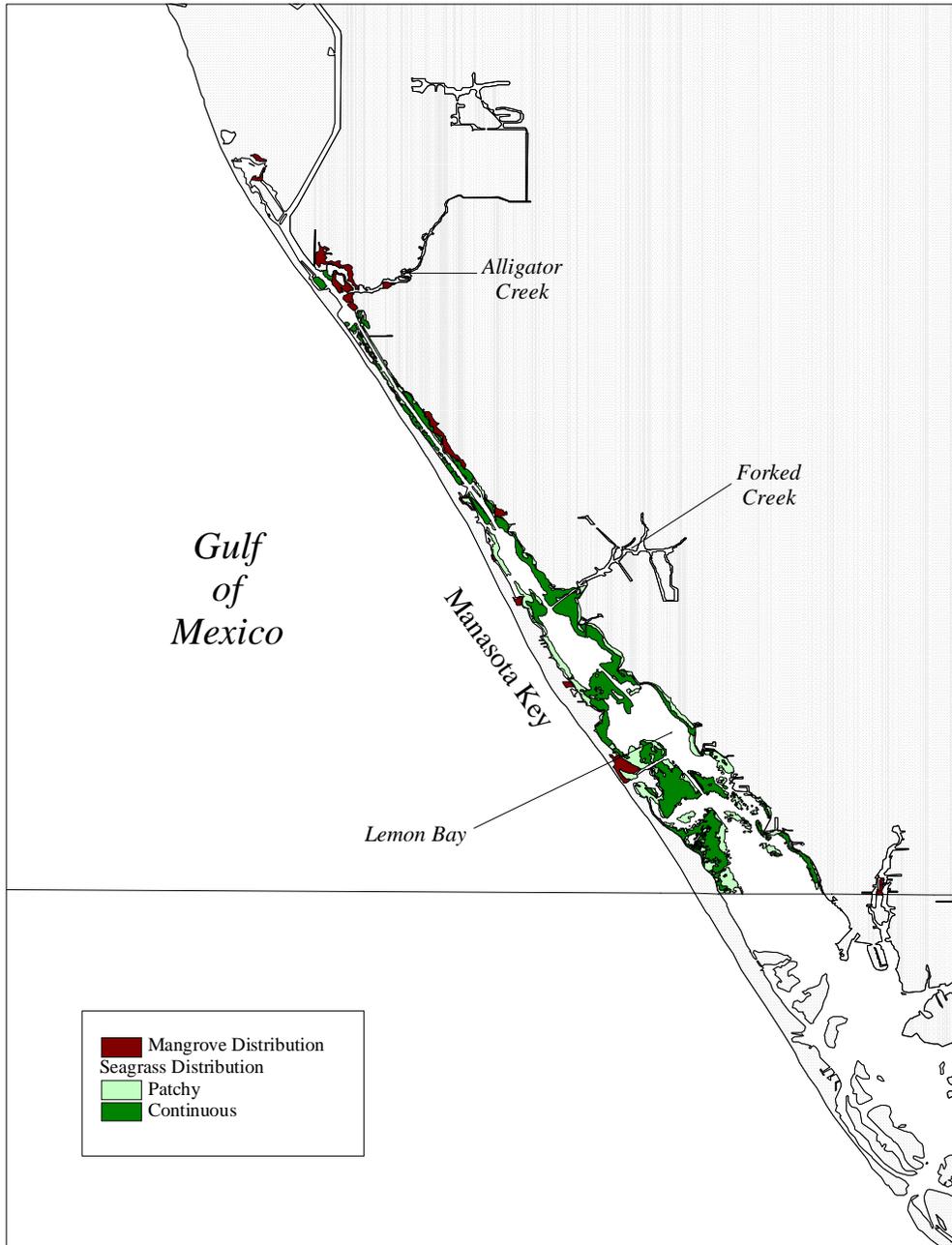
**Figure II.22.** Documented mangrove and seagrass areas in northern Sarasota County. Source: Florida Marine Research Institute.



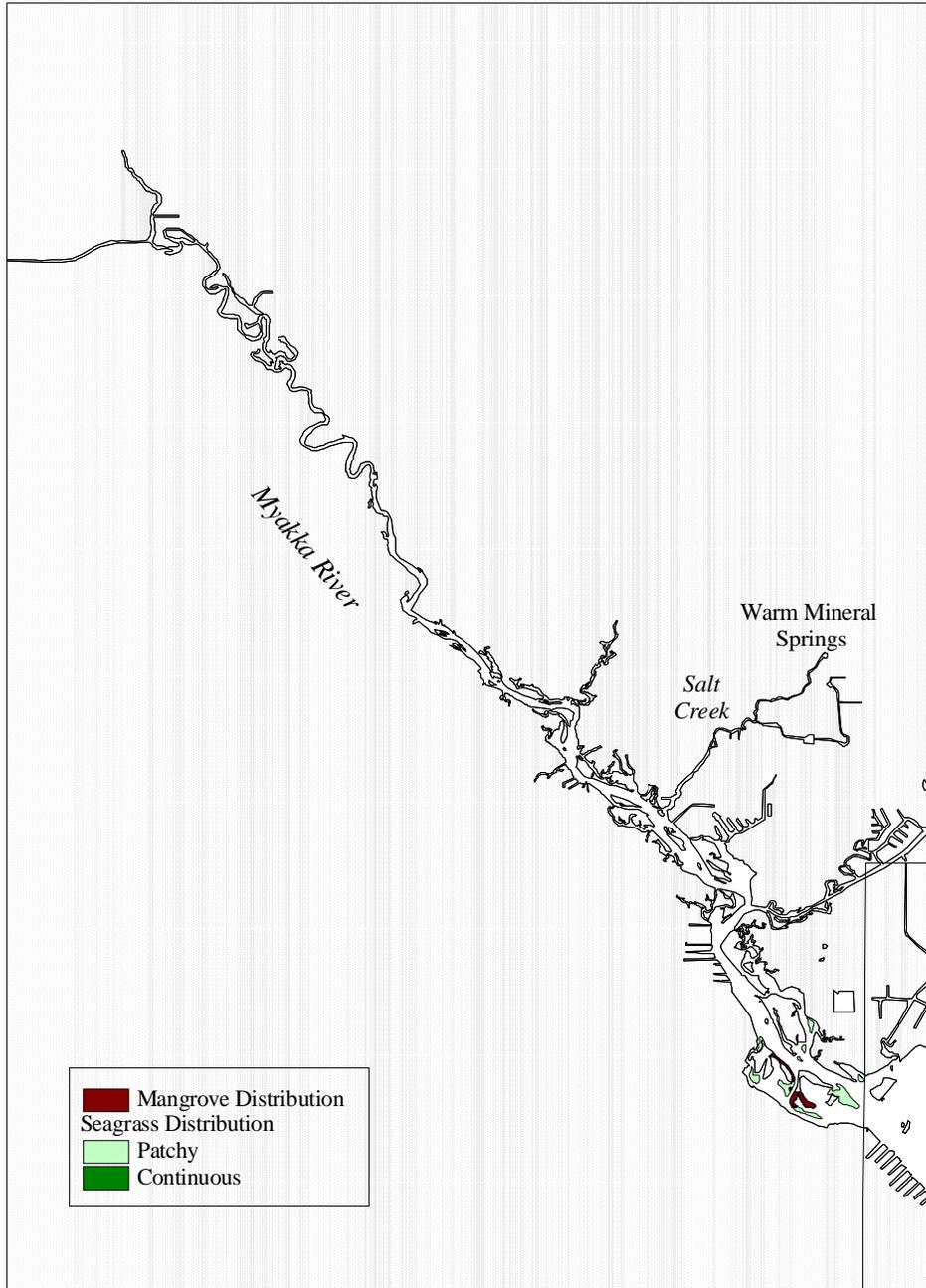
**Figure II.23.** Documented mangrove and seagrass areas in central Sarasota County. Source: Florida Marine Research Institute.



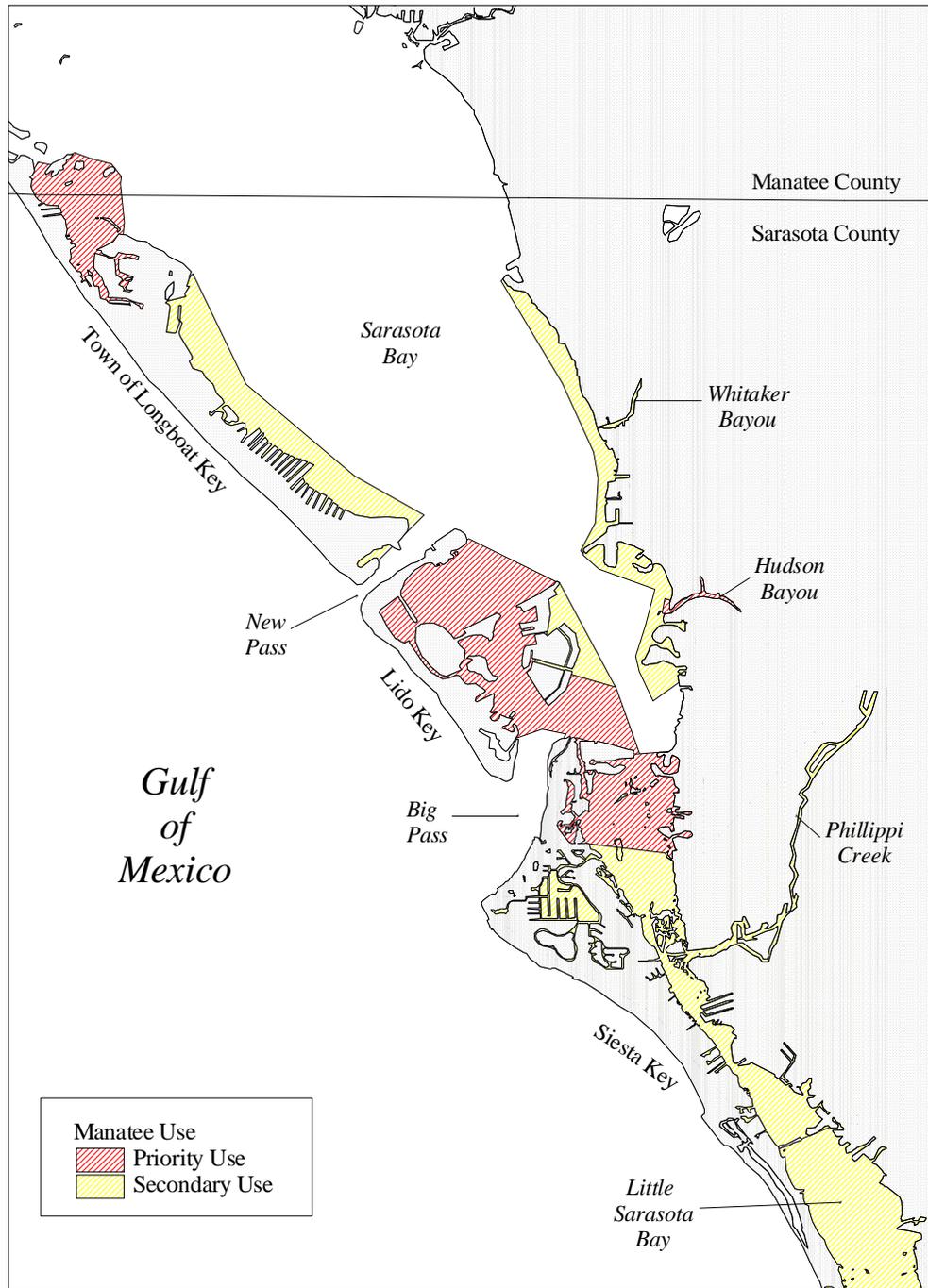
**Figure II.24.** Documented mangrove and seagrass areas in southern Sarasota County. Source: Florida Marine Research Institute.



**Figure II.25.** Documented mangrove and seagrass areas along the Sarasota County portion of the Myakka River. Source: Florida Marine Research Institute.



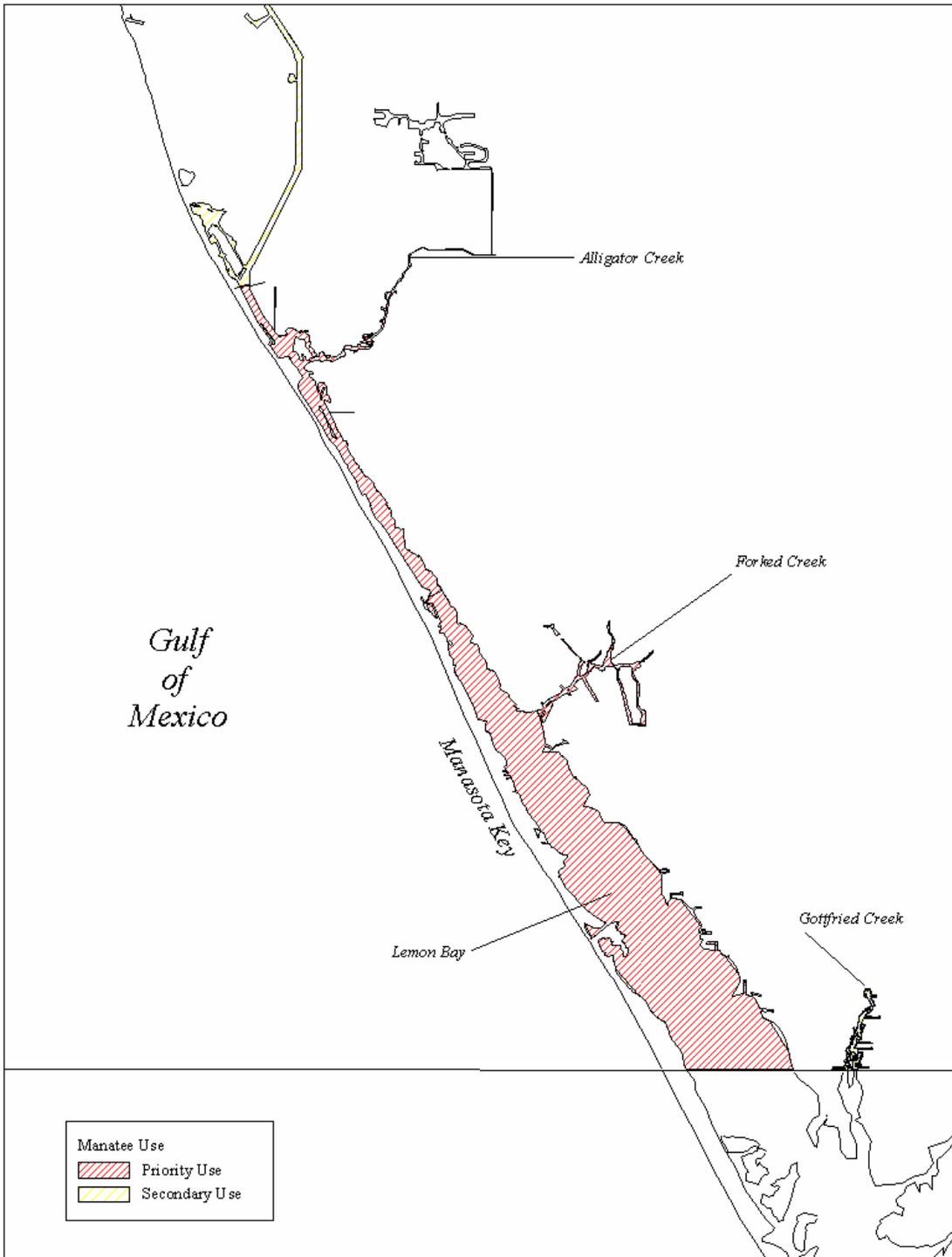
**Figure II.26.** Identification of priority and secondary manatee areas in northern Sarasota County.



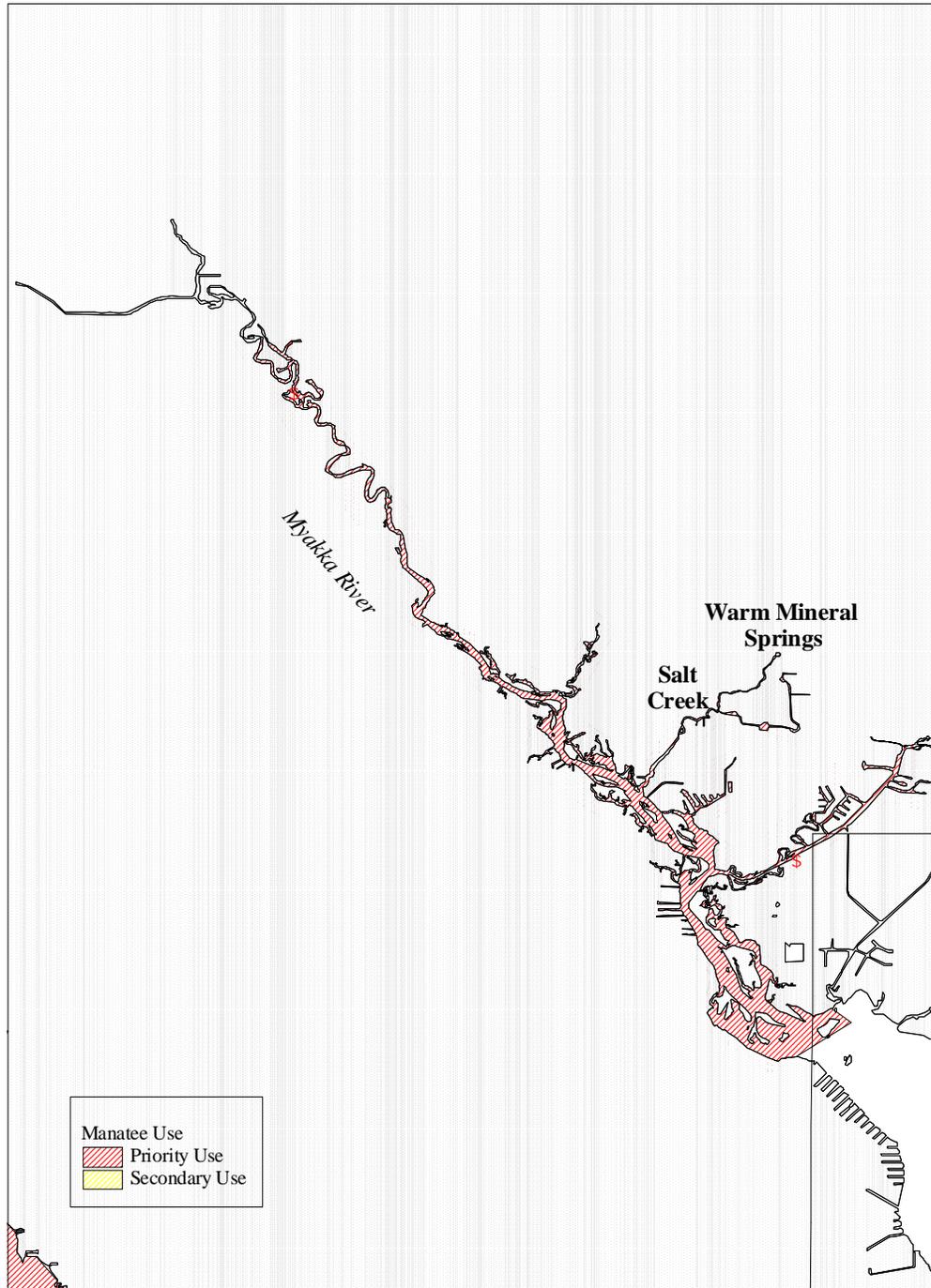
**Figure II.27.** Identification of priority and secondary manatee areas in central Sarasota County



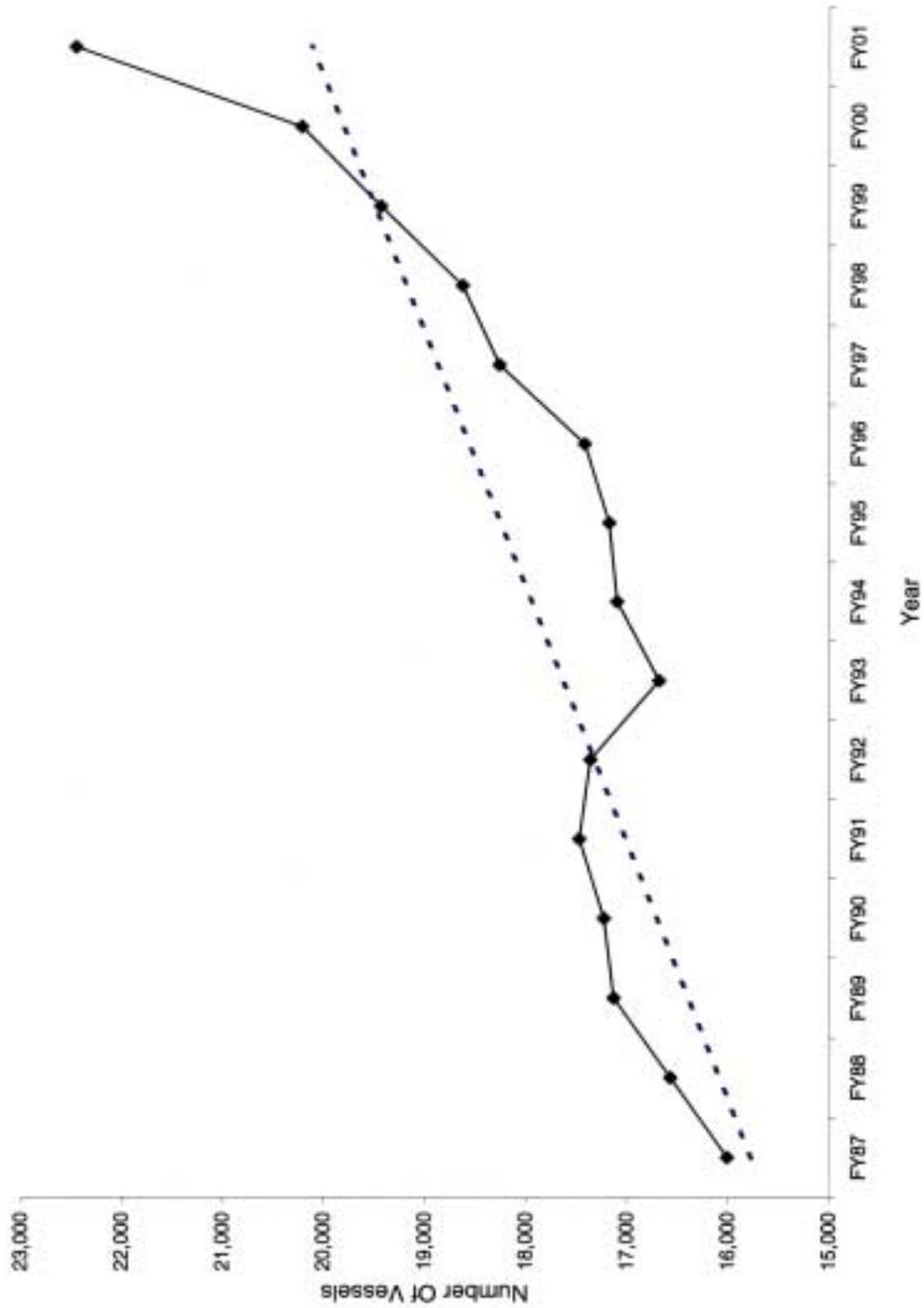
**Figure II.28.** Identification of priority and secondary manatee areas in southern Sarasota County



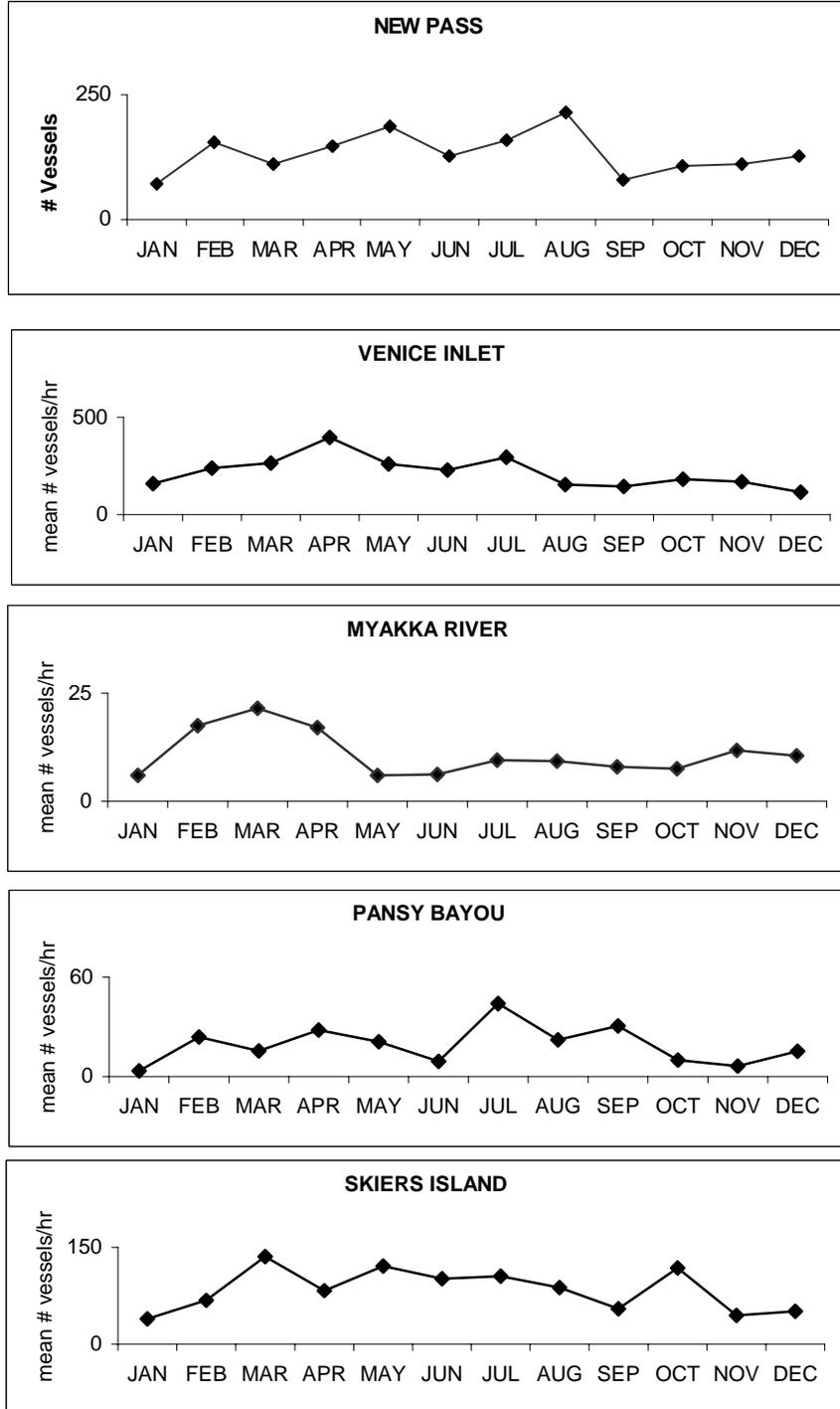
**Figure II.29.** Identification of priority and secondary manatee areas along the Sarasota County portion of the Myakka River.



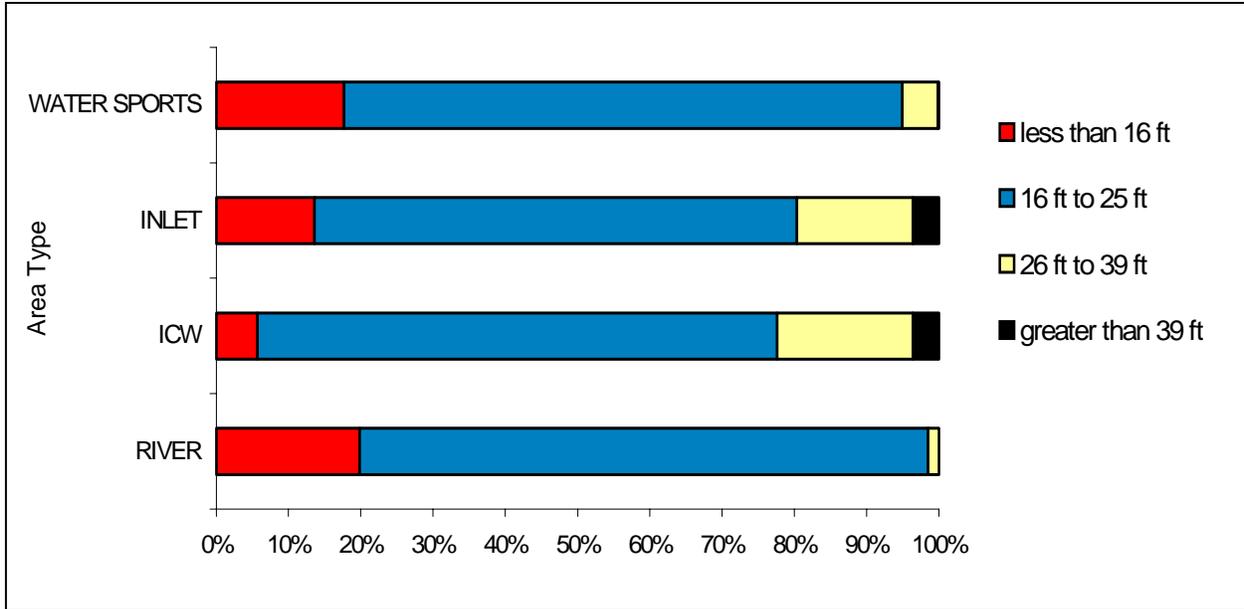
**Figure II.30.** Number of registered vessels in Sarasota County, 1987-2001.



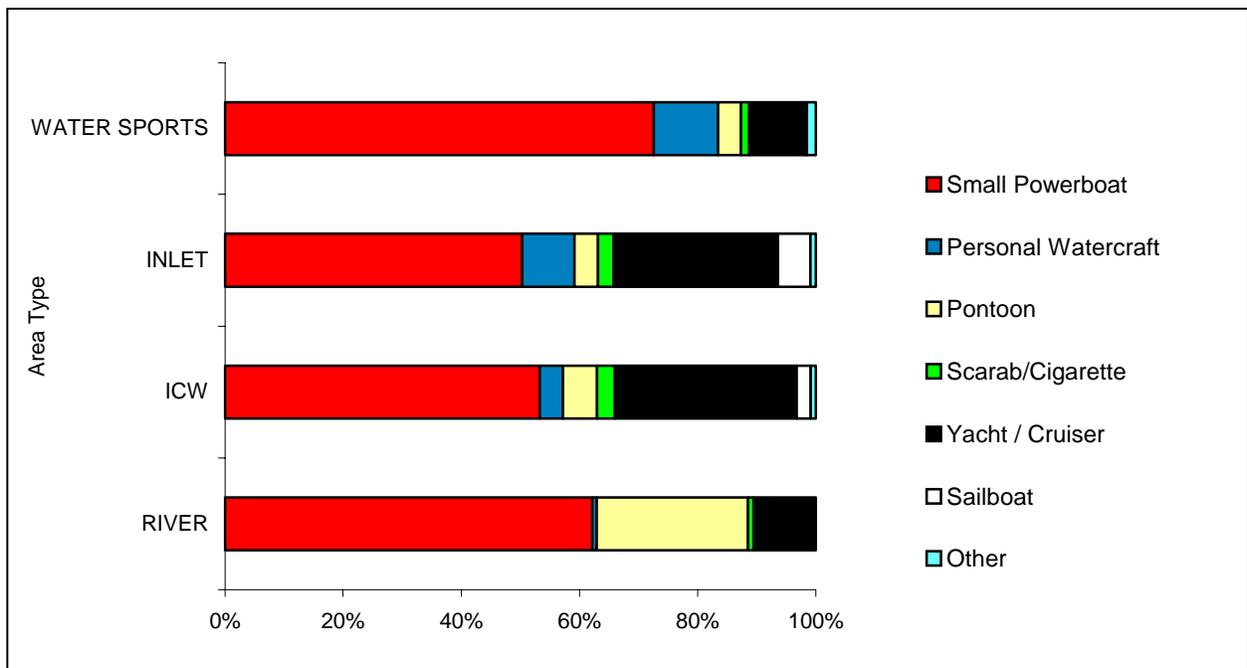
**Figure II.31.** Seasonal distribution of vessel traffic at five sites in Sarasota County. Source: Gorzelany, 1996.



**Figure II.32.** Relative proportion of various boat sizes in use at different locations within Sarasota County. Source: Gorzelany, 1996.



**Figure II.33.** Relative proportion of various boat types in use at different locations within Sarasota County. Source: Gorzelany, 1996.



**Figure II.34.** Distribution of vessel traffic at New Pass over a 24-hour period. Source: Gorzelany, 1996.

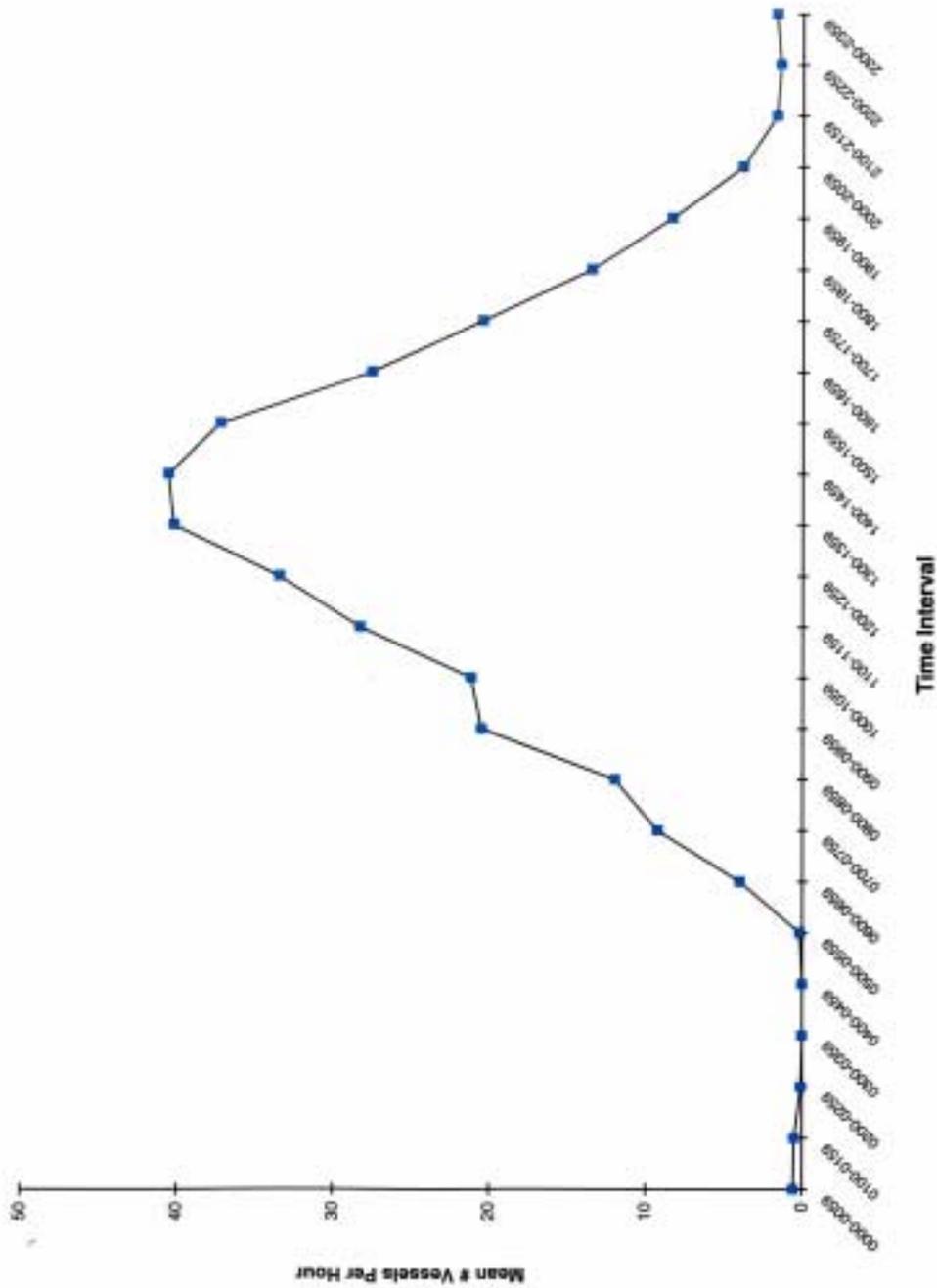


Figure II.35a. Current manatee protection zones in Sarasota County.

1 of 7



**SARASOTA COUNTY  
AND MANATEE COUNTY  
MANATEE PROTECTION ZONES**

**68C-22.026 F.A.C.  
DECEMBER 2002**

For information please call or write to:  
Fish and Wildlife Conservation Commission  
Office of Environmental Services  
Bureau of Protected Species Management  
620 South Meridian Street, OES-BPS  
Tallahassee FL 32399-1600  
TEL: (850) 922-4330 FAX: (850) 922-4338 SUNCOM: 292-4330

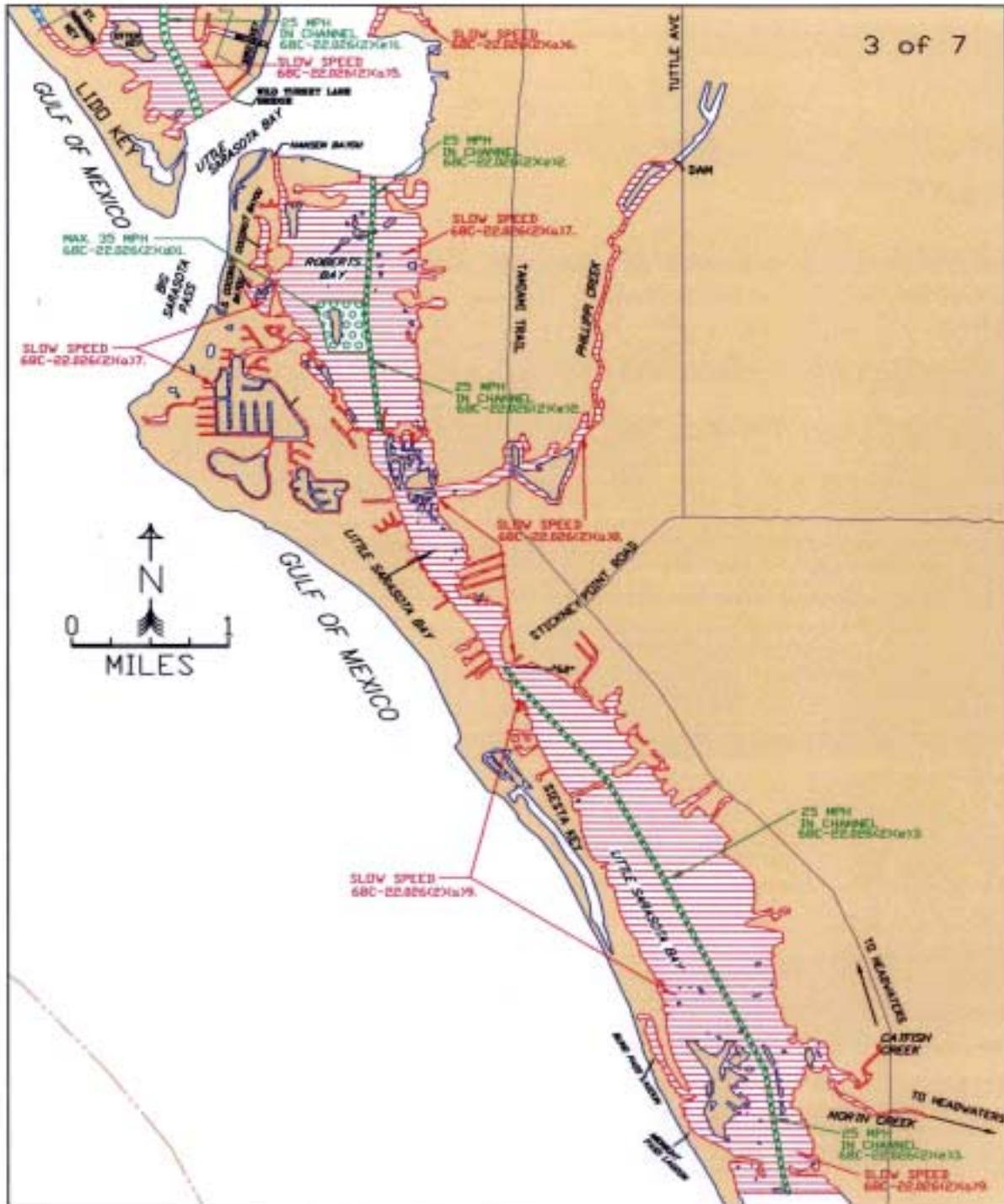
**LEGEND**

-  IDLE SPEED, CHANNEL INCLUDED
-  SLOW SPEED, CHANNEL INCLUDED
-  NO ENTRY (November 15 - March 15)
-  NO ENTRY, RESIDENTS ONLY
-  25 MPH
-  35 MPH
-  25 MPH IN CHANNEL

Date Printed: February 11, 2003



Figure II.35c. Manatee protection zones, continued.



**Figure II.35d.** Manatee protection zones, continued. Unshaded portion of Little Sarasota Bay has also recently been established as a Manatee Refuge by the U.S. Fish and Wildlife Service (March 2003) and is now designated as Slow Speed, 25 mph in the ICW channel.





Figure II.35f. Manatee protection zones, continued.

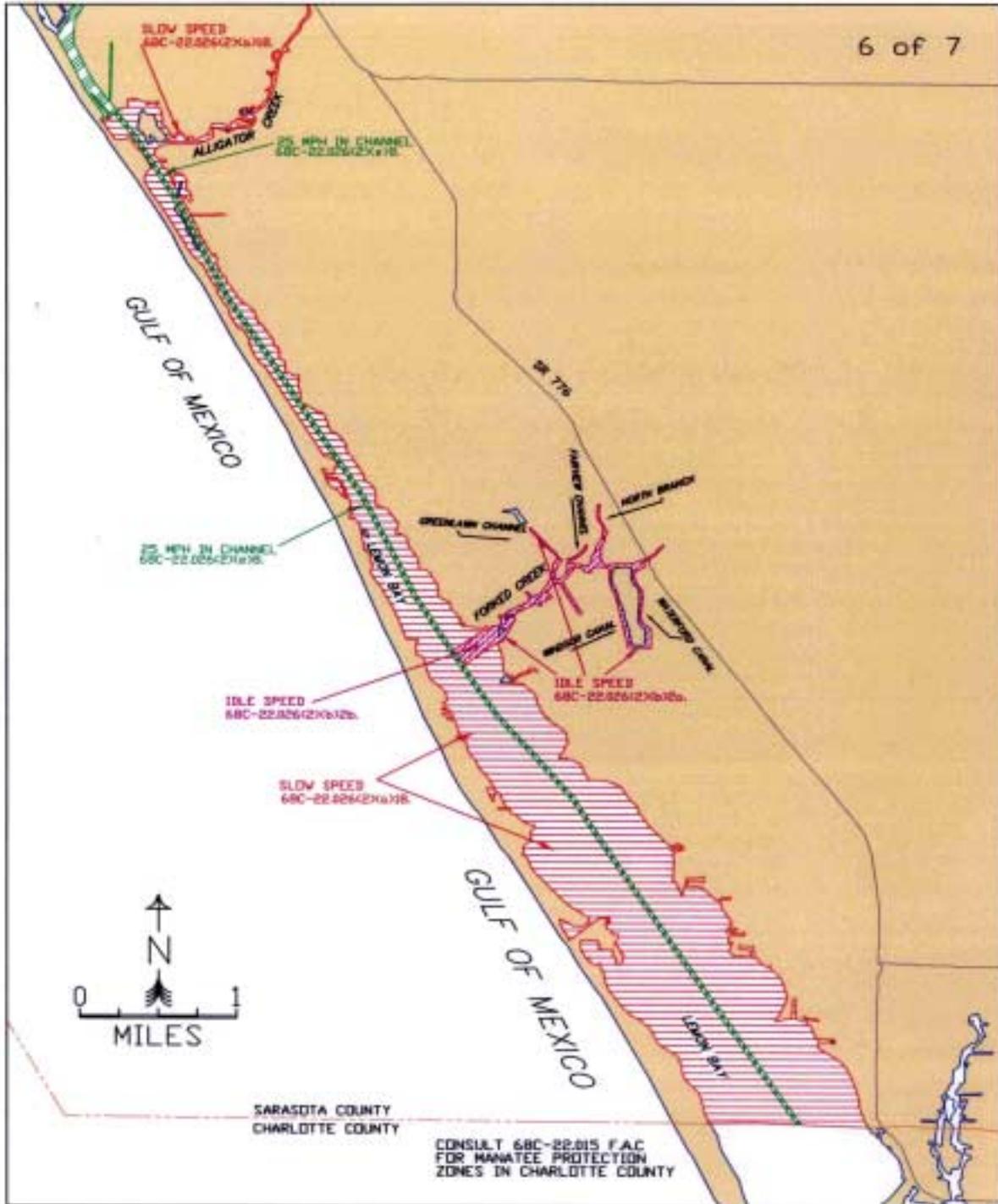


Figure II.35g. Manatee protection zones, continued.

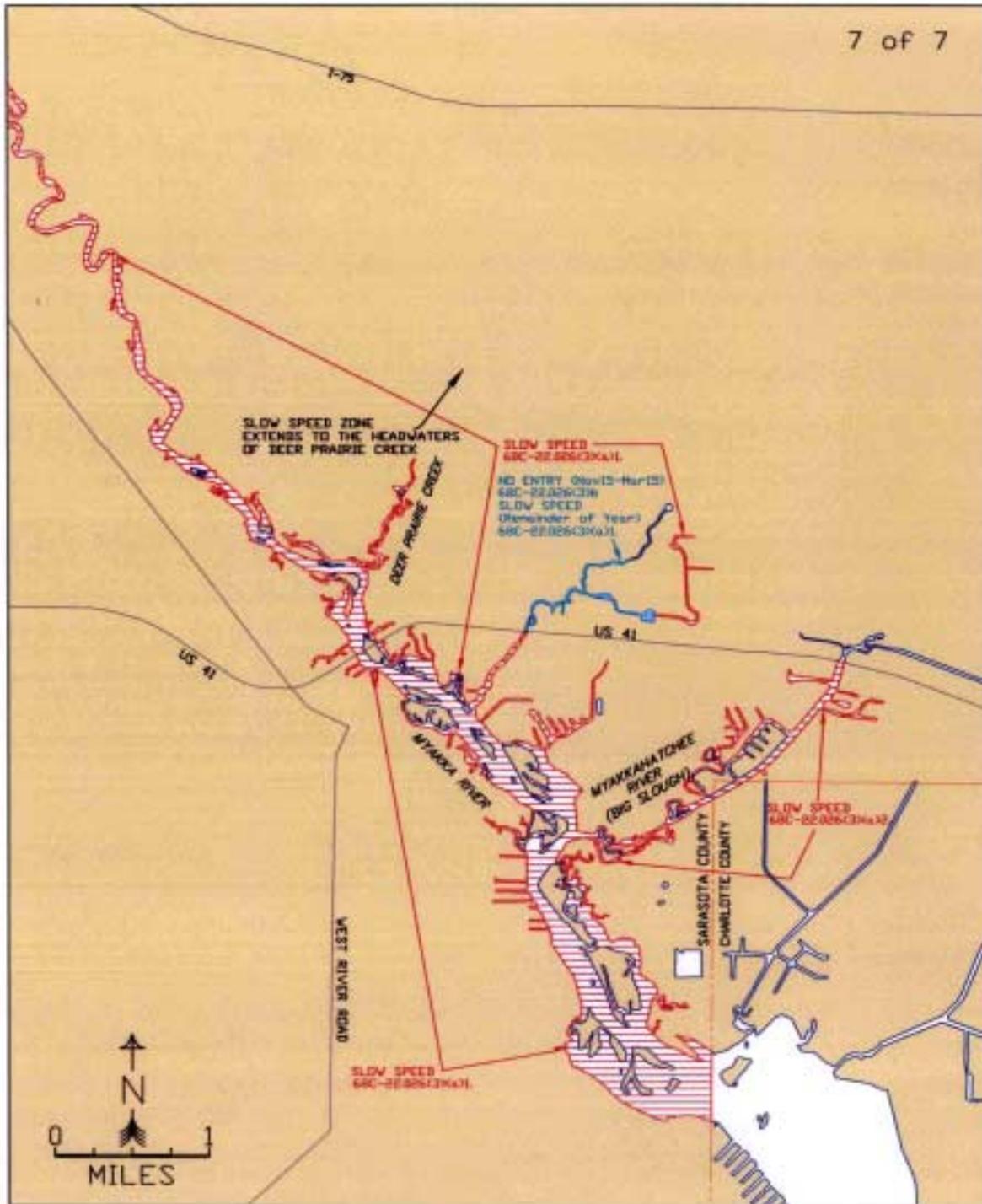


Figure II.36. Existing marinas in northern Sarasota County (Section II.3., pages 45-47).



Figure II.37. Existing marinas in central Sarasota County (Section II.3., pages 45-47).

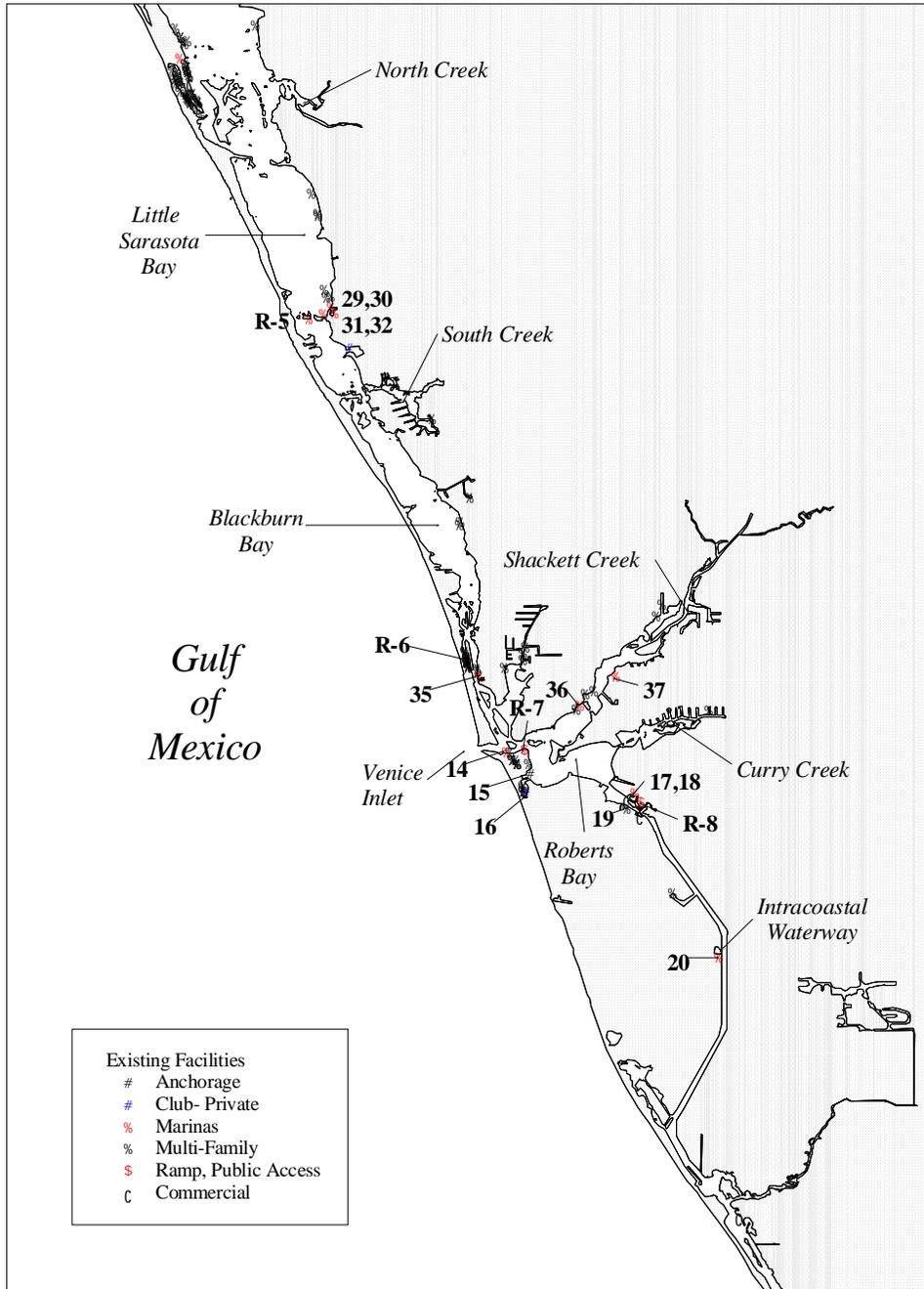
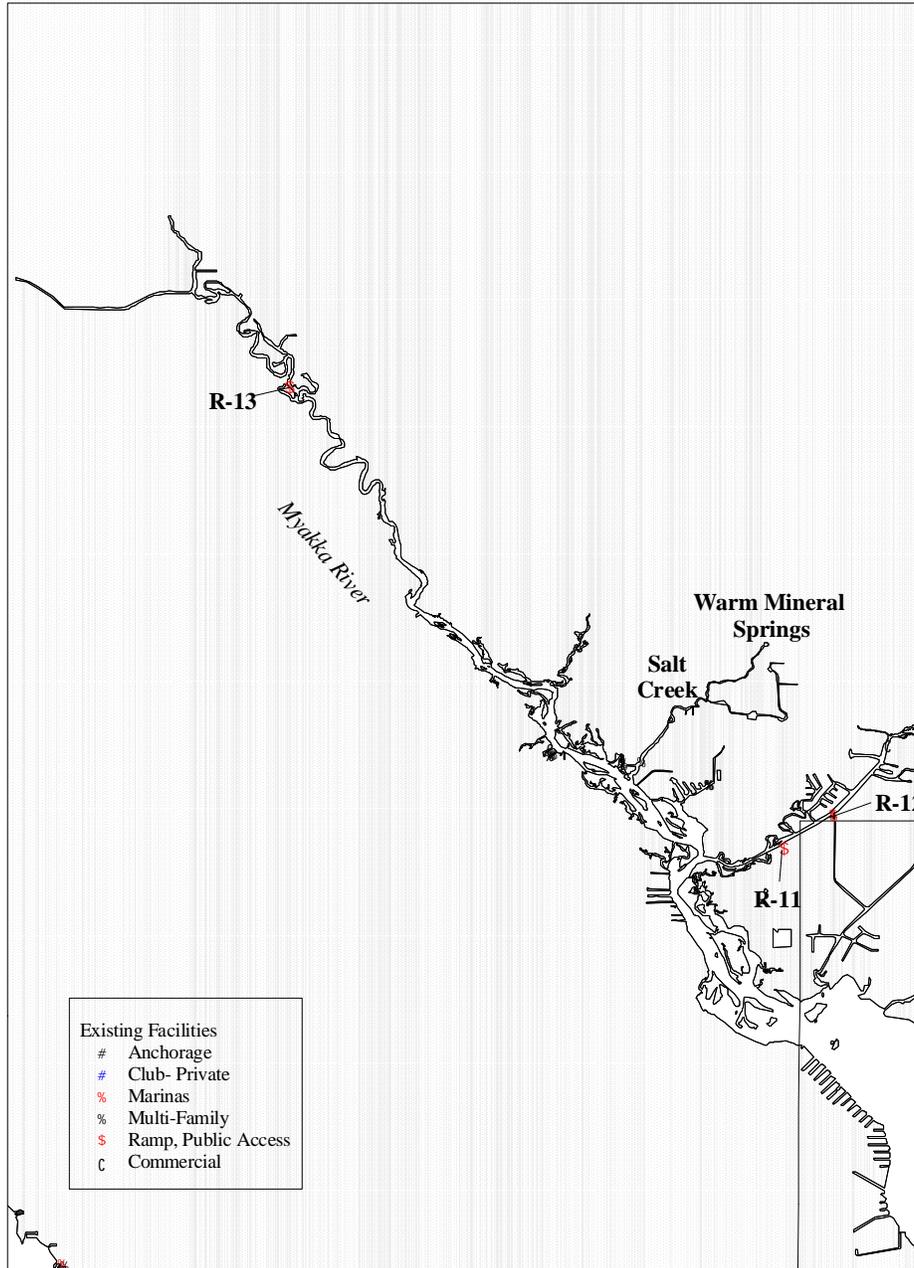


Figure II.38. Existing marinas in southern Sarasota County (Section II.3., pages 45-47).



**Figure II.39.** Existing marinas along the Sarasota County portion of The Myakka River (Section II.3., pages 45-47).



## BOAT FACILITY SITING PLAN

### II.6. DATA TREND OBSERVATION

After review of various data sources, several limiting factors which play a major role in the decision making process became apparent.

- 1) The Sarasota County waterways shoreline is very close to build-out with respect to unoccupied properties. Longboat Key and the City of Sarasota are near build-out.
- 2) The Sarasota County waterways shoreline is near the saturation point with respect to moorings.
- 3) Existing zoning and future land use criteria will limit the potential sites for new facilities. The majority of the Sarasota County waterway shorelines are high value residential single family or multifamily properties. Acquiring new land for public or private facilities will be very expensive and will, in more cases, require rezoning and changes in future land use policy.
- 4) With respect to non-manatee environmental factors, the shallow nature of most of the waterways severely limits the potential for new development without dredging. New dredging for shoreline access would impact seagrasses, mud flats or mangroves in many areas of the system. In accordance with the Apoxsee provision (II.1.2), Antonini pointed out in his assessment that much of the existing waterways were restricted, that is boats were prevented from using waterways on some tides due to depth limitations.
- 5) The historical trend in development has been directed to portions of waterfront closest to the Gulf passes. This seems to be supported by boating surveys, with the Gulf of the pass areas being the destination point for many boaters. Focusing new facility development in the vicinity of passes should keep transit times and distances to a minimum, which has a direct benefit for manatee protection as well as to submerged aquatic vegetation. In addition the regions in the vicinity of the passes tend to have the greatest water depths.
- 6) Zoning of uplands and future land use policies are subject to possible changes. Manatee criteria need to be addressed during the application process for any proposed changes or variances in coastal zoning for property uses related to boat facilities.

## II.7 BOAT FACILITY SITING

### II.7.1 Facility Siting Evaluation Method

The first step in boat facility siting addresses manatee protection issues. Other screening processes related to appropriate zoning, future land use classification, land availability, bathymetry, and natural resources (seagrasses, wetlands, etc.) also must be taken into consideration as part of a comprehensive facility siting plan. Development of the manatee protection criteria were consistent with Policy 1.3.5 of the Sarasota County Comprehensive Plan (Section II.3.4)

The second step in evaluation of facility siting is determination of the presence or absence of coastal wetlands or SAV that are considered, non-mobile natural resources and have a protected status. Prohibiting the placement of new facilities within areas of shallow seagrasses or coastal wetlands is consistent with Policy 2.1.2 and 2.1.3 of the Comprehensive Plan (Section II.3.4).

The third step in the facility siting method examines zoning and future land use criteria for those areas identified as “Recommended” or “Conditional” after evaluation of manatee and vegetation criteria. Changes in zoning and future land use classification are based on social needs and political decisions which may occur independently of natural resource considerations.

Areas that are deemed acceptable for new or expanded facilities by manatee and natural resource criteria may not have appropriate zoning or future land use classifications. However, such designations can be changed without inherent adverse affects on natural resources. A presumption of this document is that zoning, future land use classification and present financial constraints may not be limiting factors for future facility development. In addition it is recognized that the data bases for manatee distribution and wetlands habitat may also change due to factors independent of zoning and future land use and therefore these criteria should be updated at intervals consistent with updates of the Sarasota County Comprehensive plan.

The County regulates activities associated with boat facility siting and construction in the unincorporated county and the incorporated City of Venice through the Sarasota County Comprehensive Plan; Water and Navigation Control Authority Ordinance, Article XX, as amended. Also, in 1997, the County enacted Section 72b, which provides specific manatee protection provisions during construction activities (**Appendix B**).

The provisions of the facility siting method do not pertain to single family residences or projects involving a construction or expansion of less than five wet or dry slips.

## II.7.2. Boat Facility Siting Criteria - Manatee Issues

The proposed manatee-related criteria for marina construction / expansion dealt with four main questions:

- 1) *Is the proposed marine construction / expansion located within a documented manatee area?*

Manatee areas in Sarasota County are defined as follows:

### Priority Manatee Protection Area

Documented areas of recurrent use by manatees based upon aerial survey data, telemetry data, mortality data, and/or photo-identification studies (**Figures II.26 through II.29**).

### Secondary Manatee Protection Area

Documented areas of recurrent, though somewhat less frequent use by manatees, based upon aerial, telemetry data, mortality data and/or photo identification studies. This may include areas that have been determined to be travel corridors to and from higher priority areas (**Figures II.26 through II.29**).

- 2) *Will a significant number of vessels at this proposed location travel through an established manatee area?*

Not only is the location of the proposed facility a factor in siting criteria, but also the projected sphere of influence created by vessels traveling to and from the proposed facility. As a result, the expected impact on adjacent manatee areas from vessels utilizing the facility was also taken into consideration. Tidal inlets (New Pass, Big Sarasota Pass, and Venice Inlet) are both common travel corridors to and from the Gulf of Mexico and a frequent boating destinations. Therefore, the relative distance to the nearest tidal inlet is used to predict the direction of travel for the majority of vessels originating from any given facility. From this, it was determined if any additional manatee areas would be potentially impacted by future boat traffic from a proposed facility.

- 3) *What is the distance between the proposed construction / expansion and the nearest tidal inlet?*

Because manatees are primarily known to inhabit coastal waters in Sarasota County, boats traveling to the Gulf of Mexico will have an increased chance of encountering a manatee with increasing distance to a tidal inlet (New Pass, Big Sarasota Pass, or Venice Inlet). The distance from one of nearest inlets was therefore considered a screening factor in boat facility siting criteria.

4) *What is the size of the proposed facility?*

The larger the facility, the greater the number of vessels the facility will accommodate, resulting in an increasing potential risk to manatees. For the purposes of this siting criteria methodology, one boat slip, dry slip, or parking space designated for a boat trailer will be considered to be numerically equivalent. Note that siting criteria related to facility size refer to newly-proposed slips/spaces only. The number of current slips/spaces at existing facilities that are proposing expansion are not considered in siting determination.

**Results of the Screening Process**

The screening procedure based on manatee related criteria is provided below. These outcomes only pertain to facility construction/expansion of five slips or more. The terminus of each series of screening questions ends with one of the following three recommendations:

**Recommendation/Approval** - Facility construction or expansion of a given size class is presumed to present an insignificant additional risk to manatees at the present time and is approved, however permit applicants are still required to implement standard manatee protection measures as required by the Florida Fish and Wildlife Conservation Commission. In addition, the number of new facilities or expansions of existing facilities within an recommended area may be limited and subject to final review if data trends indicate the need for additional protection.

**Conditional Recommendation** - Facility construction or expansion of a given size class may be approved; however final approval will depend upon a series of site-specific criteria designed to minimize the risk to manatees. These criteria may include, but are not limited to the following:

- Recent manatee mortality trends (including watercraft – related mortality)
- Facility characteristics (commercial vs. residential, upland use, level of traffic generated)
- Predominant boat type at the proposed facility
- Proximity of proposed facility to ICW
- Waterway configuration
- Presence / absence of idle or slow speed zones in the area

As a result of this screening process, additional conditions may include, but are not limited to:

1. Restrictions on vessel draft at the proposed facility.
2. Restrictions on vessel composition (powerboat: sailboat ratio).
3. Potential modification to the size, type, or design of the proposed facility.
4. Execution of a conservation easement, designed to prohibit future construction or expansion of docking facilities or other water access along the shoreline.
5. Implementation of additional vessel speed restrictions in the vicinity of the proposed facility deemed adequate to offset potential impacts.
6. Design and implementation of a boating activity study may also be requested in order to evaluate potential impacts on manatees and other natural resources.

Finally, for all approved construction or expansion of 30 moorings or greater, a comprehensive marina manatee educational program must be implemented before completion of project construction. Such a plan shall be developed with the assistance of and approved by the Florida Fish and Wildlife Conservation Commission's Bureau of Protected Species Management. The program shall include, at a minimum, permanent signs and kiosks, speed zone booklets, and manatee educational brochures and pamphlets. The permittee will be responsible for the cost of the signs and the printing of the pamphlets. Signs and kiosks should be installed prior to facility opening and beginning operations, be replaced in the event of fading or becoming damaged, and be ongoing for the life of the permitted docking facilities. The permittee shall request, in writing, guidance in developing and approving this marina manatee educational program by contacting: OES/BPS, 620 South Meridian Street, Tallahassee, Florida, 32399-1600 (850-922-4330). While this provision addresses facility construction or expansion of 30 moorings or greater, Sarasota County has the discretion to require any facility to incorporate additional educational elements if appropriate.

The permittee shall comply with the following manatee protection construction conditions as specified by the FWC.

1. The permittee shall instruct all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatee(s).

2. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, The Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act.
3. Siltation barriers shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
4. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
5. If manatee(s) are seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.
6. Any collision with and/or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-FWCC. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-232-2580) for north Florida or Vero Beach (1-772-562-3909) in south Florida.
7. Temporary signs concerning manatees shall be posted prior to and during all construction/dredging activities. All signs are to be removed by the permittee upon completion of the project. A sign measuring at least 3 ft. by 4 ft. which reads *Caution: Manatee Area* will be posted in a location prominently visible to water related construction crews. A second sign should be posted if vessels are associated with the construction, and should be placed visible to the vessel operator. The second sign should be at least 8 1/2" by 11" which reads:

*Caution: Manatee Habitat. Idle speed is required if operating a vessel in the construction area. All equipment must be shutdown if a manatee comes within 50 feet of operation. Any collision with and / or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-FWCC. The U.S. Fish and Wildlife Service should also be contacted in Jacksonville (1-904-232-2580) for north Florida or in Vero Beach (1-772-562-3909) for south Florida.*

**Construction/Expansion Not Recommended** - Facility construction or expansion of a given size class is presumed to present a significant increased risk to manatees and is not recommended. As is the case with the other categories, the number of new facilities or expansion of existing facilities may be subject to further review.

These outcomes provide the answer from a manatee perspective. Existing protocols and regulations for development review will be utilized, along with these outcomes to determine the feasibility of issuing a permit for development.

It is understood that this is a dynamic process, and that the results of the manatee siting criteria will likely change through time. The identification of Recommended, Conditional, and Not Recommended areas will be subject to periodic review and may be modified to reflect current manatee population trends and mortality data.

### **II.7.3 Summary of Manatee-Related Boat Facility Siting Criteria**

The following represents a summary of boat facility siting criteria based upon manatee-related factors. Results are also displayed graphically in **Figures II.40 through- II.49**, and a more detailed key to the manatee-related siting criteria is provided in **Appendix C**.

#### **Proposed facility construction / expansion within a PRIORITY manatee area:**

All possible scenarios = Not Recommended

#### **Proposed facility construction / expansion within a SECONDARY manatee area, with NO additional impacts to established manatee use areas:**

Less than 1 mile from inlet with 5-9 slips/spaces = Recommended  
Less than 1 mile from inlet with 10-99 slips/spaces = Recommended  
Less than 1 mile from inlet with greater than or equal to 100 slips/spaces = Conditional

Between 1 and 3 miles from inlet with 5-9 slips/spaces = Recommended  
Between 1 and 3 miles from inlet with 10-99 slips/spaces = Conditional  
Between 1 and 3 miles from inlet with greater than or equal to 100 slips/spaces = Conditional

Greater than 3 miles from inlet with 5-9 slips/spaces = Conditional  
Greater than 3 miles from inlet with 10-99 slips/spaces = Conditional  
Greater than 3 miles from inlet with greater than or equal to 100 slips/spaces = Not Recommended

**Proposed facility construction / expansion within a SECONDARY manatee area; with additional impacted PRIORITY manatee area:**

Less than 1 mile from inlet with 5-9 slips/spaces = Conditional  
Less than 1 mile from inlet with 10-99 slips/spaces = Conditional  
Less than 1 mile from inlet with greater or equal to than 100 slips/spaces = Conditional

Between 1 and 3 miles from inlet with 5-9 slips/spaces = Conditional  
Between 1 and 3 miles from inlet with 10-99 slips/spaces = Conditional  
Between 1 and 3 miles from inlet with greater than or equal to 100 slips/spaces = Not Recommended

Greater than 3 miles from inlet with 5-9 slips/spaces = Conditional  
Greater than 3 miles from inlet with 10-99 slips/spaces = Not Recommended  
Greater than 3 miles from inlet with greater than or equal to 100 slips/spaces = Not Recommended

**Proposed facility construction / expansion NOT within a designated manatee area, with NO additional impacts to established manatee use areas:**

All possible scenarios = Recommended

**Proposed facility construction / expansion NOT within a designated manatee area, with additional impacted PRIORITY manatee area:**

Less than 1 mile from inlet with 5-9 slips/spaces = Recommended  
Less than 1 mile from inlet with 10-99 slips/spaces = Conditional  
Less than 1 mile from inlet with greater than or equal to 100 slips/spaces = Conditional

Between 1 and 3 miles from inlet; all possible scenarios = Conditional

Greater than 3 miles from inlet with 5-9 slips/spaces = Conditional  
Greater than 3 miles from inlet with 10-99 slips/spaces = Conditional  
Greater than 3 miles from inlet with greater than or equal to 100 slips/spaces = Not Recommended

**Proposed facility construction / expansion NOT within a designated manatee area, with additional impacted SECONDARY manatee area:**

Less than 1 mile from inlet with 5-9 slips/spaces = Recommended  
Less than 1 mile from inlet with 10-99 slips/spaces = Recommended  
Less than 1 mile from inlet with greater than or equal to 100 slips/spaces = Conditional

Between 1 and 3 miles from inlet with 5-9 slips/spaces = Recommended  
Between 1 and 3 miles from inlet with 10-99 slips/spaces = Conditional  
Between 1 and 3 miles from inlet with greater than or equal to 100 slips/spaces = Conditional

Greater than 3 miles from inlet; all possible scenarios = Conditional

Based upon the siting criteria for the smallest construction/expansion category (5-9 slips) there are a relatively large number of areas within Sarasota County that could be either “Recommended” or “Conditional” for facility construction or expansion. These areas include the southern portions of Longboat Key; the Sarasota bayfront north of the Ringling Causeway to the Manatee County line, portions of Roberts Bay (Sarasota), all of Little Sarasota Bay, Blackburn Bay, the majority of waterfront property within the City of Venice, and the areas in close proximity to the all three tidal inlets (New Pass, Big Sarasota Pass, and Venice Inlet). As the size of the proposed facility increases, the size of the Recommended areas is reduced and the relative proportions of both “Conditional” and “Not Recommended” areas increase. **Figures II.40 through II.49** illustrate the changes in “Recommended,” “Conditional,” and “Not Recommended” areas resulting from incremental increases in proposed facility size. Only one figure is provided for the Myakka River because the entire river is considered priority manatee area and as a result is unsuitable for new or expanded facilities. As stated above, these criteria address manatee-related issues only. Other screening processes related to zoning, present and future land use, water depth and water quality issues, and other natural resource issues (seagrasses, wetlands, etc.) will need to be taken into consideration as part of a comprehensive facility siting plan.

Additional review of the siting criteria was completed for the Venice Bypass Canal. This area is relatively close to Venice Inlet, and is a relatively narrow waterway with minimal speed restriction (25mph). The Bypass Canal has been documented as a travel corridor for manatees (Weigle et. Al., 2001). Given these characteristics, this area has been classified, at this time, as unsuitable for new or expanded facilities greater than 99 slips.”

Similarly, an additional review as completed for Gottfried Creek, which spans Sarasota and Charlotte Counties. The mouth of the creek falls within the Charlotte County portion of Lemon Bay. Outcomes for the creek are depicted on figures **II.46 through II.48** as “Conditional” for up to 99 slips and “Not Recommended” for 100 slips or greater.

Existing policies for siting boat facilities include compatibility with county and municipal comprehensive plans, zoning, future land use plans, laws complying with state and federal jurisdictions, and the WNCA.

It is suggested that the first step of the permitting process for new or expanded facilities consist of the implementation of the Facility Siting Criteria including manatee and at risk resources parameters. The criteria specified within this document are relatively easy to apply to large geographic regions of the bay. If a site passes the siting criteria, the existing permitting procedures will continue to be followed. The recommendations in this document do not preempt existing rules or ordinances, or create requirements outside the authority of local, state, and federal regulations. The next logical step is to address the local codes of the county and pertinent municipality with respect to current zoning, future land use and development ordinances.

**II.7.4 Wetlands, Water Depth, and Seagrass Considerations**

The goal of a Manatee Protection Plan is not only to provide direct protection to manatees, but also to ensure preservation of manatee habitat. To this end, additional considerations for facility siting include water depth, the presence of wetlands vegetation (primarily mangroves), and the presence of submerged aquatic vegetation (primarily seagrasses). These factors are fully evaluated through established protocols and regulations contained within the Water and Navigation Control Authority (WNCA) code (Appendix B). Most of the waterways in the south county are extremely shallow outside the ICW. New shoreline facilities in most of the areas of Roberts Bay, Little Sarasota Bay, Blackburn Bay and Lemon Bay would require new dredging for access channels, which would likely be prohibited due to a policy of no new dredging (Apoxsee section 1.3.4).

Wetlands and seagrasses occur in many regions of Sarasota County Waterways. Seagrasses are nearly continuous in the shallow intertidal areas along many portions of the bay. Shoal grass (*Halodule wrightii*) occurs in nearly all shallow areas with natural slopes and relatively protected from intense wave action. The mangrove and seagrass maps provided in this document (**Figures II.22 – II.25**), should be utilized as a guide to assist with field verification of density and species evaluations conducted during the growing season, between April 1 and October 1.

Using available wetlands and seagrass data to exclude areas for the siting of future facilities is consistent with Sarasota County Comprehensive Plan policies. Criteria for evaluation were based on state regulations prohibiting destruction of coastal wetlands and seagrasses. After determination of “Recommended” and “Conditional” areas, seagrass and mangrove data was included in order to provide a final outcome related to both manatee data and mangrove/seagrass data. As a result, the facility siting evaluation in these areas was revised as follows;

**Table II.7.** Siting determination based upon manatee and seagrass/wetlands considerations.

<u>Manatee Evaluation</u>	<u>Seagrass-Wetlands Present or Absent</u>	<u>New Recommendation</u>
Recommended	Present	Not Recommended <sup>1</sup>
Recommended	Absent	Recommended
Conditional	Present	Not Recommended
Conditional	Absent	Conditional <sup>2</sup>

<sup>1</sup> Reviewed under current permitting criteria through the WNCA code.

<sup>2</sup> Additional manatee protection criteria may be necessary.

## II.7.5 Variance Procedures

A variance is required in order for a facility to be sited if, based on Manatee Protection Plan criteria, “Denial” is/would be the recommended outcome of the application review. The Board of County Commissioners (the Board) may grant a variance to an applicant for a boat facility that is inconsistent with the provisions of the MPP under the stipulations of the Manatee Protection Plan Implementation Code (MPPIC) and as defined in this section. Requests for consideration of a variance can be made 1) as a component of an initial application for development review under the existing WNCA code provisions or 2) subsequent to denial of a previous application. Variance requests subsequent to prior denial require submittal of an amended application to the Code Administrator, Resource Protection.

The variance procedure herein defines the potential range of exceptions that may be granted, which are summarized in Table II.8. It is critical to understand that the stipulations of the Manatee Protection Plan provide the recommended outcome solely from a manatee protection perspective. *Additional considerations, as codified in the WNCA code, provide the ultimate determination for development review.* The Board may impose reasonable conditions upon the granting of a variance.

Applicants may seek to appeal results of the boat facility siting criteria and the applicant may request a variance based on additional considerations or circumstances. The variance procedure also addresses the re-application for additional expansion at a previously-approved site. For all criteria outcomes, “Recommended”, “Conditional” and “Not Recommended”, up to four (4) slips may be permitted under a Sarasota County WNCA Minor Work Permit within the existing regulatory framework for development review (Appendix B). Hence, the variance procedures defined below govern application for slips in excess of four (4). Specific variance procedures are outlined as follows:

### **Appeal for Re-application at the same site within a designated “Green” (Recommended) area** (Figures II.40 through II.49):

If the site of proposed construction/expansion is located in a designated “green” area an applicant may re-apply for additional expansion at the same site, however approval shall be subject to the criteria in the “Appeal to build in a designated ‘Yellow’ (Conditional) area.”

### **Appeal to build in a designated “Yellow” (Conditional) area:**

This section includes both an appeal regarding the denial of an original application within a conditionally-approved area, and the re-application for additional construction/expansion at the same site within a conditionally-approved area. Additional docking facilities may be considered if the facility can demonstrate that it will not have an adverse impact on manatees. A facility shall be considered in compliance with this requirement if the entire boat facility is consistent with the ratio of one (1) boat slip for every 100 linear feet of owned shoreline, excluding the number of boat slips that may be authorized at the site under a Minor Work Permit. Higher ratios may be considered but in no case shall the maximum total build out of the facility exceed five (5) additional slips for 100 linear feet of owned shoreline, excluding the number of boat slips that may be authorized at the site under Minor Work Permit.

A variance may be granted within a “Yellow” (Conditional) area only if all of the following criteria are met:

- The applicant shall meet all conditions established under the original permit application for this site.
- The facility can demonstrate that it will not have an adverse impact on manatees.
- The remainder of owned shoreline property at the proposed site shall be encumbered as a conservation easement designed to prohibit future construction or expansion of docking facilities.
- The site shall contain and maintain appropriate signage (including both informational signs and speed zone informational signs), and provide educational materials related to manatees and manatee habitat.
- The applicant shall also meet all criteria associated with existing local, state, and federal permit regulations, including all criteria regarding natural resource protection, water depth, tidal flushing and water circulation. In addition, the applicant shall meet all State of Florida water quality standards.

**Any variance for construction or expansion in an area designated as “Conditional” will be a one-time variance, and no additional variances will be granted at this site.**

**Appeal to build in a designated “Red” (Not Recommended) zone:**

Since the “Not Recommended” outcome includes both Secondary and Priority Manatee Use Areas, specific conditions are defined below for each. These use areas are depicted in Figures II.26 through II.29 and reflect how manatees utilize Sarasota County waterways based on scientific data. The Priority Use Areas are the most sensitive habitat areas for manatees within Sarasota County.

Appeals within Secondary Manatee Use Areas: A variance for a maximum ratio of three (3) additional boat slips for every 100 linear feet of owned shoreline excluding the number of boat slips that may be authorized at the site under a WNCA Minor Work Permit, for construction/expansion within an area designated as “Not Recommended/Secondary Manatee Use Area” may be considered if all of the listed variance criteria are met

Appeals within Priority Manatee Use Areas: A variance for a maximum ratio of two (2) additional slip for every 100 linear feet of owned shoreline excluding the number of boat slips that may be authorized at the site under a WNCA Minor Work Permit, for construction/expansion within an area designated as “Not Recommended/Manatee Priority Use Area” may be considered if all of the below-listed variance criteria are met.

- The waters adjacent and channels leading to the facility are designated as either “slow speed” or “idle speed” as authorized and defined by Federal speed zone rules for manatee protection, or Ch. 68C-22 (for manatee protection) or Ch. 68D-22 (for boating safety) Florida Administrative Code.
- The remainder of owned shoreline property at the proposed site shall be encumbered as a conservation easement designed to prohibit future construction or expansion of docking facilities.
- The site shall contain and maintain appropriate signage (including both informational signs and speed zone informational signs), and provide educational materials related to manatees and manatee habitat.
- The applicant shall also meet all criteria associated with existing local, state, and federal permit regulations, including all criteria regarding natural resource protection, water depth, tidal flushing and water circulation. In addition, the applicant shall meet all State of Florida water quality standards.
- The Board may impose reasonable conditions upon the granting of a variance.

**Any variance for construction or expansion in an area designated as “Not Recommended” will be a one-time variance, and no additional variances will be granted at this site.**

A summary of potential variance outcomes is provided in Table II.8.

**Table II.8** Summary of potential variance outcomes.

Outcome	Color	Permittable under WNCA Permit	Additional Density Permittable (Range, per 100 feet of shoreline owned)	Example Maximum Variance (100 ft owned shoreline)
Recommended	Green	4 slips	Reapplication as Conditional	
Conditional	Yellow		1:100 up to 5:100	<b>up to 9 = 4 + 5:100</b>
Not Recommended Secondary Manatee Use Area	Red		1:100 up to 3:100	<b>up to 7 = 4 + 3:100</b>
Not Recommended Priority Manatee Use Area	Red		1:100 up to 2:100	<b>up to 6 = 4 + 2:100</b>

Along with manatee-related considerations, the following information will also be taken into consideration for boat facility development:

- Inventories of wetlands, bird rookery islands, seagrass beds, prop scarring, freshwater submerged aquatic vegetation, shellfish areas, existing water depths, dredge spoil locations, and water circulation patterns were reviewed.
- Specially-designated areas, such as Outstanding Florida Waters, aquatic preserves, federal, state and local parks, sanctuaries and research reserves, wildlife refuges, and any other lands set aside for preservation and/or open space.
- Review of local government comprehensive plan policies regarding the siting of boat facilities to determine if there are any limitations or restrictions to development in each area.
- An evaluation of existing local government dock and marina design regulations, permitting criteria, and codes.
- Existing County and municipality zoning. Existing upland land use designations that currently allow marina and boat facility development were located and displayed on maps.
- Sarasota County Future Land Use Classification. Those properties for which future land use changes will allow for new boat facility sites were also identified. Criteria were developed to be used by local governments to evaluate if a land use change allowing future boat facility development is appropriate.

#### **II.7.6. Status of Sarasota County Waterways**

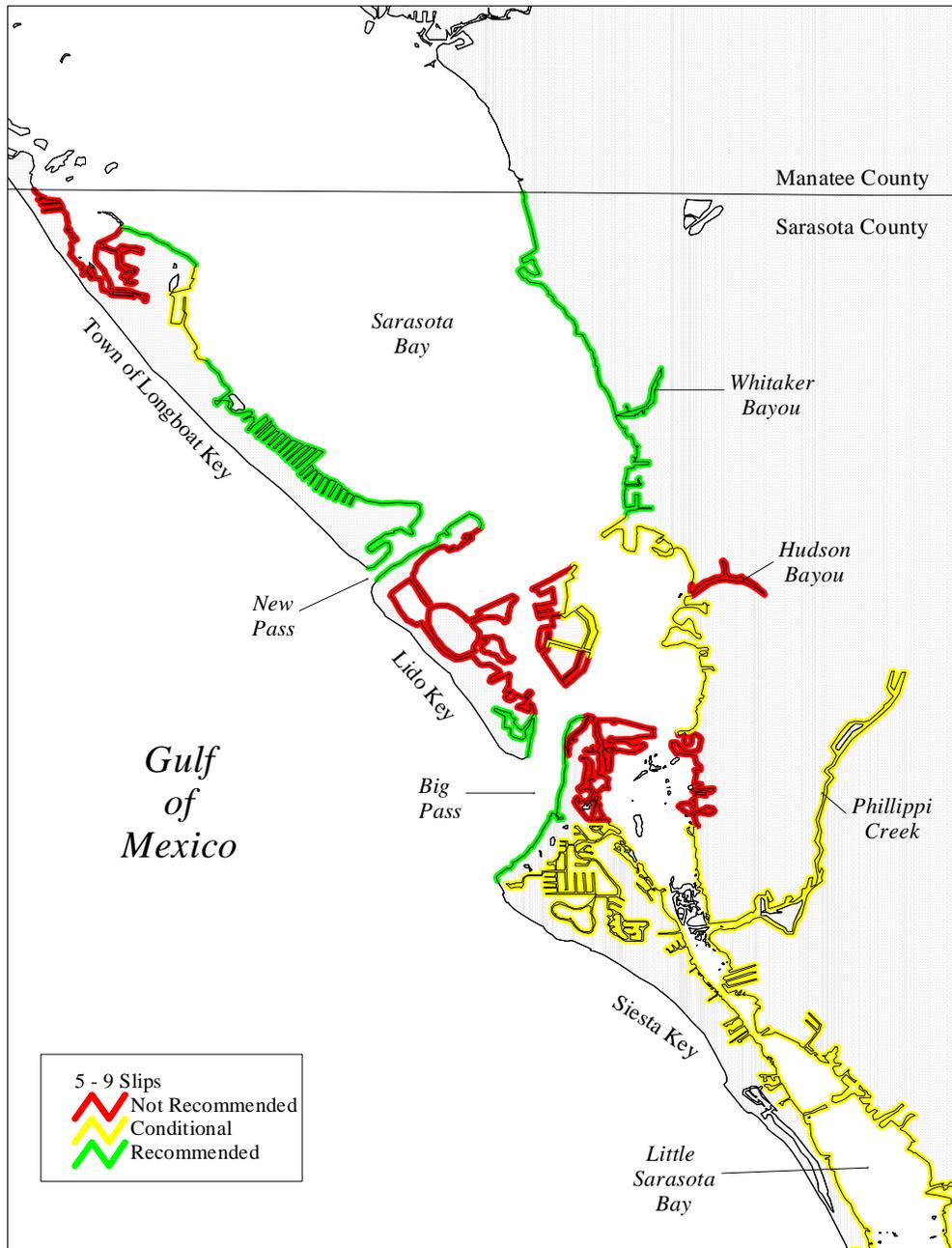
Overall, the following characterizes the status of Sarasota County waterways:

- 1) The Sarasota County waterways shoreline is very close to build-out with respect to unoccupied properties. Longboat Key and the City of Sarasota are near build-out.
- 2) The Sarasota County waterways shoreline is near the saturation point with respect to moorings.
- 3) Existing zoning and future land use criteria will limit the potential sites for new facilities. The majority of the Sarasota County waterway shorelines are high value residential single family or multifamily properties. Acquiring new land for public or private facilities will be very expensive and will, in most cases, require rezoning and changes in future land use policy.
- 4) With respect to non-manatee-related environmental factors, the shallow nature of most of the waterways severely limits the potential for new development without dredging. New dredging for shoreline access would impact seagrasses, mud flats or mangroves in many

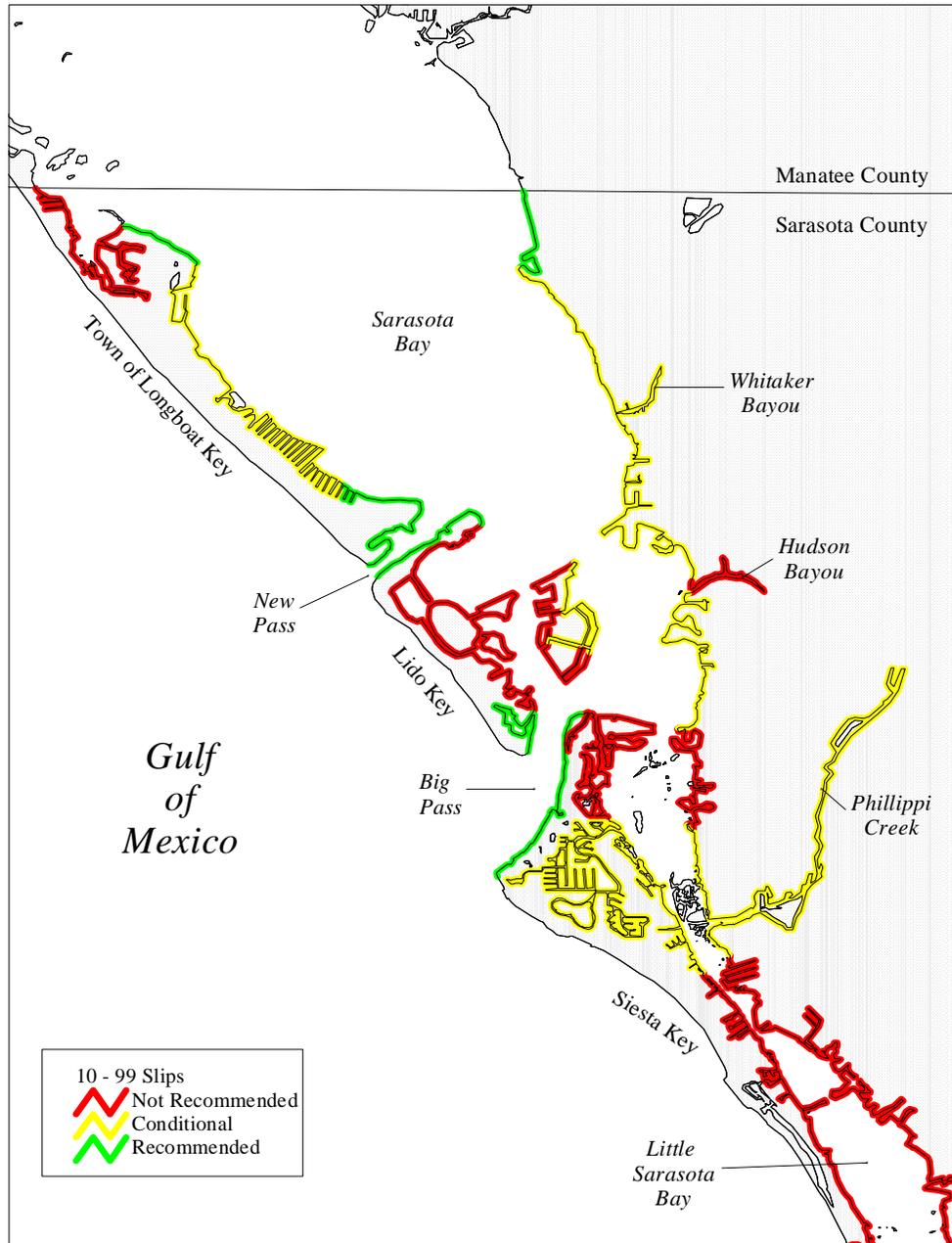
areas of the system. In accordance with the Apoxsee provision (II.1.2), Antonini pointed out in his assessment that much of the existing waterways were restricted, that is boats were prevented from using waterways on some tides due to depth limitations.

- 5) The historical trend in development has been directed to portions of waterfront closest to the tidal inlets. This seems to be supported by boating surveys, with the Gulf and the inlet areas being the destination point for many boaters. Focusing new facility development in the vicinity of inlets should keep transit times and distances to a minimum, which has a direct benefit for manatee protection as well as to submerged aquatic vegetation. In addition the regions in the vicinity of the passes tend to have the greatest water depths.
- 6) Zoning of uplands and future land use policies are subject to possible changes. Manatee criteria need to be addressed during the application process for any proposed changes or variances in coastal zoning for property uses related to boat facilities.

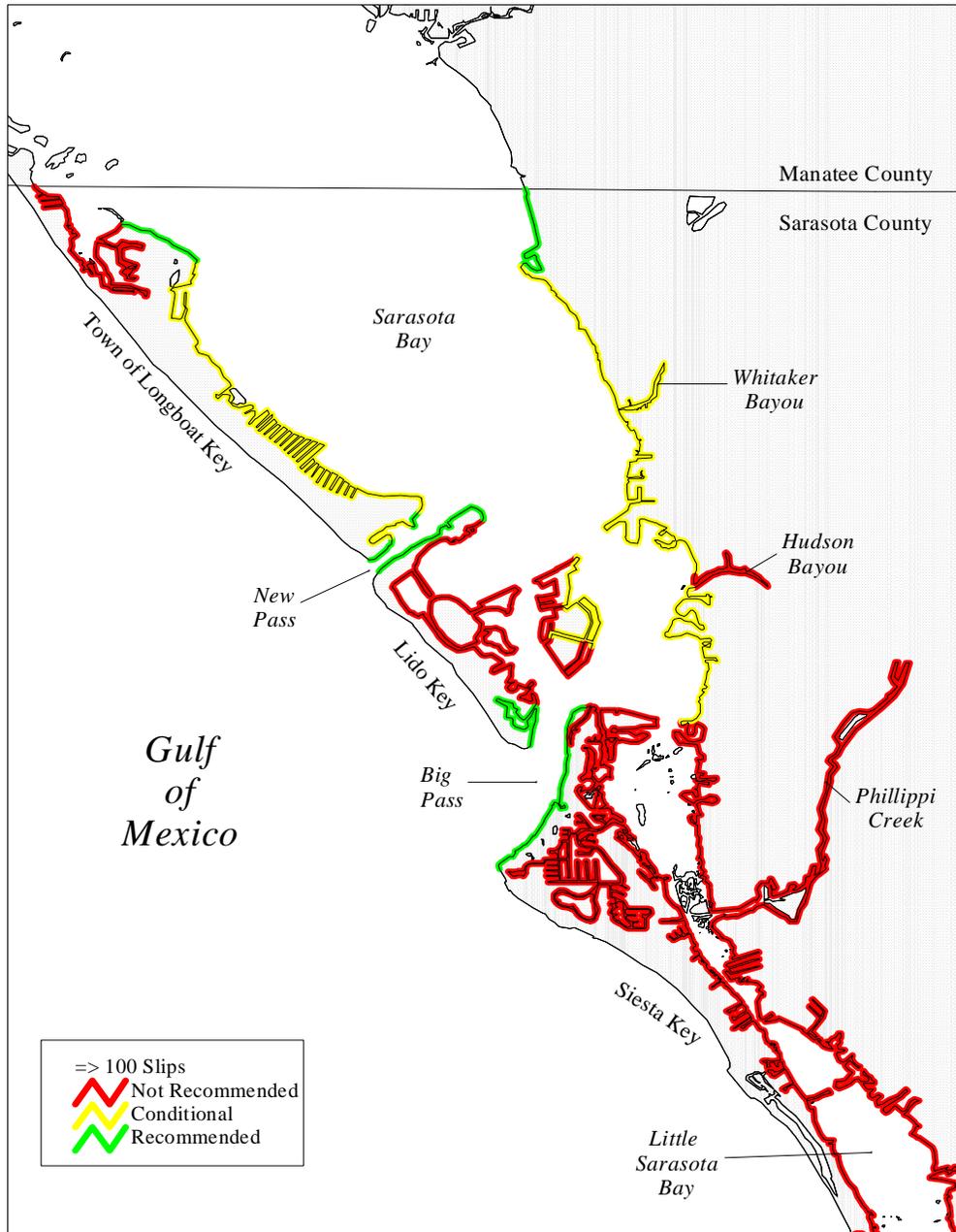
**Figure II.40.** Results of facility siting criteria for northern Sarasota County; 5-9 proposed slips



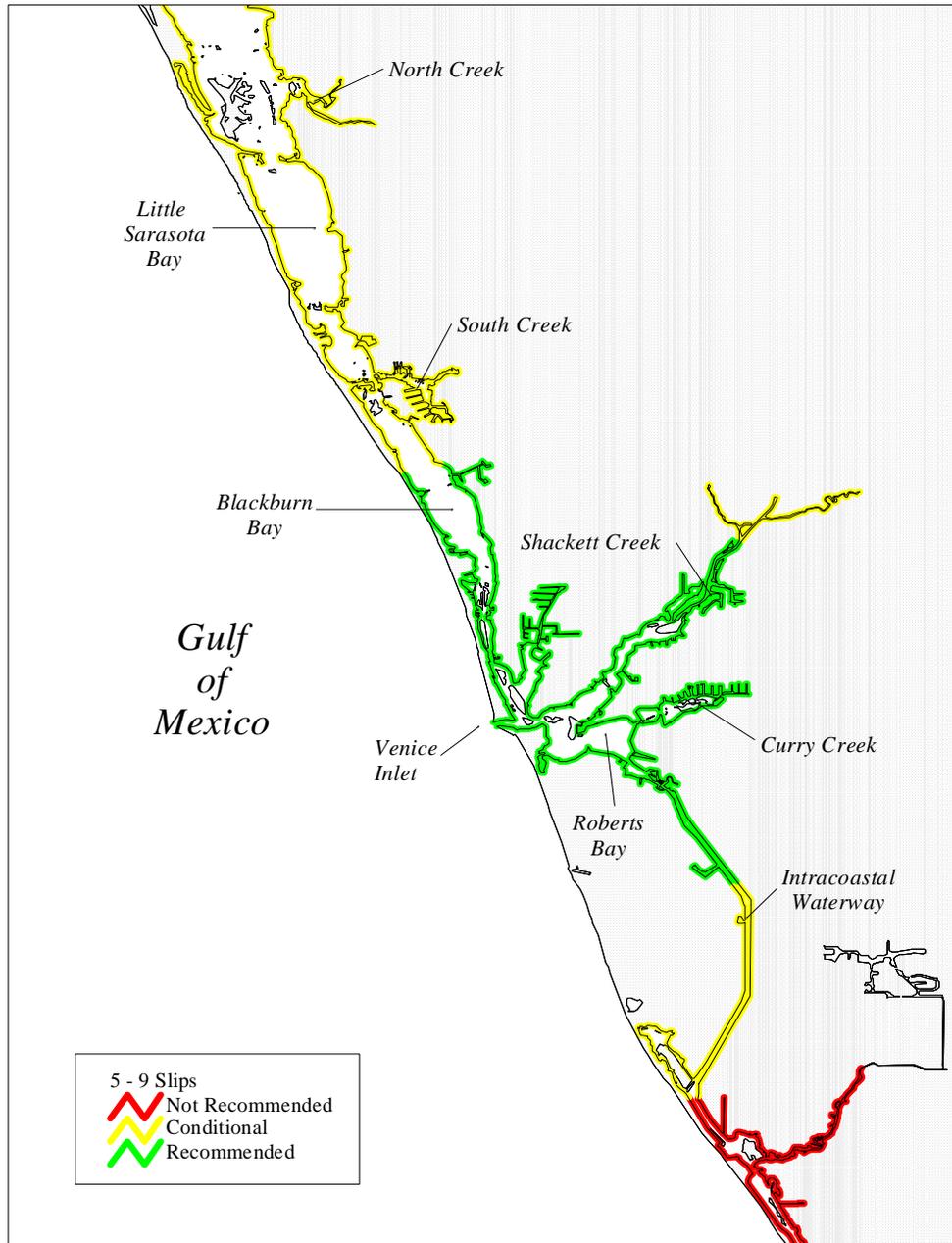
**Figure II.41.** Results of facility siting criteria for northern Sarasota County; 10-99 proposed slips.



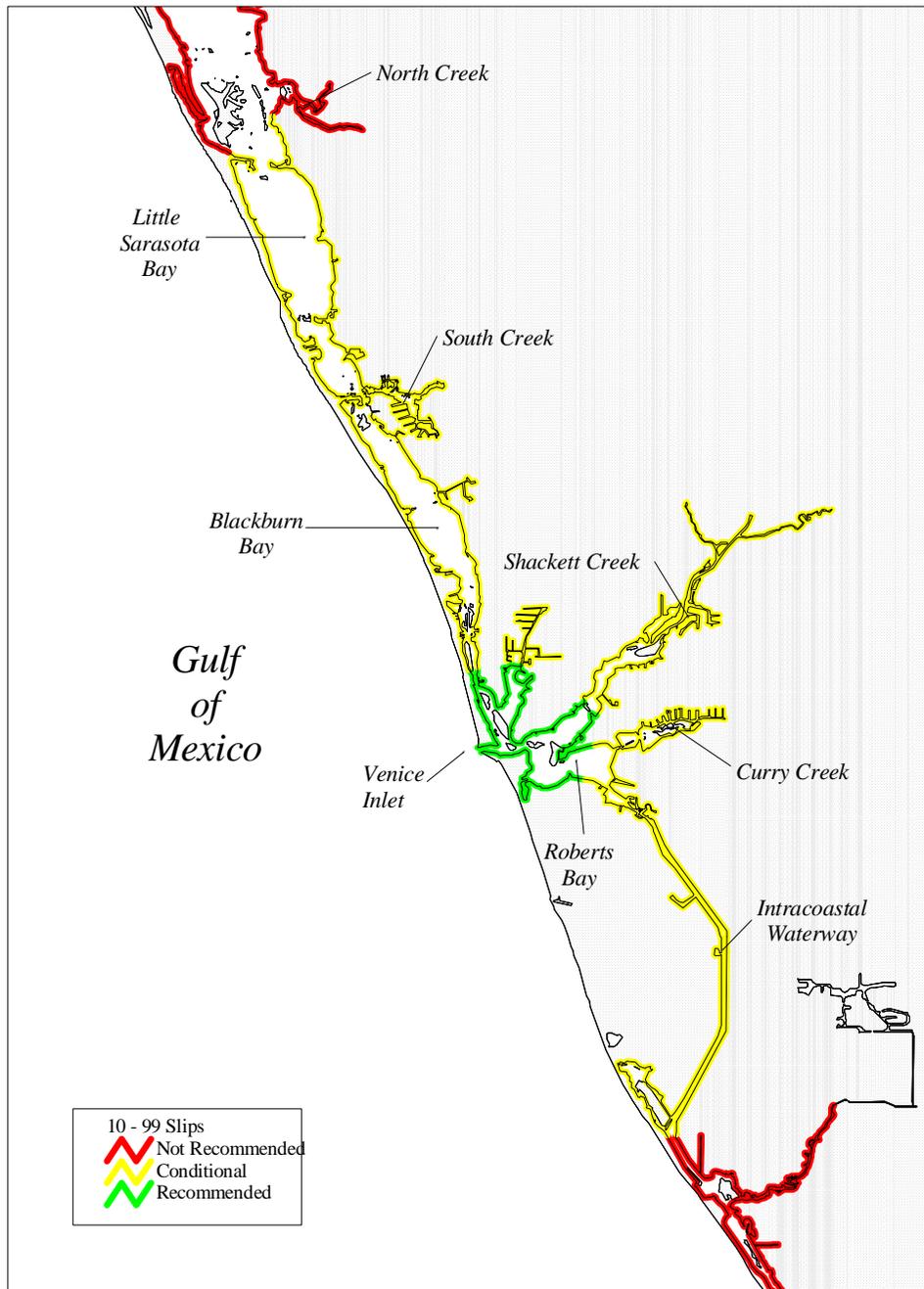
**Figure II.42.** Results of facility siting criteria for northern Sarasota County; greater than or equal to 100 proposed slips.



**Figure II.43.** Results of facility siting criteria for central Sarasota County; 5-9 proposed slips.



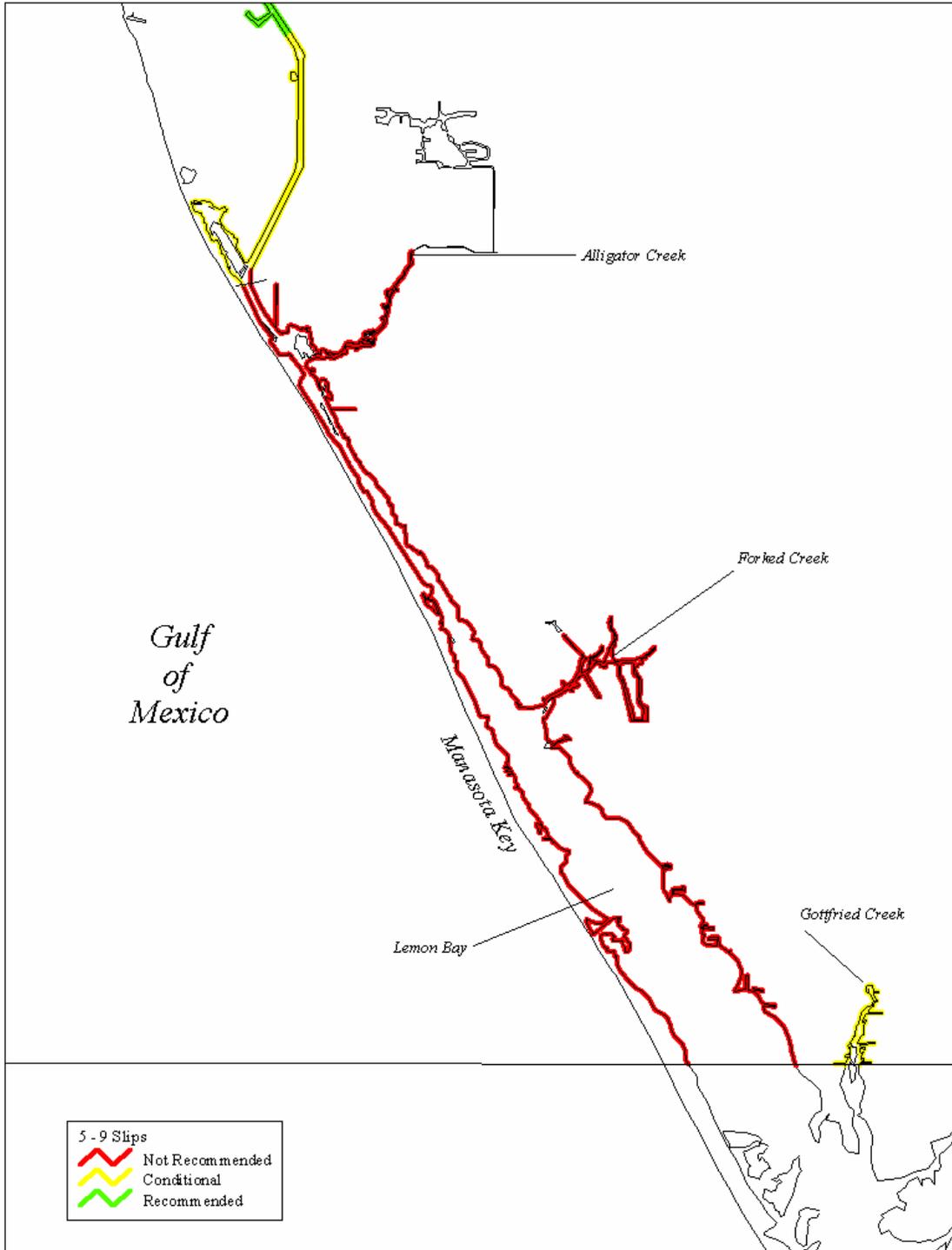
**Figure II.44.** Results of facility siting criteria for central Sarasota County; 10-99 proposed slip



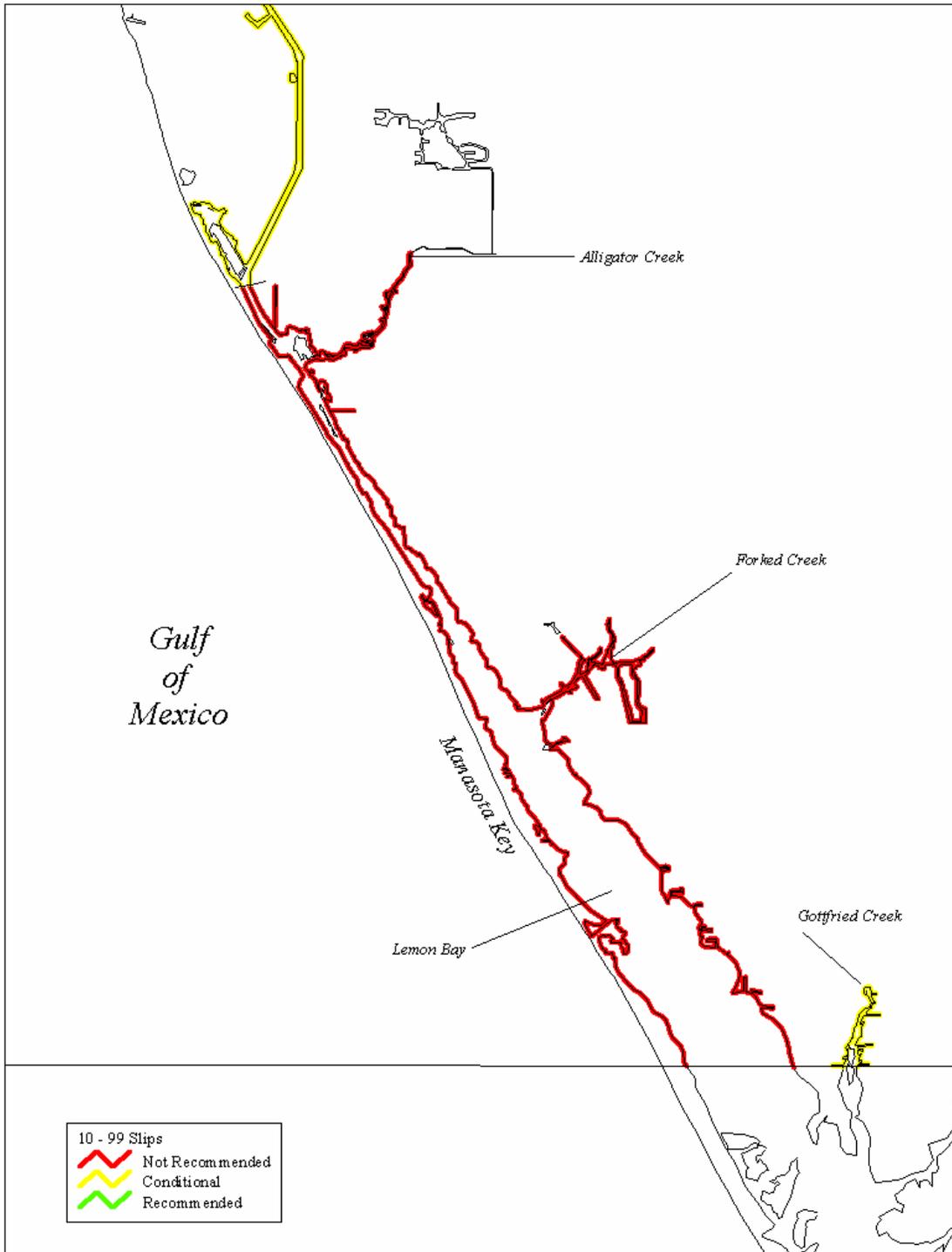
**Figure II.45.** Results of facility siting criteria for central Sarasota County; greater than or equal to 100 proposed slips.



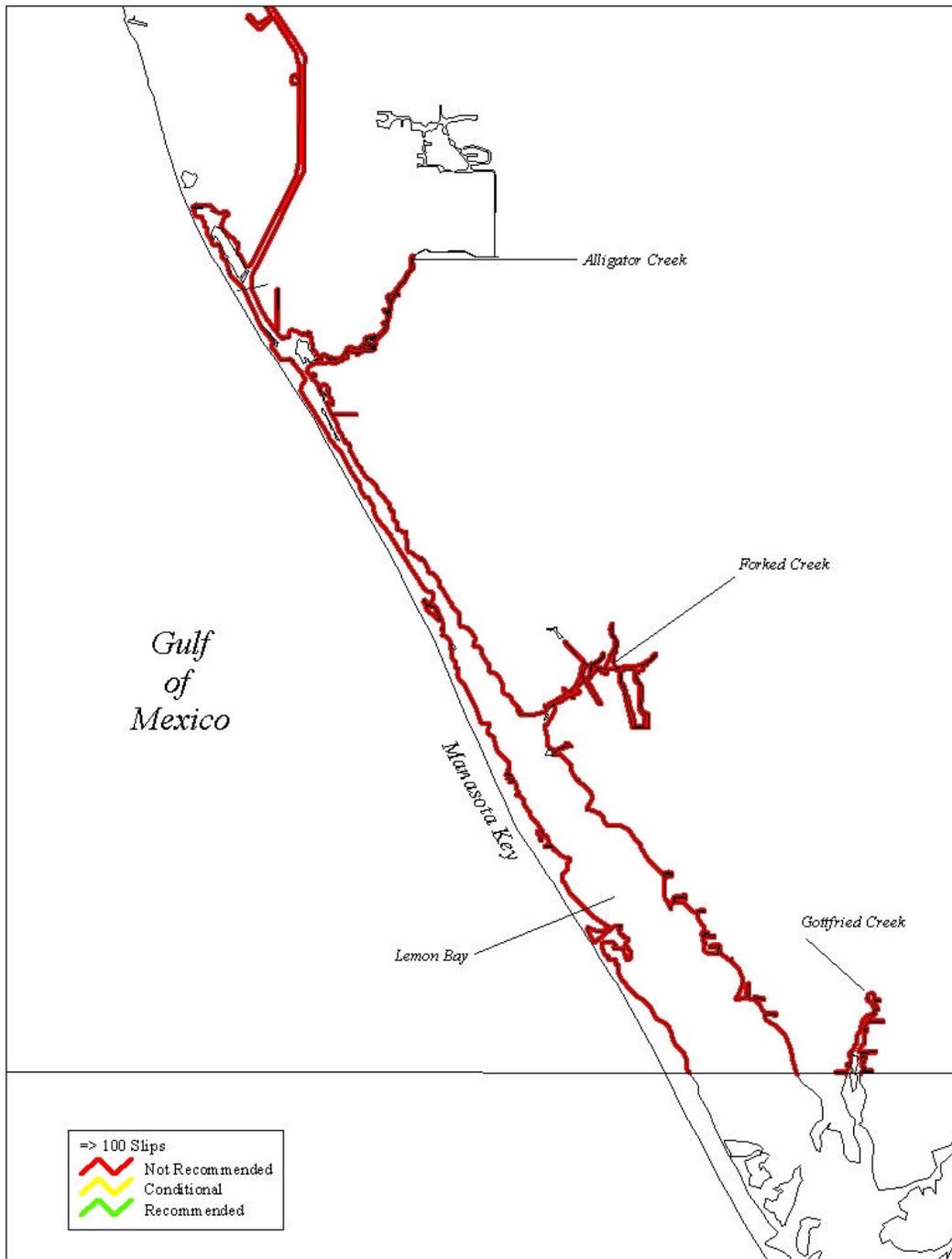
**Figure II.46.** Results of facility siting criteria for southern Sarasota County; 5-9 proposed slips.



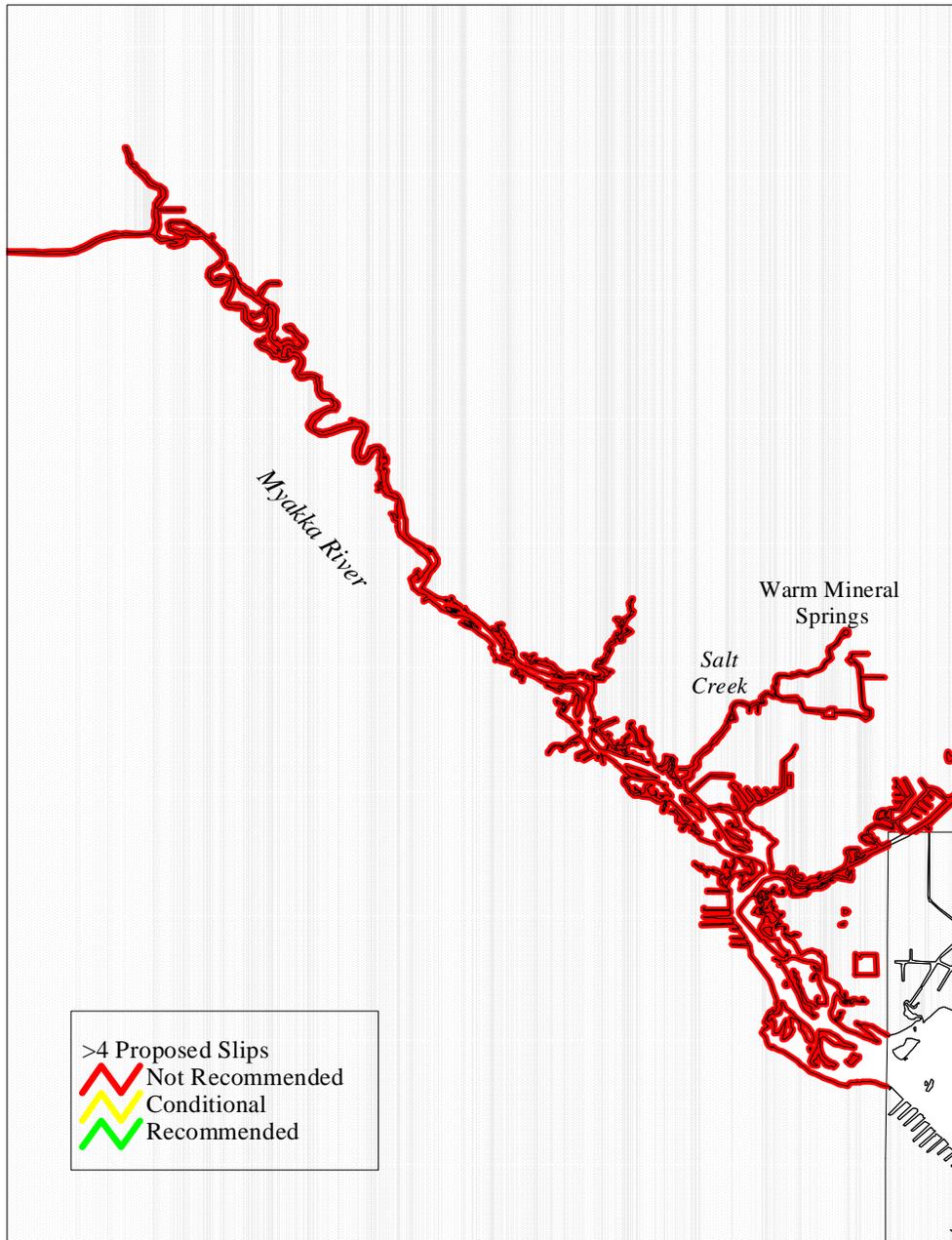
**Figure II.47.** Results of facility siting criteria for southern Sarasota County; 10-99 proposed slips



**Figure II.48.** Results of facility siting criteria for southern Sarasota County; greater than 100 proposed slips.



**Figure II.49.** Results of facility siting criteria for Sarasota County portion of the Myakka River; greater than 4 proposed slips.



# MANATEE PROTECTION PLAN IMPLEMENTATION

## DEVELOPMENT OF RECOMMENDATIONS

### III. HABITAT PROTECTION

#### III.1 HABITAT PROTECTION STRATEGIES

Sarasota Bay was selected for inclusion in the National Estuary Program in 1988, and a multidisciplinary project began in 1989 that produced three major documents: The State of the Bay Report (1990), the Framework For Action (1992), and the Comprehensive Conservation & Management Plan (1994). These have been the guiding documents for both water quality improvement and habitat protection in the Sarasota Bay area. The initial goals of the Program focused on the following problems:

- Improvement of water transparency
- Reduction in quantity and improvement in quality of stormwater runoff
- Restoration on seagrasses and shoreline habitat
- Improvement of beach, inlet, and channel management
- Creation of increased levels of managed access to Sarasota Bay resources
- Restoration of fish populations and other natural resources
- Establishment of an overall Sarasota Bay management system

Since 1989, the following improvements have been documented by the Sarasota Bay National Estuary Program:

- A 47 percent reduction in nitrogen pollution to Sarasota Bay
- An 80 percent reduction in nitrogen pollution in Sarasota Bay from wastewater treatment facilities
- An 8 percent increase in saltwater wetland acreage, along with 21 new wetland enhancement projects
- Retrofit of several watersheds for improved stormwater management
- Removal of septic systems and creation of central sewers in northern Sarasota County
- Implementation of a regional wastewater re-use system

Continuing efforts towards the improvement of water quality and natural resources in Sarasota Bay are focusing in the following areas:

#### Sewers

An improved sewer system in Sarasota County still needs to be fully implemented. In November 1998, voters of Sarasota County passed a one-cent sales tax extension that would allocate \$28 million for septic system replacement. The County is also pursuing additional state and federal funding to offset the costs to affected homeowners. The City of Sarasota has also developed an annexation plan for impacted areas in order to offer connection to existing sewer systems.

#### Wastewater

Wet-season storage options continue to be developed in order to reduce surface water discharge into Sarasota Bay, and several feasibility studies have been funded. Sarasota County and the City of Sarasota have been investigating Aquifer Storage and Recovery (ASR). Full implementation of ASR technology would allow cities and counties to reclaim as much as 10 million gallons of potable water per day to offset demand. ASR would also enhance the reliability of a re-use distribution system during the dry season, when demand typically exceeds the available supply.

#### Stormwater

Elevated levels of toxic substances were found in numerous tidal creeks and bayous flowing into Sarasota Bay. Concentrations of some heavy metals in some sediments were found to be at levels of ecological, but not human, risk. Pesticides were also found in trace amounts in sediments in lower salinity areas. The concentration of pollutants in low salinity environments is of concern due to the fact that these are nursery areas for fish and shellfish of commercial, recreational, or ecological importance (Sarasota Bay NEP, 1995). The adverse impact on manatees is less clear. Stormwater runoff has been determined to be the primary source of pollutants into Sarasota Bay. Current nutrient loading estimates indicate that stormwater runoff contributes as much as 56 percent of the total nitrogen input. This results in increased algal growth, decreased light penetration and water clarity, and subsequent adverse impact on seagrasses. Retrofit projects, which will address both water quality and flood control issues, have been recommended. While improving stormwater treatment is vital to the restoration of environmentally-sensitive habitats in Sarasota Bay, it may be many years before some of the highly persistent contaminants, such as lead, decrease to acceptable levels. While stormwater treatment technologies are promising in reducing the levels of toxic substances, the reduction of nitrogen can best be accomplished through the direct reduction of nitrogen-rich compounds into the Bay. It has been determined that residential property owners will be the key to reducing stormwater nitrogen loadings. Improving landscape design and maintenance to reduce the need for fertilizers, pesticides, and water is needed. In

October, 1993 the Sarasota Bay Program and the Cooperative Extension Service launched the Florida Yards & Neighborhoods Program in order to provide information and advice on landscape design and maintenance to homeowners.

This program, involving the landscape industry, developers, homebuilders, and retailers, directly involves the public in the restoration effort by reducing nitrogen and contaminant loads to Sarasota Bay. The Florida Yards & Neighborhoods Program also satisfies federal requirements for local governments to provide opportunities for public involvement in the prevention of stormwater pollution (Sarasota Bay NEP, 1995).

#### Habitat Restoration

The Sarasota Bay NEP has been involved in the development of wetland restoration projects throughout the Sarasota Bay area, and a network has been established by which larger scale technical and funding support can be obtained. Seven wetland restoration projects have been completed, and 14 additional projects are either underway or are planned. Sarasota Bay NEP is also working on the acquisition of ecologically sensitive lands for the protection of wetlands and other critical habitats.

## **III.2 OTHER PROTECTION MEASURES**

### **III.2.1 Aquatic Vegetation Control**

Aquatic vegetation control in Sarasota County is essentially limited to landlocked lakes and retention ponds, and the extreme upper portions of the Myakka River, where vegetation is primarily removed through the use of chemical herbicides. The areas affected are not frequented by manatees and the risk of exposure to chemical agents is considered minimal. Any impacts associated with the use of chemical herbicides would most likely be indirect impacts on water quality and habitat, however no assessments have been conducted to date. The Sarasota National Estuary Program may examine the impacts of aquatic vegetation control in the future (Raulerson, pers. comm.), however it is not considered to be a high priority issue in Sarasota County.

### **III.2.2 Manatee Entrapment**

Sarasota County has very few stormwater outfalls that are a potential risk to manatees, and no manatee mortality in Sarasota County has ever been attributed to entrapment. A large culvert exists at the end of a residential canal in Pansy Bayou, however it is only submerged during the most extreme high tides. The integrity of the culvert is compromised and it is scheduled for replacement through the City of Sarasota's drainage master plan project. Upon replacement an appropriate exclusion device is to be installed. No other open culverts or areas of potential entrapment (other than tidal entrapment) are known to exist in Sarasota County.

### **III.2.3 Land Acquisition**

In 1999, voters approved a referendum that would allow for the purchase of environmentally sensitive lands in Sarasota County. Sarasota County has contracted with The Nature Conservancy to serve as the acquisition agent with land acquisitions under the county's Environmentally Sensitive Lands Protection Program (ESLPP). A nine-member oversight committee comprised of community representatives oversee the purchase of these lands and ensure the most effective use of resources. In 2002, the Sarasota County Commission approved the addition of parcels of land adjacent to Warm Mineral Springs for preservation. Sarasota County is working on numerous parcels under 32 separate ownerships. Sarasota County will continue to pursue these acquisitions, as well as the possibility of trading other less environmentally sensitive property elsewhere for the parcels. Along with Warm Mineral Springs acquisition, Environmentally Sensitive Lands Oversight Committee (ESLOC) has identified additional environmentally sensitive sites for possible land acquisition, including several additional sites along the Myakka River. These sites, along with the location of the Warm Mineral Springs acquisition, are provided in **Appendix D**.

## IV. EDUCATION

### IV.1 MANATEE EDUCATION AND AWARENESS

The following resources have been identified as the primary sources of manatee education and awareness information within Sarasota County:

#### Florida Department of Environmental Protection (DEP)

The Department of Environmental Protection, whose mission is “protection through outreach,” oversees the State’s land and water conservation program, administers regulatory programs, manages the Florida Park Service, and issues permits for air, water and waste management. Most of the manatee related education and awareness programs provided by the DEP deal with issues affecting manatees, such as seagrass protection, coastal and aquatic habitat preservation, and pollution avoidance, rather than information on the mammal itself. DEP’s Office of Environmental Education sponsors traveling exhibits and specialized educational programs for students and citizens, as well as produces and distributes brochures and publications on a number of environmental protection issues. A list of these services and brochures can be found on DEP’s website, [www.dep.fl.state.us](http://www.dep.fl.state.us).

#### Florida Fish and Wildlife Conservation Commission (FWC)

Proceeds from manatee auto license plates and decal sales, vessel registrations, and donations are deposited into the Save the Manatee Trust Fund (STMTF), created by the 1978 Florida Manatee Sanctuary Act. Monies from the trust fund may be used by FWC for manatee research, management, education, increased law enforcement and other population recovery strategies. FWC’s Manatee Program, including the Bureau of Protected Species Management (BPSM) and the Advisory Council on Environmental Education (ACEE) in Tallahassee and the Florida Marine Research Institute (FMRI) in St. Petersburg, receives funding primarily from the STMTF.

Examples of manatee protection awareness and educational activities offered by the BPSM include: posting of state manatee speed zone signs and associated boater education, permit review and standard marina construction conditions, production and distribution of manatee and manatee habitat-related brochures, posters, videos, pamphlets, teachers’ guides, public service announcements, television messages, and marketing displays for public education purposes. Yearly art contests are held to choose the next year’s manatee decal. BPSM’s publication, “Manatee News Quarterly” is sent to over 400 individuals statewide and is dedicated to providing up-to-date information on manatee research, management and conservation news. The

BPSM is also responsible for coordinating with county and federal governments in the production of Manatee Protection Plans.

Among other activities, the FMRI aids in the production of county-wide boaters' guides; employs interns for a variety of manatee-related research projects; produces numerous scientific publications annually; and offers an Atlas of Marine Resources CD-ROM providing data on manatee mortality, results of aerial surveys, aerial survey flight paths, manatee density polygons, and protection zones that is made available to scientists, managers, educators, and consultants. Information on manatee mortality, recent publications, ongoing research topics and more can be found at the FMRI website: [www.floridamarine.org](http://www.floridamarine.org)

FWC's ACEE program cooperates with various government and private organizations on manatee-related environmental education projects to be funded through the STMTF. Examples include funding for county-wide boaters' guides and corresponding educational boat ramp kiosks; coordination with The Department of Education to develop and distribute model instructional materials for use in environmental education and to integrate environmental education into the general curriculum of public schools districts, community colleges and universities; coordination with county governments to institute monofilament recycling programs; funding for Tampa Bay Watch to institute a Manatee Watch program in the tri-county area of Tampa Bay; and coordination with Diane Wilkins Productions on the production and distribution of a Manatee Education Program consisting of two videotapes.

Manatee related materials are readily available on the BPSM website, [www.floridaconservation.org/psm/](http://www.floridaconservation.org/psm/). The public can access a vast amount of manatee-related information here, including basic biology and behavioral facts, current rulemaking proposals, permit related information, conservation news, and agency reports. The public can also download educational literature, such as brochures, newsletters, pamphlets and guides produced by FWC and other agencies from this website.

#### Save the Manatee Club (SMC)

The Save the Manatee Club is a national non-profit organization dedicated to increasing public awareness and participation in manatee protection efforts. Funds from the club's Adopt-A-Manatee program are used for public awareness and education projects, manatee research, rescue and rehabilitation efforts, advocacy and legal action. SMC produces and distributes, in conjunction with various government and state agencies, brochures highlighting threats to manatees such as lock structures and monofilament line entanglement, as well as brochures and water-proof decals providing manatee protection tips for boaters, swimmers and divers. SMC produces manatee awareness waterway signs for posting by Florida shoreline property owners in areas frequented by manatees, and provides volunteers and funding for display boards at various manatee education centers and parks. SMC provides free education packets and staff interviews for students, and distributes free to educators an educator's guide, informative poster, and

coloring and activity book, as well as “Manatee Messages” and “Manatees: Species in Peril” videos. SMC also maintains an internet web site, [www.savethemanatee.org](http://www.savethemanatee.org), where the public can read new manatee related information and request copies of the brochures, stickers and other educational materials provided by SMC. SMC also offers free in-service programs on manatees to Florida educators.

#### West Coast Inland Navigation District (WCIND)

The West Coast Inland Navigation District is a special tax district of the state of Florida that oversees the management and maintenance of the Gulf Intracoastal Waterway from Anclote Key, just north of Tampa Bay, to the Caloosahatchee River, just south of Fort Myers. In addition to funding a variety of waterway projects, WCIND publishes and distributes, free to the public, informative publications dealing with boating safety tips and regulations, regional waterway features, and environmental awareness. Two publications in particular provide information on the Florida manatee and its habitat: “Attention Swimmers, Boaters, Divers- Guidelines for Protecting Manatees” and “Boater’s Guide to Seagrass.” WCIND also maintains a website where a small amount of background information on the Florida manatee can be found. A complete list of publications by WCIND and contact information is also provided on their website: [www.wcind.net](http://www.wcind.net).

#### Sarasota Bay National Estuary Program (NEP)

Along with its accomplishments regarding habitat restoration, water quality improvements and overall resource enhancement, the Sarasota Bay National Estuary Program (NEP) is also involved in significant public education and awareness in the area. The Sarasota Bay NEP has developed numerous partnerships with local, state, and national outreach programs including the American Littoral Society, National Audubon Society, City of Sarasota, Sarasota County Extension Office, Sarasota County Chamber of Commerce, Sarasota County Government, Sarasota County School System, Southwest Florida Water Management District, Southwest Florida Regional Planning Council, Tampa Bay Regional Planning Council, The U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, the Gulf of Mexico Program, and Mote Marine Laboratory. Through these partnerships, the Sarasota Bay NEP assists in the dissemination of information regarding marine and estuarine resources protection and habitat restoration. A list of free publications can be found at their website: (<http://www.sarasotabay.org>).

#### Mote Marine Laboratory

Located in Sarasota, Mote Marine Laboratory (MML) is an independent, nonprofit research organization dedicated to excellence in marine science and education. The Marine Mammal Center at MML has a permanent exhibit about manatees including a 70,000-gallon habitat where the public can have a close-up view of two captive-born animals, Hugh and Buffett. The exhibit

includes displays on general manatee biology and conservation, research equipment used in the field, captive manatee training techniques and an interactive display on manatee sight and touch. Trained volunteers interact with the public, answering questions and providing useful information. MML has many educational programs centralized around the Manatee exhibit and its animals. There were approximately 380,000 visitors to the Mote Marine Laboratory Marine Mammal Center in 2002.

The Education Department at Mote works closely with schools throughout Florida to educate K-12 students and teachers on marine life and the environment through field trips, outreach programs, overnights and summer programs. Mote's Sea Trek Distance Learning Program offers 4<sup>th</sup> through 8<sup>th</sup> grade students locally, state and nation wide an opportunity to learn about manatees from MML staff through live videoconferences. The Booker High School Environmental Science Academy and the Sarasota School of Arts and Sciences both have partnerships with MML that allows students from these programs to work closely with Mote educators and participate in a variety of lab activities and projects. In the year 2002-3, Booker students have been involved in a FWCC grant to produce their own videoconference program about manatees for dissemination to local elementary students utilizing the staff and animal resources at MML. MML also provides manatee education through summer camps, family programs, and a unique overnight program, "Moonlight with Manatees", where children ages 7-12 sleepover at the manatee exhibit where they learn facts and listen to stories about manatees. The Manatee Research Program accepts students from Mote's college internship program and provides these studies with the opportunity to work full time with the staff and participate in every aspect of manatee research. Both the Manatee Research and Education staff answer questions from the public via e-mail or in person concerning manatees and distribute informative brochures produced by the State, FPL and Save the Manatee club to those requiring more information. Mote's website, [www.mote.org](http://www.mote.org), provides information on Mote's educational programs, the Manatee Research department and the Manatee exhibit.

#### Other Resources

Information on manatees and related conservation issues is also provided through Sarasota County itself. Pamphlets related to boating and waterway safety, natural resource protection, boating speed zones, and other conservation issues are distributed through numerous County resources, including Sarasota County Environmental Services and local law enforcement agencies. Along with the distribution of materials produced in whole or in part by the County (including a quarterly newsletter), Sarasota County Environmental Services also assists in the distribution of materials from other organizations (listed above). The County also maintains a website ([www.scgov.net](http://www.scgov.net), "environment" link) that disseminates information related to environmental and conservation-related issues in Sarasota County. A web page specifically focusing on the MPP is currently under development.

## **IV.2 EDUCATION / AWARENESS RECOMMENDATIONS**

### Improvement / Enhancement of Sarasota County Boater's Guides

Sarasota County currently distributes several informational pamphlets related to habitat and resource protection, parks and recreation, and boating. One recommendation is the consolidation of some of these informational pamphlets into a more comprehensive boaters guide, similar to the guide that is currently produced for Lee County. Along with serving as a supplemental aid to navigation, the new boating guide would also include information on environmentally sensitive areas (such as seagrass areas), speed zones (including a guide to markers and signs), and locations of boat ramps, artificial reefs, marinas and other waterside facilities. Basic information on manatee biology and conservation may also be incorporated into this guide. New boater's guides may be distributed at marinas and boat facilities, public education facilities (such as Mote Marine Laboratory), bait and tackle shops, and boat rental facilities. Distribution may be coordinated through the West Coast Inland Navigation District and Sarasota County, along with various municipalities and law enforcement agencies. They may also be distributed through the Sarasota County Tax Collector's Office with vessel registration information.

### Informational Kiosks

Due in part to recent changes in Sarasota County speed zones, new and/or updated informational kiosks at public boat ramps and marinas are recommended. Along with maps depicting current speed zone regulations and an explanation of regulatory signs in the County, these kiosks would provide current information on the biology and status of manatees in Sarasota County, along with additional information on other natural resources such as seagrasses, mangroves, wetlands, and waterfowl.

### Sarasota County School System

There currently is no curriculum within the Sarasota County School system that specifically addresses natural resources or manatee-related issues. Sarasota County Environmental Services, perhaps in partnership with Mote Marine Laboratory, may work to develop a curriculum for Sarasota County Schools in order to develop a greater awareness for natural resource protection, particularly as it relates to manatees. The Save the Manatee Club has also developed a 36 page educator's guide and educational video that may be used in the development of a curriculum.

### Special Events

The Suncoast Offshore Grand Prix is an annual offshore powerboat race that is held in Sarasota during the 4<sup>th</sup> of July Weekend. It has been estimated that more than 50,000 visitors, primarily boating enthusiasts, travel to Sarasota for the week-long event. Events such as these may provide an important opportunity to disseminate information on manatees and habitat protection

to the boating public. Because there are a variety of public events (golf tournaments, fishing tournaments, parades, concerts, and parties) in conjunction with this event, there may be opportunities to develop:

1. A manatee education/awareness booth at one or more events where natural resource information (or possibly boating guides) can be distributed.
2. Advertising space in various race-related brochures and programs that can serve as a reminder to boaters to watch for manatees.
3. Public service announcements related to manatee awareness in association with media coverage during the event.

A similar strategy may be used at other local events in Sarasota County such as seafood festivals and boat shows.

#### Waterways Education Committee

Sarasota County has formed a Waterways Education Committee (WEC) that will address education and awareness issues relative to manatee protection, including the implementation of the recommendations listed above. The purpose of the WEC is multi-faceted. First, the committee will determine the relevant audiences to whom we (or the County) need(s) to target our educational messages. The committee will then examine existing educational strategies and messages being delivered throughout the County to determine how they may be enhanced or revised. Finally, the committee will develop recommendations of future educational efforts to be included in the Manatee Protection Plan and County programs.

#### Monofilament Line Recycling Program

Monofilament line, which represents the majority of fishing line, is not biodegradable, it persists in the environment approximately 600 years. This thin and clear line presents a hazard to birds and marine life through entanglement and ingestion. In addition the line can become entangled on boat propellers. Removing this pollutant from our waters would provide an esthetic benefit, in addition to improving environmental health.

Sarasota County once before attempted to conduct a Monofilament Line Recycling Program, however, logistical constraints limited the program's effectiveness and it was discontinued. A formal effort to promote such programs is ongoing in the State and some other municipalities have established successful programs. Given the persistence of this material as an environmental pollutant and the hazard it presents, Sarasota County Natural Resources, in cooperation with the Office of Sustainability and Solid Waste, should investigate the feasibility of reinitiating a recycling program within Sarasota County.

### IV.3 RECOMMENDATIONS FOR FURTHER STUDIES

In addition to studies related to habitat protection strategies identified in **Section III.1**, two important areas of research in Sarasota County will be necessary in order to continue to maximize opportunities for recreational use, manatee protection, and effective management of Sarasota County waterways. These two recommended areas of research are:

#### Continued studies of manatees in Sarasota County

Studies of manatees in Sarasota County have been ongoing since 1985. While the manatee population has been well studied and characterized, it is important to continue to monitor and assess the manatees in Sarasota County in order to evaluate long-term population trends. Twice-monthly manatee aerial surveys of Sarasota County are ongoing, along with photo-identification and telemetry studies. The continuation of this work is essential in order to effectively evaluate the status of the Sarasota County manatee population. As a result, the development of future management plans can be based on the most current, accurate scientific data.

#### Initiation of boat traffic studies in Sarasota County

While inventories of boat facilities and studies of boater compliance have been conducted, a comprehensive boat traffic study of Sarasota County has yet to be performed. Similar studies, involving both aerial- and land-based surveys, have been conducted in Lee County, Charlotte County, and portions of Manatee County. These types of studies, which may also include studies involving the determination of the carrying capacity of the waterway, a boating demand study (including mail surveys to registered boat owners), and updated boater compliance studies, would provide useful information on recreational boating traffic use patterns, and may be valuable in identifying potential conflicts of use between human activity and manatee use. This type of information would be valuable in the ongoing management of Sarasota County waterways.

#### Boating Facility and Demand Study

Sarasota County should update the previous study of waterway access points, demand and the adequacy and appropriateness of county facilities. The assessment should examine siting, consistent with the Boat Facility Siting Plan.

Sources of funding for these studies may include the Florida Fish and Wildlife Conservation Commission, Sarasota County, the West Coast Inland Navigation District (WCIND), and the Florida Boating Improvement Program (FBIP).

### **State and Federal Studies and Data Collection Recommendations**

#### Southwest Stock Population Dynamics

State and Federal agencies responsible for evaluating population dynamics of the Southwest stock should continue their research efforts to assess the manatee population. Any data assessed and the determination made by these agencies should be shared with the public and subject governmental bodies.

#### Effectiveness and Adequacy of Manatee Speed Zones

The responsible State and Federal agencies should assess the effectiveness and adequacy of speed zones enacted for manatee protection. A USFWS press release (5/2/03) indicated that such an effort is being developed. This effort should include an assessment and evaluation of speed zone signage.

Along with specific recommendations for further studies, a Waterway Awareness and Management Group composed of various stakeholders in Sarasota County should be formed in order to identify, discuss, and prioritize boating related issues and future needs within the County. Such a committee would make recommendations related to future projects, waterways improvements, signage, and potential research studies targeted at enhancing recreational boating in Sarasota County. This committee would replace the WEC and Law Enforcement Subcommittee currently operating on the project.

## V. LAW ENFORCEMENT

### V.1 LAW ENFORCEMENT ACTIVITIES

Local on-water law enforcement activities in Sarasota County are represented by four organizations; the Sarasota Police Department, the Sarasota County Sheriffs Department, Longboat Key Police Department, and the Venice Police Department. In addition, Sarasota County waters are monitored at both the state level (Florida Fish and Wildlife Conservation Commission) and the federal level (United States Coast Guard and the U.S. Fish and Wildlife Service). The current status of law enforcement activity in Sarasota County is summarized as follows:

#### Sarasota Police Department

Number of on-water officers: 2

Number of vessels: 2

Patrol area: Sarasota city limits; ICW marker 83 to ICW marker 15

Average number of on-water man-hours per week: approx 60

Estimated proportion of time patrolling manatee zones: 50%

#### Sarasota County Sheriffs Department

Number of on-water officers: 2

Number of vessels: 3

Patrol area: county-wide

Average number of on-water man-hours per week: 50-60

Estimated proportion of time patrolling manatee zones: 80-90%

#### Longboat Key Police Department

Number of on-water officers: 1

Number of vessels: 2

Patrol area: Longboat Pass (Manatee Co.) to New Pass (Sarasota Co.)

Average number of on-water man-hours per week: 40

Estimated proportion of time patrolling manatee zones: 25-30%

#### Venice Police Department

Number of on-water officers: 1

Number of vessels: 1

Patrol area: Venice area, from Manasota Bridge to Albee Road Bridge  
Average number of on-water man-hours per week: 16\*  
Estimated proportion of time patrolling manatee zones: 60-80%

\* Venice PD notes that this has increased to approximately 40 man-hours per week since 2001

#### Florida Fish and Wildlife Conservation Commission

Number of on-water officers: 6  
Number of vessels: 8  
Patrol area: county-wide  
Average number of on-water man-hours per week: 96  
Estimated proportion of time patrolling manatee zones: 80-90%

#### U.S. Fish and Wildlife Service

Number of on-water officers: varies  
Number of vessels: varies  
Patrol area: county-wide  
Average number of on-water man-hours per week: \*  
Estimated proportion of time patrolling manatee zones: 100%

The U.S. Fish and Wildlife Service provides special details in Sarasota County related to manatee speed zone enforcement. During 2002, a three day detail involving 405 man-hours was conducted. An additional 300 man-hours have been conducted in the Sarasota County portion of the Lemon Bay Manatee Refuge. Additional details are anticipated once newly-established federal zones are established in Little Sarasota Bay.

#### U.S. Coast Guard

Number of on-water officers: 3\*  
Number of vessels: 1\*  
Areas patrolled: Tampa Bay to Charlotte Harbor, including all Sarasota County waters  
Average Number of man-hours/week on the water: 20-40\*  
Approximate percent time spent patrolling / enforcing manatee speed zones: 80%

\*The United States Coast Guard (USCG) represents a somewhat unique law enforcement entity in the area because its patrol range is not county-specific. The Sarasota County area is patrolled by Coast Guard Station Cortez, which is responsible for Manatee, Sarasota, and portions of Charlotte and Hillsborough Counties. The amount of time that USCG spends in Sarasota County varies from week to week and the numbers shown above are estimates for Sarasota County-only. USCG typically allocates a three-man team and one vessel for daily patrols. Manatee speed zones are enforced by USCG under federal jurisdiction, and USCG Station Cortez recently received Unit Of The Year Award for their enforcement efforts.

## V.2 LAW ENFORCEMENT RECOMMENDATIONS

Enforcement clearly plays a critical role in the waterways management, and indications are that the multidisciplinary law enforcement efforts in Sarasota County are both active and efficient. They are also, however, clearly overburdened by the tremendous amount of area that they need to monitor and patrol. Marine enforcement units understandably have little time or opportunity to routinely monitor problem areas identified by Gorzelany (1996), and must focus on higher traffic areas where boating safety may be a more critical issue. One obvious need, which has been suggested in the past, is a larger allocation of funds, personnel, and resources toward enhancing marine enforcement in Sarasota County. Without a long-term commitment to such resources, very little can be expected in terms of effective coastal waterway management.

A recurring recommendation among law enforcement agencies, along with other stakeholders involved with recreational boating issues, is the need for improved regulatory signage. Law enforcement officers concur that improved signage is needed so that they can more effectively do their job. These improvements include changes in the number and location of signs, as well as the design and content of signs. Two specific areas of inadequate signage in Sarasota County that were identified by law enforcement personnel were the City Island Grass Flats area behind St. Armand's and Lido Keys, and the Roberts Bay area behind Siesta Key. To assist in the problem of signage on a statewide basis, a new Manatee Speed Zone Task Force has recently been created by the U.S. Fish and Wildlife Service. This Task Force has also identified improvements to signage as a priority issue in manatee protection.

Improved information exchange is also recommended between regulatory, enforcement, and judiciary personnel in order to more effectively process and evaluate speed zone violations. An informational booklet has been suggested which could be distributed among the judiciary that would explain the background and purpose of posted speed zones in Sarasota County. This would include information on the posted signage in a particular area (including a photo of the sign and its location), recent changes which may have occurred, and description of the corresponding statute.

Another recommendation that has been made in other manatee protection plans is the creation of a law enforcement task force, comprised of representatives of each active law enforcement agency in Sarasota County. The goal of this task force would be to:

- Improve "coverage" of enforcement activity within manatee speed zones.
- Improve coordination and dialogue between enforcement agencies.
- Keep all agencies informed of specific enforcement initiatives by one or more groups.
- Review any new or updates procedures and protocols related to manatee issues.

Such a task force would meet on a quarterly or semi-annual basis in order to exchange information and better coordinate law enforcement activities within the county.

Finally, during the 2003 legislative session monies were diverted from the Department of Transportation fuel tax to, in part, fund additional enforcement of manatee protection laws through a newly formed State office administered by the Florida Fish and Wildlife Conservation Commission. In order to increase local law enforcement capacity, a portion of the monies should be allocated to “Key” counties for dedicated enforcement of manatee protection laws. Those counties with approved Manatee Protection Plans should be favored over others that have not completed their MPP.

## VI. IMPLEMENTATION

### VI.1 DEVELOPMENT OF OBJECTIVES AND POLICIES

**Objective:** Sarasota County shall comply with Florida Statute 370.12, which stipulates requirements for Manatee Protection Planning.

**Policy:** The siting of all boat facilities in any local government jurisdiction in Sarasota County, over which the County has permitting authority, shall be consistent with the guidelines, methodologies, procedures, and policies established in this plan.

**Policy:** Sarasota County shall amend the comprehensive plan and enact an implementing ordinance that permits staff to utilize provisions of the Boat Facility Siting Plan in permit review.

#### **Action Items**

- Comprehensive Plan Policy 1.3.5 Revision
- Adopt MPP Implementation Code
- Assign code administrator

#### **Anticipated Schedule**

- Language submitted in EAR report to DCA on July 1, 2004 with implementation to follow in Comprehensive Plan amendments ~upon Department of Community Affairs approval.
- MPP Implementation Code draft to public hearing for adoption in September 2003.
- County administrator will assign a code administrator upon adoption of the MPPIC by the Board of County Commissioners.

**Policy:** Sarasota County shall incorporate required references to the Boat Facility Siting Plan in its Comprehensive Plan as part of the Evaluation and Appraisal review amendments to be incorporated upon Department of Community Affairs approval.

#### **Action Item**

- New Comprehensive Plan Policy 1.3.6

#### **Anticipated Schedule:**

- Language submitted in EAR report to DCA on July 1, 2004 with implementation to follow in Comprehensive Plan amendments ~ upon Department of Community Affairs approval.

**Objective:** Sarasota County shall update the County Code to create consistency relative to manatee protection regulations.

**Policy:** Permit applications relating to waterway facilities and their accessory structures/construction shall be evaluated according to currently codified rules, with the provisions of the Boat Facility Siting Plan also considered in generating the permitting recommendation.

**Action Items:**

- Building permits, WNCA permits, rezone petitions, and land development proposals, at minimum, will be evaluated for consistency with manatee protection regulations and the Boat Facility Siting Plan as defined in the MPP Implementation Code.
- Relevant codes shall be amended as required to reference the implementation of the BFSP.

**Anticipated Schedule:**

- MPP Implementation Code draft to public hearing for adoption in September 2003.
- Other codes shall be amended as necessary.

**Objective:** Sarasota County shall keep the Manatee Protection Plan current, with the best available data and wildlife protection practices.

**Action Items:**

- A routine review procedure has been defined within the plan.

**Anticipated Schedule:**

- Routine reviews will occur five years from the adoption date of the last authorized signatory.

**Objective:** Sarasota County shall continue efforts to enhance recovery of the West Indian Manatee by programs that support objectives stated in the USFWS Manatee Recovery Plan.

**Policy:** Sarasota County shall, in cooperation with local municipalities, resolve potential manatee entrapment locations.

**Action Items:**

- Collapsed culvert located on the access road from St. Armand's circle to Lido Key, which connects a canal to Pansy Bayou, shall be replaced as part of drainage project underway in City of Sarasota.
- An appropriate exclusion device shall be installed on the new culvert.

**Anticipated Schedule:**

- The pipe replacement is scheduled to occur in the 2<sup>nd</sup> quarter of 2004.

**Policy:** Sarasota County shall continue to support data collection efforts relevant to manatee protection.

**Action Items:**

- Sarasota County will continue to support the Sarasota Bay and Charlotte Harbor National Estuary programs.
- The County will seek funds to conduct a traffic pattern/destination study for boating within Sarasota County waters.

**Anticipated Schedule:**

- Active and ongoing

**Policy:** Sarasota County will continue effort to protect manatee habitat from degradation.

**Action Items:**

- Seagrass beds shall be protected from dredge and fill activities.
- Manatee aggregation areas shall be protected from alteration or human activities that negatively impact their usage.

**Anticipated Schedule:**

- Sarasota County's Comprehensive Plan prohibits dredge and fill other than for maintenance purposes.
- Sarasota County is working with FWC to re-post signage at Warm Mineral Springs/ Salt Creek to reduce human harassment of resting manatees at this primary warm water refuge. Sarasota County has an active and ongoing acquisition program for the site.

**Policy:** Sarasota County will continue to acquire and protect sensitive manatee habitat.

**Action Items:**

- Through the Environmentally Sensitive Lands Protection Program (ESLPP), the County shall continue efforts to secure parcels within the protection priority site at Warm Mineral Springs Creek. The goal of the program is to

acquire these lands to provide security for the manatees while they loaf in this highly utilized respite area.

- The County shall work to secure grant funds to assist with acquisition costs.

**Anticipated Schedule:**

- Land acquisition efforts are active and ongoing. To date, two parcels within the protection priority site have been acquired. Negotiations continue on several others.
- Sarasota County submitted an application for a Recovery Land Acquisition grant for Warm Mineral Springs Creek land acquisition. The County was awarded a federal grant, in partnership with FWC, for \$455,835.

**Policy:** The County shall create awareness within governmental organizations and the citizenry within Sarasota County regarding Manatee Protection issues and the Manatee Protection Plan.

**Action Items:**

- Educational programs shall be required for marine facilities proposing new construction and/or expansion of existing facilities.
- Educational plans including information distribution and signage shall be included in marine facility permit applications submitted for review by Sarasota County.
- The Waterway Education Committee will develop recommendations of future educational efforts.
- A marine resource protection pamphlet will be produced to discuss protection relevant to various resources (i.e., Manatee, Sea Turtles, sea grasses, etc).
- The County will actively promote November as the State recognized "Manatee Awareness Month".
- Grants from the Save the Manatee Trust Fund should be made available to the County for implementing the education provisions of the Manatee Protection Plan.

**Anticipated Schedule:**

Sarasota County will investigate options for implementing the education provisions contained within the plan. However, Manatee Protection Planning is a State mandated program that is not funded. Implementation of such programs will be contingent upon securing funding and logistical constraints.

**Policy:** The County shall initiate an effort to enhance the potential of marine law enforcement and compliance through improved communication of laws, regulations and waterway dynamics.

**Action Items:**

- A tool will be designed to enhance community and judicial understanding of the recent changes to speed zones within the County .
- The County will revise the boater's guide and speed zone map to assist boaters in boating responsibly and avoiding impacts to manatees.
- The County will merge the existing Law Enforcement and Education committees into a single waterways awareness and management committee.
  - State and Federal agencies, with jurisdiction for speed control on the waters within Sarasota County, should install, inspect and maintain signage adequate to allow enforcement of the Manatee Zones they have implemented. These agencies should ensure that the zones are consistent and signed in a clearly enforceable manner.
- Grants from the Save the Manatee Trust Fund should be made available to the County for implementing the enforcement provisions of the Manatee Protection Plan.

**Anticipated Schedule:**

- Sarasota County will investigate options for implementing the enforcement provisions contained within the plan. However, Manatee Protection Planning is a State mandated program that is not funded. Implementation of such programs will be contingent upon securing funding and logistical constraints.
- Implementation of recommendations for State and Federal agencies are at their discretion.

## **VI.2 MANATEE PROTECTION PLAN IMPLEMENTATION**

### **VI.2.1 Implementation Plan**

Upon adoption of the Sarasota County Manatee Protection Plan (MPP) by the Board of County Commissioners, the Plan will be incorporated into the Sarasota County Comprehensive Plan, *Apoxsee*, as an Amendment. The Amendment will be proposed during the current Comprehensive Plan Evaluation and Appraisal Report (EAR) process which is expected to be completed by late 2005/early 2006.

In the meantime, a MPP Implementation Code (MPPIC) is proposed in order to begin effectively implementing the provisions of the Plan. The MPPIC will be incorporated into the Sarasota County Code of Ordinances.

The MPPIC will contain language requiring that all development proposals located within the County limits that are specified in the BFSP (5 marine slips or greater) be consistent with the MPP. Further, the MPPIC will require that all projects (including but not limited to, WNCA permits, re-zone petitions, special exceptions, land development projects, earthmoving permits, and building permits, etc.) located within the permitting authority of Sarasota County reviewed under the Sarasota County Code of Ordinances shall be consistent with the MPP.

In addition to the adoption of a MPPIC, a revision to the WNCA Code is anticipated to occur within the year to ensure consistency among the two Codes. Language similar to “Upon adoption of the Sarasota County MPP, all qualifying WNCA permit applications shall be consistent with the provisions of the MPP” is expected to be added to Section 54-664 of the WNCA Code (Permit Approval Criteria).

### **VI.2.2 Coordination with Florida Fish & Wildlife Conservation Commission**

In order to provide consistency among the applicable regulatory agencies and in the administration of the MPP, Sarasota County Resource Protection (RP) will adopt an official internal policy. This policy will require that consultation be made with the Florida Fish & Wildlife Conservation Commission (FWC), the Florida Department of Environmental Protection (FDEP), the U.S. Army Corps of Engineers (ACOE), and the U.S. Fish & Wildlife Service (FWS), for all proposed projects specified in the BFSP. Further, RP shall continue to implement its current policy to require all Federal and State permits be obtained prior to the issuance of a County permit.

It is important to note that permit applicants sometimes attempt to obtain permits from some regulatory agencies first, and then move onto other agencies. Coordination among the agencies must occur at the beginning stages of the permitting process in order to ensure consistency. Therefore, Federal and State agencies involved in marine dredge and fill permitting should also adopt a policy to consult with RP staff when reviewing those projects specified in the BFSP.

### **VI.2.3 Implementation Schedule**

1. April 2003 - Municipal Administrator Meetings
2. May 2003 - Draft plan to County and Municipal Boards
3. Late May 2003 - Municipal Commission/Council Presentations
4. June 24, 2003 - BCC acceptance of MPP deliverable, auth to advertise, auth ord making
5. June 30, 2003 - Submit MPP deliverable to FWC for review
6. July 2003 - Public Comment period opens
7. Mid July 2003 - Public Meetings on Adoption of MPP

8. August 2003 - FWC comments on MPP due to be received
9. August 2003 - Close public comment period
10. September 24, 2003 - Board of County Commissioners Public Hearings to consider MPP adoption & Implementing code
11. July 1, 2004 EAR report due to DCA, includes relevant MPP amendments
12. Upon DCA approval Comprehensive Plan amended with BFSP incorporated by reference and implemented by code.

#### **VI.2.4 Mechanism for Periodic Review and Revision**

The Sarasota County Manatee Protection Plan will be reviewed five years after it is adopted by both Sarasota County Board of County Commissioners and the Florida Fish and Wildlife Conservation Commission. The clock for revision will start once the last authorized signature is in place.

Thereafter, a routine evaluation of the plan will be scheduled every five years. During said review the plan will be revised by amendment to the county code and will be supplemented with standard data and information as addressed below. Sarasota County recognizes that some instances may exist where the routine review cycle must be abbreviated. In the event that an exceptional review is required, the next routine review will be scheduled five years from that revision date. The following is a list of such exceptions and their effective dates. Any failure to conduct the review and revisions according to the stated schedule shall not invalidate the plan nor any provisions of the county code associated with it. Thus, failure to conduct the update on schedule in no way affects the enforceability of this plan.

#### **Exceptions**

#### **Effective Date**

- |  |   |
|--|---|
| * State delisting of the West Indian Manatee                           | – upon promulgation and implementation. |
| * Significant change in legal requirements                             | – upon promulgation and implementation. |
| * Uncharacteristic manatee mortality as defined by BPSM                | – immediate review                      |
| * Change in Waterway character (ex/ Midnight Pass opened)              | – immediate review                      |
| * Special review may be initiated by the Board of County Commissioners |   |

During a routine review of the plan, the data that is included in the plan will be updated with that which is best available. Specific data areas to be addressed are: 1) FMRI data on mortality and population, 2) Boat registrations from the Tax Collector, 3) Demographic information from the Tax collector, and 4) existing marine facilities within each municipal area. The update may be conducted by Sarasota County staff or by an outside vendor. In addition, during a routine review of the plan, the boat facility siting criteria will be evaluated for effectiveness and/or obsolescence.

Among the other information to be considered during the periodic review of the Manatee Protection Plan are:

- Findings of a state/federal assessment of the adequacy of manatee zones, if available. Any changes in the zones will be reflected in the revised report.
- Findings of a state/federal assessment of the southwest stock of the West Indian Manatee if available.
- Data from studies identified in the “Recommended Future Studies” section of the Manatee Protection Plan.

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# APPENDICES

## APPENDIX A MANATEE PHOTO ID INFORMATION

## APPENDIX B SARASOTA COUNTY COMPREHENSIVE PLAN WATER AND NAVIGATION CONTROL AUTHORITY ARTICLE XX

## APPENDIX C KEY TO MANATEE RELATED SITING CRITERIA

## APPENDIX D ENVIRONMENTALLY SENSITIVE LANDS PROTECTION PROGRAM PRIORITY SITES

# **APPENDIX A**

## **MANATEE PHOTO ID INFORMATION**

**Appendix Table 1.** Sighting histories for identified manatees observed multiple times in Sarasota County.

NAME	ID#	TOTAL Sightings	# Years Seen	Comments
VICTORIA	SB58	194	7	numerous additional off-effort sightings
SNORTY	SB46	124	7	
SCOOP	SB41	120	7	known to winter at Salt Creek
E	SB79	103	7	also sighted south of Sarasota Co.
TOMO-BELLA	SB52	102	7	also sighted south of Sarasota Co.
ELLIE	SB13	102	6	calf of SB16
SAM	SB39	92	7	
WEDGES	SB59	84	3	calf of SB58, expired 1996
JEMP	SB22	69	6	stranded, released; telemetry animal
FANNY	SB16	68	7	
CLYDE	SB9	65	7	also confirmed sightings prior to 1993
RAISIN	SB121	61	3	
RIVER	SB37	60	7	expired 1999
SB99	SB99	58	6	
DELTA MAMA	SB11	57	6	
MERE-C	SB67	54	6	
SMILEY	SB45	53	6	
MAXINE	SB27	52	7	
TRISCUIT	SB55	48	7	
WELTITWO	SB94	47	4	
TWO DOT	SB56	45	6	
SPORK	SB48	44	6	
CHEW-CHOO	SB7	43	7	also confirmed sightings prior to 1993
DAPPLE	SB10	43	6	also confirmed sightings prior to 1993
MANX	SB112	41	5	numerous additional off-effort sightings
DUISI	SB86	41	5	
PBJ	SB32	38	7	
FRINGE	SB19	38	4	captured for health assessment, 2000
TRIKE	SB54	37	3	
LITTLE GUY	SB26	36	6	calf of SB79
LAG	SB24	35	6	
ANCHOR	SB1	35	3	expired 1996
RICOCHE	SB36	33	5	
MR MOLE	SB92	31	5	

**Appendix Table 1.** Sighting histories for identified manatees observed multiple times in Sarasota County.

NAME	ID#	TOTAL Sightings	# Years Seen	Comments
MOONPIE	SB116	31	2	calf of SB27
MERECLA	SB76	30	4	
MORSE	SB29	30	3	
ROSEANNE	SB38	29	7	also sighted south of Sarasota Co.
TANMAN	SB50	29	4	
SERGEANT	SB42	29	2	also sighted south of Sarasota Co.
BOOMERANG	SB4	28	6	
SNUFF	SB47	28	5	
JAIR	SB101	27	5	
COLUMBUS	SB82	27	5	
BROOK	SB91	27	2	calf of SB37
JENI	SB23	25	7	
TIGGER	SB51	25	5	
STITCHES	SB87	25	4	
CLOVER BLT	SB88	24	6	
CASHEW	SB97	24	5	
SEUSS	SB122	24	1	calf of SB52
SEVEN	SB93	22	4	also sighted south of Sarasota Co.
F-TAIL	SB15	22	3	
SB159	SB159	22	1	
TRAX	SB53	21	7	
SLASHER	TB2	21	7	
NAIAD	SB105	21	3	
JALAN	SB138	21	2	
SPRUCE	SB141	20	3	also sighted south of Sarasota Co.
SKAMPER	SB129	20	2	calf of SB38
MARLEY	SB124	20	2	
CHUMLEY	SB8	19	3	
ZEBRA	SB63	18	4	expired 1997
DUCK	CR379	18	4	
SB136	SB136	18	2	
DU505	DU505	18	1	
LEIF	FM216	17	4	
RASTER	TB35	17	3	

**Appendix Table 1.** Sighting histories for identified manatees observed multiple times in Sarasota County.

NAME	ID#	TOTAL Sightings	# Years Seen	Comments
SKUNK	SB49	17	2	expired 1999
RUSSETT	SB89	17	2	
REMMINGTON	SB95	16	4	
HALEY	SB85	16	4	
ENGLEWOOD	FM243	16	4	telemetry animal
TAIL	TB17	16	2	
HOLEYTAIL	SB21	16	2	expired 1996
SCHAZAM	SB96	15	4	
SB102	SB102	15	2	
3-DOT	SB119	15	2	
U1606	U1606	15	1	
DU126	DU126	15	1	
IOU	SB75	14	6	
REN	TB45	14	2	
DU523	DU523	13	1	
DILLON	SB84	12	5	
OLYMPIC	SB123	12	3	known to have given birth to twins
VOGUE	SB108	12	2	
SPEEDBUMP	SB140	12	2	
SB161	SB161	12	1	
PIXIES	SB156	12	1	
GHATES	SB151	12	1	
DU163	DU163	12	1	
PYTHAGORAS	SB139	11	5	
PEDSCUFF	SB33	11	5	
VANITY	SB57	11	3	
SCOOPLA	SB98	11	3	
QUEQUAG	SB118	11	3	
SPRINKLES	SB113	11	2	
FRANCINE	TB78	11	2	
BABE	SB133	11	2	
SB164	SB164	11	1	
WELTY	SB61	10	6	
WISK	TB97	10	4	

**Appendix Table 1.** Sighting histories for identified manatees observed multiple times in Sarasota County.

NAME	ID#	TOTAL Sightings	# Years Seen	Comments
BEAUREGARD	SB73	10	4	
AYLA	SB81	10	4	
CHECK	TB90	10	3	
NEON	SB134	10	2	
DOMINO	SB106	10	2	
DASHER	SB109	9	5	
TARGET	TB18	9	4	
LIMULUS	SB128	9	3	
CARA	SB90	9	3	also sighted south of Sarasota Co.
HEY ZEUS	SB115	9	2	
PANGEA	CH101	9	1	
DAPHNIA	SB71	9	1	expired 1996
BLIMPIE	SB135	9	1	
SOMBRERO	SB104	8	3	
OEDIPUS	SB30	8	3	
NEWT	SB117	8	3	
HAR-V	SB18	8	3	
BONES	SB3	8	3	
GOLDFISH	SB126	8	2	matlacha
DU534	DU534	8	1	
DU16B	DU16B	8	1	
U164	TB179	7	3	
NEE	SB114	7	2	
DU626	DU626	7	2	
CLINTON	SB130	7	2	
ANNELID	SB157	7	2	
3POINT14	SB155	7	2	
DU678	DU678	7	1	
DU618	DU618	7	1	
DU574	DU574	7	1	
MR. MAGOO	SB44	6	4	
BONNETHEAD	SB78	6	3	
KIBBLES	SB80	6	2	expired 1996
GRATIATOR	SB153	6	2	

**Appendix Table 1.** Sighting histories for identified manatees observed multiple times in Sarasota County.

NAME	ID#	TOTAL Sightings	# Years Seen	Comments
DU599	DU599	6	2	
TANGO	SB137	6	1	
SB160	SB160	6	1	
PELE	CH19	6	1	
MIGRAINE	SB70	6	1	
ICEMAN	SB154	6	1	
DU257	DU257	6	1	
DU166	DU166	6	1	
CRAYOLA	SB158	6	1	
ARROW	SB2	6	1	
TAILSPIN	SB142	5	3	
PENTA	SB83	5	3	
KENNEDY	SB77	5	3	also sighted south of Sarasota Co.
TB150	TB150	5	2	
SNOTCH	SB143	5	2	
PRETZEL	SB35	5	2	expired 1996
MARBLE	FM237	5	2	expired 1997
JAWA	CH93	5	2	
FETISH	SB17	5	2	expired 1996
CONCH	TB158	5	2	
POPSICLE	SB131	5	1	also sighted south of Sarasota Co.
OMEGA	SB110	5	1	
KEYHOLE	CH26	5	1	
ELVIS	SB14	5	1	
DU694	DU694	5	1	
DU680	DU680	5	1	
DU579	DU579	5	1	
DU258	DU258	5	1	
DU182	DU182	5	1	
ROMAN	SB100	4	2	
PIZZA	CH25	4	2	also sighted south of Sarasota Co.
NOLE	TB59	4	2	
HAMMER	SB65	4	2	expired 1998
DU539	DU539	4	2	

**Appendix Table 1.** Sighting histories for identified manatees observed multiple times in Sarasota County.

NAME	ID#	TOTAL Sightings	# Years Seen	Comments
DU511	DU511	4	2	
SB162	SB162	4	1	
RC	SB66	4	1	calf of SB38, expired 1996
PAINT	SB34	4	1	expired 1996
DU693	DU693	4	1	
DU600	DU600	4	1	
DU596	DU596	4	1	
DU542	DU542	4	1	
DU5	DU5	4	1	
DU261	DU261	4	1	
DU176	DU176	4	1	
DU101	DU101	4	1	
DORITO	SB120	4	1	
DASYPUS	SB152	4	1	
CH69	CH69	4	1	
BOWTIE	SB111	4	1	
TB129	TB129	3	3	
SWAN	TB124	3	3	
U1383	U1383	3	2	
SHADOW	SB43	3	2	
SB22	SB22	3	2	
SB109	SB109	3	2	
SB103	SB103	3	2	
GLYPH	TB67	3	2	
DU67	DU67	3	2	
DU585	DU585	3	2	
CLAWED	SB69	3	2	
CALYPSO	SB132	3	2	also sighted south of Sarasota Co.
U1513	U1513	3	1	
U1512	U1512	3	1	
U1227	U1227	3	1	
SB165	SB165	3	1	
SB163	SB163	3	1	
PACMAN	SB31	3	1	

**Appendix Table 1.** Sighting histories for identified manatees observed multiple times in Sarasota County.

NAME	ID#	TOTAL Sightings	# Years Seen	Comments
LUNAR	TB29	3	1	also confirmed sightings prior to 1993
FOOTPRINT	SB107	3	1	
DU98	DU98	3	1	
DU96	DU96	3	1	
DU91	DU91	3	1	
DU723	DU723	3	1	
DU708	DU708	3	1	
DU702	DU702	3	1	
DU697	DU697	3	1	
DU688	DU688	3	1	
DU62	DU62	3	1	calf of SB38
DU533	DU533	3	1	
DU529	DU529	3	1	
DU522	DU522	3	1	
DU515	DU515	3	1	
DU501	DU501	3	1	
DU265	DU265	3	1	
DU259	DU259	3	1	
DU124	DU124	3	1	
CROWN	TB161	3	1	
CH19	CH19	3	1	
BUTCHER	SB5	3	1	
BUG	SB6	3	1	
VECTOR	TB36	2	2	
SB52	SB52	2	2	
MITCH	FM21	2	2	
LISA	TB76	2	2	
FOUR SPOT	SB68	2	2	
ELLIS	TB147	2	2	
DU89	DU89	2	2	
DU51	DU51	2	2	
DU278	DU278	2	2	
DU159	DU159	2	2	
DU157	DU157	2	2	

**Appendix Table 1.** Sighting histories for identified manatees observed multiple times in Sarasota County.

NAME	ID#	TOTAL Sightings	# Years Seen	Comments
APRIL POINT	FM241	2	2	rehabilitated and released
WORF	SB62	2	1	
U1526	U1526	2	1	
U1515	U1515	2	1	
U1418	U1418	2	1	
U138	U138	2	1	
U1158	U1158	2	1	
TWISTER	SB125	2	1	
THE BOOT	CH91	2	1	ft myers / matlacha
TEN-THIRTY	SB74	2	1	
TB152	TB152	2	1	
SB147	SB147	2	1	
SB141	SB141	2	1	
HALFHEX	SB20	2	1	expired 1996
DU94	DU94	2	1	
DU93	DU93	2	1	
DU725	DU725	2	1	
DU703	DU703	2	1	
DU701	DU701	2	1	
DU700	DU700	2	1	
DU686	DU686	2	1	
DU685	DU685	2	1	
DU685	DU685	2	1	
DU684	DU684	2	1	
DU682	DU682	2	1	
DU679	DU679	2	1	
DU677	DU677	2	1	
DU625	DU625	2	1	
DU615	DU615	2	1	
DU603	DU603	2	1	
DU597	DU597	2	1	
DU594	DU594	2	1	
DU59	DU59	2	1	
DU584	DU584	2	1	

**Appendix Table 1.** Sighting histories for identified manatees observed multiple times in Sarasota County.

NAME	ID#	TOTAL Sightings	# Years Seen	Comments
DU582	DU582	2	1	
DU575	DU575	2	1	
DU557	DU557	2	1	
DU551	DU551	2	1	
DU550	DU550	2	1	
DU55	DU55	2	1	
DU543	DU543	2	1	
DU538	DU538	2	1	
DU525	DU525	2	1	
DU516	DU516	2	1	
DU515	DU515	2	1	
DU285	DU285	2	1	
DU282	DU282	2	1	
DU23	DU23	2	1	
DU183	DU183	2	1	
DU173	DU173	2	1	
DU16A	DU16A	2	1	
DU168	DU168	2	1	
DU167	DU167	2	1	
DU143	DU143	2	1	
DU138	DU138	2	1	
DU120	DU120	2	1	
DU108	DU108	2	1	
DU1	DU1	2	1	

# **APPENDIX B**

**SARASOTA COUNTY COMPREHENSIVE PLAN  
WATER AND NAVIGATION CONTROL AUTHORITY  
ARTICLE XX**

## ARTICLE XX. WATER AND NAVIGATION CONTROL AUTHORITY\*

\*Cross references: Administration, ch. 2; waterways, ch. 130.

Sec. 54-651. [Purpose.]

That in order to provide for adequate regulation and control of Dredging, Filling, or otherwise Altering all water areas, watercourses, waterways, inlets, bays, bayous, submerged lands, islands, sandbars, Wetlands, Sovereignty Lands, or any contiguous areas landward to the Top of Bank in the Coastal Area of Sarasota County, including the repair and construction of associated water-dependent structures such as Docks, Piers, Davits, and other similar structures, and in the interest of public rights, public welfare, protection of public riparian property rights and the Preservation of the natural beauty and attractiveness of the bays, bayous, harbors, streams, watercourses and inlets and to aid and assist boating activities and navigation, there is hereby created the Sarasota County Water and Navigation Control Authority within Sarasota County, and said Sarasota County Water and Navigation Control Authority shall have the power and authority to:

- (1) Regulate and exercise control over Dredging, Filling, or otherwise Altering any water areas, watercourses, waterways, inlets, bays, bayous, submerged lands, islands, sandbars, Wetlands, Sovereignty Lands, or any contiguous areas landward to the Top of Bank in the Coastal Area of Sarasota County; and
- (2) File recommendations with the Trustees of the Internal Improvement Fund of the State of Florida concerning the sale of all Sovereignty Lands in the waters of Sarasota County.

(Ord. No. 72-084, § 1, 10-10-1972; Ord. No. 97-094, § B, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-652. [Definitions.]

The following terms and phrases, when used in this article, shall have the meaning ascribed to them in this section, except where the context clearly indicates a different meaning:

Access Ramp means that part of a Dock or Pier which is connected to uplands, and leads to a Terminal Platform.

Administrator means the Sarasota County Administrator, or an administrative official of Sarasota County government designated by the County Administrator to administer and enforce the provisions of this article.

Altering shall include, but not be limited to, Dredging, Filling, placing, building, keeping, maintaining, erecting, extending, or making any other material change to lands or structures located within the jurisdictional area of the Code, the use of which requires a permanent or temporary location on or above the ground, bottomland, water area or water surface, or attachment to a structure having a permanent or temporary location on or above the ground, bottomland, water area or water surface. It includes permanent or temporary physical changes to elevations or slopes, or the installation of any pilings, boat lifts, or other structures or fixtures, as well as the installation of any other appurtenant structures such as floating Docks and lifts, whether or not such floating structures are licensed as "vessels."

Applicant includes individuals, firms, partnerships, corporations, associations, organizations, trusts, companies, or any other legal entity that has applied for a permit.

Authority means the Sarasota County Water and Navigation Control Authority.

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

Boat Lift means a fixed or floating device utilized for lifting, hoisting and launching vessels.

Coastal Area means the area that encompasses the barrier islands, bayfront mainland, gulf and bay waters, and all other Navigable Waters contiguous to bay waters, and all areas at or below the five-foot NGVD contour line.

Creation means establishing new Wetlands or surface waters by converting other land forms.

Davit means a cantilevered lifting device mounted directly to a wood or concrete piling.

Dock means a fixed or floating structure consisting of pilings, structural supports, decking, and all appurtenances, extending from the shore over water, used for the purpose of securing and providing access to buoyant vessels.

Dredging means excavating, by any means, in surface waters or Wetlands. It also means excavating, or creating, a water body which is, or is to be, connected to any surface waters or Wetlands directly or via an excavated water body or series of water bodies.

Enhancement means improving the ecological value of Wetlands, other surface waters, or uplands that have been degraded when compared to their historic condition.

Filling means depositing of materials in surface waters or Wetlands, by any means.

Littoral Zone means that part of a water body which is inundated under normal conditions to a depth of three feet or less as measured from the mean low water (MLW) elevation. Littoral Zones typically support rooted aquatic vegetation, including mangroves, marsh grasses, and seagrasses.

Maintenance Excavation means the performance of any Dredging of an existing, functional channel for the purpose of restoring the channel to its previous design configuration, so as not to exceed dimensions of original construction.

Maintenance of Coastal Structures means performing any repairs that restore existing, functional structures to their original design specifications, so as not to exceed the dimensions of original construction.

Marginal Dock means a fixed or floating structure, placed immediately contiguous and parallel to a functional vertical bulkhead, or within five feet of the waterward edge of a revetment.

Mitigation means an action or series of actions taken to offset the adverse impacts that would otherwise cause a regulated activity to fail to meet permitting criteria. Mitigation usually consists of Restoration, Enhancement, Creation, Preservation, or a combination thereof.

Navigable Waters includes all waters in the Coastal Area that are sufficiently deep or wide to provide passage for boats.

Person shall include all natural Persons, as well as all organizations and other entities, but shall not include the State of Florida, Sarasota County, or any other governmental board or bureau, except where otherwise noted.

Pier means a structure in, on, or over water or Sovereignty Lands, which is used primarily for fishing or swimming.

Preempted Area means that part of submerged bottomlands occupied or covered by a docking facility or Pier, including any associated area for mooring a vessel. This area is considered to be excluded from traditional public uses as a result of structure placement.

Preservation means the protection of Wetlands, other surface waters or uplands from adverse impacts by placing a conservation easement or other comparable covenant over the property or by dedicating the property to a public or nonprofit entity.

Previously Dredged Portions means those locations where actual channel Dredging has occurred.

Restoration means converting back to a historic condition those Wetlands, surface waters, or uplands which currently exist as a land form which differs from the historic condition.

Shoreline means the area immediately landward of the Wetland boundary to the Top of Bank.

Sovereignty Lands means those lands including, but not limited to, tidal lands, islands, sandbars, shallow banks, and lands waterward of the ordinary or mean high-water line, beneath navigable Freshwater or beneath tidally-influenced waters, to which the State of Florida acquired title on March 3, 1845, by virtue of statehood, and which have not been heretofore conveyed or alienated.

Terminal Platform means that part of a Dock or Pier that is connected to the Access Ramp and is used for securing and loading a vessel or for fishing. The Terminal Platform is considered the activity area of the structure.

Top of Bank means the crest elevation of the Shoreline or of Shoreline protection structures, whichever point is more landward.

Vessel Draft means the vertical distance measured from the highest point to which a water body rises on the vessel's exterior hull to the bottom portion of the keel or fixed drive unit, whichever is lower. Adjustable outboard or inboard/outboard engines shall not be included in the Vessel Draft calculation.

Water-Dependent Activity means an activity that can only be conducted on, in, over, or adjacent to water areas because the activity requires direct access to the water body or Sovereignty Lands for transportation, recreation, energy production or transmission, or source of water, and where the use of the water or Sovereignty Lands is an integral part of the activity.

Wetlands means those areas that are inundated or saturated by surface water or groundwater at a frequency and a duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in Wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in Wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce, or persist in aquatic environments or anaerobic soil conditions. Florida Wetlands generally include swamps, sloughs, marshes, wet prairies, bayheads, bogs, cypress domes and strands, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps, and other similar areas. The extent of Wetlands is delineated according to the methodology in F.A.C. 62-340.300.

(Ord. No. 72-084, § 2, 10-10-1972; Ord. No. 97-094, § C, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-653. [Territorial jurisdiction.]

(a) The Sarasota County Water and Navigation Control Authority shall exercise its jurisdiction throughout all of Sarasota County and it is hereby authorized to apply and enforce the provisions of Sarasota County Ordinance No. 72-084 as amended hereby (this article) to all areas within Sarasota County, including but not limited to all municipalities.

(b) In recognition of the existing permitting regulations in these municipalities, construction and maintenance of Docks and Piers in the Town of Longboat Key, the City of Sarasota and the City of North Port are exempted from obtaining a permit under this article so long as the work is authorized by the municipality itself.

(Ord. No. 73-023, § 1, 7-31-1973; Ord. No. 97-094, § T, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-654. [Composition.]

The Authority shall be composed of duly elected members of the Board of County Commissioners of Sarasota County, and said Board shall be the governing authority of the Sarasota County Water and Navigation Control Authority.

(Ord. No. 72-084, § 4, 10-10-1972; Ord. No. 97-094, § E, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-655. [Officers; compensation of members.]

The Authority shall elect one of its members as Chairman. The Clerk of the Circuit Court of Sarasota County shall serve as Secretary ex officio, and as Clerk of the Sarasota County Water and Navigation Control Authority, but he shall not be entitled to any salary or additional compensation therefore, nor shall he be entitled to a vote on said Authority. The members of the Board shall not be entitled to any additional salary or additional compensation for their services as members of the Authority.

(Ord. No. 72-084, § 5, 10-10-1972; Ord. No. 97-094, § F, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-656. Permits required.

(a) No Person shall perform any work having the effect of Dredging, Filling, or otherwise a Altering any water areas, watercourses, waterways, inlets, bays, bayous, submerged lands, islands, sandbars, Wetlands, Sovereignty Lands, or any contiguous areas landward to the Top of Bank in the Coastal Area of Sarasota County, without first obtaining a permit from the Authority or Administrator, unless specifically exempted under the provisions of Section 54-660.

(b) It shall be the duty of the Administrator to accept and process all applications and matters of business coming before the Authority and receive all revenues and receipts of the Authority. All applications shall be accompanied by such filing fees and costs as have been established by resolution of the Board of County Commissioners for the filing, processing, advertising, and hearing of the application.

(Ord. No. 72-084, § 6, 10-10-1972; Ord. No. 97-094, § G(6), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-657. Major work permits.

(a) Whenever any Person shall desire to perform any work described above that is not otherwise authorized by permit or exemption under this article, such Person shall, before commencing any such operation, file an application and obtain a major work permit from the Authority to do such work. Said application shall include:

(1) A plan or drawing showing specifically what is proposed to be done, and the location of property owners who may be affected thereby. Said plan or drawing shall be to scale and shall show the depths of the water and the elevation of the development above the water line, and shall have been drawn by a registered professional engineer. At least one copy of said drawing shall be submitted of a size acceptable for publication in a daily newspaper, i.e., two and seven-eighths inches column width;

(2) The names and mailing addresses of the property owners of all riparian upland property within 1,000 feet of the nearest point of said development;

(3) Proof of ownership of the property which is proposed to be developed, including any submerged lands;

(4) A signature by the owner of the property, or be accompanied by a notarized written consent to do the work from the property owner if the application is made by any Person or firm other than the owner of the property involved. This owner consent signature obligates the property owner(s) and

successors to comply with all permit stipulations and all provisions of this article;  
and

(5) Other information required by the Authority as may be necessary in the processing and determination of the application.

(b) When an application for a permit is made as required by this article, the Administrator shall process the application within reasonable timeframes with due consideration given to the rights and privileges of all affected parties.

(1) Every application for a permit shall be approved or denied at a public hearing which shall be held within approximately 90 working days after receipt of the original application or receipt of requested additional information or correction of errors or omissions.

(2) If revised plans conforming to requested additional information are not submitted within 90 working days after receipt of notice of the need for revisions, the permit application shall be deemed withdrawn.

(3) Failure to satisfy the review timeframe shall not result in approval by default of the application for a permit.

(c) The Authority shall set a public hearing of which at least 15 days' prior notice has been given by publication of such hearing in a newspaper having general circulation in Sarasota County.

(1) Said notice shall state the development proposed to be made, and a general description of the area involved, and shall include a plat or drawing showing the development to be made and the location of same as it relates to the surrounding area.

(2) An affidavit of proof of said publication shall be furnished to the Authority before its consideration of said application.

(3) The Authority shall cause notices to be sent by registered or certified mail or personal service to each of the riparian upland property owners within 1,000 feet of the proposed development, which shall in all events include the owners of the upland riparian property affected by any proposed fill between said riparian upland and the nearest channel, and such other property owners as the Authority deems might be adversely affected by the proposed development, and such notices shall be substantially the same as are required to be published in a newspaper as hereinbefore provided.

(4) All municipalities or other public agencies who may be affected by said proposed development also shall be notified by registered or certified mail as hereinbefore provided and shall have the right to be heard.

(Ord. No. 72-084, § 6, 10-10-1972; Ord. No. 97-094, § G(6.1), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-658. Minor work permits.

The Administrator may, upon approval of an application, and without the necessity of holding a public hearing, issue a minor work permit to authorize the following projects as minor work:

(1) Maintenance Excavation of existing access channels connecting a boat basin to a navigable waterway or channel of a width no greater than the minimum necessary to provide for navigational safety, and in no event to exceed 40 feet, and to a depth of not more than five feet below mean low water, and where said excavating will not result in the placing of any spoil material in or upon submerged lands.

(2) Construction of Docks, Piers, decks, mooring piles, or Boat Lifts, provided that such structures conform to the standards provided in Section 54-669 and only where the structures are appurtenant to upland riparian properties within zoning districts that allow such structures as a permitted use. Any Dock construction at commercial or multifamily properties that would result in the properties having a total of five slips or more shall not be authorized as minor work, and shall require a major work permit as described in Section 54-657.

(3) Construction of seawalls or other shore protection structures behind existing Littoral Zones and Wetland vegetation, and at or above mean high water, when consistent with State law.

(4) Maintenance of jetties, rock revetments, boat ramps, groins, and similar coastal structures.

(5) Installation, replacement and maintenance of bridges, culverted waterway enclosures, utility crossings, or drainage control structures within artificially created waterways.

(6) The Restoration of banks in artificially created waterways and canal systems through residential subdivisions, or in existing artificially created canals defined by legal description, recorded in the official public records of Sarasota

County, Florida, where the work will result in seawalls, retaining walls, or riprap being constructed, or Shoreline contours being regraded, landward of the approximate mean high-water line or vegetated Littoral Zone.

(7) Construction of single-family or multifamily pile-supported boat davits, when new pilings are installed, subject to the standards provided in Section 54-669.

(Ord. No. 72-084, § 6, 10-10-1972; Ord. No. 97-094, § G(6.2), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-659. General permits.

The Administrator is authorized to issue general permits for the following types of work, provided that the structures to be maintained were constructed in accordance with a permit issued by the Authority, or were constructed before January 1, 1985:

- (1) Repair or replacement of all existing Docks, Piers, mooring piles, Boat Lifts, and similar structures provided that:
  - a. The structures are restored to their existing size, shape and location; and
  - b. The work is conducted in such a manner as to minimize adverse effects on existing natural resources in the vicinity of the work, including, but not limited to, seagrasses, oysters, Littoral Zone vegetation and bottom sediments;
- (2) Replacement of boathouse roof supports, structural connectors and sheathing;
- (3) Replacement of no more than eight linear feet of existing bulkhead facing or slab material;
- (4) Replacement of channel markers;
- (5) Installation of single-family or multifamily pile-supported boat Davits on existing pilings, subject to the standards provided in Section 54-669;

- (6) Installation of Boat Lifts on legally permitted structures within the designated mooring areas of the original permit, subject to the standards provided in Section 54-669;
- (7) Installation of Davits or personal watercraft lifts adjacent to legally permitted structures, subject to the standards provided in Section 54-669;
- (8) Construction of Wetland Enhancement projects at or above mean low tide in accordance with an approved plan that does not involve the construction of structures with a top elevation of +2.0 feet NGVD or greater.

(Ord. No. 97-094, § G(6.3), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-660. Exemptions.

(a) The following maintenance work is hereby exempted from permitting requirements, provided that the structures to be maintained were constructed in accordance with a permit issued by the Authority, or were constructed before January 1, 1985:

- (1) Redecking or resurfacing of decks, Docks, Piers, and other similar structures;
- (2) Replacing or repairing handrails, guardrails, support stringers and benches;
- (3) Replacing or repairing tie-backs and deadmen on bulkheads when the work is located landward of all Wetlands;
- (4) Removing, replacing or repairing bulkhead caps when the cap is reconstructed within six inches of existing dimensions and is above the mean high-water line;
- (5) Repairing cracks in bulkhead slabs and caps with bonding cement above the mean high-water line;
- (6) Replacing existing hardware and fasteners on Dock decking, framing and Boat Lifts;
- (7) Repairs to bridges, walkways and utility crossings where the structure spans the waterway;

(8) Maintenance of navigation signage.

(b) Any design change or alternate use of construction material on the structures to be maintained may cause the project to be nonexempt.

Ord. No. 97-094, § G(6.4), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-661. Limits to applicability.

(a) A minor work permit, general work permit, or exemption shall authorize any Person to construct or maintain any Dock or Pier on public property, except for the construction and maintenance of Docks and Piers lawfully extending from that Person's private uplands across submerged lands owned by the State of Florida.

(b) Nothing in this article shall be construed as requiring modification of existing Docks or Piers extending from private uplands that were constructed before January 1, 1985.

(Ord. No. 97-094, § G(6.5), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-662. Unpermitted structures built after January 1, 1985.

(a) Structures that were constructed without a permit after January 1, 1985, and that meet the provisions of this article, shall be assessed a fee of three times the current permitting fee, providing the property owner that committed the violation still owns the property. A single permit fee shall apply to any new owners of the property.

(b) Structures or attachments, or any portion thereof, that were constructed without a permit after January 1, 1985, and that do not meet the provisions of this article, as amended, shall be removed from the waterway, and any loss or alteration of habitat shall be mitigated, in accordance with the provisions of Section 54-665(a).

(Ord. No. 97-094, § G(6.6), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-663. Permit approval criteria, requirements and administrative procedures.

The Authority, in order to prevent undesirable situations which might result from the promiscuous and uncontrolled Filling of bottom land or the excavating of basins or channels without regard to what might result there from, shall obtain such engineering or other data and hear such testimony as may be necessary to determine the effect of the proposed development on rights and interests of the public, including the effects on natural resources.

(Ord. No. 72-084, § 7, 10-10-1972; Ord. No. 97-094, § H(7), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-664. Permit approval criteria.

(a) The Authority and the Administrator shall consider, in their review of permit applications, the following criteria. If any of the following questions are answered in the affirmative, the application shall be denied or modified:

(1) Would the proposed project have a detrimental effect on the use of said waters in the County for navigation, transportation, recreational or other public purposes and public conveniences;

(2) Would the proposed project restrict the free use of the waterways and Navigable Waters;

(3) Would the proposed project adversely alter the flow of water or tidal currents in Sarasota County;

(4) Would the proposed project adversely affect erosion control or increase erosion, shoaling of channels, or formation of stagnant pockets likely to collect debris;

(5) Would the proposed project adversely affect the conservation of wildlife, marine life, and other natural resources;

(6) Would the proposed project adversely affect the natural beauty or recreational opportunities upon Sarasota County's waters; or

(7) Would the proposed project adversely affect the uplands surrounding or directly affected by said plan or development.

(b) If the Authority and the Administrator shall find the proposed plan or development will not adversely affect any of the criteria listed in subsection (a) of this section, said Authority or Administrator shall then grant and issue a permit for said proposed plan or development or any modification thereof according to the provisions of this article, as hereinafter provided. The permit may contain stipulations or conditions that are designed to mitigate the impact of the development on the public rights and interests identified in the criteria listed in subsection (a) of this section or assure that construction or use of the permitted facility will conform to the requirements of this article. The Authority and Administrator may consider the use of Mitigation techniques

such as conservation easements, invasive and nuisance species removal or native species Restoration to perform these actions.

(c) If the Authority or the Administrator shall find that the said proposed plan or development will adversely affect any private property rights or any of the rights or interest of the public identified in the criteria listed in subsection (a) of this section, the Authority or Administrator shall deny the application and refuse to issue a permit for the proposed plan or development, unless the Applicant can provide sufficient supplemental information to demonstrate to the Authority or the Administrator that the proposed work will not have an adverse effect on the rights or interests of the public as listed in subsection (a) of this section.

(d) Said permit, if granted, shall not be effective until 30 days after the filing of the determination with the Clerk, and if a petition for rehearing is filed, until said petition is heard and determined; provided, however, that general permits and permits for minor work issued pursuant to Sections 54-658 and 54-659 shall be effective immediately upon issuance.

(e) The Authority and the Administrator shall also make findings of fact and determine from available data and testimony whether the proposed plan or development is consistent with the provisions of Chapter 2, the Environment chapter, of Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan.

(Ord. No. 72-084, § 7, 10-10-1972; Ord. No. 97-094, § H(7.1), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-665. Permit requirements.

(a) Mitigation requirements. The Authority or the Administrator may require an Applicant to compensate for impacts that result from activities regulated pursuant to the provisions of this article, to offset the adverse effects of a proposed project or development.

(1) Mitigation requirements are hereby established for activities that involve loss or alteration of habitat.

a. Loss of habitat shall be defined as the elimination or reduction in coverage of area of the habitat (e.g., Dredging or Filling of habitat or other destructive alterations). Loss of habitat requirements shall be used to design and implement Mitigation actions involving the Creation of new habitat area.

b. Alteration of habitat shall be defined as the disturbance of habitat without any reduction in coverage of area of the habitat (e.g., Dock or deck construction spanning a habitat or riprap within an upland buffer). Alteration of habitat requirements shall be used to design and implement Mitigation actions involving the Restoration, Enhancement or Preservation of existing habitat area.

(2) The Mitigation requirements shall apply to the specific habitats as described in "Principles for Evaluating Development Proposals in Native Habitats," Environment chapter, Apoxsee.

a. Wetland impacts must be mitigated in accordance with either Level I or Level II ratios and performance standards specified in the Environmental Technical Manual of the County's Land Development Regulations and in Apoxsee. Minimum Mitigation ratios shall be as follows:

1. One-to-one for herbaceous Wetlands and two-to-one for wooded Wetlands in accordance with Level I performance standards; or

2. Two-to-one for herbaceous Wetlands and four-to-one for wooded Wetlands in accordance with Level II performance standards.

b. Upland habitats shall not be subject to these Mitigation requirements, with the exception of dunes. Loss or alteration of dunes shall be minimized, and shall be mitigated in a manner consistent with the ratio and performance standards listed above for Wetlands, but with use of native coastal dune plants.

(3) In cases where Mitigation is required, Mitigation and monitoring plans must be submitted to and approved by the Administrator before a permit will be issued. The Administrator may approve off-site Mitigation in cases where on-site Mitigation or Preservation is not feasible, where the on-site Mitigation opportunities are not expected to have long-term viability when compared with the proposed off-site Mitigation, or where off-site Mitigation would provide a greater improvement in ecological value and function than on-site Mitigation.

(4) In cases where Mitigation is required for loss of habitat, a plan must be submitted for the Creation of new habitat area according to the ratios and plant

size, spacing and zonation as specified in the Environmental Technical Manual of the County's Land Development Regulations (Sarasota County Ordinance No. 81-12, as amended) and in the "Riparian Habitat Planting Guidelines," attached as Appendix I of Ordinance No. 97-094 [Section 54-678].

(5) In cases where Mitigation is required for alteration of habitat, a plan must be submitted for the Restoration, Enhancement or Preservation of existing habitat area based on a one-to-one ratio of habitat area altered to habitat area enhanced by any of the following actions:

- a. Restore existing, disturbed habitat;
- b. Remove invasive and nuisance species from existing habitat or upland buffer;
- c. Plant upland buffer; and/or
- d. Establish conservation easements over existing habitat or upland buffer

(6) Mitigation activities shall be specified by permit or code enforcement order and shall be conditioned upon specified performance, maintenance and monitoring standards. Where alteration of habitat Mitigation is involved, stipulations that define performance, maintenance and monitoring activities shall be set forth as follows:

- a. Mitigation activities shall be completed within 60 days following completion of construction activities. All vegetation shall be of nursery stock from within a 100-mile radius of the subject property. No disturbance of existing native vegetation shall occur. No disturbance to the slope of the existing bank shall occur, except in accordance with an approved plan.
- b. Mitigation success criteria are as specified in the Environmental Technical Manual of the County's Land Development Regulations (Sarasota County Ordinance No. 81-12, as amended). The success of any revegetation effort shall be monitored by the permittee or his designee and shall also be subject to monitoring and enforcement by the County during a three-consecutive-year period following installation of vegetation. Photographs of the vegetated area shall be taken and forwarded to the

Administrator following the initial vegetation effort and every year thereafter for a period of three years.

(7) All planting referenced in this subsection must be done in accordance with the provisions of the "Riparian Habitat Planting Guidelines," attached as Appendix I of Ordinance No. 97-094 [Section 54-678].

(8) Except for red, black and white mangroves, which are provided for in subsection (a)(9) of this section, all native vegetation planted as Mitigation, or located within a Preservation or conservation area or easement owned or controlled by the State or County, shall not be altered or trimmed, except to provide pedestrian and vessel access to a Dock or mooring structure, or in accordance with an approved plan.

(9) Trimming and alteration of mangroves shall be consistent with the provisions of the Mangrove Preservation Act (F.S. § 403.9321 et seq.), and shall be consistent with the provisions of the Sarasota County Tree Protection Ordinance No. 83-44, as amended (Chapter 54, Article XVIII, of this Code).

(10) In no instance shall a Mitigation area be integrated with a structure where the future replacement of the structure being permitted would result in the destruction of the Mitigation area.

(b) Manatee protection requirements. Manatees are protected under the Endangered Species Act of 1973, the Marine Mammal Protection Act of 1972, and the Florida Manatee Sanctuary Act of 1978 (F.S. § 370.12(2)). The following manatee protection measures shall apply to all activities authorized under the provisions of this article:

(1) The permittee will instruct all personnel associated with the construction of the facility of the potential presence of manatees and the need to avoid collisions with manatees. The permittee and/or contractor will be held responsible for any manatees harmed, harassed, or killed as a result of construction of the project.

(2) Siltation barriers will be made of material in which manatees cannot become entangled. The barriers must be properly secured, and regularly monitored to avoid manatee entrapment, and must not block manatee entry to or exit from essential habitat.

(3) All construction vessels associated with the project will operate at "no wake/idle" speeds at all times while within 300 feet of the site and vessels will follow routes of deep water whenever possible.

(4) If manatees are seen within 100 yards of the project area, all appropriate precautions shall be implemented to ensure protection of the manatees. These precautions shall include operating all equipment in such a manner that, if a manatee moves closer than 50 feet to equipment, the equipment shall be immediately shut down.

(5) Any collision with and/or injury to a manatee shall be reported immediately on the "Manatee Hotline" and to the U.S. Fish and Wildlife Service.

(6) A minimum of one three-foot by four-foot temporary manatee awareness construction sign labeled "Manatee Habitat--Idle Speed in Construction Area" shall be installed and maintained at prominent locations within the construction area/docking facility prior to initiation of construction.

(7) The contractor shall keep a log detailing manatee sightings, collisions, or injury to manatees should they occur. Following project completion, a report summarizing incidents and sightings will be submitted to the Florida Department of Environmental Protection, Marine Mammal Section, and the U.S. Fish and Wildlife Service.

(c) Best management practices requirements. For all permits issued under the provisions of this article, the permitted activity shall not cause Shoreline erosion, unreasonable interference with navigation, or poor water quality. For all such permits other than permits for Docks, Piers, Boat Lifts, and similar water-dependent structures, the following best management practices for control of erosion, siltation and turbidity shall apply:

(1) All fill utilized shall be free of debris and compatible with the existing soil.

(2) Erosion control devices shall be placed along the Top of the Bank in order to minimize soil from entering the water body or Wetland. The Administrator shall be notified prior to commencing any dredge or fill operation, to insure that all preliminary Dredging procedures (i.e., installation of turbidity curtains, barriers, erosion control devices, dewatering site, etc.) have been properly followed.

(3) Two rows of turbidity curtains shall be used during all Dredging and Filling projects. These curtains shall encircle the entire site, from Shoreline to Shoreline, be staked in place, and reach the submerged bottom at all times.

(4) All inorganic material (i.e., concrete, styrofoam, cans, bottles, metals, etc.) and construction debris shall be removed from the Shoreline and disposed of in accordance with State and local regulations.

(5) With all maintenance Dredging or major work permit applications, the Applicant shall submit a best management practices plan for erosion, siltation and sediment control. No cutting, clearing, grading or Filling shall be accomplished on any site under development unless appropriate devices, as shown in the approved best management practices plan, have been installed to minimize pollution from objectionable materials, to control erosion, and to remove sediment from surface water runoff and protected habitats. Appropriate techniques shall also be utilized to stabilize and revegetate disturbed areas as soon as possible.

(6) With all maintenance Dredging or major work permit applications, the Applicant shall submit a water quality monitoring plan, which shall be subject to approval by the Administrator. The approved plan shall be implemented throughout construction of the permitted activity.

(Ord. No. 97-094, § H(7.2), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-666. Administrative procedures for major work permits.

(a) The Authority, based on evidence and testimony adduced at a public hearing, shall make findings of fact and determine whether or not the proposed plan or development will adversely affect any of the criteria listed in Section 54-664(a). Said finding of fact and determination shall be reduced to writing and shall be filed with the Clerk of the Authority.

(b) Any Person, including the State of Florida, Sarasota County, and any municipal corporation in said County, in the event they are aggrieved by the findings of fact and determination of the Authority, may, within 15 days of such findings and determination, petition for rehearing, stating specifically in the petition the grounds upon which the governing authority has erred in its findings and wherein they are aggrieved by said findings. The governing authority may, in its discretion, grant or deny such rehearing.

(c) Any Person, including the State of Florida, Sarasota County, and any municipal corporation in said County, who is aggrieved by the Authority's ruling on the petition for

rehearing shall have the right to have the entire cause reviewed by the Circuit Court in and for Sarasota County as provided by the Florida Rules of Appellate Procedure.

(Ord. No. 72-084, § 7, 10-10-1972; Ord. No. 97-094, § H(7.3), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Cross references: Administration, ch. 2.

Sec. 54-667. Administrative procedures for minor work permits.

(a) The duty and authority to review applications for minor work permits and issue or deny same is hereby delegated to the Administrator. In exercising this duty and authority, the Administrator shall have the same responsibility and authority as the Board of County Commissioners acting as the governing body of the Water and Navigation Control Authority. No public hearing shall be required for the issuance of any such minor work permit and no review of the issuance of same shall be required by the Authority.

(b) All Applicants shall submit documentation of compliance with all pertinent permit requirements, as well as documentation that the Applicant owns or has authority to use the submerged lands that will be affected by the project, in the form specified by the Administrator, before the Administrator will review the application. Applicants are responsible for securing all approvals required by private property restrictions or by other regulatory agencies.

(c) Every application for a minor work permit shall be approved or denied within approximately 35 working days after receipt of the original application. The review time will be adjusted if the Applicant is required to provide additional information or correction of errors or omissions. If revised plans conforming to requested additional information are not submitted within 30 working days after receipt of notice of the need for revisions, the permit application shall be deemed withdrawn, unless a written request for an extension is approved by the Administrator. Failure to satisfy the review timeframe shall not result in approval by default of the application for a permit.

(d) No minor work permit shall be issued until the Administrator determines that the effects of the proposed construction will meet the criteria provided in Section 54-664(a).

(e) The Applicant or owner may appeal any determination by the Administrator in reviewing an application for a minor work permit. Upon receipt of an appeal, the Administrator shall schedule an administrative hearing within 45 calendar days and with seven days' notice to the appellant. This hearing shall be conducted by the Authority in the same manner as the other evidentiary hearings held pursuant to Section 54-657. Upon

review, the Authority may either affirm, remand, reverse, or modify the administrative determination, and shall have the powers of the Administrator from whom the appeal is taken.

(f) In order to defray the cost of the issuance of said permits and the inspection work performed there under, the Authority may by resolution provide for a schedule of fees. Applicants for after-the-fact permits shall be charged three times the regular fee in addition to any fines and penalties assessed.

(Ord. No. 72-084, § 7(a), 10-10-1972; Ord. No. 74-032, § 1, 8-6-1974; Ord. No. 97-094, § H(7.4), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Cross references: Administration, ch. 2.

Sec. 54-668. Administrative procedures for general permits.

(a) The duty and authority to review applications for general permits and to issue or deny same is hereby delegated to the Administrator. In exercising this duty and authority, the Administrator shall have the same responsibility and authority as the Board of County Commissioners acting as the governing body of the Water and Navigation Control Authority. No public hearing shall be required for the issuance of any such general permit and no review of the issuance of same shall be required by the Authority.

(b) All Applicants shall submit documentation of compliance with all pertinent permit requirements, as well as documentation that the Applicant owns or has authority to use the submerged lands that will be affected by the project, in the form specified by the Administrator, before the Administrator may issue the permit. Applicants are responsible for securing all approvals required by private property restrictions or by other regulatory agencies.

(c) Every application for a general permit shall be approved or denied within approximately ten working days after receipt of the original application or receipt of requested additional information or correction of errors or omissions. Failure to satisfy the review timeframe shall not result in approval by default of the application for a permit.

(d) No general permit shall be issued until the Administrator determines that the effects of the proposed maintenance work will meet the criteria provided in Section 54-664(a).

(e) The Applicant or owner may appeal any determination by the Administrator in reviewing an application for a general permit. Upon receipt of an appeal, the Administrator shall schedule the hearing within 45 calendar days and with seven days' notice to the appellant. This administrative hearing shall be conducted by the Authority in the same manner as the other evidentiary hearings held pursuant to Section 54-657. Upon review, the Authority may either affirm, remand, reverse, or modify the administrative determination, and shall have the powers of the Administrator from whom the appeal is taken.

(f) In order to defray the cost of the issuance of general permits and the inspection work performed there under, the Authority shall by resolution provide for a schedule of fees. Applicants for after-the-fact permits shall be charged three times the regular fee in addition to any fines assessed.

(Ord. No. 97-094, § I, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Cross references: Administration, ch. 2.

Sec. 54-669. Specific permit requirements for Docks, Piers, Davits, and other similar structures.

The provisions of this article shall not deny any right of an upland owner to construct a Dock, Pier or wharf in front of his upland recognized by the Constitution and laws of the State, but said Authority may make reasonable rules, regulations and impose permit conditions for the construction hereof in order to carry out the provisions and intent of this article, including the standards provided in this section. The construction of Docks, Piers, decks, mooring piles, Davits, Boat Lifts, or other similar structures under minor work permits shall be subject to the minimum standards for issuance of a permit as described in this section. Any proposed construction that does not meet the minimum standards as described in this section may only be authorized as major work under a major work permit, in accordance with the provisions of Section 54-657. Permits shall be issued for Water-Dependent Activities only. All permits shall be issued with a requirement that the permittee or contractor shall provide written certification and as-built plans to the Authority that structures or other alterations have been constructed in accordance with the authorized plans.

(1) Water-dependent structures (including Docks, Piers, decks, mooring piles, Davits, Boat Lifts, and other similar structures) and vessels shall conform to the following siting criteria;

a. No structure, moored vessel, or combination thereof may occupy more than 25 percent of the width of any waterway or extend more than 300 feet from the Shoreline as measured across open water, whichever is

less. No such structure, moored vessel, or combination thereof shall be located closer than 25 feet to the centerline of any channel typically used for navigation, except where the channel is less than 83 feet wide. All structures and vessels shall be located a minimum of 100 feet from the near edge of the Intracoastal Waterway channel, unless specific authorization is obtained from the U.S. Department of Army, Corps of Engineers.

b. All structures except Marginal Docks must be set back a minimum of 25 feet from the Applicant's riparian rights line. Marginal Docks may be set back only ten feet. There shall be no exceptions to the setbacks unless the Applicant's Shoreline frontage is less than 65 feet or a sworn affidavit of no objection is obtained from the affected adjacent upland riparian owner, or the proposed structure is a subaqueous utility line. A certified riparian rights survey by a professional land surveyor may be required by the Administrator.

c. For upland properties or easements where the shore frontage is less than 65 feet, only a minimally sized dockage facility shall be authorized for the purpose of mooring only one vessel. The Dock structures and mooring area shall be centered within, and occupy no more than 50 percent of, the available shore frontage, with allowances to the centering requirement made for the Preservation of Littoral Zone vegetation.

d. All structures and vessels shall be located in a manner that minimizes either direct or inadvertent alteration or destruction of seagrasses, Wetland vegetation, bottom sediments, and benthic fauna. Vessel Draft of any vessels berthed at a structure authorized pursuant to this section shall be restricted so as to maintain a minimum clearance of one foot as measured at mean low water over any submerged bottomlands or tops of seagrasses. Where no seagrasses exist, the one-foot minimum clearance shall be reduced to zero clearance in manmade canals or Previously Dredged Portions of coastal streams, as identified in Apoxsee. This seagrass restriction shall apply both to the berthing area within a ten-foot radius around the structure, as well as to the entire travelway between the structure and the nearest channel. Any Dredging of a submerged bottom in violation of any State, federal or local law or regulation, including propeller Dredging, shall not be deemed "previously dredged" for purposes of applying the zero clearance exemption authorized by this section. Upon request of the owner, the Administrator may be letter, and without charge, modify and existing permit to conform to the current

Vessel Draft standards. If the mean low water depth is not sufficient to meet the requirements of this subsection (1)d., the Applicant shall have the following options:

1. Revise the location or configuration of the proposed Dock to provide a mooring area with adequate water depth, if possible to do so while maintaining compliance with all other siting and design criteria listed in this section; or
  2. Revise the application to request a fishing Pier instead of a Dock; or
  3. Execute a declaration of restrictive covenants, limiting the draft of any vessel utilizing the Dock, and record this declaration within the public records of Sarasota County. This declaration may be modified or voided in the future if the requirements of this article become less stringent, or if changes to the mean low water depth occur such that the Vessel Draft restriction is no longer warranted. A model of the declaration of restrictive covenants is attached as Appendix II of this article [Section 54-679]; or
  4. Revise the application to include maintenance Dredging of the mooring area and/or areas of ingress and egress; or
  5. Withdraw the application. The lack of adequate water depth necessary to maintain the minimum vessel clearance shall be sufficient grounds for denial of a permit.
- e. No more than one Dock or Pier shall be located at a single-family residence or at an upland residential parcel of property zoned for single-family use. It shall not be used for the purpose of mooring more than two vessels unless use is shared with an adjacent riparian property upon which no Dock or Pier exists. The two-vessel restriction shall not include personal watercraft, or canoes, kayaks, rowboats or other similar vessels. For the purposes of this article, a riparian easement holder, where the lawfully written and executed easement specifically provides for constructing, maintaining and utilizing a Dock or Pier, is deemed to have sufficient interest in upland property to obtain a permit for Dock construction, subject to all other applicable criteria as stated herein.

f. No water-dependent structures located adjacent to Shorelines that front on the Gulf of Mexico shall be approved under minor work permits. Such structures shall only be reviewed as proposed major work, and shall be authorized only if they meet the criteria for major work permits. This limitation shall also apply to the Shorelines of Siesta Key along Big Sarasota Pass that are directly exposed to the open waters of the Gulf of Mexico. For the purposes of this paragraph, the Shorelines of Big Sarasota Pass directly exposed to open waters of the Gulf of Mexico shall include only those Shorelines southerly of the intersection of the municipal boundary of the City of Sarasota with the waters of Big Sarasota Pass along Siesta Key.

g. No living, fueling, or enclosed storage facilities (except boathouses constructed in accordance with the provisions of subsection (2)e. of this section) shall be located over the water, except that fueling facilities may be authorized only as part of commercial marina operations.

h. Should the design of a new structure protrude into the waterway where there is a reasonable potential for Creation of a marine navigational hazard, or if the Dock extends beyond other Docks in the area, adequate safety lighting shall be installed at the end of the Dock or mooring piling, and operated every night from dusk to dawn. It shall be the responsibility of the property owner to maintain safety lighting on the Dock.

(2) Docks and Piers shall conform to the following dimensional and structural guidelines.

a. The Preempted Area associated with any Dock authorized pursuant to this article shall be restricted so as to provide for a maximum square footage not to exceed ten square feet for each one linear foot of shore frontage within the parcel of property for which a permit is sought. For any docking facility authorized in association with a riparian easement, the Preempted Area allowance shall be limited so as not to exceed the total Preempted Area allowed for the parcel which the easement traverses.

b. The Terminal Platform, together with any catwalks or finger Piers, shall not exceed 250 square feet, nor eight feet in width. In areas of an aquatic preserve, the size of the Terminal Platform shall not exceed 160 square feet.

c. The Access Ramp shall not exceed four feet in width, and may be required to include a handrail in order to preclude vessel moorage along the Access Ramp.

d. Marginal Docks shall not exceed 250 square feet, nor eight feet in width, and shall be designed to minimize impact to vegetated Littoral Zones.

e. Boathouses and vessel lifting shall be considered a part of a Dock structure for the purposes of calculating maximum square footage of the Preempted Area. Boathouses shall not exceed a maximum size of 250 square feet, including the Terminal Platform area. Square footage of the boathouse shall be measured at the perimeter of the support piles, and a maximum allowance for roof overhang shall be three feet. Boathouses and vessel lifting devices must have open sides, and shall not exceed 15 feet in height as measured from mean high water. Boathouses must have a pitched roof of not less than four feet horizontal to one foot vertical slope. All such roofs shall comply with the minimum design and construction standards contained within the Southern Building Code, and shall not contain cementitious tile shingles.

f. The minimum decking elevation over seagrass shall be five feet above mean high water. The decking and walking surfaces shall be designed and constructed to ensure a maximum of light penetration through the Dock. Maximum plank width shall be ten inches with a minimum of one-half-inch spacing required between decking planks.

g. Piers shall have nondetachable handrails affixed to the perimeter of the Terminal Platform. A permanent sign shall be posted on the Pier which reads "Fishing Pier--Motorized Vessel Access Prohibited."

(3) Davits shall conform to the following design and location criteria.

a. The Davits are mounted directly on wood or concrete pilings.

b. Water depths at the proposed installation location comply with subsection (1)d. of this section.

c. The installation of the Davits will not define more than two slips for a single-family Dock.

(4) The Administrator is authorized to issue permits for construction of Docks and Piers that do not conform to the technical standards provided in this section where issuance of the permit is necessary to comply with federal or State law, or where the Administrator determines that the proposed deviation is required by the unique characteristics of the site. In either case, all proposed work must meet the criteria provided in Section 54-664(a).

(Ord. No. 72-084, § 9, 10-10-1972; Ord. No. 97-094, § K, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-670. [Permit duration.]

No permit shall be issued for more than a three-year period. Work under said permit must be commenced within one year from the date of issuance and shall be completed within three years from the date of issuance of said permit; in the event said work is not commenced or completed within said periods, reapplication shall be made to the Authority. For any noncompliance with, or for violations of, its terms, the permit may be revoked after notice of intent so to do has been furnished by the Authority and opportunity afforded within reasonable time for hearings thereon.

(Ord. No. 72-084, § 10, 10-10-1972; Ord. No. 97-094, § L, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-671. [Purchase of Sovereignty Land.]

Applicants for the purchase of Sovereignty Lands from the Trustees of the Internal Improvement Fund of the State of Florida shall, concurrently with the filing of said application with the Trustees of the Internal Improvement Fund, file a copy of their application with the Authority, together with such other information as said Authority may require. The Authority shall then set a public hearing and publish notice of such public hearing two times in a daily newspaper of general circulation in the area that is qualified to publish legal notices, at least one week prior to said public hearing. That said notice shall state the legal description of the land to be purchased, together with a general description of the land to be purchased, and shall also include a plat or drawing showing the location of said land as it relates to the surrounding area. An affidavit of proof of said publication shall be furnished to the Authority before its consideration of said application. The Authority shall further cause notices to be sent by registered mail or personal service to each of the upland property owners within 500 feet of the land to be purchased, and such other upland property owners as the Authority deems might be adversely affected by the proposed sale of said land; and such notices shall be substantially the same as are required to be published in a newspaper, as hereinbefore provided. All municipalities or other public agencies who may be affected by the sale of said land shall also be notified by registered mail as hereinbefore provided.

(1) At said public hearing, the Authority will consider what recommendations it will submit to the Trustees of the Internal Improvement Fund of the State of Florida. All of the proponents and opponents of the sale of said land shall be heard by the Authority at said public hearing; and the Authority shall then determine its recommendations, which recommendations it shall immediately cause to be submitted in writing to the Trustees of the Internal Improvement Fund.

(2) In considering its recommendations, the Authority may obtain such engineering and other data and hear such testimony under oath as it may deem necessary.

(3) The Authority shall assess such filing fees and costs as may be necessary for the filing, processing and determination of the application to purchase submerged lands; provided, however, such fees and costs shall not exceed \$100.00.

(4) The recommendations of the Authority as submitted to the Trustees of the Internal Improvement Fund, irrespective of whether they be adverse or favorable, shall not in any way affect any subsequent action of the Authority on an application of [for] a permit or permits to develop said land under the provisions of this article.

(Ord. No. 72-084, § 11, 10-10-1972; Ord. No. 97-094, § M, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-672. Civil and administrative enforcement powers.

(a) The Authority or Sarasota County shall have the power to enforce the provisions of this article, or any permit issued hereunder, by equitable or legal judicial proceedings, including the power to enjoin violations by mandatory and prohibitory injunctions, as well as the power to enforce its findings and determinations by injunction or other legal or administrative process, including code enforcement proceedings as set out in Ordinance No. 93-006, as amended (Chapter 2, Article VIII, of this Code). Each day of any such violation shall constitute a separate and distinct offense.

(b) The Administrator is hereby authorized to issue a stop work notice to a Person where the Administrator determines that work at the site;

(1) Is proceeding in violation of this article or a permit issued hereunder; or

(2) Poses an imminent and significant hazard to the public health, safety, or welfare, or to the environment.

(c) No permit may be issued to improve or expand any facility constructed or modified in violation of this article or a permit issued hereunder, unless the violation has been corrected.

(Ord. No. 72-084, § 14, 10-10-1972; Ord. No. 88-082, § 1, 8-2-1988; Ord. No. 97-094, § O, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-673. [Criminal enforcement powers.]

A violation of any of the provisions of this article or of any regulations adopted or permit conditions approved pursuant to this article shall be punishable in the same manner as a misdemeanor as provided by law. Each day of any such violation shall constitute a separate and distinct offense.

(Ord. No. 72-084, § 15, 10-10-1972; Ord. No. 97-094, § P, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-674. [Interpretation.]

The provisions of this article shall be liberally construed in order to effectively carry out its purpose. Where any provision of this article refers to or incorporates another provision, ordinance, statute, rule, regulation, policy, official publication, or other authority, it refers to the most current version, incorporating any amendments thereto or redesignation thereof.

(Ord. No. 72-084, § 17, 10-10-1972; Ord. No. 97-094, § R, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-675. [Severability.]

It is declared to be the legislative intent that, if any section, subsection, sentence, clause or provision of this article is held invalid, the remainder of this article shall not be affected.

(Ord. No. 72-084, § 18, 10-10-1972; Ord. No. 97-094, § S(18), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-676. [Conflict with State law.]

All laws or parts of laws in conflict herewith are hereby repealed and F.S. § 271.01 (sec. 1, ch. 8537, 1921) is hereby specifically repealed to the extent that it is inconsistent with the provisions of this article.

(Ord. No. 72-084, § 19, 10-10-1972; Ord. No. 97-094, § S(19), 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-677. Sunset provision.

This article shall be automatically reviewed by June 30, 2008, unless otherwise amended or ratified by the Board of County Commissioners of Sarasota County, Florida.

(Ord. No. 97-094, § U, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-678. Appendix I, riparian habitat planting guidelines.

Riparian habitat planting guidelines [are as follows.]

- (1) Wetland grasses, such as *Spartina* and *Juncus*.
  - a. Minimum one-gallon plants to provide for adequate anchoring of planted stock on two-foot spacing to provide an adequate coverage for stabilizing soil.
  - b. One-gallon at two-foot centers.
- (2) Mangroves. We recognize that healthy black mangroves are available in limited sizes.
- (3) Black mangroves. Minimum one-gallon plants on two-foot spacing.
- (4) Red mangroves, white mangroves, green buttonwoods.
  - a. Three-gallon at three-foot centers.
  - b. Seven-gallon at five-foot centers.
- (5) All herbaceous. One-gallon at two-foot centers.
- (6) Shrubs

- a. One-gallon at three-foot centers.
  - b. Three-gallon at five-foot centers.
- (7) Upland trees. Three-gallon at ten-foot centers (with under story); eight-foot centers without.
- (8) Beaches or dunes.
- a. Herbaceous. Plugs on one-foot centers or one-gallon on two-foot centers.
  - b. Sea grapes. Three-gallon on eight-foot spacing. All nursery stock from 100-mile radius.

GRAPHIC LINK: Typical Salt Water Shoreline

(Ord. No. 97-094, app. I, 5-26-1998; Ord. No. 2001-051, § 2, 9-12-2001)

Sec. 54-679. Appendix II, declaration of restrictive covenants.

[The declaration of restrictive covenants is as follows:]

DECLARATION OF RESTRICTIVE COVENANTS

This Declaration of Restrictive Covenants is made on the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by \_\_\_\_\_, hereinafter referred to as "Owners."

RECITALS:

Whereas, Owners are the owners in fee simple of or holders of riparian rights appurtenant to property located in Sarasota County, Florida, with a street address of \_\_\_\_\_, Florida, more particularly described as follows:

[Description]

hereinafter referred to as the "Property."

Whereas, Owners desire to construct a Dock extending from the Property into a water body in Sarasota County and pursuant to County Ordinance No. 72-084, as amended, have submitted an application for the construction of said Dock to the Sarasota County Water and Navigation Control Authority (WNCA); and

Whereas, Owners acknowledge that in order to protect valuable marine habitats and resources it is the policy of Sarasota County and WNCA to prevent Dredging and propeller scouring of submerged bottom lands in Sarasota County in accordance with the policies of Apoxsee, the Revised and Updated Sarasota County Comprehensive Plan, and Ordinance No. 72-084, as amended; and

Whereas, WNCA has agreed to issue a permit for the construction of said above-referenced Dock in accordance with the terms and conditions hereinafter set forth; and

Whereas, in consideration of the granting of said permit Owners have agreed to make this Declaration of Restrictive Covenants to attach to and be binding upon the land and to bind Owners, their grantees, heirs, easement holders, successors and assigns.

Now therefore, in consideration of the granting of the aforementioned permit, and for other good and valuable consideration, Owners and their easement holders hereby covenant and declare as follows:

1. Owners and Easement Holders shall construct a Dock extending from the Property only in accordance with the requirements, conditions, approved plans and stipulations of the Minor Work Permit No. \_\_\_\_\_, dated \_\_\_\_\_, issued to Owners and Easement Holders by the WNCA, hereinafter referred to as the "Permit."

2. Any Dock constructed pursuant to the Permit shall be for the private use of residents of the dwelling unit located on the Property, their Easement Holders, their guests and invitees, and shall not be used for commercial, revenue generating or income-related activity.
3. Vested egress/ingress depths to the authorized Dock structure are restricted by a controlling depth of \_\_\_\_\_ mean low water. "Mean low water" shall have the meaning provided in F.S. § 177.27.
4. To eliminate or reduce damage to submerged bottom lands and marine vegetation during egress/ingress, no vessel with a draft of greater than \_\_\_\_\_ feet (\_\_\_\_\_ inches) shall be moored or operated in the vicinity of the Dock. "Draft," as used herein, shall be the distance between the highest point to which the water body rises on the vessel's exterior hull and the bottom portion of the keel or fixed drive unit, whichever is lower. "Vicinity of the Dock" as used herein shall refer to the area within a fifty (50) foot radius of the center of any vessel mooring area along or adjacent to said Dock.
5. As a condition of the granting of a Dock permit to Owners and Easement Holders, Owners and Easement Holders covenant and agree that at all times a minimum distance of 12 inches shall be maintained between the submerged bottom and the point of maximum draft of any vessel moored or operated within the vicinity of the Dock. The purpose of this covenant is to prevent propeller Dredging of the submerged bottom within the vicinity of the Dock.
6. Representatives of Sarasota County and/or the WNCA shall have the right to inspect the vicinity of the Dock and the exterior bottom of any vessels moored at the Dock at any time without notice to Owners to determine whether the restrictions and covenants provided herein have been violated.
7. The WNCA shall have the right to enforce the restrictions and covenants set forth herein by equitable or legal judicial proceedings, including injunction to require removal of the Dock or Mitigation of damage, in addition to any other method or remedy provided by law for enforcement of a county ordinance.
8. The restrictions and covenants made herein shall encumber and run with the Property and be binding upon the Owners, Easement Holders, their grantees, successors and assigns forever.

# **APPENDIX C**

## **KEY TO MANATEE RELATED SITING CRITERIA**

## MARINA CONSTRUCTION/EXPANSION CRITERIA

### MANATEE RELATED CRITERIA ONLY

Results of criteria are illustrated in **Figures II.1 through II.9 ~ Facility Siting Areas Evaluation Based on Manatee Criteria.**

- 1) *Is the proposed construction / expansion located within a priority manatee area?*  
(See **Figures I.26 through I.29**)

Yes = **Not Recommended**

No = go to **2**

- 2) *Is the proposed construction / expansion located within a secondary manatee area?*  
(See **Figures I.26 through I.29**)

Yes = go to **3**

No = go to **12**

- 3) *Would the majority of boat traffic also impact a priority manatee area?*  
(These are defined as the areas that are in direction toward the nearest inlet)

Yes = go to **4**

No = go to **8**

- 4) *Distance to nearest inlet*

less than 1 mile = go to **5**

1 to 3 miles = go to **6**

greater than 3 miles = go to **7**

- 5) *Number of proposed wet slips / dry slips / parking spaces (if ramp)*

5 to 9 = **Conditional**

10 to 99 = **Conditional**

100 or greater = **Conditional**

6) *Number of proposed wet slips / dry slips / parking spaces (if ramp)*

5 to 9 = **Conditional**  
10 to 99 = **Conditional**  
100 or greater = **Not Recommended**

7) *Number of proposed wet slips / dry slips / parking spaces (if ramp)*

5 to 9 = **Conditional**  
10 to 99 = **Not Recommended**  
100 or greater = **Not Recommended**

8) *Distance to nearest inlet*

less than 1 mile = go to **9**  
1 to 3 miles = go to **10**  
greater than 3 miles = go to **11**

9) *Number of proposed wet slips / dry slips / parking spaces (if ramp)*

5 to 9 = **Recommended**  
10 to 99 = **Recommended**  
100 or greater = **Conditional**

10) *Number of proposed wet slips / dry slips / parking spaces (if ramp)*

5 to 9 = **Recommended**  
10 to 99 = **Conditional**  
100 or greater = **Conditional**

11) *Number of proposed wet slips / dry slips / parking spaces (if ramp)*

5 to 9 = **Conditional**  
10 to 99 = **Conditional**  
100 or greater = **Not Recommended**

12) *Is a significant amount of boat traffic expected to impact any established manatee areas?*

Yes, potential impacts to Priority areas = go to **13**  
Yes, potential impacts to Secondary areas = go to **16**  
No = **Recommended**

*13) Distance to nearest inlet*

less than 1 mile = go to **14**  
1 to 3 miles = **Conditional**  
greater than 3 miles = go to **15**

*14) Number of proposed wet slips / dry slips / parking spaces (if ramp)*

5 to 9 = **Recommended**  
10 to 99 = **Conditional**  
100 or greater = **Conditional**

*15) Number of proposed wet slips / dry slips / parking spaces (if ramp)*

5 to 9 = **Conditional**  
10 to 99 = **Conditional**  
100 or greater = **Not Recommended**

*16) Distance to nearest inlet*

less than 1 mile = go to **17**  
1 to 3 miles = go to **18**  
greater than 3 miles = **Conditional**

*17) Number of proposed wet slips / dry slips / parking spaces (if ramp)*

5 to 9 = **Recommended**  
10 to 99 = **Recommended**  
100 to 199 = **Conditional**

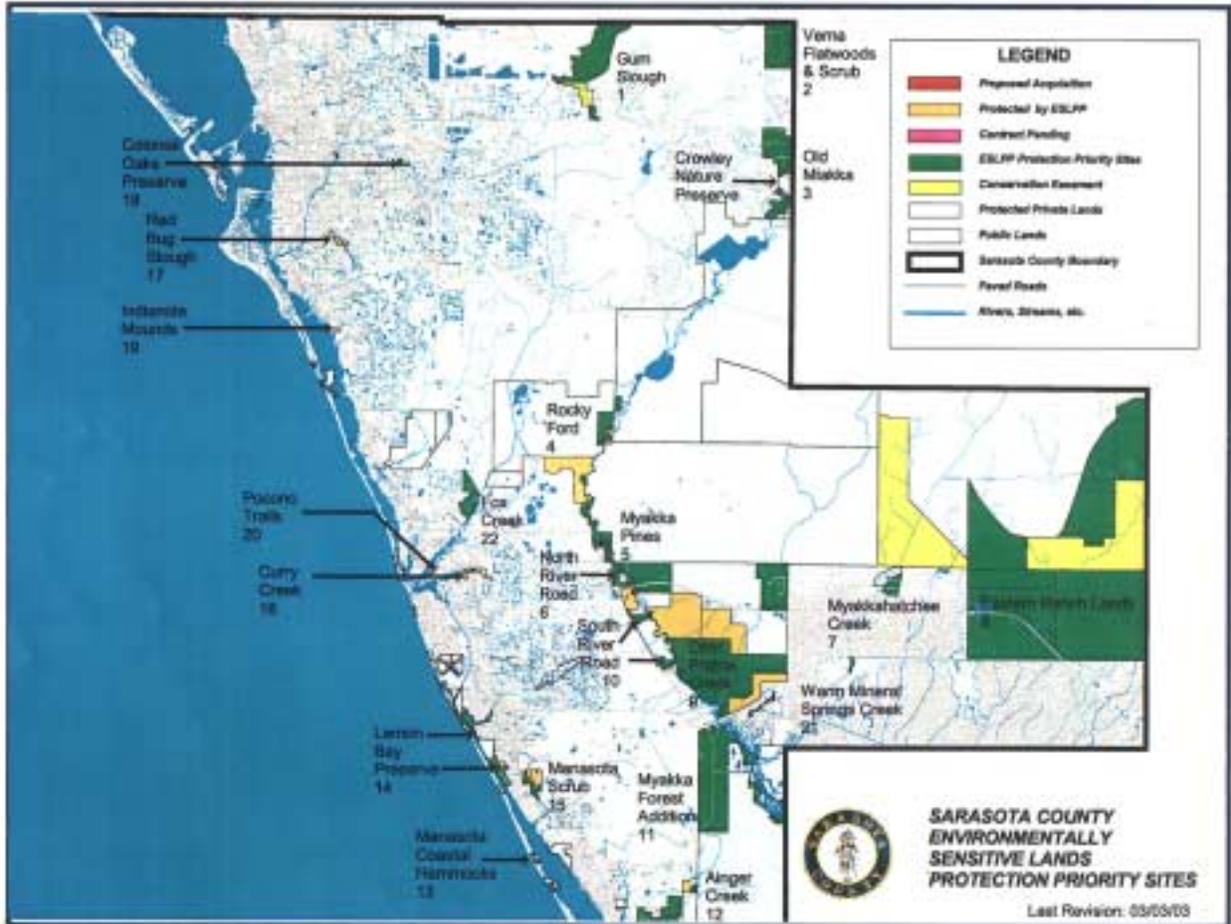
*18) Number of proposed wet slips / dry slips / parking spaces (if ramp)*

5 to 9 = **Recommended**  
10 to 99 = **Conditional**  
100 to 199 = **Conditional**

# **APPENDIX D**

## **ENVIRONMENTAL SENSITIVE LANDS PROTECTION PROGRAM PRIORITY SITES**

### Environmentally Sensitive Lands Protection Program Priority Sites



**Expanded View of Warm Mineral Springs Creek Priority Protection Site**

