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EXECUTIVE SUMMARY

Background

Charlotte County faces a major planning dilemma: how to balance population growth and coastal development with conservation and management of its estuarine resources. The county is a microcosm of Florida, which between 1960 and 1991 had the fastest growing coastal population (169 percent) of the Lower 48 states. The 1995 county population was 130,397. With a projected average annual increase of 4,263 persons, Charlotte County's population will grow to 198,600 in 2010 and 243,800 by the year 2020.

Boating is a key element of the coastal lifestyle and growth phenomenon. While the nation's boating population doubled between 1973 and 1989, it tripled in southwest Florida. The 1992 Charlotte County boat population was 13,876. The number of boats is projected to increase to 43,103 by the year 2010. This will place increasing pressure on existing boating facilities and will call for thoughtful planning to accommodate the projected increase.

A county-wide marine, land and water use siting study was undertaken in 1991. In part because of concerns about these dramatic changes, this study also addressed the need to provide for adequate future public access to the shore and water, maintenance of existing navigation, land-side infrastructure and zoning to support marine uses, and adequate standards for public boat ramp access, marina wet slips and dry storage. The study results provide Charlotte County with a planning instrument that specifies the type, quantity and location of public shore access and boating facilities (marinas, ramps, docks) needed to meet anticipated demand through the year 2010.

Specific study elements include: (a) a profile of supply-demand characteristics of boaters; (b) an inventory and mapping of current land-side infrastructure and water access; (c) a suitability evaluation of potential sites to expand marinas, ramps and docks to meet anticipated boater demands; (d) identification of regulatory policies that affect development, use and protection of the county's marine resources, and assessment of current regulatory limits to permit water-dependent and water-related uses; (e) an evaluation of preferred taxation strategies to provide public access to bay waters; and (f) recommendations of changes to the county comprehensive plan to accommodate water-dependent and water-related uses. The results, summarized below, should assist Charlotte County in determining: (1) how to achieve sustainable coastal development; (2) how to guide future uses along its shoreline; and (3) how to prioritize water-dependent and water-related activities in marine use areas

Boating Access: Demand and Supply

Charlotte County has experienced substantial growth in boat registrations (79 percent) from 7,735 in 1981 to 13,876 in 1991. During this 11-year period, Florida's boat population grew by 42 percent, from 480,384 to 683,780. The demand for boating facilities increased at a much greater rate within Charlotte County than elsewhere in the state. Furthermore, the county rate of growth between 1981 and 1991 was substantially greater (by orders of magnitude) in several length classes: <12' class [2x], 26<40' class [3x], ≥40' class [5x].

Projected personal income and population growth will increase Charlotte County boat registrations by 211 percent between 1991 and 2010. The largest percent changes are: 663 percent (from 1,238 to 9,448) for 26<40' boats; 534 percent (from 1,154 to 7,311) for <12' class (probably indicating continued growth of personal watercraft), and 489 percent (from 186 to 1,096) for boats \geq 40' in length. There will be a proportionally greater number of larger boats in the coming years. Larger boats have a greater potential to impact shallow seagrass beds and erode adjacent shorelines.

County boaters gain access to the water from marinas, ramps and private docks. Over half (57 percent) rely on private docks; only 36 percent use ramps and 7 percent use marinas. Ramp use in the county is about half the rate for Florida.

The 26 public and private marinas in Charlotte County in 1991 included 2,497 slips/racks; 47 percent were wet slips. The initial demand should be satisfied without additional supply, given that there are 485 vacancies in the baseline year (1991). By the year 2000, 494 new slips will be needed, assuming all present excess capacity is used. By 2010, existing capacity must more than double – from 2,497 in the base period to 5,918 (i.e., 2,497 plus 3,421). This represents an increase of 137 percent. There is an increase in wet slip use over the period which reflects increases in boat length and per capita income. Tourists/transients represent 32 percent of demand; the ratio of tourist to resident demand is implicitly held constant throughout the projection period.

There were 35 boat lanes in the county in 1991 (a ramp may have more than one lane). Peak demand/day was not satisfied in 1995 when peak demand exceeded supply by 10 percent – at that time, 4 additional lanes were needed. There is a projected need for an additional 51 lanes by the year 2010.

Over 57 percent of Charlotte County registered boaters berth their vessels at private docks behind single family residences or as part of multi-family residences (i.e., with riparian rights). The 1992 inventory of salt-water accessible parcels identified a total supply of 26,531 residential and vacant parcels in the county (12,290 residential and 14,241 vacant) where private docks exist or potentially could be located. Charlotte County is using only 35 percent of its stock of potential private dock sites (assuming there are no environmental constraints). Ninety-two percent of the available stock will be utilized by the year 2010.

The distribution of boat trip origins in Charlotte County (1993) is as follows: trips from docks account for 57 percent; ramps, 36 percent; and marinas, 7 percent. The principal origins for *all* recreation boat trips in Charlotte County are: Punta Gorda (28 percent), Port Charlotte (22 percent), Lemon Bay to Gasparilla Sound (20 percent), Peace River (14 percent), and South Gulf Cove and Myakka River locations (8 percent). The principal trip originating locations for boaters coming from private docks is Punta Gorda (41 percent). For ramp originating boat trips, it is the Peace River (26 percent). Over 65 percent of marina originating trips are in the Lemon Bay to Gasparilla Sound area.

The overall distribution of boat trip destinations in Charlotte County (1993) is as follows: the principal destination is Charlotte Harbor (43 percent), followed by the Gulf of Mexico (20 percent), Lemon Bay (12 percent), and the Peace River (10 percent). While the Gulf of Mexico is the second most important destination for boat trips originating from private docks and marinas, Lemon Bay is the second most important destination for ramp boaters. The Peace River is another key destination for private dock and ramp boaters, but it is unimportant for marina boaters.

Boating Resource Geographic Information System (GIS)

This system allows for the capture, storage, integration, analysis, and display of mapped boating information. It is based on data collected by diverse federal, state and county agencies about marine use siting features and related uses on all 30,564 salt-water accessible parcels in Charlotte County, which occur on the ground or in adjoining bay waters.

A regional assessment of boating infrastructure and marine resources divides Charlotte County into five areas: Zone 1 (Lemon Bay to Gasparilla Sound, 12 percent of salt-water parcels); Zone 2 (South Gulf Cove and El Jobean, 24 percent); Zone 3 (Port Charlotte West of US 41, 19 percent); Zone 4 - (Peace River upstream from the US 41 bridge to DeSoto County boundary, 19 percent); and Zone 5 - (Punta Gorda Isles, Alligator Creek and Pirate Harbor, 26 percent).

1. **Land Use and Land Cover (LULC)**. County-wide, almost half (47 percent) of all salt-water accessible parcels are vacant, another 40 percent are residential, 11 percent have some development constraint, and, 2 percent are either commercial, industrial, public, agricultural, submerged or parcelette.

There is considerable variability in LULC between the average county distribution and those within the 5 zones. Some noteworthy examples are:

- (a) **Zone 1 (Lemon Bay to Gasparilla Sound)** - higher proportion of residential use (55 percent), lower of vacant condition (28 percent) and lower of development constraint (8 percent);
- (b) **Zone 2 (Gulf Cove/El Jobean)** - considerably lower proportion of residential use (14 percent), much higher of vacant condition (82 percent) and lower with development constraint (3 percent);
- (c) **Zone 3 (Pt. Charlotte)** - high in residential use (61 percent), lower of vacant (37 percent) and much lower (< 1 percent) with development constraint;
- (d) **Zone 4 (Peace River)** - lower both in residential use and vacant (26 and 23 percent) and much higher (49 percent) with development constraint;
- (e) **Zone 5 (Punta Gorda)** - close to the county average in residential use and vacant condition (54 and 46 percent) but much lower (< 1 percent) in development constraint.

The other two percent of Charlotte County's salt-water accessible parcels are in commercial, industrial, public, agricultural, submerged and parcelette use or cover. Zone 1 has the greatest proportion of these other uses and land covers. The Peace River (Zone 4) has the second largest concentration.

2. **Boat Docks**. There were 12,070 boat docks (1992) in Charlotte County distributed on 9,304 parcels. Docks are situated on residential (88 percent), commercial (8 percent) and vacant (4 percent) lots. Ninety-six percent of all salt-water parcels with docks are in residential use; this ranges from 70 to 99 percent across the zones. There is a much wider variation in the distribution of commercial and vacant parcels with docks across the zones. Examples include:

- (a) **Zone 1 (Lemon Bay to Gasparilla Sound)** - more than double the county average on a percentage basis (commercial docks and vacant parcels with docks);
- (b) **Zone 2 (Gulf Cove/El Jobean)** - no commercial docks and negligible (<1 percent) vacant with docks;
- (c) **Zone 3 (Pt. Charlotte) and Zone 5 (Punta Gorda)** - about half the county average of commercial docks and negligible (<1 percent) vacant with docks.

The highest concentrations of boat docks are situated in the following locations:

- (a) **residential docks** - Zone 5 (Punta Gorda, 42 percent), Zone 3 (Pt. Charlotte, 24 percent), Zone 1 (Lemon Bay to Gasparilla Sound, 21 percent);
- (b) **commercial docks** - Zone 1 (Lemon Bay to Gasparilla Sound, 58 percent), Zone 5 (Punta Gorda, 23 percent);
- (c) **vacant parcels with docks** - Zone 1 (Lemon Bay to Gasparilla Sound, 73 percent).

The relation of parcels with docks to the total number of salt-water accessible parcels shows that the zones fall into two parcel groups: (a) Zones 2 (Gulf Cove) and 4 (Peace River) where ≤ 10 percent have docks; and (b) Zones 1,3 and 5, where 45-50 percent have docks.

3. Road Access. Seventy-eight percent of the salt-water accessible parcels have local road access; 14 percent have no road access, and 8 percent are adjacent to urban/rural collectors. An exception to these conditions is Zone 4 (Peace River) where these conditions are reversed: 79 percent of the parcels have no road access and 10 percent are adjacent to local roads. This exception is due to the large concentration of development constraint, submerged and agricultural parcels situated along the Peace River.

4. Water Service Line. Seventy percent of all salt-water accessible parcels have access to county or municipal water service lines, while 30 percent have no potable water supply. Major exceptions to average conditions are: Zones 2 (Gulf Cove) and 4 (Peace River) where approximately 50 and 70 percent of the parcels have no water service lines. As a general rule, the more urbanized the location, such as Zones 3 (Pt. Charlotte) and 5 (Punta Gorda), the higher the percent with a larger main size.

5. Central Sewer. Only 41 percent of the parcels have central sewer service. There are wide contrasts across Charlotte County in the distribution of this service, ranging from Zone 5 (Punta Gorda) with 83 percent having central sewer connections, Zone 3 (Pt. Charlotte) with 55 percent, Zone 2 (Gulf Cove) 29 percent, Zone 1 (Lemon Bay to Gasparilla Sound) 14 percent, and Zone 4 (Peace River) 3 percent.

6. Boat Access. This feature refers to improved (dredged) and unimproved (natural) water-side conditions at the parcel location. Eighty-two percent of the county's salt-water accessible parcels have improved boat access. Over half (52 percent) of the improved access is associated with vacant parcels; another 45 percent is associated with residential use. Ninety-three percent of unimproved boat access is found equally divided among residential,

vacant, and development constraint type parcels. The highest concentrations of residential parcels with improved boat access are found in Zone 5 (Punta Gorda) 37 percent and Zone 3 (Pt. Charlotte) 31 percent. The highest concentration of vacant parcels with improved boat access are found in Zone 2 (Gulf Cove) 46 percent. There are 1,084 parcels with development constraints that have improved or unimproved access. There are 24 percent with improved access. The 76 percent with unimproved access are situated primarily along the Peace River in Zone 4.

7. Water Depth. This feature refers to shallow (< 3 ft.) and deep (\geq 3 ft.) water depth adjacent to the parcel location; it does not account for access channel depths. Almost two-thirds of the parcels are adjacent to water with a \geq 3 ft. depth. Ninety-eight percent of these parcels are vacant (56 percent) and in residential use (42 percent). Most of the zones parallel the county average although a noteworthy exception is Zone 2 (Gulf Cove) where 90 percent of the parcels with \geq 3 ft. water depth are vacant. The largest concentration of shallow water (< 3 ft. depth) parcels is found in Zone 4 (Peace River) 46 percent.

8. Wetlands. Approximately 9 percent of all parcels contain some wetland; two-thirds are located in Zone 4 (Peace River) and another 21 percent are in Zone 1 (Lemon Bay to Gasparilla Sound). Seventy-nine percent are found on parcels with development constraints and 16 percent on vacant lots. Over half of the residential parcels and half of the vacant parcels with wetlands are situated in Zone 1.

9. Aquatic Preserve (AP). Only 7 percent of the parcels are adjacent to aquatic preserves: 4 percent in Lemon Bay AP, and 3 percent in Gasparilla Sound/Charlotte Harbor AP. In Zone 1, all of the salt-water accessible parcels are adjacent to APs: 87 percent are in residential and vacant LULC. Charlotte Harbor AP covers parcels in Zone 1 (Lemon Bay to Gasparilla Sound), Zone 3 (Pt. Charlotte) and Zone 5 (Punta Gorda): 37 percent are residential, 26 percent are vacant, and another 25 percent have development constraints. Most canal developments – Grove City (Zone 1), South Gulf Cove (Zone 2), Manchester Waterway (Zone 3), Palm Shores (Zone 4), Pirate Harbor (Zone 5) – are situated outside the aquatic preserve boundaries. However, boats from these canal-front waterways must traverse AP submerged lands to gain access to boating and fishing waters.

10. Seagrass. Zone 1 (Lemon Bay to Gasparilla Sound) contain extensive seagrass beds (with the exception of the central bay north of the Tom Adams bridge, Peterson Channel, Stump Pass channel and the Intracoastal Waterway). Boat traffic in Lemon Bay, outside the natural and dredged channels, cannot avoid impacting on these beds. The county's seagrasses in Charlotte Harbor are situated as fringes along the east, west and north shores. Boat traffic impact in these Charlotte Harbor areas is limited predominantly to vessels entering and exiting from canal-front developments en route to the harbor's deep water, and fishermen plying the beds for trout, redfish and other game fish.

11. Manatees. Information on the distribution of manatees is provided to the Board of County Commissioners (BCC) as a general tool for planning and managing public boating access in Charlotte County. The presence and density of manatees should be taken into consideration by the BCC and County Marine Advisory Committee in determining whether and where slow speed and/or manatee protection zones may be needed.

Site Suitability Analysis

The suitability analysis rates parcels as future sites for marinas, boat ramps or private docks. The methodology consists of a point system which scores parcel attributes. A development suitability rating (Preferred Water-Dependent Use, or PWDU) is assigned to each candidate parcel. This rating, for marinas and ramps, is based on an evaluation of developmental and environmental criteria, including vacant adjoining parcels, acreage, land use, land-side infrastructure (water, sewer, road), aquatic preserve, wetland, seagrass, water depth adjacent to the parcel, and boat access. Sites with a cumulative low point score for environmental and developmental parameters are considered poor candidates for intensive uses, such as sport and industrial marinas, commercial docks and waterfront hotels (PWDU I). They may be considered adequate, however, for less intensive uses, including boat ramps, waterfront restaurants and residential developments (PWDU II). The environmental suitability evaluation of private docks on residential and vacant parcels is based on presence of wetlands, access (dredged channel), location adjacent to an aquatic preserve, and water depth. Dock construction should be discouraged at sites with high environmental impact scores.

1. Marinas. There are 20 public access marinas (1991): 15 have vacant adjacent parcels, 3 contain areas of wetland, and 9 are located near seagrass. The analysis indicates 2 marinas with good, 7 with fair, and 11 with poor PWDU ratings. There are 20 vacant parcels that are potentially suitable for new marina development and all 20 parcels receive PWDU ratings of fair and good.

Charlotte County has a projected need for an additional 1,697 wet slips and 1,724 dry stack storage spaces by the year 2010. The county's ability to meet these demands is based on available acreage of suitable sites. It is estimated that Charlotte County needs 67 acres: 29 acres will be required for dry facilities and 38 acres for wet slips (estimates are based on 45 boats per acre for wet slips, and 60 boats per acre, assuming 3 stacks of 20 boats each, for dry storage).

There is less than 1 acre available for wet and dry slips by expanding existing marinas on vacant adjacent parcels. Using the criteria provided in this study, there are an additional 107 acres available for new marinas. There is a surplus of 41 acres for marina development (107 acres available minus 67 acres needed).

Port Charlotte (Zone 3) has the greatest potential to satisfy future marina needs (up to 3,420 wet slips or 4,560 dry slips). Marina expansion in the Punta Gorda Isles region (Zone 5) potentially could accommodate up to 1,200 dry storage or 900 wet slips. Space for an additional 450 wet or 600 dry slips may be available in the South Gulf Cove / El

Jobean area (Zone 2). Conversely, shortfalls in acreage may occur from Lemon Bay to Gasparilla Sound (Zone 1) and the Peace River (Zone 4).

2. Private Dock Sites. There are currently 26,531 residential and vacant salt-water accessible parcels, 17,320 *with no docks* (65 percent) and 9,211 (35 percent) *with docks*. The *with no dock* category has 16,220 parcels with low environmental impact, 696 medium impact parcels, and 404 parcels where new docks would have a potentially high environmental impact. The greatest number of the high impact parcels are located between Lemon Bay and Gasparilla Sound (304, or 75 percent). The *with dock* category has 8,819 parcels of low environmental impact, 262 medium impact parcels, and 130 with a high impact. The greatest number of medium and high impact parcels (158, or 60 percent) are also located between Lemon Bay and Gasparilla Sound.

3. Boat Ramps. The Spring Lake and Port Charlotte Beach sites are the only existing ramp locations that have adjacent vacant parcels. The Spring Lake and Lashley Park sites are the only ones with a good PWDU rating. There are 5 public parcels that are potentially suitable for boat ramps; 4 of these locations have vacant adjacent parcels. There are 30 non-public parcels potentially suitable for new boat ramps.

Charlotte County has a projected need for an additional 51 ramp lanes by the year 2010. Its ability to meet this demand is based on available acreage of suitably rated sites. It is estimated that Charlotte County needs 17 additional acres (based on 24 boats/lane/day average use and .34 acres of parking space per user). Existing publicly-owned acreage (14 acres) could potentially satisfy a portion of the future boat ramp needs (on-site inspection is needed to determine the footprint of existing buildings and infrastructure and estimate build-out potential). Other sources are the 30 non-public parcels (193 acres) and public right-of-way access points, such as dead-end streets that front on the water. The combined acreage of selected public and non-public parcels suitable for boat ramps greatly exceeds the projected need for 17 acres and provides the county with great flexibility in the selection of appropriate locations for future ramps.

4. Regional Distributions of Supply and Demand. The analysis of supply of suitable (PWDU) sites and anticipated future demand of 5,918 marina wet and dry slips indicates anticipated regional disparities within Charlotte County: greatest differences occur in Port Charlotte (Zone 3) where supply exceeds demand, and from Lemon Bay to Gasparilla Sound (Zone 1), where demand exceeds available sites. Comparisons of anticipated demand for private docks with suitable dock sites show that the available stock will meet or exceed demand estimates for all zones but the Lemon Bay to Gasparilla Sound area. The ramp supply-demand analysis shows sufficient available sites in all areas with the exception of Zone 4 (Peace River).

Marine Use Regulations

The *Florida Administrative Code* (Rule 9J-5.012[3]) directs coastal counties to adopt objectives and policies within the coastal management elements of their comprehensive plans which: prioritize shoreline uses, giving priority to water dependent uses; increase the

amount of public access to the beach or shorelines consistent with estimated public needs; establish performance standards for shoreline development; and establish criteria for marina siting. Further, these objectives and policies must address land use compatibility, availability of upland support services, protection of water quality, availability of public use, economic need and feasibility, and water depth. Finally, the rule provides that local governments in coastal areas which participate in a county-wide marina siting plan must include the plan as part of their coastal management elements.

Planning is one way in which local governments in Florida may achieve these policy objectives. This Marine Land and Water Use Siting Study was undertaken in fulfillment of the policies of the 1988 Charlotte County Comprehensive Plan which itself was done in compliance with Chapter 163 and Rule 9J-5 as amended in 1985 following the Environmental Land Management Study (ELMS II). The Future Land Use Map (FLUM) is the visual representation of the Comprehensive Plan; FLUM contains "overlay districts" intended to provide additional guidance for land use activities. The establishment of zoning districts is another tool available for local governments to implement public land use policy. Regulation, such as the establishment of buffer zones between surface waters and wetlands and development activities, is also used to protect marine resources.

The Preferred Water-Dependent Uses (PWDUs), designated in this study, are consistent with the Resource Protection Areas (RPAs) which occur in the Lemon Bay Aquatic Preserve Management Plan. PWDUs are established using a point matrix which takes into consideration both water-side and land-side environmental and developmental constraints. This matrix does not consider zoning or land use classifications as it is assumed that the Zoning Atlas and FLUM may be amended if a PWDU's underlying zoning and land use designations conflict with a proposed water dependent use. Two such designations have been defined as non-exclusionary overlay districts within which water-dependent uses and structures in Charlotte County should be allowed:

- (I) all types of marinas, including the provision of dry-stack facilities; boat ramps; commercial docks; yacht clubs; moorage for waterfront hotels, motels, dockminiums, and restaurants; boat repair yards; piers; and all other water-dependent uses; and
- (II) commercial and public boat ramps; piers; moorage for waterfront restaurants and business other than marinas; multi-slip docking facilities for residential developments for which the number of slips may not exceed the number of dwelling units.

Land Use Incentives

There are several "preferred taxation" (*blue-beltting*) strategies by which marina facilities may remain in private ownership yet continue to provide public access to bay waters. They include (along with their estimated cost): preferential property tax incentives (\$249,285/year); deferred taxation (\$47,915/year, 6-year period with roll-back and no interest penalty); restrictive agreements (\$299,850/year); exclusive water-dependent zoning (\$0 for without preferential assessment, \$249,285/year with preferential

assessment); and purchase of development rights (\$18,681,090, one-time purchase from all facilities in 1993); the dollar amounts represent 100 percent participation of marinas at the time of this study.

The use of "preferential property tax assessments" – based on a use-value assessment of marinas and other public access, water-dependent facilities – is the method by which Charlotte County may provide an economic incentive for the owners of existing marine-dependent properties to retain their properties in such uses. The "assessed value" formula (profit before taxes ÷ capitalization rate) may be modified by the Charlotte County Property Appraiser to better fit existing assessment methods. While this method does not provide the same level of assurance as does exclusionary zoning or restrictive agreements, the potential legal and political difficulties associated with the former and the perceived reluctance of property owners to enter into the latter suggest that "preferential property tax assessments" may be the best current method available to Charlotte County, to maintain public boating access and infrastructure on existing marine-dependent properties through the year 2010.

Charlotte County may use "restrictive agreements" with the owners of vacant properties to forego development which does not provide public boating access on Preferred Water-Dependent Parcels (PWDUs). In return, the subject property's value would be assessed as being placed under restrictions for use as outdoor recreational or parks purposes. In order to avoid exploitation, as land-banking, such agreements should contain rollback provisions which require the payment of taxes withheld, should the property be developed in a manner which does not provide public access. These restrictive agreements, furthermore, should be made non-transferrable in order to prevent individuals from entering agreements solely to benefit from reduced taxes.

Conclusions

This marine, land and water use siting study was undertaken in fulfillment of the policies of the 1988 Charlotte County Comprehensive Plan. It is anticipated that the results will be incorporated – in whole or in part – into the 1997 Comprehensive Plan currently under consideration by the Board of County Commissioners for transmittal to the Florida Department of Community Affairs.

Charlotte County's 250 miles of navigable canals and access channels link its 30,564 salt-water accessible parcels with Charlotte Harbor, Lemon Bay and the Gulf of Mexico. The number of boats grew by 79 percent from 1981 to 1991; within county boat registrations are projected to grow, by 211 percent between 1992 and 2010. There will be a 664 percent increase in larger, deeper draft boats which will: (a) influence boater choice in selecting wet slip, dry storage, ramp, or private dock; and (b) require deeper water depths in selected entrance channels and slip locations.

There are disparities within Charlotte County in the distribution of suitable sites (acreage) which can be used to meet anticipated year 2010 needs for marina, ramp and private dock facilities. Based on estimated trends in the number and size of boats from 1991 to the year 2010, the regional supply-demand scenario for Charlotte County is:

Lemon Bay to Gasparilla Sound (Zone 1): shortfall in marina acreage (-71); shortfall in residential and vacant parcels (-4,495); excess in ramp site acreage (+1).
South Gulf Cove and El Jobean (Zone 2): marginally adequate marina acreage (0 balance); excess in residential and vacant parcels (+5,713); excess in ramp site acreage (+13).

Port Charlotte West of US 41 (Zone 3): excess in marina acreage (+76); excess in residential, vacant parcels (+1,882); excess in ramp acreage (+61).

Peace River Upstream from the US 41 Bridge to the DeSoto County Line (Zone 4): shortfall in marina acreage (-3); excess in residential and vacant parcels (+1,053); shortfall in ramp site acreage (-2).

Punta Gorda Isles, Alligator Creek and Pirate Harbor (Zone 5): excess in marina acreage (+20); excess in residential and vacant parcels (+5,268); excess in ramp site acreage (+34).

The most noteworthy disparity is in Zone 1 (Lemon Bay to Gasparilla Sound) where there are greater concentrations of boats, more demand to build docks along the shoreline in order to gain access to bay waters where, coincidentally, sensitive wetlands and seagrass habitats prevail, and large deficits in future marina acreage and residential or vacant parcel dock sites. The potential closure of Stump Pass, if it were to occur by longshore drift, would further concentrate traffic in south Lemon Bay and exacerbate boating pressures on bay resources.

The site suitability figures for marinas, residential docks and boat ramps identify optimal salt-water parcels (existing in 1993) for development. Charlotte County may wish to explore alternative scenarios in which: (a) new water-side parcels – created through platting or other means – are added; (b) publicly-owned parcels lying adjacent to, or landward of, existing facilities are included; (c) criteria are either relaxed or further restricted; or (d) residential docks, boat ramps and marinas are sited to direct the number of boats – with selective drafts – to appropriate locations in order to minimize impacts on natural resources. Such policy-directed analyses, particularly additions of parcels, to be consistent with other information reported in this study, should be subject to comparably rigorous evaluation criteria.

Recommendations

- 1. Incorporate the Preferred Water-Dependent Uses onto the Future Land Use Map as two Marine Access Overlay Districts.**

MAOD 1 indicates properties appropriate for the most intensive use. It includes: all types of marinas and dry-stack facilities; boat ramps; commercial docks; yacht clubs; moorage for waterfront hotels, motels, dockominiums, and restaurants; boat repair yards, piers; and all other water-dependent uses.

MAOD 2 indicates properties appropriate for less intensive water-dependent uses than those allowed in MAOD 1. It includes: commercial and public boat ramps; piers; moorage for waterfront restaurants and businesses other than marinas; multi-slip docking facilities for residential developments for which the number of slips may not exceed the

number of dwelling units.

- 2. Develop a method for applying a use-value assessment to marina and other public access facilities in order to provide an economic incentive which ensures that the properties will remain in a use which provides public access.**
- 3. Enter into agreements with the owners of vacant MAOD 1 and MAOD 2 properties in order to provide economic incentives which discourage the use of these properties in ways which do not provide for public access.**
- 4. Maintain the land-side elements of the Boating Resource GIS and incorporate them into the county's future planning and permitting processes. Keeping records of the number and type of such facilities will help Charlotte County determine whether the level of service standards established through the Comprehensive Plan are being met, and whether the facilities are meeting the needs of the boating public, particularly with regard to location. The information gained through this application of GIS and permit tracking technology will assist the Board of County Commissioners to make sound political and financial decisions regarding the provision of facilities which offer general public access to Charlotte County's valued marine resources.**
- 5. Upgrade the water-side components of the Boating Resource GIS -- boats, water depth, seagrass, mangrove -- in order to assess the county's waterway management needs. Boat access includes both water depths adjacent to parcels and channel depths. The site suitability analysis only considered water depth adjacent to the parcel since no county-wide data were available which describe channel conditions. The trend towards proportionally greater numbers of deeper draft boats will make waterway management issues, such as maintenance dredging, more critical in the future, and will place increasing pressure on existing land-side facilities and bay water resources. A county-wide waterway assessment should be undertaken in order to determine existing channel conditions and boat access needs.**
- 6. Direct future land and water marine use to locations where potential impacts on the environment will be minimized.**

