

SARASOTA COUNTY MANATEE PROTECTION PLAN

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EXECUTIVE SUMMARY

This document represents a required comprehensive five-year revision to the Sarasota County Manatee Protection Plan (MPP). The overall purpose of this document is to compile and review updated information on manatee use in Sarasota County in order to provide management guidance targeted at reducing 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 the protection of wetlands and seagrasses, boat facility siting, recreational waterway use, boating access, zoning and future land use, and other issues related to potential impacts to marine and coastal resources. While the Sarasota County MPP is a County-generated document, the product is the result of extensive coordination and cooperation with the Florida Fish and Wildlife Conservation Commission (FWC), the US Fish and Wildlife Service (USFWS), law enforcement agencies, local municipalities, numerous stakeholder groups, and other interested parties.

Along with providing updates on manatee use in Sarasota County, this MPP revision also re-examines protection criteria and management strategies aimed at reducing human-related threats to manatees and natural resources within Sarasota County. The specific components of this document include:

- Updated information on boat facilities (marinas, docks, boat ramps, etc.) in Sarasota County
- An assessment of boating activity patterns in Sarasota County based upon newly available scientific data
- Updated information on manatee use in Sarasota County, including recent mortality data
- A review of recent water quality and habitat information, including seagrasses
- Updated manatee protection measures, including revisions to boating speed zones
- A revised Boat Facility Siting Plan (BFSP) to determine the best areas for new marinas, boat ramps, etc.*
- A review of information on aquatic preserves, Outstanding Florida Waters, manatee refuges, etc., in Sarasota County
- A review of available information on environmental education and awareness programs in Sarasota County
- A revised implementation schedule / timeline for completion

* - *The facility siting plan does not pertain to single family docks or projects proposing four or fewer new slips; only projects involving the expansion / construction of five or more slips are governed by the MPP.*

This information is analyzed to develop measures to protect manatees and their habitat from expected risks. Recent scientific data on manatees in Sarasota County were extensively reviewed. Available datasets included recent population, aerial surveys, land and boat-based field studies, manatee mortality data, and tracking / telemetry data. Based upon these data, the following areas were considered to be high use manatee habitat within Sarasota County:

1. Buttonwood Harbor
2. Pansy Bayou / City Island Grassflats

3. Hudson Bayou
4. South Sarasota Bay, including the waters inside Big Sarasota Pass
5. Roberts Bay (Sarasota)
6. Little Sarasota Bay in proximity to the former Midnight Pass
7. Portions of Blackburn Bay
8. Lemon Bay, including Forked Creek
9. The Upper Myakka River, including Salt Creek

Additional moderate use manatee areas were also identified. These areas included:

1. The southern portion of Longboat Key
2. Whitaker Bayou
3. The Hyatt Boat Basin and the Marina Jack area
4. Portions of Little Sarasota Bay and Blackburn Bay
5. Venice Inlet, including Dona Bay, Lyons Bay, and Roberts Bay
6. Venice Bypass Canal

While some revisions in manatee use designations have been made since 2003, the total amount of coastal waterway (total length of shoreline) in Sarasota County designated as manatee habitat overall has changed by less than five percent.

A primary component of this document was the re-examination of the facility siting criteria, which addresses future boat-related construction and expansion as it relates to manatees and other natural resources. Three principal factors were used for facility siting consideration:

- The number of the proposed slips at the facility (creation or expansion)
- The location of the proposed facility creation or expansion
- The projected sphere of influence of the proposed facility

In order to provide more facility siting options in the appropriate locations, an additional facility size designation was also created. The original 2003 Sarasota County MPP identified an intermediate-size facility construction / expansion of 10-99 slips. This designation has been divided into two facility size categories: 10-49 slips and 50-99 slips.

Changes to both manatee use designations and facility siting criteria have resulted in changes in siting outcomes in some areas. In general, the siting criteria developed in this revision are somewhat less restrictive for facility construction or expansion of less than 50 slips, and somewhat more restrictive for facility construction / expansion of 50 or more slips. For example, the amount of Sarasota County coastal shoreline designated as “Recommended” for facility construction or expansion of 5 to 9 slips has increased County-wide by approximately six percent, and the amount of coastal shoreline designated as either “Recommended” or “Conditional” for facility construction or expansion of 10 to 49 slips has increased County-wide by approximately five percent. The amount of coastal shoreline designated as either “Recommended” or “Conditional” for larger facility construction or expansion (greater than 99 slips), however, has decreased by approximately four percent. Areas with less restriction include northern Sarasota Bay, Phillippi Creek, portions of Little Sarasota Bay, and the Venice Bypass Canal. Areas with greater restriction include portions of

southern Sarasota Bay, Roberts Bay (Sarasota), and Blackburn Bay. While some changes have occurred, most of the Sarasota County shoreline is essentially unchanged from the original facility siting designations. Areas with essentially the same outcomes include Longboat Key, St Armands Key, Lido Key, New Pass, Big Sarasota Pass, and all coastal shoreline associated with Lemon Bay and the Myakka River. Facility siting changes were driven by newly available scientific data on manatee distribution, along with the modifications to the original facility siting criteria discussed in this report.

Other screening processes identified in the 2003 Sarasota County MPP related to zoning, present and future land use, water depth, water quality issues, and other natural resource issues (seagrasses, wetlands, etc.) also need to be addressed 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.

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LIST OF ABBREVIATIONS

BCC	Board of County Commissioners
BFSP	Boat Facility Siting Plan
DEP	Florida Department of Environmental Protection
DLE	Florida Division of Law Enforcement
EAR	Evaluation Appraisal Report
ESA	Endangered Species Act
ESLOC	Environmentally Sensitive Lands Oversight Committee
ESLPP	Environmentally Sensitive Lands Protection Program
FBIP	Florida Boating Improvement Program
FWC	Florida Fish and Wildlife Conservation Commission
FWRI	FWC Fish and Wildlife Research Institute
ICW	Intracoastal Waterway
ISM	FWC Imperiled Species Management Section
MIPS	Manatee Individual Photo-Identification System
MML	Mote Marine Laboratory
MMP	Manatee Management Plan
MPP	Manatee Protection Plan
MRP	Manatee Recovery Plan
MRRP	Monofilament Recycling and Recovery Program
MRPZ	Myakka River Protection Zone
NMFS	National Marine Fisheries Service

PIER	Protection, Involvement, Education, and Restoration
PWC	Personal Watercraft (e.g., Jet Ski, Sea Doo)
SBEP	Sarasota Bay Estuary Program
SCW	Sarasota County Waterways
SEU	Stormwater Environmental Utility
SMC	Save The Manatee Club
STMTF	Save The Manatee Trust Fund
SWFWMD	Southwest Florida Water Management District
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey Sirenia Project
WCIND	West Coast Inland Navigation District
WNCA	Sarasota County Water & Navigation Control Authority

LIST OF DEFINITIONS

Following are the definitions for use in this plan:

Anchorage – term used by Antonini (Antonini et al., 1998) to identify in-water vessel storage either by anchor or fixed mooring device without an associated dock or boat slip.

Blatant Non-compliance – term used by Gorzelany (1996) to describe a vessel in use traveling at a speed greater than one (1) 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 MPP, 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 that 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) – term used by Gorzelany (1996) to describe any vessel in use that maintains a speed that is consistent with the posted regulatory speed.

Comprehensive Plan – an official planning document adopted by the Board of County Commissioners (BCC) that includes goals, objectives, policy direction, and decision making related to growth and physical development within Sarasota County.

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.

Florida Manatee – (*Trichechus manatus latirostris*) A large, herbivorous marine mammal inhabiting the coastal waters, rivers, and springs throughout Florida. They are listed as endangered throughout their range, primarily due to human-related impacts, habitat loss, and a low reproductive rate.

Florida Manatee Management Plan – a management plan developed by the State of Florida in 2007 that contains an overview of research programs, initiatives, and management strategies targeted toward the protection and conservation of Florida manatees.

Florida Manatee Recovery Plan – a management document developed by the USFWS, which contains a series of goals and objectives targeted at the down-listing and ultimate delisting of the endangered Florida manatee.

Florida Manatee Sanctuary Act – state legislation passed in 1978 that designated the entire State of Florida as a manatee sanctuary and created boat speed regulatory zones in areas that were determined to be at high risk to manatees.

High-Use Critical Manatee Habitat – areas in Sarasota County that were originally identified as Priority Habitat in the original 2003 Sarasota County MPP. Some areas in the northern portion of the county, including Roberts Bay and inside Big Sarasota Pass have been expanded to include adjacent areas due to recent documented manatee use.

High-Use Important Manatee Habitat – areas where relatively high manatee use has been documented over the past several years. While these are considered as high-use areas, it was determined that these areas do not meet the criteria as High-Use – Critical Manatee Habitat due to the lack of a long-term database of information indicating high-use in these areas.

Intracoastal Waterway – the primary navigable inland waterway along the Florida Gulf Coast, which extends from Tarpon Springs to Fort Myers.

Low Use Manatee Habitat – areas are essentially the same as those identified in the original 2003 Sarasota County MPP, and include areas in the northern portion of the County with relatively low documented manatee use or where limited scientific data are available.

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 that provides services available to the general public including but not limited to: rental of wet slips 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 that provides services available to the general public including but not limited to: rental of wet slips 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.

Moderate Use Manatee Habitat – areas that correspond to the locations identified as Secondary Habitat in the original 2003 Sarasota County MPP. These are areas of recurrent, though somewhat less frequent manatee use and may include travel corridors to and from other high-use areas.

Mooring – a location where one vessel is berthed or stored when not in use. Types of moorings identified by Antonini et al., (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 – definition used in the 2003 Sarasota County MPP to describe 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) or Ramp Space – 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.

Save the Manatee Trust Fund – a state-managed trust fund comprised of monies collected from the sales of specialty license plates, boat registration fees, voluntary contributions, and interest income for ongoing research and conservation efforts to protect the Florida manatee.

Secondary Manatee Areas – definition used in the 2003 Sarasota County MPP to describe 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.

Take – any activity associated with the harassment, hunting, capture, killing, or collection of marine mammals, including any attempt to engage in such conduct.

Technical Non-compliance – term used by Gorzelany (1996) to describe a vessel that is considered to be in technical violation within a speed-regulated area, 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).

Telemetry – research involving the monitoring of tagged animals through remote radio or satellite tracking.

Trailer – term used by Antonini et al. (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 and Navigation Control Authority (WNCA) – the implementing body of Chapter 54, Article XX of the Sarasota County Code of Ordinances.

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 wet slips.

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APPENDIX B	Chapter 54 , Article XX of the Sarasota County Code of Ordinances (WNCA Code)

INTRODUCTION

The Florida manatee (*Trichechus manatus latirostris*) is a recognized subspecies of the West Indian manatee, and is classified as “endangered” throughout its range at both the state and federal level. In spite of ongoing protection measures, their long term existence remains threatened by habitat loss, low reproductive capacity, and human-related activity. The adverse impact of watercraft on manatees has been well-documented. 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, 2001). As the human population continues to increase, there will be an increased environmental impact in coastal areas, leading to increasing pressures on manatee populations. Florida’s coastal counties continue to balance human growth and development with the conservation and protection of natural resources.

Florida manatees are currently 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). As a result of concerns over the long-term survival of the Florida manatee population, a Manatee Recovery Plan (MRP) was developed by the USFWS (USFWS, 1989). The objective of the MRP is the downlisting and ultimate delisting of the Florida manatee from its endangered and/or protected status. The MRP states that prior to consideration of downlisting, the threats to manatee habitat or range must be reduced, 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”

To achieve this, the following population benchmarks in each of the four manatee sub-regions must be met over the most recent 10-year period of time:

- A statistical confidence that the average annual rate of adult survival is 90% or greater,
- A 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
- A statistical confidence that the average annual rate of population growth is equal to or greater than zero

The original MRP was revised in 1996 and a third revision was completed in 2001. In conjunction with the original MRP, 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). In order to minimize human-related threats to manatees, the Florida Governor and Cabinet then directed these Counties to develop a comprehensive MPP. Based upon well-documented aerial survey data, Sarasota County voluntarily joined the original twelve key counties in 1990. As of 2007, all thirteen key counties (including Sarasota County) have developed state-approved MPPs. Two additional counties, Levy and Clay, voluntarily created MPPs, which were approved in 1995 and 2006 respectively.

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 (BFSP) to determine the best areas for new marinas, boat ramps, etc.
- Information on aquatic preserves, Outstanding Florida Waters, manatee refuges, etc.
- An inventory of 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 MPP 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 recreational planning, and protecting environmentally sensitive marine and estuarine habitat. The FWC has the authority to review and approve MPPs developed by individual counties. The State of Florida has also coordinated with the USFWS to receive comments on MPPs.

In 2001, a review of the listing process for reclassification of the Florida manatee was conducted by FWC and in 2005 a biological review panel examined the best available scientific data regarding the status of the manatee. The review panel used a core biological model to predict the probability of future declines in the population. The panel concluded that the manatee population did not meet the new criteria for classification as “endangered”, but met the new criteria for listing as “threatened”. After acceptance of the biological review panel’s findings, a Florida Manatee Management Plan (MMP) was created (FWC, 2007). This plan is complementary to the USFWS Florida MRP, with the ultimate goal of delisting the Florida manatee from both endangered and threatened status. The manatee continues to be listed as an endangered species at the state and federal level. The additional goal of the FWC Florida MMP is to effectively manage the manatee population in perpetuity. The development of MPPs remains a critical component of the Florida MMP. FWC continues to review existing MPPs to assess whether or not revisions are needed. These reviews will evaluate all relevant data collected since the approval of the previous Plan. In advance of this review, there are certain data or inventories that may need to be collected before the Plans can be fully re-evaluated. These include updated information on boat facilities, boat traffic and distribution, manatee distribution, and relevant habitat assessments. Reviews of county plans will be done in consultation with the counties and with USFWS. Some factors to be considered when setting the priority schedule for review are as follows:

- Manatee and boating data, and boat facility inventories must be more recent than when the MPP was developed or last reviewed
- Length of time since the last review of the MPP

- Identification of a particular manatee-related issue or concern that could be addressed by the MPP
- A need to clarify language in the Plan that makes implementation difficult or results in mixed interpretation

The original Sarasota County MPP was completed and adopted by the Sarasota County Board of County Commissioners (BCC) in September 2003. The document was subsequently approved by FWC and incorporated into the Sarasota County Comprehensive Plan. The current document represents a required five-year update and revision of the original 2003 Sarasota County MPP.

GENERAL SETTING

SARASOTA COUNTY WATERWAYS (SCW)

Sarasota County, located on the central Florida west coast, has a land area of 576 square miles (1,492 sq. km), 35 miles (56 km) of coastline, and a water area of approximately 153 square miles (396 sq. km). Incorporated areas within the County include the City of Sarasota, the Town of Longboat Key (located in both Sarasota County and Manatee County), the City of Venice, and the City of North Port, which together encompass 137 square miles (355 sq. km) of land area and 19 square miles (49 sq. km) of water jurisdiction. Area statistics for each municipality are provided in **Table 1**.

The Intracoastal Waterway (ICW) connects the entire Sarasota County waterway system, linking natural deep water sections through a series of manmade channels, canals and cuts. The ICW was originally intended to facilitate commercial shipping along the southwest Florida coast. Today, however, the vast majority of the ICW's functionality is devoted to recreational activities including power boating, sailing, fishing, water skiing, kayaking and canoeing (Antonini et al., 1999).

The navigable coastal waterways in Sarasota County extend from the Manatee County line in northern Sarasota Bay to the Charlotte County line in Lemon Bay. Sarasota County Waterways (SCW) also include the upper Myakka River (**Figure 1**). Waterway characteristics are divided into three sub regions: 1) the Sarasota Bay area, which extends from the Manatee County / Sarasota County line south to Venice Inlet and the Venice Bypass Canal (or Venice Airport Canal), 2) the Sarasota County portion of Lemon Bay and, 3) the Sarasota County portion of the Myakka River. These three sub regions are summarized as follows:

Sarasota Bay

The Sarasota Bay area is a sub-tropical coastal lagoon which, as defined by the Sarasota Bay Estuary Program (SBEP), is approximately 56 miles long and extends from Anna Maria Island (Manatee County) south to Venice Inlet. The Sarasota County portion includes Sarasota Bay, Roberts Bay, Little Sarasota Bay, and Blackburn Bay along with a series of relatively small tributaries; Whitaker Bayou, Hudson Bayou, Phillippi Creek, Clower Creek, Catfish Creek, North Creek, and South Creek. Tidal inlets to the Gulf of Mexico in Sarasota County include New Pass, Big Sarasota Pass, and Venice Inlet. A former tidal inlet, Midnight Pass, is currently closed. The widest section of the waterway in northern Sarasota County is greater than 3.1 miles (5 km). Most portions of the waterway are relatively shallow, with a mean water depth of less than six feet (1.8 km).

Approximately 500,000 people reside in this area and the bayfront portions of the County are mostly developed. Recent shoreline mapping identified 185.8 linear miles of bulkhead shoreline and 38.5 miles of riprap shoreline in this area. An additional 7.6 miles are dominated by nuisance or exotic species (Serviss and Sauers, 2003). 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 continual threat to native coastal vegetation. As is the case in other Florida coastal areas, significant environmental damage occurred during the 1950s and 1960s through the construction of the ICW and canal communities in the region. These projects impacted both seagrass communities and water circulation patterns.

Damage was exacerbated by stormwater and wastewater pollution as the coastal community developed (SWFWMD, 2002). Other historical changes to Sarasota Bay are also discussed in Antonini et al. (1999).

In 1987, the United States Congress named Sarasota Bay as an estuary of “national significance”. Two years later, Sarasota Bay was formerly designated as part of the National Estuary Program by the U.S. Environmental Protection Agency. Over the past two decades, significant improvement has occurred, including improvements in water quality and habitat restoration (Sarasota Bay NEP, 2000, 2006).

Lemon Bay

Lemon Bay is a relatively long, narrow estuary located south of Venice in both Sarasota and Charlotte Counties. It varies from approximately 0.5 to 1.2 miles (0.8 to 1.9 km) in width. The Sarasota County portion is approximately 9 miles (14 km) in length and approximately 0.9 miles (1.4 km) wide at its widest point. Most portions of the waterway are relatively shallow, with a mean water depth of less than five feet (1.8 m). The Lemon Bay watershed (including the Charlotte County portion) encompasses approximately 73 square miles (189 sq. km). Seven tributaries flow into Lemon Bay; two in the Sarasota County portion (Alligator Creek and Forked Creek). Tidal exchange primarily occurs from two inlets; both in the Charlotte County portion (Stump Pass and Gasparilla Pass).

Lemon Bay is relatively undeveloped, with significant mangroves, marshes, and seagrass habitat providing nursery and/or forage areas for a variety of aquatic species. Lemon Bay is one of six described areas within the greater Charlotte Harbor estuary complex to be designated by Legislature for inclusion in the Aquatic Preserve Program under the Florida Aquatic Preserve Act of 1975. Lemon Bay is also included within the Charlotte Harbor National Estuary Program, established in 1995 (Charlotte Harbor NEP, 2008).

The Myakka River

The 66 mile (106 km) long Myakka River is a relatively shallow, black water river that begins its southerly flow in Manatee and Hardee Counties, and includes a 34-mile (55 km) portion through Sarasota County. In Sarasota County, the Myakka River is meandering and resembles its natural state. A twelve mile (19 km) stretch of the River is also preserved in Myakka River State Park. The upper portions of the River in Sarasota County are less than 65 feet (20 m) wide. The lower portions near the Charlotte County line are greater than 1,650 feet (0.5 km) wide. Residential use increases farther downstream towards the Charlotte County line, where the River widens and becomes shallower with a braided channel. Two significant tributaries, Deer Prairie Creek and Big Slough (or Myakkahatchee Creek), both discharge into the River as it widens and enters Charlotte Harbor. The lands surrounding the River are primarily agricultural and rural, with many natural riparian communities remaining intact. In the lower portion of the Myakka River watershed, urban development is displacing agriculture. Former grazing lands along the banks of the lower Myakka River are now being converted to urban uses, mostly homes. Construction is occurring on the vast inventory of lands that were platted in the 1960s. At that time, these plats displaced agriculture in western Port Charlotte and in the City of North Port. The Myakka River now becomes even more important to these areas, supplying their drinking water as well as habitat for fish and wildlife.

The Myakka River was designated as a Wild and Scenic River by the Florida Legislature in 1985 through the passage of the Myakka River Wild and Scenic River Designation and Preservation Act (258.501, Florida

Statute). The designation provides for the preservation and management of the entire 34-mile portion through Sarasota County. The County's Myakka River Protection Code (Chapter 54, Article XXXIII of the Sarasota County Code of Ordinances) provides additional protection along the River corridor through the 220-foot wide Myakka River Protection Zone (MRPZ). Development activities within the MRPZ are limited in order to protect the ecological and scenic values of the River while maintaining reasonable accommodations for homeowners that live along the River.

The Myakka River and Myakka River watershed are also a part of the Charlotte Harbor National Estuary Program. The Myakka River corridor in Sarasota County is largely held in public ownership, with more than 18 miles of river frontage having been acquired through Sarasota County's Environmentally Sensitive Lands Protection Program (ESLPP) since 1999. This voter-approved and taxpayer-funded program acquires natural lands and parklands for environmental protection. A total of more than 62 miles (99 km) of Myakka riverfront has been protected in Sarasota County. In November 2005, voters approved a second referendum extending the ESLPP program through 2029 and expanded the County's land protection efforts to include neighborhood parkland acquisitions. A summary of acquisitions through the ESLPP is provided in **Figures 2A and 2B**.

SARASOTA COUNTY DEMOGRAPHICS

According to the U.S. Census Bureau (2009), the resident population of Florida in 2008 was 18,328,340. Of the 67 Florida counties, Sarasota County ranked 14th with a resident population of 393,608. There is also an estimated seasonal resident population of greater than 100,000 (Sarasota County, 2004c). Since 2000, the resident population of Sarasota County has increased by 14.1 percent; similar to the state-wide population increase of 14.7 percent. An additional 92,962 residents are projected in Sarasota County through 2020 (a 24% increase), and an additional 152,116 residents are projected through 2030 (a 39% increase; **Figure 3**). Approximately 65 percent of the Sarasota County population resides in unincorporated areas and the remaining 35 percent reside among four municipalities; the Town of Longboat Key, the City of Sarasota, the City of Venice, and the City of North Port. The resident population estimates for each municipality are shown in **Table 2**. Additional information for the four municipalities is provided as follows:

Town of Longboat Key

Longboat Key is the principal barrier island that 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 located 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), and ranges from 0.05 to 1.0 miles in width, 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 the south end (New Pass). Along with greater than 5,000 year-round residents, an additional 15,000 seasonal residents are estimated (Doctor, 2008). The Town of Longboat Key is considered 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.

City of Sarasota

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 two primary tidal inlets, the City was the principal focus for development in the early through mid-1900s. City limits also include the barrier island of Lido Key, St. Armands Key, City Island, Bird Key, and Island Park. The City of Sarasota consists of 14.9 square miles (38.6 sq. km) of land and 9.7 square miles (25.1 sq. km) of water. Bayfront property is mostly developed for single or multi-family residences.

City of Venice

The City of Venice is located on the Gulf of Mexico along Venice Inlet and the ICW. Two small bays, Roberts and Dona Bays, which receive flows from Shakett and Curry Creek, are the principal inland water bodies. The City of Venice consists of 14.9 square miles (38.6 sq. km) of land and 1.7 square miles (4.4 sq. km) of water, including 2 linear miles of bay shores and approximately four miles of ICW. Waterfront property is mostly developed for single or multi-family residences although a portion of the ICW is industrial property. 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."

City of North Port

The City of North Port, located in the southeastern portion of Sarasota County, encompasses approximately 104 square miles (269 sq. km) of land and 2.1 square miles (5.4 sq. km) of navigable waterway. Direct access to SCW is limited to the lower Myakka River via Myakkahatchee Creek (Big Slough). The resident population in North Port has increased 147 percent since 2000, and 370 percent since 1990 and is currently the largest and fastest growing municipality in Sarasota County with 56,316 residents.

The overall population distribution has implications for future boating facility needs in Sarasota County. The Town of Longboat Key and the City of Sarasota are at or near build-out and waterside docking facilities for residents of these communities are near the saturation point. As a result, the need for new multi-family docks should diminish. However, an increase in demand for water access may occur in areas with continued growth such as Venice and North Port.

DEVELOPMENT STANDARDS

Sarasota County, the United States Army Corps of Engineers (USACE), the Florida Department of Environmental Protection (DEP), Water Management Districts, and any municipality in which the project is located require development permits. 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

COMPREHENSIVE LAND USE PLAN

The Sarasota County Comprehensive Plan 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 relate to the protection of manatees and manatee habitat, specifically:

ENV Policy 1.3.3

The County will identify areas suitable for water-dependent/water-related uses and develop and implement techniques to encourage development and expansion of such uses in these areas provided such uses will not degrade environmental resources. The County will discourage any conversion of water-dependent uses to non water-dependent uses, and shall prohibit conversion when land use changes reduce or eliminate public accessibility and recreation on waterways. The County will develop incentives for water dependent/water-related businesses to maintain their current use.

ENV Policy 1.3.5

The expansion of existing boating facilities in suitable areas shall be permitted preferentially to 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 travelway as defined by the Manatee Protection Plan Implementation Code (MPPIC). No new motorized boating facilities shall be allowed within the Pansy Bayou and the Warm Mineral Springs and Creek.

ENV Policy 1.3.6

New construction and expansion of marine facilities of five slips or greater, shall be as defined in the Boat Facility Siting Plan (BFSP) contained within Sarasota County's Manatee Protection Plan and existing county code. Construction or expansion of boat ramps shall also be as defined by the BFSP. Amendments to the Boat Facility Siting Plan, shall be implemented by action of the Board of County Commissioners.

ENV Policy 2.1.2

Prohibit dredge and fill activities in the Gulf of Mexico, bays, rivers, and streams of the County except to maintain previously dredged and existing drainage canals. All new environmentally sound navigation channels and beach nourishment projects require approval by the Board of County Commissioners and

must be determined to be in the public interest. 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**).

ENV Policy 2.1.3

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.

ENV Policy 4.4.8

Development shall not adversely impact the manatee.

ENV Policy 4.8.1

Land uses and land and water development shall be consistent with and governed by the environmental Values and Functions of Sarasota County's native habitats in accordance with the "Principles for Evaluating Development Proposals in Native Habitats."

The intent of the Comprehensive Plan is to ensure that environmental quality is maintained and enhanced, where possible. While the policies listed above are directly or indirectly related to manatee conservation, other sections of the Comprehensive Plan (such as Future Land Use) are intended to be used together. 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 Section 163.3191, Florida Statutes during the upcoming amendment cycle.

ANALYSIS OF FUTURE DEMAND FOR FACILITIES

Waterfront or near-waterfront boating facilities within Sarasota County provide space for approximately 15,879 vessels (**Table 17**) 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 multi-family residences are near saturation. Additional docks will likely 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 Comprehensive 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 necessity 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).

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 that 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. Blackburn Point Park has been identified by Sarasota County as a location for a new boat ramp. As of July 2011, permitting for 56 parking spaces for vehicles with trailers is nearly complete. This new ramp at Blackburn Point Park will 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.

INTERGOVERNMENTAL 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 WNCA, the DEP, the Florida Fish and Wildlife Conservation Commission (FWC), the Southwest Florida Water Management District (SWFWMD), the USACE, and the USFWS. While local municipalities may require that applicants meet performance standards requirements, they typically review structural and zoning aspects of permits, while WNCA, DEP, FWC, SWFWMD, USACE, and USFWS typically address environmental issues.

In order to facilitate the review of boat facility proposals located within the municipalities, a generalized standard operating procedure is outlined below. As the primary administrator of the MPP, in conjunction with FWC, the County may assist in the application review process with a municipality. Municipalities are not required to adhere to this procedure. However, consistency with the MPP is required prior to construction and/or expansion of dockage facilities representing an increase of five slips or greater, and this process may help to facilitate the review occurring between multiple agencies.

Step #	Action
1	Application for proposed facility for construction and/or expansion of dockage facility representing an increase of 5 slips or greater is received by municipality.
2	A copy of the application is provided to County staff for initial comments pertaining to MPP consistency.
3	Comments regarding consistency with the MPP are transmitted to the municipality from the County and shared with the applicant as part of the standard application review process
4	County staff provides technical assistance to the municipality throughout the application review process as necessary.
5	Standard application review process continues until the municipality deems the application complete.
6	County staff makes a recommended consistency finding with the MPP to the municipality in coordination with FWC.
7	The municipality makes the determination regarding the facility in consideration of the recommended consistency finding.
8	State agencies (e.g. SWFWMD, Florida DEP, and FWC) review process.

SARASOTA COUNTY REGULATORY SCHEME

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 (Chapter 54, Article XX of the Sarasota County Code of Ordinances; **Appendix B**) criteria and the policies of the Sarasota County Comprehensive Plan. According to the WNCA Code and Comprehensive Plan, all proposed dockage facilities shall meet public interest criteria, which include, but are 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 USACE and the DEP have a joint application for proposed dockage facilities. The USACE 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 USACE is required to consult with the USFWS or National Marine Fisheries Service (NMFS) 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 DEP 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 USACE, SWFWMD and DEP, the County recommends that they be obtained in tandem.

MANATEES IN SARASOTA COUNTY

Manatees in Sarasota County are considered part of the Southwest Florida subpopulation, or management unit. Other regional subpopulations include Northwest Florida, Atlantic, and the Upper St. Johns River. The Southwest subpopulation includes the coastal waters from Pasco County to Collier County, including Everglades National Park. Other subpopulations have demonstrated stable and/or growing manatee populations while the status of the Southwest Florida region remains somewhat uncertain. Initial population models indicated an estimated population decline between 1994 and 2001; however, results are uncertain due to a relatively wide confidence interval (FWC, 2007). Along with significant human-related threats, it has been noted that periodic unusual mortality events, such as red tide may be a contributing factor in Southwest Florida.

Prior to 1985, little information was available on the abundance and distribution of manatees between Tampa Bay and Charlotte Harbor, including the coastal waters of Sarasota County. Beginning in 1985 however, low-level aerial surveys between Anna Maria Island and Venice Inlet were initiated by Mote Marine Laboratory (MML); resulting in the documentation of a significant seasonal population of manatees (Patton, 1986; Nabor and Patton, 1988). Aerial surveys later extended throughout Sarasota County, including the Myakka River. Sarasota County now has 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. A database of manatee mortality in Sarasota County extends back to 1976 and citizen sighting reports have been maintained since 1986. Finally, satellite tracking and telemetry studies have collected data in manatees in Sarasota County since 1991. Much of this research is still underway.

Four primary scientific databases of available information on manatees were reviewed for this document:

1. Aerial Surveys
2. Photo-Identification
3. Telemetry Data
4. Mortality Data

In addition, available information on manatee habitat, freshwater sources, and warm water refugia in Sarasota County were reviewed and updated as needed. Results are discussed separately as follows.

AERIAL SURVEYS

Low-level aerial surveys have been demonstrated to be the most reliable data collection technique for the determination of relative manatee abundance and distribution (Hartman, 1979; Irvine and Campbell, 1978; Packard, et al., 1986; Ackerman, 1995). Manatee aerial surveys in Sarasota County were initiated by MML in 1985, and have been performed on a continuous basis since 1987. Aerial survey techniques have been 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 since 1985.

The aerial surveys conducted in Sarasota County, funded primarily by Sarasota County, represent one of the longest ongoing manatee aerial survey datasets in the State of Florida. Based largely upon Sarasota County's long-term aerial survey database, manatee abundance and distribution is now well documented. As many as 107 manatees in 57 unique sighting locations throughout the County have been documented during a single aerial survey (June 10, 2002). Aerial survey data have provided the basis for inclusion of Sarasota County as a key Manatee Protection County, and has aided both Sarasota County and the State of Florida by providing the best available scientific data for ongoing management decisions in the County.

The most comprehensive analysis of manatee aerial survey data in Sarasota County was recently conducted by MML (Scolardi et. al., 2009), which examined a 20-year database of aerial surveys conducted in Sarasota County from 1987-2006. This analysis supported earlier findings indicating that manatees are found in Sarasota County year-round, though their distribution varies significantly both spatially and temporally. Aerial survey data was divided into three sub regions; the Sarasota Bay sub region (Sarasota Bay to the Venice Bypass Canal), the Sarasota County portion of Lemon Bay, and the Sarasota County portion of the Myakka River. Manatees in the Sarasota Bay sub region appear to have increased in abundance between 1987 and 1999. Since 1999, abundance has remained stable or slightly decreased (**Figure 4**). A similar trend was observed in Lemon Bay, though counts have increased since 2004 (**Figure 5**). Though the Myakka River was not regularly surveyed until the mid-1990s, results indicated that manatee use in the Myakka River has remained stable or slightly decreased since 1996 (**Figure 6**). These were considered as general trends and it was noted that aerial survey counts were highly variable and influenced by numerous factors through time, including changes in water clarity, seagrass distribution and abundance, red tide events, and observer bias.

There is also a distinct seasonal shift in habitat use within the County (**Figure 7**). During the warmer months (typically March through October), manatees are regularly observed in the Sarasota Bay region. During the colder months (November through February), however, habitat use shifts to the southern portions of the County, with many animals leaving the County altogether. In late fall and early winter, higher counts were observed in Lemon Bay and in particular along a tributary that functions as a secondary warm water refuge site (Forked Creek). During the winter and early spring, higher counts of manatees were observed in the Myakka River and in particular in proximity to a primary warm water refuge site at Warm Mineral Springs. Few animals were observed in any other portion of the County during the coldest months of the year (December through February).

A series of County maps depicting the spatial distribution of manatees observed from recent aerial surveys (2002-2008) are shown in **Figures 8 through 11**. These data show a similar distribution to the 1995-1999 aerial survey data provided in the original Sarasota County MPP. While manatees were regularly sighted throughout the entire County, preferred areas of recurrent use were seen in Buttonwood Harbor, Pansy Bayou / City Island seagrass flats, the northern portion of Roberts Bay, isolated portions of Little Sarasota Bay, lower Blackburn Bay / Venice Inlet, Lemon Bay, Forked Creek, and the lower Myakka River. In 2009, aerial survey data were also analyzed by the FWC during a review of manatee speed zones in Sarasota County. For this analysis, a non-parametric statistical density estimation (kernel density) map was used to depict manatee density throughout the County. The same 2002-2008 survey interval was used. Similar areas in the County emerged as high-use areas by manatees (**Figures 12 through 15**).

PHOTO-IDENTIFICATION

While aerial survey data provide critical information on manatee abundance and distribution, they are limited in their ability to identify and monitor individual animals through time. In order to collect supplemental information on manatee site fidelity, residency time, behavior, habitat use, reproductive parameters, and short-term movement patterns within Sarasota County, photo-identification studies were initiated by MML in 1993. The use of photo-identification is a non-invasive method that utilizes unique scar patterns on manatees. In Florida, many manatees bear scars from repeated encounters with powerboats; however, other man-made and natural external features can also be used. 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) which is currently maintained by the U.S. Geological Survey Sirenia Project (USGS), the FWC, and MML. All three agencies work collaboratively to collect, maintain, and analyze manatee photo-identification data. Recovered manatee carcasses are also examined and compared to the MIPS database.

Dating back to 1985, the MIPS database has identified more than 250 different manatees from Sarasota County. Of these, 200 individuals have been observed in multiple years, 101 different individuals have been observed for five or more years, and 20 different individuals have been observed for ten or more years. Several animals in the MIPS west coast database (including Sarasota County sightings) have been observed for more than 20 years. Photo-identification data however, are essentially a function of survey effort. It is likely that an even greater number of animals return to Sarasota County annually, and have been returning longer than field data have been collected.

Both seasonal residents (individuals that spend a significant amount of time in an area for a portion of the year) and seasonal transients (individuals that transition briefly through an area on their way to and from other regions) have been identified in Sarasota County (Koelsch, 1997). These animals originate from a variety of locations along the Florida west coast, with Sarasota County representing a transition area between north/south migratory routes. While Southwest Florida (including Sarasota County) is considered as a unique sub region, Southwest Florida manatees have been identified as far north as the Florida Panhandle. Numerous animals from Sarasota County have been identified at natural winter refuge sites in Citrus County (Crystal River and Homosassa Springs) and at artificial winter refuge sites in Pinellas County (FPL Bartow Power Plant) and Hillsborough County (TECO Big Bend Power Plant). Many animals have also been observed at both natural and artificial winter refuge sites in Lee County (Matlacha Isles and the FPL Ft. Myers Power Plant) and in Collier County (Port Of The Islands and Everglades National Park). In some cases, winter refuge sites to the north and south of Sarasota County have been utilized by the same animal.

The photo-identification database confirms that Sarasota County is an area of recurrent use for the Florida west coast manatee population. A summary of available information is provided in **Appendix A**. Available photo-identification data are currently complete through 2008 and partially complete through 2010. Data collection and analyses are ongoing.

TELEMETRY DATA

Manatee capture, tagging, and tracking projects have provided valuable information on seasonal movements, migratory patterns, and site fidelity (Deutsch et al., 2003). Over the past 18 years, satellite telemetry projects involving the use of Argos-linked GPS/PTT tags (PTT = platform transmitter terminals) have been conducted by FWC biologists with the Fish and Wildlife Research Institute (FWRI) (Deutsch et al., 1998, 2003, 2006). The current database of telemetry data also includes 14 manatees in Southwest Florida that have been monitored by MML. Since 1991, more than 50 different manatees have been monitored in Sarasota County. Some examples of movement patterns of individual manatees utilizing Sarasota County waters are shown in **Figures 16 through 20**. Animal *TSW064* demonstrated extensive usage of the Myakka River before traveling southward to Estero Bay during April-May 2008 (**Figure 16**). Animal *TTB059* demonstrated extensive usage of Lemon Bay, including Forked Creek, before traveling north to Little Sarasota Bay during August-September 2007 (**Figure 17**). This animal also documented the use of the Venice Bypass Canal as a significant travel corridor between the northern and southern portions of Sarasota County. A larger range over a shorter period was demonstrated by animal *TSW063* during April-May 2008 (**Figure 18**). This animal traveled from Placida Harbor to northern Sarasota Bay (approximately 50 miles) over a seven-day period and from Venice Inlet to New Pass (approximately 19 miles) in an 18-hour period. **Figures 19 and 20** provide examples of animals that utilized Sarasota County as part of a larger range throughout the west coast of Florida. Animal *TTB002* (**Figure 19**), was tracked from Charlotte Harbor (Charlotte County) to St. Joseph Sound (Pinellas County), including multiple tracks in Sarasota County (Lemon Bay, Blackburn Bay, and the Myakka River). Animal *TTB049* was tracked through seven coastal counties along the Florida west coast over a two-year period, including extensive use of Sarasota County (**Figure 20**).

These data confirm that manatees in Sarasota County move freely among multiple sites within and outside of the County; in many cases on a daily basis. This provides valuable supplemental information that can assist in not only the identification of preferred sites, but also important travel corridors where manatees may be less likely to be observed during aerial surveys.

MORTALITY DATA

Since 1976, 209 manatee carcasses have been recovered from Sarasota County waters, including 45 animals (22%) that have been classified as watercraft-related deaths. No other human-related causes have been reported. Over the past three years (2006-2008), Sarasota County ranked 8th in manatee deaths and 11th in watercraft-related manatee deaths statewide (**Tables 3 and 4**). These numbers represent an improvement since the original 2003 Sarasota County MPP, when the County ranked 7th in manatee deaths and 6th (tied) in watercraft-related mortality. Sarasota County also ranked 7th and 9th in total manatee deaths and watercraft-related deaths among the 13 “key” Florida counties respectively, pursuant to the Florida MMP. Both the total number of manatee deaths and the number of watercraft-related deaths in Sarasota County have varied greatly from year to year, however both categories continue to show an increasing trend (**Figures 21 and 22**). More manatee carcasses have been recovered from Sarasota County in the past 9 years than were recovered in the previous 24 years. A similar trend was observed for watercraft-related manatee deaths.

The seasonal variation in manatee abundance in Sarasota County is also reflected in mortality data (**Figure 23**). During the coldest months of the year (December – February), the number of recovered carcasses is greatly reduced. No watercraft-related manatee deaths have occurred between December and February, and only one watercraft-related death occurred in the month of March. In contrast, relatively high numbers of manatee carcasses (all categories except cold stress) have been recovered in Sarasota County during the warmer months of the year. Greater than 70 percent of all perinatal deaths in Sarasota County have occurred during a four-month period from May through August. The highest numbers of watercraft-related deaths have occurred during the summer and fall. The high numbers of manatee deaths reported during March and April were influenced by red tide events which occurred in southwest Florida over the past several years.

Additional mortality information from different areas within Sarasota County is summarized in **Table 5**. Lemon Bay may be of particular concern due to the fact that this area has sustained relatively large numbers of both watercraft-related deaths and total manatee deaths between 1976 and 2008. This trend has continued since reported in the original Sarasota County MPP. Other areas within the County where a relatively high number of carcasses have been recovered, including carcasses which have been identified as watercraft-related, include Little Sarasota Bay, Roberts Bay (Sarasota), Big Pass, Phillippi Creek, and the Myakka River. These areas indicate both popular manatee locations and areas where there appears to be a higher risk of boat interaction. Specific locations where carcasses identified as watercraft-related deaths have been recovered are provided in **Figures 24 through 27**.

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 manatee deaths are cause for concern, however significant management issues 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 (Wright et al. 1995), though it is nearly impossible to determine where these injuries occur since few encounters are either witnessed or reported. More than 1,000 identifiable manatees have been scarred from boat collisions, with 97 percent bearing scar patterns from multiple boat strikes (Beck and Reid, 1995). Sub-lethal injuries may reduce breeding success and remove some animals from the breeding population (Reynolds, 1999). Animals may also be forced to abandon areas of refuge due to increased boat traffic or other human activities (Powell, 1981; O'Shea, 1995). Areas that are poised for significant coastal development may also threaten existing manatee habitat. While watercraft-related mortality data may provide an indication of the most severe and immediate threat, a variety of other factors including the predicted loss of artificial warm water habitat, reductions in natural spring flows, and catastrophic natural events also adversely impact the long-term survival of the Florida manatee population (FWC, 2007).

MANATEE HABITAT

Manatees are considered generalist herbivores, and consume a variety of submerged, emergent, and floating vegetation. Because of their broad distribution and seasonal migratory patterns, Florida manatees utilize a wider diversity of food items and are possibly less specialized in their feeding strategies than manatees in tropical regions (Lefebvre et al., 2001). In marine and estuarine habitats, manatees most often consume seagrasses (Etheridge et. al, 1985; Koelsch, 1997). Along with providing essential habitat for manatees, seagrasses also are a vital component of Florida's coastal ecology and economy by providing nutrition and shelter to a wide variety of commercial, recreational, and ecologically important aquatic species. In the Sarasota Bay area, five of the seven known Florida seagrass species are found; *Thalassia testudinum* (turtle grass), *Syringodium filiforme* (manatee grass), *Halodule wrightii* (shoal grass), *Ruppia maritima* (widgeon grass), and *Halophila engelmannii* (star grass). Recent maps of seagrass coverage in Sarasota County are provided in **Figures 28 through 30** (the Myakka River is not included in the seagrass maps because seagrasses were not documented in the Myakka River region).

In-water studies have been conducted in Sarasota Bay in order 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 ICW 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 preferred 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 (Koelsch, 1997).

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 (Gorzalany 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.

Finally, a landscape analysis examining habitat selection by manatees and humans (boaters) in Sarasota County was recently conducted by Gannon et. al. (in prep), with the goal of assessing the extent and locations of overlap between human use and manatee use with regard to particular habitat features. Ultimately this analysis may provide clearer focus for management and, as needed, enforcement efforts to protect manatees. Preliminary results have found that there is no direct overlap in habitat selection by boaters and manatees, and that the environmental variables that characterize habitat preferred by manatees and those characterizing highest use boat areas are generally different. Boating activity was most closely associated with proximity to tidal inlets and marine facilities. Manatee distribution was most closely associated with presence of seagrasses and proximity to tidal creeks. This does not mean that there is an absolute disconnect between habitat occupied by these user groups, but rather the analyses reflect tendencies that may provide some measure of predictive ability.

FRESH WATER SOURCES

The attraction to and use of freshwater by manatees is well-documented, though whether or not this is a physiological requirement is still unclear. Unlike other sirenian species such as the strictly-freshwater Amazonian manatee and the strictly-saltwater dugong, Florida manatees have demonstrated the ability to osmoregulate and move freely between fresh water and salt water environments (Ortiz, 2001). While typically associated with fresh water and estuarine environments, they have also demonstrated the ability to spend extended periods of time in salt water (Reynolds and Ferguson, 1984; Hill and Reynolds, 1989). Although manatees can be found in 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 (Miami-Dade, Broward, Palm Beach, Martin, and Collier) Sarasota County waters are somewhat limited in the availability of freshwater. The mean annual rainfall in the Sarasota Bay area is 54.6 inches (1.38 m) (Sarasota Bay NEP, 2000), with most precipitation occurring between June and October. A significant proportion of annual rainfall enters the area as stormwater runoff via a series of creeks and bayous, including Whitaker Bayou, Hudson Bayou, Phillippi Creek, Clower Creek, Catfish Creek, North Creek, and South Creek. The largest tributary to Sarasota Bay is Phillippi Creek, which drains a watershed of 57 square miles, or 38 percent of the entire Sarasota Bay watershed. The rivers and creeks in Sarasota County 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. Based upon the limited availability, it is unlikely that manatee distribution in Sarasota County is significantly influenced by salinity and/or the presence of fresh water.

WARM WATER REFUGIA

While Florida manatees have a protective fat layer, it is somewhat ineffective at thermoregulation. In addition, they have only a limited capability of increasing their metabolic rate to compensate for heat loss (Reynolds and Odell, 1991). As a result, manatees must migrate to warmer water when temperatures drop below approximately 20°C (68°F). In Sarasota County, portions of the Myakka River (Salt Creek/Warm Mineral Springs) represent the only significant warm water refugia. As many as 147 manatees have been sighted during a land-based survey (Source: Florida Marine Research Institute data; November, 2002). The Warm Mineral Springs area is considered by both the State of Florida and the USFWS to be a primary warm water refuge site for manatees. A secondary warm water refuge has also been identified in south Sarasota County within Forked Creek, a small tributary 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 artificial sources of warm water exist in Sarasota County. Along with movement within the County, manatees are known to make extensive north-south migrations with seasonal distribution influenced by water temperature (USFWS, 2001). Because of the relatively limited access to warm water refugia in Sarasota County, the population of manatees declines significantly in the winter as the animals migrate out of the County to more significant artificial warm water sites to the north and south. These include artificial warm water sites in Tampa Bay (TECO Big Bend Plant, and Progress Energy Bartow Plant) and in the Caloosahatchee River (FPL Ft Myers Plant).

CONCLUSIONS BASED ON MANATEE DATA

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 in Sarasota County were collected on June 10, 2002 (107 animals).

2) The population of manatees in Sarasota County appears to have increased since 1985. This may be due to a shift in habitat use from other areas along the Florida west coast. While manatee use in Sarasota County has increased historically, survey counts in recent years (1999-2008) suggest that the number of animals utilizing Sarasota County may have stabilized or, in some areas, slightly decreased.

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. Approximately 80 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 subpopulation.

4) Manatee mortality in Sarasota County has increased historically, though there is a high level of variability from year to year. While manatee mortality in Sarasota County remains 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. Relatively high numbers of manatee carcasses, including those identified as watercraft-related, still occur in Lemon Bay in particular.

5) 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, several areas of recurrent use by manatees were identified. These areas should be considered as key manatee habitat, and provided the basis for boat facility siting criteria in the MPP. While newly-available scientific data provided in this document indicates that manatee use patterns in Sarasota County are similar to those described in the 2003 Sarasota County MPP, new designations were developed to account for the varying levels of use throughout the County. The revised manatee use designations are described as follows:

High Use – Critical Habitat

These areas essentially correspond to areas identified as Priority Habitat in the original Sarasota County MPP. Some areas in the northern portion of the County, including Roberts Bay and inside Big Sarasota Pass have been expanded to include adjacent areas due to recent documented manatee use.

High Use – Important Habitat

This designation refers to two specific locations in the central portion of the County located inside the former Midnight Pass area (Little Sarasota Bay) and along the southern portion of Blackburn Bay, where relatively high manatee use has been documented over the past several years. While these are considered as high-use areas, it was determined that these areas do not meet the criteria as High-Use – Critical Habitat due to the lack of a long-term database of information indicating high-use in these areas.

Moderate Use

Moderate Use areas essentially correspond to the areas identified as Secondary Habitat in the original Sarasota County MPP. These are areas of recurrent, though somewhat less frequent manatee use and may include travel corridors to / from other high-use areas.

Low Use / Limited Available Data

These areas are essentially the same as those identified in the original Sarasota County MPP, and include areas in the northern portion of the County with relatively low documented manatee use or where limited scientific data are available.

Based upon updated scientific information, the following changes to manatee use designations in Sarasota County were made:

Area	2003 Sarasota County MPP Designation	2011 Sarasota County MPP Designation
Southern portion of Roberts Bay (Sarasota)	Secondary	High-Use - Critical
Eastern shoreline of Sarasota Bay from Hudson Bayou to the North Siesta Key Bridge	Low Use	Moderate Use
Eastern shoreline of Sarasota Bay directly outside Hudson Bayou	Secondary	High-Use - Critical
Eastern portion of Bird Key	Secondary	High-Use - Critical
Eastern shoreline of Sarasota Bay from Stephens Point to the Ringling Causeway (exclusive of Whitaker Bayou and the Hyatt Boat Basin)	Secondary	Low Use
Southern portion of Blackburn Bay to Venice Inlet	Secondary	High Use - Important
Little Sarasota Bay, in proximity to the former Midnight Pass	Secondary	High Use - Important

All other portions of Sarasota County remain the same as described in the original 2003 Sarasota County MPP, but use the new nomenclature. A series of maps depicting the newly-revised manatee areas in Sarasota County are shown in **Figures 31through 34**.

BOATING ACTIVITY IN SARASOTA COUNTY

BOAT REGISTRATIONS

Sarasota County currently ranks 14th out of 67 Florida counties with a total of 25,239 (24,453 recreational, 786 commercial) registered vessels (**Table 6**). This represents one ranking higher (surpassing Collier County) compared with data compiled for the original Sarasota County MPP (Sarasota County, 2003). While the rates of increase have varied, the numbers of registered vessels in Sarasota County have continued to increase over time (**Figure 35**). Since 2000, an additional 5,024 vessels have been registered - an increase of 25 percent. The numbers of registered vessels in Sarasota County have increased at a slightly higher rate than the statewide average, though similar trends were observed. Since 1987, the numbers of registered vessels have increased statewide at an average rate of 2.18% per year (2.23% in Sarasota County). Since 2000, registered vessels have increased statewide at an average rate of 2.01% per year (2.87% in Sarasota County). The numbers of registered vessels both statewide and in Sarasota County have been essentially unchanged since 2006, presumably due in part to the recent economic downturn.

BOATING ACCIDENT STATISTICS

A summary of 2008 boating accident statistics for all Florida counties is provided in **Table 7**. Four reported boating accidents occurred in Sarasota County during 2008, which ranks 30th (tied) out of 67 Florida counties. The boating accident rate in Sarasota County (1 reported accident per 6,113 registered vessels) is among the lowest accident rates in the state (52nd out of 67 Florida counties), and is the lowest boating accident rate among the 13 “key” manatee protection counties.

VESSEL COMPOSITION

The distribution of registered vessels in Sarasota County by size category is provided in **Table 8**. The most common registered vessel is Class 1 (16’-25’11” in length). Vessels less than 26 feet in length currently comprise approximately 85 percent of all County-registered vessels. This is consistent with findings from recent boating studies conducted in Sarasota County (Gorzelany, 2006a, 2006b). Aerial surveys conducted during 2005 also determined that 85 percent of all vessels in-use observed in Sarasota County waters were less than 26 feet in length. Field data also indicated that the distribution of vessel size classes in Sarasota County was similar to other Florida west coast counties (Lee, Charlotte, and Collier Counties), and less similar to Florida east coast counties (Brevard, Martin, Palm Beach, Broward, and Miami-Dade Counties). Sarasota and other west coast counties tend to be comprised of a higher proportion of smaller vessels while east coast counties have a relatively higher proportion of larger vessels (**Table 9**). Similar findings were determined for vessel types (**Table 10**). Vessels in Sarasota County identified as “small powerboats” comprised 71 percent of all vessels observed, while vessels identified as “large powerboats” comprised 11 percent of all vessels observed. This proportion was again more similar to other Florida west coast counties and less similar to Florida east coast counties. Similar findings (distribution of vessels in use by size and type) were reported from land-based observational surveys conducted from the three primary tidal inlets in Sarasota County (Gorzelany, 2006a).

BOATING ACTIVITY AND USE PATTERNS

Trends in boating activity were examined from a series of mail / respondent surveys conducted by Sidman et. al. (2006). Results from 1,331 mail survey respondents (**Table 11**) indicated that the most common waterway access points for boaters in Sarasota County were boat ramps (38.5%) and private docks (37.7%). Additional access points included dry storage (10.8%), marina wet slip (10.2%), condo dock (2.6%), and shore / causeway (0.2%). Data collected from Sidman et. al. (2006) also determined that the typical Sarasota County survey respondent was:

- A Florida resident for at least 11 months of the year and approximately 56 years of age
- Has, on average, 16 years of boating experience and has taken a boating safety or seamanship course
- Takes an average of three to four boating trips per month with more trips during the late spring and summer (April – July) and fewer trips during the winter (December – February)
- Begins their trip at approximately 7AM and spends approximately 5 hours on the water
- Shows a preference for the following water-based activities in order of importance: visiting restaurants, fishing, cruising, sight-seeing, and nature-viewing
- Perceives that a lack of seamanship and/or courtesy by other boaters detracts most from their recreational boating enjoyment
- Believes that infrastructure improvements, better access, and greater enforcement of existing boating regulations would do most to improve their recreational boating enjoyment

The spatial distribution of boat traffic throughout Sarasota County was also examined from a series of county-wide aerial surveys conducted during 2005 (Gorzelany, 2006b). Results indicated that the highest levels of boat traffic (both in terms of total abundance and relative density) occurred in proximity to the three primary tidal inlets; New Pass, Big Sarasota Pass, and Venice Inlet (**Figures 36 and 37**). Additional areas of moderate to high traffic density were also observed along narrow portions of the ICW in Roberts Bay, Blackburn Bay, and along the Venice Bypass Canal. Lower levels of boat traffic were observed along the open-water portions in northern Sarasota Bay, and along portions of Little Sarasota Bay, Lemon Bay, and the Myakka River. From aerial survey data it was also determined that approximately three percent of all inshore waters in Sarasota County are found within one mile of the three tidal inlets, yet 22 percent of all boats in use were observed there (**Table 12**). Similarly, approximately 15 percent of all inshore waters are found within 3 miles of the three tidal inlets, yet more than 75 percent of all boats in use were found there. Land-based surveys conducted during 2005 indicated that all three tidal inlets in Sarasota County sustain moderate to heavy use by recreational boaters, particularly on weekends and in late spring and early summer. Field data collected from fixed-point locations indicated that boat traffic frequently exceeded 60 vessel passes per hour (greater than one vessel per minute) at all three survey sites. Heaviest use was observed at Venice Inlet, with boat traffic occasionally exceeding 100 vessel passes per hour (Gorzelany, 2006a). Data indicating the importance of tidal inlets as popular boating destinations has also

been documented in other recent Florida boating studies conducted in Collier, Miami-Dade, and St. Johns Counties (Gorzelay, 2008, 2009a, 2009b).

The importance of tidal inlets was also determined from mail / respondent surveys conducted during 2005 (Sidman et. al., 2006). A total of 73 percent of the routes mapped by survey respondents traversed one of five prominent inlets in the survey area (Longboat Pass, New Pass, Big Sarasota Pass, Venice Inlet, and Stump Pass). Results also indicated that Venice Inlet (32%) and New Pass (30%) experience the greatest relative volume of trips, followed by Big Sarasota Pass (22%). Longboat Pass (Manatee County) and Stump Pass (Charlotte County) were ranked 4th and 5th with 10% and 7% of trips originating from Sarasota County access facilities, respectively. Mail surveys also determined that boating was more prevalent in southern Sarasota Bay (New Pass, Big Pass), Venice Inlet, and Roberts Bay, and less prevalent in Little Sarasota Bay, Blackburn Bay, and northern Lemon Bay. Areas of boat traffic congestion associated with the tidal inlets in Sarasota County identified by Sidman et. al., (2006) are provided in **Figures 38 and 39**.

VESSEL SPEEDS AND BOATER COMPLIANCE

A one-year study was conducted in Sarasota County during 1995 in order to evaluate the level of boater compliance in conjunction with posted speed zones (Gorzelay, 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 boat 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 at Skiers Island, Roberts Bay and the Pansy Bayou/City Island seagrass flats area (the water sports area along the City Island seagrass flats area has since been re-classified as a Slow Speed Zone). 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 were greater than 50 percent higher than for any other vessel type observed.

While boating studies conducted during 2005 were not specifically focused on boater compliance, data on vessel speeds were collected from New Pass, Big Sarasota Pass, and Venice Inlet (**Figure 40**). Observed boat speeds at the three inlets were strongly influenced by site-specific regulatory zones. The New Pass survey site was located entirely within a posted idle speed zone. As a result, vessels were typically traveling at idle and slow speed. While Venice Inlet was surveyed in an unregulated area, the relatively high proportion of vessels observed traveling at idle and slow speed were probably influenced by an adjacent slow speed zone inside the Inlet. Big Sarasota Pass was entirely unregulated with no adjacent speed zones. As a result, mostly high-speed boat traffic was observed. Levels of boater compliance in New Pass were similar to values observed during the 1995 Sarasota County Boater Compliance Study (Gorzelay, 1996). While there

was a relatively high level of non-compliance, most non-compliant boaters were technically non-compliant, or essentially traveling at slow speed within the posted idle speed zone. Two additional boater compliance studies involving the relationships between boater compliance and presence of law enforcement were conducted at New Pass in 2001 and 2005 (Gorzelany, 2001, 2007). Among the results was the determination that levels of boater compliance had not changed substantially at New Pass since the original Sarasota County boater compliance study was conducted in 1995.

County-wide boater compliance data is now 15 years old and may need to be updated. Since the original 1995 study was conducted, more than 8,000 additional vessels have been registered in Sarasota County – a 47 percent increase. Evidence of changes in boat traffic patterns have also occurred, including likely increases in levels of boat traffic at critical management areas such as Venice Inlet. Some speed zones have also changed, along with the likelihood of additional changes in the near future. For these reasons, updated information on speed zone effectiveness and boater compliance in Sarasota County may be a useful management tool for both regulatory and enforcement agencies.

TRENDS IN VESSEL USE THROUGH TIME

Both mail and observational surveys indicated that the peak boating season in Sarasota County occurs during spring and early summer, though levels of traffic can be highly variable. Observational surveys also determined that there is a two- to threefold increase in boat traffic on weekends (versus weekdays), and also during afternoons (versus mornings), with higher ratios observed at popular boating destinations. Boating activity at New Pass, Big Sarasota Pass, and Venice Inlet typically increases throughout the morning and early afternoon, with the greatest amount of activity observed from approximately 1pm to 3pm (**Figures 41 through 43**). Daily variations in boating activity are similar to observations in other Florida counties (Gorzelany, 1998, 2005, 2009a).

A review of boat traffic data collected during 1995 (Gorzelany, 1996) indicated that the composition of recreational vessels (size and type) in Sarasota County has remained essentially unchanged over the past decade. The changes in levels of boat traffic were also examined from two survey datasets collected at New Pass and Venice Inlet during 1995 and 2005. Results indicated that the volume of boat traffic in the New Pass area has not changed significantly since 1995 (**Table 13**). At Venice Inlet, however, vessel counts were consistently higher than during comparable survey dates conducted in 1995, suggesting that the volume of traffic has increased (**Table 14**). This may be due to the fact that while Venice Inlet remains a relatively stable navigation channel, New Pass has been subjected to frequent shoaling, navigation problems, and maintenance dredging which may adversely impact Gulf access for many vessels. County-wide trends in boat traffic throughout Sarasota County could not be examined because county-wide aerial surveys were not conducted in 1995.

EXISTING SPEED ZONES, REFUGES, SANCTUARIES, AND AQUATIC PRESERVES

Certain Florida water bodies are provided with special heightened protection as a result of their 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 Sarasota Bay, New Pass, Big Sarasota Pass, Roberts Bay, Little Sarasota Bay, Dryman Bay, Blackburn Bay, Lyons Bay, Venice Inlet, Dona Bay, and the ICW in Venice (excluding the Venice Bypass Canal). The waters of Lemon Bay in Sarasota County have been designated as an “Aquatic Preserve.”

The primary management tool used to reduce the risk to manatees by boats is the implementation of speed-restricted zones in areas where manatees are known to occur (Deutsch et. al., 2009). Reducing vessel speed is believed to reduce the risk of injury and/or death to manatees by: 1) allowing the boat driver more time to see a manatee and therefore take evasive action; 2) by providing additional reaction time for the manatee to take evasive action; and 3) reducing the severity of injury in the event that an animal is struck (Calleson and Frohlich, 2007). In addition to physical harm, elevated noise from powerboats can potentially impact manatees and other forms of wildlife by inducing temporary or permanent hearing threshold shifts and/or the masking of acoustic signals important to the animal, thus altering the animal’s natural behavior. This may result in adverse effects on foraging, reproduction, and ultimate survival of the animal (Nowacek, et al., 2007).

In 1992, the Florida Department of Natural Resources, Division of Marine Resources, Office of Protected Species Management, in cooperation with Sarasota County, established a series of manatee speed zones throughout Sarasota County waters. These zones have remained essentially unchanged with a few exceptions (in 2002, a seasonal No Entry Zone was added in the Warm Mineral Springs / Salt Creek area of the Myakka River and a manatee zone in the City Island area was amended). A speed zone in the Buttonwood Harbor area of Sarasota Bay was also added in 2004 under the Manatee County rule. Current FWC manatee protection zones in Sarasota County appear in Rule 68C-22.026, F.A.C and are provided in **Figures 44 through 47**. In 2004, additional federal zones were implemented by the USFWS in Little Sarasota Bay and in the former Water Sports Area near City Island. The total inshore waters in Sarasota County are estimated to comprise 20,350 acres (FWC MMP, 2007). This includes 10,304 acres of inshore waters regulated for manatee protection (9,775 acres regulated by FWC and 529 acres regulated by USFWS). This represents 50.6 percent of all inshore waters in Sarasota County (45.1% regulated at-or-below slow speed).

Additional locally-adopted boating safety zones also exist in Sarasota County. These include a series of no entry and idle speed buffer zones along Gulf beaches and additional idle speed zones adopted by local ordinance. These zones, along with all current state and federal manatee protection zones are shown in **Figures 52 through 55**.

FWC reviewed the state-regulated manatee protection zones in 2009-10 and made several modifications to the zones. The amended rule was adopted in June 2010. Work to revise the on-water marking of the zones is currently ongoing. This review process and rule changes are independent of this document.

BOATING ACCESS

Boat Launches / Ramps

There are currently 14 active publicly owned boat launches in Sarasota County with one additional launch at Blackburn Point currently under development. A list of active boat ramps is provided in **Table 15**. Additional private boat launches also exist throughout the County. Additional information on boat launch facilities, including canoe and kayak launches and trails, can be found at the Sarasota County Government website (<http://www.scgov.net>) in addition to the information provided below.

Throughout the County, there are public boat ramp facilities that offer access to the bays or Gulf. The total number of parking spaces available at each public ramp facility is based upon whether the spaces are marked and if there is overflow parking made available for days of highest usage. Actual number of possible trailer parking spaces may vary. Descriptions of these public boat ramps are provided as follows:

Blackburn Point Boat Launch

800 Blackburn Point Road

Osprey 34229

The County purchased this 11-acre site on the ICW in 2006. Plans call for the development of a motorized boat-launch facility with parking spaces for 56 trailers on the eastern node and six wet slips on the central node. Parking spaces for trailers on the western node of the park are for non-motorized boats only.

Centennial Park and Boat Ramp

1059 N. Tamiami Trail

Sarasota 34236

This 10-acre park is part of a community park complex including the Lawn Bowling facility and Bayfront John Chidsey Community Center. There are three double-lane boat ramps with a roundabout lane for trailer turnaround. There are approximately 153 marked parking spaces for vehicles with trailers and about 14 designated vehicle parking spaces. On the weekends, trailer parking is often filled to capacity and weekday use is approximately 25-50 percent of capacity.

Dallas White Park

5900 Greenwood Avenue

North Port 34287

Dallas White Park is a 13-acre park owned and operated by the City of North Port. This community park is located between the Al Goll Recreation Center, North Port Aquatic Complex and the Youth Recreation Center. The boat ramp consists of one double lane cement ramp with two docks. There are approximately 15 parking spaces for vehicles with trailers.

Higel Park

1330 Tarpon Center Drive

Venice 34285

Higel Park is primarily used for boat access with easy access to the bay and Gulf. The boat ramp consists of one double lane ramp with docks. There is a scenic picnic area overlooking the ICW. This 3-acre park is

owned by the City of Venice and operated by Sarasota County Parks and Recreation. There are approximately 3 parking spaces for vehicles with trailers about 15 for vehicles and no room to expand.

Indian Mound Park

210 Winson Ave.

Englewood 34223

This 10-acre park has significant historical value and is located on Lemon Bay. There are a number of Native American Indian mounds on the site that add cultural value to the recreation highlights. Boat access is by an asphalt boat ramp with three docks. 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.

Ken Thompson Park/City Island

1700 Ken Thompson Parkway

Lido Key 34236

Ken Thompson Park is a waterfront park providing many recreational opportunities including boardwalks through mangrove and tidal marsh restoration areas. Boat access is by a concrete boat ramp with six lanes and four docks. This 92-acre park is owned by the City of Sarasota and operated by Sarasota County Parks and Recreation. It has ample parking with ready access to Sarasota Bay and the Gulf of Mexico. There are approximately 40 unmarked parking spaces plus approximately 20 overflow spaces (grass). Weekends are often full to capacity with weekday use approximately 25-50 percent capacity.

Loreto Bay Access

800 Loreto Court

Nokomis 34275

This 0.4 acre park is located in the Nokomis East neighborhood. There is currently a one-lane ramp with two docks. There is no designated parking available.

Manasota Beach Park

8570 Manasota Key Road

Manasota Key 34223

Manasota Beach provides beach and boat access. The park has a cement boat ramp, a boardwalk and a dock. There are approximately 24 unmarked parking spaces for vehicles with trailers, and about 20 overflow parking spaces. Use on weekends is typically 100 percent of capacity with about 25 percent capacity during weekdays. Plans currently in development for park improvements include parking for 33 boat trailers and 4 wet slips.

Marina Boat Ramp Park

301 E. Venice Avenue

Venice 34285

This 7-acre park provides access to the ICW. The park is owned by the West Coast Inland Navigational District (WCIND). The old train station, adjacent to the park has been restored. There are 33 parking spaces for vehicles with trailers and 14 designated vehicle parking spaces. Weekend use is typically 50 percent of capacity and about 25 percent capacity on weekdays.

Marina Park

*7030 Chancellor Boulevard
North Port 34287*

This 0.8-acre park is owned by the City of North Port and operated by Sarasota County Parks and Recreation. It allows access to the Myakkahatchee Waterway and has accessible docks including one floating dock. There are approximately 20 unmarked parking spaces for vehicles with trailers.

Nokomis Beach Park

*901 Casey Key Road
Nokomis 34275*

This 24-acre park is located on an island adjacent to the ICW. It has excellent parking and access to the bay and Gulf. This park has approximately 50 unmarked parking spaces plus 20 overflow spaces. Weekends are often 100 percent occupied and weekdays approximately 50 percent of capacity.

Pinecraft Park

*1420 Gilbert Avenue
Sarasota 34239*

This 22-acre park is located in a residential neighborhood and provides access to the shallow water upper reaches of Phillippi Creek. There is limited parking for vehicles with only room for about five trailers.

Snook Haven Park

*5000 E. Venice Avenue
Venice 34292*

This 3-acre park provides access to the Myakka River for shallow draft vessels. It features a two-lane boat ramp and approximately ten parking spaces for vehicles with trailers.

Turtle Beach Park

*8918 Midnight Pass Road
Siesta Key 34242*

Turtle Beach is located on the south end of Siesta Key on Blind Pass Lagoon. There are two separate concrete double-lane boat ramps with docks. This 17-acre park features approximately 38 parking spaces for vehicles with trailers. On weekends, the facility is typically 75 percent with weekday use approximately 25 percent of capacity.

Marinas

A total of 13 marinas in Sarasota County are listed in the Boating and Angling Guide to Sarasota County (Sarasota County, 2004a). A summary of information on public marinas in Sarasota County is provided in **Table 16**. Additional information on public marinas, along with other aspects of recreational boating can also be found in the Boating and Angling Guide to Sarasota County (Sarasota County, 2004a) and at the Sarasota County Government website (<http://www.scgov.net>).

Moorings

The most recent comprehensive inventory of moorings in Sarasota County was conducted by Florida Sea Grant (Antonini and Box, 1996; Antonini et al, 1998). A “mooring” was defined as the location where a vessel is typically stored or accommodated while not in use. Types of moorings were identified as anchored / anchorage, beached/blocked, dry stack, hoist, ramp, seawall, trailer, or wet slip. A summary of information on moorings in Sarasota County is provided in **Table 17**.

The location of existing moorings for all Sarasota County municipalities, including unincorporated county, is provided in **Figures 48 through 51**.

Additional information on SCW, habitat, and resources can also be found in the SBEP Blueways Guide (1999).

Table 1. Sarasota County Area Statistics

Land Area	<u>Water Area Square Miles</u>	<u>Land/Water Area Square Miles</u>	<u>Square Miles</u>
Town of Longboat Key (Sarasota County Portion)	2.7	5.4	8.1
City of North Port	104.0	2.1	106.1
City of Sarasota	14.9	9.7	24.6
City of Venice	14.9	1.7	16.6
Municipal Sub-Total	136.5	18.9	155.4
Unincorporated County	439.0	134.7	573.7
Total	575.5	153.6	729.1

Source: Sarasota County Municipal Planning Departments, 2009. The accuracy of the area measurement is limited by the inaccuracy inherent in the mapping of the various boundary features.

Table 2. Sarasota County annual resident population estimates. Source: U.S. Census Bureau (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	8,898
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 2. Sarasota County annual resident population estimates. Source: U.S. Census Bureau (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	52,715	17,764	22,797	5,012	227,669	325,957	1.5	4,856
2001	53,657	18,151	25,234	5,042	231,939	334,023	2.5	8,066
2002	53,939	18,628	27,448	5,068	234,601	339,684	1.7	5,661
2003	54,434	19,290	31,352	5,072	238,613	348,761	2.7	9,077
2004	54,639	20,035	35,721	5,060	242,852	358,307	2.7	9,546
2005	54,848	20,800	41,000	5,072	246,147	367,867	2.7	9,560
2006	55,364	21,584	47,770	5,067	249,601	379,386	3.1	11,519
2007	55,644	22,149	53,732	5,078	250,858	387,461	2.1	8,075
2008	55,174	22,146	56,316	5,081	254,891	393,608	1.6	6,147

Table 3. Manatee deaths (all categories) by county, for all counties with at least one verified death; 2006-2008. Source: FWC.

	COUNTY	2006	2007	2008	TOTAL
*	Lee	82	91	45	218
*	Brevard	87	57	72	216
*	Volusia	22	26	26	74
	Monroe	44	10	7	61
*	Collier	14	16	17	47
*	Citrus	10	12	22	44
*	Duval	13	8	14	35
*	Sarasota	20	5	8	33
	Hillsborough	16	4	12	32
	Pinellas	9	8	14	31
*	Broward	15	4	10	29
*	Miami-Dade	7	13	9	29
	Charlotte	10	8	10	28
*	Martin	17	6	4	27
*	Indian River	6	7	12	25
	Manatee	10	4	7	21
*	Palm Beach	7	4	8	19
	Flagler	4	7	6	17
*	St. Lucie	5	2	6	13
	Clay	3	2	7	12
	Glades	2	8	2	12
	St. Johns	3	3	3	9

Table 3. Manatee deaths (all categories) by county, for all counties with at least one verified death; 2006-2008 (continued).

COUNTY	2006	2007	2008	TOTAL
Putnam	2	1	5	8
Levy	2	0	4	6
Pasco	1	2	1	4
Dixie	0	2	1	3
Franklin	0	1	1	2
Hernando	1	1	0	2
Lake	1	0	1	2
Nassau	0	2	0	2
Taylor	1	1	0	2
Bay	0	1	0	1
Escambia	0	0	1	1
Gilchrist	0	1	0	1
Gulf	1	0	0	1
Hendry	1	0	0	1
Okaloosa	1	0	0	1
Okeechobee	0	0	1	1
Seminole	0	0	1	1

* original "key" manatee protection county

Table 4. Watercraft-related manatee deaths by county, for all counties with at least one verified watercraft-related death; 2006-2008. Source: FWC.

	COUNTY	2006	2007	2008	TOTAL
*	Lee	21	14	14	49
*	Brevard	22	10	10	42
*	Duval	8	2	11	21
*	Volusia	3	8	7	18
*	Citrus	2	5	8	15
*	Collier	1	6	6	13
	Pinellas	1	3	7	11
*	Broward	6	1	3	10
	Hillsborough	5	3	1	9
*	Martin	5	2	1	8
*	Sarasota	6	0	2	8
	Charlotte	1	3	3	7
*	Miami-Dade	1	4	2	7
	Monroe	2	3	2	7
	Manatee	3	2	1	6
*	Palm Beach	0	0	6	6
	Flagler	2	2	1	5
*	Indian River	2	0	2	4
*	St. Lucie	0	1	2	3
	Clay	0	1	0	1
	Dixie	0	1	0	1
	Glades	0	1	0	1
	Lake	0	0	1	1
	Pasco	0	1	0	1
	Taylor	1	0	0	1
<hr/>					
*	original "key" manatee protection county				

Table 5. Manatee mortality in Sarasota County by location; 1976-2008. Source: FWC.

Location	Total Deaths	Location	Watercraft-Related Deaths
Lemon Bay	55	Lemon Bay	11
Myakka River	38	Little Sarasota Bay	4
Little Sarasota Bay	15	Roberts Bay (Sarasota)	4
Roberts Bay (Sarasota)	11	Phillippi Creek	4
Longboat Key	9	Big Sarasota Pass	4
Big Sarasota Pass	9	Myakka River	3
Phillippi Creek	9	Gulf of Mexico	2
City Island / Pansy Bayou	8	Longboat Key	2
Venice Bypass Canal	8	East Sarasota Bay	2
Gulf of Mexico	7	City Island / Pansy Bayou	2
Venice Inlet / Dona Bay	7	Lyons Bay	2
Buttonwood Harbor	6	Venice Bypass Canal	2
Dryman Bay	6	Buttonwood Harbor	1
Lyons Bay	6	Bird Key / South Lido Key	1
East Sarasota Bay	5	Dryman Bay	1
Bird Key / South Lido Key	4	Blackburn Bay	0
Blackburn Bay	3	Venice Inlet / Dona Bay	0
Roberts Bay / Curry Creek	3	Roberts Bay / Curry Creek	0
TOTAL	209	TOTAL	45

Table 6. Vessel registrations by Florida county; 2008 data. Source: FWC.

County	Recreational	Commercial / Dealer	Total
Miami-Dade	56,293	2,587	58,880
Pinellas	54,466	2,125	56,591
Broward	48,875	2,182	51,057
Lee	48,853	1,611	50,464
Hillsborough	46,688	1,161	47,849
Palm Beach	43,822	1,472	45,294
Brevard	38,637	1,590	40,227
Orange	33,969	681	34,650
Duval	33,234	849	34,083
Polk	32,053	565	32,618
Volusia	29,779	1,008	30,787
Monroe	26,897	3,091	29,988
Pasco	25,414	634	26,048
Sarasota	24,453	786	25,239
Collier	23,234	939	24,173
Lake	22,256	326	22,582
Charlotte	21,853	720	22,573
Manatee	19,643	1,031	20,674
Bay	19,494	1,013	20,507
Marion	20,044	329	20,373
Okaloosa	19,397	623	20,020
Seminole	19,442	438	19,880
Escambia	17,851	489	18,340
Martin	16,906	920	17,826
Citrus	16,755	785	17,540
Santa Rosa	14,005	279	14,284
St. Lucie	13,283	624	13,907
Leon	13,562	275	13,837
Clay	12,684	247	12,931
St. Johns	12,024	430	12,454
Indian River	10,947	470	11,417

Table 6. Vessel registrations by Florida county; 2008 data (continued).

County	Recreational	Commercial / Dealer	Total
Alachua	10,988	311	11,299
Highlands	10,365	174	10,539
Hernando	9,306	207	9,513
Osceola	9,066	201	9,267
Putnam	8,676	352	9,028
Okeechobee	5,872	215	6,087
Nassau	5,710	205	5,915
Walton	5,240	120	5,360
Flagler	4,702	118	4,820
Columbia	4,649	64	4,713
Jackson	4,563	36	4,599
Wakulla	4,201	310	4,511
Levy	3,903	421	4,324
Sumter	3,985	71	4,056
Taylor	3,817	180	3,997
Franklin	2,643	885	3,528
Hendry	3,041	140	3,181
Gulf	2,894	285	3,179
Suwanee	2,894	38	2,932
Dixie	2,544	285	2,829
Gadsen	2,608	46	2,654
DeSoto	2,336	69	2,405
Washington	2,259	32	2,291
Bradford	2,190	25	2,215
Baker	2,158	6	2,164
Holmes	1,919	20	1,939
Gilchrist	1,683	32	1,715
Hardee	1,611	16	1,627
Glades	1,422	93	1,515
Calhoun	1,444	21	1,465

Table 6. Vessel registrations by Florida county; 2008 data (continued).

County	Recreational	Commercial / Dealer	Total
Jefferson	1,256	25	1,281
Madison	1,223	5	1,228
Liberty	1,081	20	1,101
Lafayette	883	12	895
Union	826	6	832
DHSMV	2,140	1,197	3,337
Total	45,797	3,438	49,235

Table 7. Boating accident data by Florida county; 2008 data. Source FWC.

County	Reported Accidents	Fatalities	Injuries	Damages	Accident Rate
Monroe	98	7	44	\$922,101	1:271
Franklin	7	0	3	\$66,570	1:377
Nassau	10	1	9	\$492,500	1:571
Miami-Dade	78	3	47	\$17,970,000	1:721
Bay	26	0	16	\$298,313	1:749
Collier	30	2	23	\$209,301	1:774
Osceola	10	1	8	\$33,200	1:906
Suwanee	3	0	4	\$8,200	1:964
Martin	17	0	10	\$102,500	1:994
Palm Beach	44	2	26	\$643,300	1:995
Hendry	3	2	1	\$2,500	1:1013
Pinellas	51	2	26	\$625,478	1:1067
Liberty	1	1	0	\$0	1:1081
St. Johns	11	2	8	\$6,500	1:1093
Broward	39	0	14	\$422,400	1:1253
Sumter	3	0	1	\$9,900	1:1328
Wakulla	3	0	2	\$5,200	1:1400
Glades	1	1	0	\$0	1:1422
Gulf	2	1	1	\$7,000	1:1447
Okeechobee	4	0	3	\$2,050	1:1468
Brevard	26	3	13	\$194,000	1:1486
Indian River	7	0	4	\$78,489	1:1563
Okaloosa	12	0	10	\$14,300	1:1616
Gilchrist	1	0	0	\$2,500	1:1683
Putnam	5	1	2	\$28,000	1:1735
Walton	3	4	1	\$0	1:1746
Escambia	10	1	5	\$36,600	1:1785
Volusia	16	1	8	\$38,400	1:1861
Holmes	1	0	0	\$3,000	1:1919
Duval	17	1	7	\$177,401	1:1954

Table 7. Boating accident data by Florida county (continued).

County	Reported				Accident Rate
	Accidents	Fatalities	Injuries	Damages	
Bradford	1	0	2	\$500	1:2190
Lee	22	1	16	\$549,140	1:2220
Hernando	4	0	3	\$37,500	1:2326
Santa Rosa	6	1	1	\$27,500	1:2334
DeSoto	1	1	0	\$0	1:2336
Flagler	2	1	2	\$2,500	1:2351
Charlotte	9	1	9	\$20,750	1:2428
Lake	9	3	11	\$15,500	1:2472
Clay	5	0	4	\$7,500	1:2536
Dixie	1	0	1	\$38,000	1:2544
Manatee	6	0	4	\$34,500	1:3273
Highlands	3	1	4	\$9,200	1:3455
Levy	1	0	0	\$3,500	1:3903
Marion	5	0	2	\$12,750	1:4008
Citrus	4	0	5	\$3,100	1:4188
St. Lucie	3	0	1	\$8,000	1:4427
Jackson	1	0	1	\$0	1:4563
Hillsborough	10	3	6	\$31,500	1:4668
Seminole	4	0	3	\$20,100	1:4860
Polk	6	1	4	\$26,600	1:5342
Orange	6	2	2	\$14,700	1:5661
Sarasota	4	0	8	\$28,500	1:6113
Alachua	1	0	1	\$1,200	1:10988
Pasco	2	2	0	\$25,000	1:12707
Leon	1	1	0	\$0	1:13562
Baker	0	0	0	\$0	0

Table 7. Boating accident data by Florida county (continued).

County	Reported				Accident Rate
	Accidents	Fatalities	Injuries	Damages	
Calhoun	0	0	0	\$0	0
Columbia	0	0	0	\$0	0
Gadsen	0	0	0	\$0	0
Hamilton	0	0	0	\$0	0
Hardee	0	0	0	\$0	0
Jefferson	0	0	0	\$0	0
Lafayette	0	0	0	\$0	0
Madison	0	0	0	\$0	0
Taylor	0	0	0	\$0	0
Union	0	0	0	\$0	0
Washington	0	0	0	\$0	0

Table 8. Summary of 2008 Sarasota County vessel registration data. Source: Florida Department of Highway Safety and Motor Vehicles (DHSMV).

Class	Size	Recreational	Commercial	Total	
Class A-1	less than 12'	3,910	29	3,939	(15.61%)
Class A-2	12' to 15' 11"	4,315	41	4,356	(17.26%)
Class 1	16' to 25' 11"	12,826	227	13,053	(51.72%)
Class 2	26' to 39' 11"	2,617	100	2,717	(10.77%)
Class 3	40' to 64' 11"	430	39	469	(1.86%)
Class 4	65' to 109' 11"	22	6	28	(0.11%)
Class 5	greater than 110'	1	0	1	(0.01%)
Canoe	all	332	0	332	(1.32%)
Dealer	all	0	344	344	(1.36%)
		24,453	786	25,239	

Table 9. Comparison of vessel size categories from recent aerial survey studies. Source: Gorzelany 2005, 2006b, 2007, 2008, 2009a, PBS&J 2008.

County	Size Category					
	< 16'	16'-25'	26'-39"	40'-64'	65'-109'	>109'
Broward (2004-05)	7%	56%	21%	11%	4%	1%
Lee (2005-06)	8%	78%	10%	3%	1%	0%
Sarasota (2005-06)	14%	71%	11%	3%	1%	0%
Charlotte (2005-06)	7%	79%	11%	3%	0%	0%
Palm Beach (2007)	10%	66%	13%	6%	4%	1%
Martin (2006-07)	9%	65%	13%	8%	4%	1%
Brevard (2006-07)	13%	68%	11%	6%	2%	0%
Collier (2006-07)	12%	77%	8%	2%	1%	0%
Miami-Dade (2008-09)	12%	56%	20%	8%	3%	0%

Table 10. Comparison of vessel type categories from recent aerial survey studies. Source – Gorzelany 2005, 2006b, 2007, 2008, 2009a, PBS&J 2008.

County	Vessel Types						
	Small Power	Large Power	Personal Watercraft	Sailboat	Kayak / Canoe	Barge	Other
Broward (2004-05)	55%	32%	2%	7%	2%	1%	1%
Lee (2005-06)	79%	10%	2%	4%	4%	1%	0%
Sarasota (2005-06)	71%	11%	3%	9%	5%	1%	0%
Charlotte (2005-06)	80%	8%	1%	8%	2%	0%	1%
Palm Beach (2007)	68%	21%	4%	4%	2%	1%	0%
Martin (2006-07)	64%	17%	4%	9%	3%	3%	0%
Brevard (2006-07)	71%	11%	4%	10%	3%	1%	0%
Collier (2006-07)	79%	8%	3%	3%	5%	1%	1%
Miami-Dade (2008-09)	54%	24%	4%	14%	3%	1%	0%

Table 11. Summary of Sarasota County waterway access data. Source: Sidman et. al., 2006.

Access Category	Frequency	Percent Total	Rank
Boat Ramp	512	38.5%	1
Home Dock	502	37.7%	2
Dry Storage Facility	144	10.8%	3
Marina Wet Slip	135	10.2%	4
Condo Dock	35	2.6%	5
Shore / Causeway	3	0.2%	6

Table 12. Calculation of boat densities in proximity to Sarasota County inlets (New Pass, Big Sarasota Pass, Venice Inlet) relative to total boats surveyed county-wide. Source: Gorzelany, 2006b.

Total number of boats observed within 1 mile of inlets	772
Total number of boats observed within 3 miles of inlets	2647
Total number of boats surveyed county-wide	3445
<hr/>	
Area of inshore water within 1 mile of inlets (sq. mi)	3.52
Area of inshore water within 3 mile of inlets (sq. mi)	16.74
Total water area surveyed county-wide (sq. mi.)	108.4
<hr/>	
Percent water area within 1 mile of inlet	3.25%
Percent boats within 1 mile of inlet	22.41%
<hr/>	
Percent water area within 3 miles of inlet	15.44%
Percent boats within 3 mile of inlet	76.84%
<hr/>	

Table 13. Comparison of boat counts from New Pass from 1995 and 2005 for similar months, days, and time intervals. Source: Gorzelany, 1996, 2006a.

NEW PASS

Month	Day	Time Interval	1995 n	2005 n	Difference	%
May	Weekday	0900-1300	43	90	increase	52%
May	Weekend	1300-1700	397	364	decrease	-9%
June	Weekend	1100-1500	180	148	decrease	-22%
	Weekend	0900-1300	93	128	increase	27%
July	Weekend	1100-1500	313	180*	decrease	-74%
	Weekend	1100-1500	83	180*	increase	54%
August	Weekday	0900-1300	30	36	increase	17%
September	Weekday	1300-1700	32	18	decrease	-78%
October	Weekend	1100-1500	110	105	decrease	-5%
October	Weekend	0900-1300	129	67	decrease	-93%
November	Weekday	1100-1500	18	32	increase	44%
TOTAL			1428	1348	decrease	-6%

* - Mean of two separate survey dates

Table 14. Comparison of boat counts from Venice Inlet from 1995 and 2005 for similar months, days, and time intervals. Source: Gorzelany, 1996, 2006a.

VENICE INLET						
Month	Day	Time Interval	1995 n	2005 n	Difference	%
May	Weekend	1100-1500	294*	457	increase	36%
May	Weekday	1300-1700	81	149	increase	46%
June	Weekend	0900-1300	344	200	decrease	-72%
	Weekend	1300-1700	163	309	increase	47%
July	Weekend	0900-1300	236	346	increase	32%
	Weekend	1100-1500	452	506	increase	11%
August	Weekday	1300-1700	28	115	increase	76%
September	Weekday	0900-1300	33	57	increase	42%
October	Weekend	1300-1700	193*	221	increase	13%
November	Weekday	1100-1500	69	104	increase	34%
TOTAL			1406	2464	increase	+43%

* - Mean of two separate survey dates

Table 15. Boat ramps in Sarasota County with access to bays/Gulf of Mexico.

Name	Address	Docking*	Restrooms	Comments
Blackburn Point	800 Blackburn Point Road, Osprey	n/a	Proposed	Currently under development
Centennial Park	1059 N. Tamiami Trail, Sarasota	Yes	Yes	10-acre park with relatively large paved parking area
Dallas White Park	5900 Greenwood Ave, North Port	Yes	No	13-acre park owned by the City of North Port, freshwater access to the canal only
Higel Park	1330 Tarpon Center Dr, Venice	Yes	Yes	3-acre park owned by the City of Venice
Indian Mound Park	210 Winson Ave, Englewood	Yes	Yes	10-acre park and historical site
Ken Thompson Park / City Island	1700 Ken Thompson Pkwy, Lido Key	Yes	Yes	Associated with 92 acre park maintained by Sarasota County
Loreto Bay	800 Loreto Ct, Nokomis	No	No	Associated with small (0.4 acre) neighborhood park
Manasota Beach Park	8570 Manasota Key Rd, Manasota Key	Yes	Yes	21-acre park with beach access, picnic shelters, and other improvements under development
Marina Boat Ramp Park	301 E. Venice Ave, Venice	No	Yes	7-acre park owned by WCIND
Marina Park	7030 Chancellor Blvd, North Port	Yes	No	0.8-acre park owned by the City of North Port
Nokomis Beach Park	901 Casey Key Rd, Casey Key	Yes	Yes	24-acre park includes concessions, picnic area, and playground
Pinecraft Park	1420 Gilbert Ave, Sarasota	No	Yes	22-acre neighborhood park includes picnic area and playground, very steep slope, non-motorized or small watercraft only
Snook Haven Park	5000 E. Venice Ave, Venice	Yes	Yes	3-acre park on the Myakka River includes restaurant, shallow draft watercraft only
Turtle Beach Park	8918 Midnight Pass Rd, Siesta Key	Yes	Yes	17-acre park includes beach access, camping, and picnic area

* Overnight docking is not permitted at these sites, with the exception of Higel Park in Venice.

Table 16. Inventory of marinas in Sarasota County.

Name ¹	PID	Address	Total Capacity	Wet Slips	Dry Stacks	Trailer	Ramp	Anchorage	Pump out	Fuel
Longboat Bay Club	0000-00-7726	3200 Gulf of Mexico Drive, Longboat Key, 34228	10	10	0	No	No	No	No	No
Longboat Key Moorings	0000-00-7981	2600 Harbourside Drive, Longboat Key, 34228	291	291	0	No	No	No	Yes	Yes
The Boathouse	0012-04-2001	410 Gulf of Mexico Drive, Longboat Key, 34228	202	8	194	No	No	No	No	Yes
MarineMax Sarasota	2008-03-0001	1601 Ken Thompson Pkwy, Sarasota 34236	315	15	300	No	No	No	Yes	Yes
Sarasota Sailing Squadron	2008-03-0003	1717 Ken Thompson Pkwy, Sarasota, 34236	682	6	190	386	No	~100	No	No
Yacht Center	2006-16-001	1889 N. Tamiami Trail, Sarasota, 34234	75	25	50	No	No	No	No	No
Marina Jack	2027-05-0027	2 Marina Plaza, Sarasota, 34236	357	257	0	No	No	100	Yes	Yes
Sarasota Yacht Club	2014-02-0001	1100 John Ringling Boulevard, Sarasota, 34236	108	108	0	No	Yes	No	Yes	Yes
Bird Key Yacht Club	2012-05-0010	301 Bird Key Drive, Sarasota, 34236	40	40	0	No	No	No	Yes	Yes
Crow's Nest Marina	0173-12-0003	1968 Tarpon Center Drive, Venice, 34285	24	24	0	No	No	No	No	Yes
Tarpon Center Marina	0175-06-0032	996 Laguna Drive, Venice, 34285	20	20	0	No	No	No	No	Yes
Venice Yacht Club	0173-14-0001	1330 Tarpon Center Drive, Venice, 34285	47	47	0	No	No	No	Yes	Yes
Fisherman's Wharf Marina	0407-06-0001	505 N. Tamiami Trail, Venice, 34285	58	58	0	No	No	No	No	Yes
MarineMax Venice	0428-12-0003	1485 Tamiami Trail, S., Venice, 34285	~300	89	210	No	No	No	Yes	No
The Field Club	0077-11-0001	1400 Field Road, Sarasota, 34231	47	47	0	No	Yes	No	No	Yes
Phillippi Harbor Club	0000-00-8476	1780 Phillippi Shores Drive, Sarasota, 34231	309	No	309	No	Yes	No	No	Yes
CB's Saltwater Outfitters	0108-08-0004	1249 Stickney Point Road, Sarasota, 34242	14	14	0	No	No	No	No	Yes
Siesta Key Marina	0108-08-0005	1265 Stickney Point Road, Sarasota, 34242	265	25	240	No	No	No	No	Yes
Southpointe Marina	0112-11-0047	7660 S. Tamiami Trail, Sarasota, 34231	20-22	20-22	0	No	No	No	No	No
Hidden Harbor Marina	0112-14-0011	7700 S. Tamiami Trail, Sarasota, 34231	261	26	235	No	No	No	No	Yes
Turtle Beach Marina	0129-16-0004	8865 Midnight Pass Road, Sarasota, 34242	160	24	136	6	No	No	No	Yes
Casey Key Fish House	0157-04-0003	801 Blackburn Point Road, Osprey 34229	12	12	0	No	Yes	No	No	No
Casey Key Marina ²	0157-03-0001	482 Blackburn Point Road, Osprey 34229	157	58	99*	No	No	No	No	No
Osprey Harbor Village	0157-03-4001	582 Blackburn Point Road, Osprey, 34229	254	32	222	No	No	No	No	Yes
Royal Palm Marina	0497-12-0013	779 W. Wentworth Street, Englewood, 34223	~230	+100	~ 100	No	No	No	Yes	Yes
Gulf Harbor Marina	0000-00-8398	100 Circuit Road, Nokomis, 34275	269	No	269	No	No	No	Yes	Yes

¹Facility name as of May 2011²The upland portion of this parcel is undeveloped as of May 2011, accounting for low occupancy

*Dry stacks not built as of May 2011

Table 17. Summary of boat moorings by type in Sarasota County. Source: Antonini and Box, 1996; Antonini et al., 1998.

Area	Wet Slips	Dry Stacks	Seawall	Beached / Blocked	Trailer	Ramp	Anchorage	Total
Town of Longboat Key	1,059	415	37	0	1	11	0	1,523
City of Sarasota	1,334	568	54	348	235	27	200	2,766
City of Venice	977	423	21	166	130	72	16	1,805
City of North Port	702	112	13	62	19	14	0	922
Unincorporated County	4,589	3,026	149	675	273	147	4	8,863
Total	8,661	4,544	274	1,251	658	271	220	15,879

Figure 1. Major waterways in Sarasota County.



Figure 2A. Summary of Sarasota County ESLPP land acquisitions.

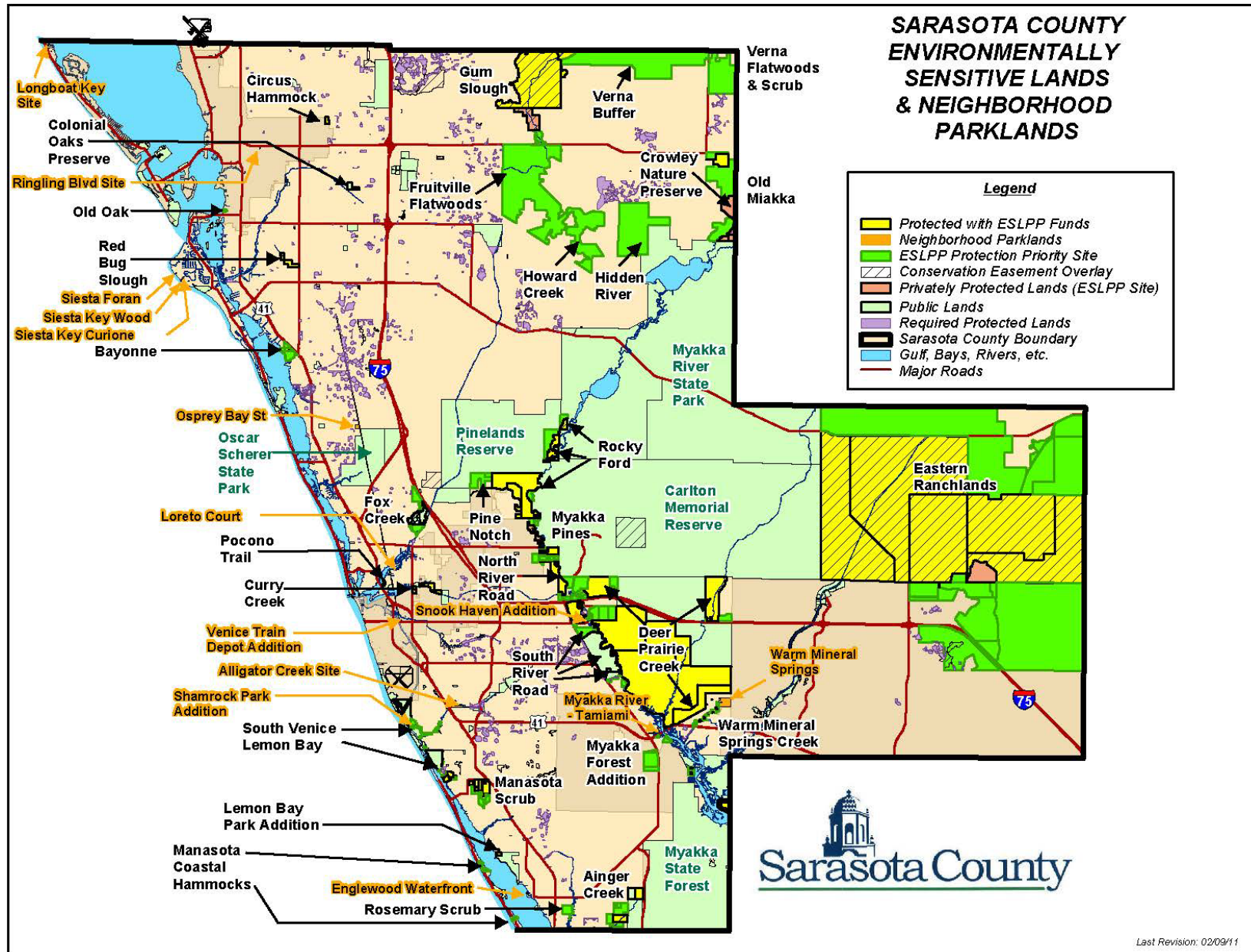


Figure 2B. Summary of Sarasota County ESLPP land acquisitions for the Warm Mineral Springs area.

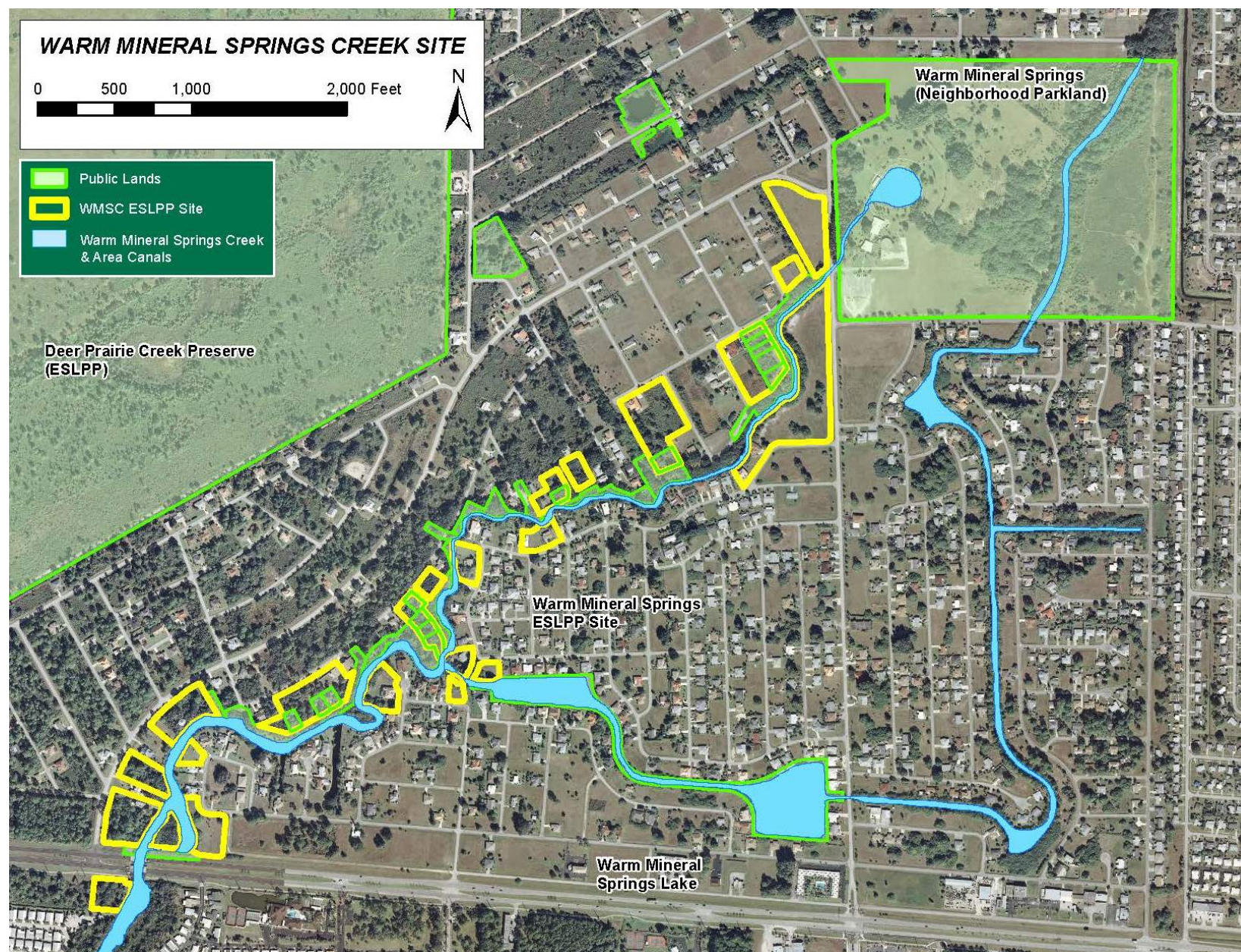


Figure 3. Sarasota County population growth since 1930; projected through 2030. Source: U.S. Census Bureau.

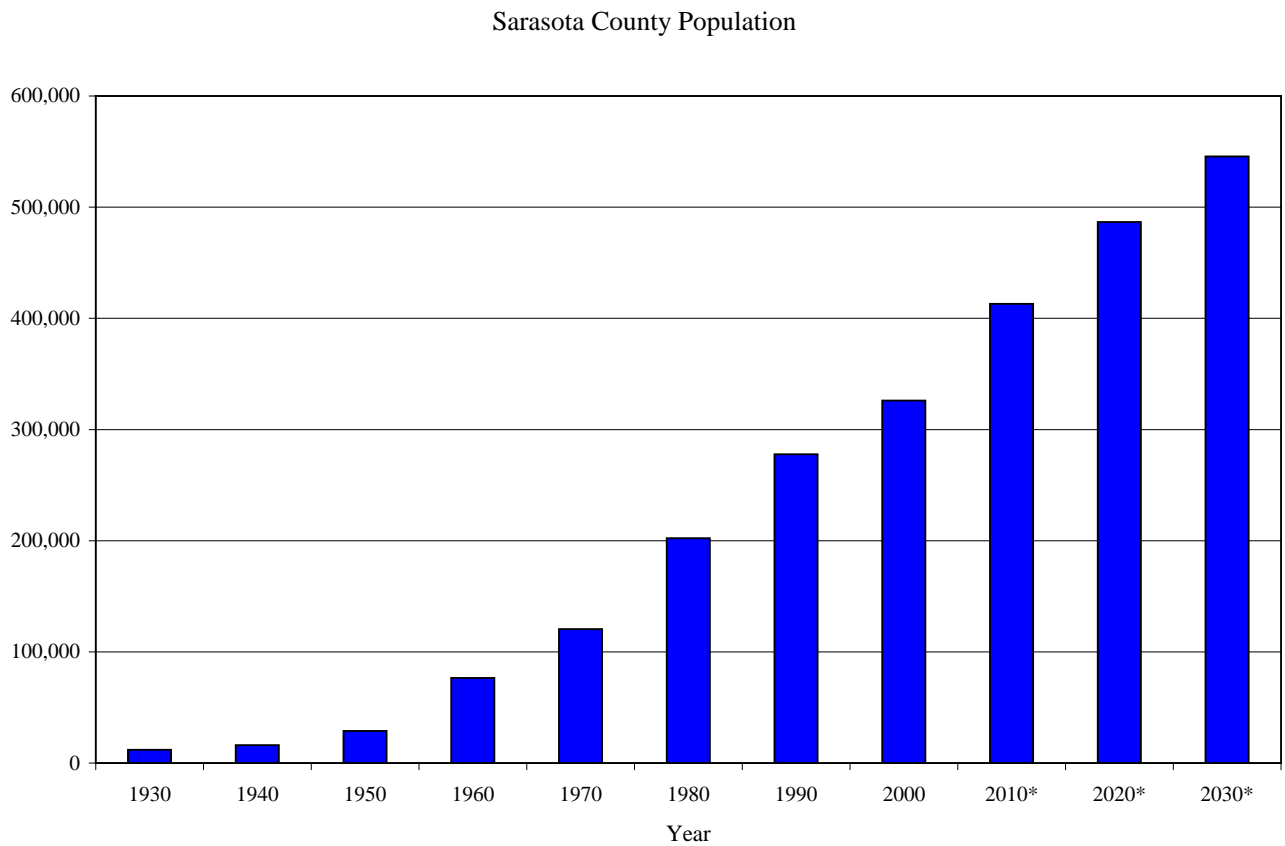


Figure 4. Average manatee counts per survey; Sarasota Bay to Venice; 1987-2006 aerial survey data. Source: Scolardi et. al., 2009.

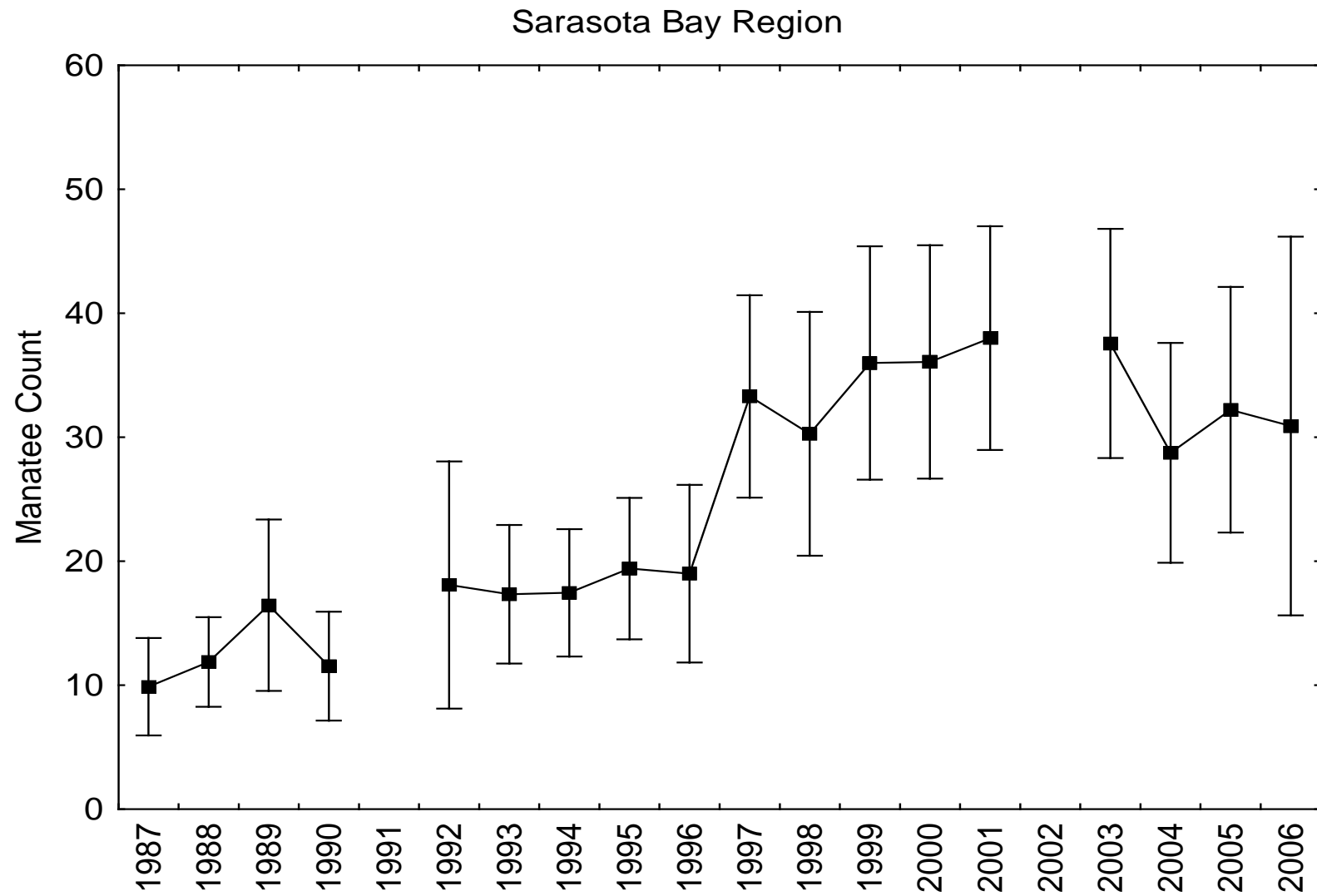


Figure 5. Average manatee counts per survey; Lemon Bay area; 1987-2006 aerial survey data. Source: Scolardi et. al., 2009.

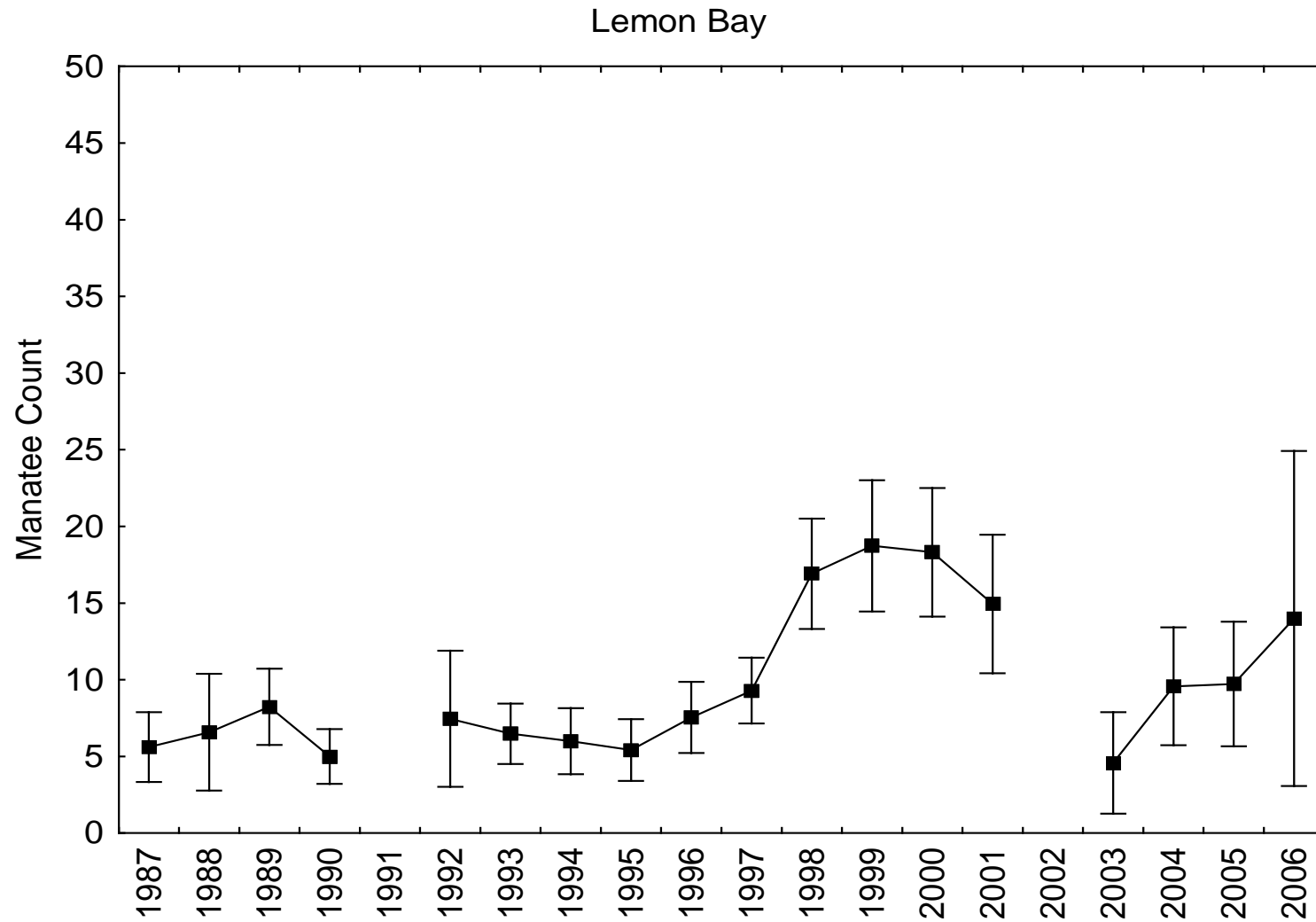


Figure 6. Average manatee counts per survey; Myakka River area; 1996-2006 aerial survey data. Source: Scolardi et. al., 2009.

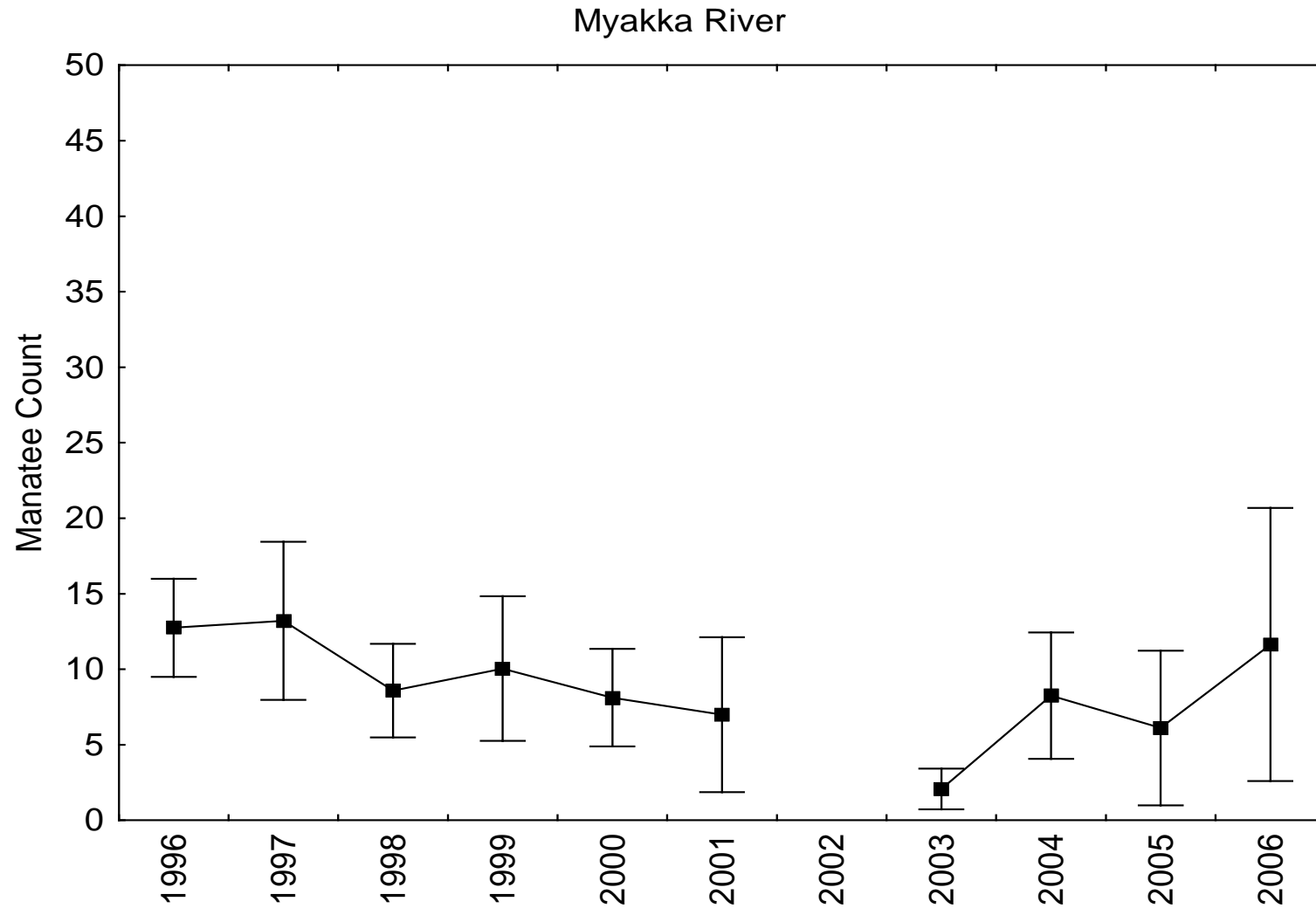


Figure 7. Seasonal counts of manatees by region. Source: Scolardi et. al., 2009.

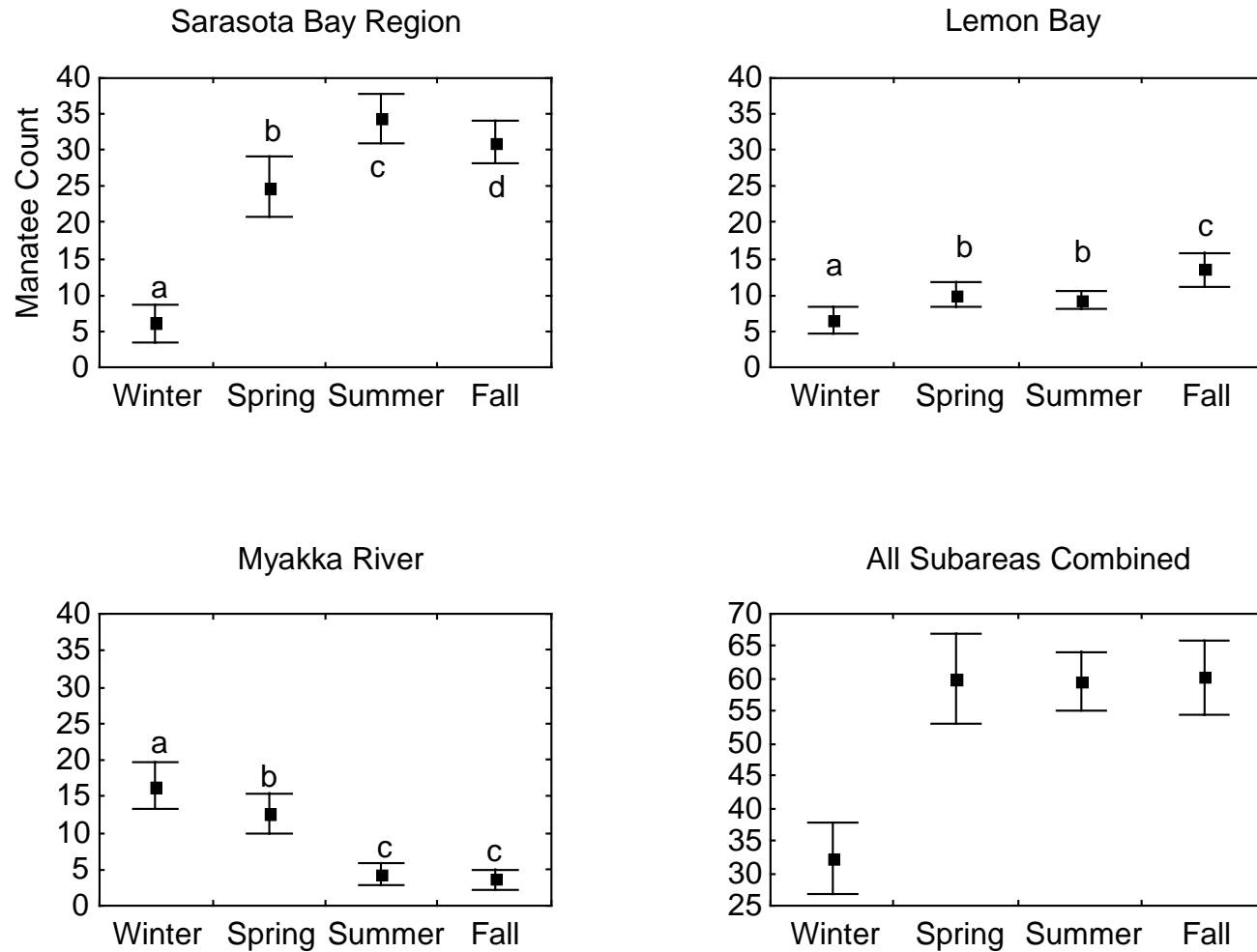


Figure 8. Composite map of manatee sightings in northern Sarasota County; 2002-2008. Source: Mote Marine Laboratory.

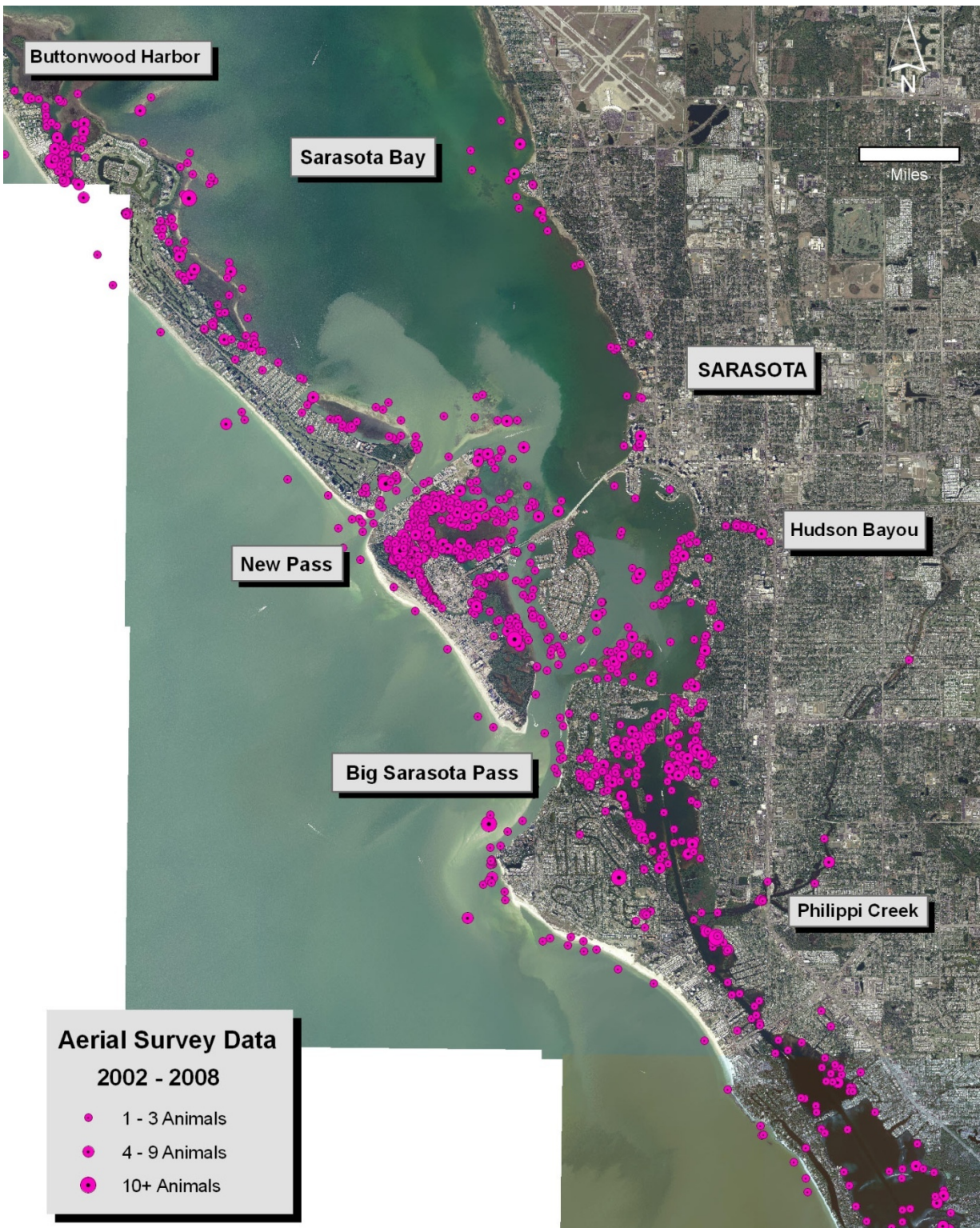


Figure 9. Composite map of manatee sightings in central Sarasota County; 2002-2008. Source: Mote Marine Laboratory.

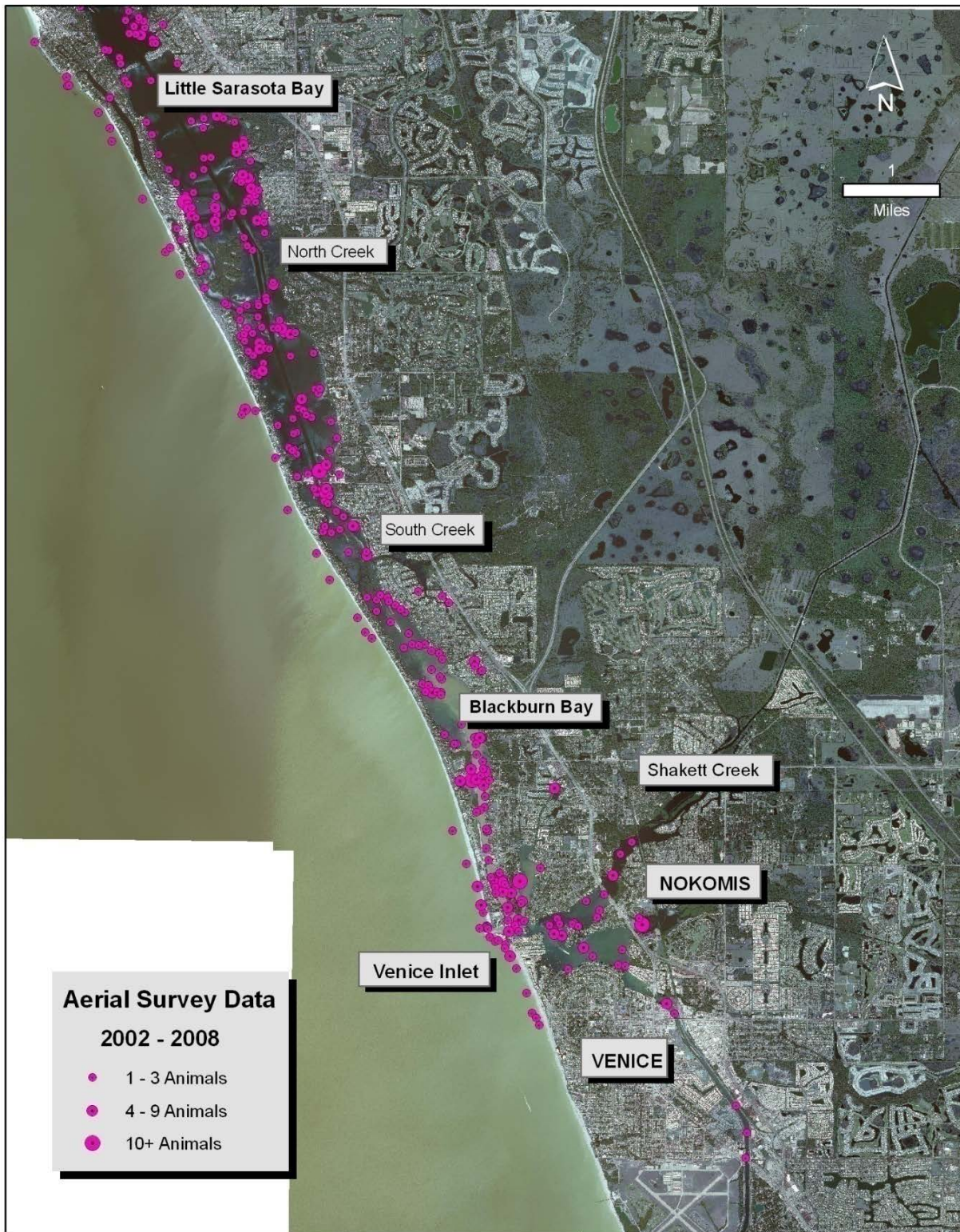


Figure 10. Composite map of manatee sightings in southern Sarasota County; 2002-2008. Source: Mote Marine Laboratory.



Figure 11. Composite map of manatee sightings along the Myakka River; 2002-2008. Source: Mote Marine Laboratory.

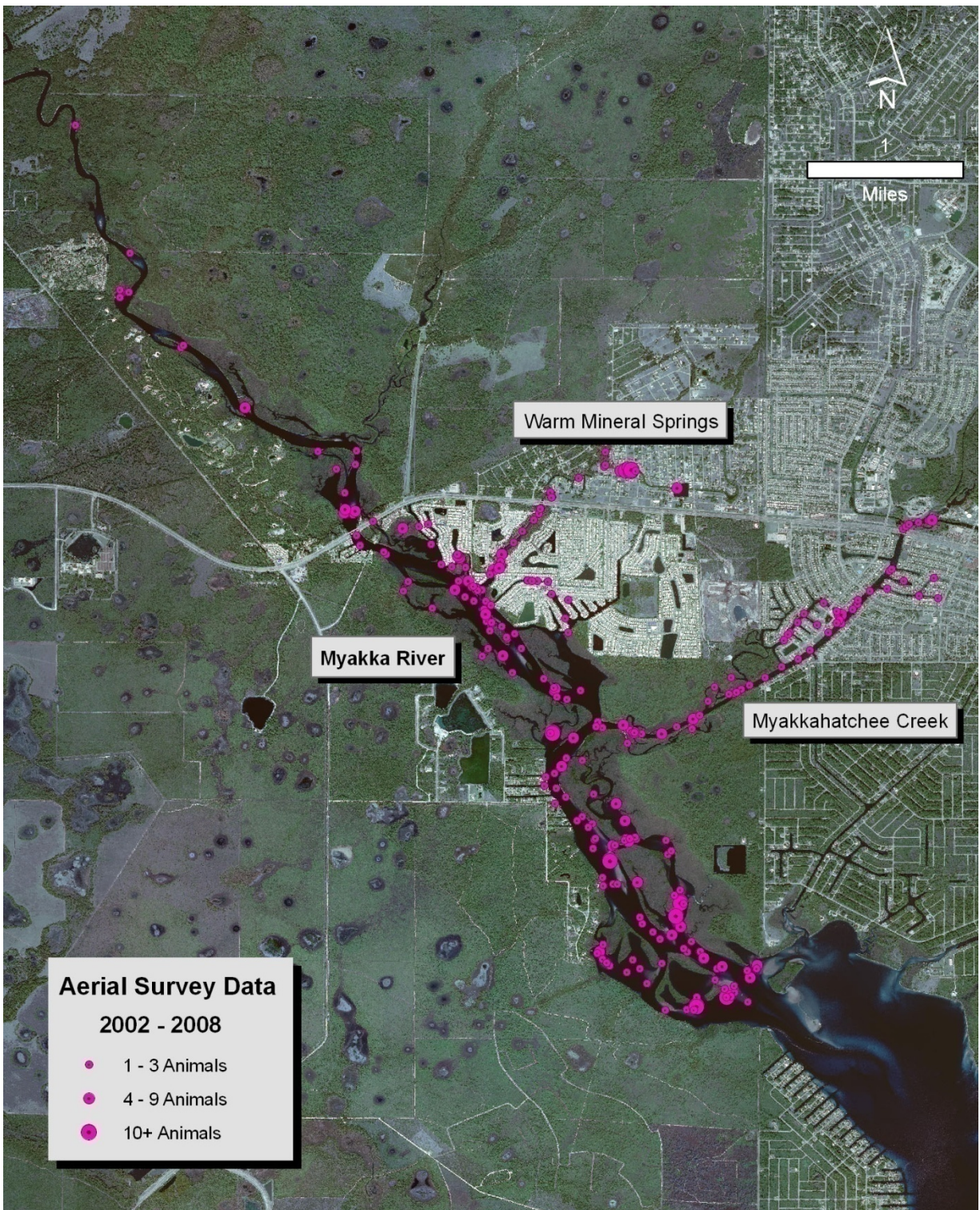


Figure 12. Summary of aerial survey data from northern Sarasota County; 2002-08. Kernel density distribution; 325m radius. Source: FWC.

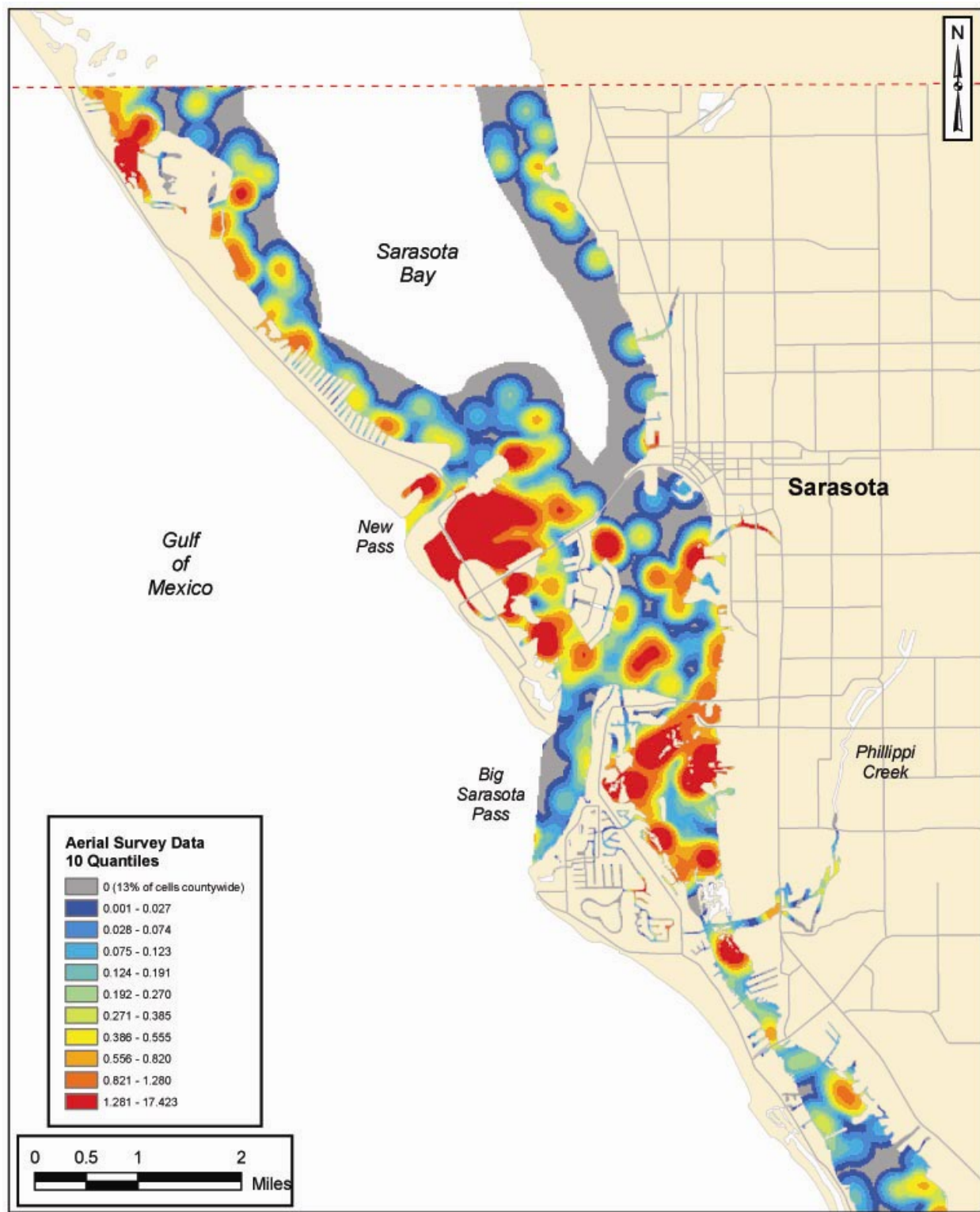


Figure 13. Summary of aerial survey data from central Sarasota County; 2002-08. Kernel density distribution; 325m radius. Source: FWC.

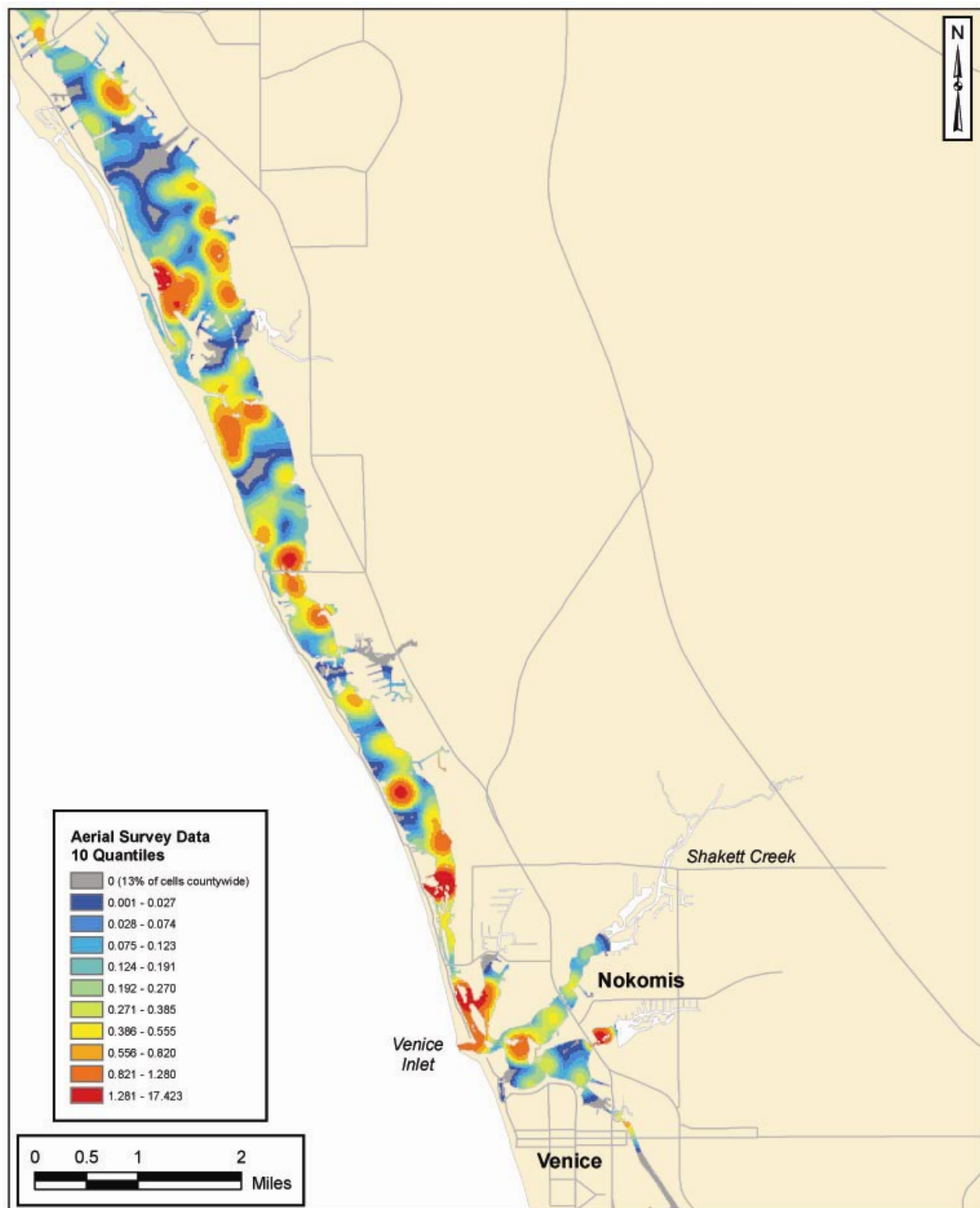


Figure 14. Summary of aerial survey data from southern Sarasota County; 2002-08. Kernel density distribution; 325m radius. Source: FWC.

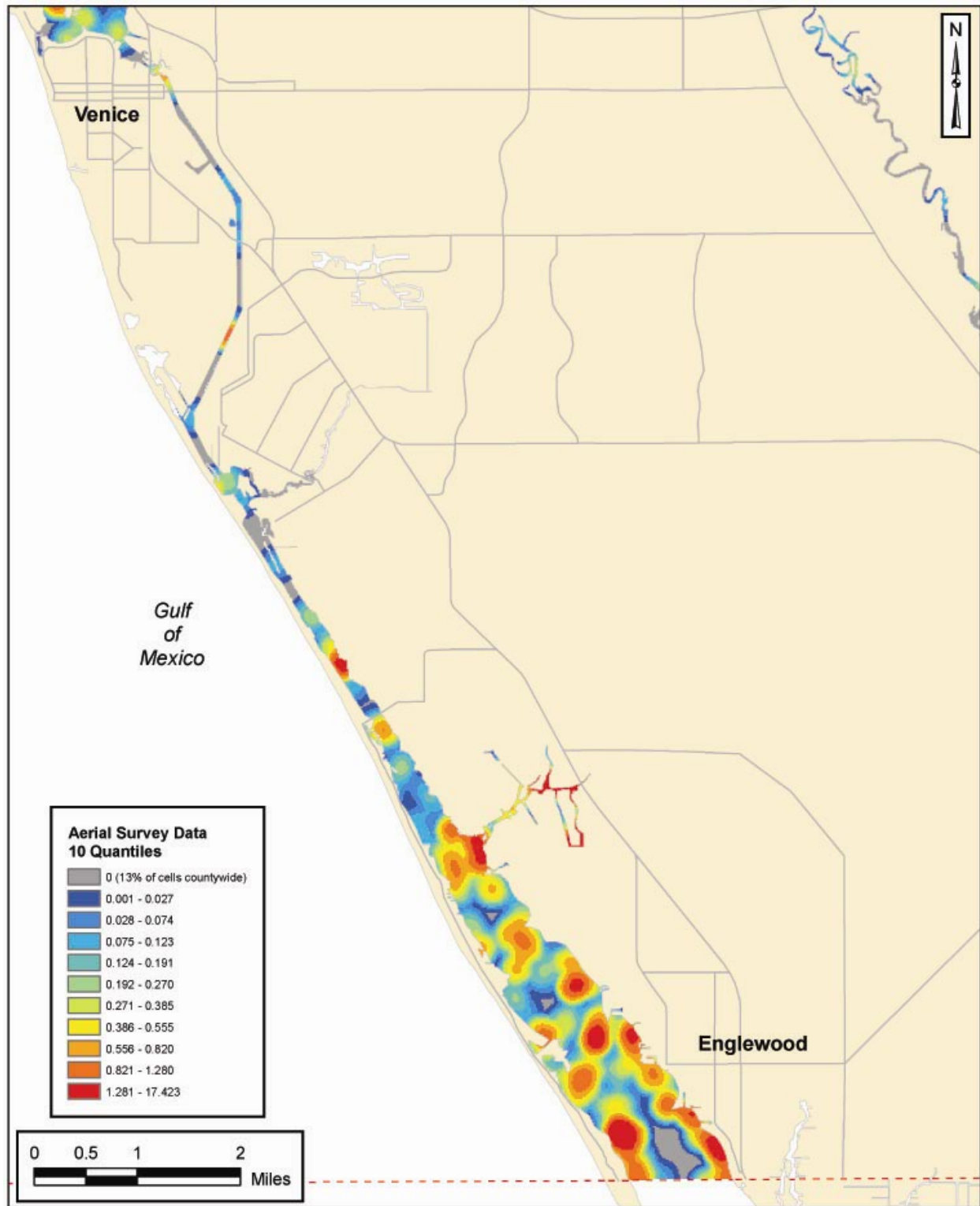


Figure 15. Summary of aerial survey data from the Myakka River; 2002-08. Kernel density distribution; 325m radius. Source: FWC.

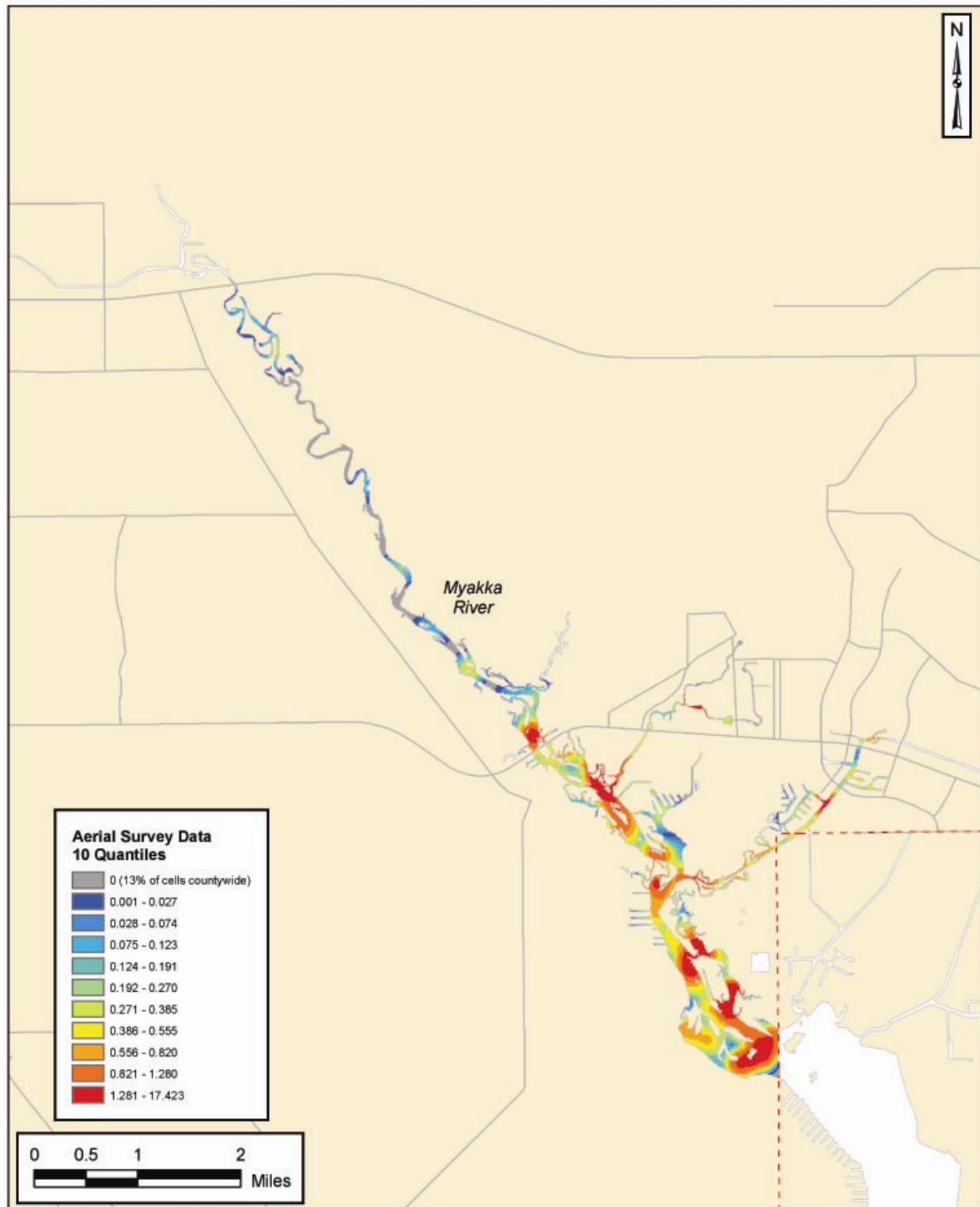


Figure 16. Telemetry data showing movement patterns of animal TSW064 between April 22, 2008 and May 22, 2008. Source: FWC.

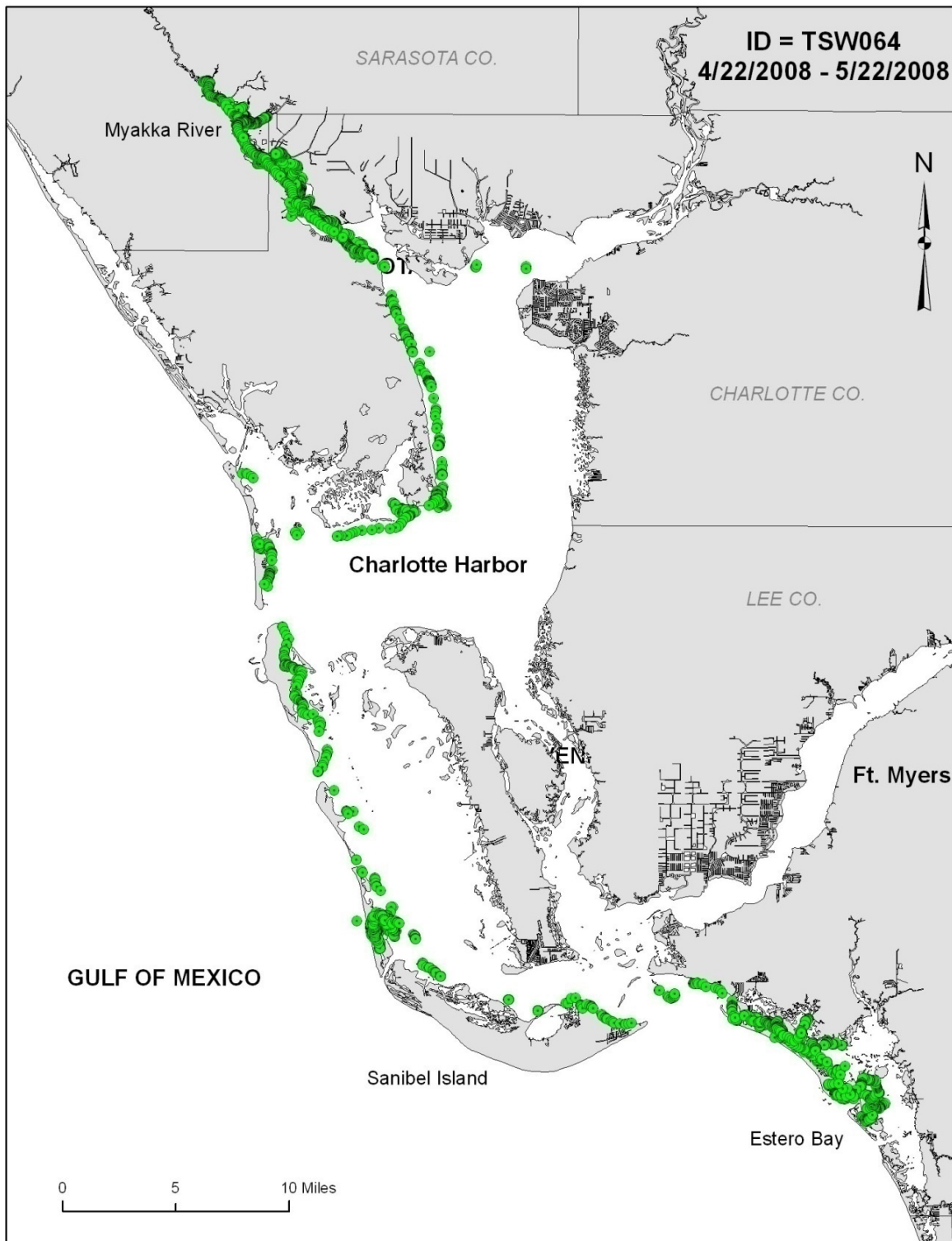


Figure 17. Telemetry data showing movement range of animal TSW059 between August 22, 2007 and September 22, 2007. Source: FWC.



Figure 18. Telemetry data showing movement range of animal TSW063 between April 22, 2008 and April 29, 2008. Source: FWC.



Figure 19. Telemetry data showing movement range of animal TTB002 between January 9, 1994 and April 7, 1995. Source: FWC.

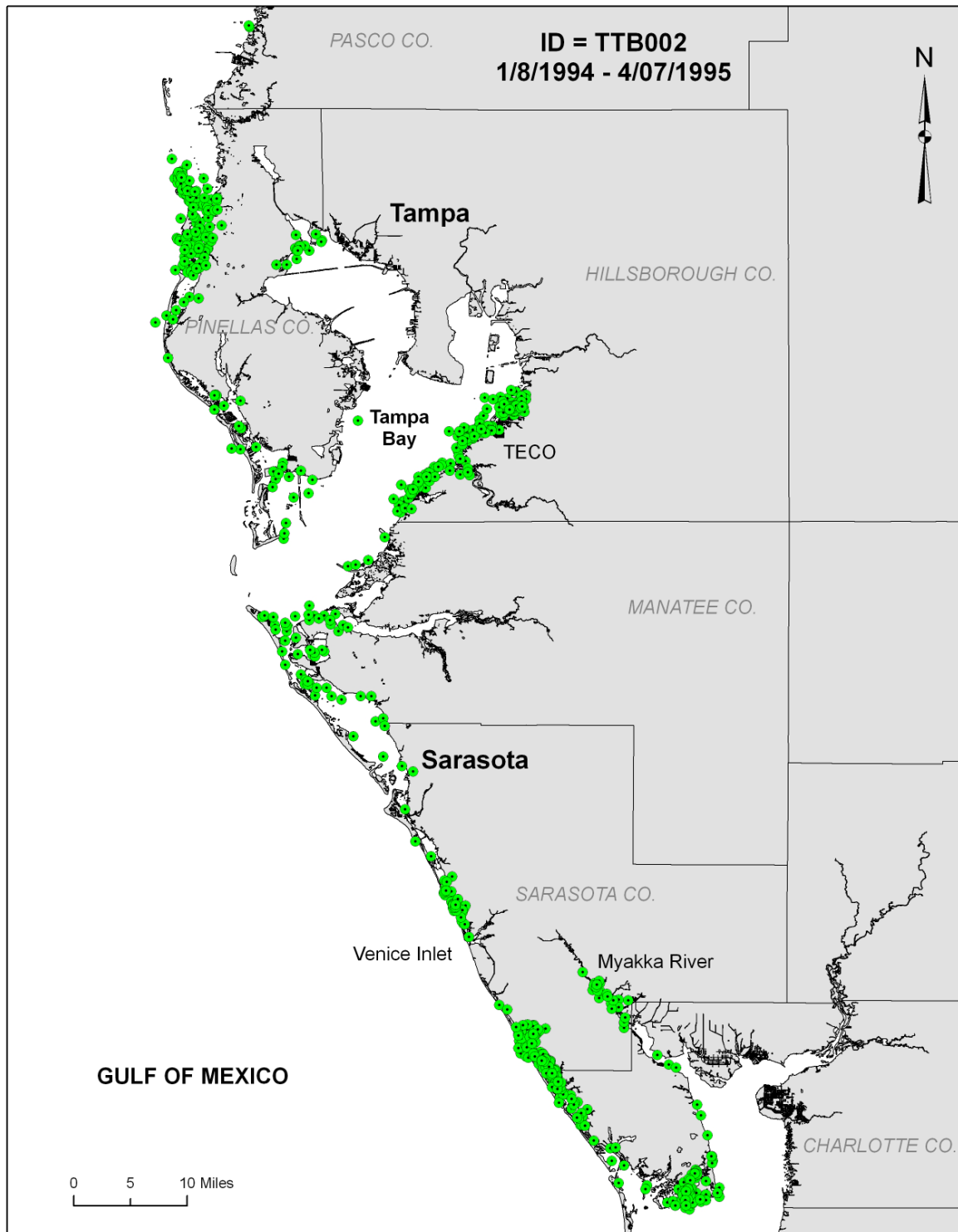


Figure 20. Telemetry data showing movement range of animal TSW049 between May 16, 1996 and May 16, 1998. Source: FWC.

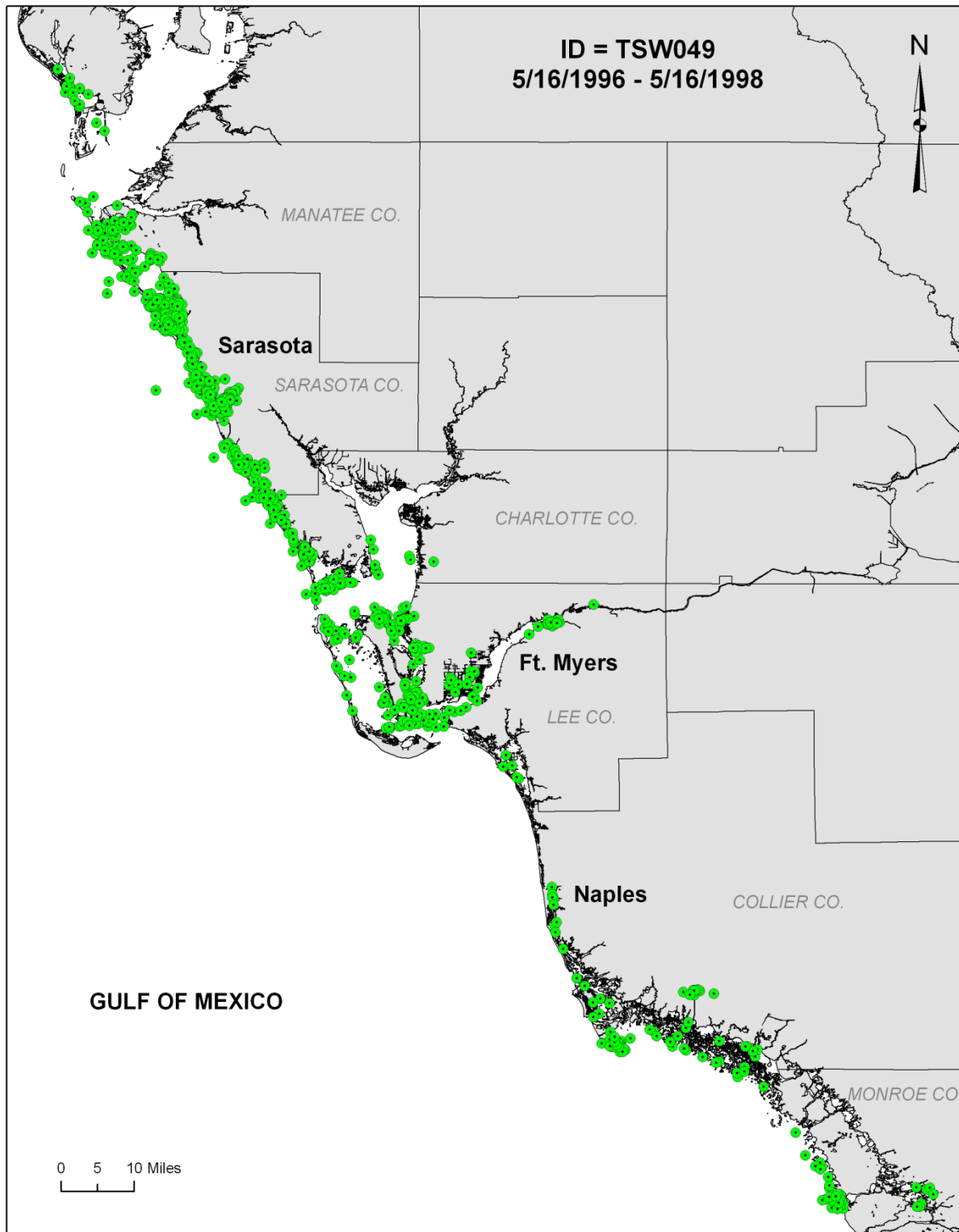


Figure 21. Manatee deaths in Sarasota County by year; all categories combined; 1976-2008, including trend line. Source: FWC.

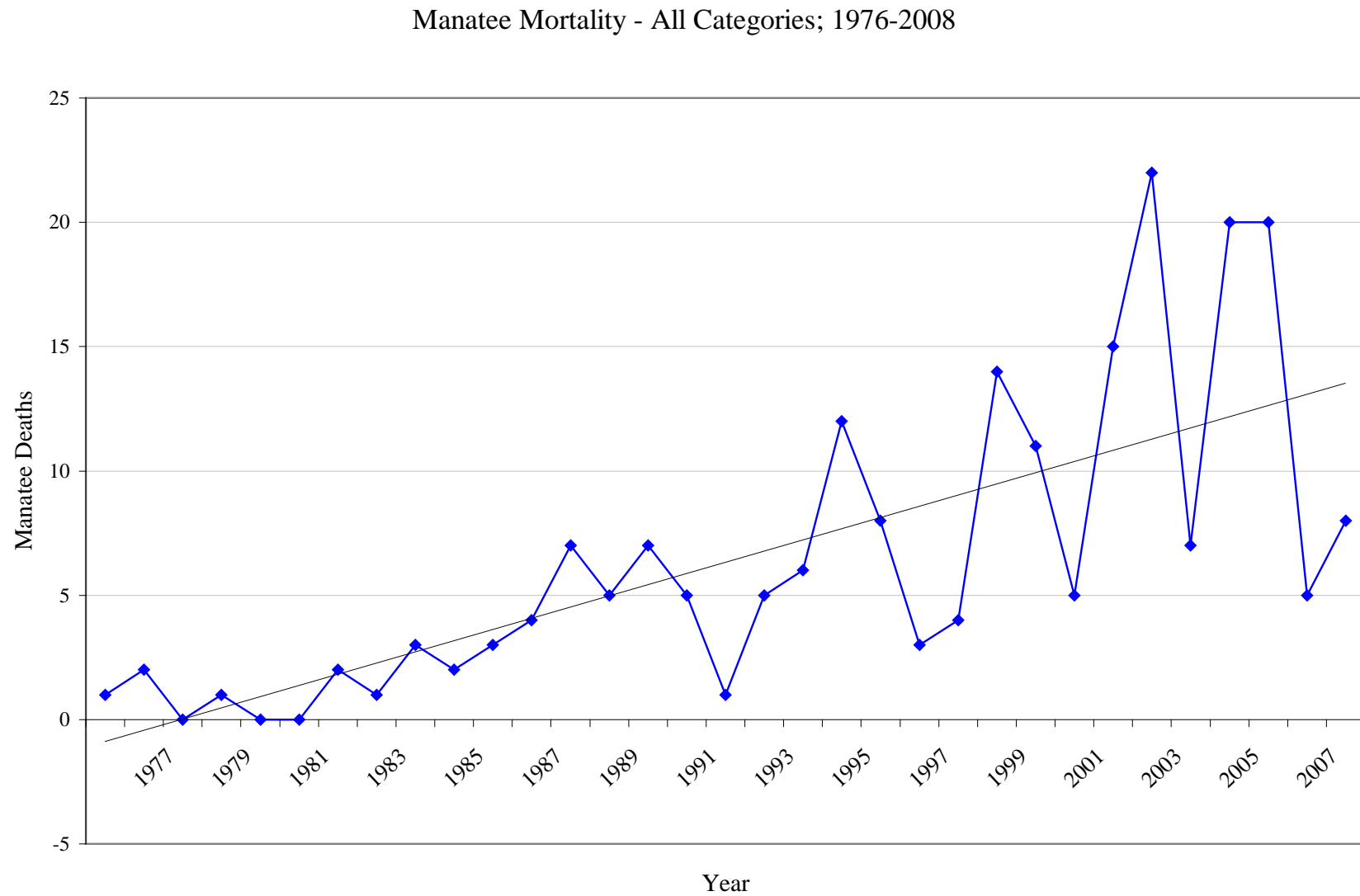


Figure 22. Watercraft-related manatee deaths in Sarasota County by year; 1976-2008, including trend line. Source: FWC.

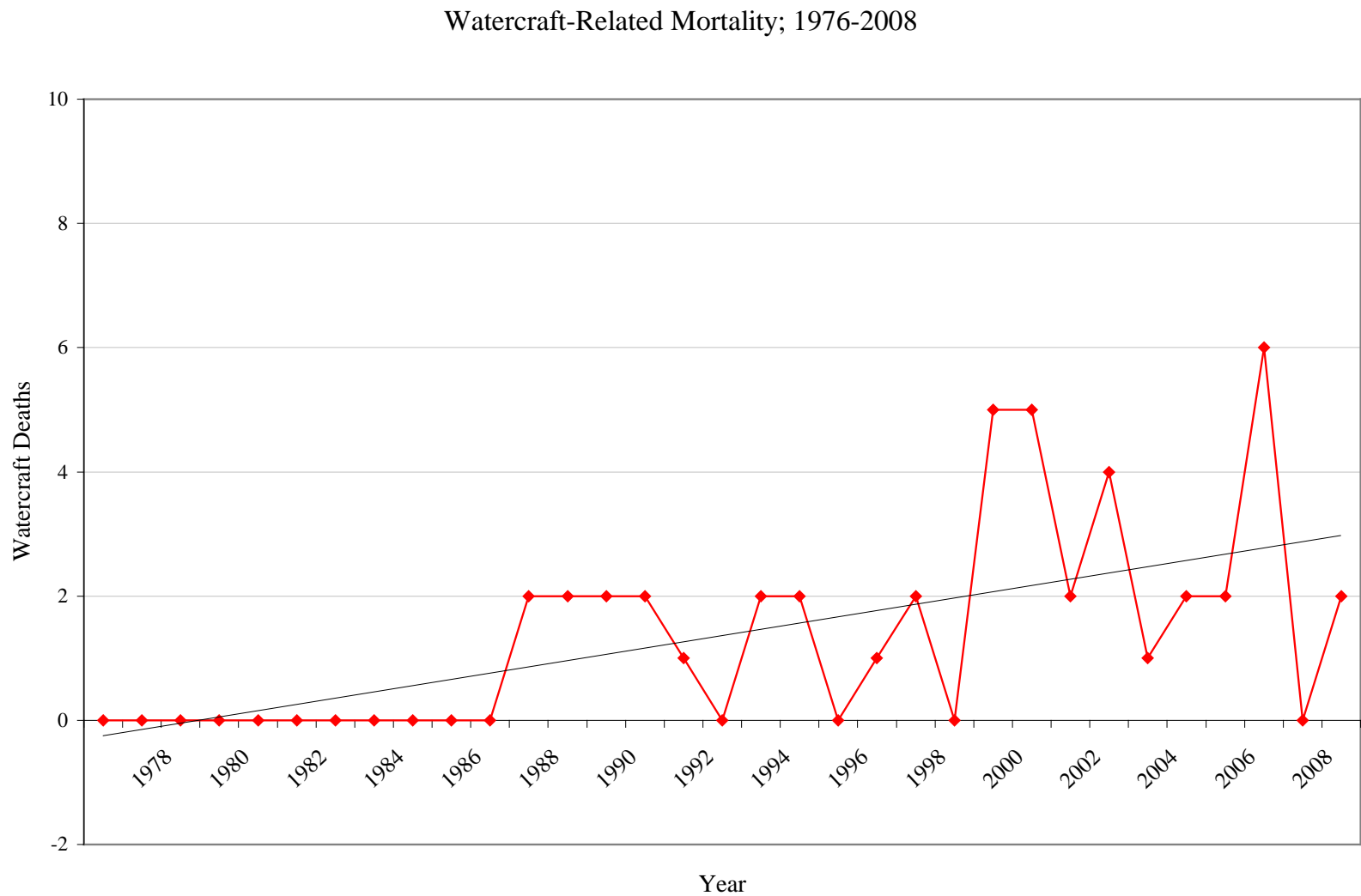


Figure 23. Manatee mortality in Sarasota County by month; 1976-2008. Source: FWC.

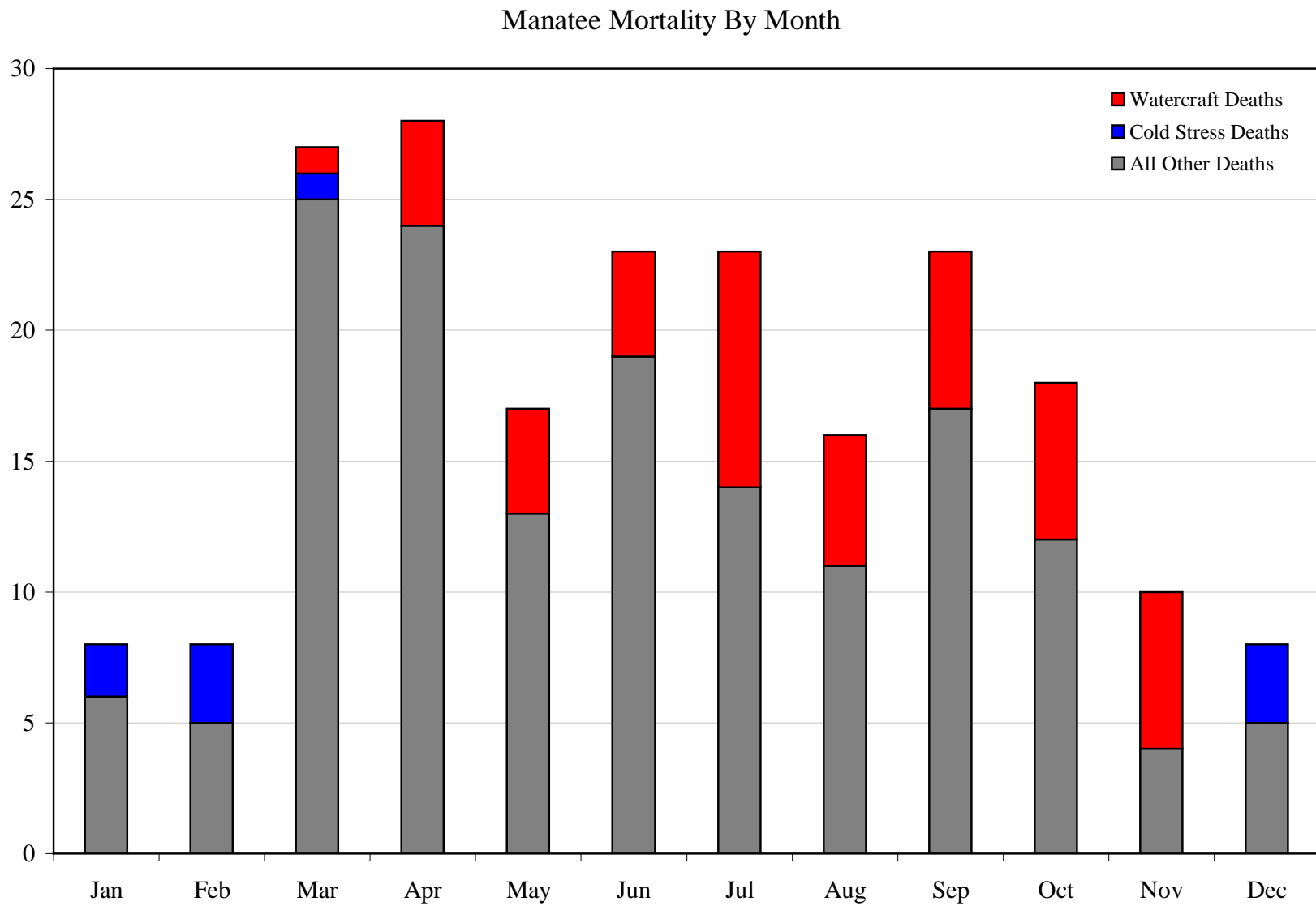


Figure 24. Locations of recovered manatee carcasses in northern Sarasota County identified as watercraft-related deaths; 1976 - October 2008. Source: FWC.

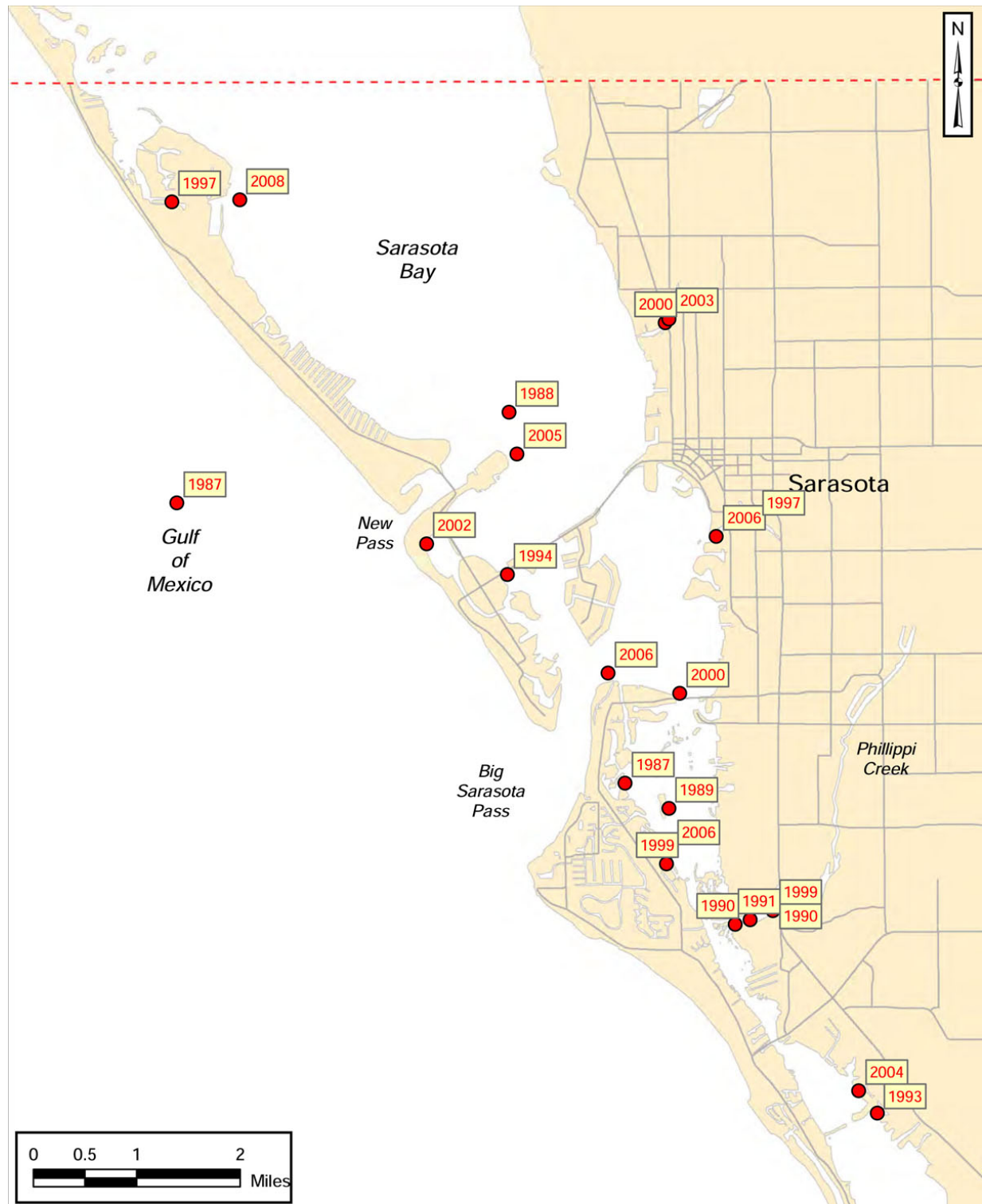


Figure 25. Locations of recovered manatee carcasses in central Sarasota County identified as watercraft-related deaths; 1976 - October 2008. Source: FWC.

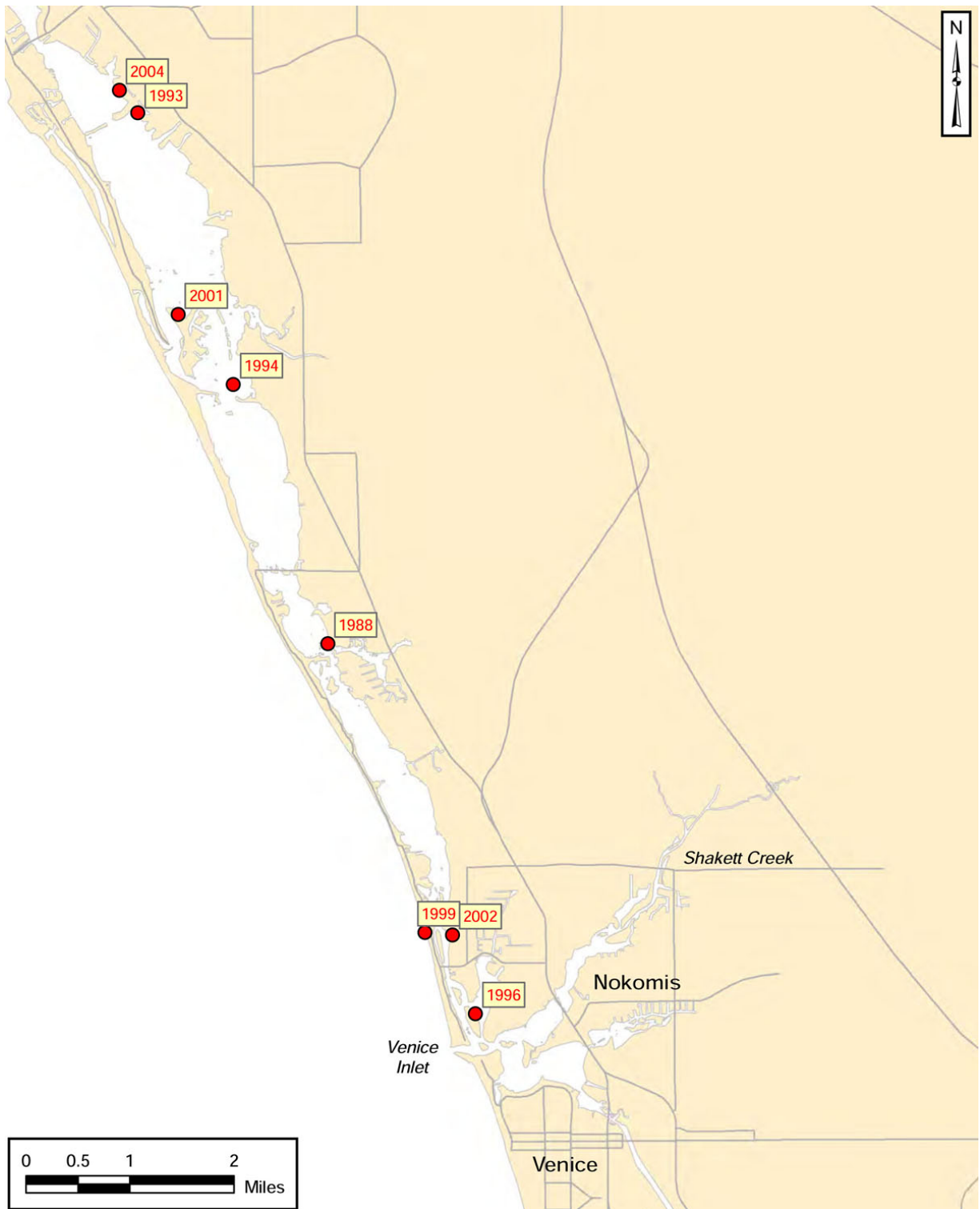


Figure 26. Locations of recovered manatee carcasses in southern Sarasota County identified as watercraft-related deaths; 1976 - October 2008. Source: FWC.

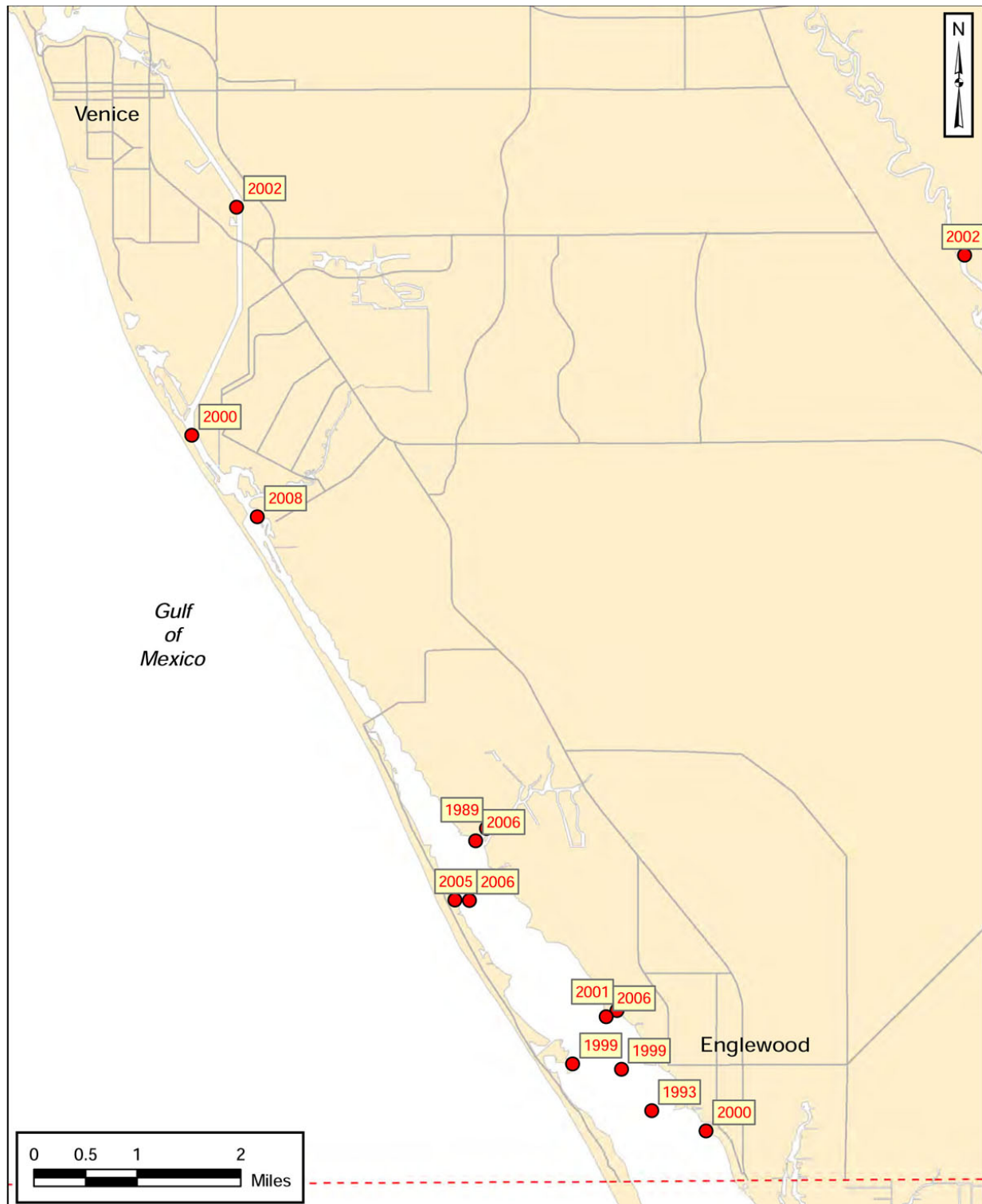


Figure 27. Locations of recovered manatee carcasses along the Sarasota County portion of the Myakka River identified as watercraft-related deaths; 1976 - October 2008. Source: FWC.

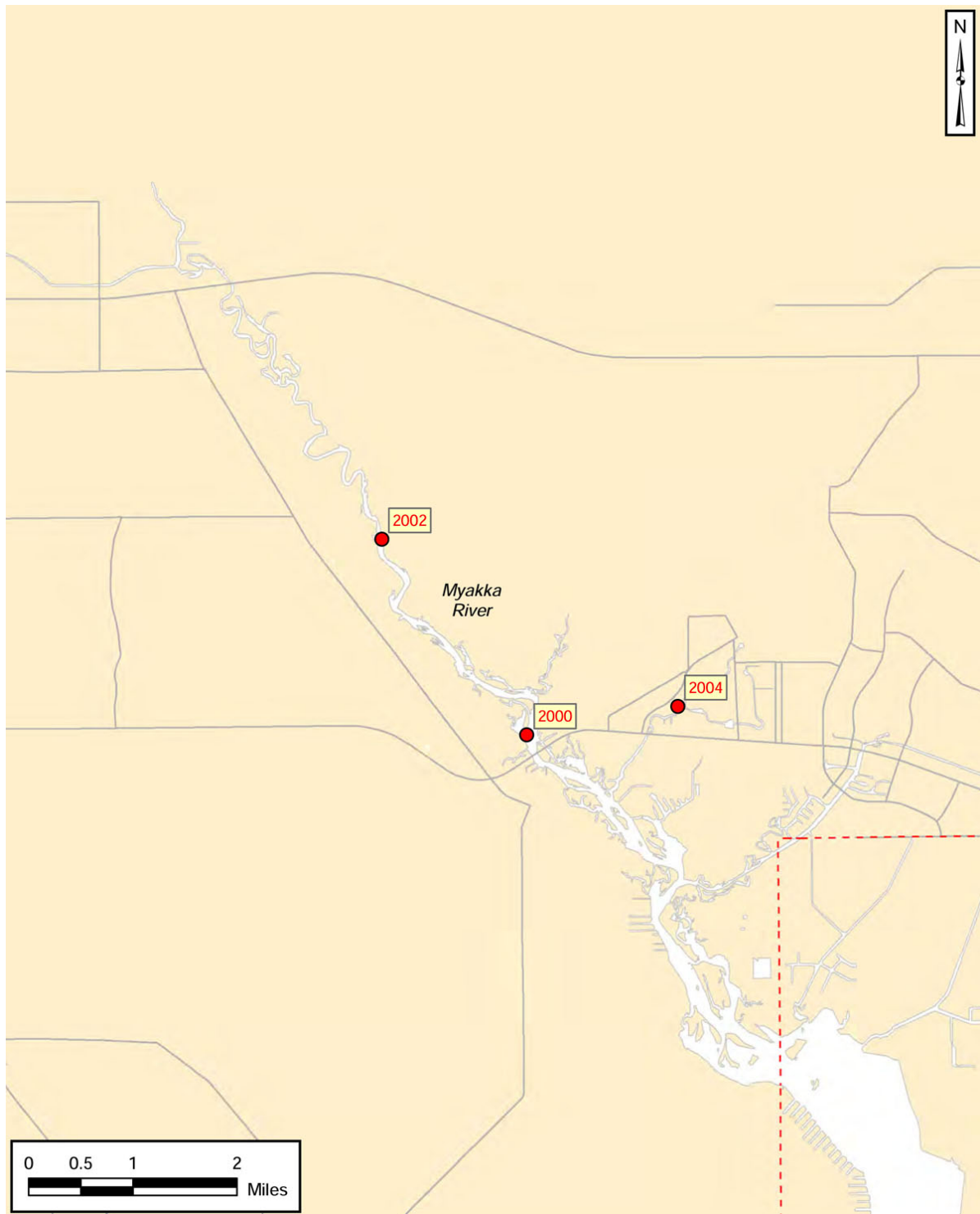


Figure 28. Distribution of seagrasses in northern Sarasota County; 2008 data. Source: SWFWMD.

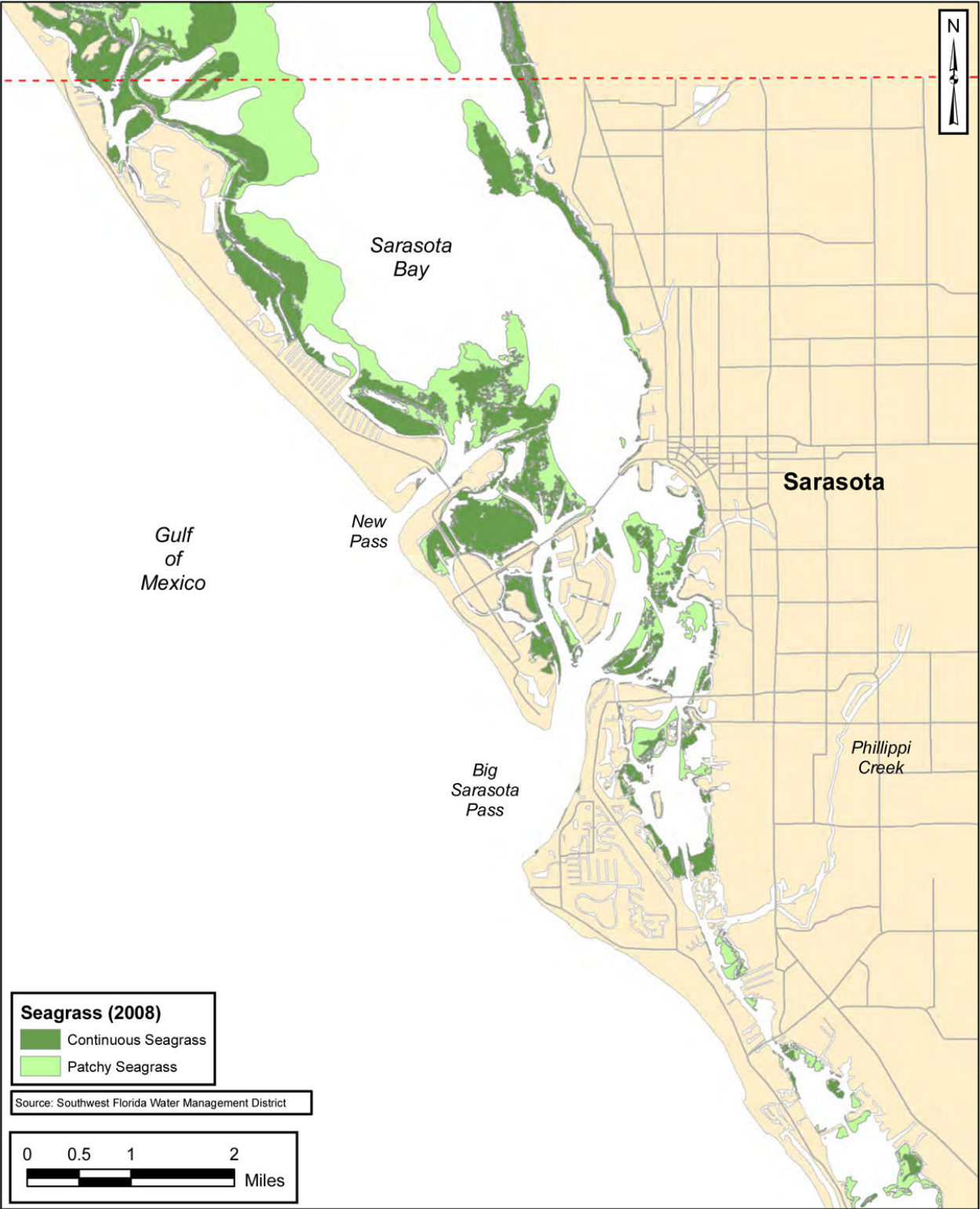


Figure 29. Distribution of seagrasses in central Sarasota County; 2008 data. Source: SWFWMD.



Figure 30. Distribution of seagrasses in southern Sarasota County; 2008 data.
Source: SWFWMD.

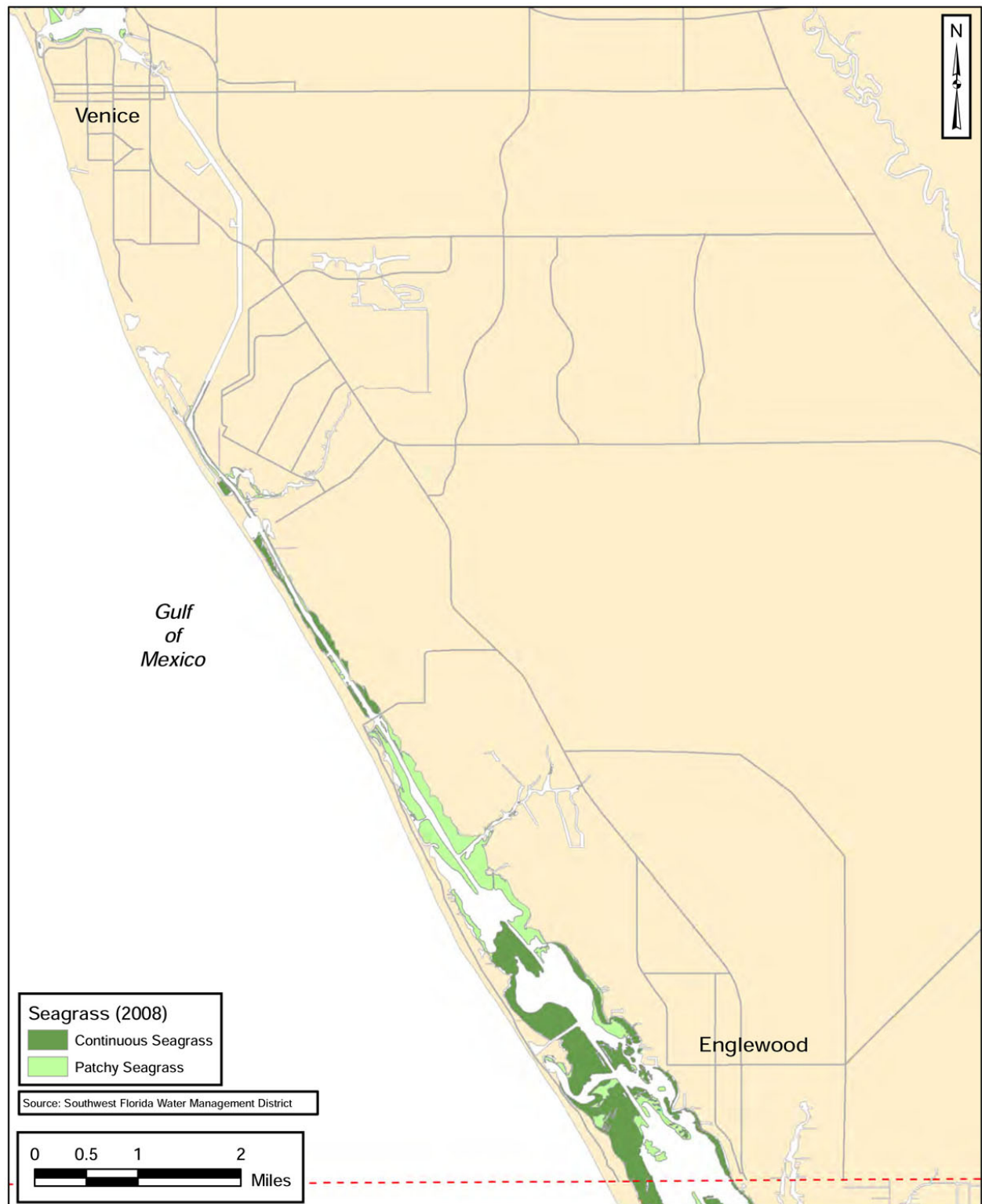


Figure 31. Revised manatee use areas in northern Sarasota County.

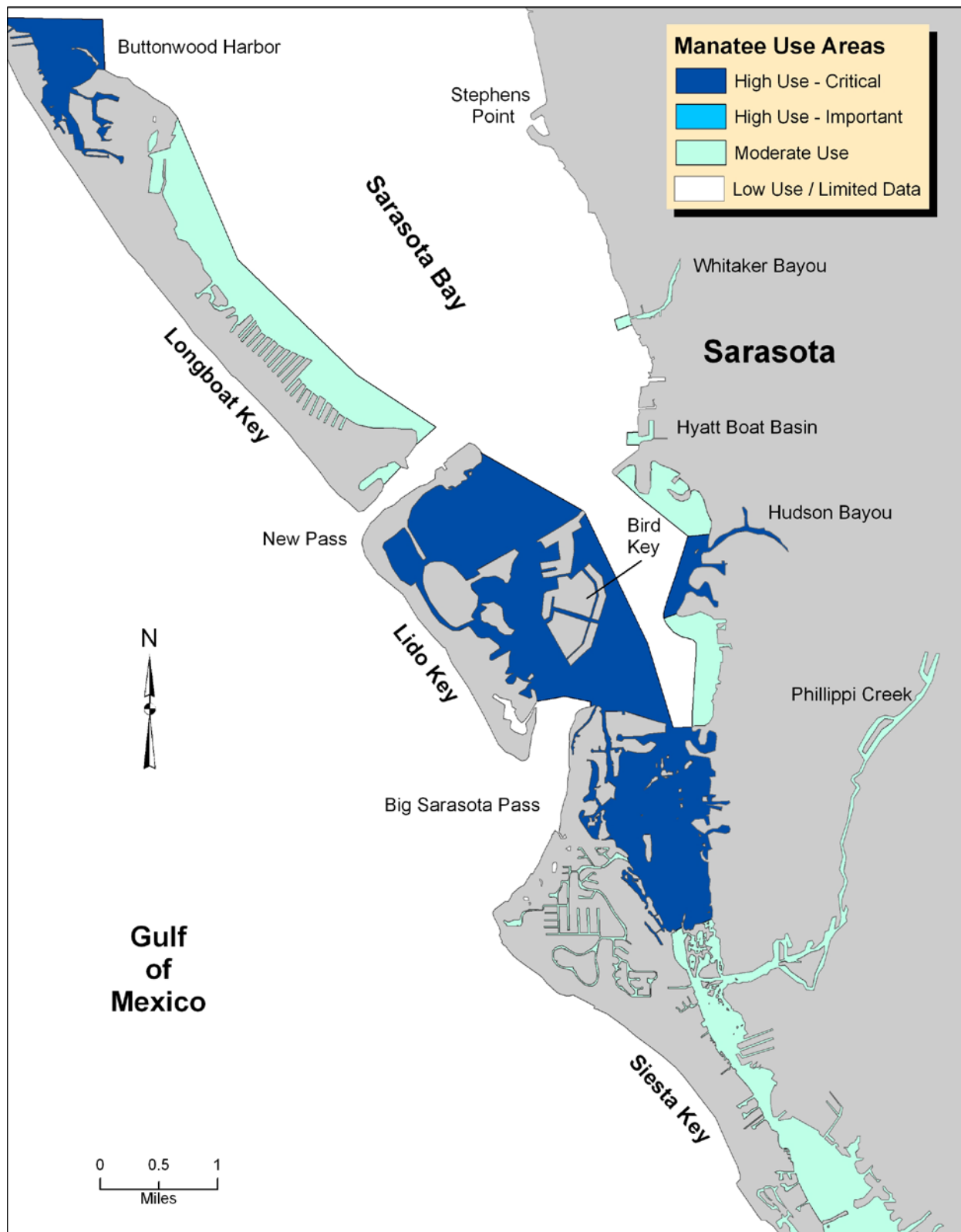


Figure 32. Revised manatee use areas in central Sarasota County.

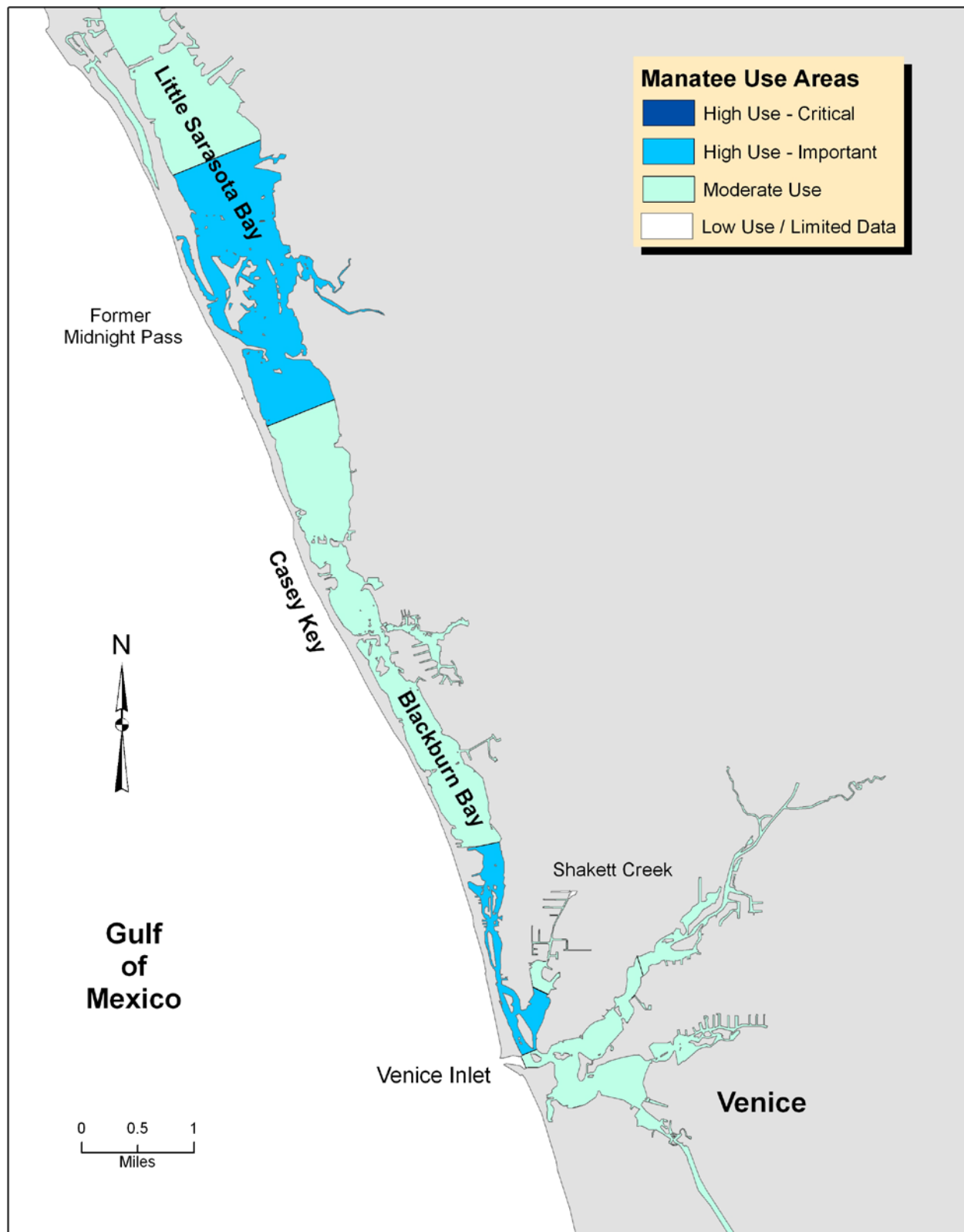


Figure 33. Revised manatee use areas in southern Sarasota County.

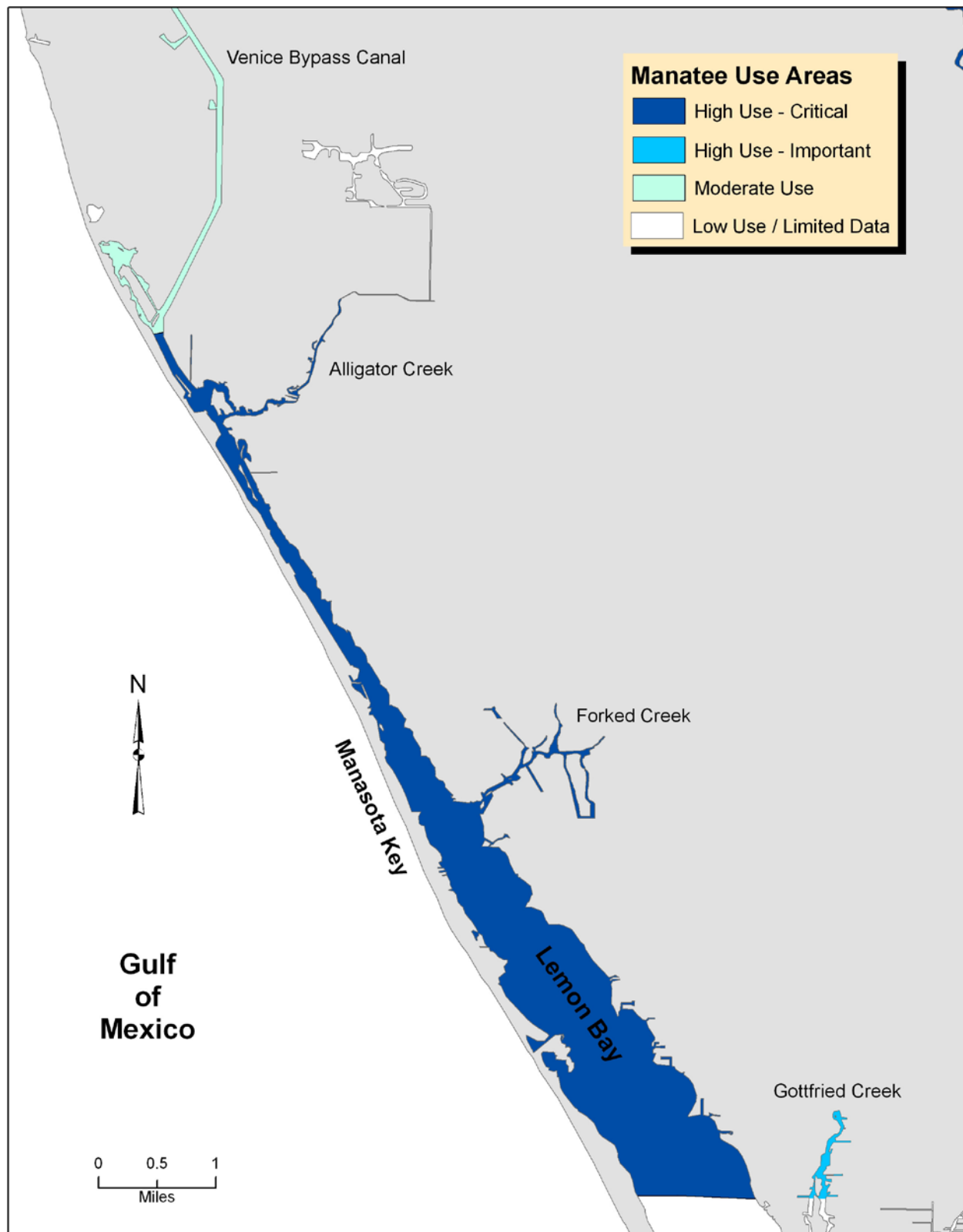


Figure 34. Revised manatee use areas along the Myakka River.

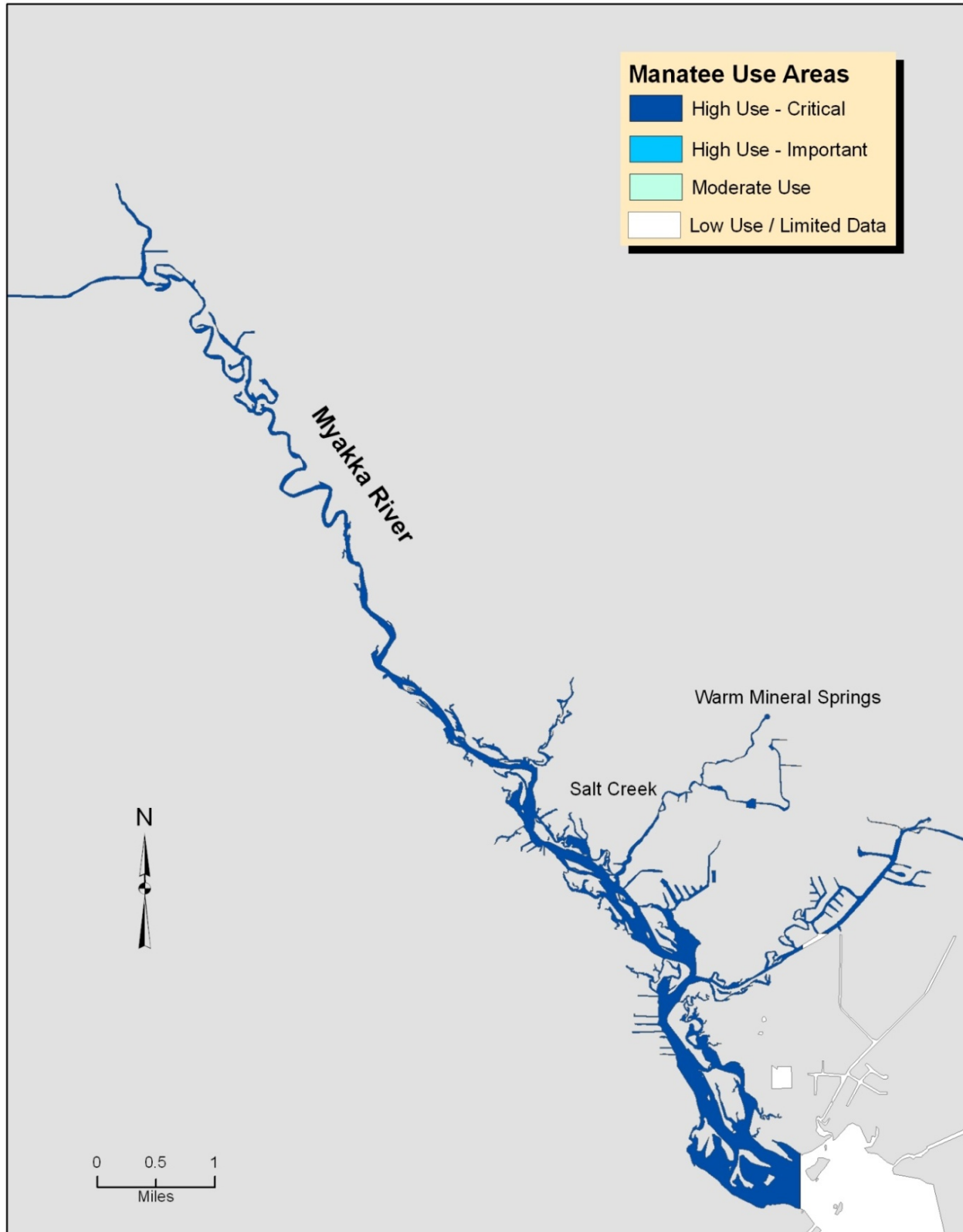


Figure 35. Registered vessels in Sarasota County; 1987-2008, including trend line. Source: FWC.

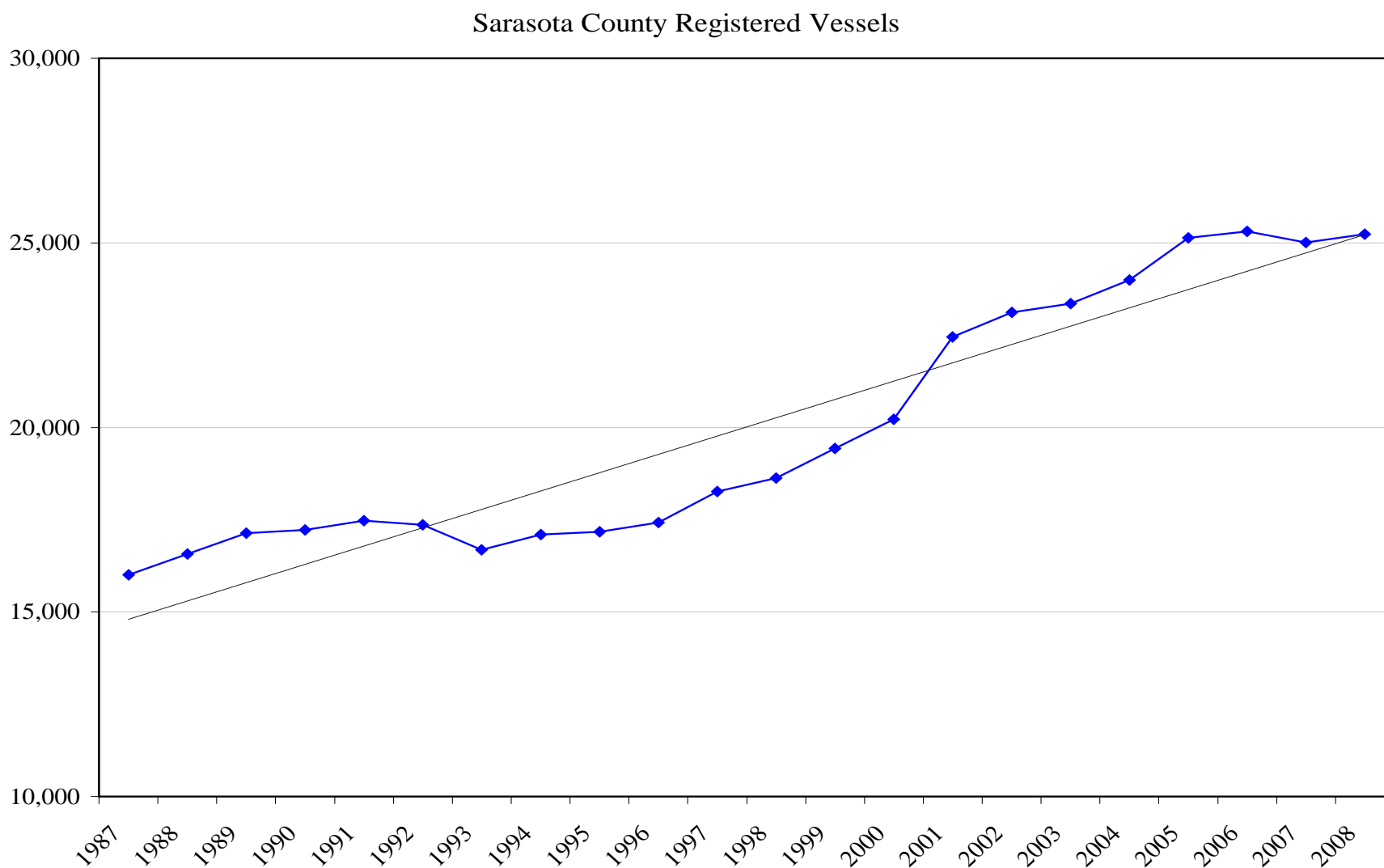


Figure 36. Sarasota County spatial analysis results, expressed as *total vessels observed*. All survey flights are combined. Source: Gorzelany, 2006b.

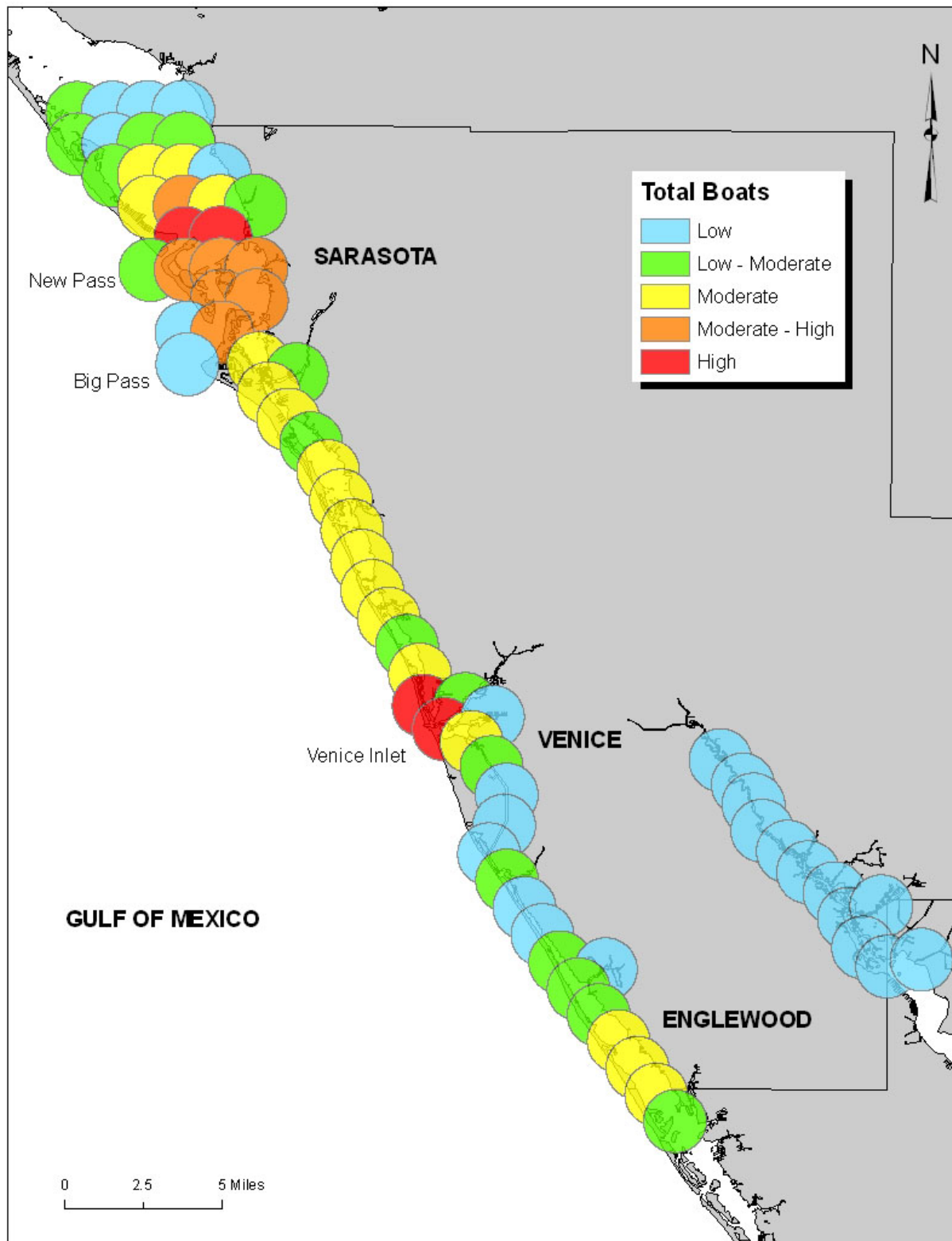


Figure 37. Sarasota County spatial analysis results, expressed as *relative boat density*. All survey flights are combined. Source: Gorzelany, 2006b.

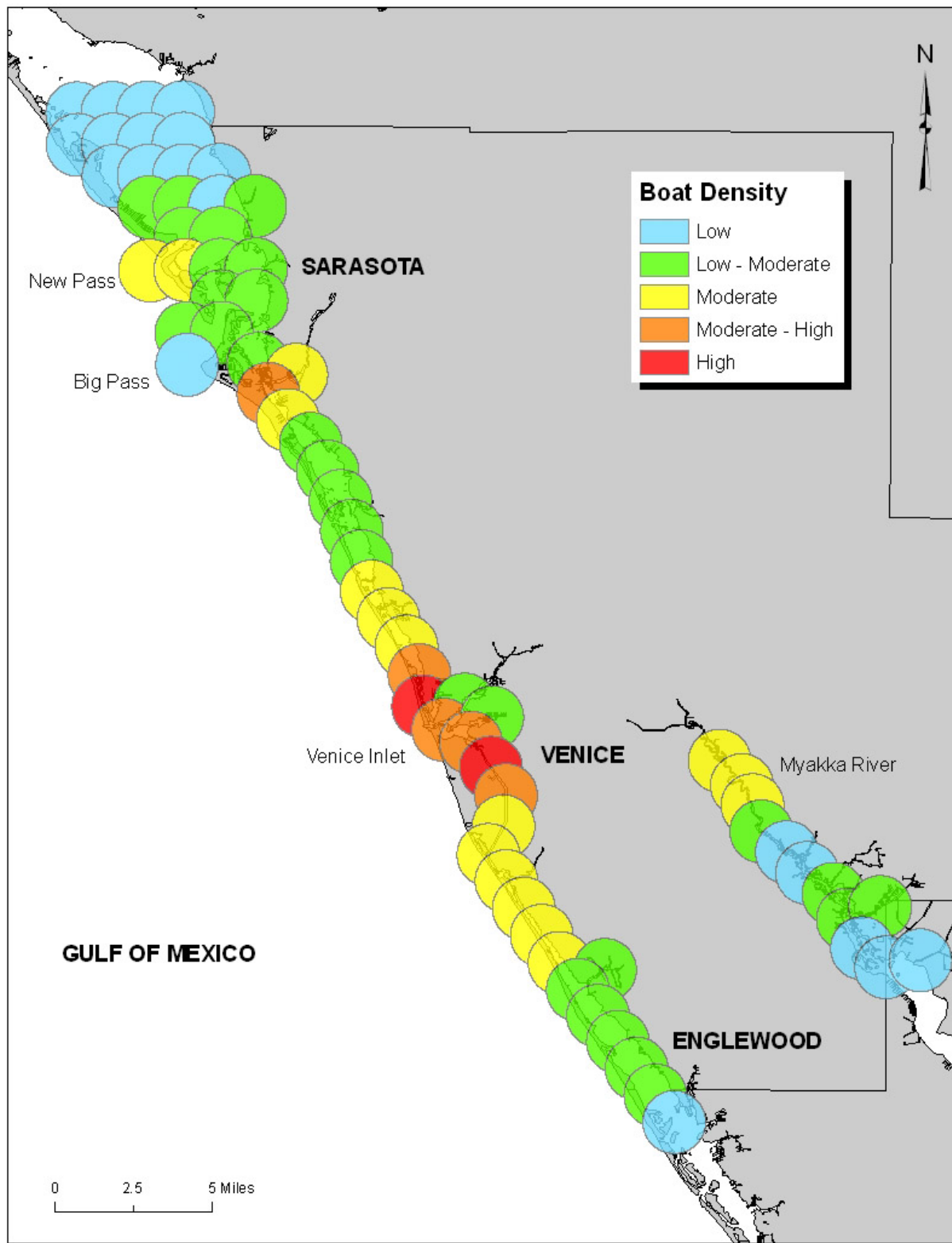


Figure 38. Areas in south Sarasota Bay and Roberts Bay identified as boating congestion hot spots. Source: Sidman et. al., 2006.



Figure 39. Areas near Venice Inlet identified as boating congestion hot spots. Source: Sidman et. al., 2006.

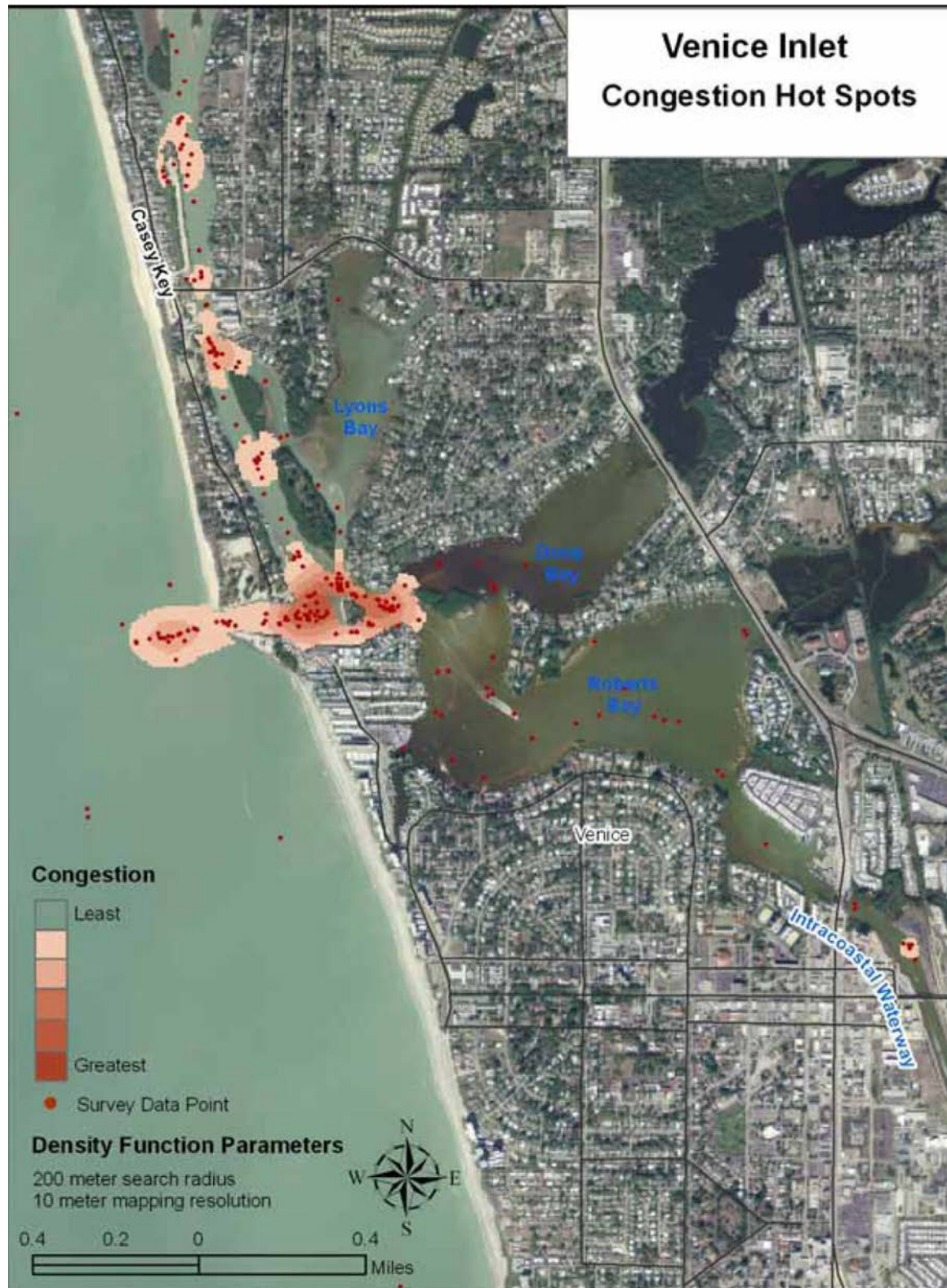


Figure 40. Distribution of observed vessel speeds in Sarasota County by survey site.
Source: Gorzelany, 2006a.

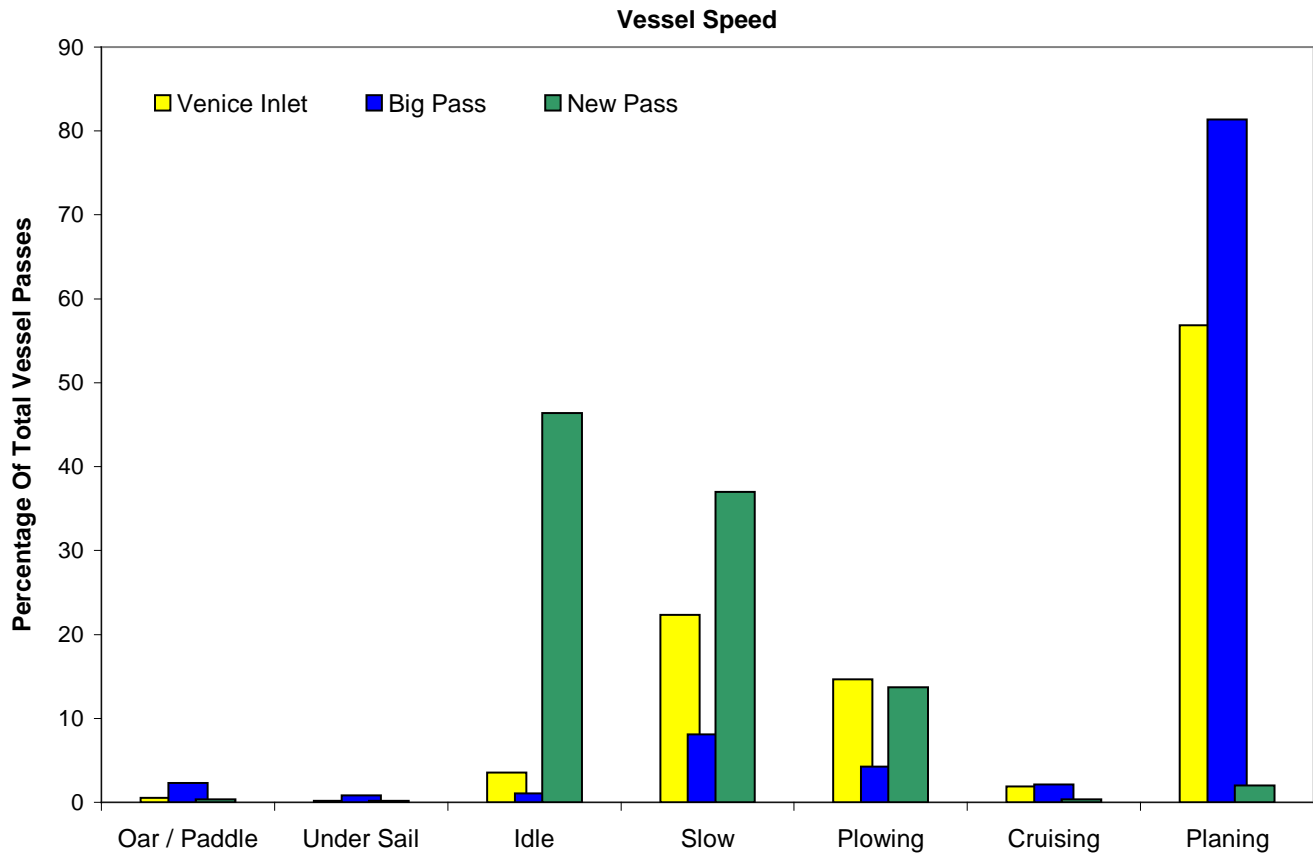


Figure 41. Hourly variations in boat traffic at the New Pass. Source: Gorzelany, 2006a.

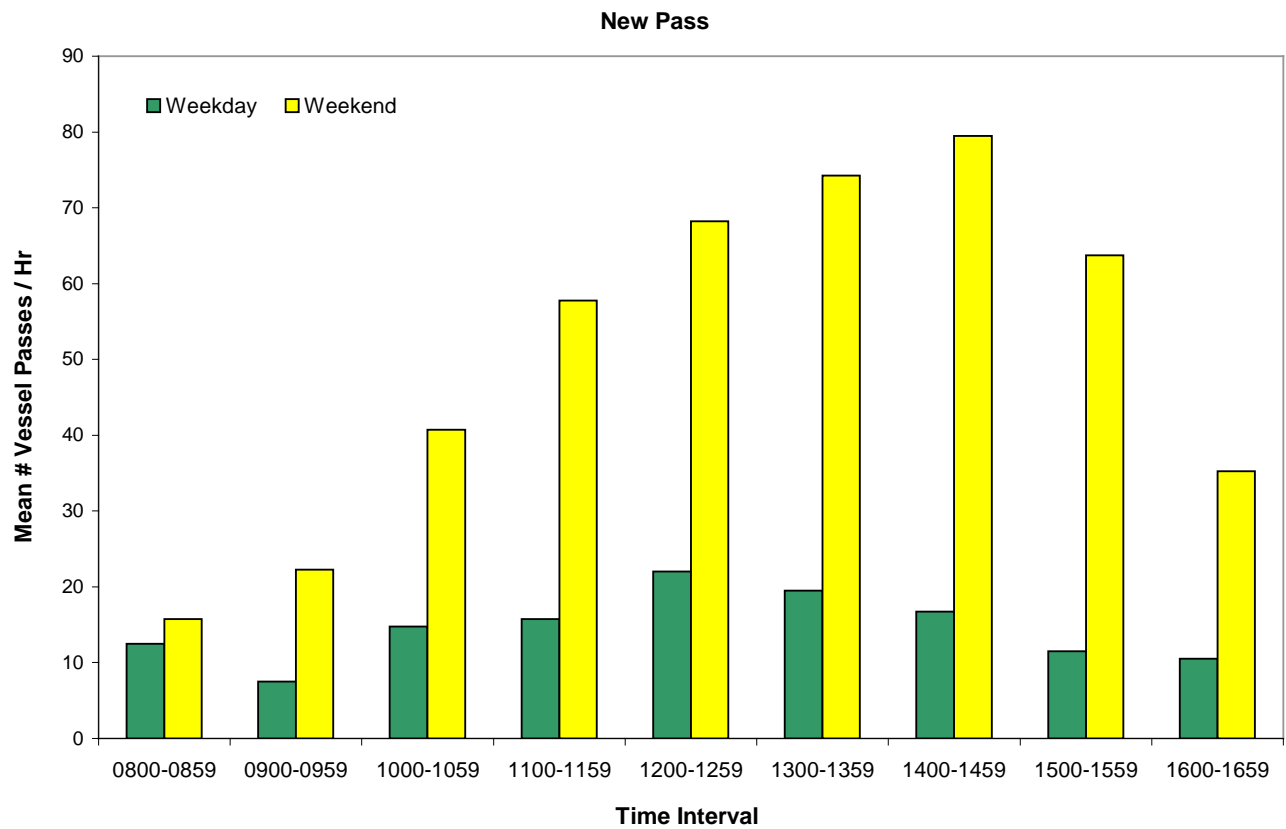


Figure 42. Hourly variations in boat traffic at the Big Sarasota Pass. Source: Gorzelany, 2006a.

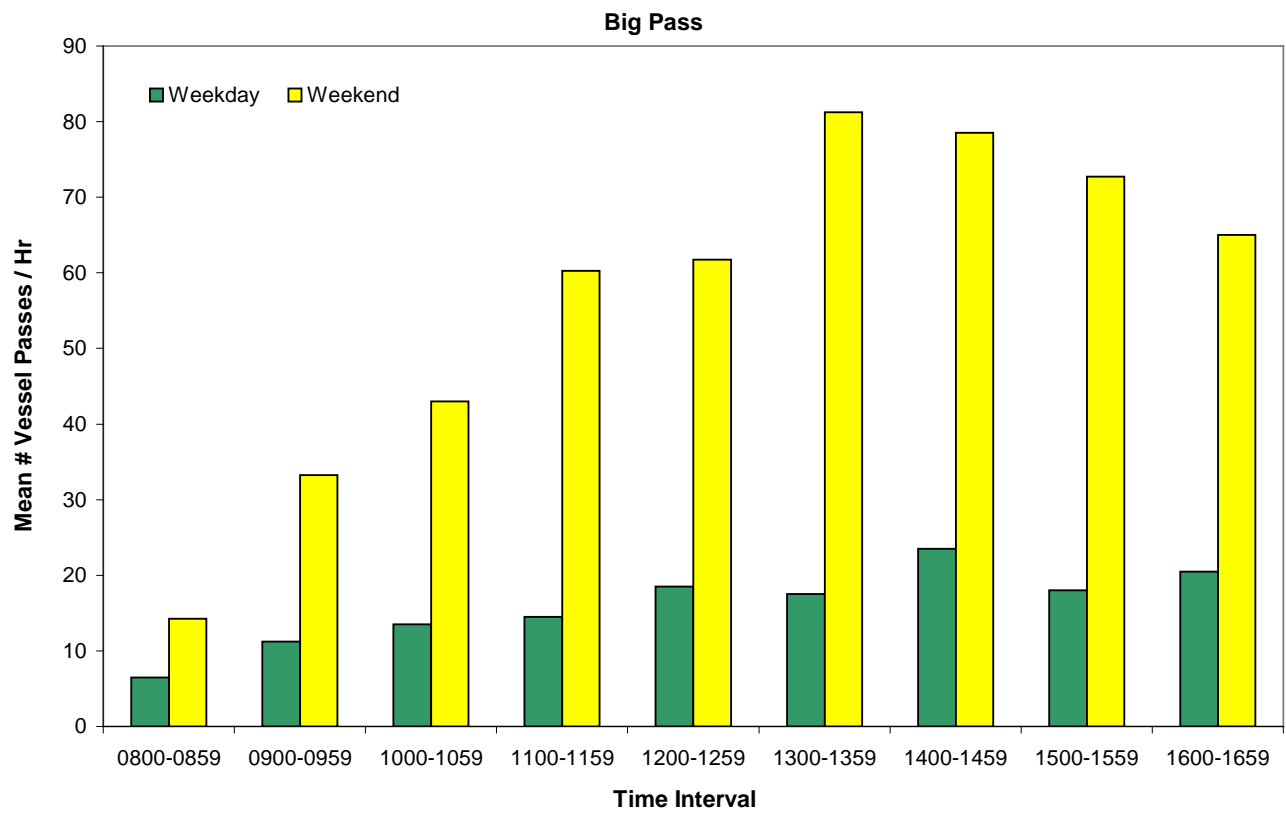


Figure 43. Hourly variations in boat traffic at Venice Inlet. Source: Gorzelany, 2006a.

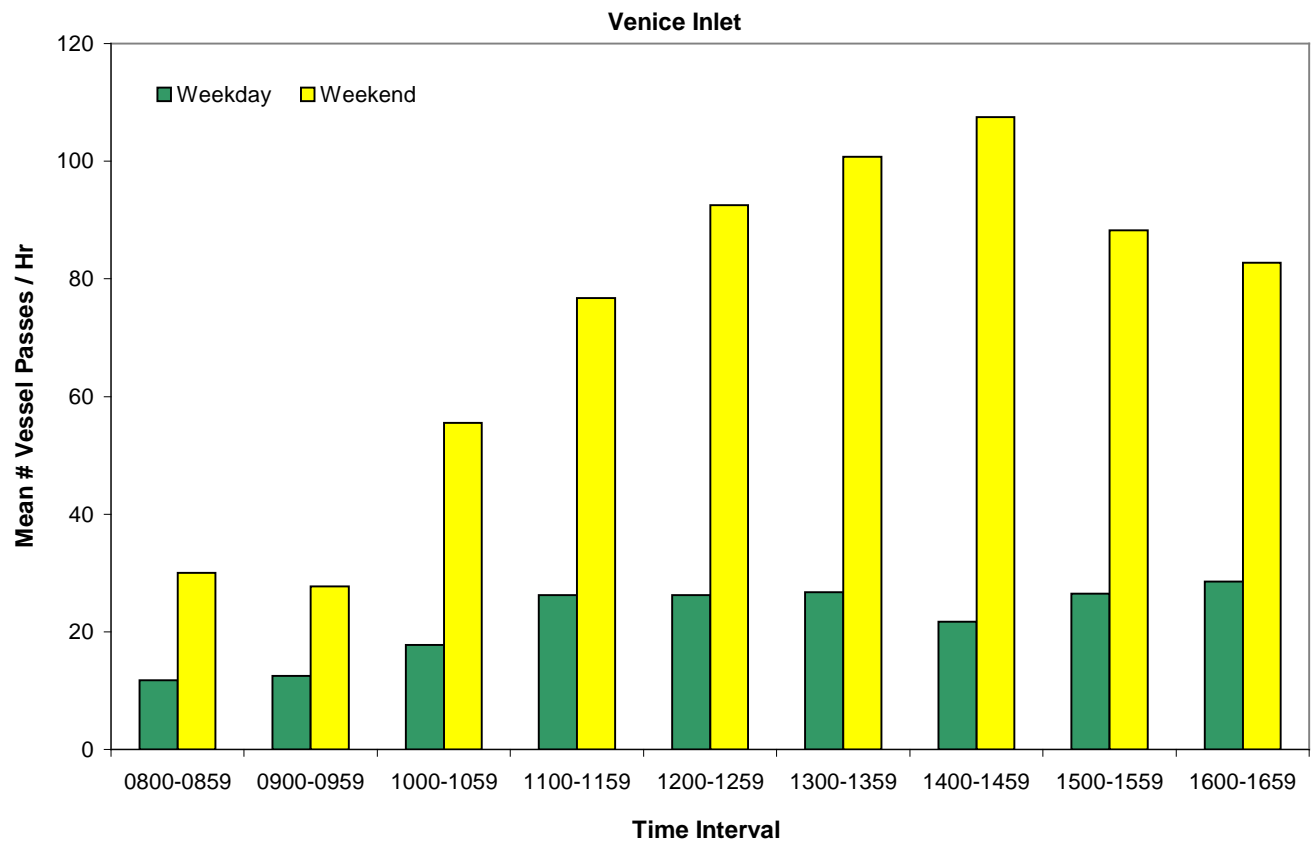


Figure 44A. Current state manatee protection zones in northern Sarasota County.
Source: FWC.

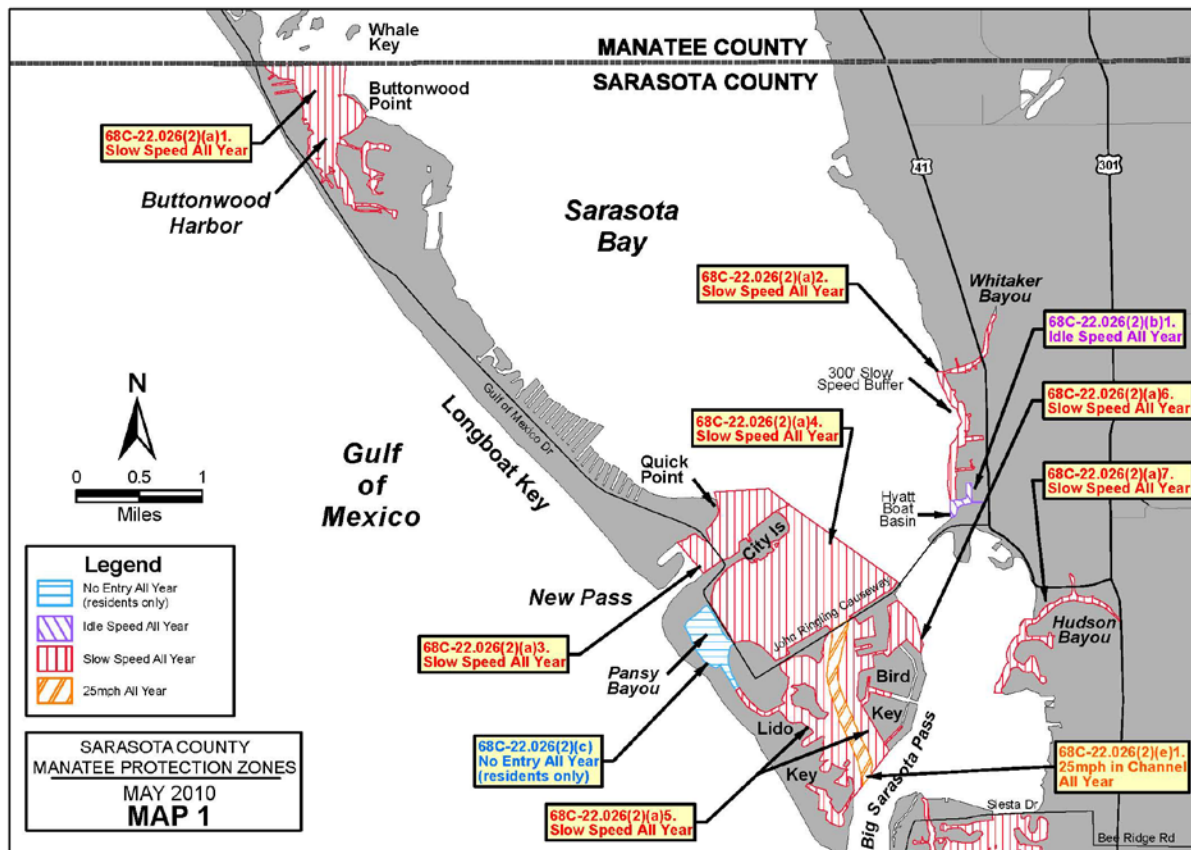


Figure 44B. Current state manatee protection zones in north central Sarasota County.
Source: FWC.

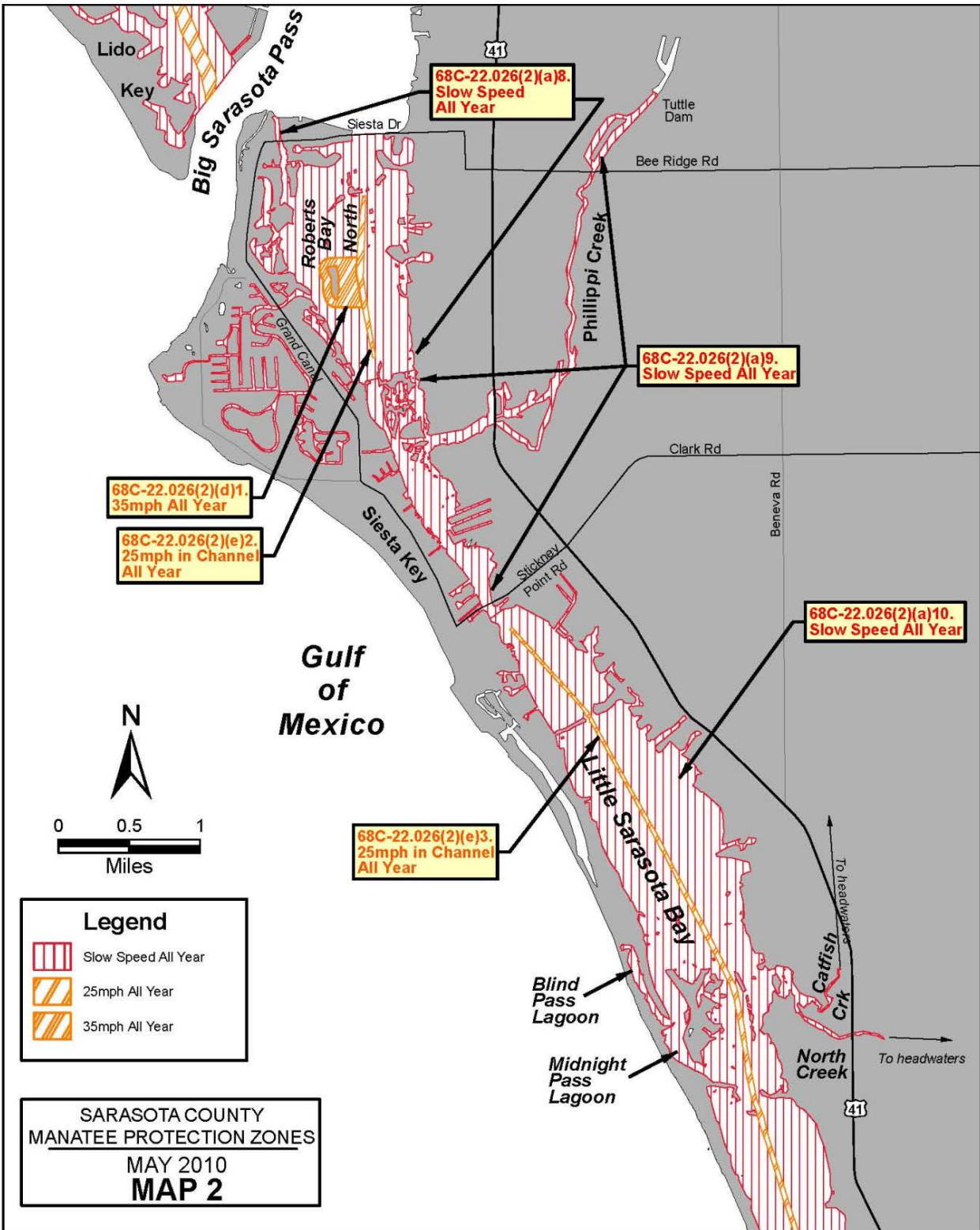


Figure 45. Current state manatee protection zones in central Sarasota County. Source: FWC.

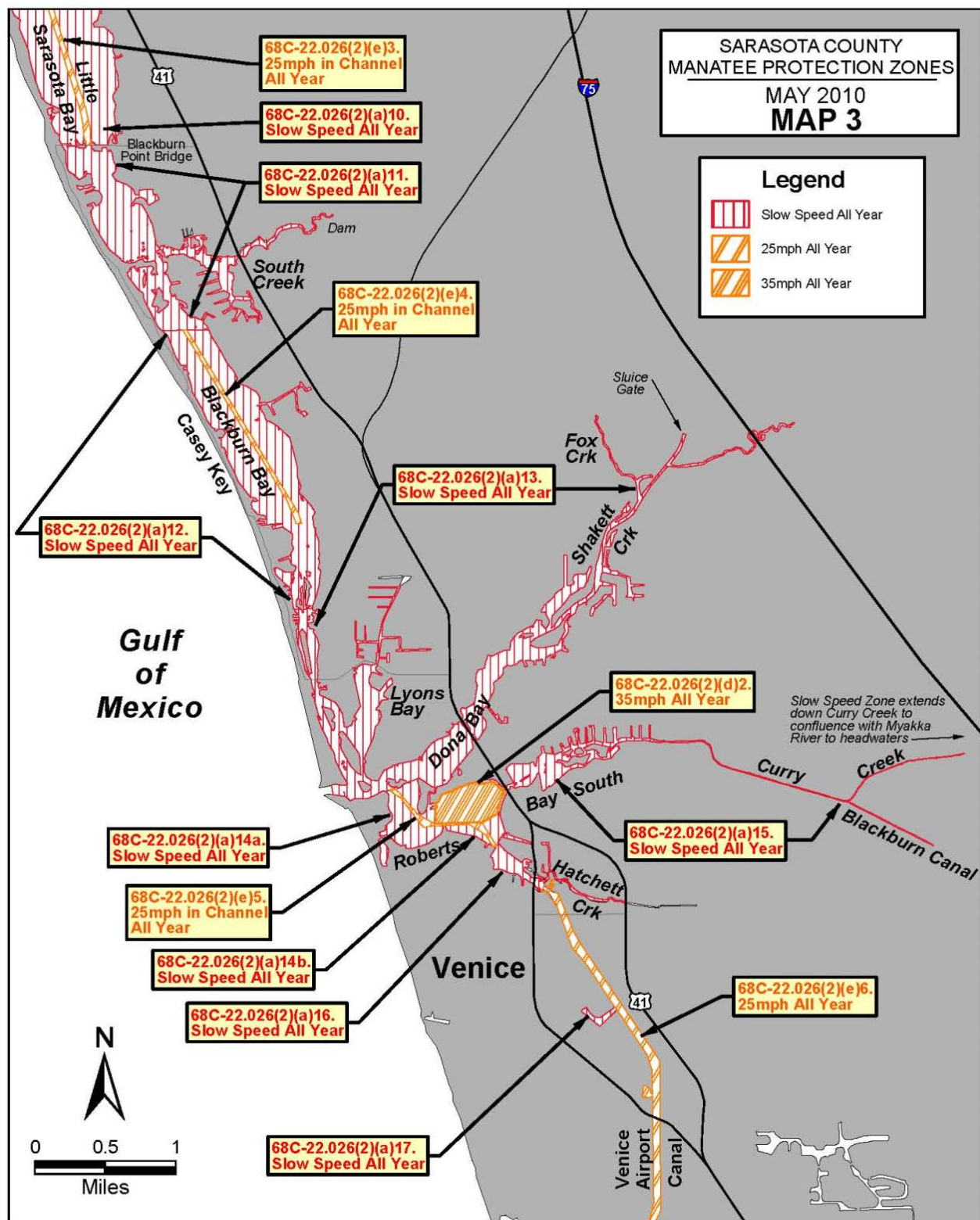


Figure 46. Current state manatee protection zones in southern Sarasota County. Source: FWC.

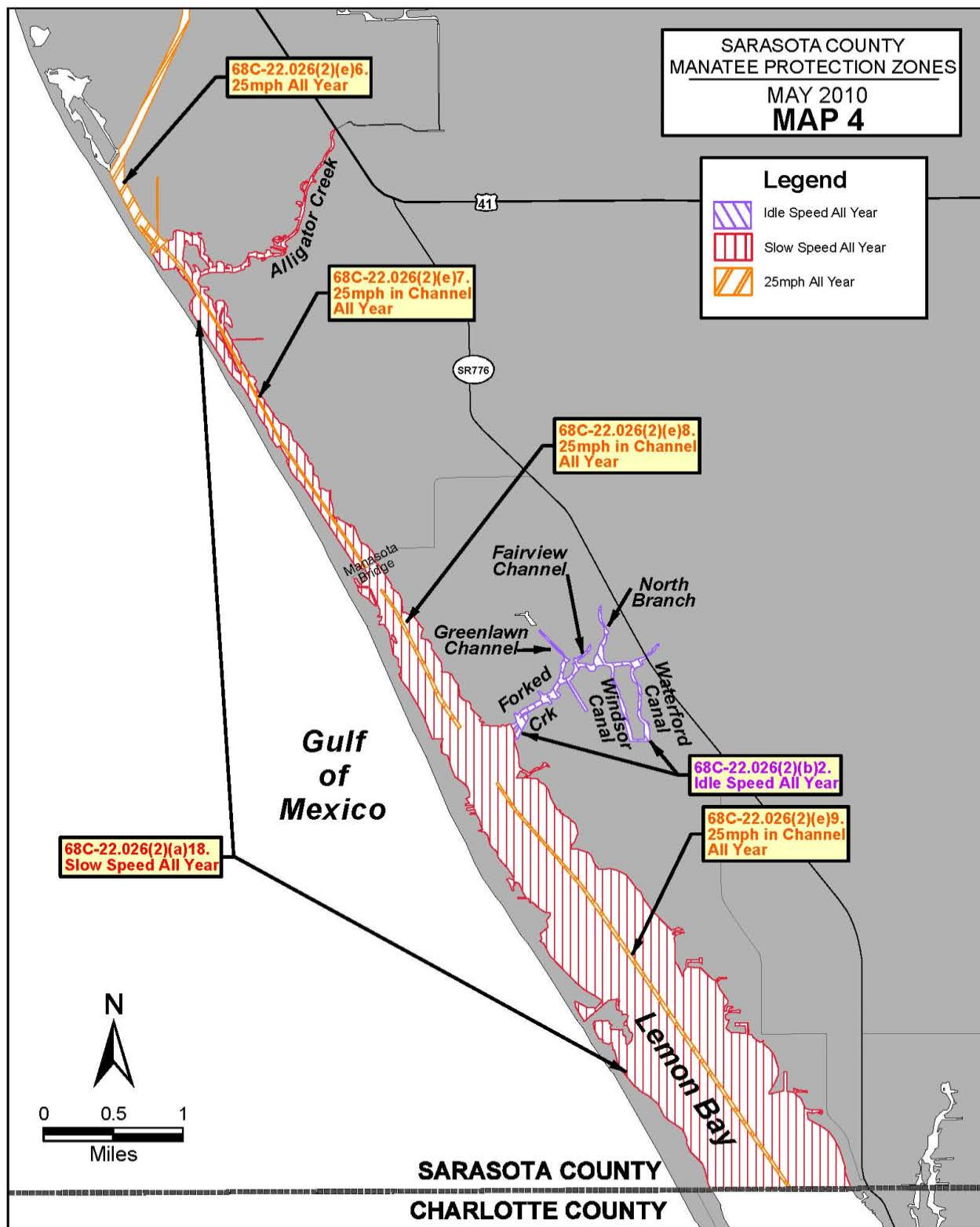


Figure 47. Current state manatee protection zones along the Sarasota County portion of the Myakka River. Source: FWC.

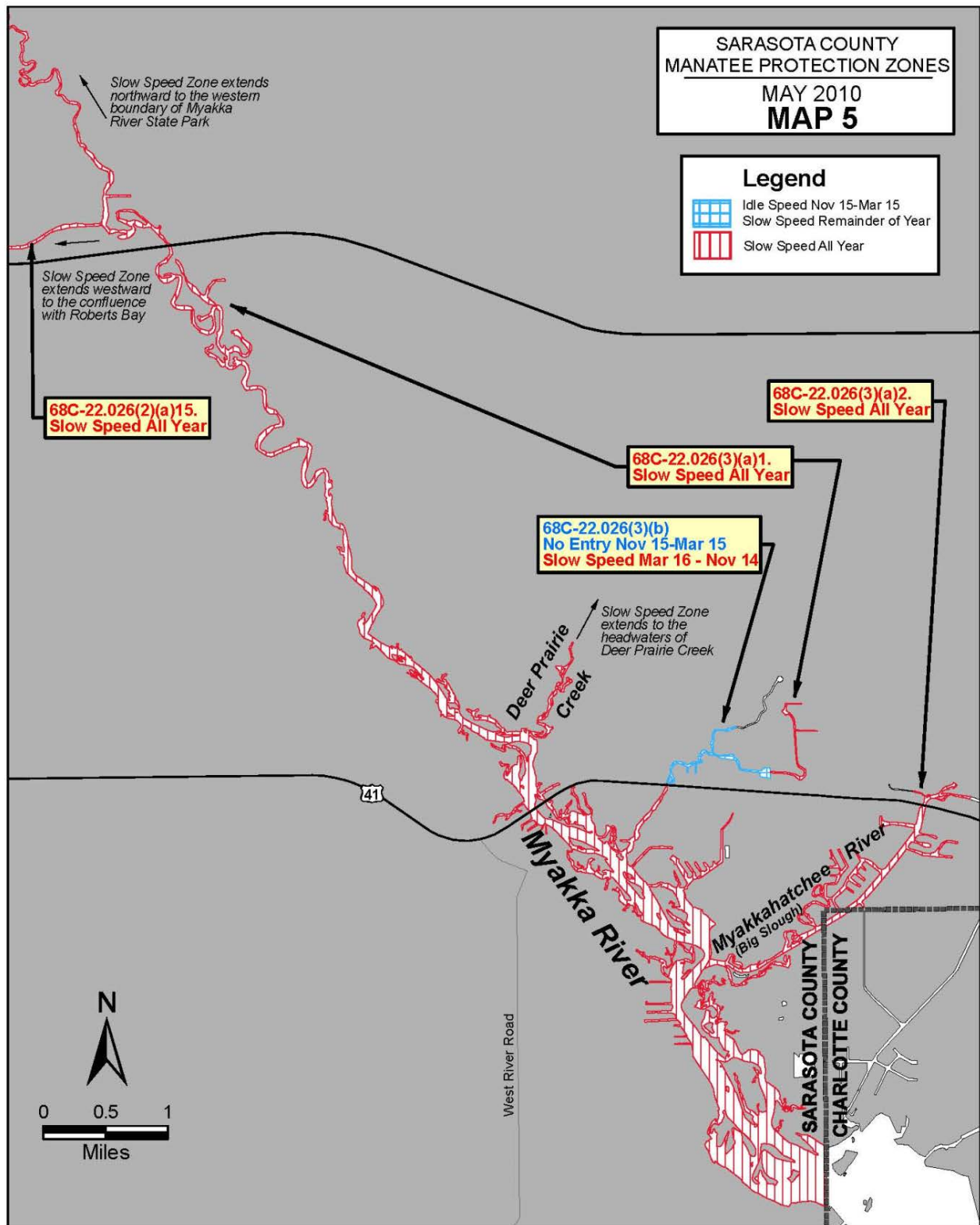


Figure 48. Existing moorings within northern Sarasota County. Source: Antonini et al., 1998.

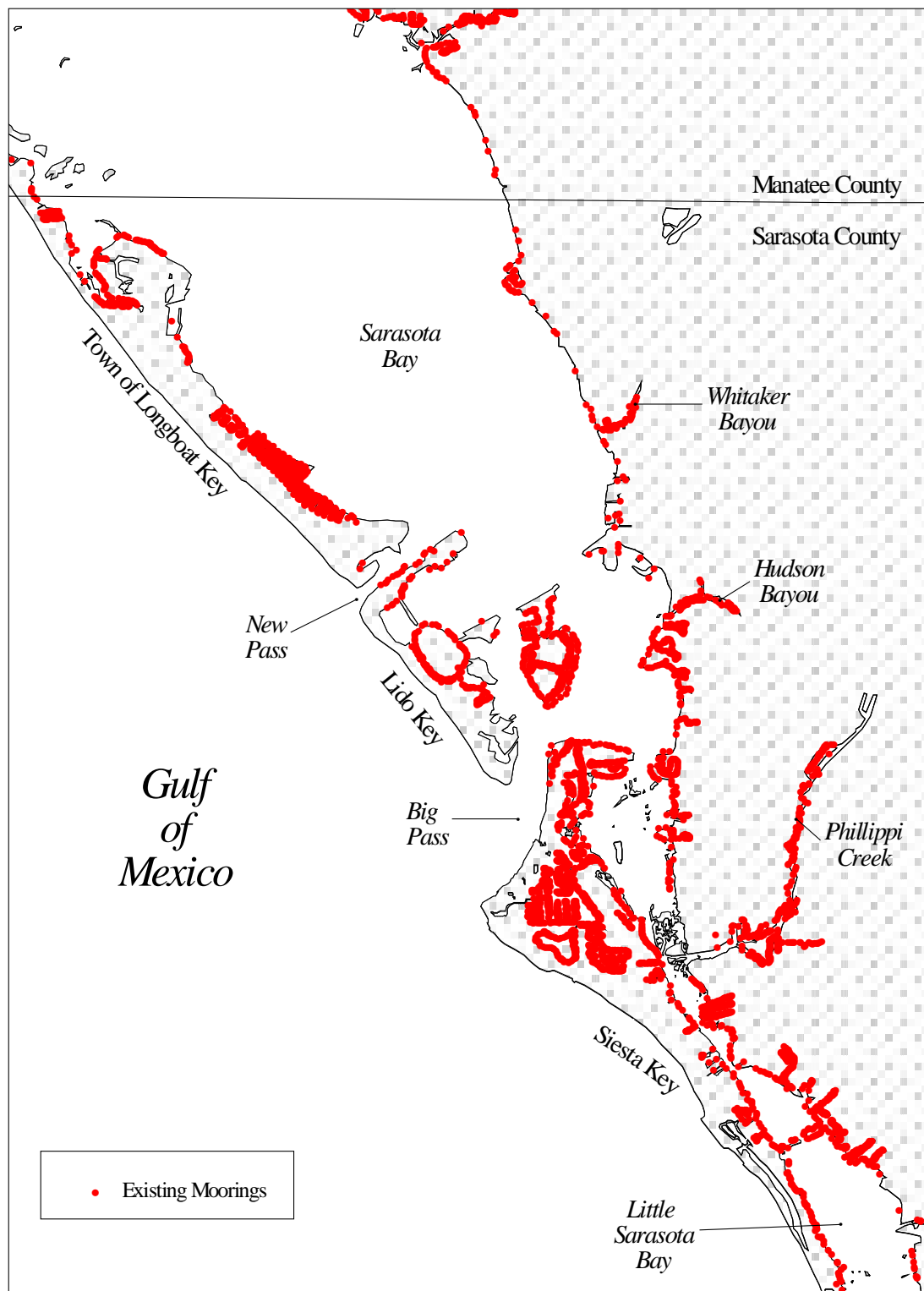


Figure 49. Existing moorings within central Sarasota County. Source: Antonini, et al., 1998.



Figure 50. Existing moorings within southern Sarasota County. Source: Antonini, et al., 1998.

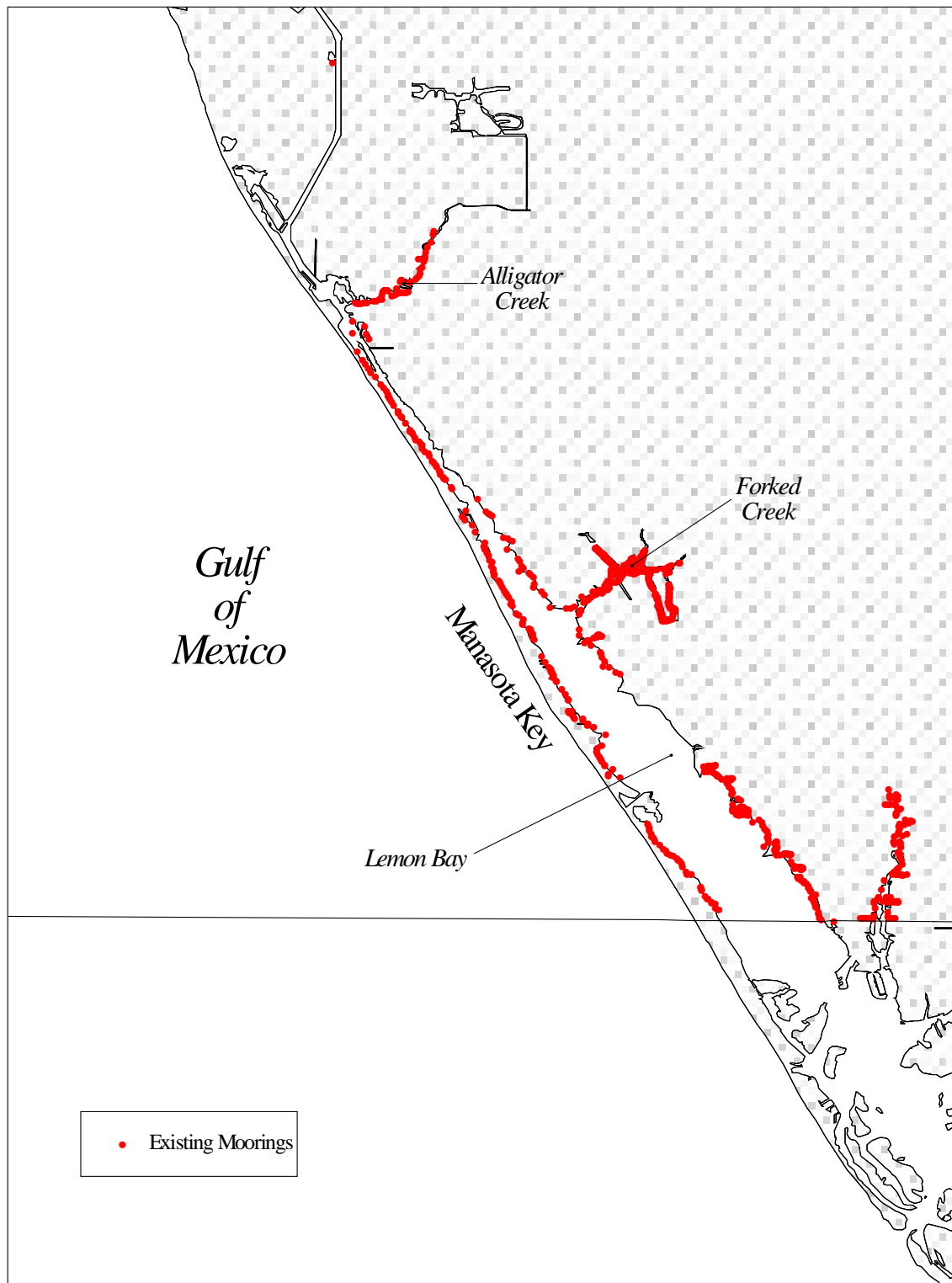


Figure 51. Existing moorings along the Myakka River. Source: Antonini, et al., 1998.

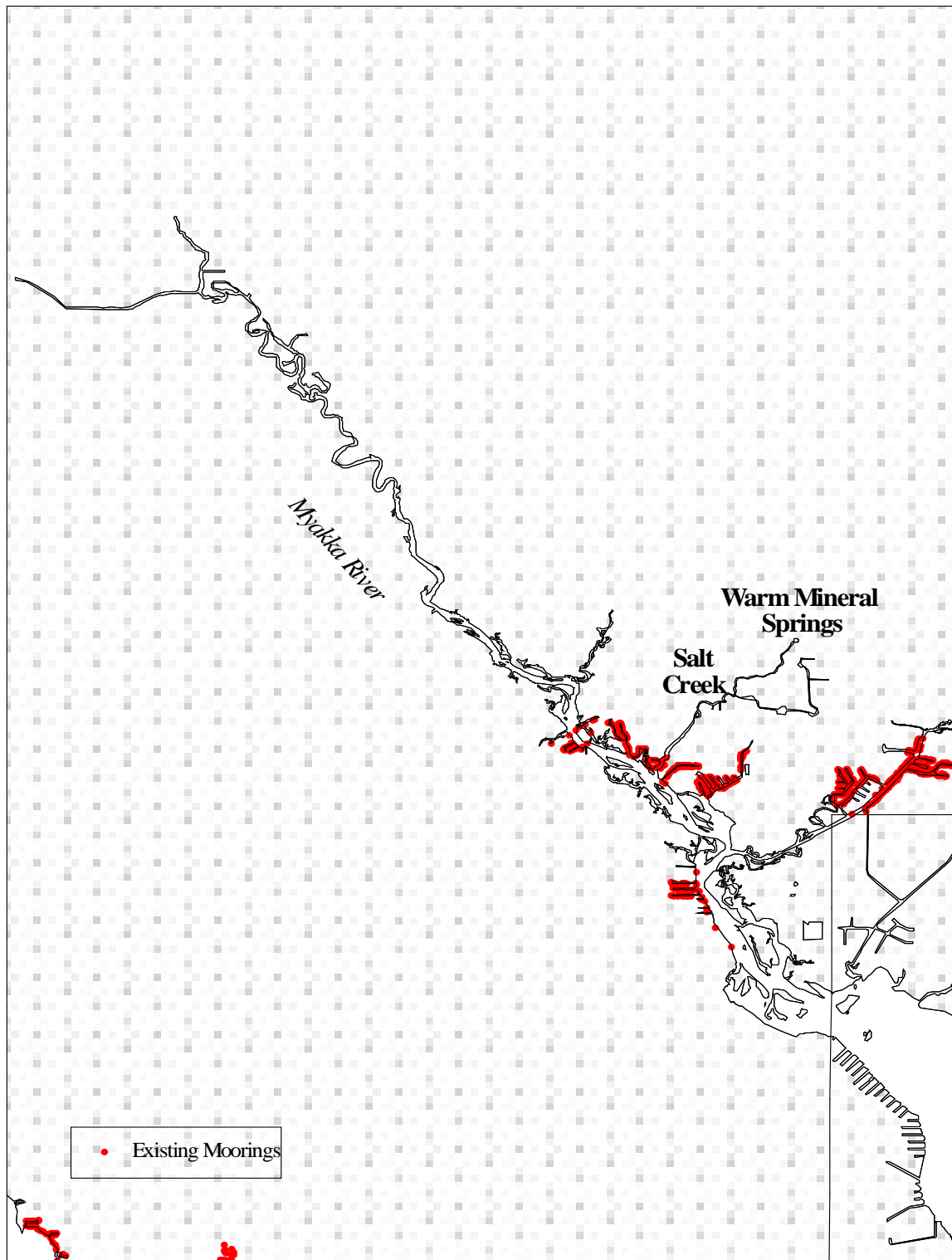


Figure 52. Current speed zones in northern Sarasota County, including locally-adopted regulatory zones.

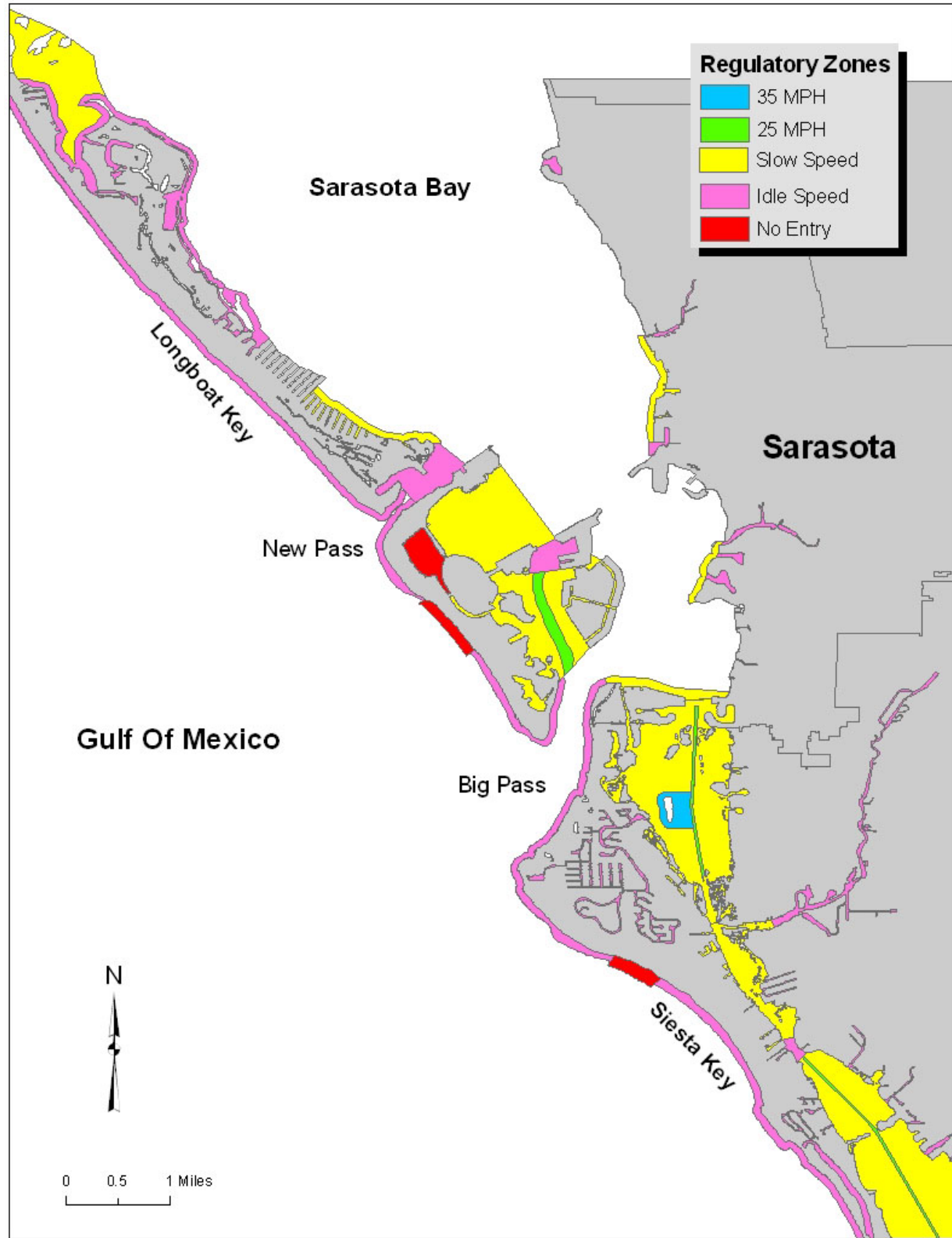


Figure 53. Current speed zones in central Sarasota County, including locally-adopted regulatory zones.

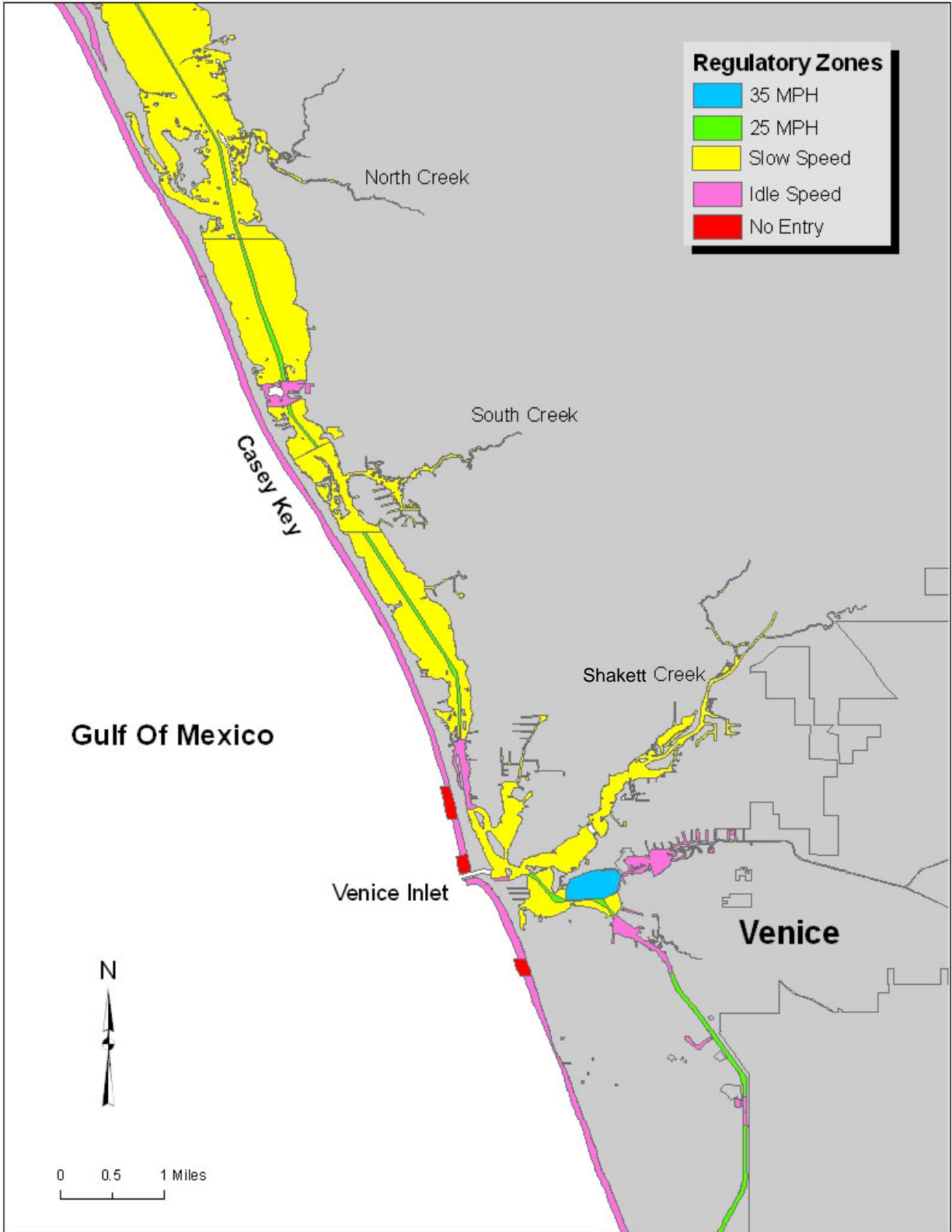


Figure 54. Current speed zones in southern Sarasota County, including locally-adopted regulatory zones.

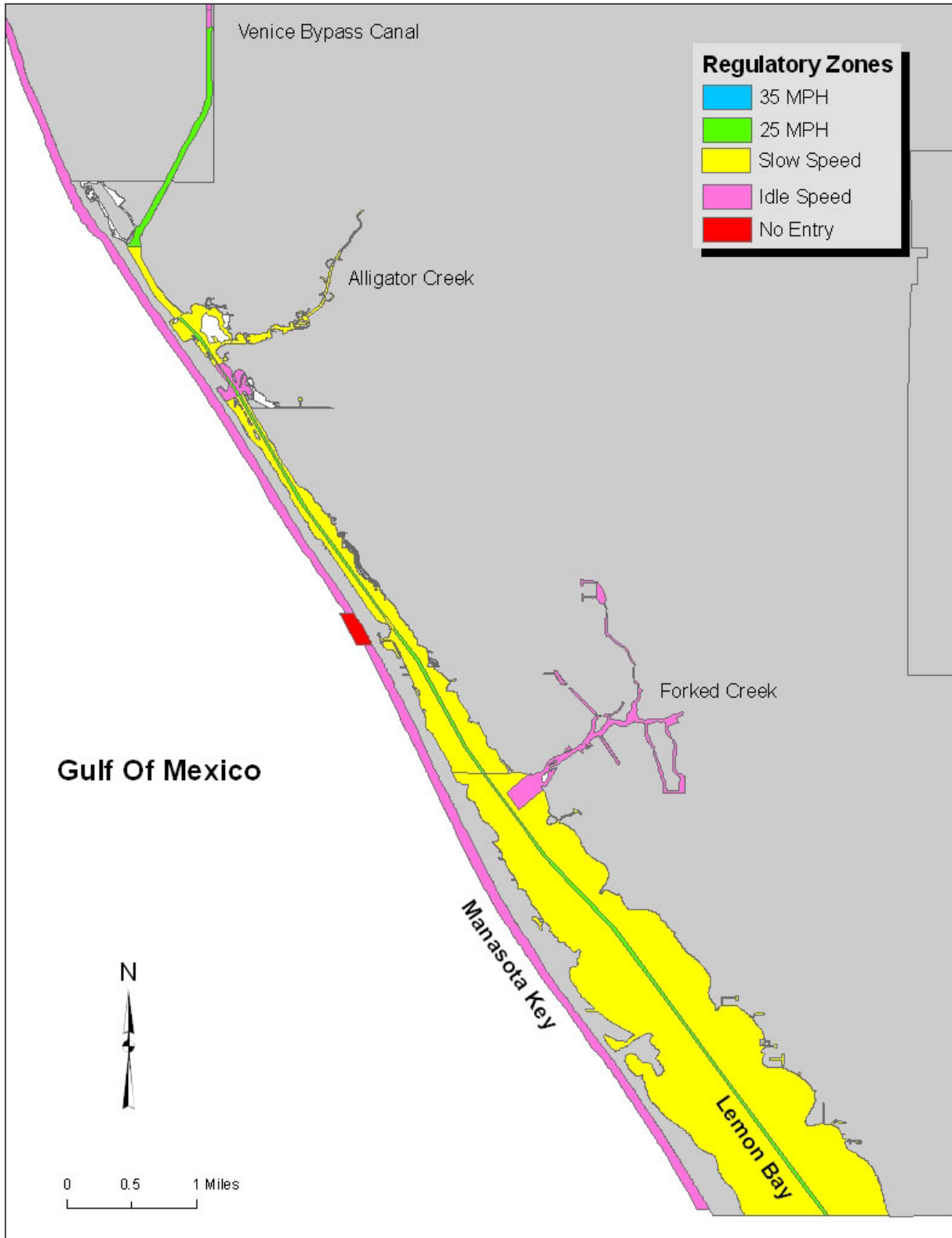
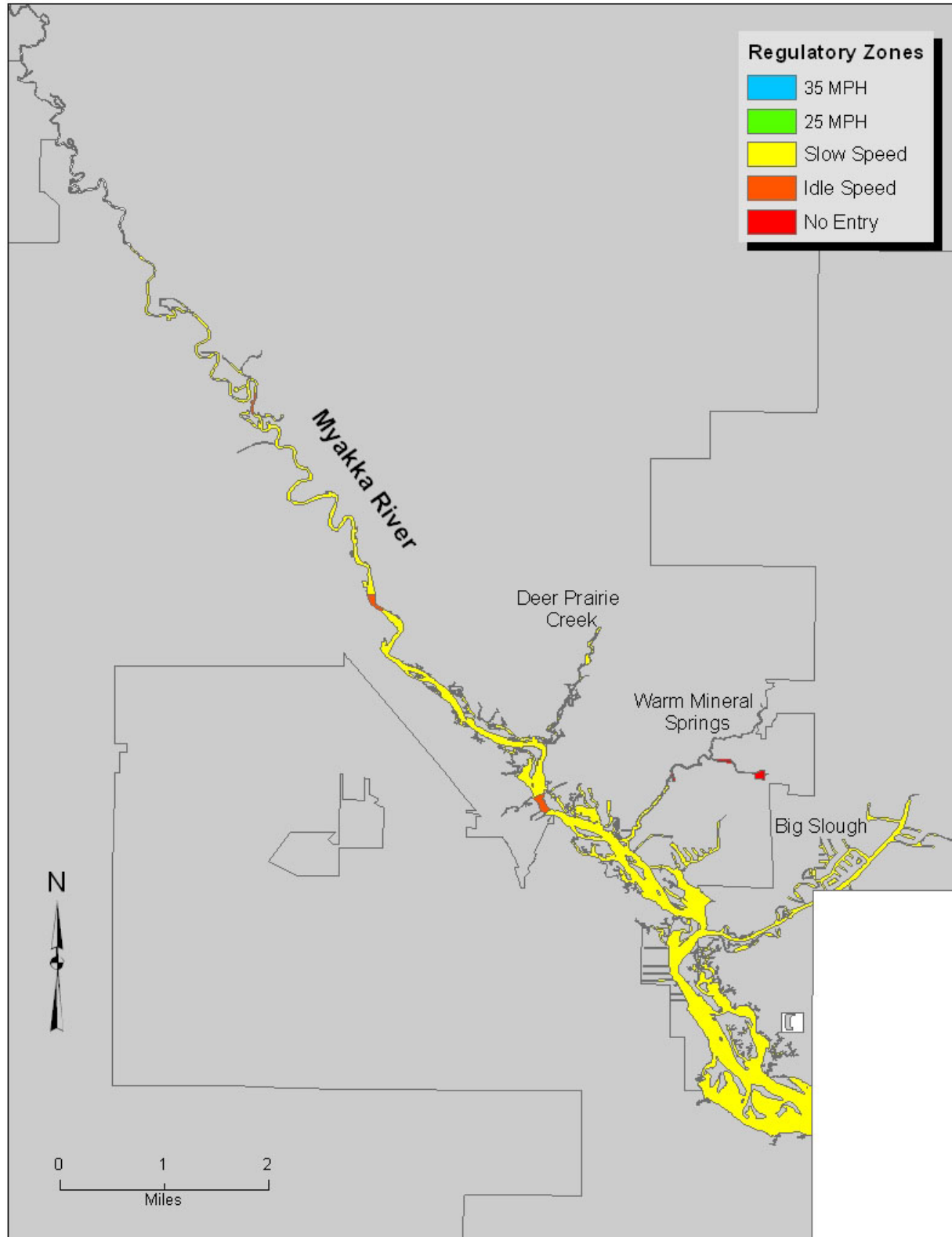


Figure 55. Current speed zones along the Myakka River, including locally-adopted regulatory zones.



BOAT FACILITY SITING PLAN

DATA TREND OBSERVATION

Several limiting factors influencing boat facility siting were identified in the original 2003 Sarasota County MPP. These factors include the following:

- The Sarasota County shoreline, including Longboat Key, is near build-out with respect to unoccupied properties.
- SCW and shoreline are near the saturation point with respect to moorings.
- 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 multi-family properties. Acquiring new land for public or private boat facilities will be very expensive and will, in many cases, require rezoning and/or changes in future land use policy.
- Antonini, et al., pointed out in their assessments that much of the existing waterways were restricted, that is boats were prevented from using waterways on some tides due to depth limitations. The shallow nature of most SCW severely limit the potential for new development without dredging, which would significantly impact mangroves, seagrasses, and other wetland habitat in many areas.
- Recent boating surveys have indicated that areas in proximity to tidal inlets are both popular boating destinations and travel corridors to and from the Gulf of Mexico.
- Focusing new facility development in the vicinity of tidal inlets would keep transit times and distances to a minimum, which has a direct benefit on both manatee protection and submerged aquatic vegetation. In addition, areas near tidal inlets are more favorable for boat facilities because they typically have the greatest water depths.
- Zoning and land use policies are subject to possible future changes. Facility siting criteria will need to be addressed during any proposed changes or variances in coastal zoning for property uses related to boat facilities.

BOAT FACILITY SITING CRITERIA – MANATEE ISSUES

Boat facility siting criteria for the revised Sarasota County MPP addressed three primary issues:

1. The size of the proposed facility creation or expansion.

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, one wet slip, dry slip, or parking space designated for a boat trailer were considered to be numerically equivalent. Note that siting criteria related to facility size refers to newly-proposed slips/spaces only. The numbers of current slips/spaces at existing facilities that are proposing expansion are not considered in siting determination, unless they are a part of a cumulative expansion or successive review since the adoption of the original

MPP, September 24, 2003. For additional information, see sections on successive reviews on pages 113 and 115 and cumulative expansions on page 116.

2. The location of the proposed facility (as it relates to documented manatee use in Sarasota County).

Whether the proposed facility creation or expansion is located within a documented high-use or moderate-use manatee area in Sarasota County (as described in the Manatees in Sarasota County Section) was taken into consideration.

3. The sphere of influence of the proposed facility (as it relates to documented manatee use in Sarasota County).

Not only is the location, or “footprint” of the proposed facility a significant 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 potential impact on adjacent manatee areas from vessels utilizing the facility was also taken into consideration.

Because tidal inlets (New Pass, Big Sarasota Pass, and Venice Inlet) are both frequent boating destinations and common travel corridors to and from the Gulf of Mexico, (Gorzalany, 2006a & b; Sidman, et al., 2006), the direction of the nearest tidal inlet was used to predict the expected direction of travel for the majority of vessels originating from a given facility. From this, it was determined if any additional manatee areas would be potentially impacted by future traffic from a boat facility.

RESULTS OF THE SCREENING PROCESS

Outcomes to proposed facility construction / expansion were defined as follows. These outcomes only pertain to facility construction / expansion of five or more slips / spaces.

Recommended - 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. Permit applicants are still required, however, to implement standard manatee protection measures as required by the FWC. In addition, the number of new facilities or expansions of existing facilities within a recommended area may be limited and subject to final review if data trends indicate the need for additional protection.

Successive Reviews in Areas with a Recommended Outcome

For properties located within an area with a recommended outcome for a given range of new slips, the outcome will remain recommended through successive reviews until the upper end of the range is reached. Successive reviews shall consider the total number of slips added since the adoption of the original MPP, September 24, 2003. For example, if a property is located in an area with a recommended outcome of 10-49 slips, that facility may choose to add 15 slips during one phase of expansion and another 34 during a second phase. The total increase of slips at that site under the recommended outcome totals 49 slips, constructed in two phases and reviewed during two separate permitting processes. The length of time that passes between phases of the project does

not affect the siting outcome, unless significant changes in manatee use occur and the outcome is revised with an adopted update to the Sarasota County MPP.

Once the upper end of the range of the recommended outcome has been reached, the outcome for that parcel will be Conditional and will be reviewed accordingly. Based on the scenario described above, the 50th slip and above would be considered in a Conditional outcome.

Not Recommended - Facility construction or expansion of the proposed size is presumed to present a significant increased risk to manatees and is not recommended at the present time.

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

Facility Characteristics

- Facility characteristics (commercial vs. residential, upland use, level of traffic generated)
- Level of existing boat traffic in the area
- Predominant boat type at the proposed facility

Generally, residential facilities produce less motorized vessel traffic than commercial marina facilities (with amenities such as restaurants, fuel, bait, rentals, boat ramps, etc.).

Manatee Data

- Documented manatee use in the area
- Recent manatee mortality trends (including watercraft – related mortality)
- Level of boat / manatee overlap in the area

The most recent available scientific data regarding manatee shall be used in order to inform the review process.

Waterway Characteristics

- Proximity of proposed construction / expansion to ICW
- Proximity of proposed construction / expansion to the nearest tidal inlet
- Waterway configuration
- Presence / absence of idle or slow speed zones in the area

Generally, the likelihood of boats encountering manatees is reduced where facilities are located closer to the ICW and to a tidal inlet. Further, the specific nature of a waterway may increase the likelihood of boat / manatee interactions (e.g.: water depth, channel width or canal width, location of natural resources, etc.).

Successive Reviews in Areas with a Conditional Outcome

Planning for anticipated expansions is encouraged at the time of the first review. Successive reviews shall consider the total number of slips added since the adoption of the original MPP, September 24, 2003. For example, the first application authorized under a conditional outcome was for a total of 24 slips in the 10-49 range. A second proposed application for 10 more slips shall be reviewed in context of the first application (e.g. 24 slips plus 10 more slips equals a total of 34 slips). In any case, if the upper end of the conditional outcome is reached, any expansion beyond that shall be reviewed as a not recommended outcome.

Wetlands and Seagrass Considerations

The goal of a MPP is not only to provide direct protection to manatees, but also to ensure preservation of manatee habitat. Wetlands and seagrasses occur throughout Sarasota County. The seagrass maps provided in this document (**Figures 25 through 27**) should be utilized as a guide to assist with field verification of density and seagrass species. The criteria for evaluation were based on state regulations prohibiting destruction of coastal wetlands and seagrasses. After determination of “Recommended” and “Conditional” areas based upon manatee criteria, seagrass and mangrove data needs to be considered in order to provide a final outcome. If wetlands and seagrasses are to be impacted by the proposed project, those impacts must be evaluated for consistency with the Comprehensive Plan and be authorized pursuant to the WNCA, state, and federal permitting criteria. The MPP consistency determination must be conducted in tandem with the local, state, and federal permit review processes. Based on the extent of impact and associated mitigation proposed, the BFSP screening process outcome may change the total number of proposed slips and the siting outcome.

Other Facility Siting Considerations

Along with manatee protection issues, other screening processes related to appropriate zoning, future land use classification, and land availability must be taken into consideration as part of a comprehensive facility siting plan. Areas that have been identified as “Recommended” or “Conditional” for new or expanded facilities using manatee-related criteria may not have appropriate zoning or future land use classifications. Changes in zoning and future land use classification are based on community needs, which may occur independently of natural resource considerations. However, such designations may be changed without inherent adverse affects on natural resources. The presumption in this document is that existing zoning, land use classification and financial constraints are not limiting factors for future facility development. It is also recognized that manatee use patterns in Sarasota County, along with seagrass and wetlands distribution, may change due to factors independent of zoning and future land use; therefore siting criteria should be updated at intervals consistent with the Sarasota County Comprehensive Plan.

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 resource 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 pre-empt 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.

Finally, water depth must be considered. Established protocols and regulations involving water depth are fully evaluated within the WNCA code (**Appendix B**). Many waterways outside the ICW, particularly in the southern portions of the County, are extremely shallow. New shoreline facilities areas such as 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 (Comprehensive Plan, ENV Policy 2.1.2).

Development of the manatee protection criteria was consistent with Policy 1.3.5 of the Sarasota County Comprehensive Plan (Comprehensive Land Use Plan Section). The County regulates activities associated with boat facility siting and construction in the unincorporated County and the incorporated City of Venice through the WNCA Code (Chapter 54, Article XX of the Sarasota County Code of Ordinances, as amended) and the Sarasota County Comprehensive Plan. Also, in 1997, the County enacted Section 72(b), which provides specific manatee protection provisions during construction activities (**Appendix B**).

Cumulative Expansions of Less Than Five Slips

Only projects involving the expansion / construction of five or more slips / spaces are governed by the MPP. For proposals that seek approval for the construction or expansion of four or fewer slips, a MPP review is not required. However, if in successive expansion efforts, the number of slips / spaces increases more than five since the original adoption of the MPP (September 24, 2003), a MPP review is required. This prevents successive expansions of more than five slips without the benefit of a MPP consistency review.

Change in Use of Facility

Changes in the nature of the use of a facility that generates more frequent trips or increases boat traffic intensity are reviewed on a case-by-case basis outside the purview of this plan by the FWC. For example, the redevelopment of a residential marina to a commercial marina with boat livery and fuel dock would result in greater intensity of use, necessitating such a review even if the total number of slips / spaces were to remain the same.

PERMIT CONDITIONS

As a result of this screening process, MPP permit conditions shall include, but are not limited to:

- Restrictions on vessel draft at the proposed facility
- Modification to the size, type, and design of the proposed facility, as needed

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

- Restrictions on vessel composition (powerboat: sailboat ratio)
- Implementation of additional vessel speed restrictions in the vicinity of the proposed facility deemed adequate to offset potential impacts
- Design and implementation of a boating activity study in order to evaluate potential impacts on manatees and other natural resources
- Installation and maintenance of monofilament recycling and recovery bins
- Execution of a conservation easement designed to prohibit future construction or expansion of docking facilities or other water access along the shoreline

- For Conditional outcomes, implementation of a boater destination study may be required to determine what, if any, impacts additional boat traffic would have in this area. This approach, originally proposed for the 2003 Sarasota County MPP, remains valid and unchanged for the 2011 MPP revision.

Education

Finally, an education program specific to the site is required for all projects. For approved construction or expansion of 30 moorings or greater, a manatee educational program must be implemented before completion of project construction. Such a plan shall be developed with the assistance of and approval by the FWC's Imperiled Species Management Section (ISM). 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 the ISM (ImperiledSpecies@myfwc.com).

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.

BOAT FACILITY SITING OUTCOMES

The following represents a summary of boat facility siting criteria based upon manatee-related factors. Results are also displayed graphically in **Figures 56 through 67**.

HIGH USE – CRITICAL AREAS:

If the proposed facility construction / expansion is located within a **HIGH USE – CRITICAL** manatee area:

All proposed sizes = **Not Recommended**

HIGH USE – IMPORTANT AREAS:

If the proposed facility construction / expansion is located within a **HIGH USE – IMPORTANT** manatee area...

...with additional potential impacts to a **HIGH USE – CRITICAL** manatee area:

All proposed sizes = **Not Recommended**

...with additional potential impacts to a **HIGH USE – IMPORTANT** manatee area:

Proposed number of slips/spaces is 5-9 = **Conditional Approval**

Proposed number of slips/spaces is 10-49 = **Not Recommended**

Proposed number of slips/spaces is 50-99 = **Not Recommended**

Proposed number of slips/spaces is >99 = **Not Recommended**

...with additional potential impacts to a **MODERATE USE** manatee area:

Proposed number of slips/spaces is 5-9 = **Conditional Approval**

Proposed number of slips/spaces is 10-49 = **Conditional Approval**

Proposed number of slips/spaces is 50-99 = **Not Recommended**

Proposed number of slips/spaces is >99 = **Not Recommended**

...with **NO** potential impacts to any additional **HIGH USE** or **MODERATE USE** manatee areas:

Proposed number of slips/spaces is 5-9 = **Conditional Approval**

Proposed number of slips/spaces is 10-49 = **Conditional Approval**

Proposed number of slips/spaces is 50-99 = **Conditional Approval**

Proposed number of slips/spaces is >99 = **Not Recommended**

MODERATE USE AREAS:

The proposed facility construction / expansion is located within a **MODERATE USE** manatee area...

...with additional potential impacts to a **HIGH USE - CRITICAL** manatee area:

Proposed number of slips/spaces is 5-9 = **Conditional Approval**

Proposed number of slips/spaces is 10-49 = **Conditional Approval**

Proposed number of slips/spaces is 50-99 = **Not Recommended**

Proposed number of slips/spaces is >99 = **Not Recommended**

...with additional potential impacts to a **HIGH USE - IMPORTANT** manatee area:

Proposed number of slips/spaces is 5-9 = **Recommended**

Proposed number of slips/spaces is 10-49 = **Conditional Approval**

Proposed number of slips/spaces is 50-99 = **Not Recommended**

Proposed number of slips/spaces is >99 = **Not Recommended**

...with additional potential impacts to another **MODERATE USE** manatee area:

Proposed number of slips/spaces is 5-9 = **Recommended**

Proposed number of slips/spaces is 10-49 = **Conditional Approval**

Proposed number of slips/spaces is 50-99 = **Conditional Approval**

Proposed number of slips/spaces is >99 = **Not Recommended**

...with **NO** potential impacts to any additional **HIGH USE** or **MODERATE USE** manatee areas:

Proposed number of slips/spaces is 5-9 = **Recommended**

Proposed number of slips/spaces is 10-49 = **Conditional Approval**

Proposed number of slips/spaces is 50-99 = **Conditional Approval**

Proposed number of slips/spaces is >99 = **Conditional Approval**

LOW USE / LIMITED DATA AREAS:

The proposed facility construction / expansion is located within a **LOW USE / LIMITED DATA** manatee area...

...with additional potential impacts to a **HIGH USE - CRITICAL** manatee area

Proposed number of slips/spaces is 5-9 = **Recommended**

Proposed number of slips/spaces is 10-49 = **Conditional Approval**

Proposed number of slips/spaces is 50-99 = **Conditional Approval**

Proposed number of slips/spaces is >99 = **Not Recommended**

...with additional potential impacts to a **HIGH USE - IMPORTANT** manatee area:

Proposed number of slips/spaces is 5-9 = **Recommended**

Proposed number of slips/spaces is 10-49 = **Recommended**

Proposed number of slips/spaces is 50-99 = **Conditional Approval**

Proposed number of slips/spaces is >99 = **Conditional Approval**

...with additional potential impacts to another **MODERATE USE** manatee area:

Proposed number of slips/spaces is 5-9 = **Recommended**

Proposed number of slips/spaces is 10-49 = **Recommended**

Proposed number of slips/spaces is 50-99 = **Recommended**

Proposed number of slips/spaces is >99 = **Conditional Approval**

...with **NO** potential impacts to any additional **HIGH USE** or **MODERATE USE** manatee areas:

All proposed sizes = **Recommended**

Revisions to the boat facility siting criteria provide for potential facility construction or expansion (either as "Recommended" or "Conditional") of up to 49 slips / spaces in numerous areas throughout Sarasota County. These areas include the southern portions of Longboat Key, the Sarasota Bayfront from the Manatee County line to the north Siesta Key Bridge (excluding the Hudson Bayou area), Phillippi Creek,

Little Sarasota Bay (excluding the Midnight Pass area), Blackburn Bay, and all waterfront property within the City of Venice. As the size of proposed facility construction or expansion increases, the proportion of “Recommended” shoreline throughout the County decreases and the proportion of “Not Recommended” shoreline increases. **Figures 56 through 67** illustrate the changes in “Recommended”, “Conditional,” and “Not Recommended” areas resulting from incremental changes in proposed facility size. Only one figure is provided for the Myakka River because the entire river is considered High-Use Critical Habitat and as a result is unsuitable for new or expanded facilities. Because of limitations in the resolution of the shoreline map used in **Figures 56 through 67**, all tidal creeks, accessory channels, residential canals, and spoil islands are not displayed. In cases where less prominent waterways or land features are not displayed, those areas will acquire the same siting outcome as the nearest adjacent shoreline or predominant surrounding shoreline. For example, any tidal creeks along the Myakka River which are not visible, or which extend farther upstream than the area that is displayed, will retain the same siting outcome that was designated for the lower portions of the same river. Similarly, any residential canals along Phillippi Creek, as well as the upper reaches of the creek, will retain the same siting outcome as is shown for the Phillippi Creek itself. Various spoil islands throughout the coastal waterway will also retain the same siting outcome as the surrounding shoreline.

These outcomes, however, provide the answer from the perspective of manatee protection only. Existing policies for boat facility siting, including compatibility with county and municipal comprehensive plans, zoning issues, future land use plans, state and federal jurisdictions, and the WNCA Code, must still be addressed. Existing protocols and regulations for development review will be utilized, along with MPP 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. 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.

Gottfried Creek

Gottfried Creek, a small tidal creek located along the central portion of Lemon Bay, presents a unique situation with regard to the designation of manatee habitat in Sarasota County. Similar to the Myakka River, only the upper portions of the Creek are within the jurisdiction of Sarasota County, while the lower portions are within Charlotte County. While manatees have been frequently sighted along the lower portions of the Creek and in adjacent areas (including Lemon Bay), limited data are available for the upper portions of the Creek due in part to poor sighting conditions. Recent manatee tagging and telemetry data, however, has confirmed that the upper portions of Gottfried Creek are used by manatees.

As part of the original assessment conducted by MML for the 2003 Sarasota County MPP, Gottfried Creek was designated as Secondary Manatee Habitat (now identified as Important Habitat). While aerial survey data were limited, it was recommended that siting outcomes in this area should take into account the sphere of influence from any proposed facility and the relatively high level of use by manatees near the better-documented lower portions of the Creek and in Lemon Bay. Based upon available scientific data, facility siting outcomes for Gottfried Creek were designated as follows:

Proposed number of slips/spaces is 5-9	=	Conditional Approval
Proposed number of slips/spaces is 10-49	=	Conditional Approval
Proposed number of slips/spaces is 50-99	=	Conditional Approval
Proposed number of slips/spaces is >99	=	Not Recommended

The “Conditional” outcome for all siting outcomes less than 100 slips / spaces would allow for a case-by-case assessment of individual proposed projects based upon individual merits. Siting outcomes for Gottfried Creek are displayed in **Figures 63 through 66**.

Figure 56. Facility siting outcomes for northern Sarasota County; 5-9 proposed slips.

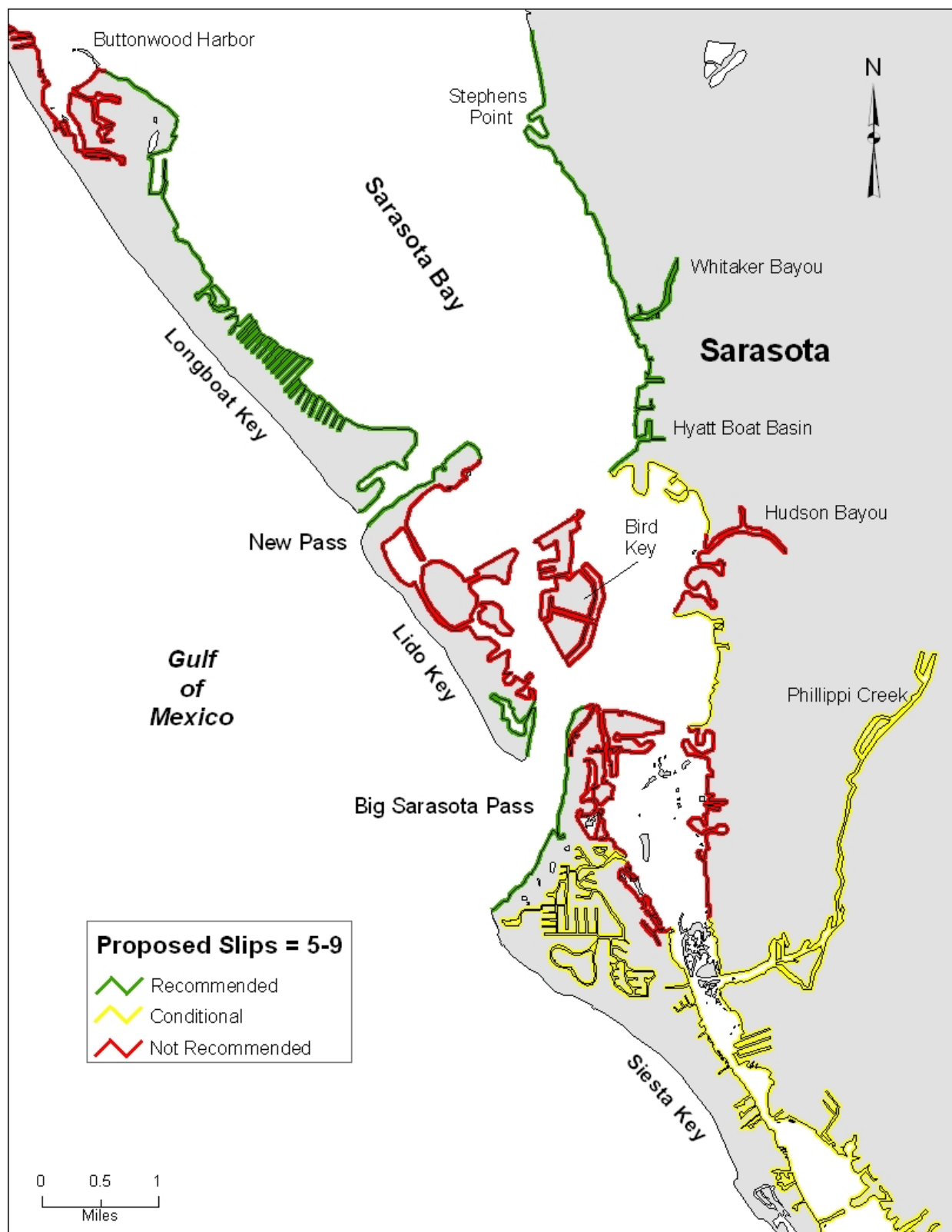


Figure 57. Facility siting outcomes for northern Sarasota County; 10-49 proposed slips.

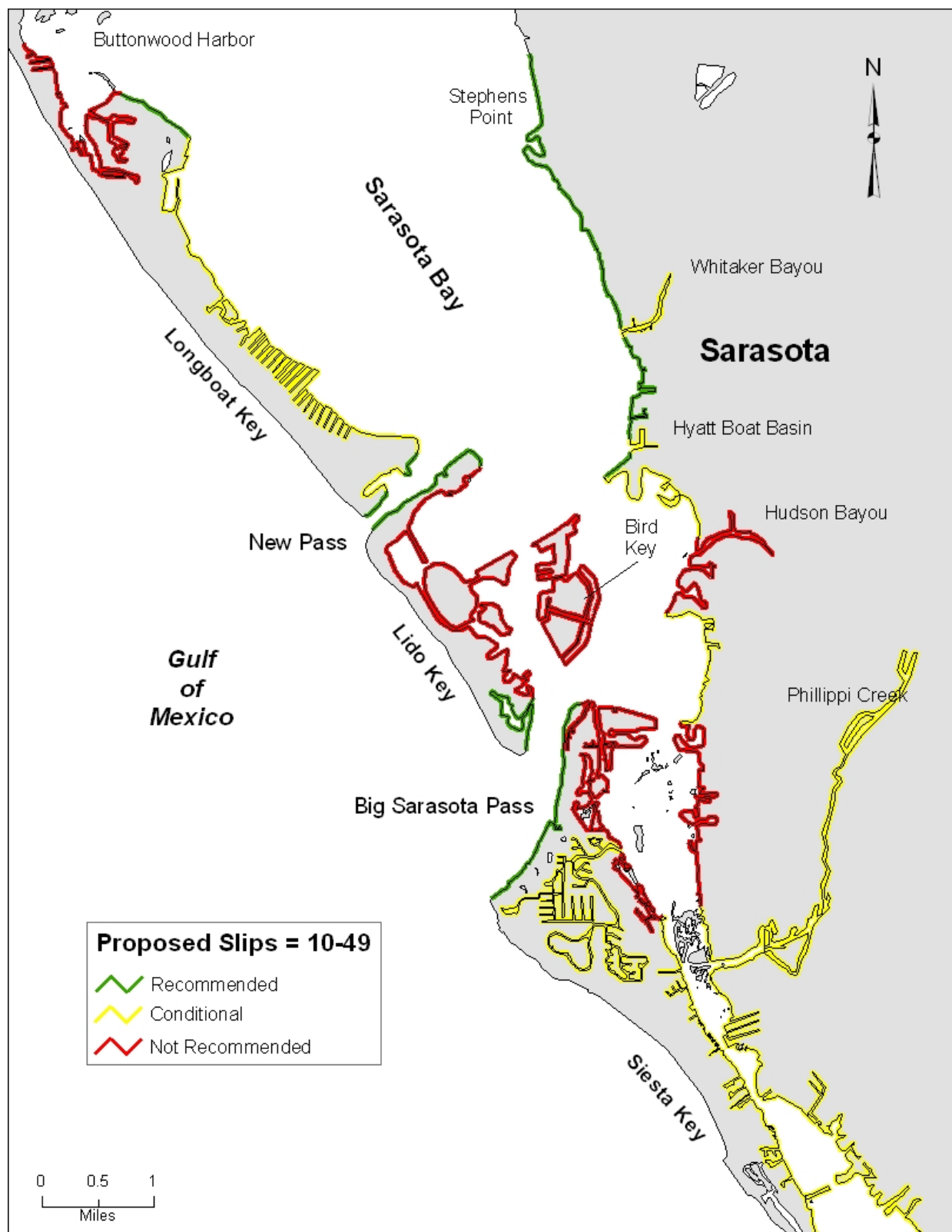


Figure 58. Facility siting outcomes for northern Sarasota County; >49 proposed slips.

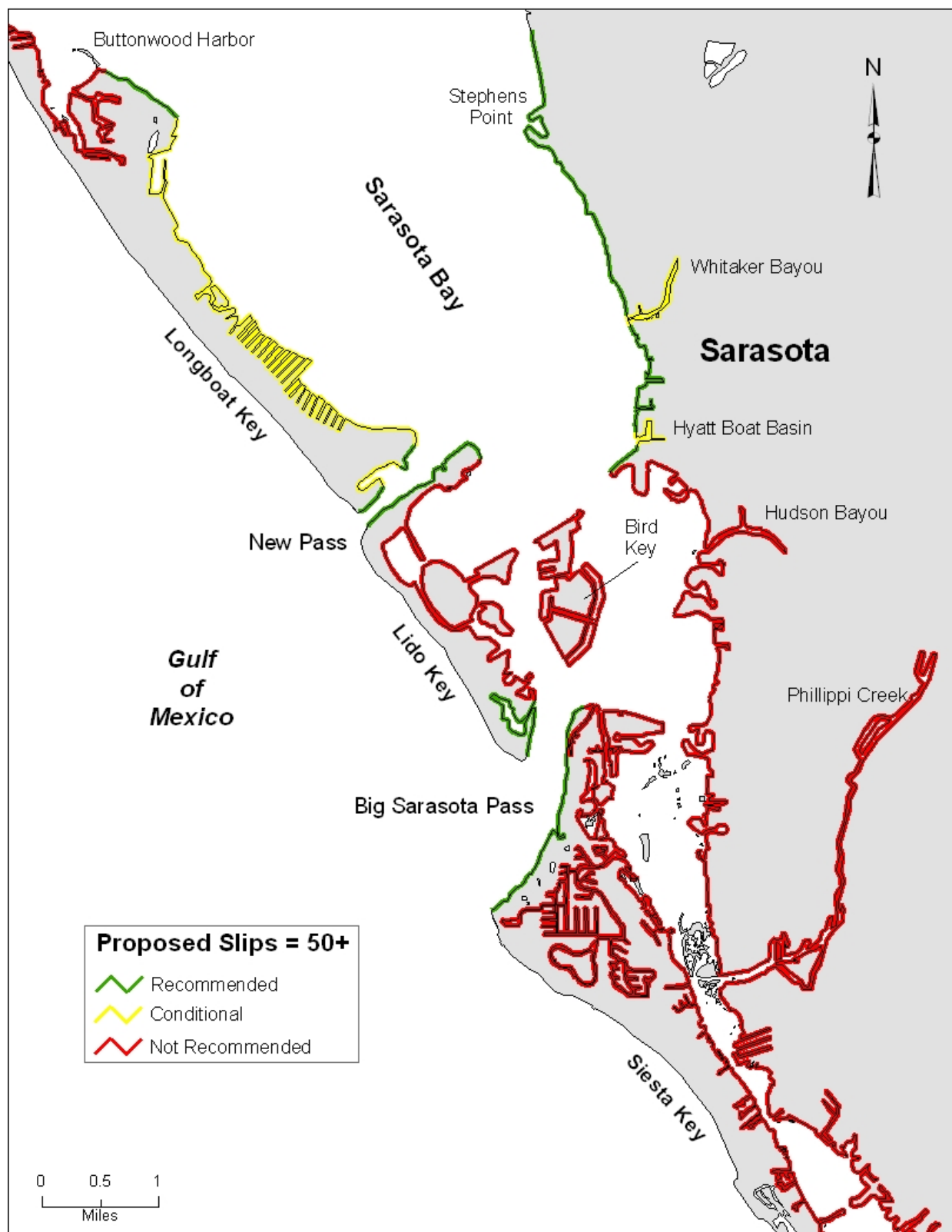


Figure 59. Facility siting outcomes for central Sarasota County; 5-9 proposed slips.

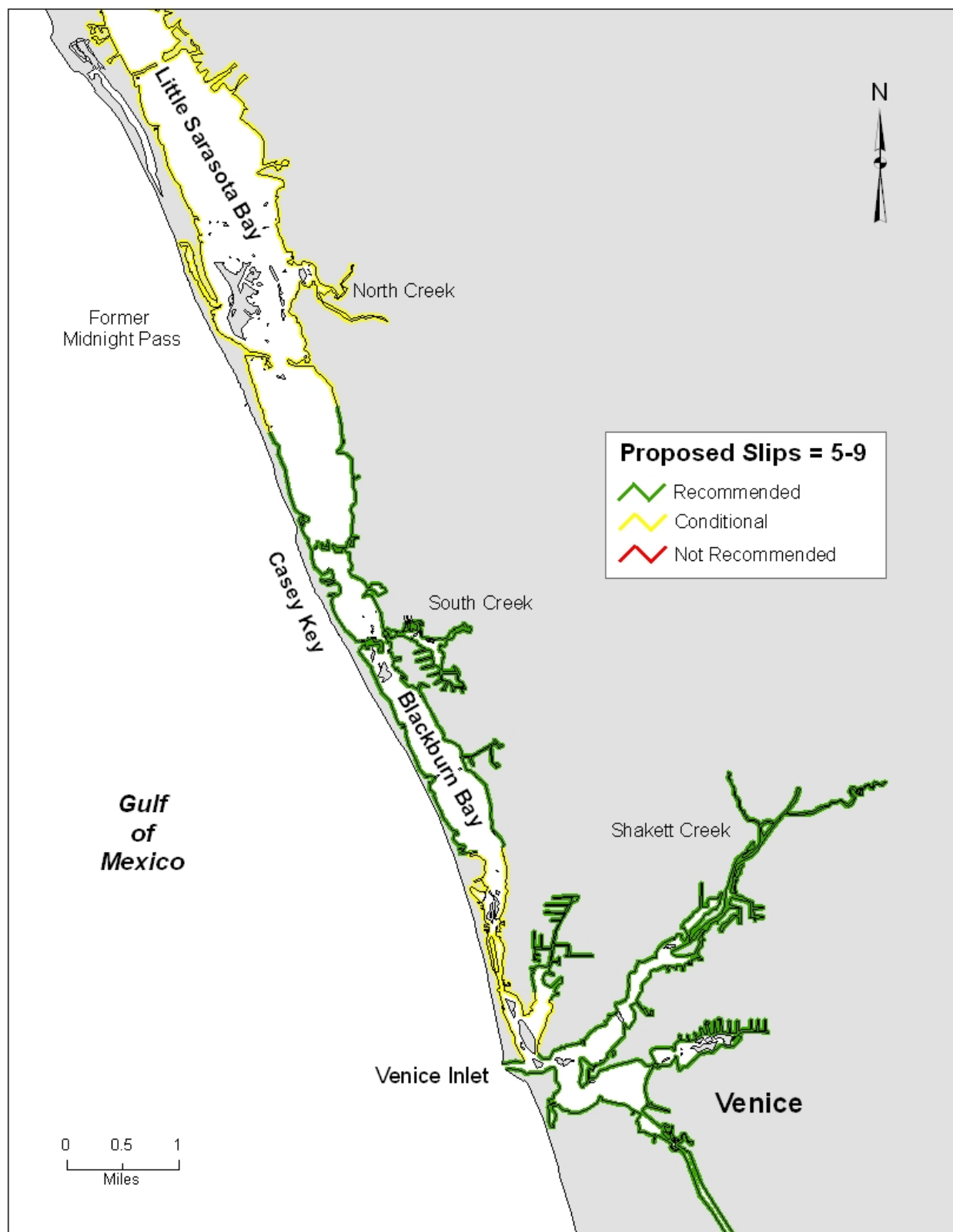


Figure 60. Facility siting outcomes for central Sarasota County; 10-49 proposed slips.

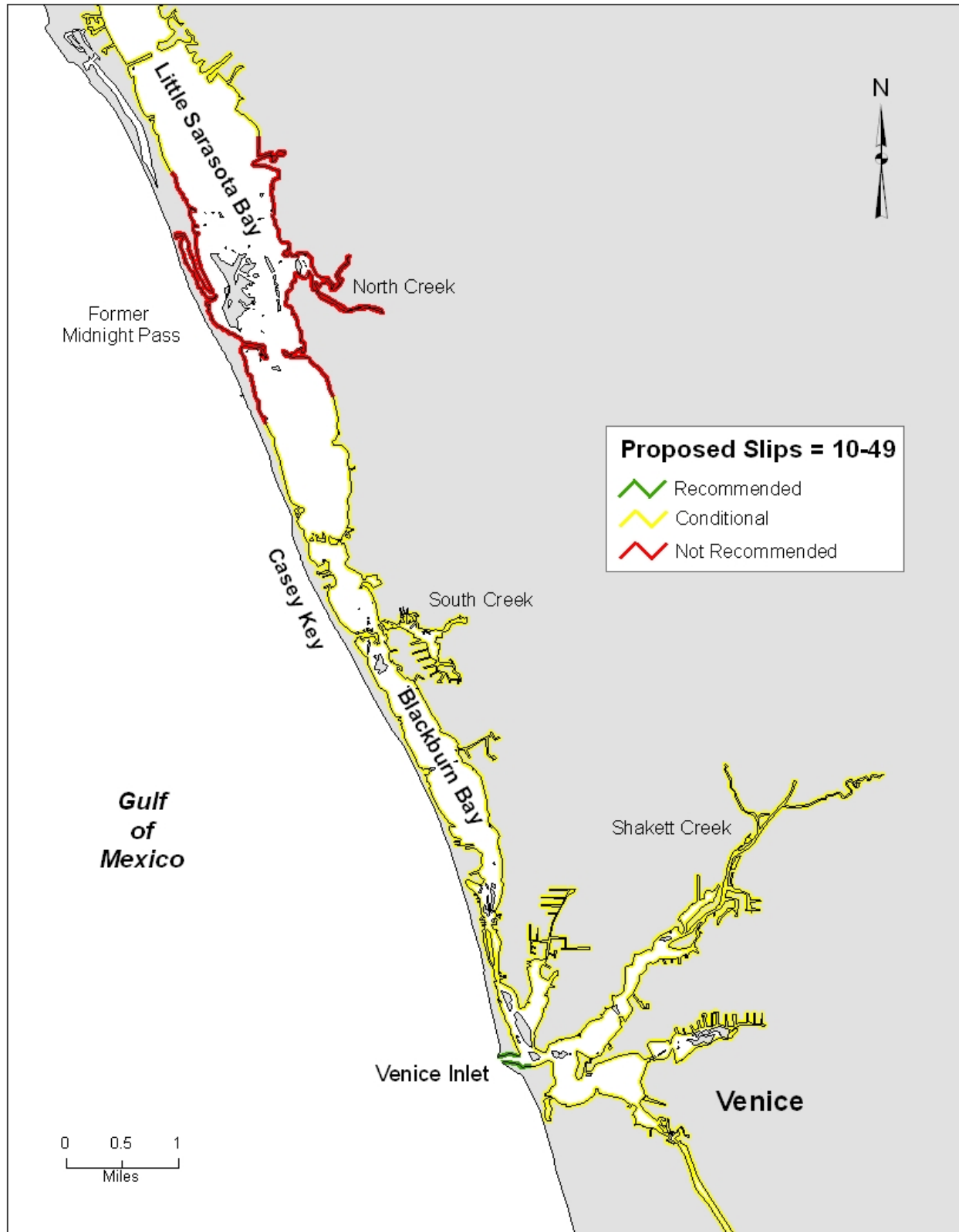


Figure 61. Facility siting outcomes for central Sarasota County; 50-99 proposed slips.

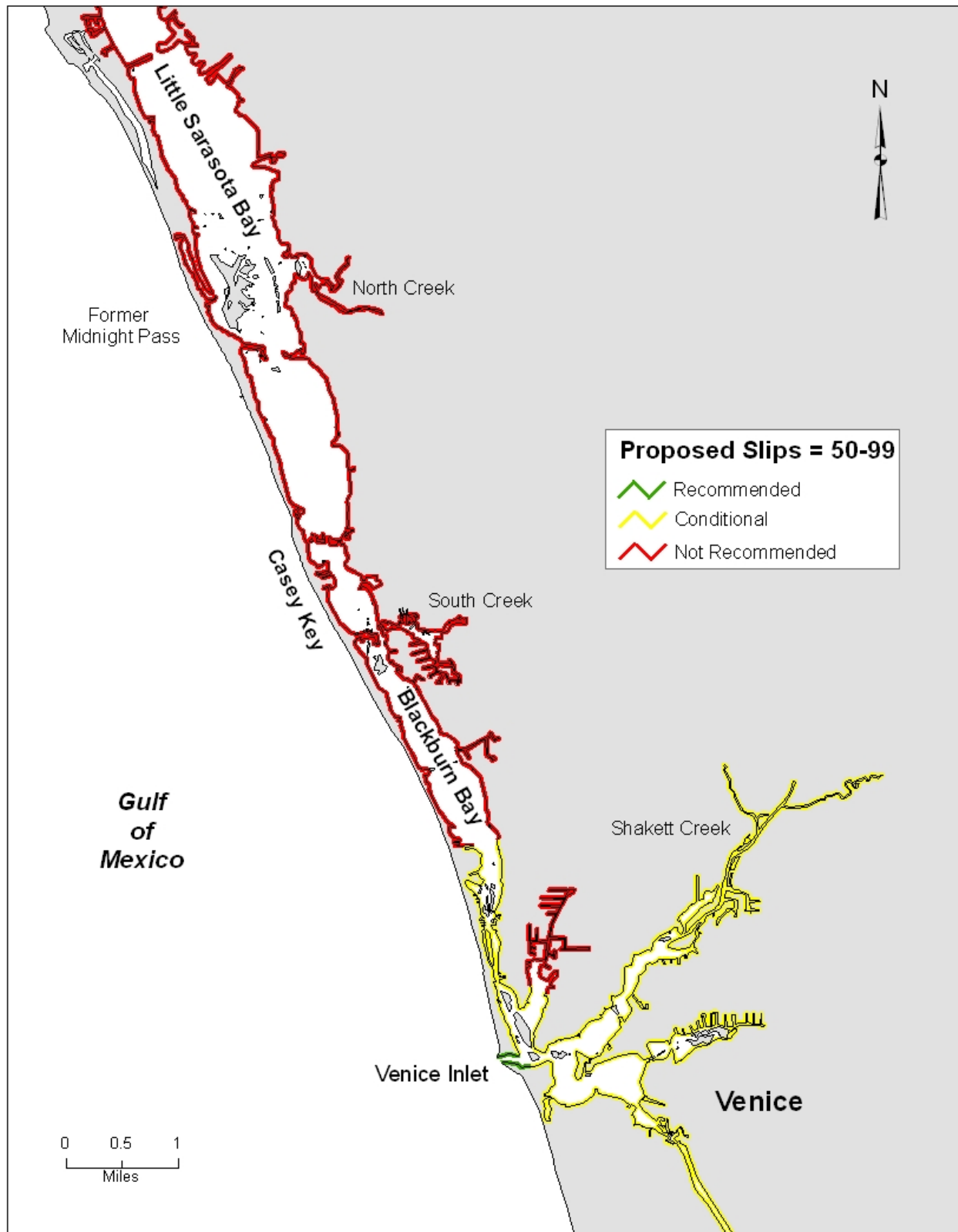


Figure 62. Facility siting outcomes for central Sarasota County; >99 proposed slips.

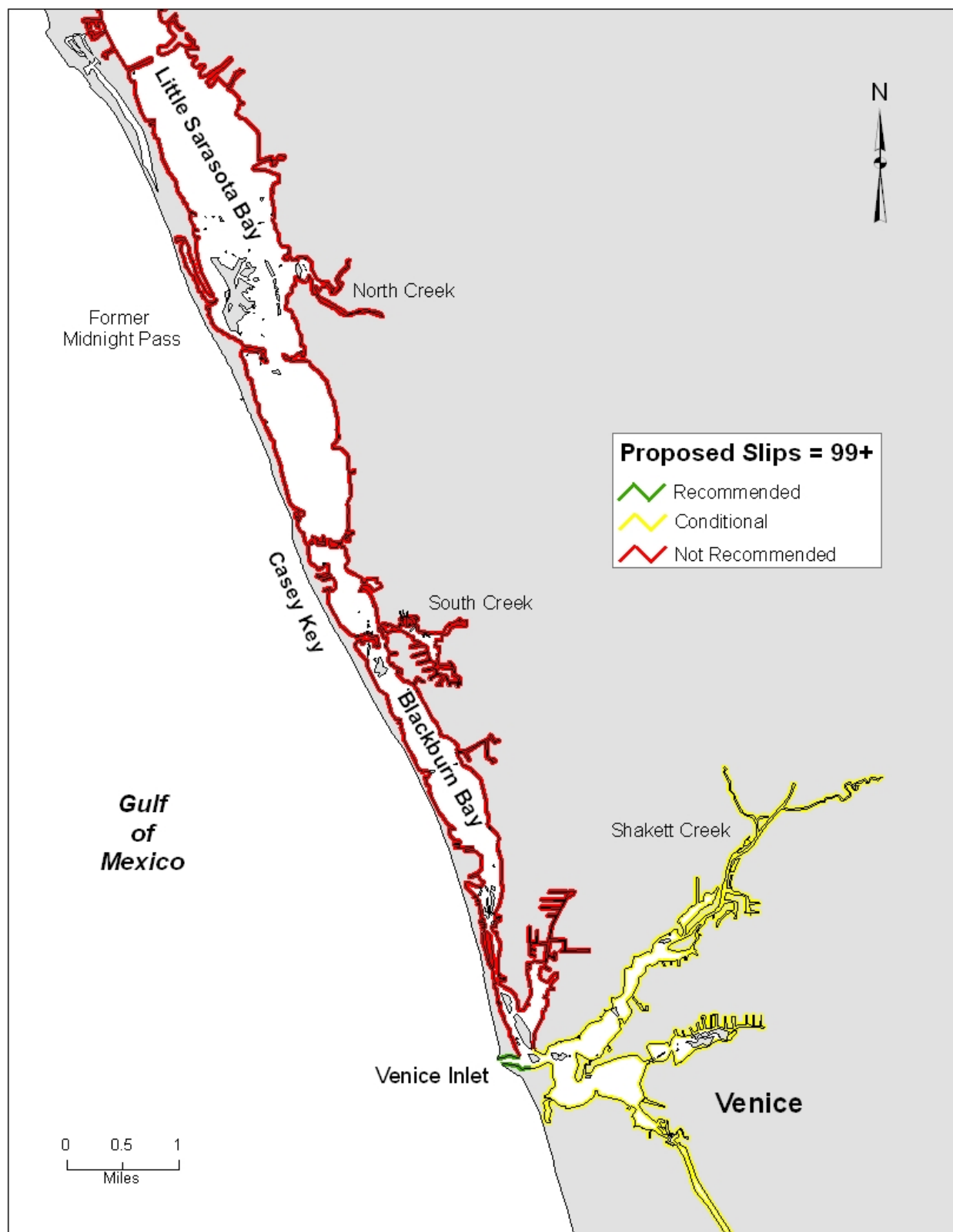


Figure 63. Facility siting outcomes for southern Sarasota County; 5-9 proposed slips.

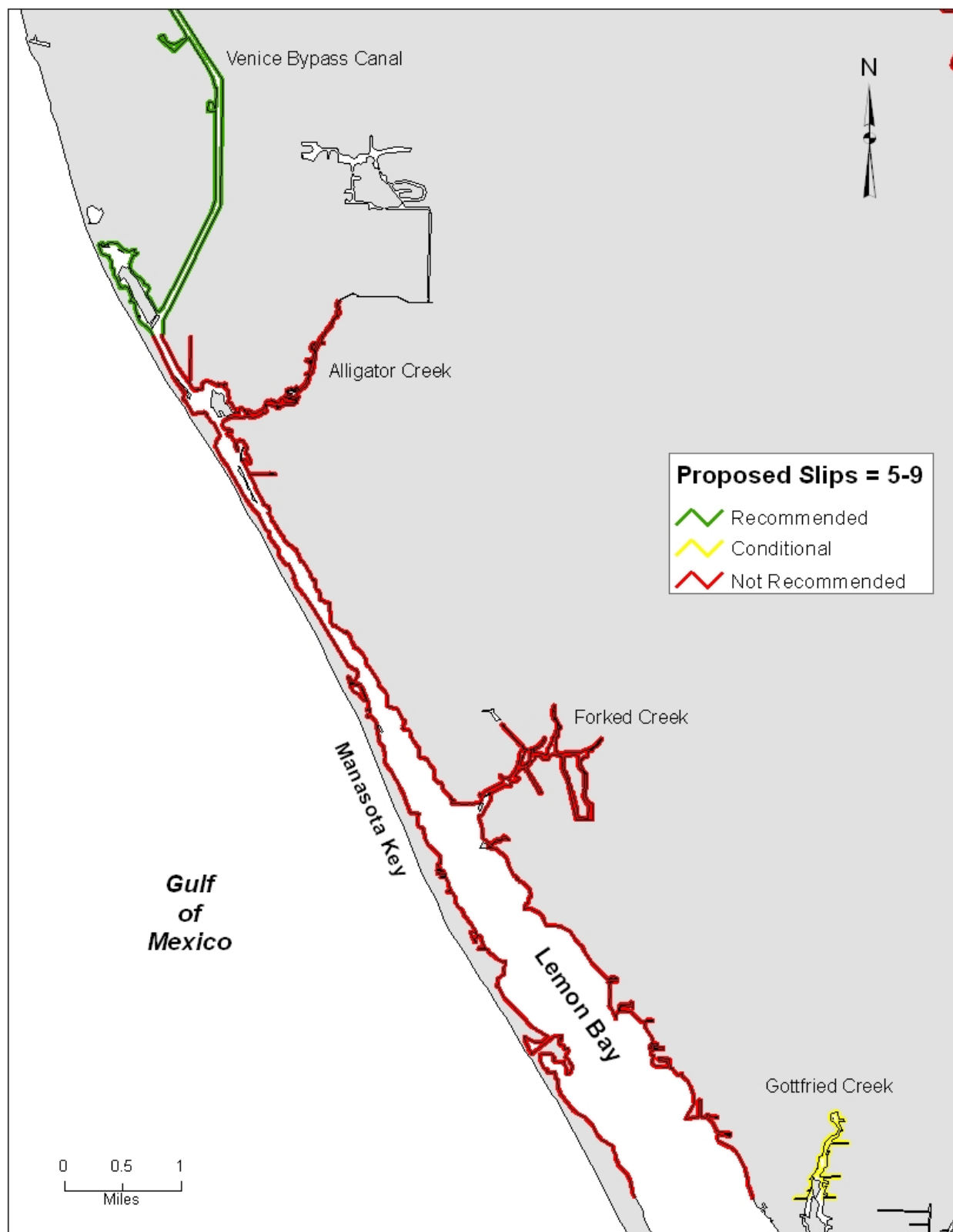


Figure 64. Facility siting outcomes for southern Sarasota County; 10-49 proposed slips.

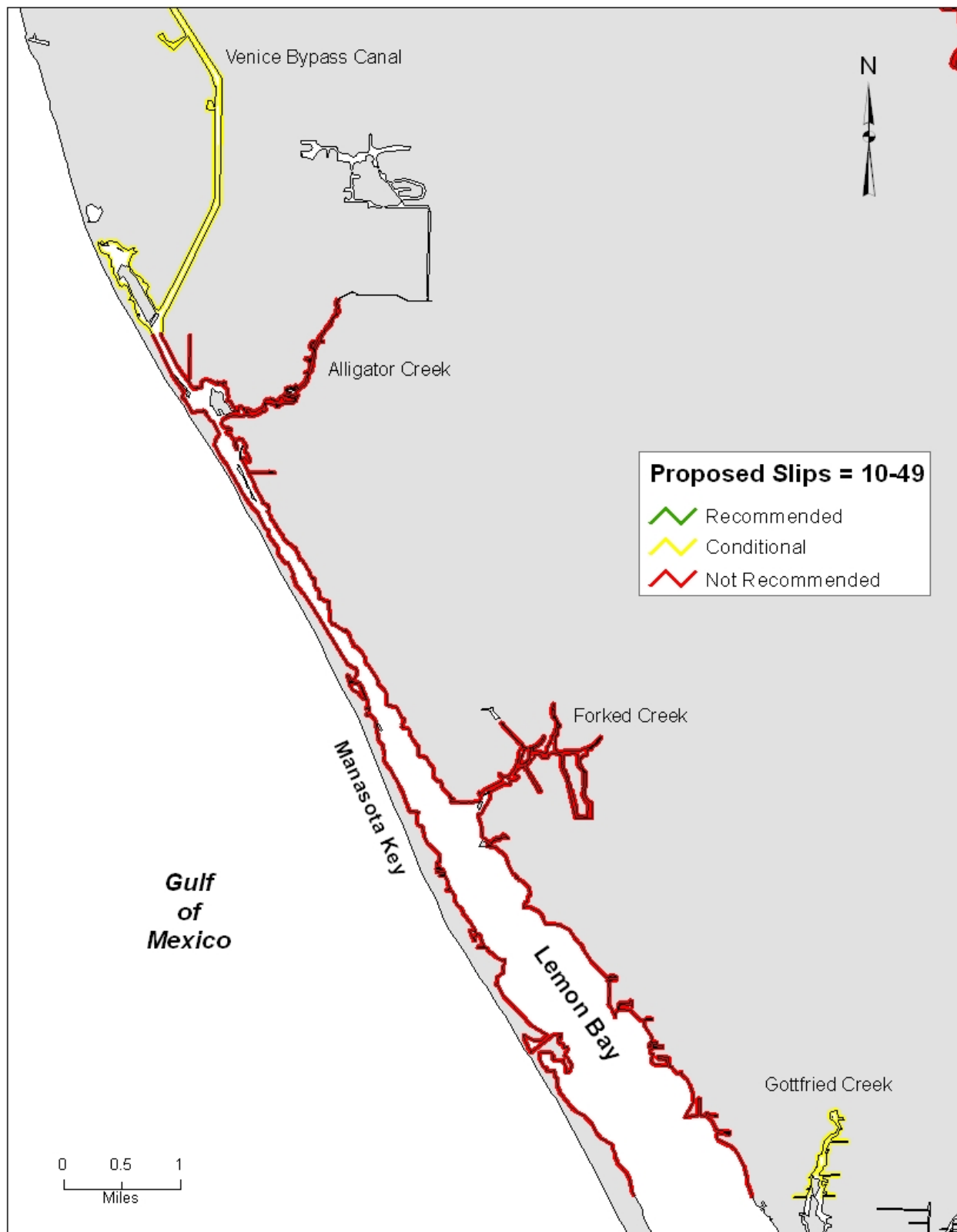


Figure 65. Facility siting outcomes for southern Sarasota County; 50-99 proposed slips.

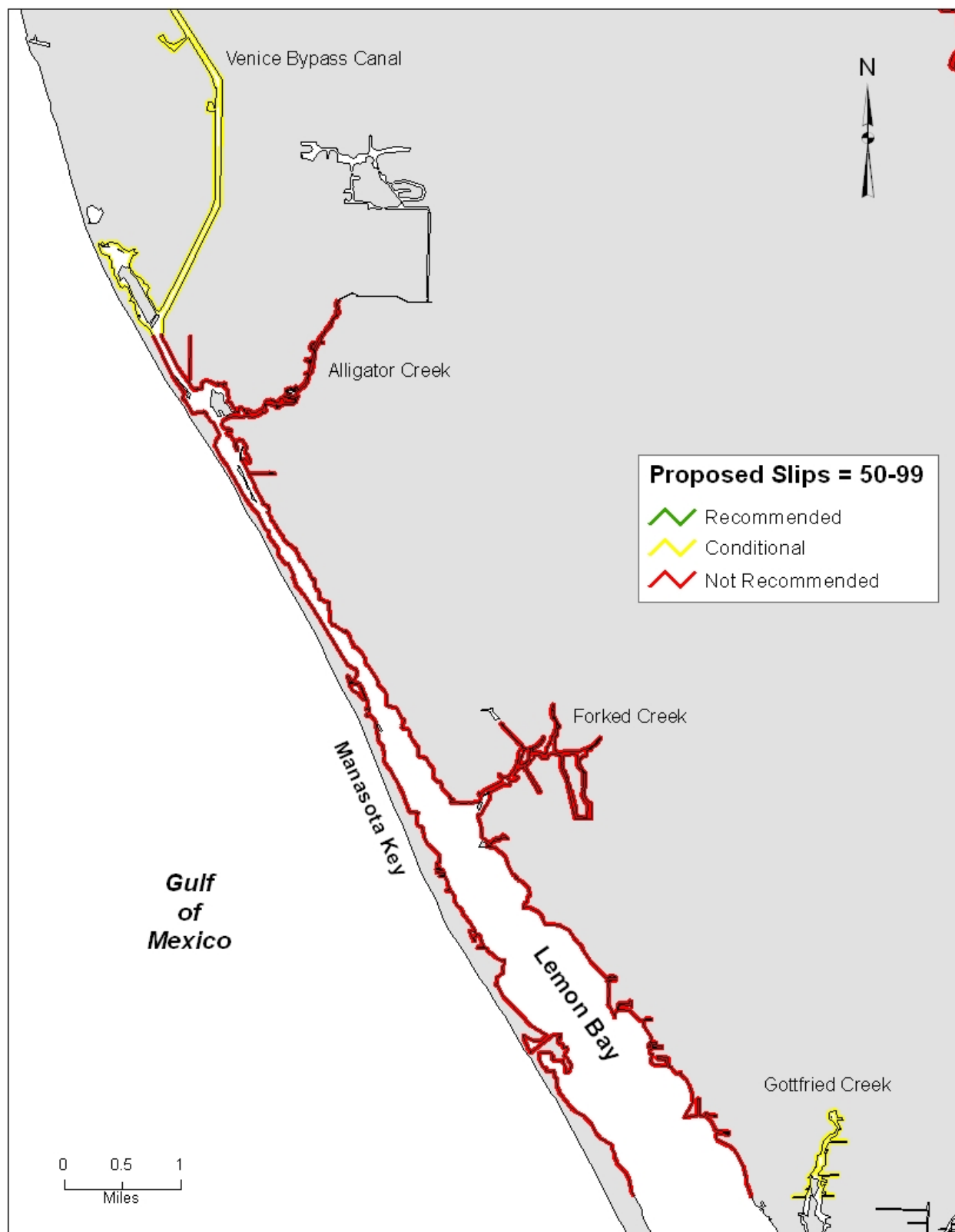


Figure 66. Facility siting outcomes for southern Sarasota County; >99 proposed slips.

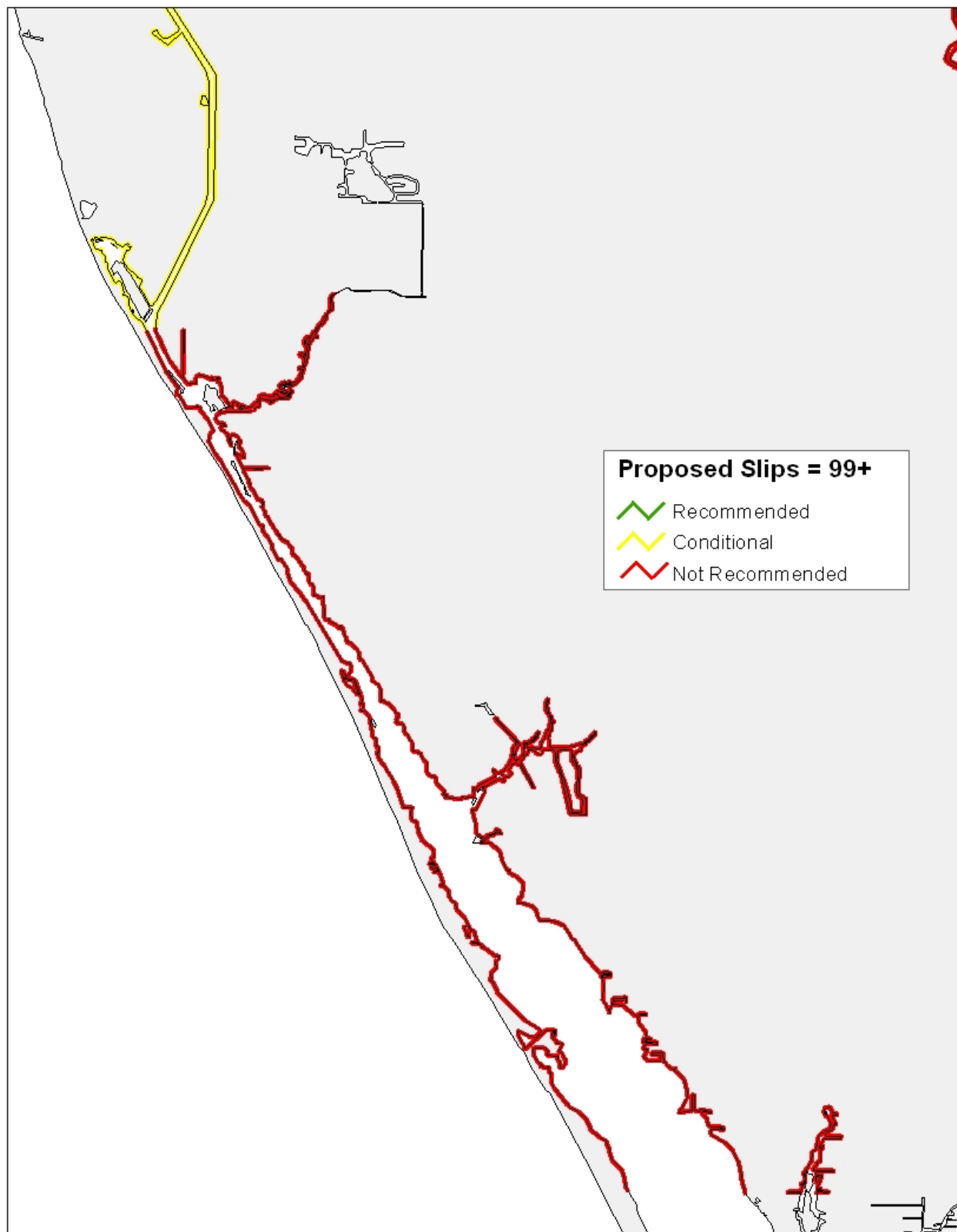
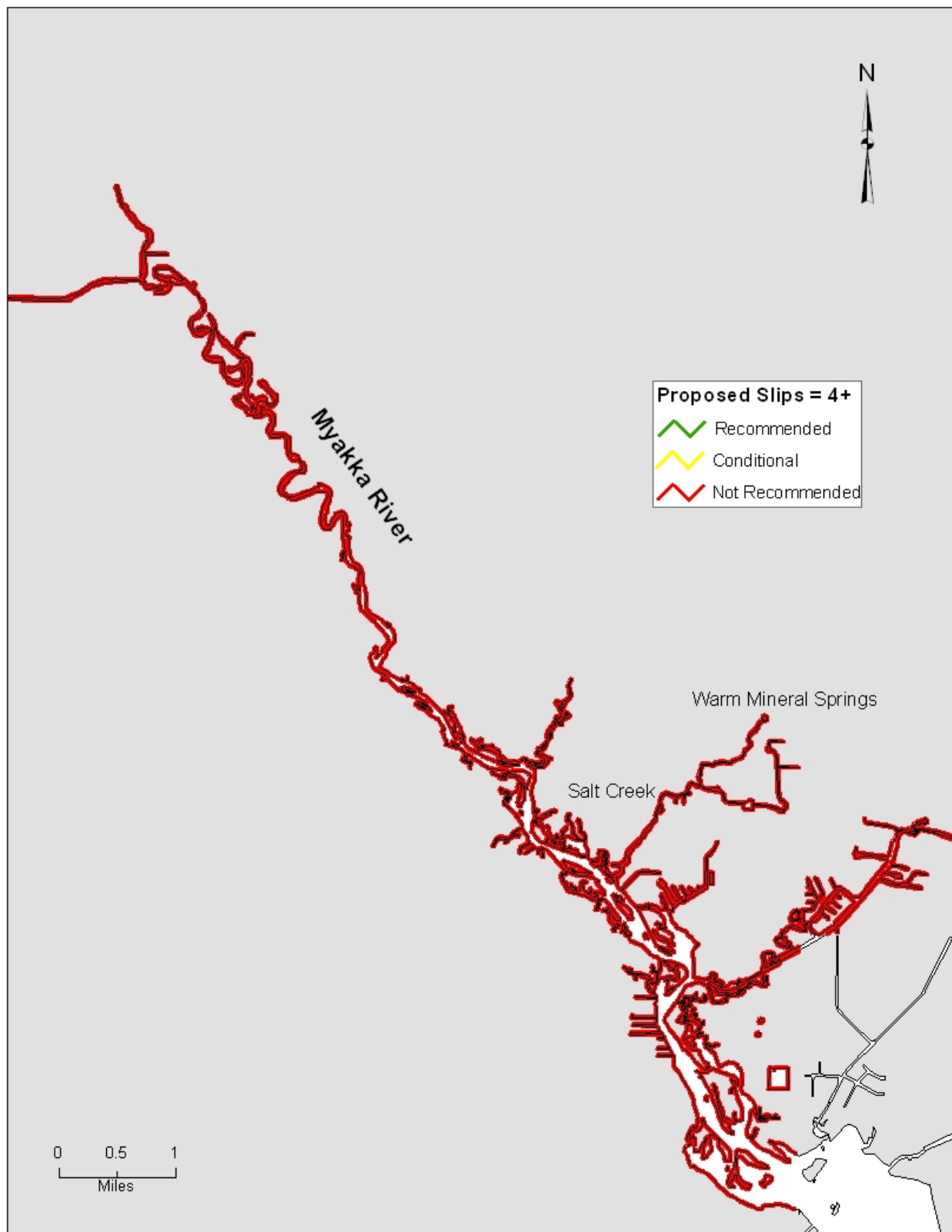


Figure 67. Facility siting outcomes for the Myakka River; >4 proposed slips.



MANATEE EDUCATIONAL EFFORTS

MANATEE EDUCATION AND AWARENESS

The following organizations have been identified as sources of available manatee education and awareness information within Sarasota County:

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). 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 ISM and the FWRI in St. Petersburg, receives funding primarily from the STMTF.

Examples of manatee protection awareness and educational activities offered by the ISM include: the development of educational signs and associated boater education, permit review and standard marina construction conditions, production and distribution of manatee and manatee habitat-related brochures, posters, electronic media, pamphlets, teachers' guides, public service announcements, and marketing displays for public education purposes. Manatee decals are created each year to highlight specific manatee messages, which are distributed through Sarasota County tax collection offices. ISM is also responsible for coordinating with county and federal governments in the production of MPPs.

Among other activities, FWRI 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 scientific data. Information on manatee mortality, recent publications, ongoing research topics and more can be found at the FWRI website: <http://www.research.myfwc.com>.

Various government and private organizations assist with manatee-awareness or information projects. Funding for county-wide boaters' guides and corresponding educational boat ramp kiosks is sometimes available with assistance from the FWC Division of Law Enforcement Boating and Waterways Section. ISM staff consult with the Department of Education to develop and distribute instructional materials for use in environmental education programs and to review materials generated for the general curriculum of public school districts, community colleges, and universities. FWC maintains a web page with various partners (<http://fishingrecycling.org>) that provides information to institute monofilament recycling programs in Florida counties (Note: Sarasota County now has over 50 designated recycling sites). Additional funding of FWC manatee-related publications is often provided through various support groups around the state, including the SWFWMD and the WCIND.

Manatee-related materials are readily available on the ISM website (<http://www.myfwc.com>). Topics include 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, student activity booklets, pamphlets, and guides produced by FWC and other agencies from this website.

Florida Department of Environmental Protection (DEP)

The DEP, whose mission is “more protection, less process,” 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 and materials provided by DEP focus on issues affecting manatees and the habitats within which they live, such as seagrass protection, coastal aquatic habitat preservation, marine debris, and pollution prevention, rather than information on the mammal itself. DEP’s Office of Environmental Education sponsors specialized educational programs for students and citizens, and produces and distributes brochures and publications on a number of environmental protection issues, including those that directly relate to manatee protection. A list of these services and brochures can be found on DEP’s website, <http://www.dep.state.fl.us>

Save the Manatee Club (SMC)

The SMC is a national non-profit organization dedicated to the conservation and protection of the Florida manatee. Funds from the club’s Adopt-A-Manatee program are used for public awareness and education projects, manatee research, rescue and rehabilitation efforts. SMC produces and distributes, in conjunction with various government and state agencies, brochures highlighting threats to manatees and protection tips for boaters, swimmers, and divers. SMC also 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. For educators, SMC provides free education packets and staff interviews for students, and distributes *Manatees: An Educators Guide (6th Edition)*, a publication which includes information on the natural history and habitat of manatees in Florida, threats to survival, and research and conservation issues. The guide also includes a section on classroom resources and activities. Additional educational materials including a coloring and activity book, fact sheets, and educational videos. SMC also maintains an internet web site, <http://www.savethemanatee.org>, where the public can read manatee related information and request copies of brochures, stickers and other educational materials provided by SMC. They also offer an educator discount for their Adopt-A-Manatee Program®.

West Coast Inland Navigation District (WCIND)

The WCIND is a multi-county special taxing district, comprised of Manatee, Sarasota, Charlotte, and Lee counties. WCIND programs include maintaining and enhancing public navigation channels and inlets, boating access facilities, waterfront parks, and piers. WCIND also provides leadership in waterway resource-based stewardship by encouraging boating safety and environmental education through the distribution of boaters’ guides and waterway maps. District programs enhance the regional economic base while preserving the environment and the quality of life in Southwest Florida.

Sustaining the environment for future generations is an important component of the WCIND mandate and management program. WCIND recognizes that programs to foster stewardship are a more effective way to reduce boating impacts than additional rules and regulations. As such, WCIND programs stress the ecological aspects of the waterways and promote efforts to encourage safe boating, environmental understanding and stewardship, and voluntary compliance of existing regulations through education.

WCIND has also sponsored the development and distribution of products that promote boating safety and navigation, identify sensitive marine habitat, and further our understanding of waterway history and the safeguards needed to maintain a healthy environment and growing coastal communities.

A complete list of free publications, including boaters' guides for Manatee, Sarasota, Charlotte, and Lee Counties, is provided on their website: <http://www.wcind.net>

Sarasota Bay Estuary Program (SBEP)

Along with its accomplishments regarding habitat restoration, water quality improvements and overall resource enhancement, the SBEP is also involved in significant public education and awareness in Sarasota County. SBEP 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, SWFWMD, Southwest Florida Regional Planning Council, Tampa Bay Regional Planning Council, Tampa Bay Estuary Program, USFWS, DEP, the Gulf of Mexico Program, and MML. Through these partnerships, the SBEP assists in the dissemination of information regarding marine and estuarine resources protection and habitat restoration.

In February 2003, SBEP launched the PIER (Protection, Involvement, Education, and Restoration) Program, an innovative education program aimed at educating and inspiring area students. The PIER Program is offered to public and private schools and homeschoolers in Sarasota and Manatee counties. A teaching curriculum for students K-8, *Sarasota Bay Coastal Habitats*, provides lesson plans and activities about watersheds, habitats, wildlife, native and non-native plants, stormwater runoff and pollution. Each topic contains background information, resources, lesson plans and activities. Lessons correlate with the Sunshine State Standards and National Science Standards.

Free educational publications and a list of more than 50 different education initiatives and resources are available through the SBEP website: <http://www.sarasotabay.org>.

Charlotte Harbor National Estuary Program

Within Sarasota County, the Charlotte Harbor National Estuary Program study area includes the Venice area, Lemon Bay and Myakka River. Created under Section 320 of the Clean Water Act in 1995, Charlotte Harbor National Estuary Program improves water quality, hydrology, habitat and stewardship through research, restoration, policy development and public outreach.

Pursuant to its Comprehensive Conservation and Management Plan (CCMP), Charlotte Harbor National Estuary Program and its partners:

- Develop methods to enhance seagrass recovery from prop scarring
- Ensure navigation programs protect Charlotte Harbor National Estuary Program study area habitat resources
- Enhance fish and wildlife habitat along shorelines
- Provide additional support for environmental compliance and enforcement on land and water
- Provide multifaceted environmentally responsible boater education programs, and

- Incorporate estuary and watershed protection in educational curricula

More can information is available at <http://www.chnep.org>.

Mote Marine Laboratory (MML)

Located in Sarasota, MML is an independent, nonprofit research organization dedicated to excellence in marine science and education. The Goldstein Marine Mammal Center at MML has a permanent manatee exhibit 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 also has many educational programs centralized around the manatee exhibit and its animals. There were approximately 300,000 visitors to MML's Goldstein Marine Mammal Center in 2008.

The Education Division at MML works closely with schools and public audiences throughout Florida and beyond to educate both students and teachers on marine science through field trips, outreach programs, and summer programs. MML's Sea Trek Distance Learning Program offers 4th through 8th grade students an opportunity to learn about manatees from MML staff through live video conferences. MML's Center for School and Public Programs also holds school field trip programs on-site at the main campus in Sarasota, occasional programming at MML Aquaculture Park, and a field station at Summerland Key. Other programs are directed at the general public and include MML's annual Special Lecture Series and summer programs for students ages 2-adult that combine hands-on classroom sessions with laboratory and field activities. MML's Center for School and Public Programs reaches 10,000 students through informational educational programs each year. MML's Center for Volunteer and College Intern Resources offers a college internship program to qualified students. More than 120 interns come to MML each year from colleges and universities around the world.

The Manatee Research Program accepts students from MML's college internship program and provides the opportunity to work full time with MML staff and participate in every aspect of manatee research. Manatee Research and Education staff answers questions from the public about manatees and distribute informative brochures produced by the State of Florida, Florida Power and Light Corporation, and the SMC. Additional information on MML's Marine Mammal and education programs is provided at MML's website, <http://www.mote.org>.

Sarasota County

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 Natural Resources and local law enforcement agencies. Along with the distribution of materials produced in whole or in part by the County, Sarasota County Natural Resources also assists in the distribution of materials from other organizations (listed above). The County also maintains a website

(<http://www.scgov.net>, “Natural Resources” link) that disseminates information related to environmental and conservation-related issues in Sarasota County. A web page specifically focused on the MPP is available on the County’s website, <http://www.scgov.net>, keyword “manatee”.

Sarasota County currently distributes the comprehensive *Boating and Angling Guide to Sarasota County*. Along with serving as a supplemental aid to navigation, this guide includes 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 is incorporated into this guide. These guides are available at the County Administration Building, Natural Resources offices, Parks and Recreation locations and on the County web site, <http://www.scgov.net/EnvironmentalServices/Coastal/BoatingGuide.asp>. The guide is also available for distribution at marinas and boat facilities, public education facilities (such as MML), bait and tackle shops, and boat rental facilities.

EDUCATION / AWARENESS RECOMMENDATIONS

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 Natural Resources, perhaps in partnership with MML, 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 SMC 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 July 4th 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 including the annual Suncoast Boat Show on City Island, the Sarasota County Fair, and a variety of arts and crafts shows, seafood festivals, and concerts in the Sarasota area.

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 provides an aesthetic benefit, in addition to improving environmental health.

In 2004, Sarasota County implemented a monofilament line recycling program. The Monofilament Recovery & Recycling Program (MRRP) is a statewide effort to educate the public on the problems caused by monofilament line left in the environment, to encourage recycling through a network of line recycling bins and drop-off locations, and to conduct volunteer monofilament line cleanup events. As of May 2011, there were over 50 recycling bins located throughout the County and 3 collection sites. Recycling bins are maintained and emptied by a network of volunteers and new or replacement bins are available free of cost from Sarasota County Natural Resources.

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 (FWC) and the federal level (United States Coast Guard and the USFWS). 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 Sheriff's 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: 30-40%

Venice Police Department

- Number of on-water officers: 2
- Number of vessels: 2
- Patrol area: Venice area, from Manasota Bridge to Albee Road Bridge
- Average number of on-water man-hours per week: 40
- Estimated proportion of time patrolling manatee zones: 60-80%

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: varies
- Estimated proportion of time patrolling manatee zones: 100%

The USFWS 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.

LAW ENFORCEMENT RECOMMENDATIONS

Enforcement 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, overburdened by the amount of area they 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 opportunity for enhancing manatee protection and boater compliance, 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 may 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 Seagrass Flats area behind St. Armands 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 USFWS. 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 updated 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 FWC. 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 MPP should be favored over others that have not completed their MPP.

MANATEE PROTECTION PLAN IMPLEMENTATION & MONITORING

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 of 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

The 2010 State Of The Bay Report published by the SBEP listed the following accomplishments:

- Significant water quality improvements in the Bay and tributaries due to an estimated 64-percent reduction in nitrogen pollution since 1988
- Seagrass coverage has increased by 24 percent above 1950
- Scallops returned to the Bay in 2008
- Restoration and enhancement of approximately 650 acres of wetland habitat with creation of 28 new ecological parks around the Bay
- Manufacture and deployment of 3,000 artificial reef modules on nine new reefs
- Establishment of the first oyster re-colonization projects
- Creation of the Gulf Coast Heritage Trail to promote managed public access to points of environmental, cultural, and historic interests around the Bay
- Establishment of the SBEP as a special district within the State of Florida
- Implementation of a comprehensive public education program
- Since 2001, 34,000 local schoolchildren have received outdoor education about Sarasota Bay
- All Sarasota Bay waters now meet state water quality standards for nutrient pollution

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

Wastewater

A master plan for wastewater reclamation, developed by the SWFWMD and the SBEP, has resulted in the reclamation of 50 percent of the wastewater currently generated in the Sarasota Bay area. Further reclamation efforts are planned. A cooperative effort among SBEP and several local government agencies has also resulted in an 85 percent reduction in nitrogen loading to Sarasota Bay. The consolidation of numerous smaller wastewater treatment facilities and the removal of older septic systems are also currently underway. Sarasota County has made significant progress in implementing a central sewer system, and the number of wastewater plants has been reduced from 116 to 38 (Sarasota County Comprehensive Plan, 2006 and D. Pouso, personal communication, 2011). Ultimately, Sarasota County plans to implement a regional system consisting of five County-owned facilities. The primary means of effluent disposal will be irrigation. As of 2004, restoration programs designed to address wastewater issues were currently underway in Phillippi Creek, Whitaker Bayou, and Bowlees Creek (Manatee County). All land parcels in the Phillippi Creek area are expected to have central sewers available by 2012. Additional management plans are also being considered for Catfish Creek, Clower Creek, North Creek, and South Creek.

Stormwater

With increased development and subsequent compaction and hardening of surfaces, stormwater discharge into Sarasota County waters has increased. Elevated levels of toxic substances have been found in numerous tidal creeks and bayous flowing into Sarasota Bay. Concentrations of 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. With recent improvements in wastewater management, 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 61 percent of the total nitrogen input. This has resulted 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. A Stormwater Environmental Utility (SEU) was created in Sarasota County in 1989, and is responsible for the planning, development, and maintenance of stormwater and surface water management facilities. Stormwater discharge is currently regulated by federal, state, and local government legislation including the Federal Clean Water Act, the Federal Water Pollution Control Act, Florida Statutes Chapter 403, Florida Administrative Code 62-25 and Sarasota County Ordinance 81-12. A Basin Master Plan, which includes the development of runoff hydrographs and surface water profiles, and recommendations for improvement, has also been initiated for all major tributaries in Sarasota County. Additional information may be found in the Sarasota County Comprehensive Plan (2006).

Habitat Restoration

Seagrass habitat in Sarasota County has declined historically primarily due to past dredge and fill operations and subsequent reductions in water quality, though there has been evidence of significant recovery in the past two decades. Since historic lows in 1988, a total of 4,058 acres of new and/or improved seagrass beds in Sarasota Bay (including the Manatee County portion) have been reported (SBEP, 2006). Data collected by the SWFWMD indicated that seagrass acreage has increased by an additional

2,786 acres since 2006; a 28 percent increase. This increase follows a seven percent increase observed between 2004 and 2006. Lemon Bay also saw a five percent increase in seagrass acreage (149 acres) since 2006. Aerial photographs in combination with ground verification reveal the Sarasota Bay ecosystem now supports an estimated 9,855 acres of seagrass beds. This represents a significant gain of 5,587 acres of new or improved seagrass beds since 1988. While the regeneration of seagrasses in Sarasota Bay indicates that water quality is improving, the ongoing drought in central Florida may also have contributed to seagrass recovery by reducing stormwater runoff and improving water clarity.

Similarly, the SBEP has estimated that wetlands habitat in Sarasota Bay decreased by approximately 38 percent between 1950 and 1990. The loss of wetland habitat is also related to past dredge and fill activities which were conducted in the 1950's and 1960's. Recent shoreline mapping indicated that more than 100 miles of hardened shoreline now exists in the Sarasota Bay watershed (Sarasota Bay NEP, 2006). In response, SBEP and its partners have completed 22 wetland restoration and enhancement projects totaling more than 160 acres. Many of these restoration projects utilize the Living Shorelines approach, which uses bank stabilization and habitat restoration techniques to reinforce the shoreline, minimize coastal erosion, and maintain coastal processes while protecting, restoring, enhancing, and creating natural habitat for Sarasota Bay resources. Finally, SBEP is involved with several monitoring programs which measure the success of completed restoration / enhancement projects. Findings may lead to modifications in future restoration strategies in order to enhance the quality of restored and/or newly created habitat. A list of recent restoration projects in Sarasota County is provided in **Table 18**. Additional information on recent restoration projects in Sarasota County can be found at <http://www.sarasotabay.org>.

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 SBEP Bay Partners Grants Program promotes environmental education and awareness targeted toward the improvement of Sarasota Bay and its estuaries. To this end, SBEP partners with the Florida Exotic Pest Plant Council in providing grants to assist in the management of invasive exotic plants.

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 and was identified as a potential entrapment hazard. Since 2004, this culvert has been outfitted with a valve that eliminates the potential for manatee entrapment. No other open culverts or areas of potential entrapment (other than tidal entrapment) are known to exist in Sarasota County.

LAND ACQUISITION

In 1999, voters approved a referendum to authorize funding to purchase environmentally sensitive lands in Sarasota County from willing sellers. A second referendum was approved by voters in 2005 to broaden the program to acquire neighborhood parklands and extend collection of up to 0.25 mil ad valorem tax through 2029. Sarasota County has contracted with the Conservation Foundation of the Gulf Coast to serve as an acquisition agent for the County's ESLPP.

The ten-member Environmentally Sensitive Lands Oversight Committee (ESLOC) is comprised of community representatives who oversee the purchase of these lands and ensure the most effective use of resources. In 2002, the BCC approved the addition of land adjacent to the creek that flows from Warm Mineral Springs for potential program protection. The Warm Mineral Springs Creek ESLPP site contains parcels under 32 separate ownerships. Sarasota County will continue to pursue protecting creek-front properties, as well as the possibility of trading other less sensitive County-owned property for site parcels. Along with Warm Mineral Springs Creek, ESLOC has identified a total of 32 environmentally sensitive sites for possible land protection, including several sites along the Myakka River and inland bay waters. These sites, along with the location of the Warm Mineral Springs Creek site, are provided in **Figure 2A and 2B**. To date, 14 parcels with a land value of \$436,850 have been acquired within the Warm Mineral Springs Creek site. These acquisitions protect 3.73 acres along the Creek. In December 2010, Sarasota County and the City of North Port jointly acquired the 81-acre Warm Mineral Springs historic resort that includes the springhead. The Spring itself will continue to be operated as a recreational facility. Due to alterations of the Creek, including the Ortiz Boulevard culvert and overall shallow water depths, there is no access for manatees to reach the Spring.

RECOMMENDATIONS FOR FURTHER STUDIES

In addition to studies related to previously discussed habitat protection strategies, 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 SCW. These 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 the County in order to evaluate long-term population trends. Aerial surveys have provided the foundation for the characterization of the manatee population in Sarasota County and have provided the basis for the management strategies outlined in this report. The continuation of this work is essential in order to effectively evaluate the status of the County's manatee population and develop future management plans based on the most current, accurate scientific data.

Recreational Boat Traffic Studies in Sarasota County

Comprehensive boat traffic studies of Sarasota County were conducted in 2005, and provided valuable information on recreational boating patterns throughout the County. These studies included both observational and mail-respondent surveys which were useful in characterizing recreational boating use in

Sarasota County – a critical component in the development of a manatee protection plan. Greater than 2,700 additional vessels have been registered in Sarasota County since data was compiled for the original MPP. Increases in the numbers of seasonal and year-round residents, along with changes in levels of service of existing boat facilities, may have resulted in changes in recreational boating patterns from which waterways management plans are dependent. It is recommended that studies of recreational boating activity in Sarasota County be repeated every 5-6 years in order to provide current data on use patterns from which effective management decisions can be made.

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 BFSP. Sources of funding for these studies may include the FWC, Sarasota County, the WCIND, and the Florida Boating Improvement Program (FBIP).

DEVELOPMENT OF OBJECTIVES AND POLICIES

This section describes the objectives, policies, and action items associated with the implementation of the MPP. Also included are the anticipated timeframes associated with each action item. Components of MPP implementation are included in the Sarasota County Comprehensive Plan, Code of Ordinances, and in various County operational programs as described below.

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 BFSP in permit review.

Action Items

- Comprehensive Plan ENV Policy 1.3.5
- Continue to implement the MPPIC

Anticipated Schedule

- Active and ongoing.

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

Policy: Permit applications relating to construction of waterway facilities and their accessory structures shall be evaluated according to currently codified rules, with the provisions of the BFSP 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 BFSP as defined in the MPPIC.

Anticipated Schedule:

- Active and ongoing.

Objective: Sarasota County shall keep the MPP 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 revision's adoption date of the last authorized signatory.

Objective: Sarasota County shall continue efforts to enhance recovery of the Florida Manatee by programs that support objectives stated in the USFWS MRP.

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. Armands circle to Lido Key, which connects a canal to Pansy Bayou, shall be replaced as part of a drainage project underway in City of Sarasota. An appropriate exclusion device shall be installed on the new culvert.
- Continue to coordinate with municipalities to identify potential manatee entrapment locations.

Anticipated Schedule:

- The Pansy Bayou culvert has been outfitted with an exclusion valve preventing manatee entrapment, continued identification of potential manatee entrapment locations is active and ongoing.

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 efforts 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 affect their usage.

Anticipated Schedule:

- Sarasota County's Comprehensive Plan prohibits dredge and fill other than for maintenance purposes.

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

Action Items:

- Through the 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 seek respite in this highly utilized refuge area.
- The County shall work to secure grant funds to assist with protection and / or restoration of creek, river, and bay frontage to buffer and enhance manatee habitat.

Anticipated Schedule:

- Land acquisition efforts are ongoing. To date, 14 parcels with a land value of \$436,850 have been acquired within the Warm Mineral Springs Creek site. These acquisitions protect 3.73 acres along the Creek.
- Completed in 2010:
- Partnered with the USFWS and FWC to complete restoration of designated riparian areas along Warm Mineral Springs Creek to improve habitat in a critical winter refuge area for the endangered Florida Manatee.
- Worked with FWC to remove an illegally constructed weir impeding the natural flow of water in Warm Mineral Springs Creek.

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

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.
- 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 STMTF should be made available to the County for implementing the education provisions of the MPP.

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.
- 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 STMTF should be made available to the County for implementing the enforcement provisions of the MPP.

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.

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 Natural Resources will adopt an official internal policy. This policy will require that consultation be made with the FWC, the DEP, the USACE, and the USFWS, for all proposed projects specified in the BFSP.

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 all regulatory 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 Natural Resources staff when reviewing those projects specified in the BFSP.

IMPLEMENTATION SCHEDULE

1. Municipal Administrator Meetings – Late 2010
2. Draft plan to County and Municipal Boards – June 2011
3. Public comment period begins – June 2011
4. Public Meetings on Adoption of MPP including targeted outreach to affected stakeholders – throughout the public comment period
5. FWC comments on MPP due to be received – July 2011
6. Close public comment period – July 27, 2011
7. BCC acceptance of MPP deliverable and public hearing to consider adoption of MPP – July 27, 2011

MECHANISM FOR PERIODIC REVIEW AND REVISION

The Sarasota County MPP will be reviewed every five years after adoption by both the BCC and the FWC. The clock for revision will start once the last authorized signature is in place.

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

- State delisting of the West Indian Manatee –
- Significant change in legal requirements –
- Uncharacteristic manatee mortality as defined by ISM –
- Change in Waterway character (ex/ Midnight Pass opened) –
- Special review may be initiated by the BCC

Effective Date

upon promulgation and implementation

upon promulgation and implementation*

immediate review

immediate review

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) FWRI 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:

- 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 MPP

Table 18. List of recent restoration projects in Sarasota Bay, 2000 – 2011. Source: Sarasota Bay Estuary Program.

Project Title	Project Description
Caples Seawall Removal and Shoreline Naturalization	Removal of 325-foot-long crumbling seawall and stabilizing shoreline with native vegetation
Crosley Estate Restoration	Habitat restoration involving the elimination of non-native plant species, thus contributing to the recovery of natural wetlands
Fairway Bay	Demonstration project using native plants and bioswales to address runoff, erosion and habitat degradation issues along shoreline
Gulf Coast Wonder and Imagination Zone	Shoreline restoration; tidal lagoon restoration
Hog Creek	Restoration of the creek bank and bottom by removing non-native plants, grading and revegetating the banks with native plants
North Lido Habitat Restoration Project	Seventy acre public park on the north Lido Key. Removal of exotic vegetation; creation of 3.75 acres of tidal wetland
Quick Point Nature Preserve	This project restored 34 acres of an environmentally sensitive site on the southeastern tip of Longboat Key
Rattlesnake Key	Exotic vegetation removal (primarily Australian pine and Brazilian pepper) from a spoil island directly north of the Venice inlet.
Sarasota Bay Walk at City Island	Creation of 4.5 acres of natural intertidal shoreline, including 25,000 plants and a nature trail with interpretive signs
Selby Shoreline Restoration Project	This project naturalized the shoreline along the bayfront at Selby Botanical Gardens
Sixth Street Canal and Sarasota Civic Center Restoration	This project restored and increased shoreline habitat in a downtown Sarasota canal area
South Lido Park Habitat Restoration (W607)	Spoil removal, removal of exotic vegetation, lagoonal re-contouring, and the enhancement of an existing trail system
Southgate Community Association Invasive Removal and Native Planting	Removal of invasive species along Phillippi Creek shoreline. Planting native plants. Hold public seminars and lectures about project
Spoil Islands Restoration Project: Bird Colony Islands	Shoreline stabilization by construction of breakwater in front of bird nesting mangrove islands

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APPENDIX A

Individual manatees sighted in Sarasota County through photo-identification.

Appendix A. Individual manatees sighted in Sarasota County through photo identification.

ID	Years	# Sightings	Range From	Range To	Other Observations
CH018	1994-2004	57	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH019	1996-2004	13	LEMON BAY / FORKED CREEK	BOCA CIEGA BAY	ROBERTS BAY
CH020	1994-2000	5	WARM MINERAL SPRINGS / SALT CREEK	TECO BIG BEND POWER PLANT	
CH022	1994-2008	61	WARM MINERAL SPRINGS / SALT CREEK	PEACE RIVER	
CH023	1996-2002	5	WARM MINERAL SPRINGS / SALT CREEK	MYAKKA RIVER	LOWRY PARK ZOO
CH025	1995-2002	29	SARASOTA BAY / PANSY BAYOU	WARM MINERAL SPRINGS / SALT CREEK	CHARLOTTE HARBOR / TURTLE BAY
CH026	1993-2002	23	WARM MINERAL SPRINGS / SALT CREEK	SARASOTA BAY / PANSY BAYOU	
CH027	1994-2008	83	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH028	1994-2000	5	WARM MINERAL SPRINGS / SALT CREEK	MYAKKA RIVER	
CH029	1995-1995	1	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH030	1990-2004	19	WARM MINERAL SPRINGS / SALT CREEK	CALOOSAHATCHEE RIVER	PEACE RIVER
CH031	1995-2006	36	WARM MINERAL SPRINGS / SALT CREEK	FPL FT MYERS POWER PLANT	
CH032	1993-2005	86	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH034	1996-2009	48	WARM MINERAL SPRINGS / SALT CREEK	TECO BIG BEND POWER PLANT	BARTOW POWER PLANT
CH035	1995-2003	20	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH044	1996-2004	30	WARM MINERAL SPRINGS / SALT CREEK	MATLACHA ISLES	
CH054	1997-2006	8	SARASOTA BAY / PANSY BAYOU	TAMPA BAY / COFFEPOT BAYOU	CHARLOTTE HARBOR / TURTLE BAY
CH065	1997-2002	18	SARASOTA BAY / PANSY BAYOU	FPL FT MYERS POWER PLANT	BURNT STORE MARINA
CH069	1998-2002	13	SARASOTA BAY / PANSY BAYOU	MATLACHA ISLES	LEMON BAY
CH082	1998-2004	17	SARASOTA BAY / BUTTONWOOD HARBOR	FPL FT MYERS POWER PLANT	MATLACHA ISLES

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
CH091	1989-2004	31	SARASOTA BAY / CITY ISLAND GRASSFLATS	FPL FT MYERS POWER PLANT	MATLACHA ISLES
CH093	1995-2004	31	SARASOTA BAY / CITY ISLAND GRASSFLATS	MATLACHA ISLES	BOCA CIEGA BAY
CH098	1996-2008	21	LEMON BAY	FPL FT MYERS POWER PLANT	TECO BIG BEND POWER PLANT
CH100	1997-2000	4	LEMON BAY / FORKED CREEK	CALOOSAHATCHEE RIVER	
CH101	1997-2004	39	SARASOTA BAY / LONGBOAT KEY	MATLACHA ISLES	BURNT STORE MARINA
CH102	1999-2002	3	LEMON BAY / FORKED CREEK	ESTERO BAY / TEN MILE CANAL	
CH108	1999-2009	93	TECO BIG BEND POWER PLANT	ROBERTS BAY	MATLACHA ISLES
CH111	1999-2008	42	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	MATLACHA ISLES
CH114	1999-2005	25	SARASOTA BAY / PANSY BAYOU	FPL FT MYERS POWER PLANT	
CH126	1997-2002	27	WARM MINERAL SPRINGS / SALT CREEK	PEACE RIVER	LOWRY PARK ZOO
CH129	2000-2003	32	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	BOCA CIEGA BAY
CH130	1998-2007	38	MYAKKA RIVER	WARM MINERAL SPRINGS / SALT CREEK	
CH131	1996-2006	52	WARM MINERAL SPRINGS / SALT CREEK	TECO BIG BEND POWER PLANT	
CH132	2000-2008	65	WARM MINERAL SPRINGS / SALT CREEK	CHARLOTTE HARBOR	
CH134	2001-2002	8	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH135	2000-2008	71	WARM MINERAL SPRINGS / SALT CREEK	TECO BIG BEND POWER PLANT	
CH136	1998-2005	46	WARM MINERAL SPRINGS / SALT CREEK	LEE COUNTY MANATEE PARK	
CH138	2002-2008	7	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH139	2002-2003	10	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH140	2002-2006	49	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
CH141	2000-2008	74	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH142	1996-2008	49	LEMON BAY	CHARLOTTE HARBOR / TURTLE BAY	WARM MINERAL SPRINGS
CH143	2001-2008	9	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH144	2000-2003	10	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH145	2000-2006	10	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH146	2002-2003	21	WARM MINERAL SPRINGS / SALT CREEK	MYAKKA RIVER	
CH147	2002-2004	29	WARM MINERAL SPRINGS / SALT CREEK	MYAKKA RIVER	
CH148	2002-2003	3	WARM MINERAL SPRINGS / SALT CREEK	LEE COUNTY MANATEE PARK	
CH149	2000-2008	16	WARM MINERAL SPRINGS / SALT CREEK	WARM MINERAL SPRINGS / SALT CREEK	
CH155	2002-2009	51	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	CALOOSAHATCHEE RIVER
CH156	1996-2002	12	ROBERTS BAY	LEE COUNTY MANATEE PARK	TECO BIG BEND POWER PLANT
CH158	2003-2003	3	LEMON BAY	LEMON BAY	LOWRY PARK ZOO
CH160	1997-2004	24	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	MATLACHA ISLES
FM021	1983-2008	39	SARASOTA BAY / SIESTA KEY	FPL FT MYERS POWER PLANT	OLD TAMPA BAY
FM100	1984-2007	74	LEMON BAY	HILLSBOROUGH RIVER	CALOOSAHATCHEE RIVER
FM212	1984-2002	16	SARASOTA BAY / BUTTONWOOD HARBOR	FPL FT MYERS POWER PLANT	MATLACHA ISLES
FM216	1989-2002	21	SARASOTA BAY / PANSY BAYOU	CAPTIVA ISLAND	
FM230	1990-2003	95	WARM MINERAL SPRINGS / SALT CREEK	PEACE RIVER	HOMOSASSA SPRINGS STATE PARK
FM240	1996-1997	4	LEMON BAY	GASPARILLA SOUND	LOWRY PARK ZOO
FM241	1996-2007	33	SARASOTA BAY / SIESTA KEY	FPL FT MYERS POWER PLANT	MATLACHA ISLES

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
FM243	1995-2002	38	SARASOTA BAY / BUTTONWOOD HARBOR	TECO BIG BEND POWER PLANT	CALOOSAHATCHEE RIVER
FM266	1991-2006	79	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	MATLACHA ISLES
FM277	1996-2009	86	LITTLE SARASOTA BAY / PHILLIPPI CREEK	LEE COUNTY MANATEE PARK	TECO BIG BEND POWER PLANT
FM297	1998-2008	24	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	MATLACHA ISLES
FM311	1991-2003	49	LEMON BAY / GOTTFRIED CREEK	LEE COUNTY MANATEE PARK	
FM337	2002-2003	14	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	
FM340	2001-2005	14	SARASOTA BAY / CITY ISLAND GRASSFLATS	FPL FT MYERS POWER PLANT	
FM342	2001-2004	10	LEMON BAY / INDIAN MOUND PARK	LEE COUNTY MANATEE PARK	
FM344	2003-2005	4	BLACKBURN BAY	ESTERO BAY	LOWRY PARK ZOO
FM355	2002-2007	12	LEMON BAY	LEE COUNTY MANATEE PARK	
SB001	1993-1995	35	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / HYATT BOAT BASIN	
SB003	1994-2008	11	SARASOTA BAY / CITY ISLAND GRASSFLATS	ANCLOTE RIVER	FPL BARTOW POWER PLANT
SB004	1994-2003	33	SARASOTA BAY / PANSY BAYOU	LEMON BAY	SARASOTA BAY / LONGBOAT KEY
SB005	1996-2003	29	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	OLD TAMPA BAY
SB006	1993-1993	3	SARASOTA BAY / BUTTONWOOD HARBOR	SARASOTA BAY / BUTTONWOOD HARBOR	
SB007	1990-2007	63	SARASOTA BAY / BUTTONWOOD HARBOR	MATLACHA ISLES	PALMA SOLA BAY
SB008	1993-2008	36	SARASOTA BAY / BUTTONWOOD HARBOR	BOCA CIEGA BAY / JOHNS PASS	FPL BARTOW POWER PLANT
SB009	1989-2004	91	SARASOTA BAY / PANSY BAYOU	TAMPA BAY / PASSAGE KEY	LEMON BAY
SB010	1990-2004	55	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	SARASOTA BAY / BUTTONWOOD HARBOR
SB011	1993-2004	79	SARASOTA BAY / PANSY BAYOU	FPL FT MYERS POWER PLANT	MATLACHA ISLES

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
SB013	1993-2001	101	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / SIESTA KEY	
SB015	1994-1996	19	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / CITY ISLAND GRASSFLATS	
SB016	1993-2008	124	SARASOTA BAY / CITY ISLAND GRASSFLATS	WARM MINERAL SPRINGS / SALT CREEK	CHARLOTTE HARBOR / TURTLE BAY
SB017	1994-1995	9	SARASOTA BAY / CITY ISLAND GRASSFLATS	GULF OF MEXICO / MANASOTA KEY	
SB018	1994-1999	13	ROBERTS BAY	TECO BIG BEND POWER PLANT	LITTLE MANATEE RIVER
SB019	1993-2008	69	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	FPL FT MYERS POWER PLANT
SB020	1993-1996	3	SARASOTA BAY / PANSY BAYOU	BLACKBURN BAY	
SB021	1994-1996	19	SARASOTA BAY / PANSY BAYOU	PLACIDA HARBOR	
SB022	1990-2002	85	SARASOTA BAY / PANSY BAYOU	CALOOSAHATCHEE RIVER	MATLACHA ISLES
SB023	1993-2007	38	SARASOTA BAY / PANSY BAYOU	MANATEE RIVER	ROBERTS BAY
SB024	1994-2002	44	SARASOTA BAY / BUTTONWOOD HARBOR	PALMA SOLA BAY	MATLACHA ISLES
SB026	1993-2005	45	SARASOTA BAY / PANSY BAYOU	PALMA SOLA BAY	ESTERO BAY
SB027	1993-2004	69	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	SARASOTA BAY / HUDSON BAYOU
SB028	1993-1994	2	SARASOTA BAY / PANSY BAYOU	MYAKKA RIVER	
SB029	1994-1997	28	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / CITY ISLAND GRASSFLATS	
SB030	1993-2000	10	SARASOTA BAY / BUTTONWOOD HARBOR	SARASOTA BAY / PANSY BAYOU	
SB031	1994-2003	7	SARASOTA BAY / CITY ISLAND GRASSFLATS	ORANGE RIVER	MATLACHA ISLES
SB032	1990-2008	61	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	MATLACHA ISLES
SB033	1993-2005	32	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	PLACIDA HARBOR
SB034	1995-1996	6	SARASOTA BAY / PANSY BAYOU	PLACIDA HARBOR	GULF OF MEXICO / MANASOTA KEY

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
SB035	1994-1995	5	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / OTTER KEY	
SB036	1983-2003	42	SARASOTA BAY / CITY ISLAND GRASSFLATS	FPL FT MYERS POWER PLANT	BOCA CIEGA BAY / JOHNS PASS
SB037	1993-1999	62	SARASOTA BAY / PANSY BAYOU	MATLACHA ISLES	ROBERTS BAY
SB038	1993-2007	104	SARASOTA BAY / PANSY BAYOU	FPL FT MYERS POWER PLANT	PALMA SOLA BAY
SB039	1992-2003	106	SARASOTA BAY / PANSY BAYOU	MARCO ISLAND	TAMPA BAY / HARBORAGE MARINA
SB041	1993-2006	178	SARASOTA BAY / PANSY BAYOU	WARM MINERAL SPRINGS / SALT CREEK	
SB042	1993-2007	53	SARASOTA BAY / PANSY BAYOU	MATLACHA ISLES	PALMA SOLA BAY
SB043	1991-2008	64	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	ROBERTS BAY
SB044	1993-2000	7	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / CITY ISLAND GRASSFLATS	
SB045	1994-2005	71	SARASOTA BAY / PANSY BAYOU	PORT OF THE ISLANDS	GASPARILLA SOUND
SB046	1993-2007	149	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	SARASOTA BAY / HYATT BOAT BASIN
SB047	1994-2008	105	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	BLACKBURN BAY
SB048	1994-2000	51	SARASOTA BAY / PANSY BAYOU	BLACKBURN BAY	SARASOTA BAY / OTTER KEY
SB049	1994-2000	25	SARASOTA BAY / CITY ISLAND GRASSFLATS	MATLACHA ISLES	BURNT STORE MARINA
SB050	1994-2004	53	SARASOTA BAY / BUTTONWOOD HARBOR	FPL FT MYERS POWER PLANT	MATLACHA ISLES
SB051	1994-2008	55	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	SARASOTA BAY / BUTTONWOOD HARBOR
SB052	1993-2004	149	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	MATLACHA ISLES
SB053	1993-2005	37	SARASOTA BAY / BUTTONWOOD HARBOR	FPL FT MYERS POWER PLANT	MANATEE RIVER
SB054	1988-1996	42	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	BLACKBURN BAY
SB055	1993-2008	80	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	BOCA CIEGA BAY

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
SB056	1994-2000	47	SARASOTA BAY / PANSY BAYOU	MATLACHA ISLES	GULF OF MEXICO / MANASOTA KEY
SB057	1994-2003	29	SARASOTA BAY / BUTTONWOOD HARBOR	ROBERTS BAY / GRAND CANAL	SARASOTA BAY / PANSY BAYOU
SB058	1990-2004	237	SARASOTA BAY / PANSY BAYOU	BLACKBURN BAY	SARASOTA BAY / HYATT BOAT BASIN
SB059	1993-1995	79	SARASOTA BAY / PANSY BAYOU	ROBERTS BAY	SARASOTA BAY / BUTTONWOOD HARBOR
SB061	1994-2004	38	SARASOTA BAY / BUTTONWOOD HARBOR	LEE COUNTY MANATEE PARK	SARASOTA BAY / HYATT BOAT BASIN
SB062	1994-2001	3	SARASOTA BAY / PANSY BAYOU	PALMA SOLA BAY	
SB063	1990-1996	28	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	BLACKBURN BAY
SB064	1993-2007	27	SARASOTA BAY / HUDSON BAYOU	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
SB065	1990-1998	12	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	ANNA MARIA SOUND / PERICO BAYOU
SB066	1995-1996	6	SARASOTA BAY / PANSY BAYOU	ESTERO BAY / IMPERIAL RIVER	PALMA SOLA BAY
SB067	1989-2002	54	SARASOTA BAY / PANSY BAYOU	MATLACHA ISLES	SARASOTA BAY / OTTER KEY
SB069	1995-1998	3	SARASOTA BAY / PANSY BAYOU	NORTH SARASOTA BAY	
SB070	1995-2002	7	SARASOTA BAY / PANSY BAYOU	FORT WALTON BEACH / SANTA ROSA ISLAND	
SB071	1995-1996	10	SARASOTA BAY / PANSY BAYOU	CHARLOTTE HARBOR	ROBERTS BAY
SB072	1995-2007	72	SARASOTA BAY / SIESTA KEY	TECO BIG BEND POWER PLANT	
SB073	1995-2000	15	SARASOTA BAY / CITY ISLAND GRASSFLATS	LEE COUNTY MANATEE PARK	PALMA SOLA BAY
SB075	1994-2008	59	SARASOTA BAY / BUTTONWOOD HARBOR	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
SB076	1989-2005	67	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	LEE COUNTY MANATEE PARK
SB077	1983-2007	39	SARASOTA BAY / CITY ISLAND GRASSFLATS	CRYSTAL RIVER / KINGS BAY	MATLACHA ISLES
SB078	1994-1999	6	SARASOTA BAY / LONGBOAT KEY	ROBERTS BAY	

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
SB079	1993-2007	149	SARASOTA BAY / PANSY BAYOU	MATLACHA ISLES	PALMA SOLA BAY
SB080	1994-1996	9	SARASOTA BAY / CITY ISLAND GRASSFLATS	LEMON BAY / DON PEDRO ISLAND	
SB081	1994-2001	15	SARASOTA BAY / PANSY BAYOU	ROBERTS BAY	SARASOTA BAY / HUDSON BAYOU
SB082	1995-2004	34	SARASOTA BAY / PANSY BAYOU	FPL FT MYERS POWER PLANT	PALMA SOLA BAY
SB083	1995-2006	26	SARASOTA BAY NORTH	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
SB084	1995-2008	22	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	ROBERTS BAY
SB085	1995-2003	55	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	LEMON BAY / STUMP PASS
SB086	1995-2000	45	SARASOTA BAY / CITY ISLAND GRASSFLATS	ROBERTS BAY	SARASOTA BAY / OTTER KEY
SB087	1991-2008	75	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	BOCA CIEGA BAY/ HUBER MARINA
SB088	1993-2008	57	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	OLD TAMPA BAY / CULBREATH KEY
SB089	1996-1999	18	SARASOTA BAY / CITY ISLAND GRASSFLATS	SARASOTA BAY / OTTER KEY	
SB090	1995-2002	31	SARASOTA BAY / BUTTONWOOD HARBOR	CALOOSAHATCHEE RIVER / ORTONA LOCKS	ANNA MARIA SOUND
SB091	1995-2002	30	SARASOTA BAY / PANSY BAYOU	MATLACHA ISLES	BURNT STORE MARINA
SB092	1995-2007	62	SARASOTA BAY / CITY ISLAND GRASSFLATS	FPL FT MYERS POWER PLANT	MATLACHA ISLES
SB093	1996-2007	44	SARASOTA BAY / PANSY BAYOU	FPL FT MYERS POWER PLANT	MATLACHA ISLES
SB094	1996-2004	92	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	MATLACHA ISLES
SB095	1993-2008	40	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
SB096	1995-2001	19	SARASOTA BAY / BUTTONWOOD HARBOR	LEMON BAY / FORKED CREEK	CALOOSAHATCHEE RIVER
SB097	1989-2005	32	SARASOTA BAY / CITY ISLAND GRASSFLATS	BAYPORT / WEEKI WACHEE	MANATEE SPRINGS STATE PARK
SB098	1996-2008	61	SARASOTA BAY / BUTTONWOOD HARBOR	LEE COUNTY MANATEE PARK	TECO BIG BEND POWER PLANT

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
SB099	1993-2008	78	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	ROBERTS BAY
SB100	1994-2008	44	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	ANCLOTE RIVER
SB102	1996-2005	34	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	PALMA SOLA BAY
SB103	1995-2008	28	SARASOTA BAY / BUTTONWOOD HARBOR	TECO BIG BEND POWER PLANT	FPL FT MYERS POWER PLANT
SB104	1996-2008	63	SARASOTA BAY / LONGBOAT KEY	FPL FT MYERS POWER PLANT	PALMA SOLA BAY
SB105	1996-2007	47	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	LEE COUNTY MANATEE PARK
SB106	1996-2008	36	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	PALMA SOLA BAY
SB107	1996-1996	2	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / PANSY BAYOU	
SB108	1996-2008	39	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
SB109	1994-1999	9	SARASOTA BAY / CITY ISLAND GRASSFLATS	LEMON BAY	ROBERTS BAY
SB110	1996-1996	4	SARASOTA BAY / PANSY BAYOU	NEW PASS BAYOU	
SB111	1996-1996	3	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / CITY ISLAND GRASSFLATS	
SB112	1993-2007	89	SARASOTA BAY / CITY ISLAND GRASSFLATS	ANNA MARIA SOUND	VENICE INLET
SB113	1997-2001	30	SARASOTA BAY / CITY ISLAND GRASSFLATS	LEE COUNTY MANATEE PARK	SARASOTA BAY / BUTTONWOOD HARBOR
SB114	1996-1997	7	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / CITY ISLAND GRASSFLATS	
SB115	1993-1998	7	SARASOTA BAY / CITY ISLAND GRASSFLATS	CAPTIVA ISLAND	SARASOTA BAY / OTTER KEY
SB116	1997-2002	57	SARASOTA BAY / PANSY BAYOU	FPL FT MYERS POWER PLANT	SARASOTA BAY / BUTTONWOOD HARBOR
SB117	1997-2008	35	SARASOTA BAY / PANSY BAYOU	BOCA CIEGA BAY	LEMON BAY
SB118	1996-2008	19	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	BOCA CIEGA BAY
SB199	1997-1999	16	SARASOTA BAY / PANSY BAYOU	PORT OF THE ISLANDS	SARASOTA BAY / OTTER KEY

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
SB120	1997-2002	8	SARASOTA BAY / PANSY BAYOU	CALOOSAHATCHEE RIVER / FRANKLIN LOCKS	ORANGE RIVER
SB121	1997-2008	110	SARASOTA BAY / PANSY BAYOU	BIG CYPRESS PRESERVE	ROBERTS BAY
SB122	1997-2006	93	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	ROBERTS BAY
SB123	1983-2004	32	ROBERTS BAY	LEE COUNTY MANATEE PARK	MATLACHA ISLES
SB124	1997-2004	25	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	FPL FT MYERS POWER PLANT
SB125	1997-2005	15	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	ANCLOTE RIVER
SB126	1997-2008	46	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	BOCA CIEGA BAY
SB128	1997-2004	10	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / LONGBOAT KEY	
SB129	1997-2008	85	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	PALMA SOLA BAY
SB130	1997-2004	12	SARASOTA BAY / PANSY BAYOU	PALMA SOLA BAY	
SB131	1995-2008	28	SARASOTA BAY / BUTTONWOOD HARBOR	MATLACHA ISLES	TECO BIG BEND POWER PLANT
SB132	1995-2003	13	SARASOTA BAY / PANSY BAYOU	MATLACHA ISLES	FPL FT MYERS POWER PLANT
SB133	1996-2006	24	SARASOTA BAY / CITY ISLAND GRASSFLATS	ESTERO BAY	TECO BIG BEND POWER PLANT
SB134	1996-2000	12	SARASOTA BAY / SIESTA KEY	ORANGE RIVER	ROBERTS BAY
SB135	1996-1997	9	SARASOTA BAY / CITY ISLAND GRASSFLATS	SARASOTA BAY / PANSY BAYOU	
SB136	1997-2008	45	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	CALOOSAHATCHEE RIVER
SB139	1993-2003	25	SARASOTA BAY / BUTTONWOOD HARBOR	LEE COUNTY MANATEE PARK	PALMA SOLA BAY
SB140	1998-2004	58	SARASOTA BAY / BUTTONWOOD HARBOR	WARM MINERAL SPRINGS / SALT CREEK	LEE COUNTY MANATEE PARK
SB141	1996-2004	35	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	MATLACHA ISLES
SB142	1995-1998	5	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / BUTTONWOOD HARBOR	

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
SB143	1996-2008	15	SARASOTA BAY / BUTTONWOOD HARBOR	TECO BIG BEND POWER PLANT	PALMA SOLA BAY
SB145	2001-2007	16	SARASOTA BAY WEST	TECO BIG BEND POWER PLANT	LEE COUNTY MANATEE PARK
SB151	1998-1999	12	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / CITY ISLAND GRASSFLATS	
SB152	1997-2004	10	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	MATLACHA ISLES
SB154	1997-2002	23	SARASOTA BAY / PANSY BAYOU	FPL FT MYERS POWER PLANT	MATLACHA ISLES
SB155	1996-2007	13	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	PALMA SOLA BAY
SB156	1997-2008	28	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	BOCA CIEGA BAY
SB157	1998-1999	7	SARASOTA BAY / PANSY BAYOU	ROBERTS BAY	
SB158	1998-2000	18	SARASOTA BAY / PANSY BAYOU	PALMA SOLA BAY	
SB159	1997-2002	48	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	SARASOTA BAY / BUTTONWOOD HARBOR
SB161	1999-1999	12	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / BUTTONWOOD HARBOR	
SB162	1999-2004	9	SARASOTA BAY / PANSY BAYOU	ROBERTS BAY	
SB163	1996-2008	33	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	ROBERTS BAY
SB166	1998-2003	16	SARASOTA BAY / BUTTONWOOD HARBOR	TECO BIG BEND POWER PLANT	
SB167	2000-2004	50	SARASOTA BAY / PANSY BAYOU	SARASOTA BAY / OTTER KEY	
SB168	2000-2006	70	SARASOTA BAY / PANSY BAYOU	LEE COUNTY MANATEE PARK	
SB170	1999-2003	39	SARASOTA BAY / BUTTONWOOD HARBOR	LEE COUNTY MANATEE PARK	MATLACHA ISLES
SB171	2000-2003	6	SARASOTA BAY / CITY ISLAND GRASSFLATS	FPL FT MYERS POWER PLANT	TAMPA BAY / BAYBORO HARBOR
SB172	1999-2006	21	SARASOTA BAY / PANSY BAYOU	FPL FT MYERS POWER PLANT	SARASOTA BAY / BUTTONWOOD HARBOR
TB002	1983-2008	69	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	ALAFIA RIVER

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
TB006	1994-2008	27	ROBERTS BAY	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
TB009	1992-2008	38	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
TB010	1990-2008	61	LEMON BAY	TECO BIG BEND POWER PLANT	PEACE RIVER
TB016	1983-2008	67	ROBERTS BAY	TECO BIG BEND POWER PLANT	BOCA CIEGA BAY
TB017	1983-2008	46	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	HOMOSASSA RIVER
TB018	1988-1998	29	SARASOTA BAY / WHITAKER BAYOU	TECO BIG BEND POWER PLANT	LITTLE SARASOTA BAY
TB027	1989-2002	25	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	MYAKKA RIVER
TB028	1989-2004	52	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	ANNA MARIA SOUND
TB029	1985-2008	45	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	BOCA CIEGA BAY / JOHNS PASS
TB035	1983-1997	22	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	SARASOTA BAY / OTTER KEY
TB036	1983-2008	90	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	SUWANEE RIVER
TB041	1985-2002	12	VENICE BYPASS CANAL	FPL FT MYERS POWER PLANT	TECO BIG BEND POWER PLANT
TB045	1992-2006	96	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	LITTLE MANATEE RIVER
TB056	1991-1997	12	LEMON BAY	TECO BIG BEND POWER PLANT	ST LUCIE CABAL
TB058	1994-2008	23	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
TB059	1994-2008	26	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	SARASOTA BAY / WHITAKER BAYOU
TB067	1994-2008	93	SARASOTA BAY / SIESTA KEY	TECO BIG BEND POWER PLANT	BOCA CIEGA BAY
TB076	1993-2008	37	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	TERRA CEIA BAY
TB078	1983-2008	104	ROBERTS BAY / GRAND CANAL	FPL FT MYERS POWER PLANT	TECO BIG BEND POWER PLANT
TB081	1994-2008	25	SARASOTA BAY / HUDSON BAYOU	TECO BIG BEND POWER PLANT	

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
TB082	1995-2008	40	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	PALMA SOLA BAY
TB090	1993-2008	61	SARASOTA BAY / OTTER KEY	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
TB097	1992-2008	61	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
TB103	1993-2008	36	SARASOTA BAY / LONGBOAT KEY	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
TB104	1992-2008	26	ROBERTS BAY	TECO BIG BEND POWER PLANT	TERRA CEIA BAY
TB121	1995-2008	50	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
TB122	1996-2008	56	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	ROBERTS BAY
TB129	1991-2008	62	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	CRYSTAL RIVER / KINGS BAY
TB133	1994-2008	34	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
TB139	1994-2008	76	LEMON BAY / FORKED CREEK	TECO BIG BEND POWER PLANT	CHARLOTTE HARBOR / TURTLE BAY
TB140	1997-2008	22	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	LEMON BAY / FORKED CREEK
TB147	1994-2008	25	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
TB148	1988-2005	29	SARASOTA BAY / BUTTONWOOD HARBOR	TECO BIG BEND POWER PLANT	
TB150	1997-2008	43	ROBERTS BAY	TECO BIG BEND POWER PLANT	
TB152	1998-2008	17	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	CRYSTAL RIVER / KINGS BAY
TB158	1997-2008	47	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
TB161	1994-2008	43	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	TECO GANNON POWER PLANT
TB163	1996-2008	23	SARASOTA BAY / PANSY BAYOU	FPL BARTOW POWER PLANT	ANCLOTE RIVER
TB169	1994-2008	23	SARASOTA BAY / CITY ISLAND GRASSFLATS	FPL BARTOW POWER PLANT	ANCLOTE RIVER
TB171	1996-2007	19	SARASOTA BAY / CITY ISLAND GRASSFLATS	TECO BIG BEND POWER PLANT	ANCLOTE RIVER

Appendix A. Individual manatees sighted in Sarasota County through photo identification (continued).

ID	Years	# Sightings	Range From	Range To	Other Observations
TB172	1996-2008	26	SARASOTA BAY / HUDSON BAYOU	TECO BIG BEND POWER PLANT	FPL BARTOW POWER PLANT
TB179	1997-2001	25	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	BOCA CIEGA BAY
TB195	2000-2003	4	LEMON BAY	LEE COUNTY MANATEE PARK	MANATEE RIVER / WARES CREEK
TB206	1999-2003	14	WARM MINERAL SPRINGS / SALT CREEK	TECO BIG BEND POWER PLANT	PALMA SOLA BAY
TB209	1999-2008	20	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	TAMPA BAY / COFFEETOP BAYOU
TB212	2000-2008	49	SARASOTA BAY / PANSY BAYOU	TECO BIG BEND POWER PLANT	SARASOTA BAY / BUTTONWOOD HARBOR
TB215	1982-2008	54	ROBERTS BAY	TECO BIG BEND POWER PLANT	CRYSTAL RIVER / KINGS BAY

APPENDIX B

Chapter 54, Article XX of the Sarasota County Code of Ordinances (WNCA Code)

ARTICLE XX. WATER AND NAVIGATION CONTROL AUTHORITY*

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

Section 1. This ordinance amends Sarasota County Ordinance No. 72-84 as codified in Article XX, Chapter 54, of the Sarasota County Code. In this ordinance, language added to an existing ordinance is underscored, and language deleted is typed in strike-through type.

Section 2. Article XX, Chapter 54, Sarasota County Code is hereby amended to read as follows:

Sec. 54-651. [Purpose.]

The general intent and purpose of this Article is to provide for adequate regulation and control of Altering Jurisdictional Areas and the repair and construction of associated water-dependent structures such as Docks, Piers, Davits, Shoreline Protection Structures, and other similar structures, in the interest of public rights, welfare, and public riparian property rights, the Preservation of the natural beauty and attractiveness of the Jurisdictional Areas and to aid and assist boating activities and navigation. Accordingly, there is hereby created the Sarasota County Water and Navigation Control Authority within Sarasota County to carry out the general intent and purpose of this Article.

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.

After-the-Fact means a permit or other authorization issued after starting or completion of work prior to obtaining the required authorization.

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 this Article, 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 Appurtenant Structures, such as floating docks and lifts, whether or not such floating structures are licensed as "vessels."

Applicant means a person, firm, partnership, corporation, association, organization, trust, company, or any other legal entity that has applied for a permit.

Appurtenant Structure is a term used to define an auxiliary or accessory structure, such as a Boat Lift, that is attached to a primary structure, such as a Dock.

Article means Chapter 54, Article XX of the Sarasota County Code of Ordinances, as amended, unless otherwise specified.

Authority means the Sarasota County Water and Navigation Control Authority.

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

Boathouse means any roofed structure located over the waterway for the purpose of covering or partially covering a Mooring Area.

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

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

Davit means a cantilevered lifting device mounted directly to a Dock, wood piling, or concrete piling or pad.
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 Jurisdictional Areas. It also means excavating, or creating, a water body which is, or is to be, connected to any Jurisdictional Areas 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 Jurisdictional Areas, by any means.

Finger Extension is a term used to define walkway structures that extend perpendicular to a main Dock structure and provide access to Mooring Areas.

Invasive Plant/Species means a species that is both not native to the region or area and whose introduction causes or is likely to cause harm to the economy, the environment, or harm to animal or human health. Invasive species affect both aquatic and terrestrial habitats, and they can be plants, animals, and microorganisms.

Jurisdictional Areas shall mean all water bodies, water courses or waterways in the coastal areas of Sarasota County, including all rivers, streams, inlets, bays, bayous, canals, sandbars, submerged or Sovereignty Lands, and any contiguous shoreline to the Mean High Water Line, or other hydrologically connected areas such as riparian or littoral Wetlands to the Top of Bank. The coastal area shall encompass all coastal areas less than or equal to five foot NGVD contour line, including gulf, bay, barrier island and mainland water bodies, water courses or waterways hydrologically connected to the coast, but shall not include isolated inland waters such as lakes or ponds with no hydrologic connection to the coast.

Listed Species means any animal afforded protection pursuant to the Florida Administrative Code, including but not limited to species categorized as endangered, threatened, and species of special concern; or any plant or animal categorized as endangered or threatened pursuant to the U.S. Endangered Species Act.

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 a structure no more than five feet from the waterward edge of a revetment.

Mean High Water Line (MHWL) means the intersection of the tidal plane of mean high water with the shore. Mean high water is the average elevation of tidal high waters recorded at a particular point or station over a considerable period of time, typically 19 years.

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.

Mooring Area means a specific area, on or over the waterway, assigned to a dock for the purpose of vessel storage. For the purpose of calculating the Preempted Area, a Mooring Area shall be defined by the maximum length and width of the rectangular area on or over the waterway within which a vessel shall be stored, or the rectangular area adjacent to the entire Terminal Platform created by the placement of pilings, whichever is greater.

NGVD or National Geodetic Vertical Datum, is a vertical control datum representing a determination of the mean sea level datum that has been used as a standard for surveying heights and elevations.

Personal Watercraft or PWC, means any jet or air-powered watercraft operated by standing, sitting, or kneeling on or behind the watercraft, in contrast to a conventional boat in which the operator stands or sits inside the vessel.

Pier means a structure in, on, or over water or Sovereignty Lands, which is used primarily for fishing, swimming, or launching non-motorized vessels such as canoes or kayaks.

Preempted Area means that part of submerged bottomlands occupied or covered by a docking facility or Pier, including any associated Mooring Areas. 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.

Riparian Rights Lines means the boundaries which identify the limits of rights of the owners of lands on the banks of Jurisdictional Areas who may be entitled to benefits incident to the use of the water. Riparian

Rights Lines may be determined by established surveying practices and techniques, through mutual agreement of adjacent riparian owners, or through a judicial determination by an appropriate court of law.

Sarasota County Comprehensive Plan means the framework adopted by the Sarasota Board of County Commissioners under Ordinance No. 89-18, as amended, to comply with the Local Government Comprehensive Planning and Land Development Regulation Act of 1985.

Shoreline Protection Structure means man-made structures designed to either prevent erosion of the upland property or to protect structures from the effects of tidal waters and current action. Examples of Shoreline Protection Structures include, but are not limited to, seawalls, bulkheads, retaining walls, rock revetments, jetties, groins, and breakwaters.

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 fresh water 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 and includes all portions of decking adjacent to authorized Mooring Areas.

Top of Bank means the crest elevation of the shoreline or of Shoreline Protection Structures, whichever point is more landward.

Turbidity Curtain means a floating screen that is utilized to contain fine sediments that are suspended into the water during marine construction and dredging activities.

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, as defined in F.A.C. 62-340, 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.

Sec. 54-653. [Applicability and Interpretation.]

- (1) *Applicability.* The Sarasota County Water and Navigation Control Authority shall exercise its jurisdiction throughout all of Sarasota County Jurisdictional Areas and it is hereby authorized to apply and enforce the provisions of Sarasota County Ordinance No. 72-84 as amended hereby (this Article) to all areas within Sarasota County, including but not limited to all municipalities.
 - (a) 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. Any other municipality which enacts its own permitting regulations for construction and maintenance of Docks and Piers shall likewise be entitled to this exemption.
- (2) *Interpretation.* The provisions of this Article shall be interpreted in the follow manner:
 - (a) In the interpretation of this Article, all provisions shall be considered minimal requirements and construed liberally to effectuate the purposes of this Article.
 - (b) This Article is not intended to repeal, abrogate, or impair any existing statutes, laws, ordinances, easements, covenants, or deed restrictions which impose more stringent restrictions on coastal construction or excavation.
 - (c) Where this Article conflicts with or overlaps another County ordinance, whichever imposes the more stringent restrictions on construction and excavation shall prevail.
 - (d) Each separate provision of this Article is deemed independent of all provisions herein so that if any provision or provisions of this Article are declared invalid or unconstitutional by any court of competent jurisdiction, all other provisions shall remain valid and enforceable.
- (3) *Overlapping Administration.* In the event that proposed activities on a particular site are subject to overlapping code provisions from different Articles of Chapter 54 of the Sarasota County Code, the more stringent regulations shall be applicable.
 - (a) *Simultaneous Reviews.* In the event that an applicant seeks authorization to conduct activities which are subject to overlapping code provisions from different Articles of Chapter 54 of the Sarasota County Code, County staff shall perform simultaneous natural resource reviews to the greatest extent practicable.
 - (b) *Joint Authorization.* In the event that proposed activities are subject to overlapping administration between Articles of Chapter 54 of the Sarasota County, the Applicant has the option of obtaining joint authorization from the County to satisfy the requirements of all applicable code provisions. The proposed activity shall meet the requirements of all applicable code provisions in Chapter 54 of the Sarasota County Code. Any joint authorizations for the project shall be heard concurrently before the Board, if Board approval is required.
 - (c) *Coordination with the Land Development Regulations.* For dockage facilities associated with proposed subdivisions, multi-family developments, and commercial projects, all Land Development Regulation approvals shall be obtained prior to application for any permit regulated by this Code.

- (d) *Listed Species.* In cases where impacts to listed species may occur, applicants shall be required to consult with the appropriate Federal and State wildlife agencies, to use recognized sampling techniques to identify listed species, and to provide documentation of such coordination and compliance prior to County approval to conduct any activities that could disturb listed species or their habitat.

(4) *Permits required.*

- (a) No work shall be performed having the effect of Altering any Jurisdictional Areas without first obtaining a permit from the Authority or Administrator, unless specifically exempted under the provisions of Section 54-653(4)(g).
- (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.
- (c) 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 Jurisdictional Areas, and any loss or alteration of habitat shall be mitigated, in accordance with the provisions of Section 54-656(7).

(d) *Major work permits*

- (1) Any Dock construction or expansion that would result in the property having a total of five slips or more shall require a major work permit subject to the provisions of Section 54-654(4).
- (2) Any proposed activities that do not qualify for a minor work permit, general permit, or exemption pursuant to this Article, or meet the minimum standards as described in Section 54-656 shall require a major work permit subject to the provisions of Section 54-654(4).

(e) *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 to a navigable waterway, to 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 the excavation will not result in the placing of any spoil material in or upon Jurisdictional Areas.
- (2) Construction of Docks, Piers, and Appurtenant Structures, provided that such structures conform to the standards provided in Section 54-656 and only where the structures are appurtenant to upland riparian properties within zoning districts that allow such structures as a permitted use.
- (3) Construction of Shoreline Protection Structures landward of existing littoral zones and Wetland vegetation, and at or landward of the Mean High Water Line.
- (4) Maintenance of boat ramps, jetties, 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 MHWL or vegetated littoral zone.
- (f) *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, Boathouses, rock revetments, seawalls, retaining walls, 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, sea grasses, oyster beds, littoral zone vegetation and bottom sediments;
 - (2) Replacement of channel markers;
 - (3) Installation of single-family or multifamily pile-supported boat Davits or Personal Watercraft lifts adjacent to legally permitted structures, subject to the standards provided in Section 54-656;
 - (4) Installation of Boat Lifts and/or mooring pilings at legally permitted structures within the designated Mooring Areas of the original permit, subject to the standards provided in Section 54-656;
 - (5) 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.
- (g) *Exemptions.* Any design change or alternate use of construction material on the structures to be maintained may cause the project to be nonexempt. The following maintenance work is hereby exempted from permitting requirements of this Article, 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 Docks, Piers, and other similar structures within the limits and dimensions of the existing structure;

- (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 entirely 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.
 - (9) Projects by municipal, state and federal government agencies performed as part of their normal official duties for the general public. For County projects, advance written notification shall be provided to the Administrator, including a copy of the plans for review. The purpose of this review is to ensure that County projects shall be consistent with the policies and principles of the Comprehensive Plan and, to the maximum extent practicable, the technical standards of this Article.
- (h) *Limits to applicability.*
- (1) No minor work permit, general work permit, or exemption shall authorize any construction or maintenance of any Dock or Pier on public property, except for the construction and maintenance of Docks and Piers lawfully extending from that Applicant's privately-owned uplands across Jurisdictional Areas.
 - (2) Nothing in this Article shall be construed as requiring modification of existing Docks or Piers extending from privately owned uplands that were constructed before January 1, 1985.

Sec. 54-654. Administration and Procedures.

- (1) *Composition.* The Authority shall be composed of duly elected members of the Board of County Commissioners of Sarasota County, and the Board shall be the governing authority of the Sarasota County Water and Navigation Control Authority.
- (a) *Officers and compensation of members.* The Authority shall elect one of its members as Chairman. The members of the Board shall not be entitled to any additional salary or additional compensation for their services as members of the Authority.

- (2) *Fees.* The Board of County Commissioners is authorized to set reasonable fees and charges for the implementation of this Article. Such fees shall be set by resolution. Fees charged will substantially finance the expenditures of reviewing projects pursuant to this Article.
- (a) 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. An applicant's failure to pay the requisite filing fees and costs may result in removal of the application from consideration by the Authority or the Administrator for approval.
 - (b) Applicants for After-the-Fact authorization shall be assessed a fee of three times the current fee, in addition to any fines and penalties assessed, providing the property owner(s) that committed the violation still owns the property. A single fee shall apply to any new owners of the property.
 - (c) For any proposal or appeal requiring a hearing before the Board of County Commissioners, all required fees shall be paid no later than 7 days before the scheduled hearing date.
- (3) *Application.* Whenever any person desires to perform any work described above that is not otherwise exempted under this Article, such person shall, before commencing any such operation, file an application for a permit and obtain approval from the Authority. The application shall include:
- (a) A plan or drawing showing specifically what is proposed to be done. The plan or drawing shall be to scale and shall show property boundaries, the depths of the water and the elevation of the development above the MHWL, and existing native habitats (including mangrove swamps and marine grasses).
 - (b) Proof of ownership of the property which is proposed to be developed, including any submerged lands;
 - (c) Information required by the Authority as deemed necessary in the processing and determination of the application. This may include such information as Riparian Rights Line surveys, hydrographic surveys, MHWL surveys, engineered plans, Mitigation plans, or other technical information related to site-specific conditions.
- (4) *Major work permit applications.* Whenever any work is proposed that is not otherwise authorized by general permit, minor work permit, or exemption under this Article, the Applicant shall, before commencing any such operation, file an application and obtain a major work permit from the Authority to do such work.
- (a) When an application for a major work 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.
 - (b) Every application for a major work permit shall be approved or denied at a public hearing which shall be held within approximately 60 working days after receipt of a complete application, which shall constitute the original application and any additional information requested by staff or submitted by the Applicant for correction of errors or omissions.

- (1) 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.
 - (2) Failure to satisfy the review timeframe shall not result in approval by default of the application for a permit.
- (c) *Public Notification:* The Applicant shall be responsible for notifying the public of the proposed development as follows:
 - (1) A minimum of fifteen days prior to the public hearing date, the Applicant shall be responsible for copying and mailing a notice provided by Sarasota County to all property owners within 500 feet of the property boundaries of the land for which the major work permit is sought. Where such land is adjacent to the property in the Applicant's ownership, the distance shall be measured from the boundaries of the entire ownership. Where the notification boundaries include a multi-family dwelling (e.g., condominium), each individual unit owner shall be notified. Notice shall be deemed mailed by its deposit in the United States mail, first class, properly addressed, and postage paid. An affidavit attesting to such mailing shall be submitted to the Administrator a minimum of 5 days prior to the public hearing date.
 - (2) A minimum of ten days prior to the public hearing date, a notice shall be published in a newspaper of general circulation that has been selected by Sarasota County.
 - (3) The notice shall state the development proposed to be made, and a general description of the area involved, and shall include a drawing showing the development to be made and the location of same as it relates to the surrounding area.
 - (4) An affidavit of proof of publication shall be furnished to the Authority before its consideration of the application.
 - (5) All municipalities or other public agencies that may be affected by the proposed development also shall be notified by mail as hereinbefore provided and shall have the right to be heard.
 - (6) The Applicant shall be responsible for the cost of all notice requirements.
- (d) *Administrative procedures for major work permits.* 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 54-655(1) and the Sarasota County Comprehensive Plan. The findings of fact and determination shall be reduced to writing and shall be filed with Board Records.
 - (1) Any person, including the State of Florida, Sarasota County, and any municipal corporation in the County, who is aggrieved by the Authority's ruling 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.
- (5) *Administrative procedures for minor work and general permits.* The duty and authority to review applications for minor work and general 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 or general permit and no review of the issuance of same shall be required by the Authority.

- (a) 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.
 - (b) Every application for a minor work permit shall be approved or denied within approximately 35 working days after receipt of the complete application. Every application for a general permit shall be approved or denied within approximately 10 working days after receipt of the complete 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.
 - (c) No minor work or general permit shall be issued until the Administrator determines that the effects of the proposed construction will meet the criteria provided in Section 54-655(1) and the Sarasota Comprehensive Plan.
 - (d) The Applicant or owner may appeal any determination by the Administrator in reviewing an application for a minor work or general permit. Upon receipt of an appeal, the Administrator shall schedule an administrative hearing within 60 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 54-654(4). 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.
- (6) *Permit duration.* No permit shall be issued for more than a one-year period. Work under a permit must be commenced within six months from the date of issuance and shall be completed within one year from the date of issuance of the permit; in the event the proposed work is not commenced or completed within said periods, or an extension has not been granted by the Administrator, reapplication shall be made to the Authority. One or more extensions of time for periods of not more than 90 days each may be allowed by the Administrator, provided the extension is requested in writing and justifiable cause is demonstrated. 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.

Sec. 54-655. Permit approval criteria.

- (1) 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 to comply with the law:

- (a) Would the proposed project have a detrimental effect on the use of Jurisdictional Areas for navigation, transportation, recreational or other public purposes and public conveniences;
 - (b) Would the proposed project restrict the free use of Jurisdictional Areas;
 - (c) Would the proposed project adversely alter the flow of water or tidal currents in Jurisdictional Areas;
 - (d) Would the proposed project adversely affect long-term water quality, erosion control or increase erosion, shoaling of channels, or formation of stagnant pockets likely to collect debris;
 - (e) Would the proposed project adversely affect the conservation of wildlife, marine life, and other natural resources;
 - (f) Would the proposed project adversely affect the natural beauty or recreational opportunities upon Jurisdictional Areas;
 - (g) Would the proposed project adversely affect the uplands surrounding or directly affected by the plan or development;
 - (h) Would the proposed project adversely affect the public health, safety, and welfare; or
 - (i) Would the proposed project exceed applicable siting criteria within the technical standards pursuant to Section 54-656.
- (2) If the Authority and the Administrator find the proposed plan or development will not adversely affect any of the criteria listed in subsection (1) of this Section, the Authority or Administrator shall then grant and issue a permit for the 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 (1) 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 Species removal or native species Restoration, Enhancement, or Creation to perform these actions.
- (3) If the Authority or the Administrator find that the proposed plan or development will adversely affect any private property rights or any of the rights or interests of the public identified in the criteria listed in subsection (1) of this Section, the Authority or Administrator shall deny the application and refuse to issue a permit for the proposed plan or development.
- (4) The proposed plan or development shall be consistent with the provisions of the Sarasota County Comprehensive Plan.
- (5) The proposed plan or development shall be consistent with the Sarasota County Manatee Protection Plan.

- (6) Applicants shall not re-submit the same application, or an application which is materially the same, that has previously been denied by the Administrator or the Authority until a period of one year has passed after the denial.

Sec. 54-656. Construction and Technical Standards.

The provisions of this Article shall not deny any right of an upland owner to construct a Dock or Pier extending from his or her upland recognized by the Constitution and laws of the State, but the Authority may 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, mooring piles, Davits, Boat Lifts, Shoreline Protection Structures, or other similar structures shall be subject to the minimum standards for issuance of a permit as described in this section. For major work permits, the construction and technical standards within this section shall only be used as guidance for evaluating permit approval criteria of Section 54-655(1)(i).

- (1) Permits shall be issued only for structures associated with Water-Dependent Activities. Water-dependent structures (including Docks, Piers, 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. However, where unique site-specific conditions as described below occur, the Administrator or Authority has the authority, but not the obligation, to grant relief from the 25 percent width of waterway criteria. An exception to the rule occurs when the Administrator or the Authority makes each of the following determinations:
 - (1) the Applicant's property meets one of the following site-specific conditions: (a) located at the terminal end of a canal; (b) located opposite lands under public ownership upon which no Dock construction is anticipated; or (c) located opposite an offshore island upon which no development or Dock construction is anticipated;
 - (2) the proposed deviation shall meet all permit approval criteria of Section 54-655, and is consistent with all other Construction and Technical Standards in Section 54-656;
 - (3) the proposed deviation does not prohibit adjoining property owners from constructing a comparable Dock facility in the future;
 - (4) no possibility exists for an alternative Dock design that meets the 25 percent criteria along the Applicant's shoreline (For end of canal scenarios, a Riparian Rights Line survey may be required. Any Riparian Rights Line located within 25 feet of the proposed construction shall require a sworn affidavit of no objection from the affected property owner(s).); and
 - (5) deviation from the 25 percent criteria shall be the minimum necessary, as determined by the Administrator, to provide access to the waterway. (A request to increase Vessel Draft shall not be grounds for granting relief from the 25 percent width of waterway.)
 - (b) No structure, moored vessel, or combination thereof may extend more than 300 feet from the shoreline as measured across open water.
 - (c) No 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.

- (d) 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.
- (e) All structures except Marginal Docks and seawall-mounted Davits must be set back a minimum of 25 feet from the Applicant's Riparian Rights Line. Marginal Docks and Davits mounted on a seawall 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.
- (f) 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 structure and Mooring Area, including any Appurtenant Structures, 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. A sworn affidavit of no objection shall be obtained from the affected adjacent upland riparian owner(s) if the proposed Dock, Appurtenant Structures, and Mooring Area exceed 50 percent of the available shore frontage, or are not centered within the available shore frontage.
- (g) 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.
 - (1) 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 may be reduced to zero clearance in man-made canals or Previously Dredged Portions of coastal streams, as identified in the Sarasota County Comprehensive Plan. This seagrass restriction shall apply both to the Mooring 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 by letter, and without charge, modify any existing permit to conform to the current Vessel Draft standards.
 - (2) Based on site-specific conditions, including shallow water depths or the presence of submerged resources, the Administrator may require the Applicant to 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 III of this Article [Section 54-662].
- (h) If the mean low water depth is not sufficient to meet the requirements of subsection 54-656(1)(g), 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 Section 54-656; or

- (2) Revise the application to request a Pier instead of a Dock; or
 - (3) Revise the application to include maintenance Dredging of the Mooring Area and/or areas of ingress and egress; or
 - (4) 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.
- (i) 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.
 - (j) 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 a major work permit application. 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.
 - (k) No new Dock shall be approved within Jurisdictional Areas of Warm Mineral Springs and Warm Mineral Springs Creek.
 - (l) 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.
 - (m) 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 reflective material and/or safety lighting shall be installed at the end of the Dock or mooring pilings. Safety lighting shall be operated every night from dusk to dawn. It shall be the responsibility of the property owner to maintain safety lighting on the Dock for the life of the structure.
- (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 Extensions, 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) Only one Access Ramp shall be allowed at a single-family residence dock facility. 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 devices 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. Maximum roof overhang shall be three feet from the support pilings. 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 current edition of the Florida Southern Building Code, and shall not contain cementitious tile shingles.
 - (f) The minimum decking elevation over seagrass shall be five feet above the Mean High Water Line. 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 eight inches with a minimum of one-half-inch spacing required between decking planks.
 - (g) Piers shall have non-detachable 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 pilings, concrete pilings; concrete pads, or a seawall;
 - (b) Davits mounted on a seawall cap shall not be located within 10 feet of the neighboring Riparian Rights Line, unless the Applicant has obtained a sworn affidavit of no objection from the affected upland riparian owner.
 - (c) Water depths at the proposed installation location comply with subsection 54-656(1)(g); and
 - (d) The installation of the Davits shall not define more than two Mooring Areas for a single-family property.
- (4) Shoreline Protection Structures shall conform to the following design and location criteria:
- (a) All new Shoreline Protection Structures shall be located landward of the Mean High Water Line and all Wetland vegetation.
 - (b) Rock revetments shall be installed with appropriately designed filter media beneath the entire length and shall maintain a slope ratio of 2:1 (horizontal:vertical) or less.
 - (c) Rock revetments shall be constructed only of clean, local, quarry rock.
 - (d) No Shoreline Protection Structures along the Jurisdictional Areas of the Myakka River shall be approved under minor work permits.
 - (e) All new Shoreline Protection Structures shall require shoreline management, subject to the provisions of subsection 54-656(7) of this Article.
- (5) All Maintenance Excavation and Dredge and Fill projects shall conform to the following criteria:

- (a) Maintenance Excavation depth shall be limited to -5.0 feet at mean low water or the controlling depth of the existing waterway adjacent to the limits of the Maintenance Excavation, whichever is less.
 - (b) All Maintenance Excavation projects require a professional hydrographic survey of the pre-dredged conditions, engineered plans, and a post-dredge hydrographic survey.
 - (c) All spoil resulting from Maintenance Excavation projects shall be consistent with native habitat protection management guidelines as provided in Chapter 2 of the Sarasota County Comprehensive Plan and the provisions of the Sarasota County Earthmoving Code (Chapter 54, Article XII, of this Code).
- (6) 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 54-655(1).
- (7) *Native Habitat Impacts and Shoreline Management.*
- (a) *Native Habitats.* All permits issued pursuant to the provisions of this Article shall be consistent with the Principles for Evaluating Development Proposals contained within Chapter 2 of the Sarasota County Comprehensive Plan.
 - (b) *Impacts to Native Habitats.* All impacts to Wetlands greater than ½ acre shall be consistent with the most current state-approved Mitigation methodology. For all other impacts to native habitats, the following Mitigation options shall be applicable:
 - (1) *Docks, Piers and Similar Structures.* All Docks, Piers and similar structures shall, to the maximum extent practicable, avoid impacts to native habitats. If impacts are unavoidable, the structure shall then minimize impacts by incorporating the designed standards provided in Section 54-656. Within mangrove swamp habitats, direct impacts to mangrove trees shall be avoided, and if unavoidable, minimized through site specific design. As stated in the Sarasota County Comprehensive Plan, in no event may an Applicant dredge or fill a mangrove swamp. When impacts are unavoidable and the structure has been minimized, Mitigation for Docks shall be as follows:
 - (a) If opportunities exist for shoreline plantings, native salt tolerant vegetation in accordance with the "Riparian Habitat Planting Guidelines" attached as Appendix I shall be required to compensate for the value and function of the impacted habitat.
 - (b) Subject to site specific conditions, the County may waive or reduce the requirement for plantings along the shoreline, if the Invasive Species removal required pursuant to subsection 54-656(7)(c)(1) adequately compensates for the value and function of impacted native habitat, or the applicant proposes a conservation easement that achieves comparable benefits.

- (c) If the environmental benefits of shoreline plantings and Invasive Species removal do not compensate for the value and function of the impacted habitat, the Applicant may offer a conservation easement in lieu of or to supplement the plantings or Invasive Species removal in order to ensure continuing value and function.
 - (1) If a Conservation Easement is proposed, it shall be signed and notarized prior to issuance of the permit, and subsequently recorded with the Clerk of the Circuit Court once the permit has been issued as part of a stipulation or special condition of the permit.
- (c) *Shoreline Management.* All permits issued pursuant to the provisions of this Article shall be consistent with the following:
 - (1) *Invasive Species.* All permits shall require, to the maximum extent practical, removal of Invasive Plants from the shoreline area to a minimum distance of 30 feet landward of the Mean High Water Line.
 - (2) *Shoreline Hardening.* Where practical, shoreline planting and enhancement projects shall be required for development orders proposing shoreline hardening.
- (d) *Off-site Mitigation.* Mitigation shall be required on-site unless site specific conditions do not adequately provide opportunity to compensate for the value and function of the impacted habitat.
 - (1) 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.
 - (2) Unless otherwise required by law, off-site Mitigation for impacts to seagrass beds shall be located within Sarasota County boundaries. Whenever possible, Mitigation for impacts to seagrass beds shall be located in close proximity to where the impacts occur. Mitigation for impacts to seagrasses may occur outside of the territorial boundaries of Sarasota County if the Mitigation is conducted in a marine grass bed located immediately adjacent to the County border or is contiguous to a marine grass bed that is partially contained within Sarasota County.
 - (3) If Mitigation occurs outside of the territorial boundaries of Sarasota County, then the permit shall expressly require the permittee to construct, restore, or enhance the Mitigation area in the manner approved by the County, as well as to permanently monitor, maintain, and manage the Mitigation area in accordance with the County's ordinances, rules, or regulations, and any other specific requirements contained in the permit. Any violation of any Mitigation area requirement shall be a violation of the permit. All Mitigation for impacts to seagrass beds shall be appropriate to compensate for the value and functions lost due to the impacts to the seagrass bed.

- (e) *Invasive Species Removal, Planting and Monitoring Requirements.* All permits with planting requirements shall be consistent with the following:
- (1) Invasive Species removal and planting activities shall be completed within 60 days following completion of construction activities.
 - (2) All vegetation shall be of nursery stock.
 - (3) No disturbance of existing native vegetation shall occur during plantings or Invasive Species removal. No disturbance to the slope of the existing bank shall occur, except in accordance with an approved plan.
 - (4) The success of planting projects shall be as specified in the Environmental Technical Manual of the County's Land Development Regulations (Sarasota County Ordinance No. 81-12, as amended).
 - (5) Except for red, black and white mangroves, 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 Area, or in accordance with an approved plan.
 - (6) 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).
 - (7) 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.

Sec. 54-657. Stipulations and Conditions.

- (1) Approvals granted pursuant to this Article may contain specific stipulations or conditions that are designed to avoid, minimize, and mitigate the impact of the authorized activity on the environment and the public rights and interests, or to assure that such authorized activity will conform to the requirements of this Article.
- (2) All approvals granted pursuant to this Article shall contain the common stipulations and conditions contained in Section 54-661, Appendix II of this Article.

Sec. 54-658. Responsible Parties.

- (1) The property owner and contractor or service provider retained by the Applicant or their representative to conduct work covered by this Article are jointly responsible for any activities authorized pursuant to this Article.
- (2) Prior to commencing any work, and within 30 days of the County permit issuance date, the property owner(s) and the contractor conducting the work must submit a signed form provided by

the County attesting that the County permit has been received and all conditions or stipulations are acceptable.

- (a) If a signed copy of the acceptance form is not received within 30 days of the permit issuance date, the approval shall be null and void at the discretion of the Administrator.
 - (b) Failure to sign the form within the established timeframe may require re-application.
 - (c) The property owner(s), contractor, or service provider may decline to accept the permit by notifying the County in writing within 14 days of the County approval.
- (3) Once work commences, all conditions or stipulations provided with the County approved permit shall apply and shall be enforceable. Failure to adhere to these conditions or stipulations may be cause for the posting of a stop work order on site, revocation of the County approval, and/or code enforcement pursuant to Section 54-659 of this Article.
- (4) For activities that are performed without the appropriate authorization, or are performed in a manner that is inconsistent with the authorized plans and/or stipulations of the permit, the Administrator reserves the right to report the action to the appropriate contractor licensing board.

Sec. 54-659. Violations and Compliance.

Sarasota County has the authority to enforce any permit or stipulation, as well as, any provisions of this Article per Chapter II, Article VIII of the Sarasota County Code of Ordinances and per provisions of the Florida Statutes Chapter 162.

(1) *Civil and Administrative.*

- (a) The Administrator may withhold issuance of a permit or deny an application or other authorization if there is an existing unresolved violation of the Sarasota County Code on the subject property.
- (b) The Administrator will issue a stop work order when it has been determined that work at the site:
 - (1) Is proceeding in violation of this Article, a permit or other authorization issued hereunder or proceeding without any required authorization; or
 - (2) Poses an imminent and significant hazard to the public health, safety, or welfare, or to the environment.
- (c) The County may issue an After-the-Fact authorization to correct a violation.
 - (1) The Administrator has the authority to review and approve After-the-Fact activities that meet all of the standard approval and technical criteria for Minor Work and General Permits contained within this Article.
 - (2) All After-the-Fact activities requiring a Major Work Permit shall only be reviewed by the Board of County Commissioners.

(2) *Enforcement and Penalties.*

- (a) A violation of any provision of this Article shall be processed according to Chapter II, Article VIII of the Sarasota County Code of Ordinances and per provisions of the Florida Statutes Chapter 162. Each day of any such violation shall constitute a separate and distinct offense.
- (b) The Administrator may require corrective actions, including but not limited to, Restoration of any native habitats impacted as a result of the violation activities. The Administrator may also require monitoring in accordance with the standards established within the Land Development Regulations.
- (c) Administrative costs and penalties collected as part of enforcement of this Article shall be placed in the Sarasota County Pollution Control Recovery Trust Fund, as established in Resolution No. 91-360.
- (d) Notwithstanding any other provisions of this Article for enforcement or penalties, the Board may also enforce this Article by actions at law or in equity for damages and injunctive relief. In the event the Board prevails in any such action, the Board shall be entitled to an award of its costs.

(3) *Enforcement of Code by other means.* 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.

Sec. 54-660. 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) *Black mangroves.* Availability of healthy black mangroves is limited.
 - a. Minimum one-gallon plants on two-foot centers.
- (3) *Red mangroves, white mangroves, green buttonwoods.* Availability of red and white mangroves may be seasonally limited.
 - a. Three-gallon at three-foot centers.
 - b. Seven-gallon at five-foot centers.
- (4) *All herbaceous.* One-gallon at two-foot centers.
- (5) *Shrubs.*
 - a. One-gallon at three-foot centers.

- b. Three-gallon at five-foot centers.
- (6) *Upland trees*. Three-gallon at ten-foot centers (with understory); eight-foot centers in areas without understory.
- (7) *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 plants shall be from nursery stock. Receipts from plant supplier may be requested.

Sec. 54-661 Appendix II, Permit Stipulations and Conditions.

All permits shall be issued with the stipulations and conditions of Section 54-661(1) and (2), and other relevant subsections of 54-661 below as they pertain to the scope of work to be performed.

- (1) *Standard stipulations for all permits*.
 - (a) By accepting the permit, the Applicant(s) hereby accept(s) all stipulations and conditions herein and agree(s) to abide by them.
 - (b) The permit authorizes the named owner(s) to perform the proposed work. Should the property change ownership prior to commencement of construction, the new property owner(s) must provide the Administrator with a written request to transfer the permit to their name prior to commencing construction.
 - (c) A copy of the permit (containing the approved stamped plans) shall be located on-site throughout the entire operation at a visible and readily accessible location to the shoreline area.
 - (d) All work must be as shown on the approved plans attached and within the stipulations and conditions of the permit.
 - (e) All permits are conditioned upon the prohibition of propeller Dredging. Propeller scour of the submerged bottom is a violation of County, State, and Federal laws and is punishable as provided therein.
 - (f) No commercial and/or revenue-generating activities are allowed at the structure and/or within the Mooring Area(s), unless authorized by the Zoning Code.
 - (g) Storage facilities shall not be located on the structure or over the water. All storage boxes shall be located on dry uplands and not within or over Wetlands.
 - (h) Authorized work under this permit must be commenced within six months from the date of issuance. Authorized work under this permit shall be completed within one year from the date of issuance. In the event the proposed work is not commenced or completed within said periods, or an extension has not been granted by the Administrator, reapplication shall be made to the Authority. One or more extensions of time for periods of not more than 90 days each may be allowed by the Administrator, provided the extension is requested in

writing and justifiable cause is demonstrated.

- (i) The Applicant(s) shall hold and save Sarasota County and its staff harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted structure.
- (j) This permit does not convey to the owner(s) or create for the owner(s) any property right or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the owner(s) or convey rights or privileges other than those specified in the permit and in accordance with Chapter 54, Article XX, of the Sarasota County Code.
- (k) If evidence of the existence of historical resources is discovered or observed at development sites or during development activities after final approval, all work shall cease in the area of effect as determined by the Director of Sarasota County Historical Resources. The developer, owner(s), contractor, or agent thereof shall contact Sarasota County Historical Resources within two working days. Examples of evidence of historical resources include whole or fragmentary stone tools, shell tools, aboriginal pottery, historic glass, bottles, and building foundations, bone tools, shell mounds, shell middens, and sand mounds. The Director of Sarasota County Historical Resources shall assess the significance of the findings and mitigate any adverse effects as soon as possible but not later than within three working days of notification.
- (l) If any human-skeletal remains or associated burial artifacts are discovered at development sites or during development activity, all work in the area shall cease and the owner(s) (or designee) shall contact the nearest law enforcement office and Sarasota County Historical Resources. According to Chapter 872, Florida Statutes, it is unlawful to disturb, vandalize, or damage a human burial site.
- (m) Trimming and alteration of mangroves shall be consistent with the provisions of the Mangrove Trimming and Preservation Act, Section 403.9321 through 403.9332, Florida Statutes. Any red (*Rhizophora mangle*), black (*Avicennia germinans*), and white (*Laguncularia racemosa*) mangrove trimming beyond that associated with this permit requires a permit from the Florida Department of Environmental Protection.
- (n) Impacts to Listed Species are not authorized by this permit. These Listed Species may include, but are not limited to, Manatees, Florida Scrub Jays, Bald Eagles, Sherman's Fox Squirrels, Burrowing Owls, Gopher Tortoises, Gopher Frogs, and Eastern Indigo Snakes. This protection extends to the nests and burrows utilized by these species. If evidence (e.g., burrows, nests, scat, tracks) of a Listed Species is discovered or observed prior to or after the commencement of clearing of vegetation or earthmoving, that may not have been identified or observed prior to the issuance of this permit, all clearing and earthmoving on-site shall cease. The permittee shall consult with the Florida Fish and Wildlife Conservation Commission and/or the U.S. Fish and Wildlife Service regarding necessary protection measures and provide written evidence of such consultation to Sarasota County prior to resuming work.
- (o) The issuance of a Sarasota County Water and Navigation Control Authority permit does not relieve the owner(s) from any other permitting requirements of the U.S. Army Corps of Engineers, the Florida Department of Environmental Protection, or any other concerned

local, State, or Federal agencies, where applicable.

- (p) The proposed activities shall not cause shoreline erosion, unreasonable interference with navigation, nor poor water quality.
- (q) The authorized work and protected shoreline shall be properly maintained in good condition so as to create no hazard or nuisance to surrounding properties or the public at large. Permits may be required for this maintenance.
- (r) Following completion of all authorized work, the permittee or contractor shall provide written certification and as-built plans to the Authority that the structures or other alterations have been completed in accordance with the authorized plans.
- (s) All permit stipulations and conditions herein shall remain in effect throughout the life of the subject structures.
- (t) Failure to comply with any stipulation or condition of this permit shall constitute a violation of Chapter 54, Article XX, of the Sarasota County Code and shall be punishable as provided therein.

(2) *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:

- (a) The permittee will instruct all personnel associated with the proposed work 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.
- (b) 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.
- (c) All 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.
- (d) 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.
- (e) 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.
- (f) 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 work area/docking facility prior to initiation of the authorized work.
- (g) 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.

- (3) *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 permits, the following best management practices for control of erosion, siltation and turbidity shall apply, when determined to be practical by the Administrator:
- (a) All fill utilized shall be free of debris and compatible with the existing soil.
 - (b) 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 ensure that all preliminary Dredging procedures (i.e., installation of Turbidity Curtains, barriers, erosion control devices, dewatering site, etc.) have been properly followed.
 - (c) 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.
 - (d) 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.
 - (e) 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.
 - (f) 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.
- (4) *Stipulations and Conditions for Shoreline Protection Structure permits.*
- (a) Rock revetments shall be no steeper than two feet horizontal to one foot vertical (2'H:1'V). The slope shall be continuous to the top-of-bank.
 - (b) Clean, local, quarry rock shall be used in construction of rock revetments. Filter cloth shall be used beneath the entire length of the revetment.
 - (c) No concrete, or rubble, shall be used in the construction or maintenance of the rock revetment. The use of this material is a violation of Sarasota County Code, Chapter 54, Article XX, and is punishable as provided therein.
 - (d) The waterward toe of a new Shoreline Protection Structure shall be located landward of the Mean High Water Line (MHWL) and all Wetland vegetation.
 - (e) If any fill is utilized to back fill the Shoreline Protection Structure, it shall be free of debris and compatible with the existing soil.
 - (f) Some seawalls have tested positive for asbestos fiber. For repair and replacement projects, a licensed asbestos consultant should perform a test for the presence of asbestos. Owners

and contractors are herein advised that the improper handling and disposal of asbestos containing material may be a violation of Environmental Protection Agency, Occupational Safety and Health Administration, and Department of Business and Professional Regulation standards. Contact one of these agencies for further information regarding the proper handling and disposal of materials that contain asbestos.

(5) *Stipulations and Conditions for Maintenance Dredge permits.*

- (a) Dredging shall be as shown on the approved plans attached and within the stipulations and conditions of this permit.
- (b) The permit authorizes a one-time, Maintenance Excavation event. All future Maintenance Excavation events require a new permit.
- (c) All operational procedures used during the dredging event shall be subject to approval by Sarasota County Resource Protection. Methodology used during the course of the dredging operation deemed inadequate in minimizing environmental impacts will be subject to immediate change upon request by Resource Protection staff.
- (d) Prior to Dredging, a professional surveyor registered in the State of Florida shall establish a Dredging benchmark (referenced to elevation NGVD) adjacent to the dredge site waters. A benchmark location map and supporting elevation information shall be provided to Resource Protection staff prior to Dredging. This benchmark shall be utilized by the contractor to establish excavation depths and shall be:
 - (1) clearly marked;
 - (2) accessible from land and boat; and
 - (3) established at a location that can be utilized to reference the water surface elevation during tidal extremes anticipated during the Dredging.

Failure to meet the above-listed benchmark siting requirements may necessitate the installation of a new benchmark.

- (e) The Sarasota County Resource Protection office shall be notified 48 hours prior to commencing the Dredging operation. At that time, Resource Protection staff will arrange an on-site inspection to ensure that all preliminary Dredging procedures (i.e., installation of Turbidity Curtains, barriers, erosion control devices, dewatering site, etc.) have been followed properly.
- (f) Two rows of Turbidity Curtains shall be used during the entire Dredging operation. These curtains shall surround the activity, shall be staked in place, shall reach the submerged bottom at all times, and shall be flush against the shoreline for a minimum of ten feet.
- (g) A row of hay bales and a silt fence shall be placed along the top of the bank in all areas where spoil transference from the waterway to the spoil disposition area will occur (i.e., to minimize soil from reentering the waterway).
- (h) Turbidity monitoring stations shall be established in the vicinity of the Maintenance Excavation event, as shown on the approved plans.

- (i) Monitoring for turbidity, as measured in Nephelometric Turbidity Units (NTU), shall be conducted for the duration of the project. Sampling will commence at the initiation of Dredging activities and continue at two-hour intervals until the project is completed. Samples will be collected from mid-depth above the submerged bottom. Sampling will be restricted to the axis of the visible plume. If no plume is visible, samples will be collected at the intersection of the mixing zone boundary and a line parallel with the water current and extending from the source of turbidity.
- (j) A background turbidity monitoring site shall be marked by a temporary buoy and shall be maintained for the duration of the sampling program.
- (k) Turbidity monitoring sites shall not be changed without specific written permission from the Sarasota County Resource Protection office.
- (l) Monitoring station data shall be submitted on a daily basis to Sarasota County Resource Protection, during all Dredging activities.
- (m) All samples shall be analyzed by using a turbidity meter. Collected samples must be analyzed immediately. The following information must be recorded for each sample taken and submitted in a Monitoring Report:
 - (1) Site number;
 - (2) Recorded turbidity measurements (NTU);
 - (3) Dates and time of day when the sample was collected;
 - (4) Total depth and sample depth;
 - (5) Antecedent weather conditions, including wind direction and velocity; and
 - (6) Tidal stage and/or flow direction.
- (n) In addition to the above-mentioned information, each Monitoring Report must also include the following:
 - (1) A statement of methodology including types of sampling equipment and analytical instrumentation, preservation, and handling;
 - (2) Water and Navigation Control Authority Permit Number;
 - (3) A map indicating numbered locations of all sampling sites;
 - (4) Copies of the Quality Assurance/Quality Control log; and
 - (5) The printed name, address, and telephone number of the lab and/or person(s) conducting the monitoring.
- (o) The owner shall comply with the following Quality Assurance/Quality Control requirements for each sample collected:
 - (1) All turbidity analysis shall be performed on instruments approved by this office;
 - (2) The instrument must be recalibrated after a maximum of ten analyses and/or after every time the instrument has been turned on;
 - (3) A duplicate analysis must be performed for all single samples analyzed. A minimum of one duplicate analysis must be performed for every ten samples analyzed;
 - (4) Calibrations must be performed against a fixed standard and a prepared standard and must follow a zero adjustment against a blank;

- (5) All calibration procedures must be recorded in a permanent log book and copies must be submitted with the data; and
- (6) Date and time of collection, date and time of analyses, warm-up time, and the printed name of the analyst must be included in the log.
- (p) Should monitoring reveal that the reading of the station immediately outside the turbidity curtains exceeds the background station reading by 29 NTU, then all dredging activities associated with the issuance of the permit shall cease immediately. Corrective measures must immediately be taken to rectify this problem (i.e., ensure that Turbidity Curtains are installed properly and are functioning correctly). Any such occurrence shall be reported immediately to the Sarasota County Resource Protection office.
- (q) Turbidity Curtains shall not be removed until approved by Sarasota County Resource Protection.
- (r) Pursuant to Chapter 62-701.200(37), Florida Administrative Code (F.A.C.), any hazardous waste which is intended to be disposed of by land disposal or incineration and which can be reasonably expected to create a condition harmful to human health or air or water quality shall, at the owner(s) expense, be rendered non-hazardous prior to delivery to a disposal facility. Hazardous waste shall be defined as contained within Chapter 62-730.020 of the F.A.C.
- (s) All dredge spoil shall be legally disposed of at a facility authorized to accept this type of material. Documentation of disposal (e.g., a ticket, invoice) shall be provided to Resource Protection for the entire amount of dredge material disposed within 30 days of completing Dredging activities. If an alternate disposal site is desired, written approval shall be obtained from Resource Protection staff prior to spoil disposal in order to ensure consistency with the Sarasota County Earthmoving Code, Chapter 54, Article XII.
- (t) A post-dredging survey, certified by a registered professional surveyor or engineer, shall be provided by the owner(s) within thirty days following the completion of Dredging. Bottom elevations, contours, and slope of the entire area dredged shall be included on this survey. Bottom elevations shall be stated in relationship to mean low water. The survey shall be submitted to the Sarasota County Resource Protection office.

Sec. 54-662. Appendix III, 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:

[Legal Description and Property Identification Number]

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 *The 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. _____, 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.

Date

Owner

