

Planning for the Future of Recreational Boating Access to Charlotte County Waterways 2010–2050

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PLANNING FOR THE FUTURE OF RECREATIONAL BOATING ACCESS
TO CHARLOTTE COUNTY WATERWAYS: 2010 - 2050

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1. Introduction

Charlotte County aims to encourage responsible use of its waterways and marine resources by (a) evaluating the characteristics and needs of the County's boating population, both residents and visitors, and (b) providing public access for motorized and non-motorized watercraft and mooring. This study provides Charlotte County with a planning instrument that specifies the type, quantity, and location of public shore access and boating facilities needed to meet anticipated demand through 2050 while minimizing environmental impacts on sensitive marine habitat. The results are designed to assist Charlotte County in determining how to (1) achieve sustainable coastal development; (2) guide future uses along its shoreline; and (3) prioritize water-dependent and water-related activities.

The project objectives were as follows:

- A. To profile the supply-demand characteristics of boating access;
- B. To inventory and map current land-side infrastructure and water access characteristics adjacent to parcel locations;
- C. To assess the suitability of expanding existing marinas and ramps, siting new ones on vacant saltwater parcels, and siting mooring fields to meet projected public access demand;
- D. To identify regulatory policies that affect development and use of Charlotte County's marine resources;
- E. To present results to the BOCC for adoption as plan amendments to the Smart Charlotte 2050 Comprehensive Plan.

The project consisted of the following six tasks: (1) inventory of existing boat registrations, boat docks, ramps, and marina facilities; (2) assessment of the future need for boat docks, ramps, and marina facilities; (3) identification of suitable locations in the county for ramp, marina, and mooring facilities; (4) evaluation of Charlotte County's compliance with Florida's working waterfront legislation; (5) outlining the development of a Charlotte County manatee protection plan; and (6) updating the 1996 Marine Use Regulatory Study for Charlotte County (Tupper and Antonini 1996). The results for items 1, 2, and 3 are contained in the body of this report. Items 4,

5, and 6 were completed separately and previously submitted to Charlotte County, but for the convenience of the reader they are included in appendices D, E, and F, respectively. The paragraphs that follow describe each of the report chapters.

Chapter two provides projections of the growth of recreational boat populations based on historical vessel registration records. The chapter begins with a review and comparison of changes in the number of registered pleasure boats in Florida and Charlotte County for the 33 year period between 1978 and 2010. Variations in historical growth are analyzed and explained in terms of economic trends and indicators, which are then used to develop projections of registered boat growth at 5-year increments through the year 2050. Data on boat registrations categorized by length classes, which became available starting in 1996, was used to project growth by length class through 2050. Appendices A and B provide statistical details on the development of the projection models.

Chapter three describes the spatial distribution of boat ownership in Charlotte County based on the 107 census block groups it comprises. Projections of population growth in each block group through 2050 are made based primarily on future land use guidelines. The population projections then form the basis on which to make the projections of growth in boat registrations by block group through 2050, which are contained in Appendix C.

Chapter four includes demand projections for Charlotte County boating facilities (marina, boat ramp, and private dock) in 10 year intervals through 2050. The projections show both resident and non-resident demand, and are based on information derived from recreational boating characterizations implemented previously in Charlotte County and six of its coastal neighbors. Additional information was obtained from telephone and mail surveys conducted in the same seven coastal counties and neighboring interior counties.

Chapter five assesses the potential for expanding existing saltwater access boating facilities and siting new ones. All parcels associated with existing public ramp sites and marina sites are evaluated to assess their relative potential for expansion based on select environmental and developmental criteria. Assessment scores are assigned to each parcel to provide some indication as to the relative feasibility of expanding a particular ramp or marina. A similar process is

followed to assess 9,695 saltwater accessible parcels deemed to have some potential for siting a ramp and/or marina.

Chapter six assesses potential locations in Charlotte County to site a mooring field based on a number of factors, including those summarized in the legal and regulatory review (Appendix F). The assessment includes several exclusionary factors, such as shellfish harvesting areas, federally-restricted zones, and rights-of-way of navigation channels. Additional assessment criteria include the presence of an aquatic preserve, outstanding Florida waters, Class II surface waters, and/or smalltooth sawfish habitat; adequate water depths; and nearby upland facilities with amenities to service and/or manage a mooring field.

Chapter seven provides conclusions and recommendations based on the results presented in chapters two through six.

2. Projecting the Growth of Recreational Boat Populations

A. Overview and State-Wide Trends

Market demand for recreational boating is largely a demand for recreational services as defined by various leisure-time boating activities such as fishing, nature viewing, and cruising. Many factors influence the demand for recreational boating, including changes in discretionary income in relation to economic cycles, employment trends and inflation, as well as consumer spending on durable goods, the size of the boating population, the price of pleasure boats, and the cost of operating these vessels.

In the 33 year period between 1978 and 2010, the number of registered pleasure boats in Florida increased by approximately 110 percent: from 434,818 vessels in 1978, to 914,445 in 2010 (Figure 2-1). The decline from a peak of 991,680 registrations in 2007 to 914,445 in 2010 represents a -7.8% change over four years that likely is attributable to several factors, including the recent downturn experienced by both the U.S. and Florida economies. For example, the recession that began sometime during the fall of 2007 is responsible for generating high rates of unemployment and relatively low levels of economic growth (see Figure 2-2).

The downturn in the U.S. economy certainly affected the state of Florida, which is highly reliant on recreation and tourist dollars. Economic uncertainty and fewer job opportunities have meant lower earnings and reduced income and revenue potential for the state given its orientation as a recreation and leisure-based economy. Moreover, consumers cut back on their demand for recreational boating and related services and purchases of big-ticket items, such as pleasure boats. Thus, the recent recession reversed the upward trend in the growth of the number of pleasure boats; a situation, however, that likely is only temporary given that the regional trend is tied to cycles and trends in the national economy.

Historically speaking, there are strong correlations between the growth in the number of pleasure boats in the state of Florida and economic indicators that measure the health and vitality of the national economy. Consider the national trends in the growth and unemployment rates shown in Figure 2-2. Specifically, four nation-wide downturns or recessions are evident that cover the

periods 1978-1983, 1990-1993, 2001-2004, and 2007-present. Each of these time periods was associated with a reduction or a marked slowdown in the growth of pleasure boats in Florida.

Increases in the price of oil and gasoline likely have further contributed to a slowdown in the demand for pleasure boats due to dramatic increases in operating costs. In short, less disposable and discretionary income for consumers translated into a marked reduction in consumer spending on leisure and recreational activities: factors that led to the recent decline in the growth of pleasure boat registrations in the state of Florida. Note that there is overwhelming statistical evidence to link trends in the national economy to the rate of expansion of Florida's pleasure boats (as indicated by the empirical findings presented in Appendix A). The statistical results in Appendix A strongly suggest that the total number of pleasure boats registered in the state can be explained by a handful of economic and time-series variables.

Time-series for the observed and projected number of pleasure boats registered in Florida are shown in Figure 2-3. Projections up to the year 2050 are based on the observed trends over the period 1996 through 2010. The projections for the total number of pleasure boats from 2011 through the year 2020 are reasonable estimates. However, predicted values beyond 2020 are less reliable since they (a) are far into the future and (b) are based on a limited number of available observations with which to model the time-series.

Since unknown, future economic trends will affect the total number of pleasure boats, it is difficult to make projections without applying various limiting assumptions. A limiting assumption made for this study is that the observed cycles and past trends will repeat themselves in future years with regularity. Based on the observed trends and this limiting assumption, time-series projections are calculated from an ARMA (Auto-Regressive, Moving-Average) model that is deemed statistically adequate based on the significance of estimated parameters. The observed and projected counts of pleasure boat registrations in Florida for selected years are presented in Table 2-1.

In addition to the projected number of pleasure boats for time periods 2015 through 2050 (presented in five-year increments in Table 2-1), the number of pleasure boats per one-thousand of the population was also calculated. Note that the projected number of pleasure boats in Florida in the year 2050 is 1,356,631 boats – an increase of slightly more than 48% over the 2010 total

of 914,445 boats and slightly less than the 52% anticipated increase in Florida's population over the same period (2010-50). The results suggest that the growth in the number of Florida's registered pleasure boats will lag slightly behind the growth in the state's population, with the number of pleasure boats per 1,000 of the population likely to remain just below 2000-05 levels for the next several decades.

The growth in the number of registered pleasure boats over the next 10 years is estimated at approximately 13.6%, from 914,445 to 1,038,426 boats; while the 20-year projected growth of pleasure boats (2010-30) is estimated at approximately 22.5%, from 914,445 to 1,120,503 boats. The projections indicate that the number of pleasure boats registered in Florida is expected to rise by roughly 48% from 2010 to 2050 (from 914,445 boats to 1,356,631 boats).

Caution should be exercised in interpreting these projections as great uncertainty exists as to the magnitude of the negative impact that rising fuel prices will have on the pleasure boating industry and the demand for boats within the state. As new data are collected, the models should be re-run to update the projections to ensure greater accuracy.

It also should be noted that great variability exists within Florida in the geographic distribution of pleasure boats, with coastal counties having greater waterway access accounting for the largest shares of registered vessels. Trends at the state level, therefore, are not necessarily representative of trends found within a given county. As such, closer examination of county-wide trends in the growth of pleasure boats (the total number and by size-class) is necessary to capture the nuances in changes of pleasure boat counts as they pertain to specific regions within the state.

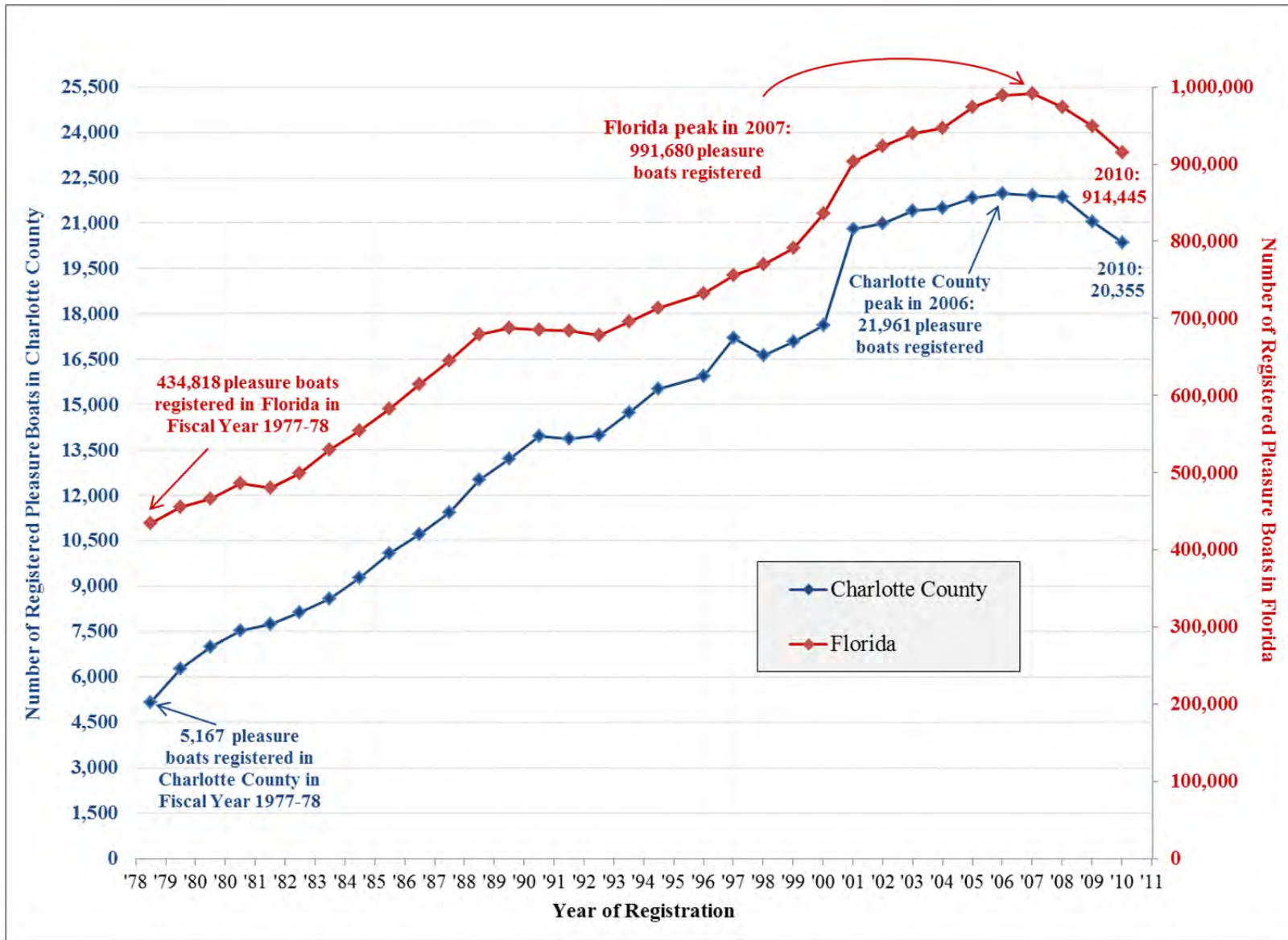


Figure 2-1. Annual number of pleasure boats registered in the state of Florida and Charlotte County: 1978-2010.

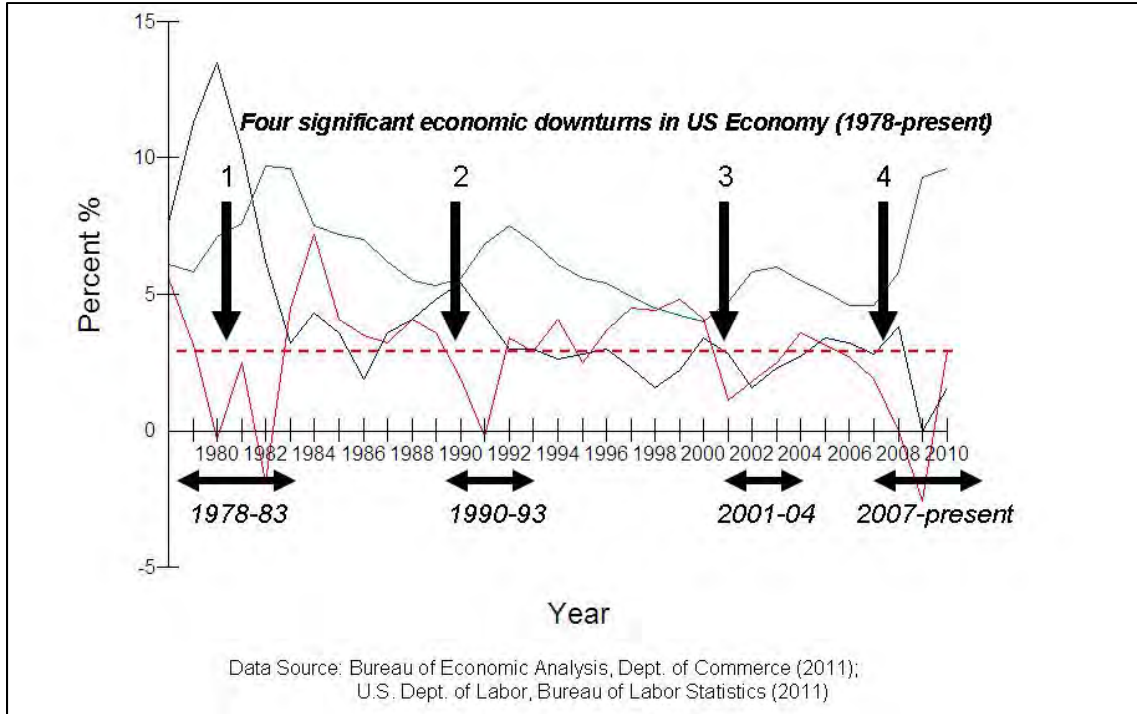


Figure 2-2. Percent change in real GDP (red), annual inflation rate (blue), and unemployment rate (green).

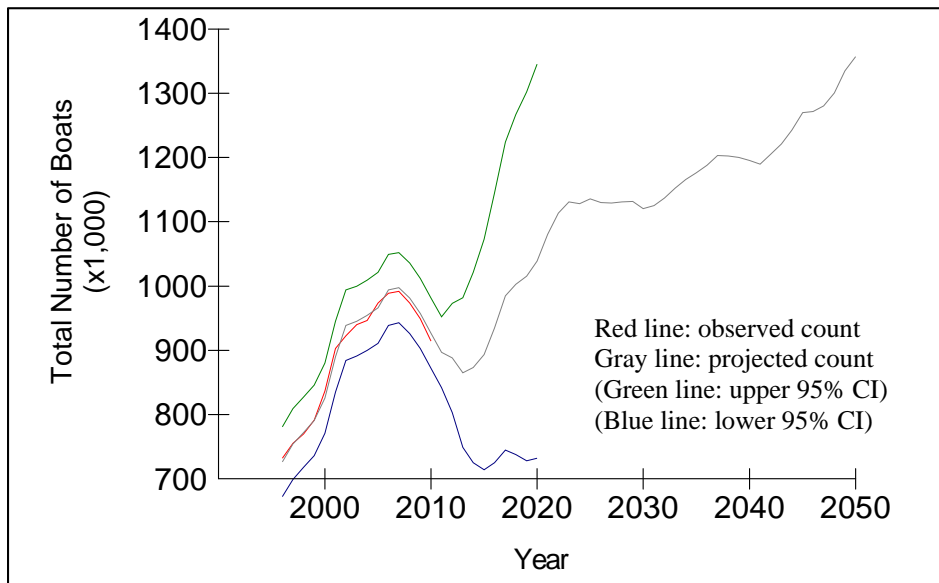


Figure 2-3. Observed (2000-10) and projected (2011-50) total number of pleasure boats registered in Florida.

Table 2-1. Observed (2000-10) and projected (2015-50) number of pleasure boats registered in Florida.

Year	Florida		
	Number of Pleasure Boats	Population	Pleasure Boats / 1,000 People
2000	836,459	15,982,378	52.3
2005	973,859	17,789,864	54.7
2010	914,445	18,801,310	48.6
2015	893,7538	19,974,400	44.7
2020	1,038,426	21,326,800	48.7
2025	1,135,329	22,641,300	50.1
2030	1,120,503	23,877,900	46.9
2035	1,176,092	25,017,100	47.0
2040	1,195,232	26,081,800	45.8
2045	1,269,430	27,150,400	46.8
2050	1,356,631	28,600,900	47.4

Source of population data/projections (2010-2040): BEBR, 2011 (medium estimates) and the U.S Census Bureau, 2005; Population projections (2045-2050) based on trend.

B. Observed and Projected Number of Pleasure Boats in Charlotte County

In 1978, 5,176 pleasure boats were registered in Charlotte County and in 2010, 20,355 were registered. During this 33 year period, pleasure boats accounted for 96.4% of all vessels that were registered in Charlotte County and commercial boats accounted for 3.6 percent. Over the 33 year period, the number of pleasure boat registrations in Charlotte County increased by 293%, a rate that was more than 2.6 times that experienced by Florida (110%) as a whole. The number of pleasure boat registrations in Charlotte County peaked in 2006 with 21,961 and declined to 20,355 in 2010, a change of -7.3 percent in five years. Periods of relatively strong growth in pleasure boat registrations in Charlotte County occurred from 1983 to 1991, when growth averaged 6.8% each year, and from 1994 to 2001, when it averaged 5.2% per year.

Two forecast models were used to develop time-series projections for the number of pleasure boats registered in Charlotte County (Figure 2-4): Model 1 – an ARMA model and Model 2 – a two-stage, time-series forecast model (see Appendix B). While the two models produced very similar results, the two-stage model generated slightly more conservative projections as represented by the trend shown in blue in Figure 2-4. Observed and projected boat registrations (obtained from Model 2) are summarized in Table 2-2, with projected values for 2011 through 2050 based on the modeling of observed trends from 1996 through 2010.

The regional trend in the projected number of pleasure boats registered in Charlotte County differs somewhat from the state-wide trend. The forecast shows a leveling off in the number of pleasure boats from 2011 through 2020, a modest increase in the number from 2020 to 2035, followed by another leveling off from 2035 to 2050. The growth rate of pleasure boats registered in Charlotte County from 2010 through 2030 is expected to be approximately 17.8%, a rate that is significantly less than the expected 22.5% growth of pleasure boats state-wide. Note, however, that the number of pleasure boats per 1,000 of the population in Charlotte County is roughly two-and-a-half-to-three times higher than the figure for the state as a whole (compare values in the last columns of Tables 2-1 and 2-2); with figures that range from a low of 122.6 vessels per 1,000 population (projected) in 2020 to an observed high of 142.9 in 2005.

The projected number of pleasure boats registered in Charlotte County in the year 2050 is 28,125, representing an expected increase of approximately 38% over the 20,355 pleasure boats observed in 2010. This represents an increase of 7,770 boats over a 40-year period, with an average expected increase of approximately 194 boats per year from 2010-2050. Over time, Charlotte County is expected to maintain a fairly stable percentage of the state's pleasure boats (with projected percentages ranging between a low of 2.0% in 2025 and a high of 2.3% in 2015). In 2050, Charlotte County is expected to be home to 2.1% of the state's pleasure boats, a lower overall percentage than the observed percentage of 2.2% in 2010. This suggests that the growth of pleasure boats in Charlotte County will be slower than the growth of pleasure boats across Florida (a trend that is evident when one compares the projections for the state versus the county, as shown in Figures 2-3 and 2-4, respectively).

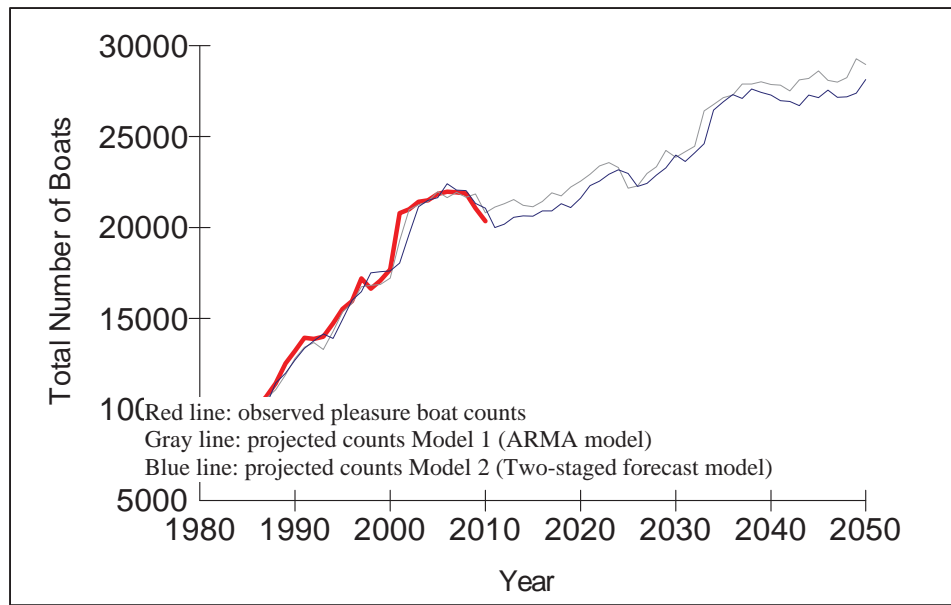


Figure 2-4. Observed (2000-10) and projected (2011-50) total number of pleasure boats registered in Charlotte County.

Table 2-2. Observed (2000-10) and projected (2015-50) number of pleasure boats less than 65 feet in length registered in Charlotte County.

Year	Population	Pleasure Boats (<65' in Length)		
		Number	Percent of Florida Total	Per 1,000 People
2000	141,627	17,692	2.1%	124.9
2005	152,814	21,834	2.2%	142.9
2010	159,978	20,355	2.2%	127.2
2015	167,500	20,626	2.3%	123.1
2020	176,300	21,623	2.1%	122.6
2025	184,900	22,968	2.0%	124.2
2030	192,700	23,977	2.1%	124.4
2035	200,000	26,910	2.3%	134.6
2040	206,700	27,284	2.3%	132.0
2045	212,800	27,124	2.1%	127.5
2050	218,500	28,125	2.1%	128.7

Source of Population data/projections (2010-2040): BEBR, 2011 (medium estimates) and the U.S Census Bureau, 2005; Population projections (2045-2050) based on trend.

C. Observed Counts and Percentage Breakdown by Size-Class

The annual numbers of pleasure boat registrations in seven length classes were obtained for 15 years (1996-2010) from the Department of Highway Safety and Motor Vehicles (DHSMV) (Table 2-3 and Figure 2-5). During this period, Charlotte County ranked 16th among Florida's 67 counties in terms of the total number of boats registered in each county. The average share in descending order that each length class constituted over the 15 year period was:

1. 16 feet to < 26 feet: 54% of all boats
2. 12 feet to < 16 feet: 17% of all boats
3. Less than 12 feet: 13% of all boats
4. 26 feet to < 40 feet: 10% of all boats
5. 40 feet to < 65 feet: 1.4% of all boats
6. 65 feet to < 110 feet: 0.02% of all boats
7. Greater than 110 feet: 0.003% of all boats

Pleasure boats less than 40 feet in length (comprising 4 length classes) accounted for 94% of all boats that were registered in Charlotte County (Table 2-4). Within this group, the dominate length class consisted of pleasure boats ranging in length from 16ft to < 26ft (16-25'11" in Table 2-4). On average, the length class accounted for 54% of all boats registered in the County; however, its share increased over time, reaching a peak of 58% in 2009 (Table 2-4 and Figure 2-6). The number of boats in the 16ft to < 26ft length class ranged from 8,534 in 1996 to 12,575 in 2007 (Table 2-3 and Figure 2-5). Over the 15 year period, the number of registered boats in this length class increased by 37% in Charlotte County as compared to a 41% increase for Florida in general (Table 2-5).

The second most frequently occurring length class consisted of boats ranging in length from 12ft to < 16ft. This class accounted for an average of 17% of all boats that were registered in Charlotte County over the 15 years. However, in contrast to boats within the dominate length class (16ft to < 26ft), the share (and the number) of boats in this length class steadily decreased over the 15 years, accounting for 24% of all boats in 1996 and 14% in 2010 (Table 2-4 and Figure 2-6). The number of boats in the length class was greatest in 1997 (3,856) and least in 2010 (2,928) (Table 2-3 and Figure 2-5). Over the 15 year period, the number of registered boats in the class decreased by 24% in Charlotte County and 15% for Florida in general (Table 2-5).

Boats less than 12 feet in length comprised an average of 13% of all boats registered in Charlotte County during the 15 year period and their share increased slightly over time, from 11% in 1996 to 14% in 2010 (Table 2-4 and Figure 2-6). The number of pleasure boats less than 12 feet in length ranged from 1,692 in 1996 to 3,177 in 2007 (Table 2-3 and Figure 2-5). Over the 15 year period, the number of registered boats in this class increased by 70% in Charlotte County and 41% for Florida in general (Table 2-5).

Boats ranging in length from 26 feet to < 40 feet comprised an average of 10% of all boats, and their share held steady over the 15 year period (Table 2-4 and Figure 2-6). In the 15 year period, the number of registered boats in this class increased by 44% in Charlotte County and 67% for Florida in general (Table 2-5). Pleasure boats 40 feet in length and longer accounted for an average of 1.4% of all registered boats (Table 2-4) and, over the 15 year period, they increased by 65% in Charlotte County and 71% for Florida in general (Table 2-5).

Table 2-3. Numbers of pleasure boats registered in Charlotte County by year and length class: 1996-2010.

<i>Year of Registration</i>	NUMBER OF REGISTERED PLEASURE BOAT BY LENGTH CLASS										
	<i>Less than 12'</i>	<i>12 - 15' 11"</i>	<i>16' - 25' 11"</i>	<i>26' - 39' 11"</i>	<i>40' - 64' 11"</i>	<i>65' - 109' 11"</i>	<i>110' or more</i>	<i>Canoes</i>	<i>All Pleasure Boats</i>	<i>All Commercial Boats</i>	<i>All Boats*</i>
1996	1,692	3,829	8,534	1,604	201	5	-	87	15,952	768	16,896
1997	2,034	3,856	9,152	1,816	228	4	-	106	17,196	855	18,225
1998	2,099	3,560	8,949	1,687	216	4	-	126	16,641	752	17,576
1999	2,244	3,505	9,238	1,725	221	3	-	132	17,068	785	18,015
2000	2,388	3,428	9,779	1,769	248	2	-	1*	17,692	574	18,505
2001	2,839	3,816	11,562	2,180	294	4	-	98	20,793	637	21,764
2002	2,896	3,772	11,634	2,277	291	4	-	122	20,996	603	21,886
2003	3,110	3,725	11,806	2,310	308	5	-	150	21,414	595	22,252
2004	3,102	3,565	12,008	2,343	311	4	-	159	21,492	580	22,275
2005	3,122	3,476	12,305	2,413	325	2	1	190	21,834	543	22,548
2006	3,176	3,372	12,445	2,436	327	5	2	198	21,961	540	22,680
2007	3,177	3,243	12,575	2,403	333	3	2	182	21,918	529	22,613
2008	3,114	3,461	12,314	2,441	327	3	1	192	21,853	549	22,573
2009	2,956	3,053	12,148	2,329	343	3	1	214	21,047	503	21,705
2010	2,878	2,928	11,692	2,306	338	1	1	211	20,355	503	20,968
TOTAL	40,827	52,589	166,141	32,039	4,311	52	8	2,167	298,212	9,316	310,481
MIN	1,692	2,928	8,534	1,604	201	1	-	87	15,952	503	16,896
MAX	3,177	3,856	12,575	2,441	343	5	2	214	21,961	855	22,680

Table 2-4. Percentages of pleasure boats registered in Charlotte County by year and length class: 1996-2010.

PERCENTAGE OF REGISTERED PLEASURE BOATS BY LENGTH CLASS											
Year of Registration	Less than 12'	12 - 15' 11"	16' - 25' 11"	26' - 39' 11"	40' - 64' 11"	65' - 109' 11"	110' or more	Canoes	All Pleasure Boats	All Commercial Boats	All Boats*
1996	11%	24%	53%	10%	1.3%	0.03%	0.00%	0.5%	94%	4.5%	100%
1997	12%	22%	53%	11%	1.3%	0.02%	0.00%	0.6%	94%	4.7%	100%
1998	13%	21%	54%	10%	1.3%	0.02%	0.00%	0.8%	95%	4.3%	100%
1999	13%	21%	54%	10%	1.3%	0.02%	0.00%	0.8%	95%	4.4%	100%
2000	13%	19%	55%	10%	1.4%	0.01%	0.00%	0.0%	96%	3.1%	100%
2001	14%	18%	56%	10%	1.4%	0.02%	0.00%	0.5%	96%	2.9%	100%
2002	14%	18%	55%	11%	1.4%	0.02%	0.00%	0.6%	96%	2.8%	100%
2003	15%	17%	55%	11%	1.4%	0.02%	0.00%	0.7%	96%	2.7%	100%
2004	14%	17%	56%	11%	1.4%	0.02%	0.00%	0.7%	96%	2.6%	100%
2005	14%	16%	56%	11%	1.5%	0.01%	0.00%	0.9%	97%	2.4%	100%
2006	14%	15%	57%	11%	1.5%	0.02%	0.01%	0.9%	97%	2.4%	100%
2007	14%	15%	57%	11%	1.5%	0.01%	0.01%	0.8%	97%	2.3%	100%
2008	14%	16%	56%	11%	1.5%	0.01%	0.00%	0.9%	97%	2.4%	100%
2009	14%	15%	58%	11%	1.6%	0.01%	0.00%	1.0%	97%	2.3%	100%
2010	14%	14%	57%	11%	1.7%	0.00%	0.00%	1.0%	97%	2.4%	100%
AVG	13%	17%	54%	10%	1.4%	0.02%	0.00%	0.7%	96%	3.0%	100%
MIN	11%	14%	53%	10%	1.3%	0.00%	0.00%	0.0%	94%	2.3%	100%
MAX	15%	24%	58%	11%	1.7%	0.03%	0.01%	1.0%	97%	4.7%	100%

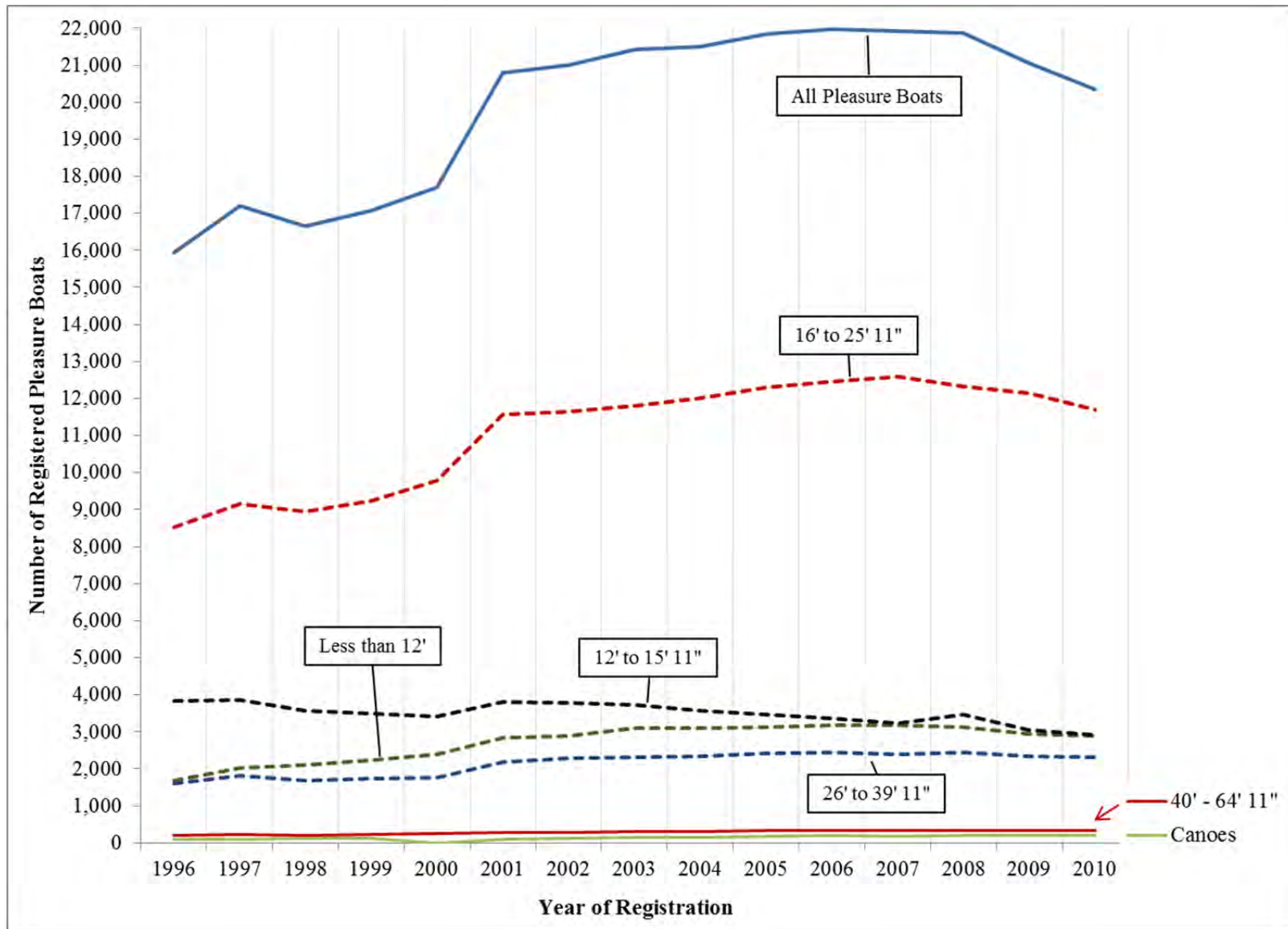


Figure 2-5. Number of pleasure boats registered in Charlotte County by year and length class: 1996-2010.

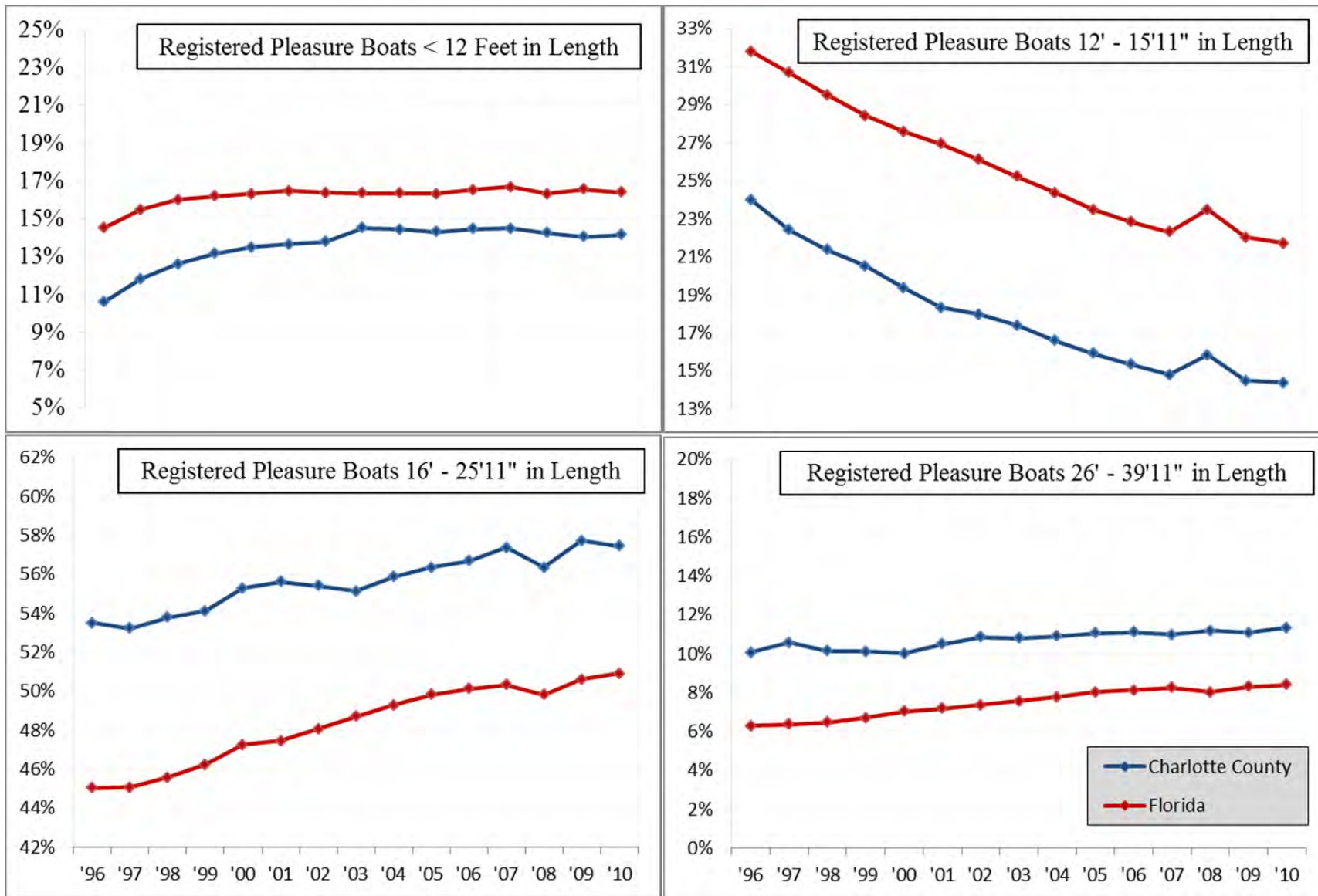


Figure 2-6. Comparison of length class shares between Charlotte County and Florida: 1996-2010.

Table 2-5. Growth in pleasure boat registrations by length class between 1996 and 2010.

Length Class	Charlotte	Florida	Difference
Less than 12'	70%	41%	1.7
12' to < 16'	-24%	-15%	-1.6
16' to < 26'	37%	41%	0.9
26' to < 40'	44%	67%	0.7
>=40'	65%	71%	0.9

D. The Projected Number of Pleasure Boats by Size-Class for Selected Years

The time-series trends and projections for pleasure boats registered in Charlotte County by size class (for selected years) are shown in Table 2-6, and highlighted in Figures 2-7 through 2-11 with observed values shown in red and projected values from ARMA models shown in blue (for the years 1996 through 2050). The highest growth in pleasure boats from 2010 to 2050 is expected to occur in the 16ft to < 26ft size class (at 44.1%), followed by a virtual tie between pleasure boats falling in the 26ft to < 40ft range and boats that are less than 12ft in length. The recent decline in boats in the 12ft to < 16ft class is expected to continue over the next 40 years, with the number of boats in that range shrinking by more than 12%. Overall, the growth in total pleasure boats within Charlotte County is expected to be somewhere between 33% and 38%, with an average projection of 35.7%, based on the aggregation of projections by size class and Model 2.

Table 2-6. Projections of pleasure boats (excluding canoes) less than 65 feet in length registered in Charlotte County: 2020-50.

Vessel Length Class (feet)	Number of Registered Pleasure Boats					Expected Change (%)	
	Actual	Projections				2010-30	2010-50
	2010	2020	2030	2040	2050		
Less than 12'	2,878	3,173	3,321	3,673	3,814	15.3%	32.5%
12' to < 16'	2,928	3,263	3,078	2,743	2,564	5.1%	-12.4%
16' to < 26'	11,692	14,127	15,611	16,199	16,851	33.5%	44.1%
26' to < 40'	2,306	2,599	2,709	2,880	3,058	17.5%	32.6%
40' to < 65'	338	357	376	401	422	11.2%	24.8%
Total	20,142	23,519	25,095	25,896	26,709	24.5%	32.6%

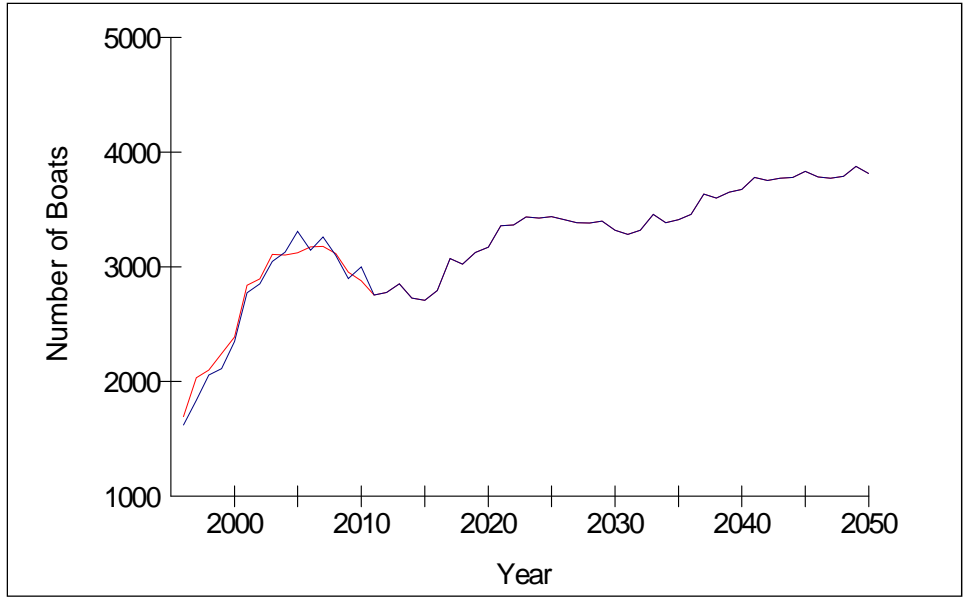


Figure 2-7. Observed (red) and projected (blue) number of pleasure boats less than 12 feet in length registered in Charlotte County.

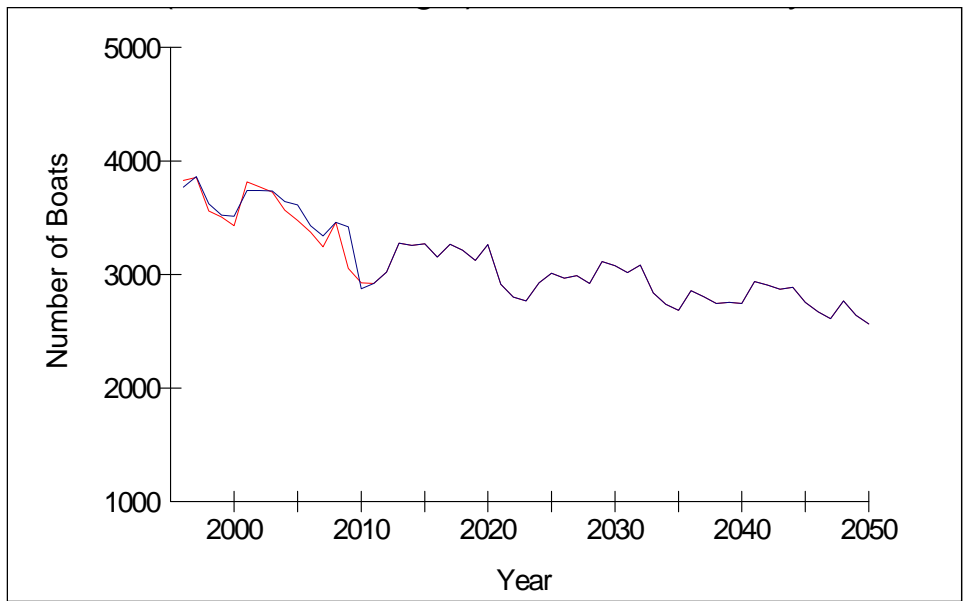


Figure 2-8. Observed (red) and projected (blue) number of boats 12 feet to less than 16 feet in length registered in Charlotte County.

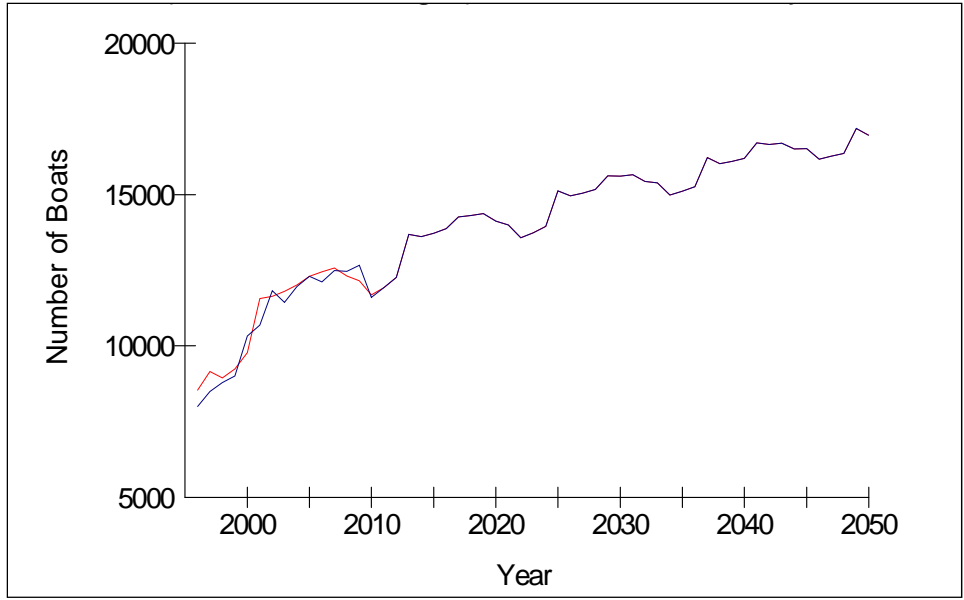


Figure 2-9. Observed (red) and projected (blue) number of boats 16 feet to less than 26 feet in length registered in Charlotte County.

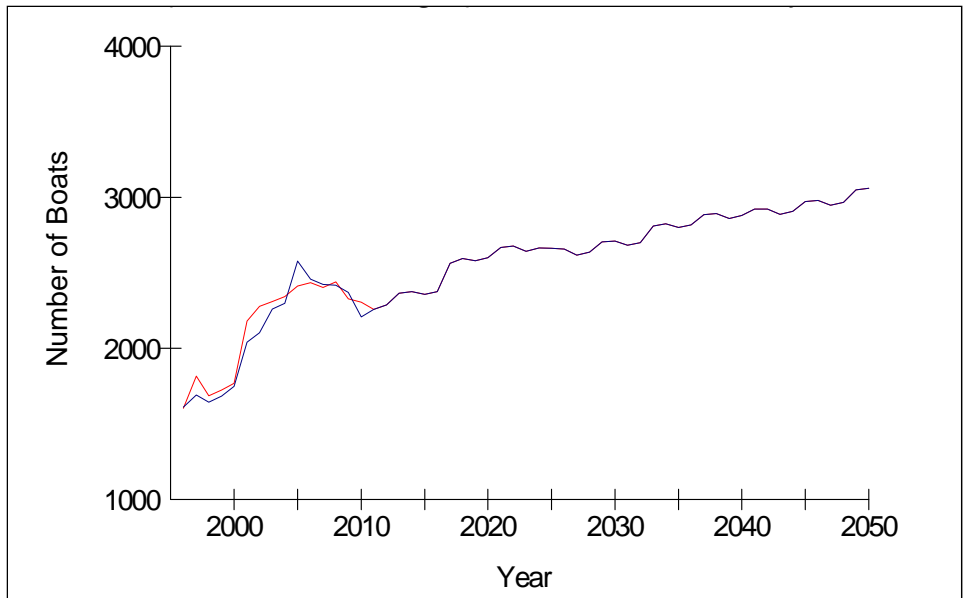


Figure 2-10. Observed (red) and projected (blue) number of boats 26 feet to less than 40 feet in length registered in Charlotte County.

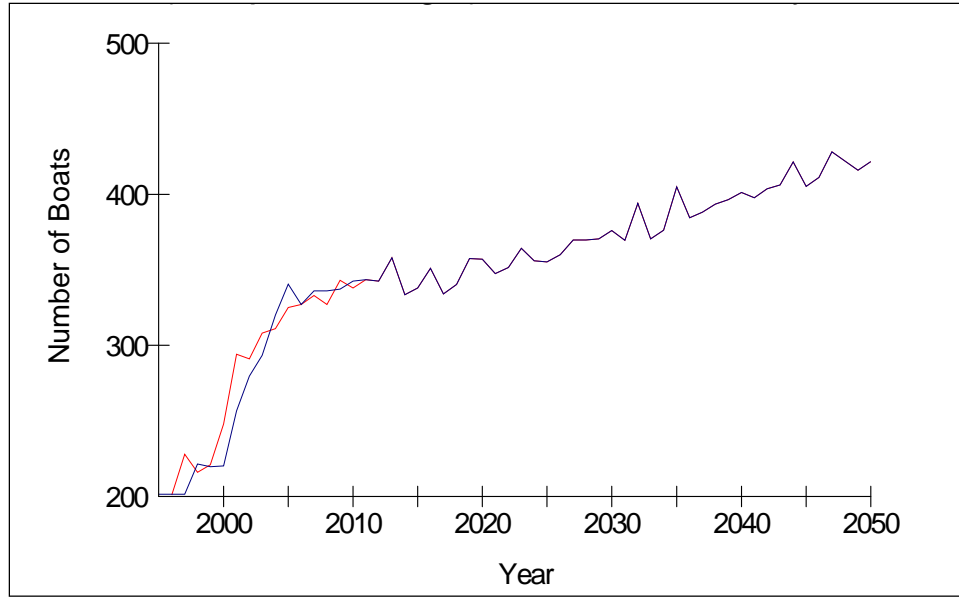


Figure 2-11. Observed (red) and projected (blue) number of boats 40 feet or more in length registered in Charlotte County.

3. Spatial Distribution of Boat Ownership in Charlotte County

A project objective was to determine the spatial distribution of current and projected growth in boat ownership for Charlotte County. Block groups, a unit of census geography, were chosen as the spatial units for which to model growth projections. Block groups were selected because they are the smallest geographic unit for which the U.S. Census Bureau publishes population data necessary to accomplish project objectives. While block groups vary in areal size, generally they contain between 600 and 3,000 people, with an optimum size of 1,500 people.

Charlotte County is divided into 107 block groups and the 2010 Census reported the average block group population as 1,495 people, ranging from 590 people in the least populated block group to 3,487 people in the most populated. In 2010, the Charlotte County permanent resident population was 159,978 and, in that same year, 20,355 boats were registered in the county: thus, on average, there were 7.9 people for every registered boat (or 127.2 boats per 1,000 people). The number of registered boats in each block group in 2010 ranged from 10 to 1,136.

The primary data sources used to develop projections of spatial growth in boat ownership by block group included the Charlotte County parcel GIS layer linked to tax accounts (2010), U.S. Census data for the year 2010, vessel registration records from the Florida Department of Highway Safety and Motor Vehicles (DHSMV, 2010), and data that was collected during recreational boating studies that were conducted previously in Charlotte County. The sections that follow provide details on how each dataset was processed.

A. Processing the Charlotte County Parcel Layer

A primary use for the Charlotte County parcel layer was to develop projections of population growth based on current and future land uses. The characteristics (data fields) of interest in the parcel data were the zoning code, future land use, and land use description of each parcel. Because a unit of land can be assigned to no more than one zone or future land use, the first processing step was to eliminate coincident parcels (polygons): those that occupied the same geographic area and that had identical boundaries. For example, housing units within a multi-family building are often represented in the GIS parcel data by polygons (parcels) stacked one on

top of the other. Each housing unit in the building, and thus each stacked polygon (parcel), will have a unique tax account number. All such instances of duplicate polygons (parcels) were removed, leaving one polygon (parcel) with a zoning code, future land use, and land use description for each unit of land. The dissolve tool in ArcGIS 10 was used to eliminate coincident polygons (parcels), resulting in a GIS layer with 201,816 parcels (polygons).

Next, 107,940 parcels that were deemed available (i.e., vacant) for the construction of new housing units were extracted and grouped by general land use (Table 3-1). Some parcels that currently have a housing unit were included due to their areal size: for example, those classified as "residential agriculture." Parcels classified as "Other" in Table 3-1, though largely zoned agriculture, had a land use description of "Acreage Not Classified as Agricultural." The one government parcel is located within the future land use category of "Murdock Village Mixed Use." Those commercial parcels retained were, for the most part, located within mixed use future land uses and thus deemed eligible for residential uses. Much effort was made to eliminate non-developable polygons (parcels), such as roads or common areas.

Each of the 107,940 parcels deemed eligible for construction of new housing units was assigned a residential density or a development right based on information from one of three sources: (1) FLU Appendix I (Land Use Guide) of Smart Charlotte 2050, (2) Table 114 of the City of Punta Gorda Comprehensive Plan 2025, and (3) Developments of Regional Impact listed in FLU appendix VI of Smart Charlotte 2050. CommunityViz, an ArcGIS extension, was used to generate a spatial build-out scenario (with default parameters) to estimate the total number of potential dwelling (housing) units that could be built within each block group (Table 3-1).

Table 3-1. Estimates of the number of future housing units that potentially could be built on eligible parcels as of 2010.

General Land Use	Number of Parcels	Potential Number of Housing Units
Vacant Residential	105,693	128,080
Agriculture	1,740	46,287
Other	334	1,434
Residential	82	1,708
Vacant Commercial	51	3,106
Industrial	33	2,772
Commercial	3	16
Environment Sensitive	2	3
Government	1	3,076
Institutional	1	1
Total	107,940	186,483

Two growth scenarios were used to develop estimates of population growth (2010-2050) by block group. The first scenario used the population projections for Charlotte County that are contained in Table FLU-9: Total Population (Seasonal and Permanent), 2010-2050 from Smart Charlotte 2050. The second scenario used the population projections for Charlotte County that were developed earlier in Chapter 2. The relative proportions of seasonal to permanent population contained in Table FLU-9 were used for both growth scenarios.

For both scenarios, population growth rates specific to each interval – every five years from 2010 to 2030, and every 10 years from 2030 to 2050 – were applied equally across all block groups. The initial 2010 permanent population assigned to each block group was that reported in the U.S. 2010 Census, as was the average number of people per housing unit reported for each block group (Appendix C). In lieu of additional information, the average number of persons per housing unit reported for each block group in 2010 was assumed to remain constant during the 40 year planning horizon. The initial 2010 seasonal population assigned to each block group was estimated based on the projections in Table FLU-9, Smart Charlotte 2050.

The estimated build-out population for each block group was a function of its capacity for new housing units, the average number of people per housing unit, and the 2010 permanent and seasonal population. At the end of each planning interval, the population projected for each block group was subtracted from its build-out population to determine what, if any, growth potential remained. Once a block group had reached its build-out capacity, the aggregate population

projected for the county was allocated proportionally to the remaining block groups based on each block group's relative share (Appendix C).

B. Estimations of Boat Ownership Growth by Charlotte County Block Group

Records for boats registered in Charlotte County in 2010 were extracted from the Vessel Title Registration System (VTRS), which is maintained by the Florida Department of Highway Safety and Motor Vehicles (DHSMV). The vessel owner name and address for each VTRS record was matched to a Charlotte County parcel using the corresponding information contained in county tax records linked to parcels. Those VTRS records that did not match a parcel were geocoded (spatially located) to a county street address or, as a last resort, to a ZIP code centroid. The result was a GIS layer with 18,067 boats that geocoded to a location in Charlotte County: the number of boats per block group ranged from 9 to 1,008. According to the DHSMV, in 2010 there were 20,355 boats registered in Charlotte County: 2,288 more than were geocoded. To account for this 11.2% difference, 2,288 boats were allocated proportionally among the 107 block groups based on the number of boats that had been successfully geocoded in each.

Estimates of growth in boat ownership for each block group were calculated as a function of a block group's population and the number of registered boats it contained in 2010. Specifically, a relative rate of "boat ownership" for each block group was estimated as the ratio of its population to the number of boats it contained. In 2010, boat ownership by block group ranged from a relatively high rate of 2 people for every boat (or 500 boats per 1,000 people), to a relatively low rate of 90 people for every boat (11 boats per 1,000 people) (Figure 3-1). Again, as was the case with people per housing unit, the rate of boat ownership for each block group in 2010 was held constant for the duration of the 40 year planning horizon (see tables in Appendix C).

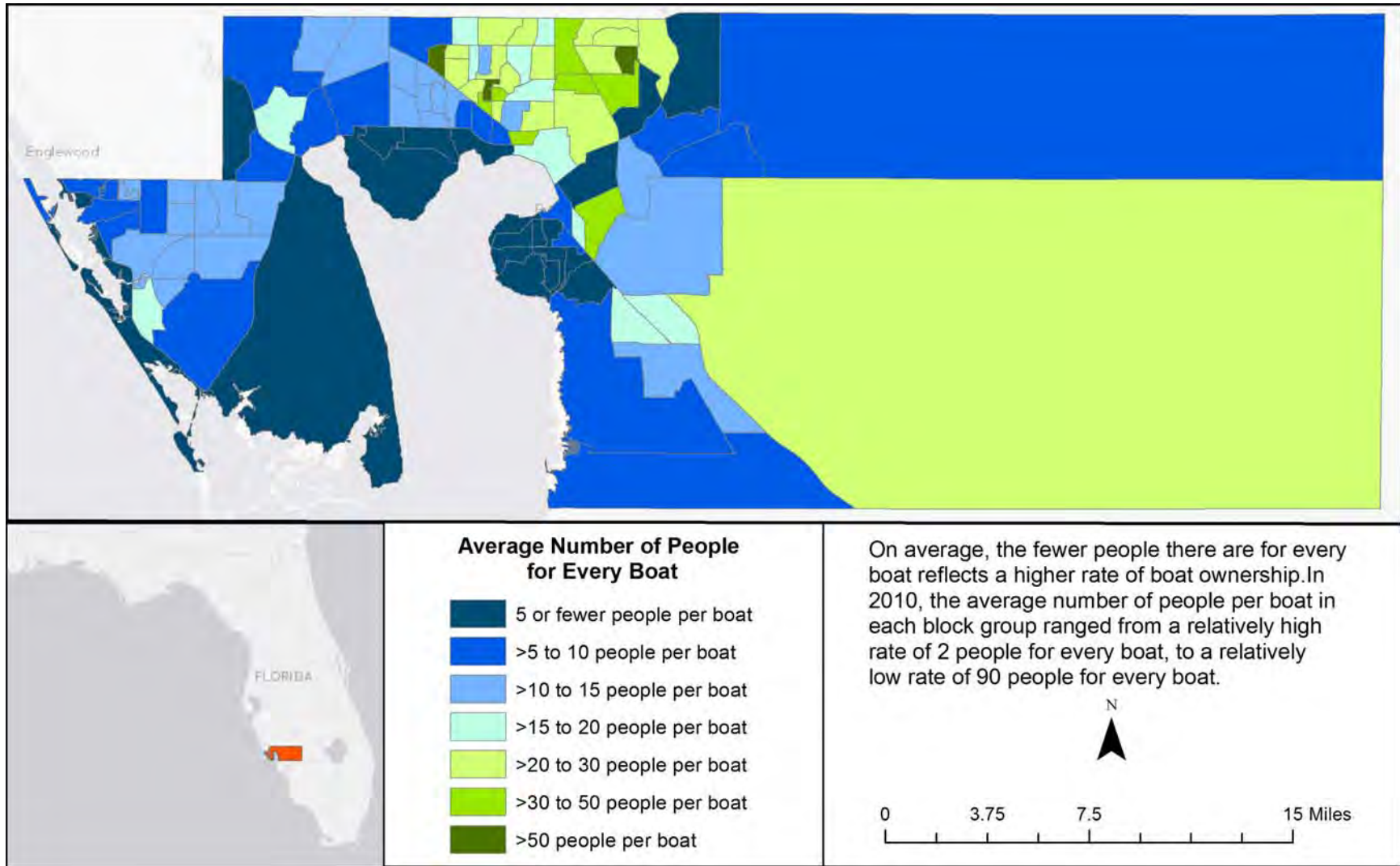


Figure 3-3-1. Relative rates of boat ownership in Charlotte County in 2010.

4. Projections of Demand for Boating Facilities in Charlotte County

Estimating the number of pleasure boats by launch facility type (marina, boat ramp, and private dock) and length class for the years 2010, 2020, 2030, 2040, and 2050 requires knowledge of the number and relative proportions of Charlotte County residents and non-residents who use these boating facilities and the frequency with which they use them. This information was derived from recreational boating characterizations that were implemented in seven coastal counties in southwest Florida: Pinellas, Hillsborough, and Manatee counties (Sidman et al., 2004), Sarasota County (Sidman et al., 2006), Charlotte and Lee counties (Sidman et al., 2005), and Collier County (Swett et al., 2009); and from telephone and mail surveys of resident boaters from these same seven counties and from interior counties adjacent to them (Swett et al., 2011).

Responses by Charlotte County residents who boat to a 2009 mail survey provided information about the facility types from which they launch their vessels (Table 4-1). The survey results indicate that approximately 53% of county residents who own a boat launch it from a residential dock, 35% from a public boat ramp, and 12% from a marina wet or dry slip (Figure 4-1). The survey also revealed that approximately 1.2% of Charlotte County residents (boat owners) use their vessels in freshwater rather than in saltwater. Thus, based on the assumption that freshwater boaters use a ramp as their access point, the 2010 estimated demand for saltwater accessible ramps was reduced by an equivalent proportion within those length classes that corresponded to freshwater boaters.

A telephone survey in 2009 provided an additional piece of information that was used to adjust demand for Charlotte County boating facilities. Responses to the phone survey indicated that 78% of boat owners had used their vessel in the previous 12 months, while 22% had not. To calculate a demand estimate for 2010 and projections for 2020, 2030, 2040 and 2050, the assumption was made that this same proportion of boat use remains constant for the duration of the planning horizon. The relevance of this statistic to dock demand is deemed minimal, since it is assumed that a boat likely is kept (stored) at the dock no matter how long the vessel remains unused. The status of a boat kept at a marina is not as clear, since it seems rational that the longer the vessel remains unused the more likely an owner would be to seek other (less costly) storage

options. Two scenarios were used when calculating demand estimates for marinas: one based on the assumption that 100% of potential users were active during the year and the other based on the assumption that only 78% were active (and the other 12% found other accommodations for their boat). The last scenario (78% active boaters) was the only one used when calculating demand estimates and projections for ramps.

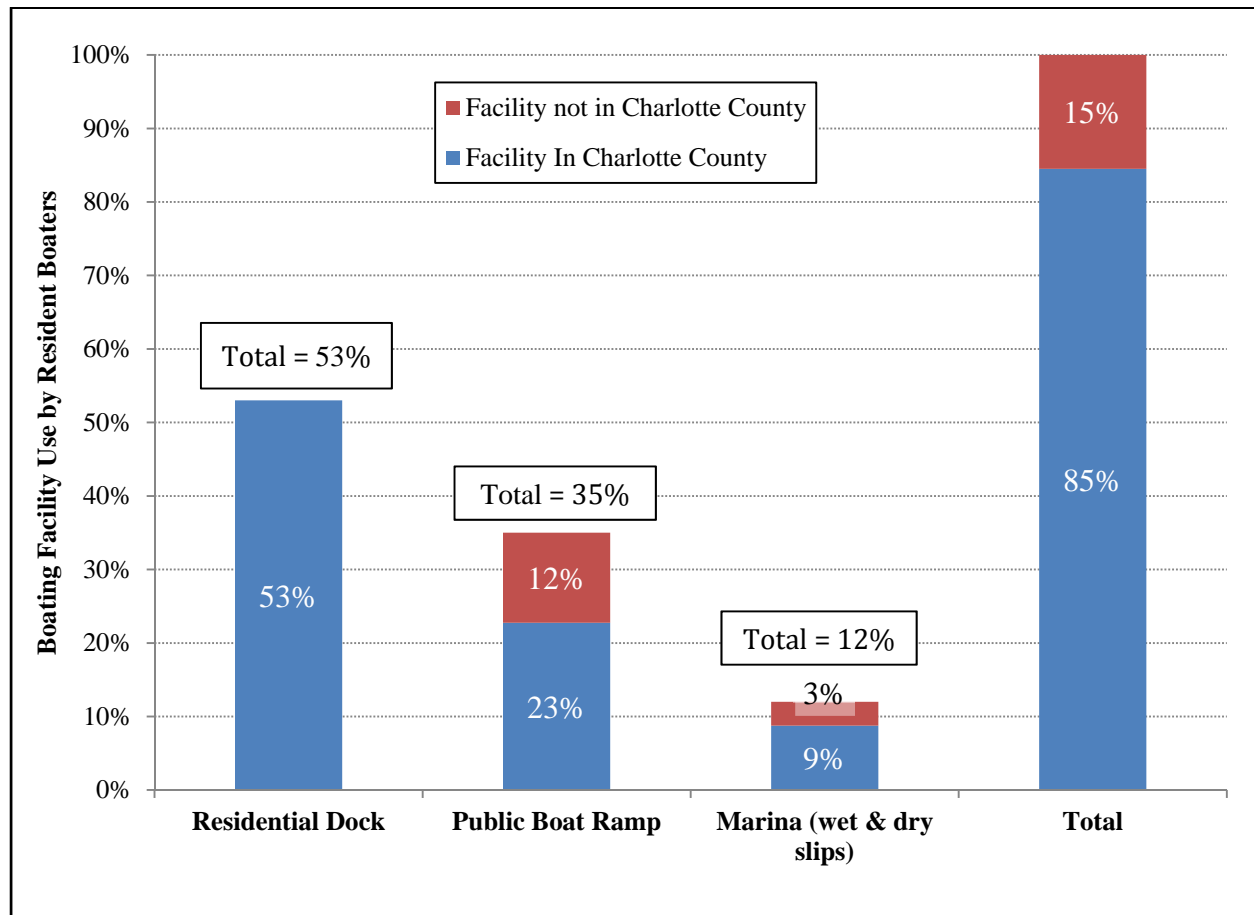


Figure 4-1. Types and locations of boating facilities used by Charlotte County residents.

Table 4-1. The relative share of dock, marina, and ramp use by Charlotte County residents.

Type of Launch Facility Used	Survey Respondents	
	Count	Share
Residential dock	88	53%
Public boat ramp	59	35%
Marina (wet & dry slips)	20	12%
Total	167	100%

The recreational boating characterizations mentioned earlier included visits to ramps and marinas, including wet and dry storage facilities, to collect vessel and vehicle registration information. The registration information was used to obtain the addresses of those boaters' who used the boating facilities. Analysis of the address information showed that some Charlotte County residents launch their boat from marinas and ramps that are not located within their own county (Table 4-2). For example, of those County residents who use ramps, 65% use one that is in Charlotte County and 35% use one located elsewhere. Of those County residents who use a marina, 73% use one in Charlotte County and 27% use one located elsewhere. Because this information was collected only for Charlotte County and the two coastal counties to its south (Lee and Collier) and the four to its north (Sarasota, Manatee, Hillsborough, and Pinellas), the share of county residents who keep their boats at a marina located in Charlotte County likely is somewhat less than 73 percent.

Table 4-2. The relative share of marina and ramp use by Charlotte County residents according to facility location.

Location of Launch Facility	Ramp Users		Marina Users	
	Count	Share	Count	Share
Charlotte County	297	65%	465	73%
Sarasota County	71	16%	8	1%
Lee County	42	9%	136	21%
Tampa Bay Region ¹	27	6%	21	3%
Collier County	18	4%	5	1%
Total	455	100%	635	100%

¹Includes Pinellas, Hillsborough, and Manatee counties

With regard to the shares of county residents and non-residents who use boating facilities in Charlotte County, the same address information indicates that residents make up about 53% of all ramp users and 51% of all marina patrons (Table 4-3,). Residents of other Florida counties who use boating facilities in Charlotte County account for approximately 43% of ramp users and 42% of marina patrons. Boaters who reside outside of Florida account for the remaining 4% of ramp users and 7% of marina patrons.

Table 4-3. The resident and non-resident share of marina and ramp use in Charlotte County.

Location of Ramp Users' Residences	Ramp Users		Marina Users	
	Count	Share	Count	Share
Charlotte County	297	53%	465	51%
Other Florida County	237	43%	386	42%
Out of State	3	4%	67	7%
Total	537	100%	918	100%

The saltwater facility demand projections that follow for the years 2020, 2030, 2040 and 2050 are based on the assumption that changes fall in line with the forecasted growth in each of the vessel length categories for the periods 2010 to 2030 and 2010 to 2050 (as estimated and summarized in Table 2-6).

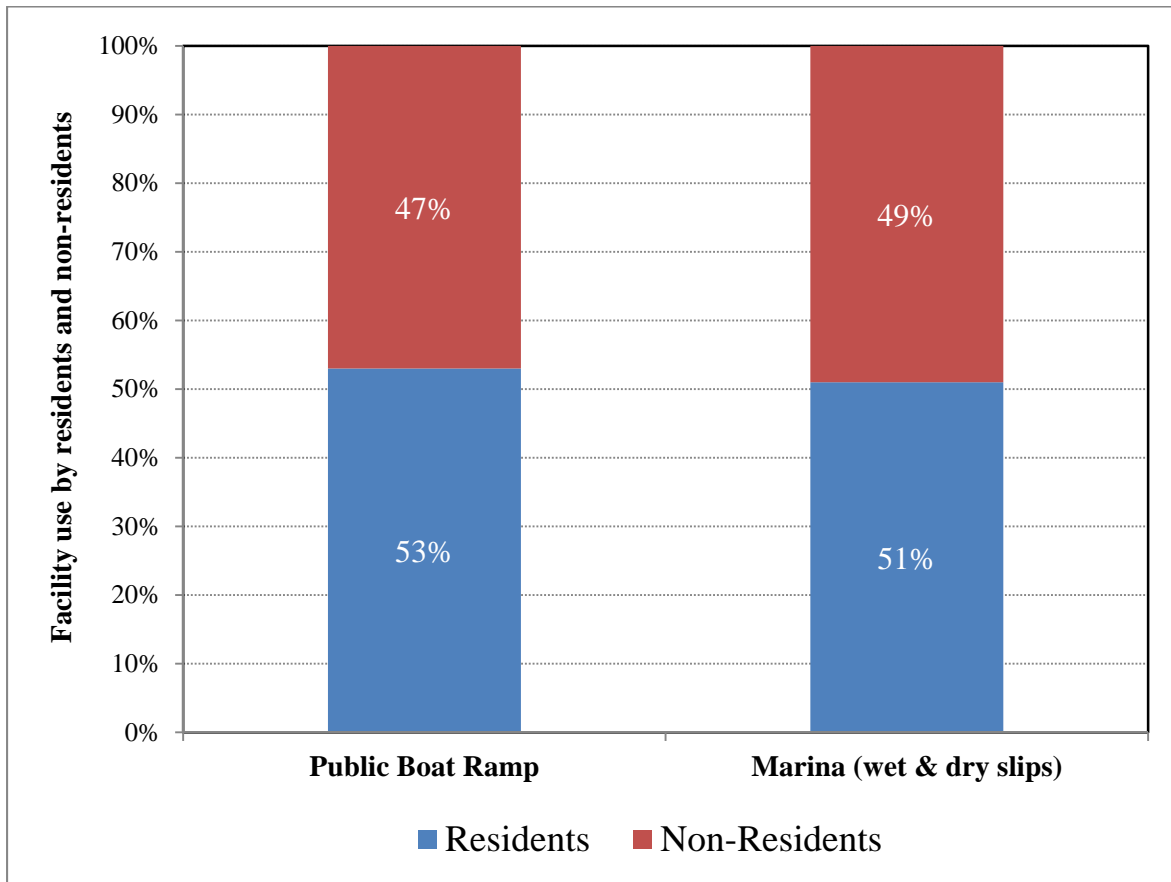


Figure 4-2. Share of Charlotte County facility use by residents and non-residents.

A. Projected Demand for Marina Wet and Dry Slips in Charlotte County

Two demand scenarios were calculated for marinas. The first scenario includes 100% of the population of resident and non-resident boaters identified as potential patrons of marina wet and dry slips located in Charlotte County. The second scenario includes only that portion of potential marina patrons who likely used their vessels at least once during a 12 month period as determined from the telephone survey. Thus, the second scenario includes *active* boaters, which as stated earlier, was estimated to be 78% of the boating population. The assumption is that the 12% who are inactive boaters find other less costly accommodations for their boat.

The estimated demand for marina wet and dry slips by Charlotte County residents ranged from 1,881 to 2,412 in 2010 (Table 4-4). This demand comprises slips in marinas that are located both inside and outside of Charlotte County. The lower number reflects active boaters only (78% of potential marina users in a given year), while the higher number includes both active and inactive boaters (100% of potential marina users). Between 2010 and 2030, the overall demand of Charlotte County residents for marina slips is projected to increase by 25%, and range from 2,345 to 3,004 in 2030. Between 2010 and 2050, the overall resident demand is projected to increase by 33%, and range from 2,495 to 3,198 in 2050.

Table 4-4. Projected Charlotte County resident demand for marina wet and dry slips: 2020-50.

Vessel Length Class (feet)	Charlotte County Resident Demand for Marina Wet and Dry Slips									
	Estimated 2010		Projected 2020		Projected 2030		Projected 2040		Projected 2050	
	78%	100%	78%	100%	78%	100%	78%	100%	78%	100%
Less than 12'	269	345	301	386	311	398	348	428	357	457
12' to < 16'	274	351	292	374	288	369	307	338	240	307
16' to < 26'	1,092	1,400	1,326	1,700	1,458	1,869	1,770	1,943	1,574	2,018
26' to < 40'	215	276	243	312	253	324	286	345	285	366
40' to < 65'	31	40	34	44	35	44	38	47	39	50
TOTAL	1,881	2,412	2,197	2,816	2,345	3,004	2,749	3,101	2,495	3,198

As indicated earlier, about 73% of those Charlotte County residents who use a marina are patrons of one that is in Charlotte County (Table 4-2). Thus, of the total estimated resident demand in 2010 (Table 4-4), the number of those slips that were demanded within Charlotte County ranged from 1,378 to 1,766 (Table 4-5). The projected resident demand in 2030 for marina slips located in Charlotte County ranges from 1,717 to 2,201, and from 1,827 to 2,342 in 2050 (Table 4-5).

Table 4-5. Projected resident demand for marina wet and dry slips located in Charlotte County: 2020-50.

Vessel Length Class (feet)	In-County Resident Demand for Marina Wet and Dry Slips									
	Estimated 2010		Projected 2020		Projected 2030		Projected 2040		Projected 2050	
	78%	100%	78%	100%	78%	100%	78%	100%	78%	100%
Less than 12'	197	252	220	283	227	291	244	313	261	334
12' to < 16'	200	257	214	274	211	270	193	247	175	225
16' to < 26'	800	1,025	971	1,245	1,068	1,369	1,110	1,423	1,153	1,478
26' to < 40'	158	202	178	229	185	238	197	253	209	268
40' to < 65'	23	30	25	33	26	33	27	35	29	37
TOTAL	1,378	1,766	1,609	2,063	1,717	2,201	1,771	2,271	1,827	2,342

Approximately 51% of occupied marina wet and dry slips in Charlotte County are used by county residents and 49% by non-residents (Table 4-3). Thus, given an estimated resident demand ranging from 1,378 to 1,766 in 2010 (Table 4-5), the corresponding non-resident demand ranged from 1,343 to 1,721 (Table 4-6). The projected non-resident demand for marina slips in Charlotte County ranges from 1,672 to 2,144 in 2030 and 1,780 to 2,282 in 2050 (Table 4-6).

Table 4-6. The projected non-resident demand for marina wet and dry slips located in Charlotte County: 2020-50.

Vessel Length Class (feet)	In-County Non-Resident Demand for Marina Wet and Dry Slips									
	Estimated 2010		Projected 2020		Projected 2030		Projected 2040		Projected 2050	
	78%	100%	78%	100%	78%	100%	78%	100%	78%	100%
Less than 12'	192	246	215	275	221	284	238	305	254	326
12' to < 16'	195	250	208	267	205	263	188	241	171	219
16' to < 26'	779	999	946	1,213	1,040	1,334	1,081	1,386	1,123	1,440
26' to < 40'	154	197	174	223	181	231	192	246	204	261
40' to < 65'	23	29	25	32	25	32	27	34	28	36
TOTAL	1,343	1,721	1,567	2,009	1,672	2,144	1,726	2,212	1,780	2,282

The combined resident and non-resident demand in 2010 for marina wet and dry slips in Charlotte County ranged from 2,720 to 3,487 (Table 4-7). The combined resident and non-resident demand projected for 2030 ranges from 3,389 to 4,345 and, in 2050, from 3,607 to 4,623.

Table 4-7. The projected resident and non-resident demand for marina wet and dry slips located in Charlotte County: 2020-50.

Vessel Length Class (feet)	In-County Resident and Non-Resident Demand for Marina Wet and Dry Slips									
	Estimated 2010		Projected 2020		Projected 2030		Projected 2040		Projected 2050	
	78%	100%	78%	100%	78%	100%	78%	100%	78%	100%
Less than 12'	389	498	435	558	448	575	482	618	515	660
12' to < 16'	395	507	422	541	416	533	381	488	346	444
16' to < 26'	1,579	2,024	1,917	2,458	2,108	2,703	2,191	2,810	2,276	2,917
26' to < 40'	311	399	352	451	366	469	389	499	413	529
40' to < 65'	46	59	50	64	51	65	54	69	57	73
TOTAL	2,720	3,487	3,176	4,072	3,389	4,345	3,497	4,484	3,607	4,623

Charlotte County has an existing capacity of 2,997 wet and dry slips in 21 marinas (Table 4-8, Figure 4-3). The existing capacity comprises 1,053 wet slips (including 42 moorings at Laishley Park) and 1,944 dry slips. When considering only *active* boaters (78% of use potential), the supply of wet and dry slips appears to exceed demand (2,720 slip) by about 9 percent (277). In contrast, when considering all potential marina users, demand (3,487) exceeds supply by about 16%, or 490 slips. If marina capacity in Charlotte County remains constant, then the projected demand will exceed supply in 2030 by 392 to 1,348 slips; and by 610 to 1,627 slips in 2050.

Table 4-8. The wet and dry slip capacity of marinas located in Charlotte County for the year 2011.

	Marina			Number of Slips		
	Name	Address	City	Wet	Dry	Both
1	Ainger Creek Marina	2002 Placida Road	Englewood	16	0	16
2	Cape Haze Marina Bay	6950 Placida Road	Englewood	105	225	330
3	Chadwick Cove Marina	1825 Gulf Blvd	Englewood	18	0	18
4	Charlotte Harbor Yacht Club	4400 Lister Street	Port Charlotte	36	0	36
5	Eldred's Marina	6301 Placida Road	Placida	87	0	87
6	Fisherman's Village Yacht Basin	1200 W. Retta Esplanade	Punta Gorda	111	0	111
7	Gasparilla Marina	15001 Gasparilla Road	Placida	225	500	725
8	Gator Creek Marine	5000 Deltona Dr	Punta Gorda	0	68	68
9	Gulf Coast Marine Center	4240 State Road 776	El Jobean	0	37	37
10	Harbor at Lemon Bay	900 S. McCall Road	Englewood	6	182	188
11	Laishley Park	100 E. Nesbit St.	Punta Gorda	127	0	127
12	Marine Dynamics	3340 Placida Road	Englewood	0	250	250
13	MarineMAX	7090 Placida Road	Cape Haze	2	100	102
14	Palm Island Marina	7080 Placida Rd	Cape Haze	90	200	290
15	Punta Gorda Marina	25096 Marion Ave	Punta Gorda	6	22	28
16	Riviera Marina	5600 Deltona Dr.	Punta Gorda	48	0	48
17	Rocky Creek Marina	1990 Placida Road	Englewood	10	60	70
18	Stump Pass Marina	260 Maryland Ave	Englewood	26	300	326
19	Uncle Henry's Marina	5820 Gasparilla Road	Boca Grande	58	0	58
20	Englewood Bait House	1450 Beach Road	Englewood	37	0	37
21	Isles Yacht Club	1780 W. Marion Ave.	Punta Gorda	45	0	45
TOTALS				1,053	1,944	2,997

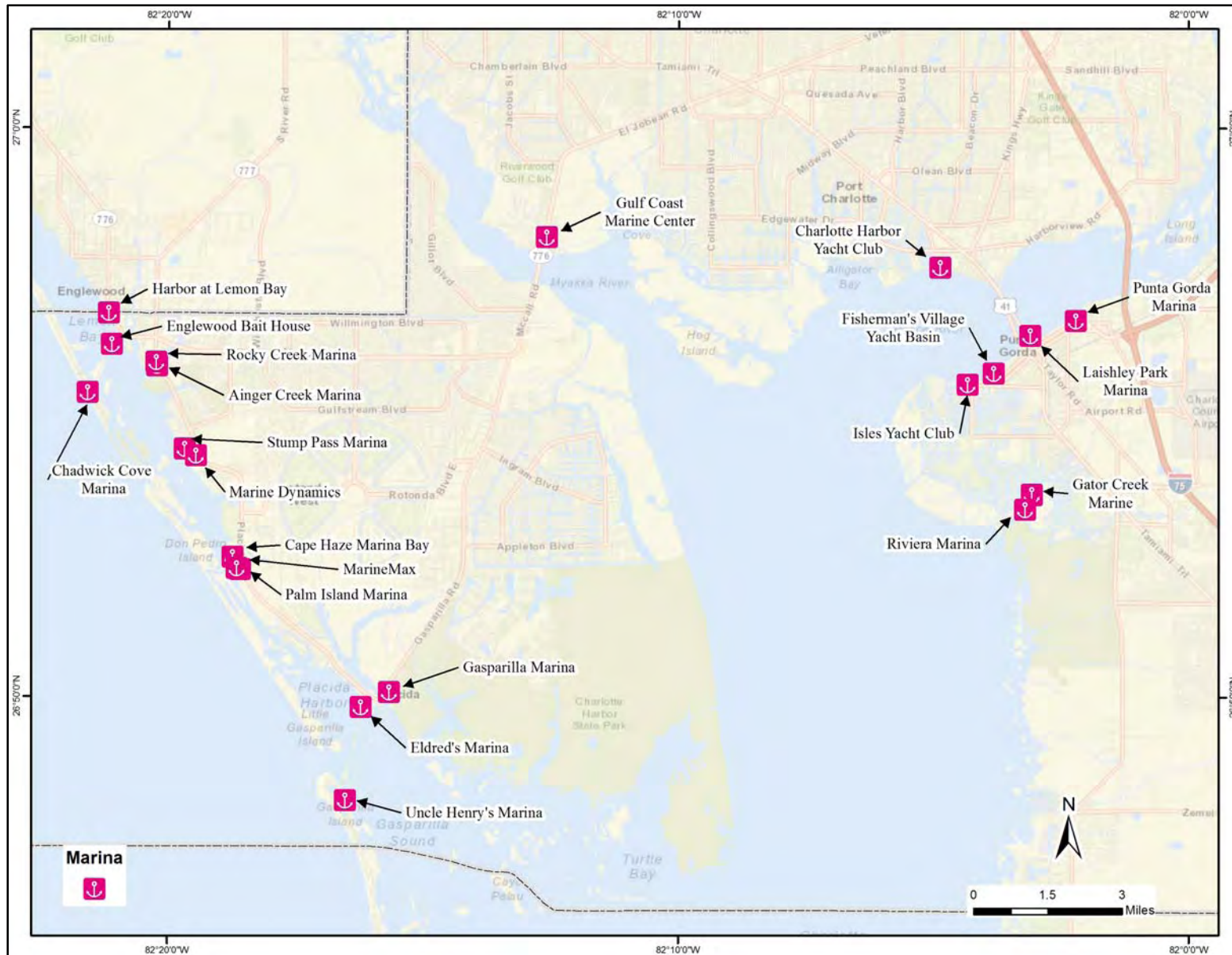


Figure 4-3. Marinas in Charlotte County, Florida.

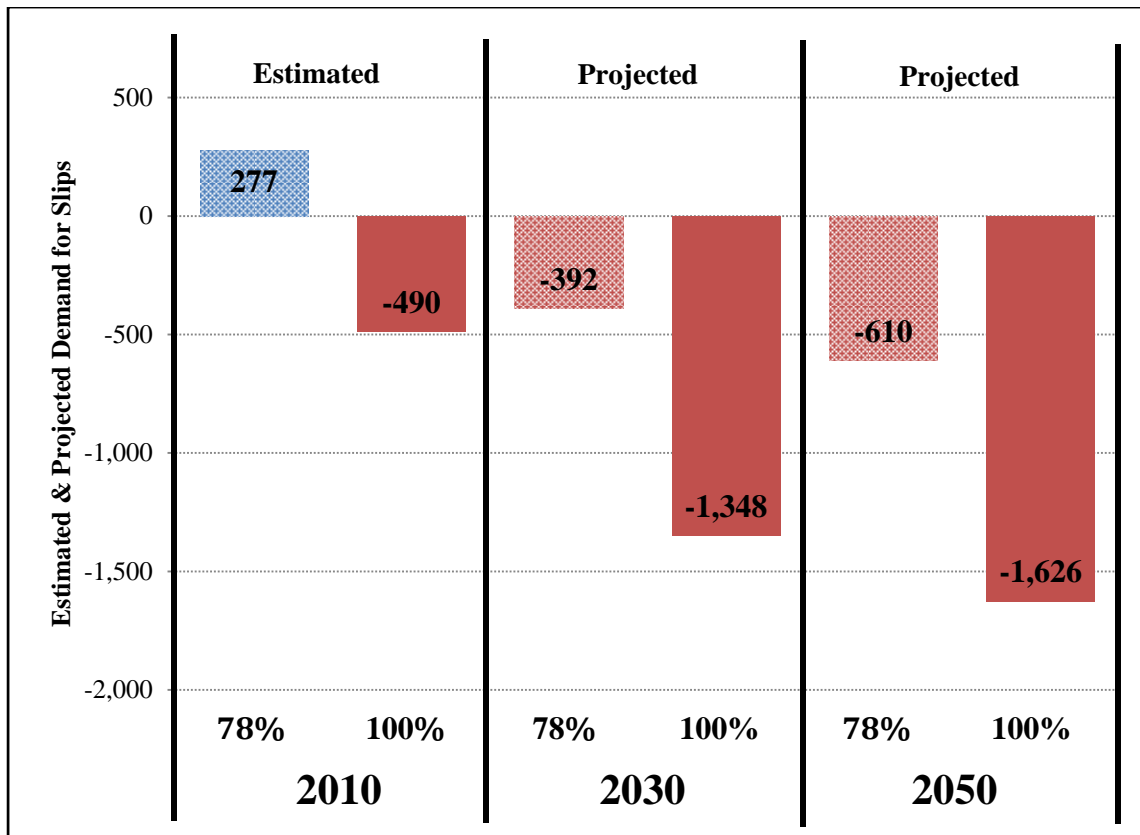


Figure 4-4. Resident and non-resident demand for marina wet and dry slips in Charlotte County.

B. Projected Demand for Saltwater Boat Ramps in Charlotte County

The same approach that was used to calculate demand estimates and projections for marinas was also used for saltwater boat ramps located in Charlotte County. However, demand was calculated only for the estimated 78% of the boating population that is active during a given 12 month period as determined from the 2009 phone survey.

In 2010, an estimated 5,531 Charlotte County residents used saltwater boat ramps (Table 4-9). This demand is for saltwater ramps that are located in Charlotte County and in neighboring counties. Between 2010 and 2030, the number of Charlotte County residents who use saltwater ramps in a given 12 month period is projected to increase by 25%, to 6,893 boat owners. Between 2010 and 2050, the number of residents using saltwater ramps in a given year is projected to increase by 33%, to 7,336 boat owners.

Table 4-9. The projected Charlotte County resident demand for saltwater ramps: 2020-50.

Vessel Length Class (feet)	Saltwater Ramp Demand by Charlotte County Residents				
	Estimated 2010	Projected 2020	Projected 2030	Projected 2040	Projected 2050
Less than 12'	790	851	912	979	1,047
12' to < 16'	804	824	845	774	704
16' to < 26'	3,209	3,747	4,285	4,455	4,626
26' to < 40'	635	691	747	795	843
40' to < 65'	93	98	104	110	116
TOTAL	5,531	6,212	6,893	7,114	7,336

As indicated earlier, approximately 65% of those Charlotte County residents who use a ramp use one that is located within Charlotte County (Table 4-2). Thus, the estimated 2010 resident demand for ramps located in Charlotte County was 3,610 boat owners (Table 4-10). In 2030, the number of resident boaters who use ramps is projected at 4,496 and, in 2050, at 4,785 (Table 4-10).

Table 4-10. The projected resident demand for saltwater ramps located in Charlotte County: 2020-50.

Vessel Length Class (feet)	In-County Saltwater Ramp Demand by Charlotte County Residents				
	Estimated 2010	Projected 2020	Projected 2030	Projected 2040	Projected 2050
Less than 12'	516	577	595	639	683
12' to < 16'	525	560	552	505	459
16' to < 26'	2,095	2543	2,797	2908	3,019
26' to < 40'	413	469	485	519	548
40' to < 65'	61	67	67	72	76
TOTAL	3,610	4,216	4,496	4,642	4,785

Total demand for saltwater ramps located in Charlotte County consists of 53% by resident boaters and 47% by non-resident boaters (Table 4-3). Thus, given that the estimated resident demand of 3,610 in 2010 (Table 4-10), the corresponding number of non-residents using saltwater ramps was 3,200 (Table 4-11). In 2030, the number of non-residents using saltwater ramps in Charlotte County is projected at 3,989 and, in 2050, at 4,244 (Table 4-11).

Table 4-11. The projected non-resident demand for saltwater ramps located in Charlotte County: 2020-50.

Vessel Length Class (feet)	In-County Saltwater Ramp Demand by Non-Residents of Charlotte County				
	Estimated 2010	Projected 2020	Projected 2030	Projected 2040	Projected 2050
Less than 12'	457	512	528	567	606
12' to < 16'	465	496	489	448	407
16' to < 26'	1858	2256	2,481	2579	2,678
26' to < 40'	366	416	431	460	486
40' to < 65'	54	59	60	64	67
TOTAL	3,200	3,740	3,989	4,118	4,244

The combined resident and non-resident demand for ramps located in Charlotte County was 6,810 in 2010 (Table 4-12). In 2030, the number of residents and non-residents using saltwater ramps in Charlotte County is projected at 8,485 and, in 2050, at 9,031 (Table 4-12).

Table 4-12. The projected resident and non-resident demand for saltwater ramps located in Charlotte County: 2020-50.

Vessel Length Class (feet)	In-County Saltwater Ramp Demand by Residents and Non-Residents of Charlotte County				
	Estimated	Projected	Projected	Projected	Projected
	2010	2020	2030	2040	2050
Less than 12'	973	1,090	1,123	1,206	1,290
12' to < 16'	990	1,056	1,041	954	867
16' to < 26'	3,953	4,799	5,278	5,487	5,697
26' to < 40'	780	885	916	979	1,034
40' to < 65'	114	126	127	135	143
TOTAL	6,810	7,956	8,485	8,760	9,031

The next step was to determine whether the demand for saltwater boat ramps in Charlotte County is adequately met based on existing and planned public ramp lanes (Table 4-13, Figure 4-5).

Boat ramp supply was estimated in terms of the County's *total daily boat lane capacity*, which is a function of the total number of public ramp lanes in the County (19 existing, 4 planned), the average time a boater requires to launch and retrieve a vessel, and the average number of hours in a day that boats are launched and retrieved.

Table 4-13. Existing and planned public ramp lanes by Charlotte County Region.

Public Ramps	Number of Lanes		Charlotte County Region
	Existing	Planned	
Hathaway Park	1		Shell Creek
Darst Park*	1		Upper Peace River
Harbour Heights Park*	2		Upper Peace River
Riverside Park Boat Ramp	1		Upper Peace River
Laishley Park*	2		Lower Peace River
Ponce de Leon Park*	2		Lower Peace River
Port Charlotte Beach Complex*	2		Lower Peace River
Spring Lake Park*	1		Lower Peace River
Cattledock Boat Ramp*	0	2	Myakka River
El Jobean Boat Ramp*	1		Myakka River
Butterford Waterway	1		South Gulf Cove
South Gulf Cove Park	1		South Gulf Cove
Placida Boat Ramp*	3		Stump Pass/Gasparilla
Ainger Creek Park*	1		Upper Lemon Bay
Bay Heights Boat Ramp	0	2	Upper Lemon Bay
Total	19	4	

*Indicates public ramps for which boat trip information was recorded from surveys sent to area boaters for the Recreational Boating Characterization Studies. Trip information was also collected for private ramps at Eldred's and Uncle Henry's marinas (Stump Pass/Gasparilla region) and for Indian Mound Park, located just north of Charlotte County in the Upper Lemon Bay region.

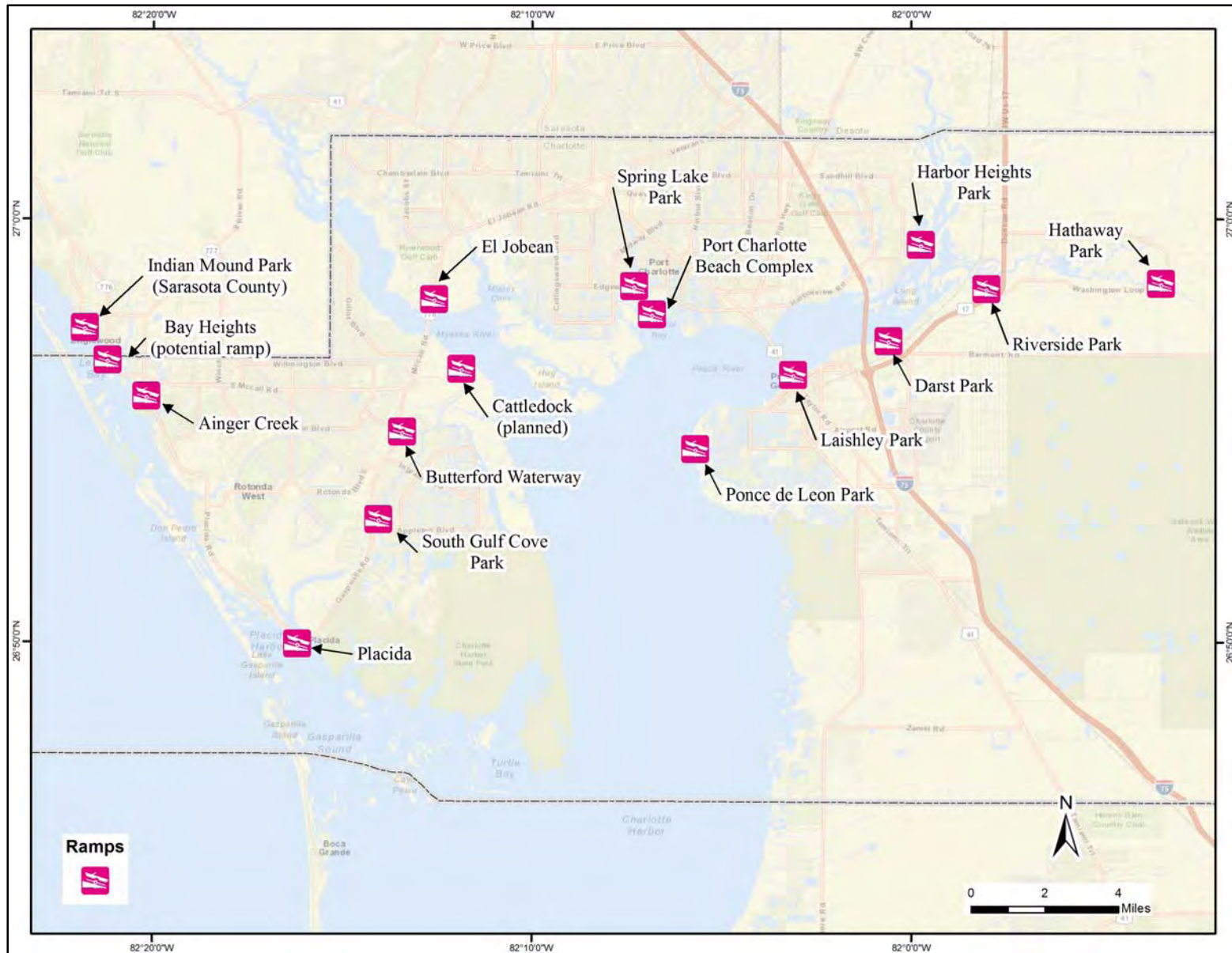


Figure 4-5. Locations of existing and planned public ramps in Charlotte County.

Three capacity levels (scenarios) were calculated based on a daily average of 12 hours of ramp activity and combined launch/retrieval times averaging 20, 30, and 40 minutes:

$$(60'/20') * 12 \text{ hours} * 19 \text{ lanes} = 684 \text{ boats per day} * 365 \text{ days} = 249,660 \text{ boats per year}$$

$$(60'/30') * 12 \text{ hours} * 19 \text{ lanes} = 456 \text{ boats per day} * 365 \text{ days} = 164,440 \text{ boats per year}$$

$$(60'/40') * 12 \text{ hours} * 19 \text{ lanes} = 342 \text{ boats per day} * 365 \text{ days} = 124,830 \text{ boats per year}$$

Taking into account Charlotte County's planned addition of 4 ramp lanes, the total daily boat lane capacity for the three scenarios would be as follows:

$$(60'/20') * 12 \text{ hours} * 23 \text{ lanes} = 828 \text{ boats per day} * 365 \text{ days} = 302,220 \text{ boats per year}$$

$$(60'/30') * 12 \text{ hours} * 23 \text{ lanes} = 552 \text{ boats per day} * 365 \text{ days} = 201,480 \text{ boats per year}$$

$$(60'/40') * 12 \text{ hours} * 23 \text{ lanes} = 414 \text{ boats per day} * 365 \text{ days} = 151,110 \text{ boats per year}$$

The survey results indicate that the average (median) number of trips per year that ramp users take when launching from a Charlotte County boat ramp is 12.8 (residents average 18 trips and non-residents 7 trips). Thus, with 6,810 resident and non-resident boaters using Charlotte County ramps in 2010 (Table 4-12), the total number of trips originating from county ramps equals 87,168 a year. The total boat lane capacities determined above would appear to exceed saltwater ramp demand across all scenarios. However, this is misleading because it does not account for the seasonality of boating nor weekly and daily boating trends.

Estimates of monthly and daily peak demand were based on responses to the mail survey by Charlotte County boaters. The mail survey results provide an estimate of the number of trips by month and day of the week (Table 4-14). On average, 40% of ramp trips (launches/retrievals) take place between Monday and Friday and 60% occur on weekends. During the week, the daily average of ramp use ranges from 96 launches/retrievals in December to 150 in April and May. On weekends, the daily average ranges from 404 launches/retrievals in January to 704 in April (Table 4-14).

Table 4-14. Distribution of trips from Charlotte County ramps by month and week day.

Month	Days per Month		Launches and Retrievals at Charlotte County Ramps			
	Week Days	Weekend Days	Share of Yearly Total	Number per Month	Daily Average	
					During Week	On Weekend
JAN	21	10	7.3%	6,402	112	404
FEB	20	8	8.1%	7,037	130	555
MAR	23	8	9.6%	8,391	134	662
APR	22	8	10.2%	8,926	150	704
MAY	21	10	9.8%	8,541	150	539
JUN	22	8	8.9%	7,789	130	615
JUL	22	9	8.1%	7,054	118	495
AUG	22	9	7.5%	6,519	109	457
SEP	22	8	7.4%	6,435	108	508
OCT	21	10	8.1%	7,037	124	444
NOV	22	8	8.1%	7,054	118	557
DEC	23	8	6.9%	5,984	96	472
TOTAL	261	104	100%	87,168	----	----

Additional information allowed for a refinement of daily peak demand estimates. In particular, statistics regarding the distribution of departure times and on-the-water trip durations of ramp users, and the relative use (popularity) of individual ramps in Charlotte County both by residents and by non-residents. Survey responses from the 2005 mail survey indicate that approximately 88% of ramp users launch their boats in the morning and 12% in the afternoon. Survey responses also indicate that ramp users spend an average (median) of 6 hours on the water. Given an average boating day of 12 hours, the assumption was made that half of the boats launched in the morning are retrieved in the morning and the other half in the afternoon. This translates into an estimated 66% of daily launches and retrievals occurring in the morning and 34% in the afternoon. The survey information was used to provide a better estimate of when boat lane capacity is likely exceeded under the three launch/retrieval scenarios of 20, 30, and 40 minutes and an average of 12 hours in a boating day.

Recreational boat trips that originated from Charlotte County ramps, as recorded during the 2005 mail survey, were used to estimate future ramp needs by allocating demand spatially among ramp lanes located in five regions of Charlotte County: Upper Lemon Bay, Stump Pass/Gasparilla Sound, Myakka River, Lower Peace River, and Upper Peace River. The allocation of ramp demand across the five regions was based on data collected during the Charlotte County recreational boating characterization study: including (a) vehicle and trailer tags logged at each ramp and (b) survey information returned by area boaters, including maps

documenting 243 boating trips survey respondents took from 13 ramps in Charlotte County. No information was collected for the two ramps in South Gulf Cove (Butterford Waterway and South Gulf Cove Park), each of which has one lane, nor for the Hathaway Park ramp on Shell Creek (Table 4-13), and, therefore, they are not included in the analysis that follows

The Upper Lemon Bay region of Charlotte County has a one-lane ramp in Ainger Creek and a two-lane ramp is in design for Bay Heights. Indian Mound Park in Sarasota County has a two-lane ramp and it is just north of Charlotte County. The Indian Mound Park ramp was included in the Charlotte County recreational boating study and, therefore, survey results for the ramp were used as a surrogate to estimate the potential impacts on demand of the planned Bay Heights ramp.

Trips from Upper Lemon Bay ramps (Ainger Creek and Indian Mound Park) that were recorded during the recreational boating characterization study accounted for about 14% (34 routes) of the 243 recorded boating routes that originated from Charlotte County ramps as recorded during the recreational boating characterization study. The relative share of recorded boating routes that originated from ramp lanes in the Upper Lemon Bay region was assumed to represent ramp demand for the region. Thus, of the 6,810 trips estimated to have originated from ramps in Charlotte County in 2010 (Table 4-12), 953 of the trips were allocated to ramp lanes in the Upper Lemon Bay region.

Given an average of 20 minutes to launch and retrieve a boat, the 2010 demand for Upper Lemon Bay ramps exceeded the ramp capacity of one lane (Ainger Creek) on weekend mornings during eleven months of the year (Table 4-15). Under the 30 and 40 minute launch/retrieval scenarios, weekend morning demand exceeded supply during 12 months of the year. Though not shown in the table, weekend afternoon demand was exceeded during the months of March and April given an average launch/retrieval time of 30 minutes, and during eleven months (except January) given an average time of 40 minutes. Estimates of weekday demand never exceeded supply.

Table 4-15. Excess ramp capacity during weekend mornings for the Upper Lemon Bay region given a supply of one lane in 2010.

Month	Average Week Day Demand		Average Weekend Day Demand		Excess Capacity in Launches/Retrievals ¹		
	Morning	Afternoon	Morning	Afternoon	20'	30'	40'
JAN	9	5	34	18	2	(10)	(16)
FEB	11	6	47	24	(11)	(23)	(29)
MAR	11	6	56	29	(20)	(32)	(38)
APR	13	7	59	31	(23)	(35)	(41)
MAY	13	7	46	23	(10)	(22)	(28)
JUN	11	6	52	27	(16)	(28)	(34)
JUL	10	5	42	22	(6)	(18)	(24)
AUG	9	5	39	20	(3)	(15)	(21)
SEP	9	5	43	22	(7)	(19)	(25)
OCT	10	5	38	19	(2)	(14)	(20)
NOV	10	5	47	24	(11)	(23)	(29)
DEC	8	4	40	21	(4)	(16)	(22)

¹ Numbers in parentheses are negative and indicate that boat ramp supply is exceeded.

The Stump Pass/Gasparilla Sound region includes two private ramps at Uncle Henry's and Eldred's marinas, as well as the popular three-lane ramp at Placida, which accounts for over 90% of ramp traffic in this region as determined from routes recorded during the 2005 survey.

Demand projections were calculated based on the three lanes at public ramp at Placida and did not include the two private ramps. The Stump Pass/Gasparilla region accounted for about 35% (84) of the 243 recorded boating routes originating from public ramps in Charlotte County.

Given an average of 20 minutes to launch and retrieve a boat, the 2010 demand for the Placida ramp exceeded its capacity of three lanes on weekend mornings during six months of the year (Table 4-16). Under the 30 and 40 minute launch/retrieval scenarios, weekend morning demand exceeded supply during 12 months of the year. Though not shown in the table, weekend afternoon demand was exceeded during the month of April given an average launch/retrieval time of 30 minutes, and during seven months given an average time of 40 minutes. Estimates of weekday demand never exceeded supply.

Table 4-16. Excess ramp capacity during weekend mornings in the Stump Pass/Gasparilla Sound region versus the supply of 3 lanes at the Placida ramp in 2010.

Month	Average Week Day Demand		Average Weekend Day Demand		Excess Capacity in Launches/Retrievals ¹		
	Morning	Afternoon	Morning	Afternoon	20'	30'	40'
JAN	23	12	81	42	27	(9)	(27)
FEB	26	13	112	58	(4)	(40)	(58)
MAR	27	14	133	69	(25)	(61)	(79)
APR	30	16	142	73	(34)	(70)	(88)
MAY	30	16	109	56	(1)	(37)	(55)
JUN	26	14	124	64	(16)	(52)	(70)
JUL	24	12	100	51	8	(28)	(46)
AUG	22	11	92	47	16	(20)	(38)
SEP	22	11	102	53	6	(30)	(48)
OCT	25	13	89	46	19	(17)	(35)
NOV	24	12	112	58	(4)	(40)	(58)
DEC	19	10	95	49	13	(23)	(41)

¹Numbers in parentheses are negative and indicate that boat ramp supply is exceeded.

The one-lane ramp at El Jobean is the only public ramp in the Myakka River region or Charlotte County and it accounted for about 6% (15) of the 243 recorded boating trips from Charlotte County ramps. Given the scenario of 20 minutes to launch and retrieve a boat on average, the 2010 demand was met by the El Jobean boat ramp (Table 4-17). Under the 30 and 40 minute scenarios, the 2010 demand exceeded capacity during weekend mornings in three and ten months, respectively (Table 4-17). Though not shown in the table, the estimated demand during weekend afternoons and on weekdays never exceeded lane capacity.

Table 4-17. Excess ramp capacity during weekend mornings in the Myakka River region versus the supply of 1 lane at the El Jobean ramp.

Month	Average Week Day Demand		Average Weekend Day Demand		Excess Capacity in Launches/Retrievals ¹		
	Morning	Afternoon	Morning	Afternoon	20'	30'	40'
JAN	4	2	16	8	20	8	2
FEB	5	3	22	11	14	2	(4)
MAR	5	3	26	13	10	(2)	(8)
APR	6	3	28	14	8	(4)	(10)
MAY	6	3	21	11	15	3	(3)
JUN	5	3	24	12	12	(0)	(6)
JUL	5	2	20	10	16	4	(2)
AUG	4	2	18	9	18	6	(0)
SEP	4	2	20	10	16	4	(2)
OCT	5	3	18	9	18	6	0
NOV	5	2	22	11	14	2	(4)
DEC	4	2	19	10	17	5	(1)

¹Numbers in parentheses are negative and indicate that boat ramp supply is exceeded.

The Lower Peace River region has four ramps with a total of seven lanes: Spring Lake Park (1), Port Charlotte Beach Complex (2), Laishley Park (2), and Ponce de Leon Park (2). The region accounted for about 39% (95) of the 243 recorded boat trips originating from ramps in Charlotte County. Given the scenario of an average of 20 minutes to launch and retrieve a boat, the 2010 demand never exceeded boat lane capacity (Table 4-18). Under the 30 and 40 minute scenarios, the 2010 demand exceeded capacity during weekend mornings in five and eleven months, respectively. Though not shown in the table, the estimated demand during weekend afternoons or on weekdays never exceeded lane capacity.

Table 4-18. Excess ramp capacity during weekend mornings in the Lower Peace River region versus the supply of seven lanes at four ramps.

Month	Average Week Day Demand		Average Weekend Day Demand		Excess Capacity in Launches/Retrievals ¹		
	Morning	Afternoon	Morning	Afternoon	20'	30'	40'
JAN	35	18	125	64	127	43	1
FEB	40	21	171	88	81	(3)	(45)
MAR	41	21	204	105	48	(36)	(78)
APR	46	24	217	112	35	(49)	(91)
MAY	46	24	166	86	86	2	(40)
JUN	40	21	190	98	62	(22)	(64)
JUL	36	19	153	79	99	15	(27)
AUG	34	17	141	73	111	27	(15)
SEP	33	17	157	81	95	11	(31)
OCT	38	20	137	71	115	31	(11)
NOV	36	19	172	88	80	(4)	(46)
DEC	30	15	146	75	106	22	(20)

¹Numbers in parentheses are negative and indicate that boat ramp supply is exceeded.

The Upper Peace River region has three ramps with a total of four lanes: Riverside Park (1), Darst Park (1), and Harbor Heights Park (2). The region accounted for about 2% (5) of the 243 recorded boat trips that originate from ramps in Charlotte County. The 2010 demand never exceeded the available ramp lane capacity in this region (Table 4-19).

Table 4-19. Excess ramp capacity during weekend mornings in the Upper Peace River region versus the supply of four lanes at three ramps.

Month	Average Week Day Demand		Average Weekend Day Demand		Excess Capacity in Launches/Retrievals		
	Morning	Afternoon	Morning	Afternoon	20'	30'	40'
JAN	2	1	6	3	138	90	66
FEB	2	1	9	5	135	87	63
MAR	2	1	11	5	133	85	61
APR	2	1	11	6	133	85	61
MAY	2	1	9	4	135	87	63
JUN	2	1	10	5	134	86	62
JUL	2	1	8	4	136	88	64
AUG	2	1	7	4	137	89	65
SEP	2	1	8	4	136	88	64
OCT	2	1	7	4	137	89	65
NOV	2	1	9	5	135	87	63
DEC	2	1	8	4	136	88	64

Ramp lane capacities needed to meet future peak demand (2010-50) in each of the five Charlotte County regions was determined for the three launch/retrieval scenarios. [*Note that, as stated previously, peak demand corresponds to the busiest weekend morning of the year.*] It is important to note that the future demand estimates that follow are based on current patterns of ramp use. However, future ramp use patterns will depend partially on future development patterns (population growth) within Charlotte County and for areas outside the county from where non-resident boaters originate. Boaters often try to minimize their travel time to a ramp and, for example, as some areas of the County develop more rapidly than others, ramp demand within regions of the County will likely shift as well.

Given an average launch/retrieval time of 20 minutes, the Upper Lemon Bay region (1 lane currently) is estimated to need a second lane to meet current demand and is projected to need a third lane by 2030 (Figure 4-6). The Stump Pass/Gasparilla region (3 lanes currently) needs a fourth lane to meet current demand and would need a total of five lanes by 2020 and six by 2040. The Myakka River region (1 lane currently) is projected to not need a second lane until 2050. The Lower Peace River region (7 lanes currently) is projected to need an eighth lane by 2020 and a ninth lane by 2050. Finally, the Upper Peace River region (3 lanes currently) appears to have a surplus of two ramp lanes that are projected to more than satisfy demand through 2050.

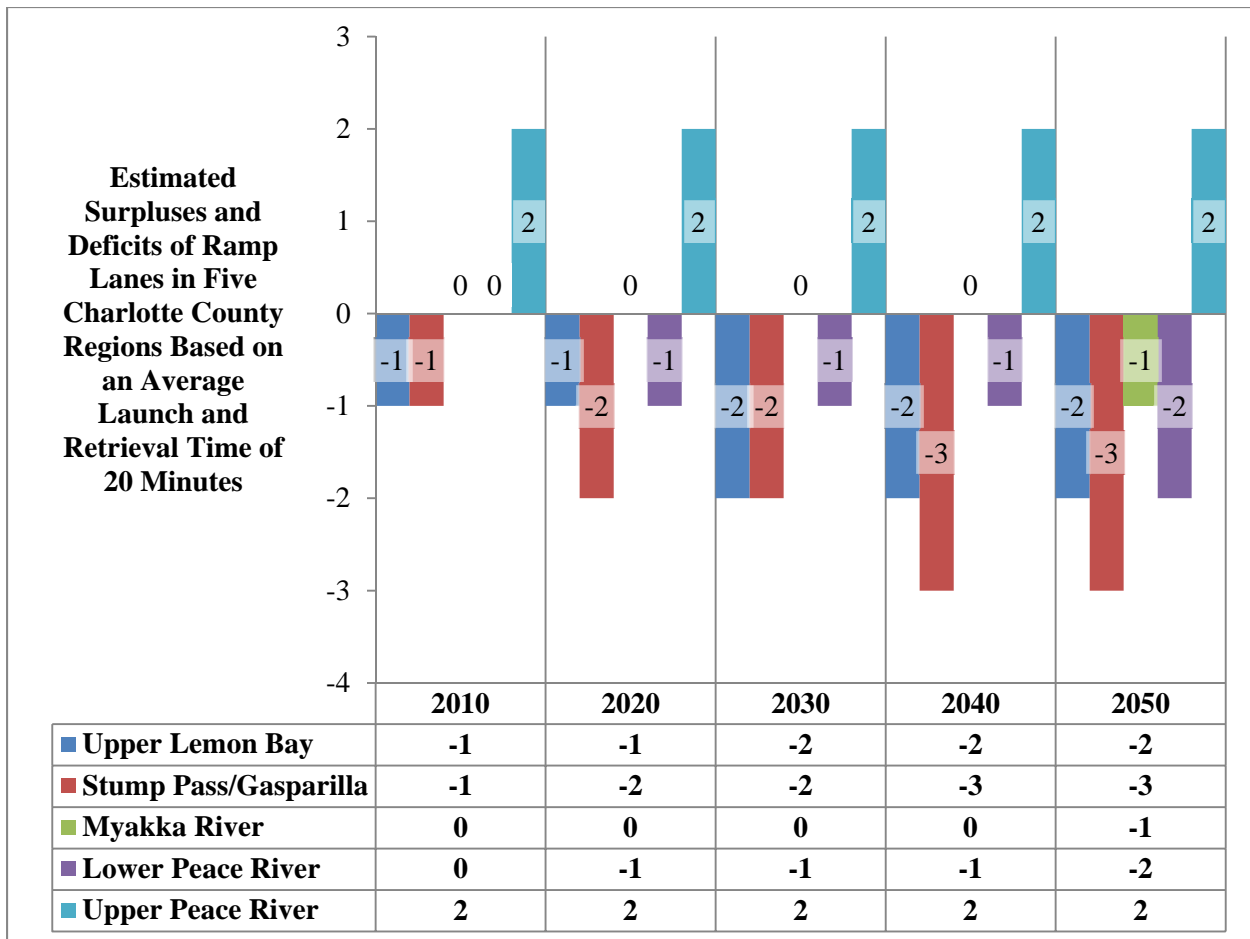


Figure 4-6. Estimated surpluses and deficits of ramp lanes in five Charlotte County regions at 10 year intervals, from 2010 through 2050, based on an average launch and retrieval time of 20 minutes.

Given an average launch/retrieval time of 30 minutes, the Upper Lemon Bay region (1 lane currently) is estimated to need two additional lanes to meet current demand and is projected to need a fourth lane by 2030 (Figure 4-7). The Stump Pass/Gasparilla region (3 lanes currently) needs three additional lanes to meet current demand, and would need a seventh lane by 2020 and an eighth by 2030. The Myakka River region (1 lane currently) needs an additional lane to meet current and future demand through 2050. The Lower Peace River region (7 lanes currently) is estimated to need three additional lanes to meet current demand and is projected to need an eleventh lane by 2020, a twelfth by 2030, and a thirteenth by 2050. Finally, the Upper Peace River region (3 lanes currently) appears to have a surplus of two ramp lanes that are projected to more than satisfy demand through 2050.

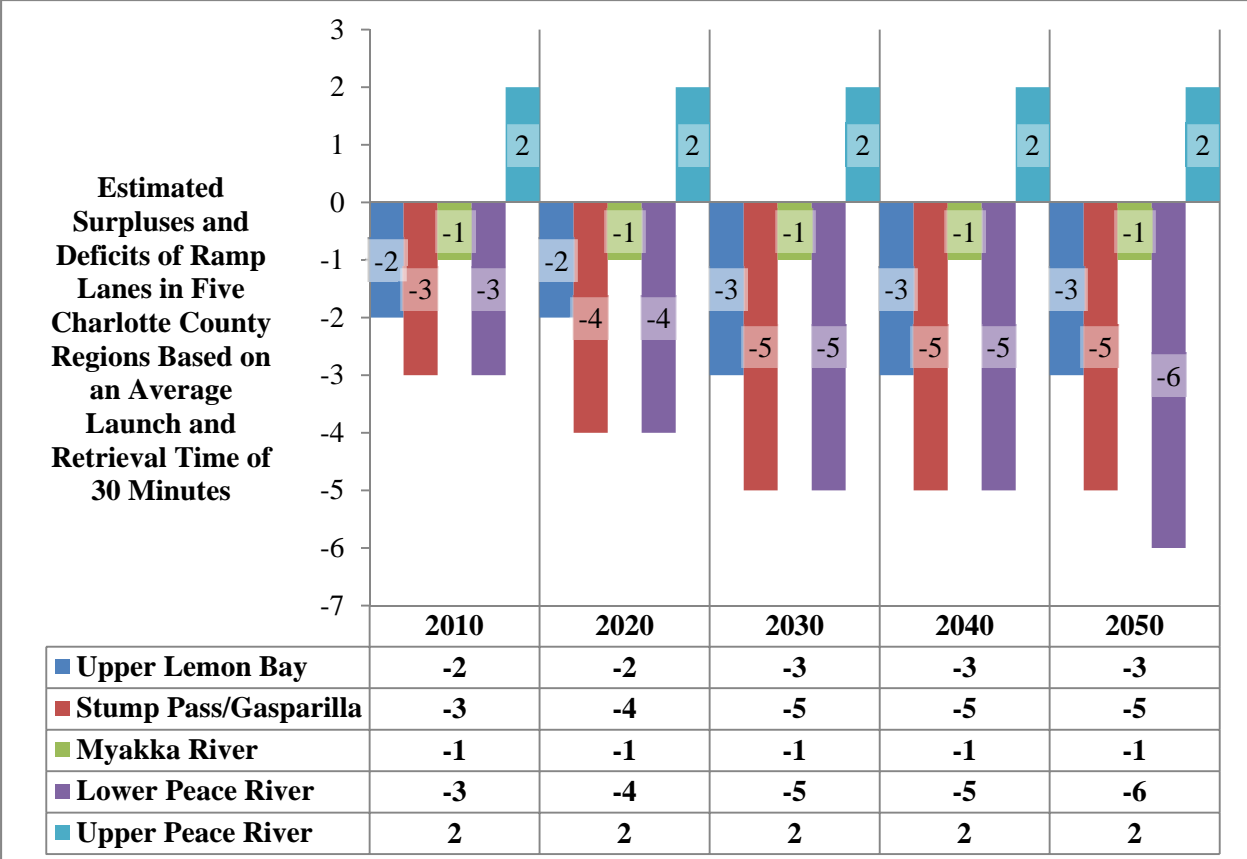


Figure 4-7. Estimated ramp lane deficits in five Charlotte County regions at 10 year intervals, from 2010 through 2050, for an average launch and retrieval time of 30 minutes.

Given an average launch/retrieval time of 40 minutes, the Upper Lemon Bay region (1 lane currently) is estimated to need three additional lanes to meet current demand and is projected to need a fifth lane by 2030 (Figure 4-8). The Stump Pass/Gasparilla region (3 lanes currently) needs five additional lanes to meet current demand, and would need a total of ten lanes by 2020 and eleven by 2040. The Myakka River region (1 lane currently) needs an additional lane to meet current demand and would need a third lane by 2050. The Lower Peace River region (7 lanes currently) is estimated to need six additional lanes to meet current demand and is projected to need a total of fifteen lanes by 2020, sixteen by 2030, and seventeen by 2050. Finally, the Upper Peace River region (3 lanes currently) appears to have a surplus of two ramp lanes that are projected to more than satisfy demand through 2050.

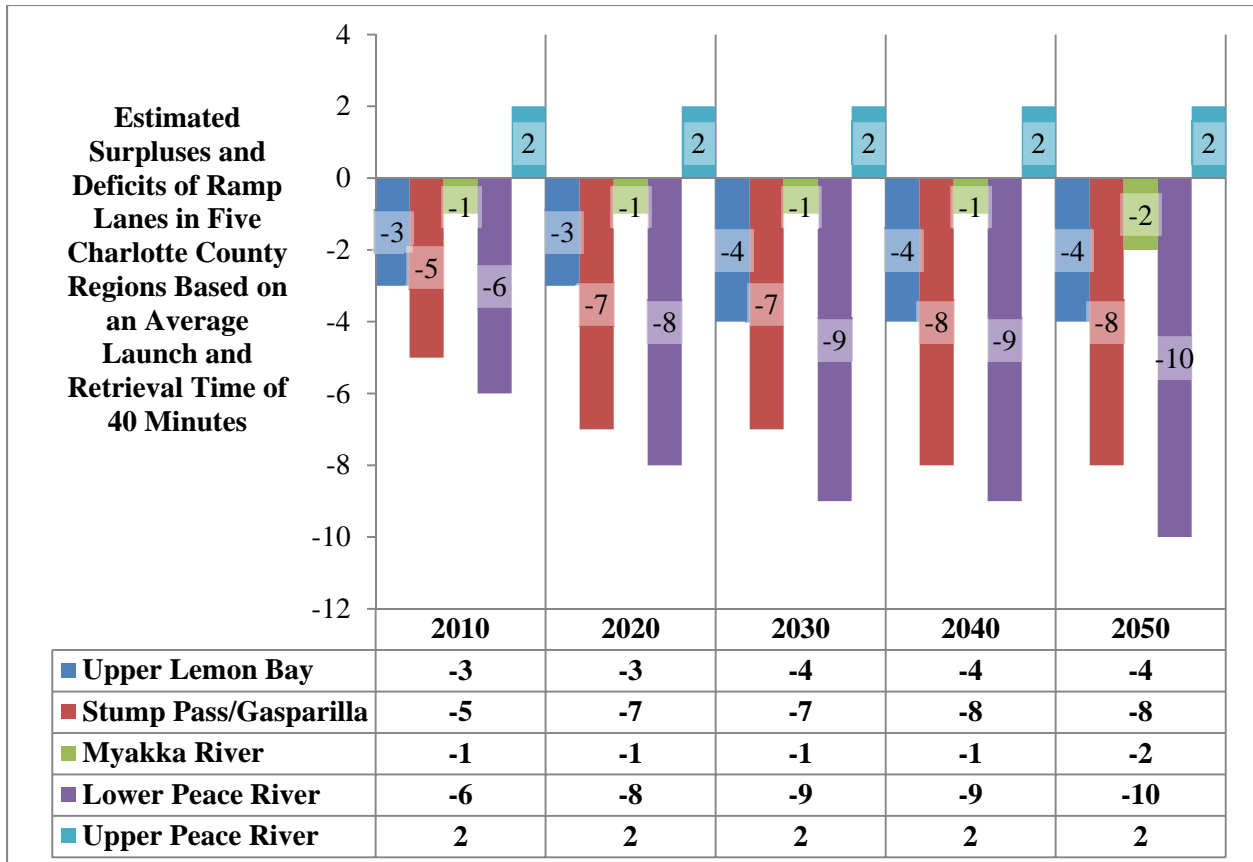


Figure 4-8. Estimated ramp lane deficits in five Charlotte County regions at 10 year intervals, from 2010 through 2050, for an average launch and retrieval time of 40 minutes.

C. On-The-Water Routes of Boat Ramp Users According to Charlotte County Region

The previous section evaluated future demand based on the locations of existing boat ramps. To provide insight as to where new ramps might be needed, this section looks at on-the-water routes mapped by resident ramp users who responded to the Charlotte County Recreational Boating Characterization. Figure 4-9 shows the 234 routes that originated from ramps in five regions of Charlotte County. Of particular interest is that a majority of routes that originated from ramps in the Lower and Upper Peace River regions and the Myakka River region had destinations in the Lower Charlotte Harbor or more southerly points.

Knowing from where resident boaters come to use Charlotte County ramps provides additional guidance about future needs (Table 4-20). The majority of resident users of Charlotte County ramps live in Central Charlotte County (54%) or East Charlotte County (26%), areas that only

have ramps in north county waters. Given that a majority of on-the-water destinations are in south Charlotte County waters and 80% of ramp users live in Central and East Charlotte County, future demand might be better met by placement of new ramps in South Charlotte County, particularly in the south portion of East Charlotte County where none currently exist.

Table 4-20. Percentage of resident ramp use by Charlotte County area.

Ramp Locations by Charlotte County Area	Origins of Ramp Users			All Ramp Users
	West Charlotte County	Central Charlotte County	East Charlotte County	
West Charlotte	17%	16%	2%	35%
Central Charlotte	2%	24%	3%	29%
East Charlotte	1%	14%	22%	36%
Total	20%	54%	26%	100%

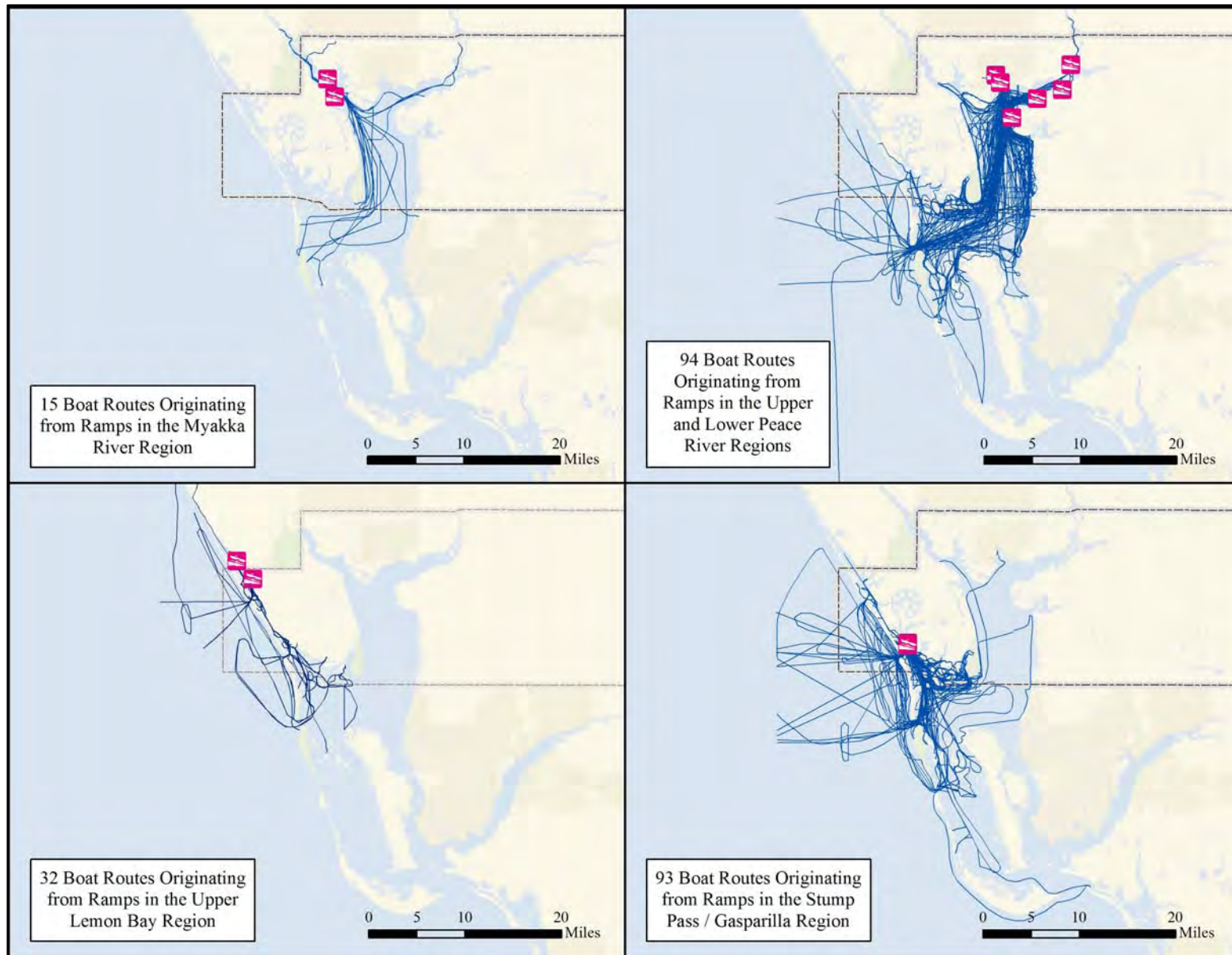


Figure 4-9. Boat routes originating from Charlotte County boat ramps by region.

D. Projected Demand for Saltwater Accessible Docks in Charlotte County

Demand for saltwater accessible docks in Charlotte County for the year 2010 was estimated at 10,614 (Table 4-21). Between 2010 and 2030, the demand for docks is projected to increase by 25% to 13,223, and between 2010 and 2050, by 33% to 14,074. Overall, the estimated demand for private boat docks in 2010 represents approximately 67% of the current supply of non-vacant residential parcels that are saltwater accessible. In addition, there are 9,947 vacant (developable) residential parcels in Charlotte County that are saltwater accessible. Taking only these vacant residential parcels into account, by the year 2030 the projected demand is estimated at approximately 26% of the capacity of vacant saltwater accessible parcels within the county and, in 2050, at 35 percent (Figure 4-10). Note that the estimates of available supply of residential saltwater accessible parcels are conservative in that they do not fully account for the overall capacity to meet projected demands for private docks. For example, there are many residential (non-vacant) parcels located on saltwater that do not have boats and, therefore, could accommodate them. Furthermore, a portion of the 9,947 vacant (developable) residential parcels on saltwater can accommodate more than one housing unit and, thus, more than one boat.

Table 4-21. Projected demand for saltwater accessible Docks in Charlotte County: 2020-50.

Vessel Length Class (feet)	Demand for Saltwater Accessible Docks in Charlotte County				
	Estimated 2010	Projected 2020	Projected 2030	Projected 2040	Projected 2050
Less than 12'	1,517	1,698	1,750	1,879	2,010
12' to < 16'	1,543	1,645	1,622	1,486	1,351
16' to < 26'	6,161	7,480	8,226	8,551	8,880
26' to < 40'	1,215	1,374	1,427	1,519	1,611
40' to < 65'	178	196	198	210	222
TOTAL	10,614	12,393	13,223	13,646	14,074

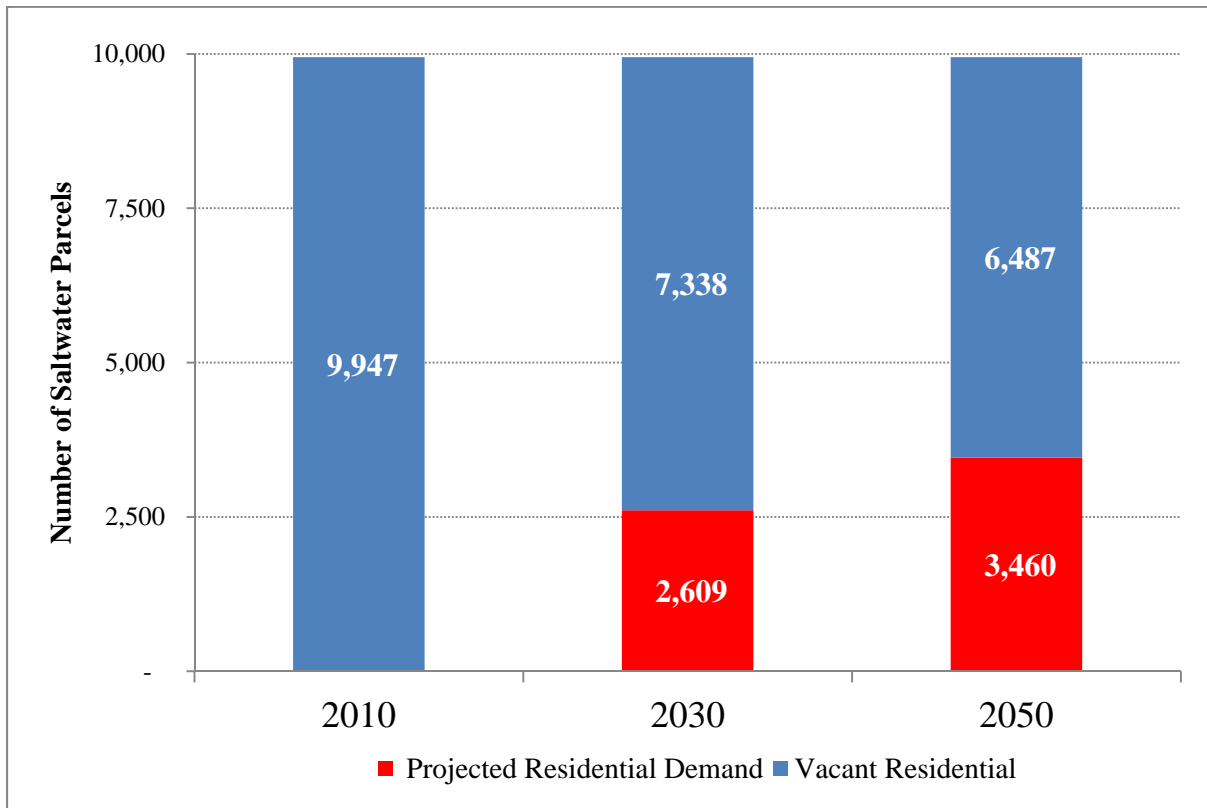


Figure 4-10. Projected demand for saltwater accessible docks in Charlotte County.

5. Assessing the Potential for Expanding Existing Saltwater Access Boating Facilities and Siting New Ones

A. Assessing Existing Saltwater Access Boating Facilities

All parcels associated with existing public ramp sites were evaluated to assess their relative potential for expansion based on select environmental (Table 5-1) and developmental criteria (Table 5-2) extracted from the datasets listed in Table 5-3. First, each parcel associated with a ramp was inspected and assigned values corresponding to each of the environmental and developmental criteria (Table 5-4 and Table 5-5, respectively). Next, each ramp parcel was assessed points for their particular environmental and developmental characteristics (Table 5-6 and Table 5-7, respectively). The final assessment score for each ramp parcel was obtained by subtracting the sum of its environmental scores from the sum of its developmental scores (Table 5-8). The final assessment scores are sorted in descending order, which provides some indication as to the relative feasibility (or ease) of expanding a particular ramp. Expansion of those listed towards the top of the column are likely more feasible than those at the bottom.

All parcels associated with existing marina sites were evaluated to assess their relative potential for expansion based on select environmental (Table 5-1) and developmental criteria (Table 5-2) extracted from the datasets listed in Table 5-3. First, each parcel associated with a marina was inspected and assigned values corresponding to each of the environmental and developmental criteria (Table 5-9 and Table 5-10, respectively). Next, each marina parcel was assessed points for their particular environmental and developmental characteristics (Table 5-11 and Table 5-12, respectively). The final assessment score for each marina parcel was obtained by subtracting the sum of its environmental scores from the sum of its developmental scores (Table 5-13). The final assessment scores are sorted in descending order, which provides some indication as to the relative feasibility (or ease) of expanding a particular marina. Expansion of those listed towards the top of the column are likely more feasible than those at the bottom (based on the evaluation criteria used).

Table 5-1. Environmental criteria used to assess the relative suitability of existing boat ramp and marina parcels for potential expansion.

Environmental Criteria	Points Assessed
ADJACENCY TO WETLANDS (mangrove swamp, oysters, saltwater marsh)	
Adjacent	2
Not adjacent	0
ADJACENCY TO SEAGRASS	
Adjacent to dense seagrass	2
Adjacent to sparse or patchy seagrass	1
Not adjacent to seagrass	0
ADJACENCY TO AQUATIC PRESERVE	
Within 100 feet of aquatic preserve	2
Not adjacent to aquatic preserve	0
ADJACENCY TO MANATEE PROTECTION AREA	
Adjacent to a manatee protection area	2
Not adjacent to a manatee protection area	0
SEA LEVEL RISE	
Affected by sea level rise of 5 feet	2
Affected by sea level rise of 10 feet	1
Not affected by sea level rise	0
ADJACENCY TO SMALLTOOTH SAWFISH HABITAT	
Adjacent to smalltooth sawfish habitat	2
Not adjacent to	0
ADJACENCY TO SHELLFISH HARVESTING AREAS	
Adjacent to conditionally approved or conditionally restricted area	2
Adjacent to prohibited area or to no shellfish area	0

Table 5-2. Developmental criteria used to assess the relative suitability of existing boat ramps and marinas for potential expansion.

Developmental Criteria	Points Assessed
WATER ACCESS	
Improved (dredged) or not applicable	2
Unimproved (natural)	0
WATER DEPTH	
Greater than or equal to 3 feet at mean lower low water	2
Less than 3 feet at mean lower low water	0
WATER SERVICE LINE AVAILABILITY	
Water main present within 50 feet	2
No water main present within 50 feet; or no data	0
CENTRAL SEWER SERVICE AVAILABILITY	
Sewer available within 50 feet	2
No sewer available within 50 feet; or no data	0
ROAD ACCESS	
Major road or minor arterial within 100 feet	2
No road within 100 feet	0
VACANT ADJACENT PARCEL (VAP)	
Yes, there is one or more vacant adjacent parcels	2
No, there are no vacant adjacent parcels	0
ACREAGE OF VACANT ADJACENT PARCELS (SUM OF ALL VAPS)	
Total area of vacant adjacent parcels is greater than 5 acres	2
Total area of vacant adjacent parcels is between 1 and 5 acres	1
Total area of vacant adjacent parcels is less than 1 acre	0

Table 5-3. GIS data layers used to assess existing and new saltwater access boating facilities.

GIS Dataset	Data Source	Description of Dataset
Aquatic Preserves	Florida Department of Environmental Protection	Aquatic Preserve boundaries
Bathymetry	Charlotte County Regional Waterway Management System	Depth soundings by Coastal Engineering Consultants, Inc. & Charlotte County Public Works. CEC data obtained 2007-11
Central Sewer Service	Charlotte County Utilities	Existing water, wastewater and reclaimed water assets, which includes mains, structures, services, and fittings
Manatee Protection Areas	Florida Fish and Wildlife Conservation Commission	Manatee protection areas as described in the Florida Administrative Code Chapter 68C-22, effective 7/23/06
Navigation Channels	Charlotte County Regional Waterway Management System	Channels constructed from depths soundings by Coastal Engineering Consultants & Charlotte County Public Works
Parcels & Accounts	Charlotte County GIS	Layer depicting ownership as per Charlotte County Property Appraiser parcel ID
Seagrass	Charlotte Harbor National Estuary Program	Seagrass for the years 1950, 1999, 2006, and 2008
Sea Level Rise	Charlotte Harbor National Estuary Program	Polygons showing areas of 5, 10, and >10 foot sea level rise

GIS Dataset	Data Source	Description of Dataset
Shellfish Harvesting Areas	Florida Department of Agriculture and Consumer Services	Shellfish harvesting area boundaries classified & digitized by Florida Department of Agriculture and Consumer Services
Smalltooth Sawfish Habitat	National Oceanic Atmospheric Administration	Critical habitat for smalltooth sawfish (<i>Pristis pectinata</i>) as designated by 74 FR 45353, 9/2/2009, Rules and Regulations
Roads	Charlotte County GIS	Street centerline file
Water Access	Water access shapefile produced by Gustavo Antonini	Interpretation of whether a site is adjacent to a dredged or natural channel, and verified using BING imagery
Water Service	Charlotte County GIS	Point layer that shows countywide hydrants and pressurized water main line layer
Wetlands	Charlotte Harbor National Estuary Program	Mangroves, oysters, and saltwater marsh

Table 5-4. Environmental characteristics for all parcels associated with existing ramps in Charlotte County.

Public Boat Ramp (Every parcel associated with a ramp is listed)	Tax Account Number of Parcel	Parcel Adjacency to:						Affected by Sea Level Rise
		Aquatic Preserve	Manatee Protection Area	Shellfish Harvest Area	Smalltooth Sawfish Habitat	Wetland	Seagrass	
Ainger Creek Park	412008104001	No	No	Prohibited	No	No	Dense	10 feet rise
Bay Heights*	412006101003	Lemon Bay	Yes	Prohibited	No	No	Dense	5 feet rise
Butterford Waterway	412108478002	No	No	None	No	No	None	No
Butterford Waterway	412108479001	No	No	None	No	No	None	10 feet rise
Cattledock *	412103100001	Charlotte Harbor	No	Cond. Approved	Yes	Yes	Dense	5 feet rise
Darst Park	402333427001	No	Yes	None	Yes	No	None	5 feet rise
El Jobean Boat Ramp	402128279001	No	No	Prohibited	Yes	No	None	No
Eldred's Marina	422012351001	Lemon Bay	Yes	Prohibited	No	No	Dense	5 feet rise
Harbour Heights Park	402315476004	No	Yes	None	No	Yes	None	5 feet rise
Hathaway Park	402426102001	No	No	None	No	No	None	10 feet rise
Laishley Park	412306326003	No	Yes	None	No	No	None	10 feet rise
Laishley Park	412306326001	No	Yes	None	Yes	No	None	5 feet rise
Placida Boat Ramp	422012301003	Lemon Bay	Yes	Prohibited	No	No	Dense	5 feet rise
Ponce de Leon Park	412215200002	Charlotte Harbor	No	None	Yes	Yes	Dense	5 feet rise
Port Charlotte Beach Complex	402228451001	Charlotte Harbor	No	None	Yes	No	None	10 feet rise
Riverside Park Boat Ramp	No Parcel ¹	No	Yes	None	No	No	None	10 feet rise
South Gulf Cove Park	412129176002	No	No	None	No	No	None	10 feet rise
Spring Lake Park	402221351001	Charlotte Harbor	No	None	Yes	No	None	10 feet rise

¹There was not parcel (polygon) for this ramp in the parcel database obtained from Charlotte County.

*Bay Heights and Cattledock were included because there are plans for placing a boat ramp.

Table 5-5. Developmental characteristics for all parcels associated with existing ramps in Charlotte County.

Public Boat Ramp	Characteristics of Ramp Parcels				Vacant Adjacent Parcel		Infrastructure Within			Waterside Channel	
	Tax Account Number	Zoning Code	Future Land Use	Acres	Present	Acres	50 feet		100 ft	Limiting Depth (ft)	Dredged or Natural
							Water Main	Sewer	Road		
Ainger Creek Park	412008104001	35	High Density Residential	1.98	Yes	1.08	No Data	No Data	Major	< 3 feet	Dredged
Bay Heights*	412006101003	20	Parks & Recreation	1.47	Yes	1.21	Yes ¹	No Data	Major	< 3 feet	Dredged
Butterford Waterway	412108478002	61	Public Lands & Facilities	1.00	Yes	3.42	>= 6"	Yes	Minor	N/A	N/A
Butterford Waterway	412108479001	61	Low Density Residential	6.88	Yes	38.86	>= 6"	Yes	Major	>= 3 feet	Dredged
Cattledock*	412103100001	21	Preservation	280.39	Yes	232.31	No	No	Minor	>= 3 feet	Dredged
Darst Park	402333427001	30	Low Density Residential	0.56	Yes	0.25	No Data	No Data	Minor	< 3 feet	Dredged
El Jobean	402128279001	73	Commercial	1.26	Yes	0.42	>= 6"	No Data	Major	>= 3 feet	Dredged
Eldred's Marina	422012351001	70	Commercial	11.20	No	N/A	No	Yes	Major	>= 3 feet	Dredged
Harbour Heights Park	402315476004	22	Parks & Recreation	8.21	Yes	0.53	Yes ¹	No Data	Minor	< 3 feet	Natural
Hathaway Park	402426102001	1	Parks & Recreation	28.90	No	N/A	No Data	No Data	Major	N/A	N/A
Laishley Park	412306326003	158	City	0.46	No	N/A	Yes ¹	No Data	Minor	N/A	N/A
Laishley Park	412306326001	158	City	15.93	Yes	2.86	Yes ¹	No Data	Major	>= 3 feet	Dredged
Placida Boat Ramp	422012301003	92	Parks & Recreation	5.63	Yes	16.17	>= 6"	Yes	Major	>= 3 feet	Dredged
Ponce de Leon Park	412215200002	199	City	15.45	No	N/A	No Data	No Data	Minor	>= 3 feet	Dredged
Port Charlotte Beach	402228451001	94	Parks & Recreation	16.08	Yes	0.91	< 6"	Yes	Major	>= 3 feet	Dredged
Riverside Park	No Parcel ²	-	Parks & Recreation	0.71	No	N/A	No Data	No Data	Minor	>= 3 feet	Natural
South Gulf Cove Park	412129176002	22	Parks & Recreation	4.80	Yes	13.56	>= 6"	Yes	Minor	>= 3 feet	Dredged
Spring Lake Park	402221351001	22	Parks & Recreation	6.05	Yes	3.98	>= 6"	Yes	Major	>= 3 feet	Dredged

¹Water is present, but the size of the main is unknown.

²There was no parcel (polygon) for this ramp in the parcel database obtained from Charlotte County.

*Bay Heights and Cattledock were included because there are plans for placing a boat ramp at these locations.

Table 5-6. Environmental criteria coded values for all parcels associated with existing ramps in Charlotte County.

Boat Ramp Parcels (Every parcel associated with a ramp is listed)	Tax Account Number of Parcel	Parcel Adjacency to:						Affected by Sea Level Rise	Environmental Score
		Aquatic Preserve	Manatee Protection Area	Shellfish Harvest Area	Smalltooth Sawfish Habitat	Wetland	Seagrass		
Ainger Creek Park	412008104001	0	0	0	0	0	2	1	3
Bay Heights*	412006101003	2	2	0	0	0	2	2	8
Butterford Waterway	412108478002	0	0	0	0	0	0	0	0
Butterford Waterway	412108479001	0	0	0	0	0	0	1	1
Cattledock *	412103100001	2	0	2	2	2	2	2	12
Darst Park	402333427001	0	2	0	2	0	0	2	6
El Jobean Boat Ramp	402128279001	0	0	0	2	0	0	0	2
Eldred's Marina	422012351001	2	2	0	0	0	2	2	8
Harbour Heights Park	402315476004	0	2	0	0	2	0	2	6
Hathaway Park	402426102001	0	0	0	0	0	0	1	1
Laishley Park	412306326003	0	2	0	0	0	0	1	3
Laishley Park	412306326001	0	2	0	2	0	0	2	6
Placida Boat Ramp	422012301003	2	2	0	0	0	2	2	8
Ponce de Leon Park	412215200002	2	0	0	2	2	2	2	10
Port Charlotte Beach Complex	402228451001	2	0	0	2	0	0	1	5
Riverside Park Boat Ramp	No Parcel ¹	0	2	0	0	0	0	1	3
South Gulf Cove Park	412129176002	0	0	0	0	0	0	1	1
Spring Lake Park	402221351001	2	0	0	2	0	0	1	5

¹There was no parcel (polygon) for this ramp in the parcel database obtained from Charlotte County.

*Bay Heights and Cattledock were included because there are plans for placing a boat ramp.

Table 5-7. Developmental criteria coded values for all parcels associated with existing ramps in Charlotte County.

Public Boat Ramp	Characteristics of Ramp Parcels				Vacant Adjacent Parcel		Infrastructure Within 50 Feet			Waterside Channel		Developmental Score
	Tax Account Number	Zoning Code	Future Land Use	Acres	Present	Acres	Water Main	Sewer	Road	Limiting Depth (ft)	Dredged or Natural	
Ainger Creek Park	412008104001	35	High Density Residential	1.98	1	1	0	0	2	0	2	6
Bay Heights*	412006101003	20	Parks & Recreation	1.47	1	1	2	0	2	0	2	8
Butterford Waterway	412108478002	61	Public Lands & Facilities	1.00	1	1	2	2	2	2	2	12
Butterford Waterway	412108479001	61	Low Density Residential	6.88	1	2	2	2	2	2	2	13
Cattledock *	412103100001	21	Preservation	280.39	1	2	0	0	2	2	2	9
Darst Park	402333427001	30	Low Density Residential	0.56	1	0	0	0	2	0	2	5
El Jobean	402128279001	73	Commercial	1.26	1	0	2	0	2	2	2	9
Eldred's Marina	422012351001	70	Commercial	11.20	0	0	0	2	2	2	2	8
Harbour Heights Park	402315476004	22	Parks & Recreation	8.21	1	0	2	0	2	0	0	5
Hathaway Park	402426102001	1	Parks & Recreation	28.90	0	0	0	0	2	2	0	4
Laishley Park	412306326003	158	City	0.46	0	0	2	0	2	2	2	8
Laishley Park	412306326001	158	City	15.93	1	1	2	0	2	2	2	10
Placida Boat Ramp	422012301003	92	Parks & Recreation	5.63	1	2	2	2	2	2	2	13
Ponce de Leon Park	412215200002	199	City	15.45	0	0	0	0	2	2	2	6
Port Charlotte Beach	402228451001	94	Parks & Recreation	16.08	1	0	2	2	2	2	2	11
Riverside Park	No Parcel ¹	-	Parks & Recreation	0.71	0	0	0	0	2	2	0	4
South Gulf Cove Park	412129176002	22	Parks & Recreation	4.80	1	2	2	2	2	2	2	13
Spring Lake Park	402221351001	22	Parks & Recreation	6.05	1	1	2	2	2	2	2	12

¹There was no parcel (polygon) for this ramp in the parcel database obtained from Charlotte County.

*Bay Heights and Cattledock were included because there are plans for placing a boat ramp.

Table 5-8. Assessment scores and ratings for potential expansion of existing ramp parcels in Charlotte County.

Existing Boat Ramp Parcels	Tax Account Number	Total Environmental Score	Total Developmental Score	Net Assessment Score ¹	Assessment Rating by Tier ²
Butterford Waterway	412108478002	0	12	12	First
Butterford Waterway	412108479001	1	13	12	First
South Gulf Cove Park	412129176002	1	13	12	First
El Jobean Boat Ramp	402128279001	2	9	7	First
Spring Lake Park	402221351001	5	12	7	First
Port Charlotte Beach Complex	402228451001	5	11	6	Second
Laishley Park	412306326003	3	8	5	Second
Placida Boat Ramp	422012301003	8	13	5	Second
Laishley Park	412306326001	6	10	4	Second
Ainger Creek Park	412008104001	3	6	3	Second
Hathaway Park	402426102001	1	4	3	Second
Riverside Park Boat Ramp	No parcel	3	4	1	Second
Bay Heights*	412006101003	8	8	0	Second
Eldred's Marina	422012351001	8	8	0	Second
Darst Park	402333427001	6	5	-1	Third
Harbour Heights Park	402315476004	6	5	-1	Third
Cattledock*	412103100001	12	9	-3	Third
Ponce de Leon Park	412215200002	10	6	-4	Third

¹The net assessment score is the total developmental score minus the total environmental score.

²The maximum possible total score was 13 for developmental criteria and 14 environmental criteria and, thus, the net assessment score could range from a high of 13 to a low of -14. The 28 possible values between the high and low total scores were divided into four tiers. No ramp parcels had scores that fell within the fourth, or lowest, tier.

*Bay Heights and Cattledock were included because there are plans for placing a boat ramp.

Table 5-9. Environmental characteristics for all parcels associated with existing marinas in Charlotte County.

Marinas (parcels associated with a marina are listed)	Tax Account Number of Parcel	Parcel Adjacency to:					Affected by Sea Level Rise	
		Aquatic Preserve	Manatee Protection Area	Shellfish Harvest Area Category	Smalltooth Sawfish Habitat	Wetland		Seagrass
Ainger Creek Marina	412008103001	Lemon Bay	Yes	Prohibited	No	No	Dense	5 feet rise
Cape Haze Marina Bay	Many Parcels	Lemon Bay	Yes	Prohibited	No	No	Dense	5 feet rise
Chadwick Cove Marina	411912403005	Lemon Bay	Yes	Prohibited	No	No	None	No
Charlotte Harbor Yacht Club	402226451001	Charlotte Harbor	No	None	Yes	Yes	Dense	5 feet rise
Gulf Coast Marine Center	402128279001	No	No	Prohibited	Yes	No	None	No
Eldred's Marina	422012351002	Lemon Bay	Yes	Prohibited	No	No	Dense	5 feet rise
Englewood Bait House	412006301003	Lemon Bay	Yes	Prohibited	No	Yes	Dense	5 feet rise
Fisherman Village Yacht Basin	412212126001	Charlotte Harbor	No	None	Yes	No	None	5 feet rise
Gasparilla Marina	422012426001	Charlotte Harbor	No	Prohibited	Yes	Yes	Dense	5 feet rise
Gator Creek Marine	412319311005	Charlotte Harbor	No	None	Yes	Yes	None	5 feet rise
Harbor at Lemon Bay	Many Parcels	Lemon Bay	Yes	Prohibited	No	No	Dense	5 feet rise
Hideaway Marina	411901476002	Lemon Bay	Yes	Prohibited	No	No	Dense	5 feet rise
Isles Yacht Club	412211279002	No	No	None	Yes	No	None	10 feet rise
Laishley Park Marina	412306326003	No	Yes	None	No	No	None	10 feet rise
Laishley Park Marina	412306326001	No	Yes	None	Yes	No	None	5 feet rise
Marine Dynamics	412017479001	No	No	None	No	No	None	10 feet rise
Marine Dynamics	412017478001	No	Yes	Prohibited	No	No	None	5 feet rise
Marine Max	412033203002	No	Yes	Prohibited	No	No	None	5 feet rise
Palm Island Marina	412033203001	Lemon Bay	Yes	Prohibited	No	No	Dense	5 feet rise
Punta Gorda Marina	412305104002	No	Yes	None	Yes	No	None	5 feet rise
Riviera Marina	412319355002	Charlotte Harbor	No	None	Yes	Yes	None	5 feet rise
Riviera Marina	412319355003	Charlotte Harbor	No	None	Yes	Yes	None	5 feet rise
Riviera Marina	412319355001	Charlotte Harbor	No	None	Yes	Yes	None	5 feet rise
Rocky Creek Marina (for sale)	412006486001	Lemon Bay	Yes	Prohibited	No	No	Dense	5 feet rise
Sea Horse Marina (closed)	402236253005	Charlotte Harbor	No	None	Yes	No	None	5 feet rise
Stump Pass Marina	412017409002	Lemon Bay	Yes	Prohibited	No	No	Dense	5 feet rise
Uncle Henry's Marina	422035101002	Charlotte Harbor	No	Prohibited	Yes	No	Dense	10 feet rise
Weston's Resort	412018105015	Lemon Bay	Yes	Prohibited	No	No	Dense	No

Table 5-10. Developmental characteristics for all parcels associated with existing marinas in Charlotte County.

Marinas (parcels associated with a marina are listed)	Characteristics of Marina Parcels				Vacant Adjacent Parcel		Infrastructure Within			Waterside Channel	
	Tax Account Number	Zoning Code	Future Land Use	Acres	Present	Acres	50 feet		100 feet	Limiting Depth (ft)	Dredged or Natural
							Water Main	Sewer	Road		
Ainger Creek Marina	412008103001	73	Commercial	0.36	No	N/A	No Data	No Data	Major	< 3 feet	Dredged
Cape Haze Marina Bay	Many Parcels	50	Low Intensity Industrial	8.56	Yes	13.40	>= 6"	No Data	Minor	>= 3 feet	Dredged
Chadwick Cove Marina	411912403005	34	High Density Residential	0.46	No	N/A	Yes ¹	No Data	Minor	>= 3 feet	Dredged
Charlotte Harbor Yacht Club	402226451001	70	Parks & Recreation	4.59	Yes	8.76	< 6"	Yes	Minor	>= 3 feet	Dredged
Gulf Coast Marine Center	402128279001	73	Commercial	1.26	Yes	0.42	>= 6"	No Data	Major	>= 3 feet	Dredged
Eldred's Marina	422012351002	70	Commercial	0.23	No	N/A	No	Yes	Dirt	>= 3 feet	Dredged
Englewood Bait House	412006301003	70	Commercial	1.72	Yes	5.29	No Data	No Data	Major	>= 3 feet	Dredged
Fisherman Village Yacht Basin	412212126001	102	City	6.80	Yes	4.15	Yes ¹	No Data	Minor	>= 3 feet	Dredged
Gasparilla Marina	422012426001	73	High Density Residential	25.13	Yes	0.94	>= 6"	Yes	Major	>= 3 feet	Dredged
Gator Creek Marine	412319311005	73	Low Density Residential	1.06	Yes	2.20	No Data	No Data	Minor	>= 3 feet	Dredged
Harbor at Lemon Bay	Many Parcels	73	Commercial	2.60	No	N/A	No Data	No Data	Minor	< 3 feet	Dredged
Hideaway Marina	411901476002	72	High Density Residential	0.29	No	N/A	No Data	No Data	Major	>= 3 feet	Dredged
Isles Yacht Club	412211279002	135	City	4.09	Yes	3.04	Yes ¹	No Data	Minor	>= 3 feet	Dredged
Laishley Park Marina	412306326003	158	City	0.46	No	N/A	Yes ¹	No Data	Minor	N/A	N/A
Laishley Park Marina	412306326001	158	City	15.93	Yes	2.86	Yes ¹	No Data	Major	>= 3 feet	Dredged
Marine Dynamics	412017479001	72	Commercial	3.82	Yes	1.15	No Data	No Data	Major	N/A	N/A
Marine Dynamics	412017478001	42	Commercial	2.22	No	N/A	No Data	No Data	Minor	>= 3 feet	Dredged
Marine Max	412033203002	73	Commercial	1.53	Yes	5.20	>= 6"	No Data	Major	>= 3 feet	Dredged
Palm Island Marina	412033203001	73	Commercial	1.63	Yes	1.85	>= 6"	No Data	Major	>= 3 feet	Dredged
Punta Gorda Marina	412305104002	73	High Density Residential	3.21	Yes	1.89	No Data	No Data	Major	< 3 feet	Dredged
Riviera Marina	412319355002	73	Commercial	0.74	No	N/A	No Data	No Data	Minor	>= 3 feet	Dredged
Riviera Marina	412319355003	73	Commercial	0.46	No	N/A	No Data	No Data	Minor	>= 3 feet	Dredged
Riviera Marina	412319355001	73	Commercial	4.60	Yes	1.29	No Data	No Data	Minor	>= 3 feet	Dredged
Rocky Creek Marina (for sale)	412006486001	73	Commercial	1.06	No	N/A	Yes ¹	No Data	Major	< 3 feet	Dredged
Sea Horse Marina (closed)	402236253005	73	Charlotte Harbor Tourist	0.52	Yes	4.57	No Data	No	Major	N/A	N/A
Stump Pass Marina	412017409002	70	Commercial	4.49	No	N/A	Yes ¹	No Data	Minor	>= 3 feet	Dredged
Uncle Henry's Marina	422035101002	70	Low Density Residential	1.05	Yes	3.59	No Data	No Data	Dirt	>= 3 feet	Dredged
Weston's Resort	412018105015	36	Medium Density Residential	0.61	No	N/A	No Data	No Data	Minor	>= 3 feet	Dredged

¹Water is present, but the size of the main is unknown.

Table 5-11. Environmental criteria coded values for all parcels associated with existing marinas in Charlotte County.

Marinas (parcels associated with a marina are listed)	Tax Account Number of Parcel	Parcel Adjacency to:						Affected by Sea Level Rise	Environmental Score
		Aquatic Preserve	Manatee Protection Area	Shellfish Harvest Area	Smalltooth Sawfish Habitat	Wetland	Seagrass		
Ainger Creek Marina	412008103001	2	2	0	0	0	2	2	8
Cape Haze Marina Bay	Many Parcels	2	2	0	0	0	2	2	8
Chadwick Cove Marina	411912403005	2	2	0	0	0	0	0	4
Charlotte Harbor Yacht Club	402226451001	2	0	0	2	2	2	2	10
Gulf Coast Marine Center	402128279001	0	0	0	2	0	0	0	2
Eldred's Marina	422012351002	2	2	0	0	0	2	2	8
Englewood Bait House	412006301003	2	2	0	0	2	2	2	10
Fisherman Village Yacht Basin	412212126001	2	0	0	2	0	0	2	6
Gasparilla Marina	422012426001	2	0	0	2	2	2	2	10
Gator Creek Marine	412319311005	2	0	0	2	2	0	2	8
Harbor at Lemon Bay	Many Parcels	2	2	0	0	0	2	2	8
Hideaway Marina	411901476002	2	2	0	0	0	2	2	8
Isles Yacht Club	412211279002	0	0	0	2	0	0	1	3
Laishley Park Marina	412306326003	0	2	0	0	0	0	1	3
Laishley Park Marina	412306326001	0	2	0	2	0	0	2	6
Marine Dynamics	412017479001	0	0	0	0	0	0	1	1
Marine Dynamics	412017478001	0	2	0	0	0	0	2	4
Marine Max	412033203002	0	2	0	0	0	0	2	4
Palm Island Marina	412033203001	2	2	0	0	0	2	2	8
Punta Gorda Marina	412305104002	0	2	0	2	0	0	2	6
Riviera Marina	412319355002	2	0	0	2	2	0	2	8
Riviera Marina	412319355003	2	0	0	2	2	0	2	8
Riviera Marina	412319355001	2	0	0	2	2	0	2	8
Rocky Creek Marina (for sale)	412006486001	2	2	0	0	0	2	2	8
Sea Horse Marina (closed)	402236253005	2	0	0	2	0	0	2	6
Stump Pass Marina	412017409002	2	2	0	0	0	2	2	8
Uncle Henry's Marina	422035101002	2	0	0	2	0	2	1	7
Weston's Resort	412018105015	2	2	0	0	0	2	0	6

Table 5-12. Developmental criteria coded values for all parcels associated with existing marinas in Charlotte County.

Marinas (parcels associated with a marina are listed)	Characteristics of Marina Parcels				Vacant Adjacent Parcel		Infrastructure Within			Waterside Channel		Developmental Score
	Tax Account Number	Zoning Code	Future Land Use	Acres	Present	Acres	50 feet			100 ft		
							Water Main	Sewer	Road	Limiting Depth (ft)	Dredged or Natural	
Ainger Creek Marina	412008103001	73	Commercial	0.36	0	0	0	0	2	0	2	4
Cape Haze Marina Bay	Many Parcels	50	Low Intensity Industrial	8.56	1	2	2	0	2	2	2	11
Chadwick Cove Marina	411912403005	34	High Density Residential	0.46	0	0	2	0	2	2	2	8
Charlotte Harbor Yacht Club	402226451001	70	Parks & Recreation	4.59	1	2	2	2	2	2	2	13
Gulf Coast Marine Center	402128279001	73	Commercial	1.26	1	0	2	0	2	2	2	9
Eldred's Marina	422012351002	70	Commercial	0.23	0	0	0	2	2	2	2	8
Englewood Bait House	412006301003	70	Commercial	1.72	1	2	0	0	2	2	2	9
Fisherman Village Yacht Basin	412212126001	102	City	6.80	1	1	2	0	2	2	2	10
Gasparilla Marina	422012426001	73	High Density Residential	25.13	1	0	2	2	2	2	2	11
Gator Creek Marine	412319311005	73	Low Density Residential	1.06	1	1	0	0	2	2	2	8
Harbor at Lemon Bay	Many Parcels	73	Commercial	2.60	0	0	0	0	2	0	2	4
Hideaway Marina	411901476002	72	High Density Residential	0.29	0	0	0	0	2	2	2	6
Isles Yacht Club	412211279002	135	City	4.09	1	1	2	0	2	2	2	10
Laishley Park Marina	412306326003	158	City	0.46	0	0	2	0	2	2	2	8
Laishley Park Marina	412306326001	158	City	15.93	1	1	2	0	2	2	2	10
Marine Dynamics	412017479001	72	Commercial	3.82	1	1	0	0	2	2	2	8
Marine Dynamics	412017478001	42	Commercial	2.22	0	0	0	0	2	2	2	6
Marine Max	412033203002	73	Commercial	1.53	1	2	2	0	2	2	2	11
Palm Island Marina	412033203001	73	Commercial	1.63	1	1	2	0	2	2	2	10
Punta Gorda Marina	412305104002	73	High Density Residential	3.21	1	1	0	0	2	0	2	6
Riviera Marina	412319355002	73	Commercial	0.74	0	0	0	0	2	2	2	6
Riviera Marina	412319355003	73	Commercial	0.46	0	0	0	0	2	2	2	6
Riviera Marina	412319355001	73	Commercial	4.60	1	1	0	0	2	2	2	8
Rocky Creek Marina (for sale)	412006486001	73	Commercial	1.06	0	0	2	0	2	0	2	6
Sea Horse Marina (closed)	402236253005	73	Charlotte Harbor Tourist	0.52	1	1	0	0	2	2	0	6
Stump Pass Marina	412017409002	70	Commercial	4.49	0	0	2	0	2	2	2	8
Uncle Henry's Marina	422035101002	70	Low Density Residential	1.05	1	1	0	0	2	2	2	8
Weston's Resort	412018105015	36	Medium Density Residential	0.61	0	0	0	0	2	2	2	6

Table 5-13. Assessment scores and ratings for potential expansion of existing marina parcels in Charlotte County.

Existing Boat Ramp Parcels	Tax Account Number	Total Environmental Score	Total Developmental Score	Net Assessment Score ¹	Assessment Rating by Tier ²
Gulf Coast Marine Center	402128279001	2	9	7	First
Isles Yacht Club	412211279002	3	10	7	First
Marine Dynamics	412017479001	1	8	7	First
Marine Max	412033203002	4	11	7	First
Laishley Park Marina	412306326003	3	8	5	Second
Chadwick Cove Marina	411912403005	4	8	4	Second
Fisherman Village Yacht Basin	412212126001	6	10	4	Second
Laishley Park Marina	412306326001	6	10	4	Second
Cape Haze Marina Bay	Many Parcels	8	11	3	Second
Charlotte Harbor Yacht Club	402226451001	10	13	3	Second
Marine Dynamics	412017478001	4	6	2	Second
Palm Island Marina	412033203001	8	10	2	Second
Gasparilla Marina	422012426001	10	11	1	Second
Uncle Henry's Marina	422035101002	7	8	1	Second
Eldred's Marina	422012351002	8	8	0	Second
Gator Creek Marine	412319311005	8	8	0	Second
Punta Gorda Marina	412305104002	6	6	0	Second
Riviera Marina	412319355001	8	8	0	Second
Sea Horse Marina (closed)	402236253005	6	6	0	Second
Stump Pass Marina	412017409002	8	8	0	Second
Weston's Resort	412018105015	6	6	0	Second
Englewood Bait House	412006301003	10	9	-1	Third
Hideaway Marina	411901476002	8	6	-2	Third
Riviera Marina	412319355002	8	6	-2	Third
Riviera Marina	412319355003	8	6	-2	Third
Rocky Creek Marina (for sale)	412006486001	8	6	-2	Third
Ainger Creek Marina	412008103001	8	4	-4	Third
Harbor at Lemon Bay	Many Parcels	8	4	-4	Third

¹The net assessment score is the total developmental score minus the total environmental score.

²The maximum possible total score was 13 for developmental criteria and 14 environmental criteria and, thus, the net assessment score could range from a high of 13 to a low of -14. The 28 possible values between the high and low total scores were divided into four tiers. No marina parcels had scores that fell into the fourth, or lowest, tier.

B. Assessing Potential Sites for New Saltwater Access Boating Facilities

The Charlotte County parcel layer was reviewed and 9,696 saltwater accessible parcels were identified that have the potential to serve as locations for future ramps and/or marinas. Saltwater accessible parcels were defined as those adjacent to the navigation channels delineated for the Charlotte County Regional Waterway Management System. The selection process was relatively non-restrictive to reduce the possibility of excluding potential parcels. The resulting parcels were screened using the criteria described below in order to isolate a small number of parcels for immediate review. However, the GIS layer can be screened using variations of the selection criteria in order to isolate other potential parcels.

Parcels (NOT associated with existing saltwater boating facilities) greater than or equal to 1 acre, within 50 feet of water and sewer service and 100 feet of a road (major, arterial, dirt, or private), having dredged water access (or unknown) greater than or equal to 3 feet MLLW (or unknown), and not adjacent to an aquatic preserve were evaluated to assess their relative potential for siting new saltwater ramps. Thirty-three parcels out of a potential 9,695 met these criteria. Parcels eligible for consideration as a potential marina site had to meet the same criteria, except that they had to be within 100 feet of a major road or an arterial road: 32 of the 33 parcels met these criteria.

The 33 parcels were evaluated based on the same environmental (Table 5-1) and developmental (Table 5-2) criteria used to evaluate existing boating facilities. Each parcel was inspected and assigned values corresponding to each of the environmental and developmental criteria (and Table 5-15, respectively). Next, each parcel was assessed points for their particular environmental and developmental characteristics (Table 5-16 and Table 5-17, respectively). The final assessment score for each parcel was obtained by subtracting the sum of its environmental scores from the sum of its developmental scores (Table 5-18). The final assessment scores are sorted in descending order, which provides some indication as to the relative feasibility (or ease) of siting a boating facility on a particular parcel. Expansion of those listed towards the top of the column are likely more feasible than those at the bottom (based on the evaluation criteria used). Figure 5-1 shows the locations of each parcel and Table 5-19 provides a key to associate mapped parcels with their tax account numbers.

Table 5-14. Environmental characteristics of parcels for potential development of new ramps and marinas in Charlotte County.

Tax Account Number of Parcel	Parcel Adjacency to:						Affected by Sea Level Rise
	Aquatic Preserve	Manatee Protection Area	Shellfish Harvesting Area	Smalltooth Sawfish Habitat	Wetland	Seagrass	
402132230001	No	No	Cond. Restricted	No	No	Dense	10 feet rise
402132277001	No	No	Prohibited	No	No	None	10 feet rise
402136226008	No	No	None	Yes	No	None	5 feet rise
402216333004	No	No	None	Yes	No	None	5 feet rise
402226331001	No	No	None	Yes	No	None	5 feet rise
402227208001	No	No	None	Yes	No	None	5 feet rise
402229455006	No	No	None	Yes	No	None	10 feet rise
402229455007	No	No	None	Yes	Yes	None	10 feet rise
402232126011	No	No	None	Yes	No	None	10 feet rise
402232202001	No	No	None	Yes	No	None	5 feet rise
402232202003	No	No	None	Yes	Yes	None	10 feet rise
402232202004	No	No	None	Yes	Yes	None	10 feet rise
402232202006	No	No	None	Yes	Yes	None	10 feet rise
402232202007	No	No	None	Yes	Yes	None	10 feet rise
402232202008	No	No	None	Yes	Yes	None	10 feet rise
402232202009	No	No	None	Yes	Yes	None	10 feet rise
402232254001	No	No	None	Yes	Yes	None	10 feet rise
412103300003*	No	No	None	No	Yes	None	5 feet rise
412109386001	No	No	None	No	No	None	5 feet rise
412115259001	No	No	None	No	No	None	5 feet rise
412115307001	No	No	None	No	No	None	5 feet rise
412116101006	No	No	None	No	No	None	5 feet rise
412116203010	No	No	None	No	No	None	5 feet rise
412116455009	No	No	None	No	No	None	5 feet rise
412116458001	No	No	None	No	No	None	5 feet rise
412120233001	No	No	None	No	No	None	10 feet rise
412121102005	No	No	None	No	No	None	5 feet rise
412123152004	No	No	None	No	No	None	5 feet rise
412126106001	No	No	None	No	No	None	5 feet rise
412129177001	No	No	None	No	No	None	10 feet rise
412129326001	No	No	None	No	No	None	10 feet rise
412129328001	No	No	None	No	No	None	10 feet rise
412129455001	No	No	None	No	No	None	10 feet rise

* Parcel is only suitable for development as a ramp; the other 32 parcels are suitable for either ramp or marina.

Table 5-15. Developmental characteristics of parcels for potential development of new ramps and marinas in Charlotte County.

Tax Account Number	Characteristics of Parcels			Vacant Adjacent Parcel		Infrastructure Within			Waterside Channel	
	Zoning Code	Future Land Use	Acres	Present	Acres	50 feet		100 ft	Limiting Depth (ft)	Dredged or Natural
						Water	Sewer	Road		
402132230001	22	Parks & Recreation	3.54	Yes	0.55	>= 6"	Yes	Minor	>= 3 feet	Dredged
402132277001	22	Low Density Residential	3.49	Yes	3.80	>= 6"	Yes	Minor	>= 3 feet	Dredged
402136226008	22	Low Density Residential	1.13	Yes	0.46	>= 6"	Yes	Minor	>= 3 feet	Dredged
402216333004	72	Commercial	2.64	Yes	0.23	< 6"	Yes	Major	>= 3 feet	Dredged
402226331001	22	Low Density Residential	1.45	No	N/A	< 6"	Yes	Major	>= 3 feet	Dredged
402227208001	22	Parks & Recreation	3.48	No	N/A	< 6"	Yes	Minor	>= 3 feet	Dredged
402229455006	22	Low Density Residential	1.08	Yes	5.05	>= 6"	Yes	Major	>= 3 feet	Dredged
402229455007	22	Low Density Residential	1.59	Yes	7.90	>= 6"	Yes	Major	>= 3 feet	Dredged
402232126011	22	Parks & Recreation	11.58	Yes	8.23	>= 6"	Yes	Major	>= 3 feet	Dredged
402232202001	72	Commercial	2.56	Yes	15.39	>= 6"	Yes	Major	>= 3 feet	Dredged
402232202003	32	Medium Density Residential	1.42	Yes	16.36	>= 6"	Yes	Major	>= 3 feet	Dredged
402232202004	32	Medium Density Residential	1.42	Yes	12.99	>= 6"	Yes	Major	>= 3 feet	Dredged
402232202006	32	Medium Density Residential	1.42	Yes	12.99	>= 6"	Yes	Major	>= 3 feet	Dredged
402232202007	32	Medium Density Residential	1.42	Yes	14.41	>= 6"	Yes	Major	>= 3 feet	Dredged
402232202008	32	Medium Density Residential	1.42	Yes	2.84	>= 6"	Yes	Major	>= 3 feet	Dredged
402232202009	32	Medium Density Residential	1.42	Yes	2.84	>= 6"	Yes	Major	>= 3 feet	Dredged
402232254001	32	Medium Density Residential	1.42	Yes	1.42	>= 6"	Yes	Minor	>= 3 feet	Dredged
412103300003*	21	Compact Growth Mixed Use	84.56	Yes	67.38	>= 6"	Yes	Dirt	>= 3 feet	Dredged
412109386001	61	Low Density Residential	13.08	Yes	60.32	>= 6"	Yes	Minor	>= 3 feet	Dredged
412115259001	22	Parks & Recreation	3.97	Yes	1.09	>= 6"	Yes	Minor	>= 3 feet	Dredged
412115307001	22	Parks & Recreation	2.87	No	N/A	>= 6"	Yes	Minor	>= 3 feet	Dredged
412116101006	22	Low Density Residential	4.02	Yes	1.29	>= 6"	Yes	Minor	>= 3 feet	Dredged
412116203010	22	Low Density Residential	1.24	Yes	0.49	>= 6"	Yes	Minor	>= 3 feet	Dredged
412116455009	22	Low Density Residential	1.25	Yes	1.74	>= 6"	Yes	Minor	>= 3 feet	Dredged
412116458001	22	Low Density Residential	1.25	Yes	22.95	>= 6"	Yes	Minor	>= 3 feet	Dredged
412120233001	22	Parks & Recreation	1.54	Yes	0.29	>= 6"	Yes	Minor	>= 3 feet	Dredged
412121102005	22	Low Density Residential	1.22	Yes	0.84	>= 6"	Yes	Minor	>= 3 feet	Dredged
412123152004	22	Low Density Residential	2.60	No	N/A	>= 6"	Yes	Minor	>= 3 feet	Dredged
412126106001	22	Low Density Residential	1.01	Yes	0.80	>= 6"	Yes	Minor	>= 3 feet	Dredged
412129177001	72	Commercial	13.27	Yes	7.71	>= 6"	Yes	Minor	>= 3 feet	Dredged
412129326001	72	Commercial	7.71	Yes	13.27	>= 6"	Yes	Minor	>= 3 feet	Dredged
412129328001	72	Commercial	17.69	Yes	0.48	>= 6"	Yes	Minor	>= 3 feet	Dredged
412129455001	22	Low Density Residential	22.46	Yes	39.35	>= 6"	Yes	Major	>= 3 feet	Dredged

* Parcel is only suitable for development as a ramp; the other 32 parcels are suitable for either ramp or marina development.

Table 5-16. Environmental criteria coded values of parcels for potential development of new ramps and marinas in Charlotte County.

Tax Account Number of Parcel	Environmental Considerations						Affected by Sea Level Rise	Environmental Score
	Aquatic Preserve	Manatee Protection Area	Shellfish Harvesting Area	Smalltooth Sawfish Habitat	Wetland	Seagrass		
402132230001	0	0	2	0	0	2	1	5
402132277001	0	0	0	0	0	0	1	1
402136226008	0	0	0	2	0	0	2	4
402216333004	0	0	0	2	0	0	2	4
402226331001	0	0	0	2	0	0	2	4
402227208001	0	0	0	2	0	0	2	4
402229455006	0	0	0	2	0	0	1	3
402229455007	0	0	0	2	2	0	1	5
402232126011	0	0	0	2	0	0	1	3
402232202001	0	0	0	2	0	0	2	4
402232202003	0	0	0	2	2	0	1	5
402232202004	0	0	0	2	2	0	1	5
402232202006	0	0	0	2	2	0	1	5
402232202007	0	0	0	2	2	0	1	5
402232202008	0	0	0	2	2	0	1	5
402232202009	0	0	0	2	2	0	1	5
402232254001	0	0	0	2	2	0	1	5
412103300003*	0	0	0	0	2	0	2	4
412109386001	0	0	0	0	0	0	2	2
412115259001	0	0	0	0	0	0	2	2
412115307001	0	0	0	0	0	0	2	2
412116101006	0	0	0	0	0	0	2	2
412116203010	0	0	0	0	0	0	2	2
412116455009	0	0	0	0	0	0	2	2
412116458001	0	0	0	0	0	0	2	2
412120233001	0	0	0	0	0	0	1	1
412121102005	0	0	0	0	0	0	2	2
412123152004	0	0	0	0	0	0	2	2
412126106001	0	0	0	0	0	0	2	2
412129177001	0	0	0	0	0	0	1	1
412129326001	0	0	0	0	0	0	1	1
412129328001	0	0	0	0	0	0	1	1
412129455001	0	0	0	0	0	0	1	1

* Parcel is only suitable for development as a ramp; the other 32 parcels are suitable for either ramp or marina.

Table 5-17. Developmental criteria coded values of parcels for potential development of new ramps and marinas in Charlotte County.

Tax Account Number	Characteristics of Parcels			Vacant Adjacent Parcel		Infrastructure Within			Waterside Channel		Developmental Score
	Zoning Code	Future Land Use	Acres	Present	Acres	50 feet		100 ft	Limiting Depth (ft)	Dredged or Natural	
						Water	Sewer	Road			
402132230001	22	Parks & Recreation	3.54	1	0	2	2	2	2	2	11
402132277001	22	Low Density Residential	3.49	1	1	2	2	2	2	2	12
402136226008	22	Low Density Residential	1.13	1	0	2	2	2	2	2	11
402216333004	72	Commercial	2.64	1	0	2	2	2	2	2	11
402226331001	22	Low Density Residential	1.45	0	0	2	2	2	2	2	10
402227208001	22	Parks & Recreation	3.48	0	0	2	2	2	2	2	10
402229455006	22	Low Density Residential	1.08	1	2	2	2	2	2	2	13
402229455007	22	Low Density Residential	1.59	1	2	2	2	2	2	2	13
402232126011	22	Parks & Recreation	11.58	1	2	2	2	2	2	2	13
402232202001	72	Commercial	2.56	1	2	2	2	2	2	2	13
402232202003	32	Medium Density Residential	1.42	1	2	2	2	2	2	2	13
402232202004	32	Medium Density Residential	1.42	1	2	2	2	2	2	2	13
402232202006	32	Medium Density Residential	1.42	1	2	2	2	2	2	2	13
402232202007	32	Medium Density Residential	1.42	1	2	2	2	2	2	2	13
402232202008	32	Medium Density Residential	1.42	1	1	2	2	2	2	2	12
402232202009	32	Medium Density Residential	1.42	1	1	2	2	2	2	2	12
402232254001	32	Medium Density Residential	1.42	1	1	2	2	2	2	2	12
412103300003*	21	Compact Growth Mixed Use	84.56	1	2	2	2	2	2	2	13
412109386001	61	Low Density Residential	13.08	1	2	2	2	2	2	2	13
412115259001	22	Parks & Recreation	3.97	1	1	2	2	2	2	2	12
412115307001	22	Parks & Recreation	2.87	0	0	2	2	2	2	2	10
412116101006	22	Low Density Residential	4.02	1	1	2	2	2	2	2	12
412116203010	22	Low Density Residential	1.24	1	0	2	2	2	2	2	11
412116455009	22	Low Density Residential	1.25	1	1	2	2	2	2	2	12
412116458001	22	Low Density Residential	1.25	1	2	2	2	2	2	2	13
412120233001	22	Parks & Recreation	1.54	1	0	2	2	2	2	2	11
412121102005	22	Low Density Residential	1.22	1	0	2	2	2	2	2	11
412123152004	22	Low Density Residential	2.60	0	0	2	2	2	2	2	10
412126106001	22	Low Density Residential	1.01	1	0	2	2	2	2	2	11
412129177001	72	Commercial	13.27	1	2	2	2	2	2	2	13
412129326001	72	Commercial	7.71	1	2	2	2	2	2	2	13
412129328001	72	Commercial	17.69	1	0	2	2	2	2	2	11
412129455001	22	Low Density Residential	22.46	1	2	2	2	2	2	2	13

* Parcel is only suitable for development as a ramp; the other 32 parcels are suitable for either ramp or marina development.

Table 5-18. Assessment scores and ratings of parcels for potential development of new marina parcels in Charlotte County.

Tax Account Number	Total Environmental Score	Total Developmental Score	Net Assessment Score¹	Assessment Rating by Tier²
412129177001	1	13	12	First
412129326001	1	13	12	First
412129455001	1	13	12	First
402132277001	1	12	11	First
412109386001	2	13	11	First
412116458001	2	13	11	First
402229455006	3	13	10	First
402232126011	3	13	10	First
412115259001	2	12	10	First
412116101006	2	12	10	First
412116455009	2	12	10	First
412120233001	1	11	10	First
412129328001	1	11	10	First
412103300003*	4	13	9	First
402232202001	4	13	9	First
412116203010	2	11	9	First
412121102005	2	11	9	First
412126106001	2	11	9	First
402229455007	5	13	8	First
402232202003	5	13	8	First
402232202004	5	13	8	First
402232202006	5	13	8	First
402232202007	5	13	8	First
412115307001	2	10	8	First
412123152004	2	10	8	First
402136226008	4	11	7	First
402216333004	4	11	7	First
402232202008	5	12	7	First
402232202009	5	12	7	First
402232254001	5	12	7	First
402132230001	5	11	6	Second
402226331001	4	10	6	Second
402227208001	4	10	6	Second

1 The net assessment score is the total developmental score minus the total environmental score.

2 The maximum possible total score was 13 for developmental criteria and 14 environmental criteria and, thus, the net assessment score could range from a high of 13 to a low of -14. The 28 possible values between the high and low total scores were divided into four tiers. No potential development parcels had scores that fell into the third or fourth tiers, or the two lowest tiers.

* Parcel is only suitable for development as a ramp; the other 32 parcels are suitable for either ramp or marina development.

Table 5-19. Key associating potential parcels for new ramp or marina development to their mapped locations.

Map Number	Tax Account Number	Zoning Code	Future Land Use	Acres
1	402226331001	22	Low Density Residential	1.45
2	402227208001	22	Parks & Recreation	3.48
3	402216333004	72	Commercial	2.64
4	402229455006	22	Low Density Residential	1.08
5	402229455007	22	Low Density Residential	1.59
6	402232202001	72	Commercial	2.56
7	402232202003	32	Medium Density Residential	1.42
8	402232202004	32	Medium Density Residential	1.42
9	402232202006	32	Medium Density Residential	1.42
10	402232202007	32	Medium Density Residential	1.42
11	402232202008	32	Medium Density Residential	1.42
12	402232202009	32	Medium Density Residential	1.42
13	402232254001	32	Medium Density Residential	1.42
14	402232126011	22	Parks & Recreation	11.58
15	402136226008	22	Low Density Residential	1.13
16	412123152004	22	Low Density Residential	2.60
12	412126106001	22	Low Density Residential	1.01
18	412115259001	22	Parks & Recreation	3.97
19	412115307001	22	Parks & Recreation	2.87
20	412103300003*	21	Compact Growth Mixed Use	84.56
21	412116458001	22	Low Density Residential	1.25
22	412116455009	22	Low Density Residential	1.25
23	412116203010	22	Low Density Residential	1.24
24	412116101006	22	Low Density Residential	4.02
25	412109386001	61	Low Density Residential	13.08
26	412121102005	22	Low Density Residential	1.22
27	412120233001	22	Parks & Recreation	1.54
28	402132230001	22	Parks & Recreation	3.54
29	402132277001	22	Low Density Residential	3.49
30	412129177001	72	Commercial	13.27
31	412129326001	72	Commercial	7.71
32	412129328001	72	Commercial	17.69
33	412129455001	22	Low Density Residential	22.46

*Site No. 20 is only suitable for development as a ramp; the other 32 parcels are suitable for either ramp or marina development.

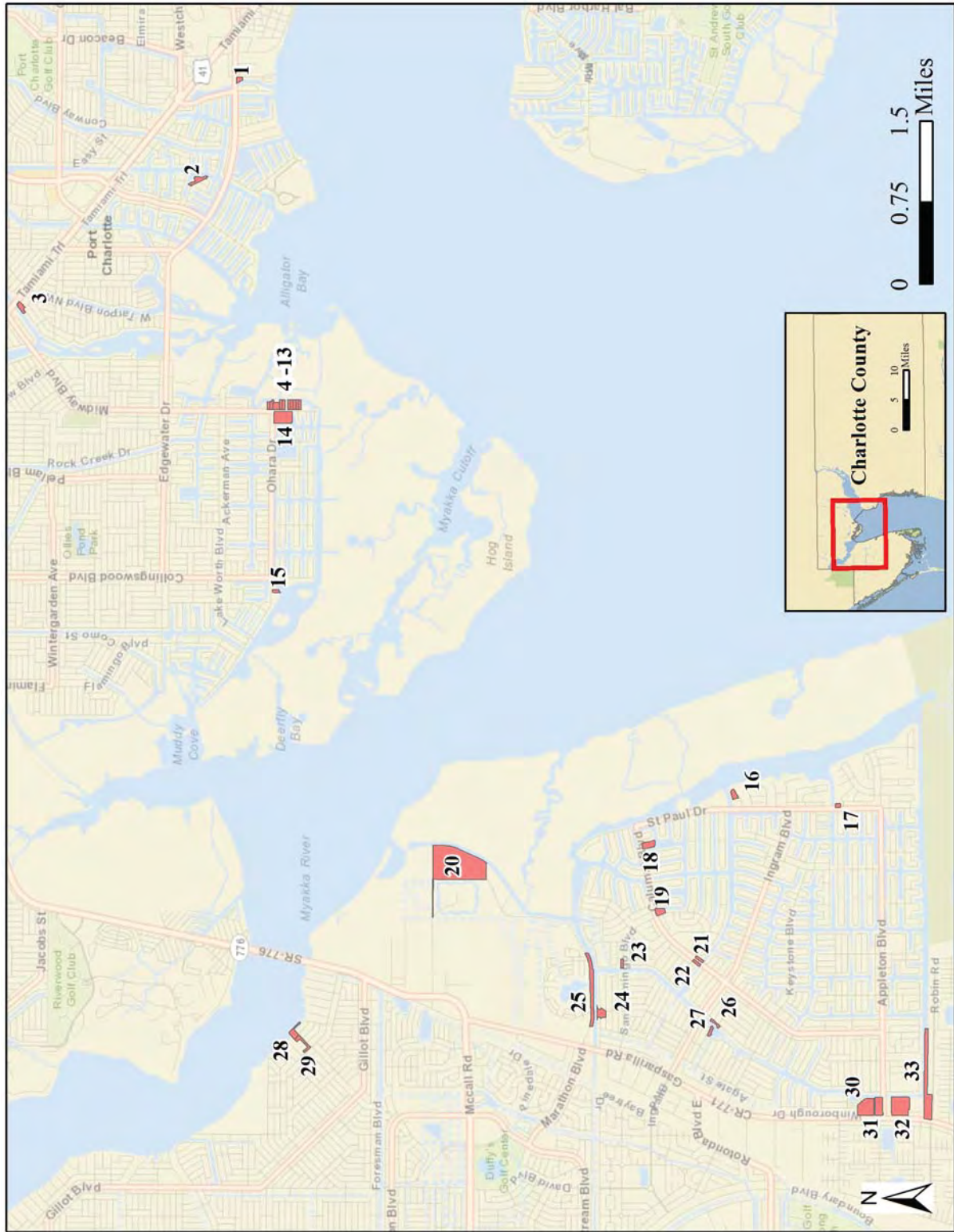


Figure 5-1. Locations of potential sites for saltwater boat access facilities in Charlotte County.

6. Mooring Field Siting Assessment

The assessment of potential locations in Charlotte County to site a mooring field was based on a number of factors, including those summarized by Ruppert and Choate (2011, Appendix F) in their Charlotte County Marine Regulatory Study. The first step in determining potential sites for mooring fields in Charlotte County was to exclude areas of coastal waters that were not feasible based on the results of the legal and regulatory analysis by Ruppert and Choate. Specifically, this task involved conducting spatial analyses in a geographic information system (GIS) to identify and exclude from consideration those portions of Charlotte County waters that are within (a) shellfish harvesting areas (other than those designated as *Prohibited*), (b) federally-restricted zones, and (c) the rights-of ways of navigation channels. Once the excluded areas were removed from consideration, the remaining areas were further partitioned based on an assessment of adequate water depths for siting a mooring field, and whether or not they were within an aquatic preserve, Outstanding Florida Waters, Class II surface waters, and/or smalltooth sawfish habitat (Table 6-1).

GIS layers of designated shellfish harvesting areas within Charlotte County were obtained from the Florida Department of Agriculture and Consumer Services (FDACS). Figure 6-1 shows the locations and extent of the three classes of shellfish harvesting areas that are present in Charlotte County, which include areas conditionally approved and conditionally restricted for shellfish harvesting, and areas where shellfish harvesting is prohibited. As explained in the regulatory study (Ruppert et al., 2011), the only areas where a mooring field potentially could be sited (given that all other requirements are satisfied) are those where shellfish harvesting is prohibited or where no shellfish harvesting area exists.

To determine whether a mooring field can be permitted for any of the areas in Charlotte County where shellfish harvesting is prohibited, FDACS would need to calculate whether sufficient dilution capacity exists within the prohibited zone to handle the potential inputs into the water body due to increased numbers of boats. FDACS performs such calculations based on potential and, thus, each boat slip (mooring) is considered in the calculation. If insufficient dilution capacity exists within a prohibited zone, FDACS will state there is insufficient capacity for the

proposed mooring field and that the adjacent shellfish growing area would require reclassification.

A GIS layer of saltwater navigation channel centerlines in Charlotte County was constructed from depths (soundings) surveyed for the Charlotte County Regional Waterway Management System (Swett et al., 2011), and includes channels within canal systems as well as natural waterways (Figure 6-2). A 500-foot width (250 feet on either side of the centerline) was used to create a GIS layer of rights-of-way for all navigation channels in the county and to serve as an exclusionary layer. The federally-restricted waterway areas that pertain to Charlotte County consist of a U.S. Coast Guard-designated shipping fairway and anchorage in the Gulf of Mexico leading up to Boca Grande Pass (Figure 6-3).

The areas that remained were evaluated based on water depths using bathymetry obtained from the Southwest Florida Water Management District referenced to the mean water level (MWL). The utility of this data for identifying potential mooring sites is limited because it contains one depth sounding for every 300 feet. The data is more appropriate for regional scale analyses and, thus, it was used more as a guide in this project. Channel centerline soundings surveyed for the Charlotte County Regional Waterway System were also used to provide a more robust bathymetry data source. For planning purposes, areas with a depth that was less than ~5.5 feet (MWL) were eliminated from further consideration as potential mooring field sites. This decision was based on two factors: (1) the depths were considered too shallow for the placement of moorings and (2) seagrass is more likely to occur in these depths.

The potential mooring field areas that remained after the preceding exclusionary analysis were evaluated with respect to their spatial relationship to aquatic preserves, Outstanding Florida Waters (OFW), Class II surface waters and smalltooth sawfish habitat, as well their adjacency to marinas that, potentially, could provide management services and amenities likely of benefit to mooring field patrons. The distance between a mooring field and a marina facility is important given that many patrons use dinghy's (some non-motorized) to transport people and supplies to and from their vessel. Thus, for reasons of safety and convenience, shorter distances are preferable and, in particular, distances less than ¼ mile.

The 10 potential sites remaining were compared to layers that are considered advisory, as they provide guidance as to the suitability of an area for the placement of a mooring field, or the relative likelihood that one could be permitted in the area. The advisory GIS data layers consisted of (a) manatee protection areas and (b) a composite data layer of seagrass beds that had been mapped during previous years. The first column in Table 6-2 identifies each site’s location on Figure 6-4. Columns two through seven indicate whether the potential site is within previously mapped seagrass, Outstanding Florida Waters, an Aquatic Preserve, Class II waters, a manatee protection zone, or smalltooth sawfish habitat. The last two columns indicate the nearest marina (or marinas) and the associated number of amenities.

Table 6-1. GIS data layers used for mooring field siting analysis.

GIS Dataset	Data Source	Description of Dataset
Aquatic Preserves	Florida Department of Environmental Protection	Aquatic Preserve boundaries.
Bathymetry	Charlotte County Regional Waterway Management System	Depth soundings by Coastal Engineering Consultants, Inc. & Charlotte County Public Works. CEC data obtained 2007-11
Manatee Protection Areas	Florida Fish and Wildlife Conservation Commission	Manatee protection areas as described in the Florida Administrative Code Chapter 68C-22, effective 7/23/06
Navigation Channels	Charlotte County Regional Waterway Management System	Channels constructed from depths soundings by Coastal Engineering Consultants & Charlotte County Public Works
Outstanding Florida Waters	Florida Department of Environmental Protection	Outstanding Florida Waters designated worthy of special protection (Section 62-302.700, F.A.C.)
Surface Water Classes	Florida Department of Environmental Classification	Class I: potable water supplies; Class II: shellfish propagation or harvesting
Seagrass	Charlotte Harbor National Estuary Program	Seagrass for the years 1950, 1999, 2006, and 2008
Shellfish Harvesting Areas	Florida Department of Agriculture and Consumer Services	Shellfish harvesting area boundaries classified & digitized by Florida Department of Agriculture and Consumer Services
Smalltooth Sawfish Habitat	National Oceanic Atmospheric Administration	Critical habitat for smalltooth sawfish (<i>Pristis pectinatat</i>) as designated by 74 FR 45353, 9/2/2009, Rules and Regulations
Waterways	Charlotte County GIS	Charlotte County hydrology represented by polygons.

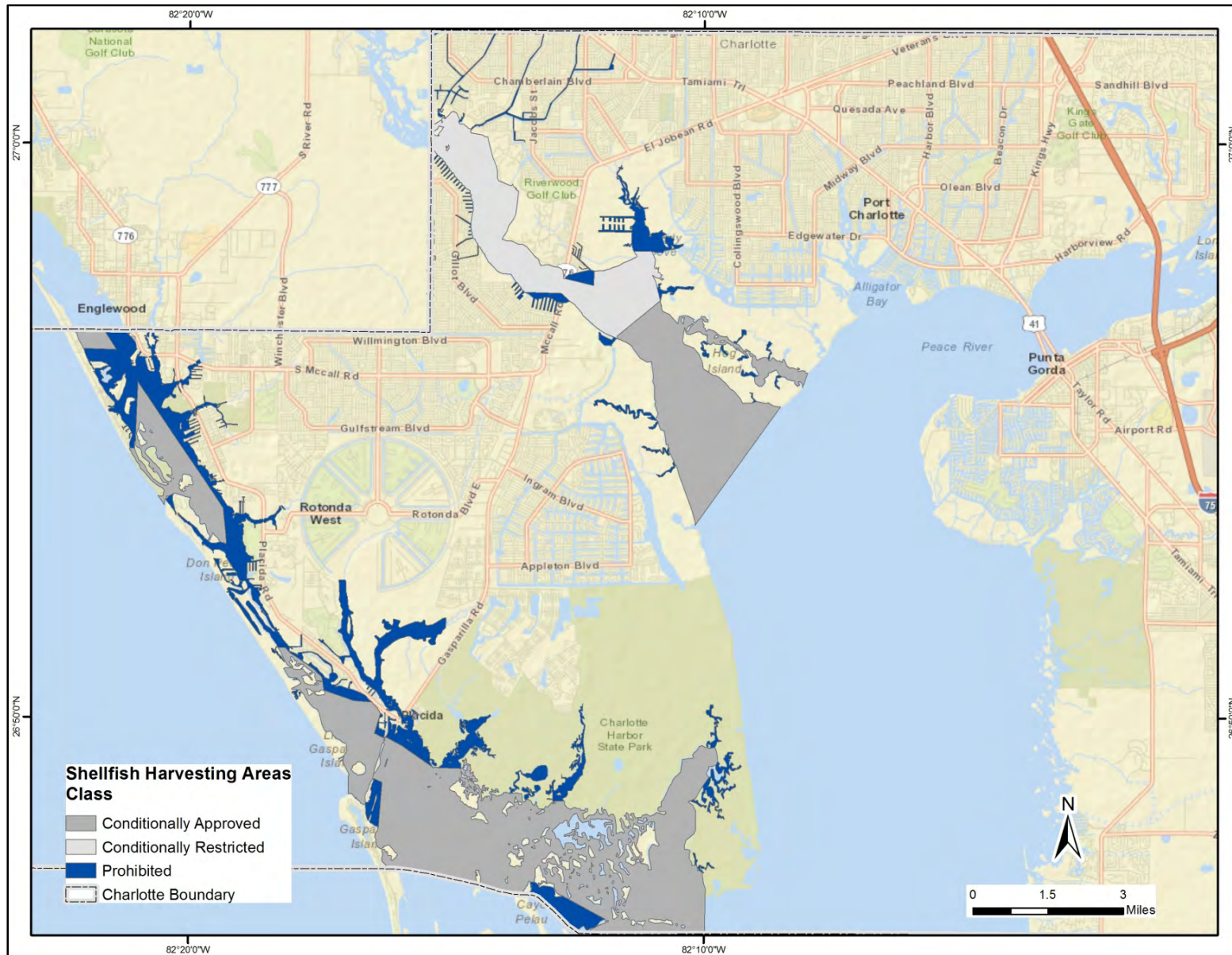


Figure 6-1. Shellfish harvesting areas in Charlotte County, Florida.

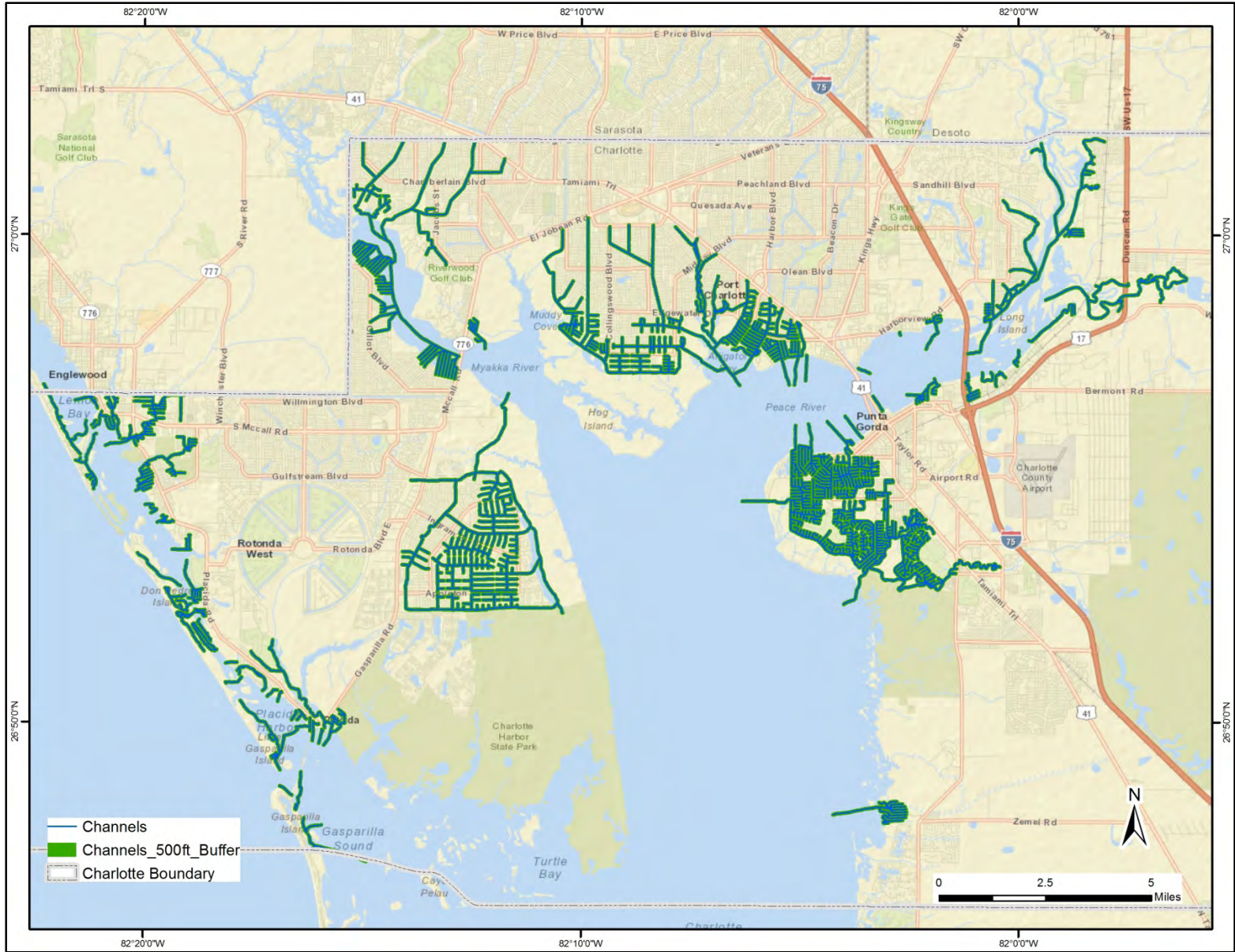


Figure 6-2. Navigation channels with 500 foot buffer zones, Charlotte County, Florida.

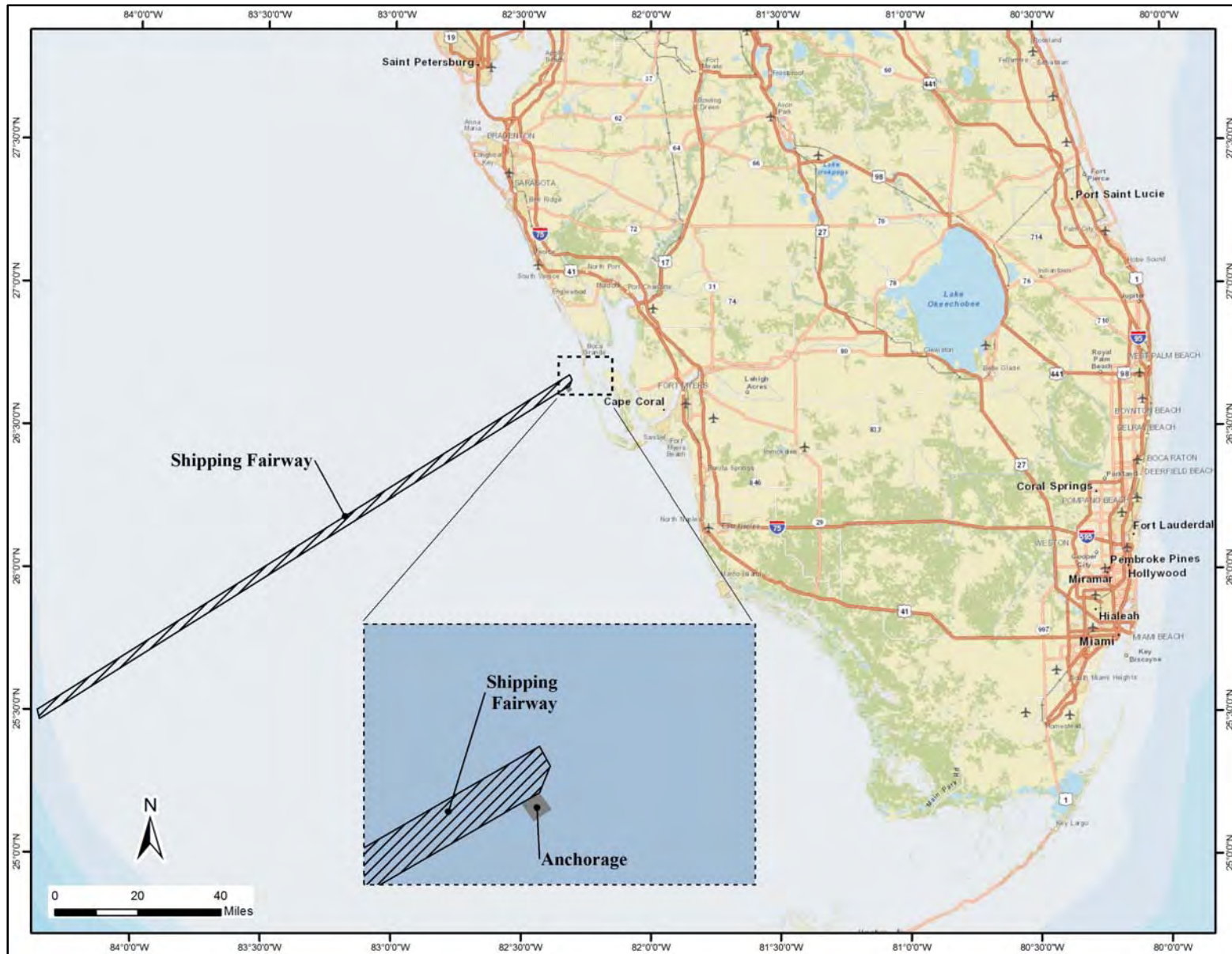


Figure 6-3. Locations of U.S. Coast Guard-designated shipping fairway and anchorage.

Table 6-2. Potential mooring field sites in Charlotte County.

Map Location	In Seagrass Beds	In OFW	In Aquatic Preserve	In Class II Waters	In Manatee Protection Zone	In Small Tooth Sawfish Habitat	Nearest Marinas	Number of Amenities
A	No	Yes	Yes	No	No	Yes	Isle Yacht Club	4
B	No	Yes	Yes	No	No	Yes	Fisherman's Village Yacht Basin	8
C	No	Yes	Yes	No	No	Yes	Fisherman's Village Yacht Basin	8
							Laishley Park	3
D	No	Yes	Yes	No	No	Yes	Charlotte Harbor Yacht Club	5
E	No	Yes	Yes	No	No	Yes	Charlotte Harbor Yacht Club	5
							Sea Horse Marina	3
F	No	No	No	No	Yes	Yes	Laishley Park	3
G	No	Yes	Yes	Yes	Yes	No	Harbor at Lemon Bay	5
							Englewood Bait House	4
H	Partially	Yes	Yes	Yes	Yes	No	Englewood Bait House	4
I	Partially	Yes	Yes	Yes	Yes	No	Stump Pass Marina	6
J	Partially	Yes	Yes	Yes	Yes	No	Eldred's Marina	1
							Gasparilla Marina	6

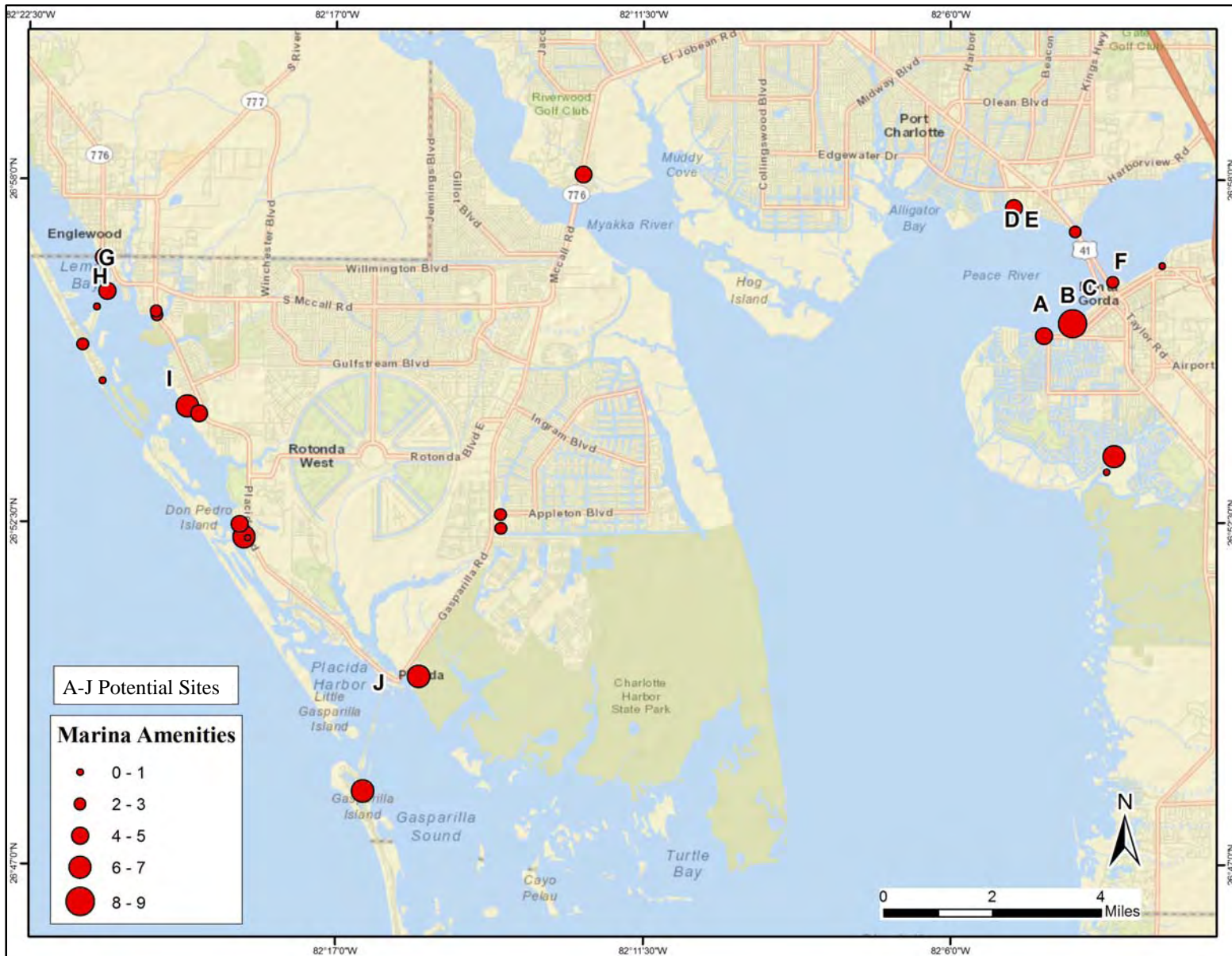


Figure 6-4. Potential mooring field sites in Charlotte County and nearby marinas sized by number of amenities.

7. Conclusions and Recommendations

The purpose of this project was to assess the future needs of Charlotte County in terms of boating facilities that provide access to its waterways. The current and projected demand for the use of Charlotte County ramp lanes, marinas (wet and dry slips), and private docks was estimated through the year 2050. Current demand was compared with the existing supply for each type of boating access facility to determine whether or not supply meets demand. The supply of ramp lanes, marina wet and dry slips, and private boat docks needed to meet future demand was determined based on the projected growth in boat registrations in Charlotte County.

The total number of pleasure boats registered in Florida and in Charlotte County was explained by a handful of economic and time-series variables (Appendix A). To project future growth in recreational boat registrations through 2050, the study used the limiting assumption that observed economic cycles and past trends will repeat themselves. However, because unknown, future economic trends will affect the number of boats that are registered (for example, potential gas price instability), it is important to note that projections for the total number of boats through the year 2020 are reasonable, while predicted values beyond 2020 become increasingly less reliable. Thus, it is recommended that County staff rerun the projection models every 10 to 15 years at least to update the projections contained in this report.

Over the 33 year period between 1978 and 2010, boat registrations increased by about 110% in Florida as a whole and by 293% in Charlotte County. Between 2006 and 2010, however, boat registrations declined by -7.3% in Charlotte County as a result of the severe economic downturn. Nonetheless, growth in the number of recreational boat registrations is linked to the national economy, and Charlotte County is expected to experience a continued upward trend in boat registrations between now and 2050. The forecast is for 28,125 boats to be registered in Charlotte County in 2050, an increase of about 38% over the 20,355 that were registered in 2010. This represents an average annual increase of 194 boats between 2010 and 2050.

Projections of boat registrations through 2050 in each of seven length classes¹ were based on observed trends in annual data that first became available in 1996 from the Florida Department of Highway Safety and Motor Vehicles. The trends observed in Charlotte County between 1996 and 2010 were increased numbers of boat registrations in every length class except those 12 feet to < 16 feet. Over the 15 year period, the greatest concentration of boats registered in Charlotte County consisted of those with lengths between 16 feet and < 26 feet: their overall share increased from 54% to 58%. The share of boats with lengths 12 feet to < 16 feet, the second most common length class in Charlotte County, steadily decreased from a high of 24% to 14% in 2010. Though representing only 13% of all registered boats on average, the number of vessels less than 12 feet in length grew by 70% over the 15 year period. Similar growth occurred for boats 40 feet in length and greater, which comprise three length classes and account for 1.5% of all boats registered in Charlotte County. These same trends for all seven length classes are expected to continue through the year 2050.

The spatial distribution of boat ownership was projected at five year intervals, through 2050, for each of the 107 block groups in Charlotte County (Appendix C). The average rate of boat ownership in Charlotte County in 2010 was 127 boats per 1,000 people. Based on block groups, ownership rates ranged from a high of 500 boats per 1,000 people to a low of 11 boats per 1,000 people. Again, as with the county-wide growth projections for boat registrations, it is recommended that the block group projections be updated at 10 to 15 year intervals. This will allow Charlotte County to better allocate future boating facilities according to geographic needs.

Information on who uses which Charlotte County boating facilities allowed for demand projections for ramps, marinas, and private docks through 2050. Currently, 53% of resident boaters keep their vessels at a dock in Charlotte County, 35% launch from a ramp, and 12% use a marina wet or dry slip. With regard to who uses Charlotte County boating facilities, residents account for about 53% of all ramp users and 51% of marina patrons.

Estimates are that current demand exceeds (by about 213) Charlotte County's existing supply of 2,997 wet and dry slips in 21 marinas. If marina capacity in Charlotte County remains constant,

¹Less than 12 feet; 12 to < 16 feet; 16 to < 26 feet; 26 to < 40 feet; 40 to < 65 feet; 65 to < 110 feet; 110 feet or more.

then the projected demand will exceed supply in 2030 by an average of 870 slips; and by an average of 1,118 slips in 2050.

Demand for saltwater accessible docks in Charlotte County in 2010 was estimated at 10,614, which represents about 67% of the current supply of non-vacant residential parcels that are saltwater accessible. In addition, there are 9,947 vacant (developable) residential parcels that are saltwater accessible. Between 2010 and 2030, dock demand is projected to increase by 25% to 13,223, and between 2010 and 2050, by 33% to 14,074. By the year 2030, the projected dock demand is estimated at approximately 26% of the capacity of vacant saltwater accessible parcels within the county and, in 2050, at 35 percent. These estimates indicate that the supply of vacant saltwater accessible parcels is sufficient to meet dock demand well beyond 2050.

Inequities in the demand for ramp access versus the supply of ramp lanes are apparent for specific regions of Charlotte County. Based on the middle scenario of an average launch/retrieval time of 30 minutes (versus 20 minutes and 40 minutes), the largest gap between current supply and demand is for the Stump Pass / Gasparilla region, which is served primarily by three lanes at the Placida ramp. Three additional ramp lanes are needed to meet current demand, a seventh will be needed by 2020, and an eighth by 2030. The Lower Peace River region, with 7 lanes, also needs three additional lanes to meet current demand, and will need an 11th by 2020, a 12th by 2030, and a 13th by 2050. The Upper Lemon Bay region, which is served by the 1-lane Ainger Creek ramp, needs two additional lanes and will need a fourth lane by 2030. The Myakka River region needs an additional lane to meet current demand, but will not need another lane through the year 2050. The Upper Peace River region has a surplus of two lanes and is not forecast to need any more.

An evaluation of boating routes originating from Charlotte County boat ramps shows that the overwhelming majority of destinations are in Lower Charlotte Harbor and points south. Given that 80% of resident boaters who use ramps live in central and east Charlotte County—areas that have no ramps on lower Charlotte Harbor—it makes sense to consider placement of new ramps for their benefit: particularly in the southern portion of east Charlotte County.

An assessment was completed of potential locations to site mooring fields in Charlotte County waters. As was the case for existing facilities and saltwater parcels, the mooring field siting

assessment was based on select developmental and environmental characteristics, many of which were identified in the Charlotte County Marine Regulatory Study (Appendix F). The presence of a few criteria, for all intents and purposes, preclude placement of a mooring field. For example, mooring fields cannot be placed in a navigation channel, nor can they be placed where water depths are inadequate. It is also highly unlikely that a mooring field could be placed within a designated shellfish harvesting area. Other factors that do not necessarily preclude the placement of a marine access facility will, nonetheless, make it more difficult to do so. For example, sovereign submerged lands within an aquatic preserve are subject to additional statutory limitations. Thus, while the statute that governs aquatic preserves does not prohibit mooring fields (facilities), it does require that more stringent requirements are met (see Ruppert and Choate, 2011). Six potential mooring field sites were identified in the Lower Peace River region, three in Upper Lemon Bay, and one in the Stump Pass / Gasparilla region.

Existing marinas and public ramps were assessed to determine the feasibility of expanding their capacity in order to meet both current and future demand. In addition, 9,696 saltwater accessible parcels were evaluated for their potential to site new ramps and/or marinas. The assessment scores assigned to each facility and parcel are not meant to be absolute; rather they provide guidance as to which facilities may prove more easily expandable and which parcels may be more adequate to site new facilities. The environmental and developmental criteria used to screen each facility and parcel can be varied and/or modified to isolate other potential parcels as Charlotte County moves forward in planning for the future of boating access to its waterways.

Appendix A: Growth Projection Model 1

Shown below are the results of four Multiple Regression models, all of which do well in explaining variation in the number of pleasure boats in the state of Florida over the period 1978-2007.

MODEL 1

Dependent: FL_Pleasure_Boats_x1000

Run Summary Section

Parameter	Value	Parameter	Value
Dependent Variable	FL_Pleasure_Boats_x1000	Rows Processed	54
Number Ind. Variables	3	Rows Filtered Out	0
Weight Variable	None	Rows with X's Missing	20
R2	0.9796	Rows with Weight Missing	0
Adj R2	0.9775	Rows with Y Missing	1
Coefficient of Variation	0.0373	Rows Used in Estimation	33
Square Root of MSE	27.08858	Completion Status	Normal
Ave Abs Pct Error	2.9651		

Regression Equation Section

Independent Variable	Regression Coefficient b(i)	Standard Error Sb(i)	T-Value to test H0:B(i)=0	Prob Level	Reject H0 at 5%?	Power of Test at 5%
Intercept	251.641304	51.625825	4.8743	0.00004	Yes	0.99700
Annual_Inflation_rate	-5.279386	2.261103	-2.3349	0.02668	Yes	0.61683
Real_GDP_Billions_2005	0.061299	0.002871	21.3532	0.00000	Yes	1.00000
Unemployment_rate_Lag	-11.843066	4.010504	-2.9530	0.00618	Yes	0.81434

Analysis of Variance Section

Source	DF	R2	Sum of Squares	Mean Square	F-Ratio	Probability Level
Intercept	1		1.739586E+07	1.739586E+07		
Model	3	0.9796	1022098	340699.4	464.3002	0.00000
Error	29	0.0204	21279.95	733.7914		
Total(Adjusted)	32	1.0000	1043378	32605.57		

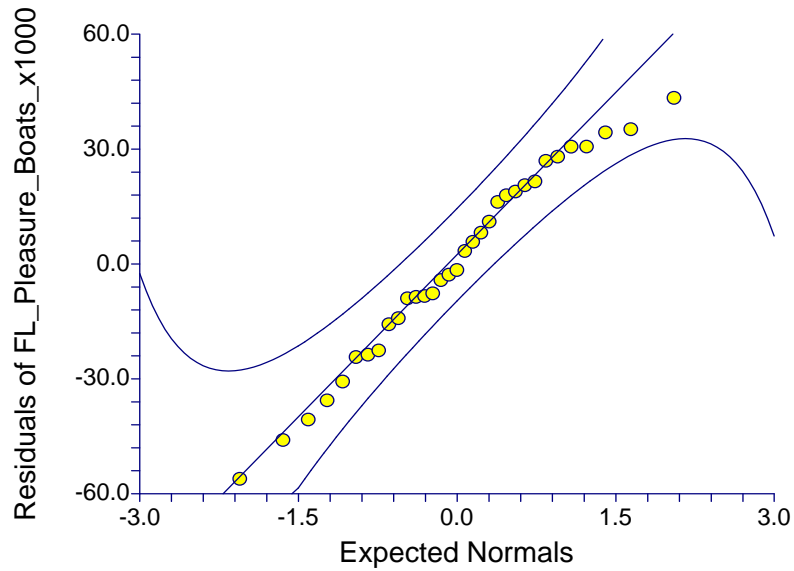
Normality Tests Section

Test Name	Test Value	Prob Level	Reject H0 At Alpha = 5%?
Shapiro Wilk	0.9723	0.545121	No

Anderson Darling	0.2734	0.666482	No
D'Agostino Skewness	-0.8082	0.418979	No
D'Agostino Kurtosis	-0.9648	0.334628	No
D'Agostino Omnibus	1.5841	0.452919	No

NORMALITY – OK!

Normal Probability Plot of Residuals of FL_Pleasure_Boats



MODEL 2: Adding an Auto-regressive term – Y(Lag1)

Dependent FL_Pleasure_Boats_x1000

Run Summary Section

Parameter	Value	Parameter	Value
Dependent Variable	FL_Pleasure_Boats_x1000	Rows Processed	54
Number Ind. Variables	4	Rows Filtered Out	0
Weight Variable	None	Rows with X's Missing	21
R2	0.9932	Rows with Weight Missing	0
Adj R2	0.9922	Rows with Y Missing	0
Coefficient of Variation	0.0219	Rows Used in Estimation	33
Mean Square Error	252.7175	Sum of Weights	33.0000
Square Root of MSE	15.89709	Completion Status	Normal
Ave Abs Pct Error	1.6619		

Regression Equation Section

Independent Variable	Regression Coefficient b(i)	Standard Error Sb(i)	T-Value to test H0:B(i)=0	Prob Level	Reject H0 at 5%?	Power of Test at 5%
Intercept	154.955204	32.927613	4.7059	0.00006	Yes	0.99505
Annual_Inflation_rate	-2.847738	1.366007	-2.0847	0.04633	Yes	0.52117
FL_Pleasure_Boats_x1000_Lag	0.746949	0.099634	7.4970	0.00000	Yes	1.00000
Real_GDP_Billions_2005	0.011415	0.006864	1.6630	0.10746	No	0.36188
Unemployment_rate_Lag	-8.775474	2.388891	-3.6735	0.00100	Yes	0.94350

Analysis of Variance Section

Source	DF	R2	Sum of Squares	Mean Square	F-Ratio	Probability Level
Intercept	1		1.739586E+07	1.739586E+07		
Model	4	0.9932	1036302	259075.5	1025.1587	0.00000
Error	28	0.0068	7076.09	252.7175		
Total(Adjusted)			32	1.0000	1043378	32605.57

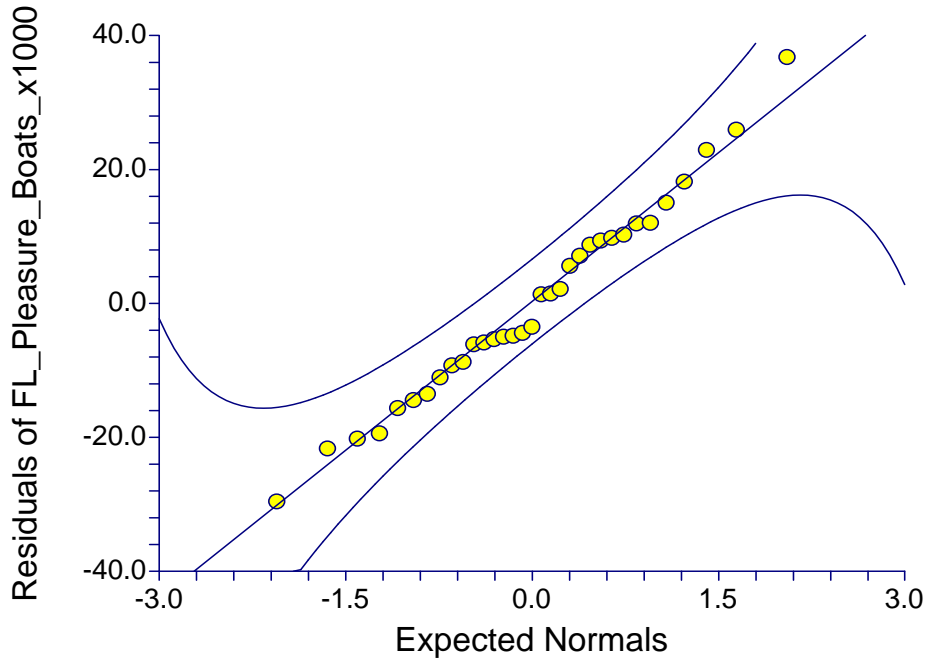
Normality Tests Section

Test Name	Test Value	Prob Level	Reject H0 At Alpha = 5%?
Shapiro Wilk	0.9865	0.945996	No
Anderson Darling	0.2014	0.881174	No
D'Agostino Skewness	0.8122	0.416679	No
D'Agostino Kurtosis	0.2008	0.840819	No

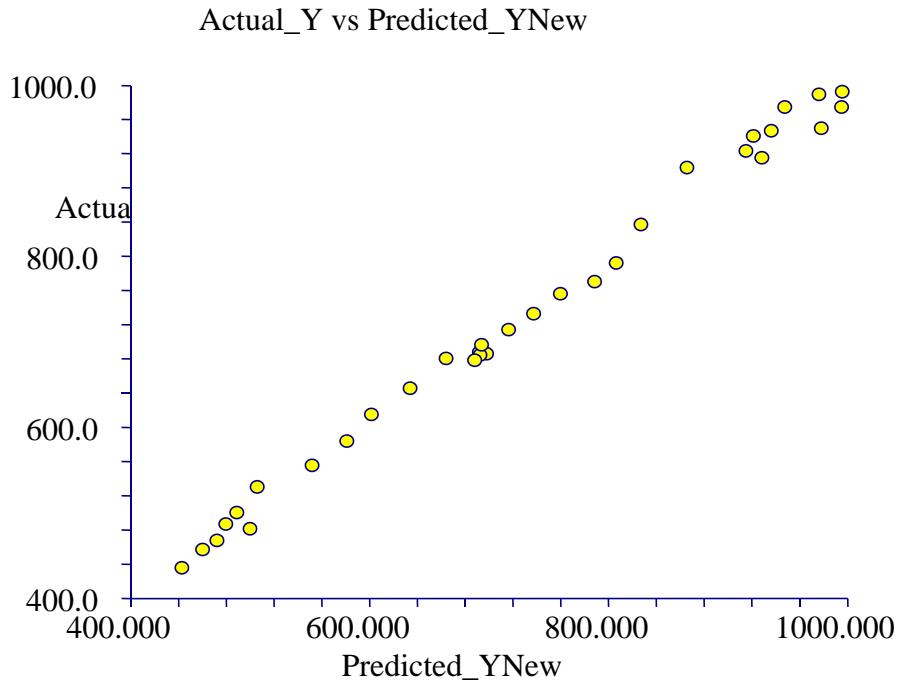
D'Agostino Omnibus 0.7000 0.704687 No

NORMALITY – OK!

Normal Probability Plot of Residuals of FL_Pleasure_Boats.



Scatterplot Y(actual) versus Y(predicted):



Note that the scatterplot of Actual versus Predicted Y shows a trend that is very close to a 45-degree line.

MODEL 3: Expanding the model to account for Population and Population Change...

Dependent FL_Pleasure_Boats_x1000

Run Summary Section

Parameter	Value	Parameter	Value
Dependent Variable	FL_Pleasure_Boats_x1000	Rows Processed	54
Number Ind. Variables	6	Rows Filtered Out	0
Weight Variable	None	Rows with X's Missing	21
R2	0.9950	Rows with Weight Missing	0
Adj R2	0.9938	Rows with Y Missing	0
Coefficient of Variation	0.0195	Rows Used in Estimation	33
Mean Square Error	201.4702	Sum of Weights	33.0000
Square Root of MSE	14.19402	Completion Status	Normal Completion
Ave Abs Pct Error	1.3848		

Regression Equation Section

Regression Variable	Standard Coefficient b(i)	Standard Error Sb(i)	T-Value to test H0:B(i)=0	Prob Level	Reject H0 at 5%?	Power at 5%
Intercept	198.269617	34.103275	5.8138	0.00000	Yes	0.99986
Annual_Inflation_rate	-5.041459	1.518958	-3.3190	0.00268	Yes	0.89144
FL_Pleasure_Boats_x1000_Lag	0.941932	0.110017	8.5617	0.00000	Yes	1.00000
Pop	-0.001395	0.000475	-2.9379	0.00684	Yes	0.80727
Pop_Change	-3.719950	1.797397	-2.0696	0.04856	Yes	0.51319
Real_GDP_Billions_2005	0.012666	0.006415	1.9746	0.05903	No	0.47673
Unemployment_rate_Lag	-9.494672	2.154121	-4.4077	0.00016	Yes	0.98869

NOTE: All variables significant at 95% confidence level

Analysis of Variance Section

Source	DF	R2	Sum of Squares	Mean Square	F-Ratio	Prob Level	Power (5%)
Intercept	1		1.739586E+07	1.739586E+07			
Model	6	0.9950	1038140	173023.3	858.8037	0.00000	1.00000
Error	26	0.0050	5238.225	201.4702			
Total(Adjusted)	32	1.0000	1043378	32605.57			

Normality Tests Section

Test Name	Test Value	Prob Level	Reject H0 At Alpha = 5%?
Shapiro Wilk	0.9820	0.843065	No
Anderson Darling	0.2370	0.786130	No
D'Agostino Skewness	0.5972	0.550349	No
D'Agostino Kurtosis	0.9312	0.351753	No
D'Agostino Omnibus	1.2238	0.542316	No

Normality OK!

Serial Correlation of Residuals Section

Lag	Serial Correlation	Lag	Serial Correlation	Lag	Serial Correlation
1	0.3089	9	-0.1812	17	0.2503
2	-0.1468	10	0.0780	18	-0.0506
3	-0.1842	11	0.1577	19	-0.1405
4	-0.1210	12	0.1090	20	-0.0878
5	-0.0061	13	0.0523	21	-0.1362
6	0.0375	14	-0.0447	22	-0.0580
7	-0.1270	15	-0.0685	23	-0.0459
8	-0.4056	16	0.2284	24	-0.1096

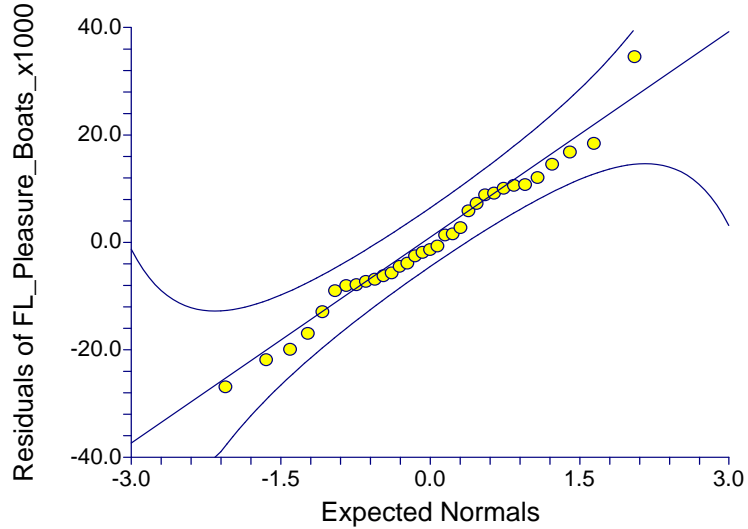
Above serial correlations significant if their absolute values are greater than 0.348155

Durbin-Watson Test For Serial Correlation

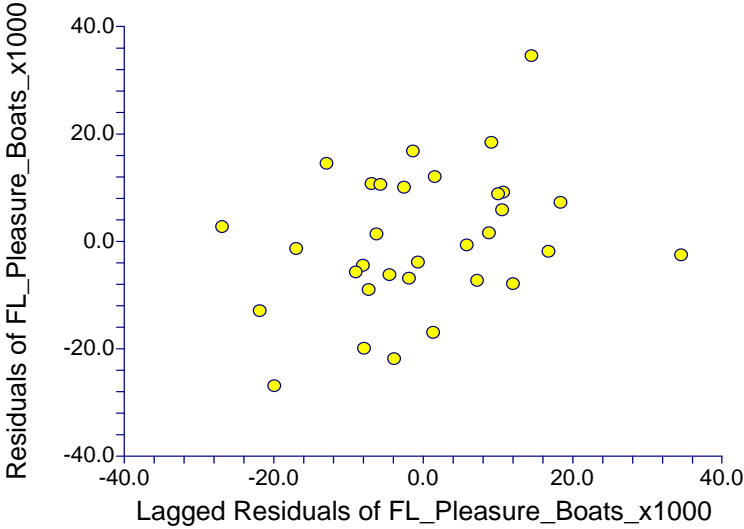
Parameter	Value	Did the Test Reject H0: $\rho(1) = 0$?
Durbin-Watson Value	1.36836	
Prob. Level: Positive Serial Correlation	0.00000	Yes
Prob. Level: Negative Serial Correlation	0.00000	Yes

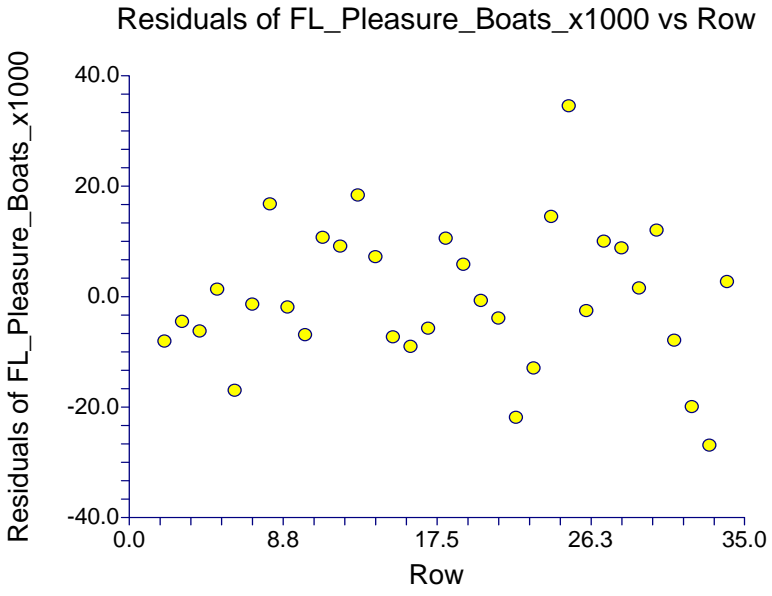
Plots Section

Normal Probability Plot of Residuals of FL_Pleasure_Boats



Serial Correlation of Residuals





Model 4: Adding a Lag2 autoregressive term... and excluding Population variables...we arrive at a model that also does very well.

Dependent FL_Pleasure_Boats_x1000

Run Summary Section

Parameter	Value	Parameter	Value
Dependent Variable	FL_Pleasure_Boats_x1000	Rows Processed	54
Number Ind. Variables	5	Rows Filtered Out	0
Weight Variable	None	Rows with X's Missing	22
R2	0.9961	Rows with Weight Missing	0
Adj R2	0.9954	Rows with Y Missing	0
Coefficient of Variation	0.0162	Rows Used in Estimation	32
Mean Square Error	142.5676	Sum of Weights	32.0000
Square Root of MSE	11.94017	Completion Status	Normal
Ave Abs Pct Error	1.1538		

Regression Equation Section

Regression Variable	Standard Coefficient b(i)	Standard Error Sb(i)	T-Value to test H0:B(i)=0	Prob Level	Reject H0 at 5%?	Power at 5%
Intercept	100.520318	23.343320	4.3062	0.00021	Yes	0.98546
Annual_Inflation_rate	-1.851681	0.968091	-1.9127	0.06686	No	0.45310
FL_Pleasure_Boats_x1000_Lag	1.252985	0.161122	7.7766	0.00000	Yes	1.00000
FL_PLeasure_Boats_x1000_Lag2	-0.474061	0.159815	-2.9663	0.00639	Yes	0.81467
Real_GDP_Billions_2005	0.011436	0.005642	2.0269	0.05305	No	0.49678
Unemployment_rate	-5.494543	1.885333	-2.9144	0.00724	Yes	0.80103

ALL Variables are significant at 95% confidence level... that is, all coefficients are significantly different from zero.

Analysis of Variance Section

Source	DF	R2	Sum of Mean Squares	Prob Square F-Ratio	Power Level (5%)
Intercept	1		1.729426E+07	1.729426E+07	
Model	5	0.9961	952205.5	190441.1	1335.7949
Error	26	0.0039	3706.758	142.5676	0.00000
Total(Adjusted)			31	1.0000	955912.3
					30835.88

Normality Tests Section

Test	Test	Prob	Reject H0
------	------	------	-----------

Name	Value	Level	At Alpha = 5%?
Shapiro Wilk	0.9507	0.150555	No
Anderson Darling	0.5179	0.188551	No
D'Agostino Skewness	2.0576	0.039626	Yes
D'Agostino Kurtosis	1.2922	0.196304	No
D'Agostino Omnibus	5.9035	0.052249	No

Normality achieved (OK)

Serial Correlation of Residuals Section

Lag	Serial Correlation	Lag	Serial Correlation	Lag	Serial Correlation
1	-0.0633	9	-0.0302	17	0.1404
2	0.0599	10	-0.1465	18	0.1017
3	-0.1456	11	0.1040	19	-0.0846
4	0.0432	12	0.0623	20	0.1718
5	-0.0786	13	0.0223	21	-0.0980
6	-0.0706	14	0.0321	22	0.0751
7	-0.3237	15	-0.1502	23	-0.0519
8	-0.0150	16	0.0297	24	-0.0173

Above serial correlations significant if their absolute values are greater than 0.353553

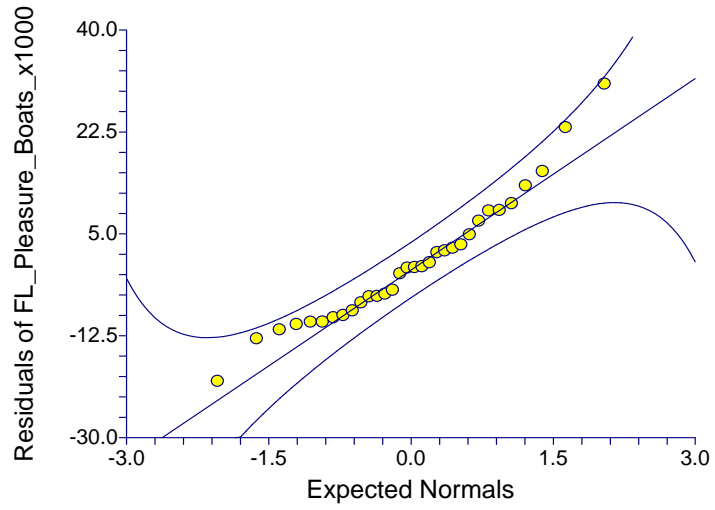
No serial autocorrelation detected.

Durbin-Watson Test For Serial Correlation

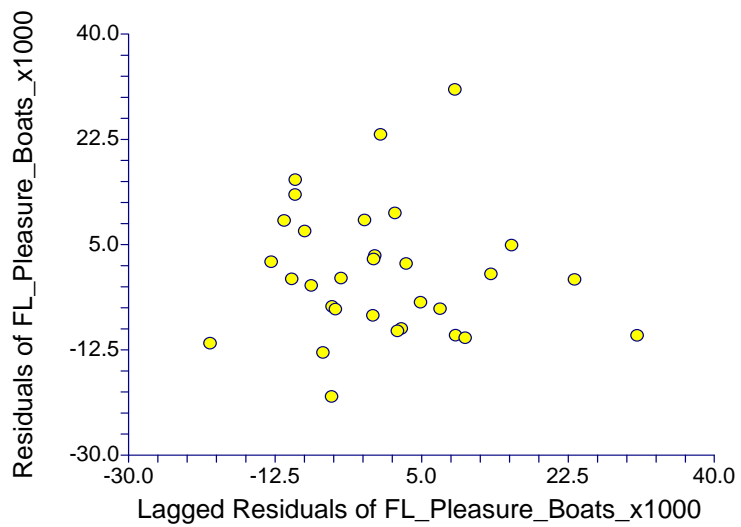
Parameter	Did the Test Reject H0: $\rho(1) = 0$?
Durbin-Watson Value: 2.08515	No
Durbin's h: 2.08	No

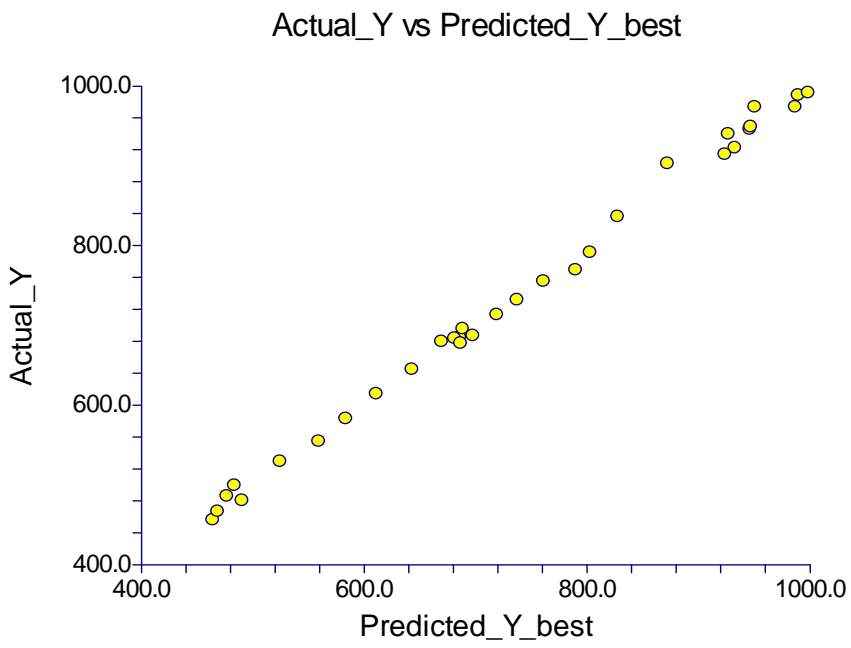
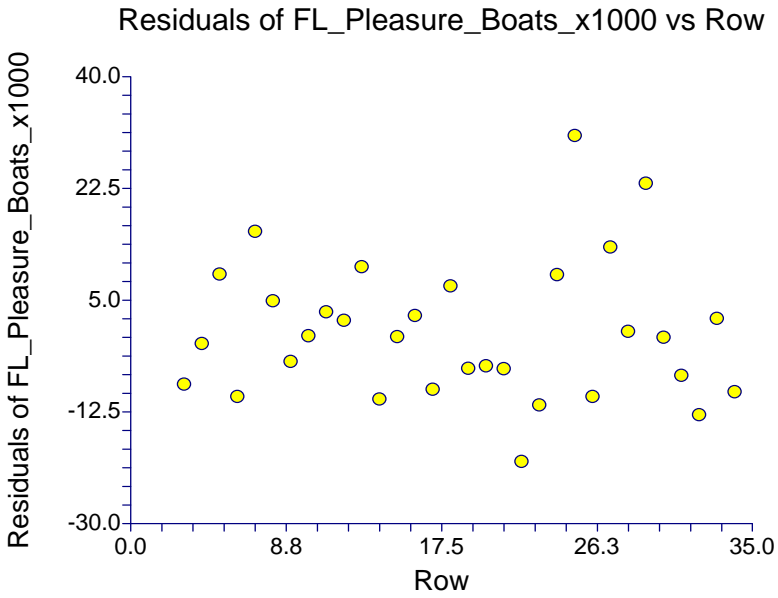
Plots Section

Normal Probability Plot of Residuals of FL_Pleasure_Boats_



Serial Correlation of Residuals





Conclusions and Findings (Appendix A)

The results of the four time-series regression models shown above suggest that variation (annually) in the number of registered pleasure boats in the state of Florida, over the period 1978-2010, is easily explained by various macro-level economic variables. The models suggest that the number of pleasure boats is positively related to national economic growth (as measure by real GDP), and negative associated with the rate of inflation and the rate of unemployment. There is also statistical evidence of an auto-regressive process, given that lagged values (at lags one and two years) also play a role in accounting for variability (as shown in models 3 and 4). The estimated auto-regressive parameters are positive and negative at lags 1 and 2, respectively (in model 4); indicating the presence of a structured serial process. This suggests that the trend in the number of pleasure boats is highly correlated over time. While other factors may certainly contribute to fluctuations and/or changes in the number of pleasure boats, in each of the four models, the variables in question account for approximately 97 or more of the variability in the dependent variable (the number of pleasure boats).

In short, macro-economic variables are shown to play a significant role in explaining the variation in the number of pleasure boats over time, and that number is statistically associated with national economic trends. This leads one to conclude that the recent decline in the number of registered boats is partly a byproduct of the recent nation-wide economic downturn.

Appendix B: ARIMA Model for Charlotte Boats

B1. BEST ARIMA MODEL for Charlotte Boats

Dependent Variable: Total_Charlotte

Model Description Section

Series Total_Charlotte

Model Regular--AR1(1,0,0) Seasonal/Cycle(4,0,0), Cycle length = 8

Observations 34

Iterations 18

Pseudo R-Squared 98.4

Root Mean Square 753.9739

Model Estimation Section

Parameter Name	Parameter Estimate	Standard Error	T-Value	Probability Level
AR(1)	0.9767902	4.22742E-03	231.0606	0.000000
SAR(1)	0.5178562	0.1262148	4.1030	0.000041
SAR(2)	0.1852164	0.1393413	1.3292	0.183773
SAR(3)	-0.3873301	0.1195069	-3.2411	0.001191
SAR(4)	0.720879	0.1290542	5.5859	0.000000

B2. BEST Two-stage MODEL for Charlotte Boats

Using Fixed Parameter Multiple Regression Model

Charlotte Boats = f (Charlotte Boats predicted Lagged 1, Unemployment rate)

Model B2. Stage 1

Dependent Variable: Unemployment_rate

Forecasts for Unemployment obtained from best ARIMA model:

Model Description Section

Series Unemployment_rate

Model Regular(1,0,0) Seasonal/Cycle(8,0,0), Cycle length = 4

Observations 34

Iterations 20

Pseudo R-Squared 74.915636

Mean Square Error 0.8004922

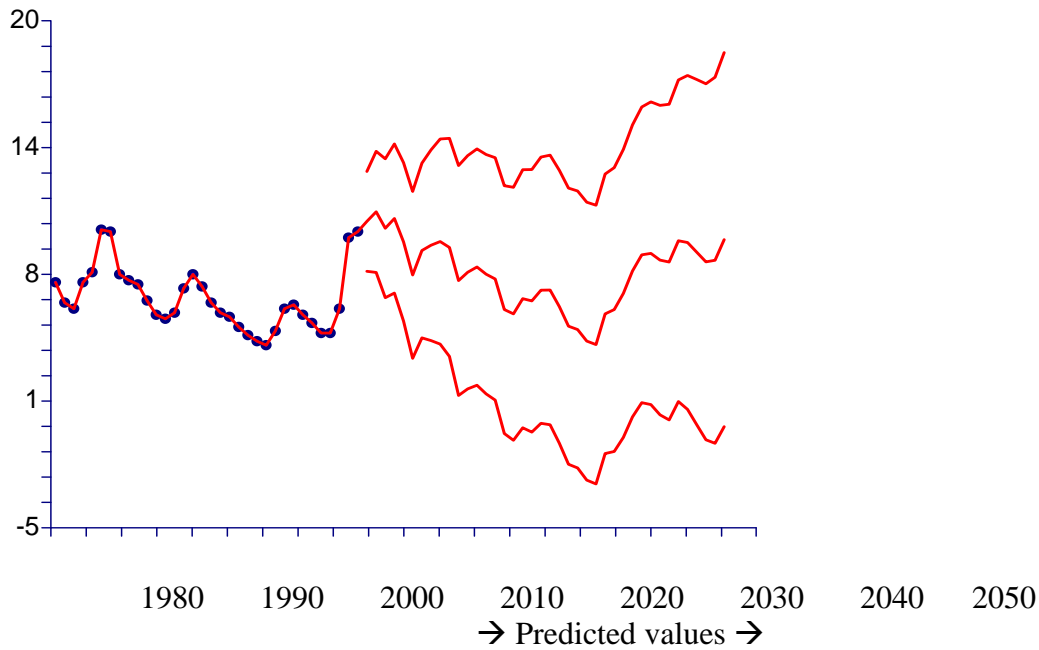
Root Mean Square 0.8947023

Model Estimation Section

Parameter Name	Parameter Estimate	Standard Error	T-Value	Prob Level
AR(1)	0.9840875	3.113035E-02	31.6118	0.000000
SAR(1)	-0.1750904	0.1449653	-1.2078	0.227121
SAR(2)	0.3303698	0.1334419	2.4758	0.013295
SAR(3)	-0.3388151	0.116123	-2.9177	0.003526
SAR(4)	-0.0461666	0.1419365	-0.3253	0.744983
SAR(5)	0.2352803	0.1364746	1.7240	0.084711
SAR(6)	-0.4425173	0.1208719	-3.6610	0.000251
SAR(7)	0.2642616	0.1673185	1.5794	0.114246
SAR(8)	0.7174347	0.1137995	6.3044	0.000000

Forecast and Data Plot

Unemployment
Rate %



Model B2. Stage 2: Multiple Regression model forecasts

Regression Model (based on the trend in the observed number of boats in Charlotte County, Florida 1978-2010, as shown below... assuming that the parameters remain constant over the forecast period: 2011-2050), using estimated values from best ARIMA model and the Unemployment predictions (shown above).

Run Summary Section

Parameter	Value	Parameter	Value
Dependent Variable	Total_Charlotte	Rows Processed	143
Number Ind. Variables	2	Rows Filtered Out	0
Weight Variable	None	Rows with X's Missing	111
R2	0.9894	Rows with Weight Missing	0
Adj R2	0.9887	Rows with Y Missing	0
Coefficient of Variation	0.0372	Rows Used in Estimation	32
Mean Square Error	315686.5	Sum of Weights	32.0000
Square Root of MSE	561.8599	Completion Status	Normal Completion
Ave Abs Pct Error	1.8646		

Regression Equation Section

Regression	Standard	T-Value	Reject
Independent	Coefficient	Error	to test Prob H0 at

Variable	b(i)	Sb(i)*	H0:B(i)=0	Level	5%?	
Intercept	2856.041592	598.810794	4.7695	0.00005		Yes
Total_Charlotte_Lag1	0.934777	0.019692	47.4691	0.00000		Yes
Unemployment_rate	-227.410364	67.516652	-3.3682	0.00215		Yes
Analysis of Variance Section						
		Sum of Mean		Probability		
Source	DF	R2	Squares	Square	F-Ratio	Level
Intercept	1		7.282857E+09	7.282857E+09		
Model 2	0.9894	8.571272E+08	4.285636E+08	1357.5605	0.00000	
Error	29	0.0106	9154910	315686.5		
Total(Adjusted)		31	1.0000	8.66282E+08	2.794458E+07	

Serial Correlation of Residuals Section

Lag	Serial Correlation	Serial Lag	Serial Correlation	Serial Lag	Serial Correlation
1	-0.0709	9	-0.0646	17	-0.0355
2	0.0049	10	0.0692	18	0.0683
3	-0.3984	11	0.0164	19	0.0415
4	0.0978	12	0.0555	20	-0.0148
5	-0.1509	13	-0.0772	21	-0.0362
6	0.0386	14	0.0103	22	-0.0265
7	-0.0420	15	0.0126	23	-0.0037
8	0.0013	16	-0.0127	24	-0.0109

*Note that there exists some possibility of inflated standard error though not severe.

Conclusions and Findings (Appendix B)

Both models B1 and B2 do exceptionally well at capturing the observed trend in the data from 1980 through 2010. Working under the limiting assumption that the resident trends and cycles in the observed time-series data will continue on into the future, projections for the total number of pleasure boats in Charlotte County were estimated using the model parameters from each of the two models (B1 and B2). It should be noted that both models provide fairly consistent and similar results in the projected number of pleasure boats from 2011 through 2050; with model B2 generates slightly more conservative time-series projections.

Information from a previous recreational boating study was used to estimate the number (population) of recreational boats owned by non-residents that were used at Charlotte County boating facilities. The estimate was based on an analysis of tag (registration) numbers recorded for vessels, vehicles, and boat trailers observed at boating facilities – including ramps, marinas, and dry stacks – during a recreational boating characterization of Greater Charlotte Harbor (Sidman *et al.*, 2005).

The vessel, vehicle, and trailer registration numbers observed at the Charlotte County boating facilities during the recreational boating characterization were used to determine the proportions of facility users (individuals) that represented county residents and non-residents. This was done by matching the vehicle, trailer, and vessel tag numbers to DHSMV records to obtain owner addresses. Of the 1,847 unique observations² compiled from the field data sheets that were recorded at Charlotte County boat ramps, marinas, and dry stack facilities, 952 boats (51.5%) were owned by residents and 895 (48.5%) were owned by non-residents.

² Though a particular vessel, vehicle, or trailer may have been observed on more than one occasion in a study county, it was counted only once for the purpose of this study.

Appendix C: Population and Boat Registration Growth Estimates by Block Group: 2010 - 2050.

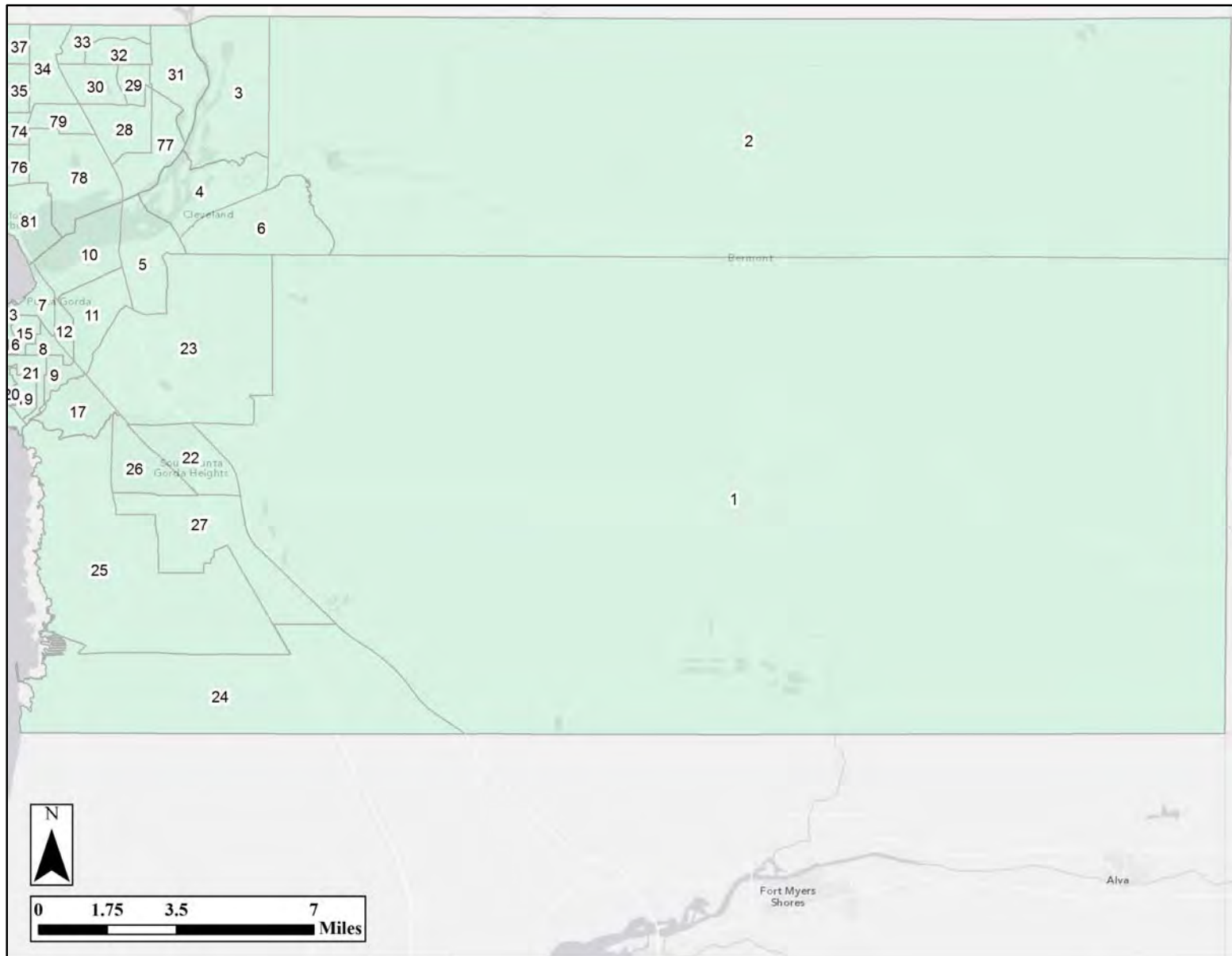


Figure C-1. Map key linking east county block group IDs to growth projection tables.

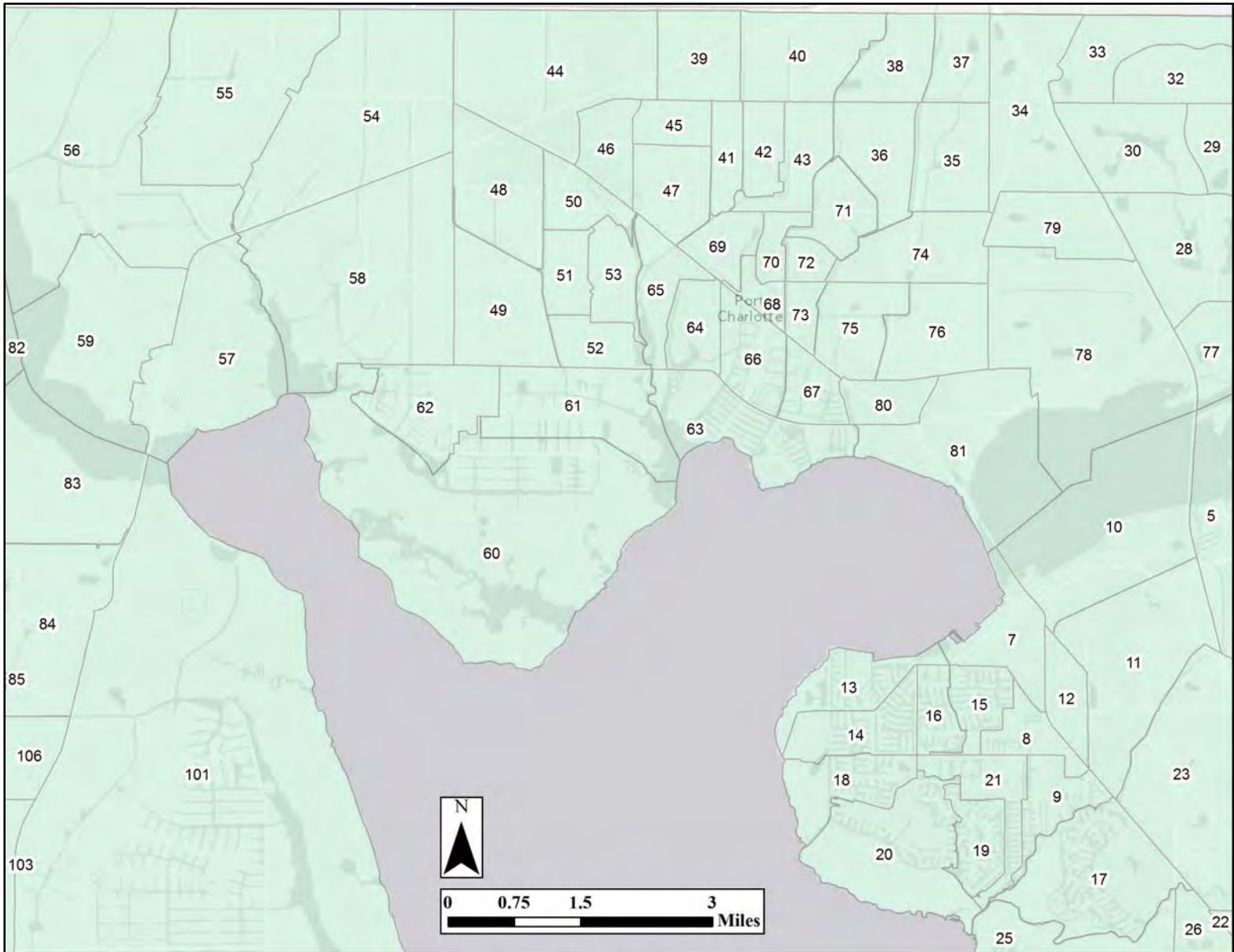


Figure C- 2. Map key linking central county block group IDs to growth projection tables.

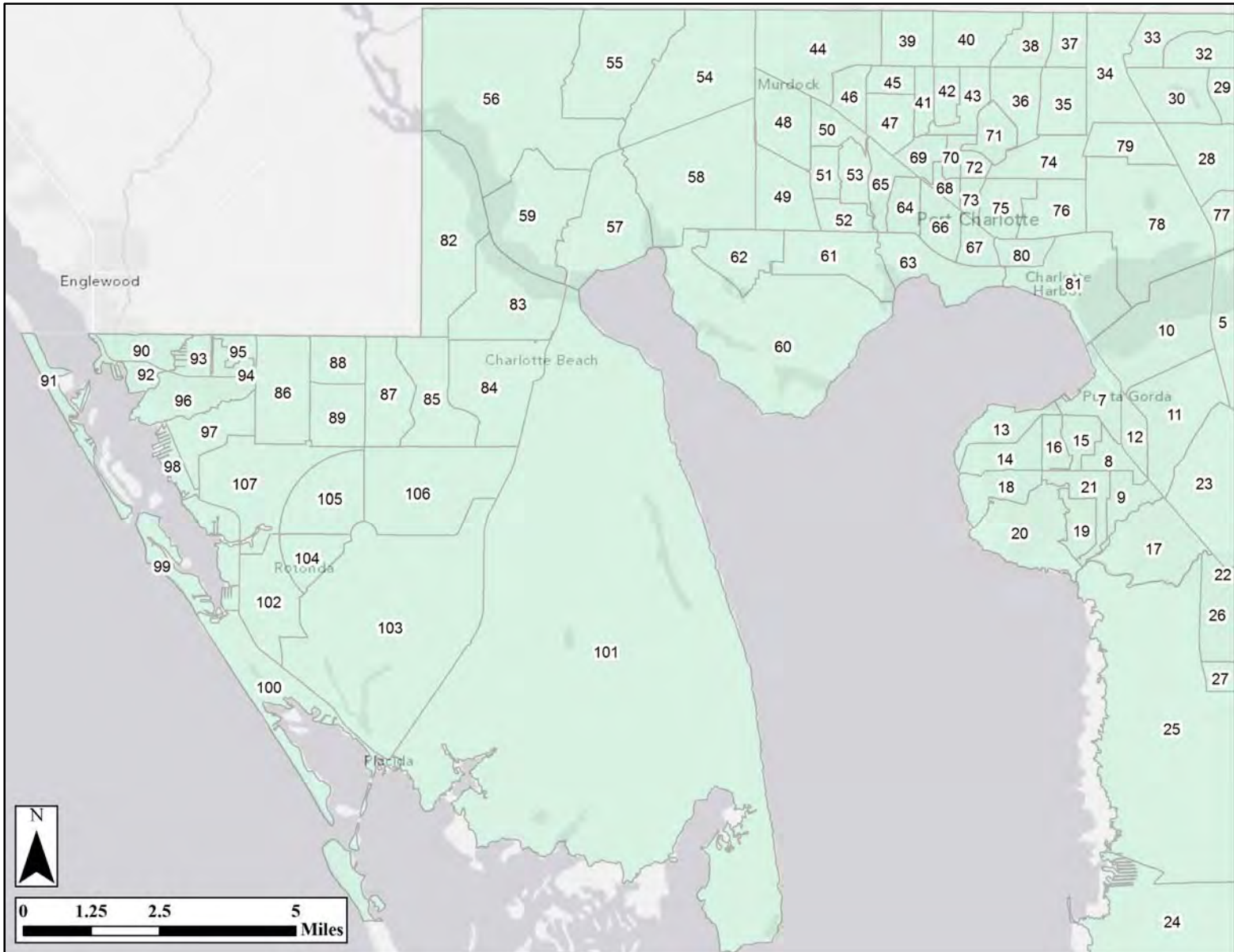


Figure C- 3. Map key linking west county block group IDs to growth projection tables.

Table A- 1. Population and housing units in 2010 and at buildout.

Map Number	Block Group ID	Housing Units in 2010 and Potential Number at Buildout					Population in 2010			Number of People per Housing Unit (2010 Census)	Potential Buildout Population
		Number Occupied (Census 2010)	Estimated Number Occupied Seasonally (2010)	Estimated Number Vacant (2010)	Potential Number Buildable	Estimated Total Number at Buildout	Estimated Seasonal Population	Permanent Population Reported (Census 2010)	Total Population		
1	120150101001	341	15	44	21,341	21,740	38	1,974	2,012	2.59	56,231
2	120150101002	790	116	349	9,070	10,325	274	1,863	2,137	2.36	24,323
3	120150102001	568	47	141	2,506	3,262	99	1,200	1,299	2.11	6,892
4	120150102002	448	44	133	957	1,582	89	899	988	2.01	3,175
5	120150102003	586	48	144	501	1,279	102	1,243	1,345	2.12	2,713
6	120150102004	455	30	91	1,010	1,586	72	1,083	1,155	2.38	3,775
7	120150103011	482	46	139	163	830	82	995	1,077	1.77	1,469
8	120150103012	476	50	149	321	995	103	1,045	1,148	2.09	2,078
9	120150103013	728	105	314	279	1,426	197	1,367	1,564	1.88	2,678
10	120150103021	649	64	191	348	1,251	125	1,280	1,405	1.97	2,467
11	120150103022	755	43	128	1,895	2,820	95	1,711	1,806	2.23	6,290
12	120150103023	298	14	42	240	594	31	655	686	2.20	1,306
13	120150104011	796	130	391	312	1,629	245	1,495	1,740	1.88	3,059
	120150104012	670	49	146	85	949	94	1,304	1,398	1.95	1,847
	120150104021	602	74	221	185	1,081	140	1,150	1,290	1.91	2,065
	120150104022	536	67	200	36	838	122	983	1,105	1.83	1,537
	120150104031	980	58	174	436	1,648	115	1,939	2,054	1.98	3,261
	120150104041	466	28	84	165	743	54	907	961	1.95	1,446
	120150104042	464	16	49	253	782	33	941	974	2.03	1,586
	120150104043	762	60	179	317	1,318	113	1,447	1,560	1.90	2,503
	120150104044	520	119	357	481	1,477	212	928	1,140	1.78	2,636
	120150105011	946	61	182	782	1,970	117	1,828	1,945	1.93	3,807
	120150105012	1,035	54	163	5,134	6,386	128	2,979	3,107	2.36	15,049
	120150105021	1,041	94	282	8,315	9,732	206	2,286	2,492	2.20	21,371
	120150105022	543	78	233	13,177	14,030	134	937	1,071	1.73	24,210
	120150105023	1,323	71	214	1,831	3,439	149	2,778	2,927	2.10	7,211
	120150105024	411	32	96	7,372	7,911	80	1,024	1,104	2.49	19,710
	120150201011	1,474	119	358	1,858	3,809	267	3,402	3,669	2.24	8,517
	120150201012	471	83	249	796	1,599	153	883	1,036	1.84	2,943
	120150201013	1,059	36	107	436	1,638	85	2,539	2,624	2.38	3,906
	120150201031	563	16	47	1,290	1,916	40	1,432	1,472	2.54	4,873

Map Number	Block Group ID	Housing Units in 2010 and Potential Number at Buildout					Population in 2010			Number of People per Housing Unit (2010 Census)	Potential Buildout Population
		Number Occupied (Census 2010)	Estimated Number Occupied Seasonally (2010)	Estimated Number Vacant (2010)	Potential Number Buildable	Estimated Total Number at Buildout	Estimated Seasonal Population	Permanent Population Reported (Census 2010)	Total Population		
	120150201032	648	31	93	511	1,283	74	1,547	1,621	2.39	3,063
	120150201033	1,029	64	191	1,149	2,432	151	2,450	2,601	2.38	5,790
	120150201041	1,123	156	468	183	1,930	265	1,910	2,175	1.70	3,283
	120150202011	752	23	69	865	1,709	57	1,850	1,907	2.46	4,204
	120150202012	774	33	98	734	1,639	82	1,937	2,019	2.50	4,091
	120150202013	779	20	60	227	1,086	51	1,967	2,018	2.53	2,742
	120150202014	668	24	71	605	1,368	58	1,642	1,700	2.46	3,363
	120150202021	433	18	53	903	1,407	45	1,090	1,135	2.52	3,542
	120150202022	708	26	77	1,414	2,225	66	1,923	1,989	2.55	5,669
	120150202023	406	17	50	183	655	38	939	977	2.29	1,502
	120150202024	533	20	60	260	873	45	1,204	1,249	2.25	1,964
	120150202025	635	33	98	410	1,175	75	1,471	1,546	2.32	2,722
	120150203011	371	22	67	3,629	4,089	59	982	1,041	2.64	10,790
	120150203012	476	22	65	187	749	51	1,123	1,174	2.36	1,766
	120150203013	1,082	139	417	76	1,714	218	1,698	1,916	1.57	2,690
	120150203014	714	28	83	412	1,237	66	1,695	1,761	2.37	2,937
	120150203021	1,013	41	124	486	1,664	92	2,354	2,446	2.22	3,696
	120150203022	687	35	105	1,604	2,431	85	1,690	1,775	2.44	5,927
	120150203031	445	19	56	199	719	45	1,058	1,103	2.38	1,709
	120150203032	401	18	55	330	804	44	973	1,017	2.43	1,951
	120150203033	425	26	78	385	914	62	1,013	1,075	2.38	2,179
	120150203034	653	32	95	257	1,036	73	1,508	1,581	2.30	2,388
	120150204001	301	18	55	5,303	5,677	49	807	856	2.66	15,107
	120150204002	664	39	116	4,241	5,059	92	1,589	1,681	2.38	12,046
	120150204003	884	66	197	10,823	11,969	155	2,088	2,243	2.36	28,271
	120150204004	414	78	233	299	1,024	143	760	903	1.84	1,880
	120150204005	490	24	71	3,236	3,821	59	1,311	1,370	2.50	9,537
	120150204006	777	117	350	817	2,060	218	1,451	1,669	1.87	3,847
	120150205011	720	50	151	564	1,485	108	1,545	1,653	2.15	3,187
	120150205012	835	57	170	568	1,630	126	1,847	1,973	2.21	3,606
	120150205013	583	50	149	1,220	2,001	114	1,344	1,458	2.30	4,599
	120150205021	681	43	130	221	1,075	94	1,483	1,577	2.18	2,341
	120150206011	604	45	135	217	1,001	104	1,400	1,504	2.32	2,320

Map Number	Block Group ID	Housing Units in 2010 and Potential Number at Buildout					Population in 2010			Number of People per Housing Unit (2010 Census)	Potential Buildout Population
		Number Occupied (Census 2010)	Estimated Number Occupied Seasonally (2010)	Estimated Number Vacant (2010)	Potential Number Buildable	Estimated Total Number at Buildout	Estimated Seasonal Population	Permanent Population Reported (Census 2010)	Total Population		
	120150206012	560	32	95	211	898	73	1,285	1,358	2.29	2,061
	120150206021	790	69	206	142	1,207	150	1,723	1,873	2.18	2,632
	120150206022	592	55	164	54	865	128	1,384	1,512	2.34	2,022
	120150207001	635	48	143	-	825	58	776	834	1.22	1,007
	120150207002	934	47	140	52	1,172	103	2,078	2,181	2.22	2,608
	120150207003	606	66	197	4	873	124	1,234	1,358	1.88	1,644
	120150208001	902	62	186	84	1,234	147	2,143	2,290	2.38	2,932
	120150208002	423	29	86	7	545	70	1,031	1,101	2.44	1,328
	120150208003	398	37	111	17	563	87	931	1,018	2.34	1,317
	120150209001	778	45	134	669	1,625	107	1,873	1,980	2.40	3,900
	120150209002	1,003	49	147	323	1,522	112	2,300	2,412	2.29	3,484
	120150209003	557	23	68	1,329	1,977	55	1,349	1,404	2.41	4,767
	120150210011	683	37	110	3,605	4,435	83	1,537	1,620	2.25	9,980
	120150210021	950	123	369	2,293	3,735	238	1,851	2,089	1.93	7,218
	120150210022	515	144	433	51	1,143	257	916	1,173	1.78	2,033
	120150210031	764	83	248	47	1,142	111	1,257	1,368	1.34	1,529
	120150210032	810	86	257	531	1,684	178	1,855	2,033	2.07	3,489
	120150301001	693	43	129	3,792	4,657	100	1,619	1,719	2.34	10,880
	120150301002	717	49	147	1,923	2,836	113	1,649	1,762	2.30	6,522
	120150301003	818	85	256	1,765	2,924	185	1,774	1,959	2.17	6,341
	120150301004	388	22	66	2,720	3,196	52	916	968	2.36	7,529
	120150302001	1,187	52	155	1,683	3,076	113	2,606	2,719	2.20	6,753
	120150302002	844	40	121	1,517	2,522	93	1,954	2,047	2.32	5,839
	120150302003	511	19	58	830	1,418	44	1,178	1,222	2.31	3,269
	120150302004	781	37	112	1,021	1,951	84	1,755	1,839	2.25	4,384
	120150303011	533	54	163	132	882	109	1,066	1,175	2.00	1,764
	120150303012	457	234	703	40	1,434	397	774	1,171	1.69	2,429
	120150303013	502	155	466	110	1,233	274	886	1,160	1.76	2,176
	120150303021	473	57	171	123	824	102	952	1,054	1.79	1,474
	120150303022	466	88	263	7	823	142	756	898	1.62	1,335
	120150303023	347	33	100	65	545	57	592	649	1.71	930
	120150303024	680	71	212	101	1,063	139	1,342	1,481	1.97	2,098
	120150304011	747	75	224	180	1,226	141	1,405	1,546	1.88	2,306

Map Number	Block Group ID	Housing Units in 2010 and Potential Number at Buildout					Population in 2010			Number of People per Housing Unit (2010 Census)	Potential Buildout Population
		Number Occupied (Census 2010)	Estimated Number Occupied Seasonally (2010)	Estimated Number Vacant (2010)	Potential Number Buildable	Estimated Total Number at Buildout	Estimated Seasonal Population	Permanent Population Reported (Census 2010)	Total Population		
	120150304012	324	58	173	78	633	105	590	695	1.82	1,153
	120150304021	415	122	367	501	1,405	237	806	1,043	1.94	2,729
	120150304022	697	326	977	819	2,818	631	1,351	1,982	1.94	5,462
	120150305011	1,580	215	645	22,316	24,756	474	3,487	3,961	2.20	54,557
	120150305021	1,007	180	539	1,341	3,067	296	1,661	1,957	1.65	5,059
	120150305022	869	155	465	4,309	5,798	326	1,826	2,152	2.10	12,183
	120150305023	713	66	199	165	1,143	138	1,484	1,622	2.08	2,379
	120150305031	1,054	84	253	749	2,140	171	2,141	2,312	2.03	4,347
	120150305032	1,167	121	364	3,461	5,113	267	2,571	2,838	2.20	11,264
	120150305033	554	50	151	2,906	3,661	106	1,168	1,274	2.11	7,718
	Totals	73,370	6,816	20,447	186,483	287,115	13,829	159,978	173,807		636,469

Table A- 2. Population and boat registration projections for 2015 based on two growth scenarios.

Map Number	Block Group ID	2015 Projections Based on the Scenario 1 Growth Rate for 2010-15					2015 Projections Based on the Scenario 2 Growth Rate for 2010-15				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150101001	2,142	45	2,187	94	54,044	2,067	39	2,106	87	54,125
	120150101002	2,022	329	2,351	472	21,972	1,951	287	2,237	435	22,085
	120150102001	1,302	119	1,421	304	5,470	1,256	104	1,360	282	5,531
	120150102002	976	107	1,082	210	2,092	941	93	1,034	194	2,140
	120150102003	1,349	122	1,471	140	1,242	1,301	107	1,408	130	1,305
	120150102004	1,175	87	1,262	143	2,513	1,134	75	1,209	133	2,566
	120150103011	1,080	98	1,178	155	291	1,042	86	1,127	143	341
	120150103012	1,134	124	1,258	159	820	1,094	108	1,202	147	875
	120150103013	1,483	236	1,720	476	958	1,431	206	1,637	439	1,040
	120150103021	1,389	150	1,539	482	928	1,340	131	1,471	446	996
	120150103022	1,857	114	1,971	58	4,319	1,791	99	1,891	54	4,399
	120150103023	711	37	748	48	558	686	32	718	44	588
	120150104011	1,622	294	1,916	729	1,143	1,565	256	1,821	671	1,238
	120150104012	1,415	113	1,528	630	319	1,365	99	1,464	584	383
	120150104021	1,248	169	1,417	421	648	1,204	147	1,351	388	714
	120150104022	1,067	147	1,213	355	324	1,029	128	1,157	327	380
	120150104031	2,104	138	2,242	688	1,019	2,030	120	2,150	638	1,110
	120150104041	984	65	1,050	563	396	950	57	1,007	523	439
	120150104042	1,021	40	1,061	521	525	985	35	1,020	484	566
	120150104043	1,570	136	1,706	743	796	1,515	119	1,634	688	869
	120150104044	1,007	255	1,262	356	1,374	972	222	1,194	325	1,442
	120150105011	1,984	140	2,124	134	1,683	1,914	122	2,036	124	1,770
	120150105012	3,233	154	3,386	321	11,663	3,119	134	3,253	299	11,796
	120150105021	2,481	248	2,729	382	18,643	2,393	216	2,610	354	18,762
	120150105022	1,017	161	1,177	136	23,033	981	140	1,121	125	23,089
	120150105023	3,014	180	3,194	205	4,017	2,909	156	3,065	190	4,146
	120150105024	1,111	96	1,207	121	18,503	1,072	83	1,156	112	18,555
	120150201011	3,692	320	4,012	120	4,505	3,562	279	3,841	111	4,676
	120150201012	958	184	1,142	13	1,802	925	160	1,084	12	1,859
	120150201013	2,755	102	2,858	105	1,048	2,658	89	2,748	98	1,158
	120150201031	1,554	48	1,602	81	3,271	1,499	42	1,541	75	3,332
	120150201032	1,679	89	1,768	85	1,295	1,620	77	1,697	79	1,366
	120150201033	2,659	182	2,840	136	2,950	2,565	158	2,723	126	3,067
	120150201041	2,073	319	2,391	66	891	2,000	278	2,278	61	1,005

Map Number	Block Group ID	2015 Projections Based on the Scenario 1 Growth Rate for 2010-15					2015 Projections Based on the Scenario 2 Growth Rate for 2010-15				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150202011	2,007	68	2,075	102	2,129	1,937	59	1,996	95	2,208
	120150202012	2,102	98	2,200	141	1,891	2,028	86	2,114	131	1,977
	120150202013	2,134	61	2,195	116	547	2,059	53	2,112	108	630
	120150202014	1,782	70	1,852	95	1,511	1,719	61	1,780	89	1,582
	120150202021	1,183	54	1,236	81	2,305	1,141	47	1,188	75	2,354
	120150202022	2,087	79	2,166	100	3,504	2,013	69	2,082	93	3,587
	120150202023	1,019	45	1,064	59	438	983	40	1,023	55	479
	120150202024	1,306	54	1,361	95	603	1,261	47	1,308	89	656
	120150202025	1,596	90	1,687	68	1,035	1,540	79	1,619	64	1,103
	120150203011	1,066	71	1,136	214	9,654	1,028	61	1,090	198	9,700
	120150203012	1,219	61	1,279	50	486	1,176	53	1,229	47	537
	120150203013	1,843	262	2,105	43	585	1,778	228	2,006	40	684
	120150203014	1,839	79	1,918	92	1,018	1,775	69	1,844	85	1,093
	120150203021	2,554	110	2,664	219	1,031	2,465	96	2,561	204	1,135
	120150203022	1,834	103	1,936	161	3,991	1,769	89	1,859	150	4,068
	120150203031	1,148	54	1,202	84	508	1,108	47	1,154	79	555
	120150203032	1,056	53	1,109	91	842	1,019	46	1,065	85	886
	120150203033	1,099	74	1,174	95	1,005	1,061	65	1,126	88	1,053
	120150203034	1,636	87	1,724	124	664	1,579	76	1,655	115	733
	120150204001	876	58	934	80	14,173	845	51	896	74	14,211
	120150204002	1,724	110	1,834	163	10,211	1,664	96	1,760	151	10,286
	120150204003	2,266	186	2,452	418	25,819	2,186	162	2,348	387	25,923
	120150204004	825	172	996	149	884	796	149	945	137	935
	120150204005	1,423	71	1,494	162	8,043	1,373	62	1,435	150	8,102
	120150204006	1,575	261	1,836	118	2,011	1,519	228	1,747	109	2,100
	120150205011	1,677	130	1,806	453	1,380	1,618	113	1,731	420	1,456
	120150205012	2,004	151	2,155	490	1,450	1,934	131	2,065	455	1,540
	120150205013	1,458	137	1,595	348	3,004	1,407	119	1,526	322	3,073
	120150205021	1,609	113	1,722	686	619	1,553	99	1,651	636	690
	120150206011	1,519	125	1,644	192	676	1,466	109	1,575	178	745
	120150206012	1,394	88	1,482	142	579	1,345	76	1,422	131	639
	120150206021	1,870	180	2,050	342	583	1,804	157	1,961	316	671
	120150206022	1,502	154	1,656	255	367	1,449	134	1,583	236	439
	120150207001	842	70	912	20	95	812	61	873	18	134
	120150207002	2,255	124	2,379	102	228	2,176	108	2,284	95	323

Map Number	Block Group ID	2015 Projections Based on the Scenario 1 Growth Rate for 2010-15					2015 Projections Based on the Scenario 2 Growth Rate for 2010-15				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150207003	1,339	149	1,488	30	156	1,292	130	1,422	28	222
	120150208001	2,325	177	2,502	112	429	2,244	154	2,398	104	534
	120150208002	1,119	84	1,203	37	125	1,079	73	1,153	34	176
	120150208003	1,010	104	1,114	39	203	975	91	1,065	36	252
	120150209001	2,032	128	2,161	117	1,739	1,961	112	2,073	109	1,827
	120150209002	2,496	135	2,631	197	854	2,408	117	2,526	183	958
	120150209003	1,464	66	1,530	74	3,237	1,412	57	1,470	69	3,297
	120150210011	1,668	99	1,767	392	8,213	1,609	87	1,696	365	8,285
	120150210021	2,009	286	2,294	105	4,924	1,938	249	2,187	97	5,031
	120150210022	994	308	1,302	38	731	959	269	1,228	35	805
	120150210031	1,364	133	1,497	35	32	1,316	116	1,432	32	97
	120150210032	2,013	213	2,226	151	1,262	1,942	186	2,128	140	1,360
	120150301001	1,757	121	1,878	440	9,002	1,695	105	1,800	409	9,079
	120150301002	1,789	135	1,925	379	4,598	1,727	118	1,845	351	4,678
	120150301003	1,925	222	2,147	149	4,194	1,857	194	2,051	137	4,290
	120150301004	994	62	1,056	109	6,472	959	54	1,013	101	6,515
	120150302001	2,828	136	2,964	350	3,790	2,729	118	2,847	325	3,906
	120150302002	2,120	112	2,232	219	3,607	2,046	98	2,143	203	3,695
	120150302003	1,278	53	1,332	118	1,937	1,233	46	1,280	110	1,989
	120150302004	1,904	101	2,005	187	2,379	1,838	88	1,925	173	2,459
	120150303011	1,157	130	1,287	212	477	1,116	114	1,230	196	534
	120150303012	840	477	1,317	195	1,112	810	415	1,226	176	1,203
	120150303013	961	329	1,291	353	886	928	287	1,215	321	962
	120150303021	1,033	123	1,156	217	318	997	107	1,104	201	370
	120150303022	820	171	991	71	344	792	149	940	65	395
	120150303023	642	68	711	59	219	620	59	679	55	251
	120150303024	1,456	167	1,623	335	474	1,405	146	1,551	310	547
	120150304011	1,525	169	1,694	301	612	1,471	147	1,618	279	688
	120150304012	640	126	767	271	386	618	110	728	249	425
	120150304021	875	285	1,160	250	1,569	844	249	1,092	228	1,636
	120150304022	1,466	758	2,224	477	3,238	1,415	661	2,075	430	3,387
	120150305011	3,784	569	4,353	1,418	50,204	3,651	496	4,147	1,307	50,410
	120150305021	1,802	356	2,159	119	2,900	1,739	310	2,050	109	3,009
	120150305022	1,981	391	2,373	442	9,810	1,912	341	2,253	406	9,930
	120150305023	1,610	166	1,776	131	603	1,554	144	1,698	121	681

Map Number	Block Group ID	2015 Projections Based on the Scenario 1 Growth Rate for 2010-15					2015 Projections Based on the Scenario 2 Growth Rate for 2010-15				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150305031	2,323	206	2,529	194	1,818	2,242	179	2,421	180	1,926
	120150305032	2,790	321	3,111	274	8,154	2,692	280	2,972	253	8,293
	120150305033	1,267	127	1,395	128	6,324	1,223	111	1,334	118	6,385
	TOTALS	173,594	16,617	190,211	24,525	446,257	167,500	14,477	181,979	22,678	454,487

Table A- 3. Population and boat registration projections for 2020 based on two growth scenarios.

Map Number	Block Group ID	2020 Projections Based on the Scenario 1 Growth Rate for 2015-20					2020 Projections Based on the Scenario 2 Growth Rate for 2015-20				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150101001	2,359	49	2,408	103	53,823	2,175	41	2,217	91	54,014
	120150101002	2,227	355	2,581	518	21,741	2,053	302	2,355	456	21,968
	120150102001	1,434	129	1,563	335	5,329	1,322	109	1,432	295	5,460
	120150102002	1,074	115	1,190	231	1,985	991	98	1,089	204	2,086
	120150102003	1,486	132	1,618	154	1,095	1,370	112	1,482	136	1,231
	120150102004	1,294	93	1,388	157	2,387	1,193	79	1,273	139	2,502
	120150103011	1,189	106	1,295	170	174	1,097	90	1,187	150	282
	120150103012	1,249	134	1,383	174	695	1,152	114	1,266	154	812
	120150103013	1,634	255	1,889	523	789	1,506	217	1,723	460	954
	120150103021	1,530	162	1,692	530	775	1,411	138	1,549	468	919
	120150103022	2,045	123	2,168	64	4,122	1,886	104	1,990	57	4,300
	120150103023	783	40	823	52	483	722	34	756	46	550
	120150104011	1,787	317	2,104	801	956	1,648	270	1,917	703	1,142
	120150104012	1,559	122	1,681	693	166	1,437	104	1,541	612	306
	120150104021	1,374	182	1,556	462	509	1,267	155	1,422	407	643
	120150104022	1,175	158	1,333	390	204	1,083	134	1,218	343	319
	120150104031	2,317	149	2,466	757	795	2,137	126	2,263	669	997
	120150104041	1,084	71	1,155	620	291	1,000	60	1,060	548	387
	120150104042	1,125	43	1,167	573	419	1,037	36	1,073	508	513
	120150104043	1,729	147	1,876	817	626	1,595	125	1,720	721	783
	120150104044	1,109	275	1,384	390	1,252	1,023	234	1,257	341	1,379
	120150105011	2,185	151	2,336	147	1,470	2,015	129	2,143	130	1,663
	120150105012	3,560	166	3,726	354	11,323	3,283	141	3,424	313	11,625
	120150105021	2,732	267	3,000	420	18,371	2,519	227	2,747	371	18,624
	120150105022	1,120	173	1,293	149	22,917	1,033	147	1,180	131	23,030
	120150105023	3,320	194	3,514	225	3,697	3,061	165	3,226	199	3,985
	120150105024	1,224	103	1,327	133	18,383	1,128	88	1,216	117	18,494
	120150201011	4,066	345	4,412	131	4,106	3,749	294	4,043	116	4,474
	120150201012	1,055	198	1,253	14	1,690	973	168	1,141	13	1,802
	120150201013	3,035	110	3,145	116	760	2,798	94	2,892	103	1,014
	120150201031	1,712	52	1,763	89	3,110	1,578	44	1,622	79	3,251
	120150201032	1,849	96	1,945	93	1,118	1,705	82	1,786	83	1,277
	120150201033	2,928	196	3,124	149	2,666	2,700	167	2,867	132	2,924
	120150201041	2,283	344	2,627	73	656	2,105	292	2,397	64	885

Map Number	Block Group ID	2020 Projections Based on the Scenario 1 Growth Rate for 2015-20					2020 Projections Based on the Scenario 2 Growth Rate for 2015-20				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150202011	2,211	73	2,284	113	1,920	2,039	62	2,101	100	2,103
	120150202012	2,315	106	2,421	155	1,670	2,135	90	2,225	137	1,866
	120150202013	2,351	65	2,416	127	326	2,168	56	2,223	113	519
	120150202014	1,963	76	2,038	105	1,325	1,810	64	1,874	93	1,489
	120150202021	1,303	58	1,361	89	2,181	1,201	49	1,250	78	2,291
	120150202022	2,298	85	2,383	110	3,286	2,119	72	2,192	98	3,478
	120150202023	1,122	49	1,171	65	331	1,035	42	1,076	57	425
	120150202024	1,439	58	1,497	105	467	1,327	50	1,376	93	587
	120150202025	1,758	98	1,856	75	866	1,621	83	1,704	67	1,018
	120150203011	1,174	76	1,250	235	9,540	1,082	65	1,147	208	9,643
	120150203012	1,342	66	1,408	55	358	1,238	56	1,293	49	472
	120150203013	2,029	283	2,312	48	378	1,871	240	2,112	42	578
	120150203014	2,026	85	2,111	101	825	1,868	73	1,941	90	996
	120150203021	2,813	119	2,932	241	764	2,594	101	2,695	214	1,001
	120150203022	2,020	111	2,130	178	3,797	1,862	94	1,956	157	3,971
	120150203031	1,265	58	1,322	93	387	1,166	49	1,215	82	494
	120150203032	1,163	57	1,220	100	731	1,072	49	1,121	89	830
	120150203033	1,211	80	1,291	105	888	1,116	68	1,185	93	994
	120150203034	1,802	94	1,896	136	491	1,662	80	1,742	120	646
	120150204001	965	63	1,027	87	14,080	889	54	943	77	14,164
	120150204002	1,899	119	2,018	179	10,028	1,751	101	1,852	158	10,193
	120150204003	2,496	200	2,696	460	25,575	2,301	170	2,472	406	25,799
	120150204004	908	185	1,093	164	787	838	157	995	144	885
	120150204005	1,567	77	1,644	178	7,893	1,445	65	1,510	158	8,027
	120150204006	1,734	282	2,016	130	1,831	1,599	240	1,839	114	2,008
	120150205011	1,847	140	1,986	498	1,200	1,703	119	1,821	440	1,365
	120150205012	2,208	163	2,370	539	1,235	2,035	138	2,174	477	1,432
	120150205013	1,606	147	1,754	382	2,845	1,481	125	1,607	338	2,993
	120150205021	1,772	122	1,894	754	447	1,634	104	1,738	667	603
	120150206011	1,673	135	1,808	211	512	1,543	115	1,658	186	662
	120150206012	1,536	94	1,630	156	430	1,416	80	1,496	138	564
	120150206021	2,059	194	2,254	376	379	1,899	165	2,064	332	568
	120150206022	1,654	166	1,820	280	202	1,525	141	1,666	247	356
	120150207001	927	75	1,003	22	4	855	64	919	19	88
	120150207002	2,474	134	2,608	108	-	2,290	114	2,404	99	203

Map Number	Block Group ID	2020 Projections Based on the Scenario 1 Growth Rate for 2015-20					2020 Projections Based on the Scenario 2 Growth Rate for 2015-20				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150207003	1,475	160	1,635	33	8	1,360	136	1,496	29	147
	120150208001	2,561	191	2,752	123	180	2,362	162	2,524	109	408
	120150208002	1,232	91	1,323	40	5	1,136	77	1,213	36	115
	120150208003	1,113	112	1,225	43	92	1,026	95	1,121	38	196
	120150209001	2,239	138	2,377	129	1,523	2,064	118	2,182	114	1,718
	120150209002	2,749	145	2,894	217	590	2,535	124	2,658	192	826
	120150209003	1,612	71	1,683	82	3,083	1,487	60	1,547	72	3,220
	120150210011	1,837	107	1,944	432	8,036	1,694	91	1,785	382	8,195
	120150210021	2,212	308	2,520	115	4,698	2,040	262	2,302	101	4,917
	120150210022	1,095	332	1,427	42	606	1,009	283	1,292	37	741
	120150210031	1,396	133	1,529	34	-	1,385	122	1,507	34	22
	120150210032	2,217	230	2,447	166	1,041	2,044	196	2,240	147	1,249
	120150301001	1,935	130	2,065	484	8,815	1,784	111	1,895	428	8,985
	120150301002	1,971	146	2,117	417	4,406	1,817	124	1,941	368	4,581
	120150301003	2,120	240	2,360	163	3,981	1,955	204	2,159	144	4,183
	120150301004	1,095	67	1,162	120	6,367	1,009	57	1,067	106	6,462
	120150302001	3,115	146	3,261	385	3,492	2,872	125	2,996	341	3,757
	120150302002	2,335	121	2,456	241	3,383	2,153	103	2,256	213	3,583
	120150302003	1,408	57	1,465	130	1,803	1,298	49	1,347	115	1,922
	120150302004	2,098	108	2,206	205	2,178	1,934	92	2,026	182	2,358
	120150303011	1,274	141	1,415	233	349	1,175	120	1,294	206	470
	120150303012	925	514	1,439	214	990	853	437	1,290	185	1,139
	120150303013	1,059	355	1,414	387	762	976	302	1,278	337	898
	120150303021	1,138	132	1,270	239	204	1,049	112	1,161	211	312
	120150303022	904	184	1,087	78	248	833	156	990	68	346
	120150303023	708	73	781	65	149	652	63	715	58	215
	120150303024	1,604	180	1,784	368	314	1,479	153	1,632	325	466
	120150304011	1,679	182	1,861	331	445	1,548	155	1,703	292	603
	120150304012	705	136	841	297	311	650	116	766	261	387
	120150304021	963	308	1,271	274	1,458	888	262	1,150	239	1,579
	120150304022	1,615	817	2,432	521	3,030	1,489	695	2,184	451	3,278
	120150305011	4,168	614	4,782	1,557	49,776	3,843	522	4,365	1,370	50,192
	120150305021	1,985	384	2,369	130	2,690	1,830	327	2,157	114	2,902
	120150305022	2,182	422	2,604	485	9,579	2,012	359	2,371	426	9,812
	120150305023	1,774	179	1,952	144	427	1,635	152	1,787	127	592

Map Number	Block Group ID	2020 Projections Based on the Scenario 1 Growth Rate for 2015-20					2020 Projections Based on the Scenario 2 Growth Rate for 2015-20				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150305031	2,559	222	2,781	214	1,566	2,359	189	2,548	189	1,799
	120150305032	3,073	346	3,419	301	7,845	2,833	294	3,128	266	8,137
	120150305033	1,396	137	1,533	141	6,185	1,287	117	1,404	124	6,315
	TOTALS	191,088	17,906	208,995	26,948	427,474	176,300	15,240	191,540	23,777	444,929

Table A- 4. Population and boat registration projections for 2025 based on two growth scenarios.

Map Number	Block Group ID	2025 Projections Based on the Scenario 1 Growth Rate for 2020-25					2025 Projections Based on the Scenario 2 Growth Rate for 2020-25				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150101001	2,634	53	2,687	115	53,544	2,282	43	2,325	97	53,905
	120150101002	2,486	388	2,873	577	21,449	2,153	317	2,470	484	21,852
	120150102001	1,601	141	1,742	373	5,150	1,387	115	1,502	314	5,389
	120150102002	1,199	126	1,325	257	1,849	1,039	103	1,142	217	2,033
	120150102003	1,658	144	1,802	172	910	1,437	118	1,554	144	1,158
	120150102004	1,445	102	1,547	175	2,228	1,252	83	1,335	148	2,440
	120150103011	1,328	116	1,443	190	26	1,150	95	1,245	160	224
	120150103012	1,394	146	1,541	194	537	1,208	119	1,327	163	750
	120150103013	1,824	278	2,102	582	575	1,580	227	1,807	489	870
	120150103021	1,708	177	1,885	591	582	1,479	145	1,624	497	843
	120150103022	2,283	134	2,417	72	3,873	1,978	110	2,087	60	4,202
	120150103023	874	44	917	58	388	757	36	793	49	513
	120150104011	1,995	346	2,341	891	719	1,728	283	2,011	747	1,048
	120150104012	1,728	119	1,847	737	-	1,507	109	1,616	650	230
	120150104021	1,534	199	1,733	514	332	1,329	162	1,491	432	573
	120150104022	1,311	173	1,484	434	53	1,136	141	1,277	364	259
	120150104031	2,587	162	2,749	843	511	2,241	133	2,374	711	886
	120150104041	1,210	77	1,287	691	159	1,048	63	1,111	582	335
	120150104042	1,255	47	1,302	639	284	1,088	38	1,126	539	460
	120150104043	1,931	161	2,091	910	412	1,672	131	1,804	766	699
	120150104044	1,238	301	1,539	433	1,097	1,073	245	1,318	362	1,318
	120150105011	2,439	165	2,604	164	1,202	2,113	135	2,248	138	1,558
	120150105012	3,975	181	4,155	394	10,893	3,443	148	3,591	333	11,457
	120150105021	3,050	292	3,342	468	18,029	2,642	239	2,881	394	18,490
	120150105022	1,250	189	1,439	166	22,771	1,083	155	1,238	139	22,972
	120150105023	3,706	211	3,918	251	3,293	3,211	173	3,383	212	3,826
	120150105024	1,366	113	1,479	148	18,231	1,184	92	1,276	125	18,434
	120150201011	4,539	377	4,916	147	3,601	3,932	308	4,240	123	4,276
	120150201012	1,178	216	1,394	16	1,549	1,021	177	1,197	13	1,746
	120150201013	3,387	121	3,508	129	397	2,935	99	3,033	109	872
	120150201031	1,911	57	1,967	99	2,906	1,655	46	1,701	84	3,172
	120150201032	2,064	105	2,169	104	894	1,788	86	1,874	88	1,189
	120150201033	3,269	214	3,483	167	2,308	2,832	175	3,006	140	2,783
	120150201041	2,548	376	2,924	81	359	2,208	307	2,514	68	768

Map Number	Block Group ID	2025 Projections Based on the Scenario 1 Growth Rate for 2020-25					2025 Projections Based on the Scenario 2 Growth Rate for 2020-25				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150202011	2,468	80	2,548	126	1,656	2,138	65	2,204	106	2,000
	120150202012	2,584	116	2,700	173	1,391	2,239	94	2,333	146	1,757
	120150202013	2,624	71	2,696	142	46	2,273	58	2,332	120	410
	120150202014	2,191	83	2,273	117	1,089	1,898	67	1,965	99	1,397
	120150202021	1,454	63	1,517	99	2,024	1,260	52	1,311	83	2,230
	120150202022	2,566	93	2,658	123	3,011	2,223	76	2,298	104	3,370
	120150202023	1,253	54	1,306	72	196	1,085	44	1,129	61	373
	120150202024	1,606	64	1,670	117	294	1,392	52	1,444	99	520
	120150202025	1,963	107	2,069	84	653	1,700	87	1,787	71	934
	120150203011	1,310	83	1,393	262	9,397	1,135	68	1,203	221	9,587
	120150203012	1,498	72	1,570	61	195	1,298	59	1,357	52	409
	120150203013	2,265	309	2,574	53	116	1,963	252	2,215	44	475
	120150203014	2,261	93	2,355	113	582	1,959	76	2,035	95	901
	120150203021	3,141	130	3,270	269	426	2,721	106	2,827	227	869
	120150203022	2,255	121	2,376	198	3,552	1,953	99	2,052	167	3,875
	120150203031	1,412	63	1,475	104	235	1,223	52	1,274	87	435
	120150203032	1,298	63	1,361	112	590	1,125	51	1,176	94	775
	120150203033	1,352	88	1,439	117	739	1,171	72	1,242	98	936
	120150203034	2,012	103	2,115	152	273	1,743	84	1,827	128	560
	120150204001	1,077	69	1,145	98	13,962	933	56	989	82	14,118
	120150204002	2,120	130	2,250	199	9,796	1,837	106	1,942	168	10,103
	120150204003	2,786	219	3,005	512	25,266	2,413	179	2,592	432	25,678
	120150204004	1,014	202	1,216	182	664	878	165	1,043	153	836
	120150204005	1,749	84	1,833	198	7,704	1,515	69	1,584	167	7,953
	120150204006	1,936	308	2,244	145	1,603	1,677	251	1,928	121	1,918
	120150205011	2,061	153	2,214	555	973	1,786	125	1,910	468	1,276
	120150205012	2,464	178	2,642	601	964	2,135	145	2,280	506	1,325
	120150205013	1,793	161	1,954	426	2,645	1,553	131	1,685	359	2,914
	120150205021	1,979	133	2,112	841	229	1,714	109	1,823	708	518
	120150206011	1,868	148	2,015	235	305	1,618	121	1,739	198	581
	120150206012	1,714	103	1,818	174	243	1,485	84	1,569	146	491
	120150206021	2,299	212	2,511	419	121	1,991	173	2,165	352	467
	120150206022	1,842	181	2,022	301	-	1,600	148	1,748	263	274
	120150207001	933	74	1,007	21	-	897	67	964	20	43
	120150207002	2,474	134	2,608	108	-	2,402	120	2,521	105	86

Map Number	Block Group ID	2025 Projections Based on the Scenario 1 Growth Rate for 2020-25					2025 Projections Based on the Scenario 2 Growth Rate for 2020-25				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150207003	1,486	158	1,644	32	-	1,426	143	1,569	31	74
	120150208001	2,733	199	2,932	127	-	2,477	170	2,647	115	284
	120150208002	1,239	89	1,328	39	-	1,192	81	1,273	38	55
	120150208003	1,199	118	1,317	45	-	1,076	100	1,176	40	141
	120150209001	2,499	151	2,650	143	1,250	2,165	123	2,288	121	1,611
	120150209002	3,069	159	3,227	242	257	2,658	130	2,788	204	695
	120150209003	1,800	78	1,877	91	2,889	1,559	63	1,623	77	3,144
	120150210011	2,051	117	2,168	481	7,813	1,776	96	1,872	406	8,108
	120150210021	2,470	336	2,806	128	4,412	2,139	275	2,414	108	4,804
	120150210022	1,222	363	1,585	47	448	1,059	297	1,355	39	677
	120150210031	1,396	133	1,529	34	-	1,453	128	1,581	35	0
	120150210032	2,475	251	2,726	185	762	2,144	205	2,349	156	1,139
	120150301001	2,160	142	2,302	540	8,578	1,871	116	1,987	455	8,892
	120150301002	2,200	159	2,360	464	4,163	1,906	130	2,036	391	4,486
	120150301003	2,367	262	2,628	182	3,713	2,050	214	2,264	153	4,077
	120150301004	1,222	73	1,295	134	6,233	1,059	60	1,119	113	6,410
	120150302001	3,477	160	3,637	429	3,116	3,012	131	3,143	362	3,610
	120150302002	2,607	132	2,739	268	3,100	2,258	108	2,366	226	3,472
	120150302003	1,572	63	1,634	145	1,634	1,362	51	1,413	123	1,856
	120150302004	2,341	118	2,460	229	1,924	2,028	97	2,125	193	2,258
	120150303011	1,422	154	1,576	260	188	1,232	125	1,357	219	406
	120150303012	1,033	562	1,594	237	835	895	459	1,353	196	1,075
	120150303013	1,182	388	1,570	429	606	1,024	317	1,341	358	835
	120150303021	1,270	144	1,414	266	59	1,100	118	1,218	224	255
	120150303022	1,009	201	1,210	87	126	874	164	1,038	72	297
	120150303023	790	80	870	73	60	684	66	750	61	180
	120150303024	1,790	197	1,987	410	110	1,551	161	1,712	345	386
	120150304011	1,875	199	2,074	369	232	1,624	162	1,786	310	519
	120150304012	787	149	936	331	217	682	122	803	277	349
	120150304021	1,075	336	1,411	304	1,317	932	274	1,206	253	1,522
	120150304022	1,802	893	2,695	578	2,767	1,561	729	2,291	479	3,171
	120150305011	4,652	671	5,323	1,734	49,234	4,030	548	4,578	1,456	49,978
	120150305021	2,216	420	2,636	145	2,423	1,920	343	2,262	121	2,796
	120150305022	2,436	461	2,897	540	9,286	2,110	376	2,487	452	9,696
	120150305023	1,980	195	2,175	160	204	1,715	159	1,875	135	504

Map Number	Block Group ID	2025 Projections Based on the Scenario 1 Growth Rate for 2020-25					2025 Projections Based on the Scenario 2 Growth Rate for 2020-25				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150305031	2,856	242	3,099	238	1,248	2,475	198	2,672	200	1,674
	120150305032	3,430	378	3,808	335	7,456	2,972	309	3,280	282	7,983
	120150305033	1,558	150	1,708	157	6,010	1,350	122	1,472	132	6,246
	TOTALS	212,273	19,472	231,745	29,930	404,724	184,900	15,983	200,883	25,257	435,586

Table A- 5. Population and boat registration projections for 2030 based on two growth scenarios.

Map Number	Block Group ID	2030 Projections Based on the Scenario 1 Growth Rate for 2025-30					2030 Projections Based on the Scenario 2 Growth Rate for 2025-30				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150101001	2,976	59	3,034	130	53,197	2,379	45	2,425	101	53,806
	120150101002	2,808	427	3,236	650	21,087	2,246	330	2,576	505	21,747
	120150102001	1,809	155	1,964	420	4,928	1,446	120	1,566	328	5,325
	120150102002	1,355	139	1,494	290	1,681	1,084	107	1,191	226	1,984
	120150102003	1,874	159	2,033	193	680	1,498	123	1,621	151	1,092
	120150102004	1,633	112	1,745	198	2,030	1,305	87	1,392	154	2,383
	120150103011	1,500	128	1,443	190	26	1,199	99	1,298	167	171
	120150103012	1,575	161	1,737	219	341	1,260	125	1,384	171	694
	120150103013	2,061	307	2,368	656	310	1,648	237	1,885	510	793
	120150103021	1,929	195	2,125	666	342	1,543	151	1,694	519	773
	120150103022	2,579	148	2,727	81	3,563	2,062	114	2,177	63	4,113
	120150103023	987	48	1,035	66	270	790	37	827	51	479
	120150104011	2,254	382	2,635	1,003	424	1,802	295	2,097	780	963
	120150104012	1,728	119	1,847	737	-	1,572	114	1,686	679	161
	120150104021	1,734	219	1,953	580	112	1,386	169	1,555	451	510
	120150104022	1,362	175	1,537	439	-	1,185	147	1,332	380	205
	120150104031	2,923	179	3,102	952	159	2,337	138	2,476	742	785
	120150104041	1,362	85	1,446	758	-	1,093	66	1,159	608	287
	120150104042	1,418	51	1,470	722	116	1,134	40	1,174	563	412
	120150104043	2,181	177	2,358	1,026	145	1,744	137	1,881	800	622
	120150104044	1,399	331	1,730	487	906	1,119	256	1,375	378	1,261
	120150105011	2,756	182	2,938	185	869	2,203	141	2,344	144	1,462
	120150105012	4,491	200	4,690	445	10,359	3,591	154	3,745	347	11,304
	120150105021	3,446	322	3,768	527	17,603	2,755	249	3,004	411	18,367
	120150105022	1,412	209	1,621	187	22,589	1,129	161	1,291	146	22,920
	120150105023	4,188	233	4,421	283	2,790	3,348	180	3,529	221	3,682
	120150105024	1,544	124	1,668	167	18,042	1,234	96	1,330	130	18,380
	120150201011	5,128	416	5,544	165	2,973	4,101	321	4,422	129	4,095
	120150201012	1,331	238	1,569	18	1,374	1,064	184	1,248	14	1,695
	120150201013	3,774	131	3,906	141	0	3,060	103	3,163	114	742
	120150201031	2,159	63	2,221	112	2,652	1,726	48	1,774	87	3,099
	120150201032	2,332	115	2,447	118	616	1,865	89	1,954	92	1,109
	120150201033	3,693	236	3,929	188	1,861	2,953	182	3,135	147	2,655
	120150201041	2,870	412	3,283	89	-	2,302	320	2,622	71	661

Map Number	Block Group ID	2030 Projections Based on the Scenario 1 Growth Rate for 2025-30					2030 Projections Based on the Scenario 2 Growth Rate for 2025-30				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150202011	2,789	88	2,877	142	1,327	2,230	68	2,298	111	1,906
	120150202012	2,920	128	3,047	195	1,044	2,335	99	2,433	152	1,658
	120150202013	2,671	71	2,742	141	-	2,371	61	2,432	125	310
	120150202014	2,475	91	2,566	132	796	1,979	70	2,050	103	1,313
	120150202021	1,643	70	1,713	112	1,829	1,314	54	1,368	87	2,174
	120150202022	2,899	102	3,001	139	2,668	2,318	79	2,397	108	3,272
	120150202023	1,415	59	1,474	81	27	1,132	46	1,177	64	325
	120150202024	1,815	70	1,885	132	79	1,451	54	1,505	103	458
	120150202025	2,217	117	2,335	95	387	1,773	91	1,864	74	858
	120150203011	1,480	92	1,572	296	9,218	1,184	71	1,254	231	9,536
	120150203012	1,687	79	1,766	68	-	1,354	61	1,415	54	351
	120150203013	2,374	316	2,690	54	-	2,047	263	2,310	46	380
	120150203014	2,555	103	2,658	127	279	2,043	79	2,122	99	814
	120150203021	3,548	143	3,691	304	5	2,837	110	2,948	237	748
	120150203022	2,547	133	2,681	223	3,246	2,037	103	2,140	174	3,787
	120150203031	1,595	70	1,664	117	45	1,275	54	1,329	91	380
	120150203032	1,467	69	1,536	126	415	1,173	53	1,226	99	725
	120150203033	1,527	97	1,624	132	555	1,221	75	1,296	103	883
	120150203034	2,273	113	2,386	171	1	1,818	88	1,905	134	483
	120150204001	1,216	76	1,292	110	13,815	973	59	1,031	86	14,076
	120150204002	2,395	143	2,538	225	9,507	1,915	110	2,026	175	10,020
	120150204003	3,147	241	3,389	578	24,882	2,517	186	2,703	451	25,567
	120150204004	1,146	223	1,368	205	511	916	172	1,088	159	792
	120150204005	1,976	93	2,069	224	7,468	1,580	71	1,652	175	7,885
	120150204006	2,187	340	2,527	163	1,320	1,749	262	2,011	127	1,836
	120150205011	2,329	168	2,497	626	689	1,862	130	1,992	488	1,194
	120150205012	2,784	196	2,980	678	625	2,226	151	2,378	529	1,228
	120150205013	2,026	178	2,203	480	2,396	1,620	137	1,757	374	2,842
	120150205021	2,196	145	2,341	911	-	1,788	114	1,901	740	440
	120150206011	2,110	163	2,273	265	47	1,687	126	1,813	207	507
	120150206012	1,937	114	2,051	196	10	1,549	88	1,637	153	424
	120150206021	2,415	218	2,632	429	-	2,077	181	2,258	368	375
	120150206022	1,842	181	2,022	301	-	1,668	154	1,822	274	200
	120150207001	933	74	1,007	21	-	935	70	1,005	21	2
	120150207002	2,474	134	2,608	108	-	2,484	124	2,608	108	0

Map Number	Block Group ID	2030 Projections Based on the Scenario 1 Growth Rate for 2025-30					2030 Projections Based on the Scenario 2 Growth Rate for 2025-30				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150207003	1,486	158	1,644	32	-	1,487	149	1,637	32	7
	120150208001	2,733	199	2,932	127	-	2,583	178	2,761	121	171
	120150208002	1,239	89	1,328	39	-	1,243	84	1,327	40	1
	120150208003	1,199	118	1,317	45	-	1,122	104	1,227	42	90
	120150209001	2,823	167	2,990	162	910	2,258	129	2,386	126	1,513
	120150209002	3,316	168	3,484	255	-	2,772	135	2,908	213	577
	120150209003	2,033	86	2,119	103	2,648	1,626	66	1,692	80	3,075
	120150210011	2,317	129	2,446	543	7,534	1,853	100	1,952	424	8,028
	120150210021	2,790	371	3,161	144	4,057	2,231	287	2,518	112	4,701
	120150210022	1,381	400	1,781	53	252	1,104	309	1,413	41	620
	120150210031	1,396	133	1,529	34	-	1,405	124	1,529	35	0
	120150210032	2,796	277	3,073	209	415	2,236	214	2,450	163	1,039
	120150301001	2,440	157	2,597	609	8,283	1,951	121	2,073	475	8,807
	120150301002	2,486	176	2,662	524	3,861	1,988	136	2,123	408	4,399
	120150301003	2,674	289	2,963	205	3,379	2,138	223	2,361	160	3,980
	120150301004	1,381	81	1,462	151	6,067	1,104	62	1,167	118	6,362
	120150302001	3,928	176	4,105	484	2,648	3,141	136	3,277	378	3,476
	120150302002	2,945	145	3,091	303	2,748	2,355	112	2,468	236	3,371
	120150302003	1,776	69	1,845	164	1,424	1,420	53	1,473	128	1,795
	120150302004	2,645	131	2,776	258	1,608	2,115	101	2,216	202	2,168
	120150303011	1,596	168	1,764	284	-	1,285	131	1,416	228	348
	120150303012	1,167	619	1,786	265	643	933	478	1,411	205	1,018
	120150303013	1,336	428	1,763	482	413	1,068	330	1,398	374	778
	120150303021	1,326	147	1,474	271	-	1,147	123	1,270	234	203
	120150303022	1,118	218	1,335	93	0	911	171	1,082	76	253
	120150303023	846	84	930	76	-	714	68	782	64	148
	120150303024	1,894	204	2,098	423	-	1,618	168	1,785	360	313
	120150304011	2,089	217	2,306	401	-	1,694	169	1,863	324	443
	120150304012	889	164	1,053	372	99	711	127	838	289	315
	120150304021	1,215	371	1,585	341	1,143	972	286	1,258	265	1,471
	120150304022	2,036	985	3,021	647	2,441	1,628	760	2,389	500	3,073
	120150305011	5,256	739	5,996	1,953	48,562	4,203	571	4,774	1,520	49,783
	120150305021	2,504	463	2,966	163	2,092	2,002	357	2,359	127	2,699
	120150305022	2,753	508	3,261	608	8,922	2,201	393	2,594	472	9,590
	120150305023	2,170	209	2,379	171	-	1,789	166	1,955	141	424

Map Number	Block Group ID	2030 Projections Based on the Scenario 1 Growth Rate for 2025-30					2030 Projections Based on the Scenario 2 Growth Rate for 2025-30				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150305031	3,227	267	3,494	268	853	2,581	206	2,787	209	1,560
	120150305032	3,876	417	4,292	378	6,972	3,099	322	3,421	295	7,843
	120150305033	1,761	165	1,926	176	5,793	1,408	128	1,536	138	6,183
	TOTALS	236,422	21,227	257,464	33,215	379,004	192,700	16,658	209,358	26,365	427,111

Table A- 6. Population and boat registration projections for 2040 based on two growth scenarios.

Map Number	Block Group ID	2040 Projections Based on the Scenario 1 Growth Rate for 2030-40					2040 Projections Based on the Scenario 2 Growth Rate for 2030-40				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150101001	3,946	73	4,018	172	52,212	2,560	49	2,608	116	53,622
	120150101002	3,724	531	4,255	854	20,068	2,416	355	2,771	576	21,552
	120150102001	2,399	193	2,591	555	4,300	1,556	129	1,685	373	5,207
	120150102002	1,797	172	1,969	382	1,205	1,166	115	1,281	257	1,894
	120150102003	2,485	197	2,682	255	31	1,612	132	1,744	172	969
	120150102004	2,165	140	2,304	261	1,471	1,404	93	1,498	176	2,277
	120150103011	1,357	112	1,469	204	-	1,290	106	1,396	190	73
	120150103012	1,896	181	2,078	271	-	1,355	134	1,489	194	589
	120150103013	2,341	337	2,678	783	-	1,773	255	2,028	581	650
	120150103021	2,254	213	2,467	800	-	1,660	162	1,822	591	645
	120150103022	3,420	184	3,604	107	2,686	2,219	123	2,342	72	3,948
	120150103023	1,249	57	1,306	86	-	849	40	889	59	416
	120150104011	2,642	418	3,059	1,205	-	1,939	317	2,256	888	804
	120150104012	1,728	119	1,847	737	-	1,691	122	1,813	773	34
	120150104021	1,839	226	2,065	647	-	1,491	182	1,673	514	392
	120150104022	1,362	175	1,537	439	-	1,275	158	1,433	433	104
	120150104031	3,078	183	3,261	1,057	-	2,514	149	2,663	845	598
	120150104041	1,362	85	1,446	758	-	1,176	71	1,247	692	199
	120150104042	1,532	54	1,586	822	-	1,220	43	1,263	642	323
	120150104043	2,320	183	2,503	1,151	-	1,876	147	2,023	911	479
	120150104044	1,855	412	2,267	638	369	1,203	275	1,479	431	1,157
	120150105011	3,585	222	3,807	248	-	2,370	152	2,522	164	1,285
	120150105012	5,954	248	6,202	589	8,846	3,863	166	4,029	396	11,020
	120150105021	4,569	400	4,970	696	16,402	2,964	268	3,232	468	18,139
	120150105022	1,873	259	2,132	246	22,078	1,215	173	1,388	166	22,822
	120150105023	5,553	290	5,842	374	1,368	3,602	194	3,796	252	3,415
	120150105024	2,047	155	2,201	220	17,509	1,328	103	1,431	148	18,279
	120150201011	6,800	517	7,317	218	1,200	4,411	346	4,757	147	3,760
	120150201012	1,765	296	2,061	24	882	1,145	198	1,343	16	1,600
	120150201013	3,774	131	3,906	141	0	3,292	111	3,403	130	503
	120150201031	2,862	78	2,940	148	1,933	1,857	52	1,909	99	2,965
	120150201032	2,928	135	3,063	152	-	2,006	96	2,102	105	961
	120150201033	4,897	293	5,190	248	600	3,177	196	3,373	167	2,418
	120150201041	2,870	412	3,283	89	-	2,477	344	2,821	81	462

Map Number	Block Group ID	2040 Projections Based on the Scenario 1 Growth Rate for 2030-40					2040 Projections Based on the Scenario 2 Growth Rate for 2030-40				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150202011	3,698	110	3,808	188	397	2,399	73	2,472	126	1,732
	120150202012	3,872	158	4,030	258	61	2,512	106	2,618	173	1,473
	120150202013	2,671	71	2,742	141	-	2,551	65	2,616	143	126
	120150202014	3,251	112	3,363	179	-	2,129	76	2,205	117	1,158
	120150202021	2,179	87	2,265	148	1,277	1,413	58	1,471	99	2,071
	120150202022	3,844	127	3,971	184	1,698	2,494	85	2,579	124	3,091
	120150202023	1,444	58	1,502	88	-	1,218	49	1,267	72	235
	120150202024	1,893	71	1,964	146	-	1,561	58	1,620	118	344
	120150202025	2,594	128	2,722	114	-	1,907	98	2,005	84	717
	120150203011	1,963	114	2,077	391	8,713	1,273	76	1,349	263	9,441
	120150203012	1,687	79	1,766	68	-	1,456	66	1,522	62	244
	120150203013	2,374	316	2,690	54	-	2,202	283	2,485	53	205
	120150203014	2,826	110	2,937	148	-	2,198	85	2,283	113	653
	120150203021	3,557	139	3,696	321	-	3,052	119	3,171	270	525
	120150203022	3,378	165	3,543	295	2,384	2,191	111	2,302	199	3,625
	120150203031	1,640	69	1,709	127	-	1,372	58	1,430	104	280
	120150203032	1,869	82	1,951	166	-	1,262	57	1,319	112	632
	120150203033	2,025	120	2,145	174	34	1,314	80	1,394	117	785
	120150203034	2,278	110	2,388	181	-	1,955	94	2,050	152	338
	120150204001	1,613	94	1,707	145	13,400	1,046	63	1,109	98	13,998
	120150204002	3,176	178	3,354	297	8,692	2,060	119	2,179	200	9,866
	120150204003	4,174	300	4,473	763	23,797	2,707	201	2,908	513	25,363
	120150204004	1,519	277	1,796	269	84	985	185	1,171	181	709
	120150204005	2,620	115	2,735	296	6,802	1,700	77	1,777	199	7,760
	120150204006	2,900	422	3,322	214	525	1,882	282	2,164	144	1,683
	120150205011	2,985	201	3,187	827	-	2,003	140	2,143	556	1,043
	120150205012	3,383	222	3,606	849	-	2,395	163	2,558	602	1,048
	120150205013	2,686	221	2,907	634	1,692	1,743	148	1,890	426	2,709
	120150205021	2,196	145	2,341	911	-	1,923	122	2,045	842	296
	120150206011	2,159	162	2,320	286	-	1,815	135	1,951	236	370
	120150206012	1,950	111	2,061	208	-	1,666	94	1,761	174	300
	120150206021	2,415	218	2,632	429	-	2,234	194	2,429	419	204
	120150206022	1,842	181	2,022	301	-	1,795	166	1,961	312	62
	120150207001	933	74	1,007	21	-	937	70	1,007	21	-
	120150207002	2,474	134	2,608	108	-	2,484	124	2,608	108	-

Map Number	Block Group ID	2040 Projections Based on the Scenario 1 Growth Rate for 2030-40					2040 Projections Based on the Scenario 2 Growth Rate for 2030-40				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150207003	1,486	158	1,644	32	-	1,494	150	1,644	32	-
	120150208001	2,733	199	2,932	127	-	2,743	189	2,932	127	-
	120150208002	1,239	89	1,328	39	-	1,244	85	1,328	39	-
	120150208003	1,199	118	1,317	45	-	1,205	112	1,317	45	-
	120150209001	3,695	204	3,900	218	-	2,429	138	2,567	144	1,332
	120150209002	3,316	168	3,484	255	-	2,982	145	3,128	243	356
	120150209003	2,696	106	2,803	136	1,964	1,749	71	1,820	91	2,946
	120150210011	3,072	160	3,233	718	6,748	1,993	107	2,100	483	7,880
	120150210021	3,700	461	4,161	190	3,058	2,400	308	2,708	128	4,510
	120150210022	1,600	433	2,033	62	-	1,188	333	1,520	46	513
	120150210031	1,396	133	1,529	34	-	1,405	124	1,529	35	-
	120150210032	3,184	305	3,489	251	-	2,405	230	2,636	186	853
	120150301001	3,236	195	3,431	805	7,449	2,099	130	2,230	541	8,650
	120150301002	3,296	218	3,515	692	3,008	2,138	146	2,284	465	4,238
	120150301003	3,546	358	3,904	270	2,437	2,300	240	2,540	182	3,801
	120150301004	1,831	100	1,931	200	5,597	1,188	67	1,255	134	6,274
	120150302001	5,209	219	5,428	641	1,325	3,379	147	3,526	431	3,227
	120150302002	3,906	181	4,086	401	1,752	2,534	121	2,655	269	3,184
	120150302003	2,355	86	2,441	217	828	1,528	58	1,585	146	1,684
	120150302004	3,508	162	3,670	342	714	2,276	109	2,384	230	2,000
	120150303011	1,596	168	1,764	284	-	1,382	141	1,523	260	241
	120150303012	1,547	769	2,316	344	112	1,004	514	1,518	233	911
	120150303013	1,675	501	2,176	616	-	1,149	355	1,504	426	672
	120150303021	1,326	147	1,474	271	-	1,234	132	1,367	266	107
	120150303022	1,118	218	1,335	93	0	980	184	1,164	86	171
	120150303023	846	84	930	76	-	768	74	841	73	89
	120150303024	1,894	204	2,098	423	-	1,740	180	1,921	410	177
	120150304011	2,089	217	2,306	401	-	1,822	182	2,004	369	302
	120150304012	978	175	1,153	430	-	765	136	901	330	251
	120150304021	1,611	460	2,071	446	657	1,045	308	1,353	301	1,376
	120150304022	2,700	1,223	3,924	841	1,539	1,752	818	2,570	570	2,892
	120150305011	6,970	919	7,889	2,569	46,669	4,522	614	5,136	1,731	49,421
	120150305021	3,320	575	3,895	214	1,164	2,154	384	2,538	144	2,521
	120150305022	3,650	631	4,281	798	7,902	2,368	422	2,790	538	9,393
	120150305023	2,170	209	2,379	171	-	1,924	179	2,103	160	276

Map Number	Block Group ID	2040 Projections Based on the Scenario 1 Growth Rate for 2030-40					2040 Projections Based on the Scenario 2 Growth Rate for 2030-40				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150305031	4,035	312	4,347	346	-	2,776	222	2,998	238	1,349
	120150305032	5,139	518	5,657	498	5,608	3,334	346	3,680	335	7,584
	120150305033	2,335	205	2,540	233	5,178	1,515	137	1,652	157	6,067
	TOTALS	285,489	24,553	310,042	40,234	326,426	206,700	17,877	224,577	29,983	411,892

Table A- 7. Population and boat registration projections for 2050 based on two growth scenarios.

Map Number	Block Group ID	2050 Projections Based on the Scenario 1 Growth Rate for 2040-50					2050 Projections Based on the Scenario 2 Growth Rate for 2040-50				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150101001	5,010	85	5,096	218	51,135	2,717	52	2,768	119	53,462
	120150101002	4,728	623	5,352	1,075	18,971	2,564	377	2,941	595	21,382
	120150102001	3,046	226	3,272	700	3,620	1,651	137	1,788	386	5,103
	120150102002	2,282	202	2,484	482	691	1,237	122	1,359	266	1,815
	120150102003	2,521	192	2,713	250	-	1,711	140	1,851	177	862
	120150102004	2,749	164	2,913	330	862	1,490	99	1,590	182	2,185
	120150103011	1,357	112	1,469	204	-	1,357	112	1,469	187	-
	120150103012	1,896	181	2,078	271	-	1,438	142	1,580	201	497
	120150103013	2,341	337	2,678	783	-	1,881	271	2,152	600	526
	120150103021	2,254	213	2,467	800	-	1,762	172	1,934	610	533
	120150103022	4,343	216	4,558	135	1,731	2,355	130	2,485	74	3,805
	120150103023	1,249	57	1,306	86	-	901	42	944	61	362
	120150104011	2,642	418	3,059	1,205	-	2,057	337	2,394	918	665
	120150104012	1,728	119	1,847	737	-	1,722	125	1,847	737	-
	120150104021	1,839	226	2,065	647	-	1,583	193	1,776	531	289
	120150104022	1,362	175	1,537	439	-	1,353	168	1,521	448	16
	120150104031	3,078	183	3,261	1,057	-	2,668	158	2,826	873	434
	120150104041	1,362	85	1,446	758	-	1,248	75	1,323	715	123
	120150104042	1,532	54	1,586	822	-	1,295	45	1,340	663	246
	120150104043	2,320	183	2,503	1,151	-	1,991	156	2,148	941	355
	120150104044	2,187	449	2,636	719	-	1,277	292	1,569	445	1,066
	120150105011	3,585	222	3,807	248	-	2,516	161	2,677	169	1,130
	120150105012	7,561	291	7,852	745	7,197	4,100	176	4,276	409	10,773
	120150105021	5,802	470	6,272	878	15,099	3,146	284	3,430	484	17,941
	120150105022	2,378	304	2,683	310	21,528	1,290	184	1,474	171	22,737
	120150105023	6,879	332	7,211	447	-	3,823	206	4,029	260	3,182
	120150105024	2,599	181	2,780	278	16,930	1,409	110	1,519	153	18,191
	120150201011	7,957	560	8,517	246	-	4,682	367	5,049	152	3,468
	120150201012	2,241	348	2,589	30	354	1,215	210	1,425	16	1,518
	120150201013	3,774	131	3,906	141	0	3,494	117	3,612	134	294
	120150201031	3,635	91	3,726	188	1,148	1,971	55	2,026	103	2,848
	120150201032	2,928	135	3,063	152	-	2,129	102	2,231	108	832
	120150201033	5,487	304	5,790	268	-	3,372	208	3,580	172	2,211
	120150201041	2,870	412	3,283	89	-	2,629	365	2,994	84	289

Map Number	Block Group ID	2050 Projections Based on the Scenario 1 Growth Rate for 2040-50					2050 Projections Based on the Scenario 2 Growth Rate for 2040-50				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150202011	4,088	116	4,204	201	-	2,546	78	2,624	130	1,580
	120150202012	3,937	155	4,091	253	-	2,666	113	2,778	179	1,313
	120150202013	2,671	71	2,742	141	-	2,674	69	2,742	140	-
	120150202014	3,251	112	3,363	179	-	2,260	80	2,340	121	1,023
	120150202021	2,767	102	2,868	187	674	1,500	61	1,562	102	1,980
	120150202022	4,881	149	5,030	233	639	2,646	90	2,737	128	2,933
	120150202023	1,444	58	1,502	88	-	1,292	52	1,344	75	158
	120150202024	1,893	71	1,964	146	-	1,657	62	1,719	122	245
	120150202025	2,594	128	2,722	114	-	2,024	104	2,128	87	594
	120150203011	2,492	134	2,626	494	8,164	1,351	81	1,432	271	9,358
	120150203012	1,687	79	1,766	68	-	1,545	70	1,615	64	150
	120150203013	2,374	316	2,690	54	-	2,337	300	2,637	55	53
	120150203014	2,826	110	2,937	148	-	2,333	91	2,423	117	513
	120150203021	3,557	139	3,696	321	-	3,240	126	3,366	279	330
	120150203022	4,289	194	4,484	374	1,443	2,326	117	2,443	205	3,484
	120150203031	1,640	69	1,709	127	-	1,456	61	1,517	107	192
	120150203032	1,869	82	1,951	166	-	1,339	61	1,400	116	551
	120150203033	2,061	117	2,179	171	-	1,394	85	1,479	121	699
	120150203034	2,278	110	2,388	181	-	2,075	100	2,175	157	212
	120150204001	2,048	111	2,159	184	12,948	1,111	67	1,177	101	13,930
	120150204002	4,033	209	4,242	376	7,804	2,187	126	2,313	206	9,733
	120150204003	5,300	352	5,652	964	22,619	2,874	213	3,086	530	25,184
	120150204004	1,600	280	1,880	272	-	1,046	196	1,242	187	637
	120150204005	3,327	135	3,462	375	6,075	1,804	82	1,886	206	7,651
	120150204006	3,391	456	3,847	240	-	1,997	299	2,296	149	1,551
	120150205011	2,985	201	3,187	827	-	2,126	148	2,275	575	912
	120150205012	3,383	222	3,606	849	-	2,542	173	2,715	622	891
	120150205013	3,411	259	3,670	800	929	1,850	157	2,006	440	2,593
	120150205021	2,196	145	2,341	911	-	2,041	130	2,171	870	170
	120150206011	2,159	162	2,320	286	-	1,927	144	2,070	243	250
	120150206012	1,950	111	2,061	208	-	1,768	100	1,869	180	192
	120150206021	2,415	218	2,632	429	-	2,371	206	2,578	433	55
	120150206022	1,842	181	2,022	301	-	1,851	171	2,022	301	0
	120150207001	933	74	1,007	21	-	937	70	1,007	21	-
	120150207002	2,474	134	2,608	108	-	2,484	124	2,608	108	-

Map Number	Block Group ID	2050 Projections Based on the Scenario 1 Growth Rate for 2040-50					2050 Projections Based on the Scenario 2 Growth Rate for 2040-50				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150207003	1,486	158	1,644	32	-	1,494	150	1,644	32	-
	120150208001	2,733	199	2,932	127	-	2,743	189	2,932	127	-
	120150208002	1,239	89	1,328	39	-	1,244	85	1,328	39	-
	120150208003	1,199	118	1,317	45	-	1,205	112	1,317	45	-
	120150209001	3,695	204	3,900	218	-	2,578	147	2,725	149	1,175
	120150209002	3,316	168	3,484	255	-	3,165	154	3,320	251	164
	120150209003	3,424	125	3,549	172	1,218	1,857	75	1,932	94	2,835
	120150210011	3,901	188	4,089	908	5,891	2,115	114	2,229	499	7,751
	120150210021	4,698	541	5,239	239	1,979	2,547	327	2,875	132	4,344
	120150210022	1,600	433	2,033	62	-	1,261	353	1,614	48	419
	120150210031	1,396	133	1,529	34	-	1,405	124	1,529	35	-
	120150210032	3,184	305	3,489	251	-	2,553	244	2,797	192	691
	120150301001	4,109	229	4,338	1,017	6,542	2,228	138	2,366	559	8,513
	120150301002	4,185	257	4,442	874	2,081	2,269	155	2,424	481	4,098
	120150301003	4,503	421	4,923	341	1,418	2,441	254	2,696	188	3,645
	120150301004	2,325	118	2,443	252	5,086	1,261	71	1,332	139	6,197
	120150302001	6,500	253	6,753	771	-	3,586	156	3,742	445	3,011
	120150302002	4,959	212	5,172	507	667	2,689	128	2,817	278	3,021
	120150302003	2,990	101	3,091	275	178	1,621	61	1,682	151	1,587
	120150302004	4,204	180	4,384	395	-	2,415	115	2,530	237	1,854
	120150303011	1,596	168	1,764	284	-	1,467	149	1,616	268	148
	120150303012	1,644	784	2,429	349	-	1,065	546	1,611	241	818
	120150303013	1,675	501	2,176	616	-	1,219	377	1,596	440	580
	120150303021	1,326	147	1,474	271	-	1,310	140	1,450	275	23
	120150303022	1,118	218	1,335	93	0	1,040	195	1,236	89	99
	120150303023	846	84	930	76	-	815	78	893	75	37
	120150303024	1,894	204	2,098	423	-	1,847	191	2,038	424	59
	120150304011	2,089	217	2,306	401	-	1,934	193	2,127	381	179
	120150304012	978	175	1,153	430	-	812	145	957	340	196
	120150304021	2,046	540	2,586	557	143	1,109	327	1,436	311	1,293
	120150304022	3,429	1,436	4,865	1,043	597	1,859	868	2,728	589	2,735
	120150305011	8,850	1,079	9,929	3,234	44,628	4,799	652	5,451	1,788	49,106
	120150305021	4,216	675	4,891	269	168	2,286	408	2,694	149	2,365
	120150305022	4,635	741	5,376	1,002	6,807	2,513	448	2,961	556	9,222
	120150305023	2,170	209	2,379	171	-	2,042	190	2,232	166	147

Map Number	Block Group ID	2050 Projections Based on the Scenario 1 Growth Rate for 2040-50					2050 Projections Based on the Scenario 2 Growth Rate for 2040-50				
		Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining	Permanent Population	Seasonal Population	Total Population	Number of Boats	Capacity Remaining
	120150305031	4,035	312	4,347	346	-	2,946	236	3,182	246	1,165
	120150305032	6,525	608	7,134	628	4,131	3,538	368	3,906	347	7,358
	120150305033	2,965	241	3,206	294	4,513	1,607	146	1,753	162	5,965
	TOTALS	323,244	26,618	349,861	44,987	286,607	218,500	18,909	237,408	30,860	399,061

***Appendix D: Compliance of Smart Charlotte 2050 with Working
Waterfronts Legislation***

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DATE: 12.4.2009

MEMORANDUM

TO: Roxann Read, Charlotte County Planner II; Dr. Robert Swett, Florida
Sea Grant; Betty Staugler, Florida Sea Grant

FROM: Thomas Ruppert, esq.

RE: **Compliance of Smart Charlotte 2050 with Working Waterfronts Legislation**

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I. 2005-06 Working Waterfronts Legislation

In both its 2005 and 2006 legislative sessions, the Florida Legislature addressed the significance of public access to the navigable waters of the state. In Chapter 2005-157, Laws of Florida, the Legislature required that local governments, through their comprehensive plans, seek to preserve and promote recreational and working waterfronts (WWFs), particularly including public access to the navigable waters of Florida. This is accomplished through several comprehensive planning requirements: 1) The recreation and open space element of all local comprehensive plans now must include waterways;¹ 2) The coastal management element must include a “shoreline use component that which identifies public access to beach and shoreline areas and addresses the need for water-dependent and water-related facilities, including marinas, along shoreline areas. Such component must include the strategies that will be used to preserve recreational and commercial working waterfronts as defined in s. 342.07”;² and 3) the future land use element of coastal counties “must include, without limitation, regulatory incentives and criteria that encourage the preservation of recreational and commercial working waterfronts as defined in s. 342.07.”³

In Chapter 2006-220, Laws of Florida, the legislature again took up the issue of public water access and comprehensive planning. Section 2(2) of Chapter 2006-220 encourages, but does not require, a local government that has a coastal management element in its comprehensive plan to adopt recreational surface water use policies that consider and include applicable criteria for factors such as natural resources, manatee protection needs, protection of WWFs, protection of public access to the water, recreation demands and economic demands.

As Charlotte County is currently engaged in a contract with Florida Sea Grant to update a previous marine use regulatory study, inventory existing boat registrations and marine facilities, and other tasks related to boating and marine uses in Charlotte County and as the County is also developing its Smart Charlotte 2050 (SC2050) comprehensive plan, this analysis examines whether SC2050 complies with statutory mandates related to recreational and WWFs and public access.

This analysis *does not* consider how/whether the goals, objectives, and policies of SC2050 will be adopted into the County’s Land Development Regulations, though review of the County’s LDRs and modification of them to align with the new comprehensive plan should be a priority immediately upon approval of a new comprehensive plan. Harmonization of the LDRs with a newly-adopted comprehensive plan becomes increasingly important as many of the goals, objectives, and policies in SC2050 are broad assertions without sufficient specifics to implement them.

¹ Sec. 1, Ch. 2005-177, Laws of Florida (2005) (codified at FLA. STAT. §163.317(6)(e) (2009)).

² Sec. 2, Ch. 2005-177, Laws of Florida (2005) (codified at FLA. STAT. §163.3178(2)(g) (2009)).

³ Sec. 1, Ch. 2005-177, Laws of Florida (2005) (codified at FLA. STAT. §163.3177(6)(a) (2009)).

II. Analytical Framework for Compliance with Legislation

The State’s land use planning agency—the Department of Community Affairs—has not promulgated rules to define specific criteria by which to judge whether a comprehensive plan meets the statutory requirements.⁴ In the absence of such guidance, this analysis proceeds based on the statutory language and previous work related to this language by the University of Florida Levin College of Law’s Conservation Clinic.

The Conservation Clinic at the Center for Governmental Responsibility developed a template for review and analysis of comprehensive plans for compliance with the 2005-06 legislative mandates to preserve WWFs. This template has been applied to over twenty comprehensive plans in Florida. This template guided review of the draft SC2050 plan, although the inquiry here was more searching in some respects and left aside other considerations. For example, the template included consideration of LDRs and evaluation and appraisal reports (EARs), but the present inquiry did not. At the same time, the present inquiry supplies a more detailed analysis of, and recommendations for, the Future Land Use; Transportation; Natural Resources; and Parks, Recreation, and Cultural Resources elements of the draft SC2050.

The author of this analysis of SC2050 cooperated with the Conservation Clinic in supervision and development of a “policy menu” of options for compliance with the 2005-06 legislative mandates for preservation of WWFs. The current analysis and template for compliance with legislative mandates respecting WWFs reflects this early work of the Clinic on the topic of WWFs. This early work established a list of various different land use planning tools and gave examples of how they could be used to serve the goal of preserving WWFs.⁵ Conservation Clinic work on WWFs also has an example of a model comprehensive plan amendment intended to demonstrate some of the recommended policy tools.⁶ Some of these materials are recommended as sources for further information throughout this analysis.

III. Analysis of Smart Charlotte 2050 (SC2050)

A. The Future Land Use (FLU) Element

Waterfronts legislation requires that the future land use element of coastal counties “must include, without limitation, regulatory incentives and criteria that encourage the preservation of

⁴ Specific criteria for determining compliance of comprehensive plans with statutory requirements generally are contained in the Florida Administrative Code under chapter 9J-5.

⁵ See “Preserving Public Access to Public Waters: A Policy Menu for Local Governments,” available at www.law.ufl.edu/conservation/waterways/waterfronts/access.shtml.

⁶ See “Creating a Recreational and Commercial Working Waterfront Program to Implement Chapters 2005-157 and 2006-220, Laws of Florida: A Model Comprehensive Plan Amendment with Policy Options” (2006), available at www.law.ufl.edu/conservation/waterways/waterfronts/access.shtml.

recreational and commercial working waterfronts as defined in s. 342.07.”⁷ The Future Land Use Element (FLU) of SC2050 likely meets this minimum statutory definition.

1. Current Language in Smart Charlotte 2050 FLU

The FLU explicitly references recreational and WWFs in FLU Objective 5.6. Policies under this objective include four policies intended to preserve recreational and WWFs. Policy 5.6.1 expedites the permitting process for the rehabilitation or expansion of existing water-dependent uses. This is a valid and useful regulatory incentive.

Policy 5.6.2 states that the County shall consider developing a tax deferral ordinance for recreational and commercial WWFs. The need for this policy has been superseded by the availability of a far more effective tool: tax assessment based on current-use value for WWF property.⁸ Due to recognition of the limited value of a tax deferral versus an adjustment to taxable value, an amendment to the Florida constitution was proposed and passed allowing for taxation of defined waterfront properties at their current use value rather than their “highest and best” use as otherwise would be required.⁹ This change can help alleviate the rapidly increasing property taxes on WWF that were promoting conversions of WWF to non-water-dependent uses and water-dependent uses not open to the public. Thus, WWFs would receive increased protection by replacing the existing policy for considering a tax deferral ordinance with a policy that indicates that the County shall begin taxing WWF properties based on their current-use value.

Policy 5.6.3 encourages the preservation of existing marinas, but does not specify any regulatory incentives or criteria or indicate that the County shall adopt any such regulatory incentives or criteria. This policy also encourages the creation of new marinas and promotes

⁷ Sec. 1, Ch. 2005-177, Laws of Florida (2005) (codified at FLA. STAT. §163.3177(6)(a) (2009)).

⁸ In any case, it was not widely expected that use of the statutory tax deferral option for recreational and working waterfronts was going to be widespread or effective in protecting working waterfronts. *See Property Tax Deferral as a Tool for Working Waterfronts: A Survey of Recreational and Commercial Working Waterfronts*, available at www.law.ufl.edu/conservation/waterways/waterfronts/access.shtml.

⁹ FLA. CONST. Art VII, sec. 4(j)(1) (2009). This part of the Florida Constitution reads:

The assessment of the following working waterfront properties shall be based upon the current use of the property:

- a. Land used predominantly for commercial fishing purposes.
- b. Land that is accessible to the public and used for vessel launches into waters that are navigable.
- c. Marinas and drystacks that are open to the public.
- d. Water-dependent marine manufacturing facilities, commercial fishing facilities, and marine vessel construction and repair facilities and their support activities”).

this by indicating that all mixed use development which includes a public marina component is an allowed use within all residential, commercial, and industrial designations within the Urban Service Area.

Policy 5.6.4 encourages development of a Boat Facility Siting Plan. This may qualify as “regulatory incentives and criteria,” but this is not certain as the language is not very strong.

Policy 6.3.14 indicates that the “County shall work toward the creation of additional public and private boat access points including kayaks and canoes along the Peace River, Shell Creek and Prairie Creek, consistent with a Manatee Protection Plan as applicable.” This language is positive for public access and compliance with waterfronts legislation, but is only hortatory in nature; more specific actions to increase public boat access would be better.

Policy 2.1.4 indicates that the “County shall not vacate any public street or right of way or easement that would constrain public access to the County's many water bodies in the absence of other public benefit.”

Land use designations for SC2050 appear in an appendix to the FLU rather than as part of the policies.¹⁰ WWFs are not specifically addressed by any land use designation. WWFs are *not* included in “Low Intensity Industrial,”¹¹ but it may be possible to argue that they would fit within this designation under the phrase “limited commercial.” The definition for “Charlotte Harbor Commercial” will allow, but does not mention, WWFs. A boat yard with significant repair and haul-out facilities would likely fall within the “High-Intensity Industrial” classification.¹² One problem that this could create is that the definition for high-intensity industrial land amendments for new uses must meet criteria that might present difficulties for such a use to meet. These include:

- Direct access via frontage or private drive to a major rural collector, urban collector, minor arterial, or principal arterial thoroughfare;
- The site is readily accessible to other forms of urban development, including significant employment opportunities;
- The site does not contain environmentally sensitive lands, or contains sufficient land which can support the proposed use without impacting environmentally sensitive lands;
- The site is not within 200 feet of a [Category I or II](#) wetland unless it can be proven that such action will not adversely affect wetland functions and values;

¹⁰ Smart Charlotte 2050 Plan Draft, FLU Element, Purpose (accessed Nov. 23, 2009), available at www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=5#contentelement_4337. The Future Land Use Designations are available as FLU Section A-3 at www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=37.

¹¹ Smart Charlotte 2050, Future Land Use Element Appendix, Non-Residential Land Use Designations.

¹² Smart Charlotte 2050: Future Land Use Element, Appendix, Definition of Future Land Use Designations, Non-Residential Land-Use Designations.

- The site is within the Urban Service Area.¹³

It is already common knowledge that state and federal permitting processes make identification of suitable public access and marine infrastructure siting very challenging. This structure of the comprehensive plan could make siting of public access and marine infrastructure even more difficult. If Charlotte County wishes to maximize the possibility of any new public access and marine infrastructure within the county, the County may wish to add exceptions to some of these criteria for proposed WWFs projects that are able to secure state and federal permits.

2. Recommendations to Improve Smart Charlotte 2050 FLU for Waterfronts

SC2050's FLU element likely complies with statutory requirements related to recreational and WWFs. Nonetheless, WWFs could be better protected and promoted in SC2050's FLU element.

At a general level, FLU Goal 1 could be modified by adding to the bulleted list there: "Protect and Preserve Recreational and Commercial Working Waterfronts." Also at the more general level, FLU Goal 4 could include a bullet noting that neighborhood protection and enhancement can include protecting and promoting public access to marine resources that is so important a part of living in coastal Florida.¹⁴

For FLU Policy 5.6.4, better language would state the County "shall develop" a Boat Facility Siting Plan rather than just stating that the County "shall encourage and support" such development. This language could be further strengthened by adding a date certain. This strengthened language would not be adding a new obligation to the County as the County has already stated that it will develop a manatee protection plan,¹⁵ of which a boat facility siting plan is a part.

The FLU element of SC2050 could be improved by incorporating additional tools to preserve and promote recreational and WWFs. The planning document on which the FLU Element was developed recognizes water resources as very important but failed to appreciate the significance, either economically or culturally, of protecting WWFs and public access to navigable waters.¹⁶ A greater FLU focus on recreational and WWFs in Charlotte County could harmonize with the smart growth principles of mixing land uses and fostering distinctive, attractive communities with a strong sense of place.¹⁷

¹³ Smart Charlotte 2050: Future Land Use Element, Appendix, Definition of Future Land Use Designations, Non-Residential Land-Use Designations.

¹⁴ It would be important to address how to balance public access needs and associated traffic with FLU Policy 4.1.6 (Neighborhood Compatibility) or 4.1.7 (Roadway Compatibility).

¹⁵ Smart Charlotte 2050: CST Policy 1.4.7.

¹⁶ Smart Charlotte 2050 Planning Framework (Dec. 2008), available at <http://www.smartcharlotte2050.com/PDF/SmartCharlotte2050PlanningFramework20081208.pdf>.

¹⁷ Smart Charlotte 2050 Plan Draft, FLU Policy 1.1.1.

A lack of reference to water-dependent and water-related use categories is the greatest weakness of the FLU element as it relates to WWFs. No zoning classifications in the SC2050 FLU either require or prioritize water-dependent and water-related uses, indeed, no zoning category even mentions them. Use of water dependency as a tool to protect and promote WWFs and access is very important.¹⁸ FLU policy 5.6.1 uses the phrase “water dependent uses,” but this is not defined in the definitions section. The FLU element and FLUM would better preserve and promote recreational and WWFs by carefully incorporating into the appropriate zoning regimes a prioritization scheme favoring water-dependent and water-related uses that qualify as WWFs on appropriate waterfront parcels.¹⁹ Such designation within zoning classifications could strengthen applications for state funding for acquisition of property for WWFs.²⁰

Rather than altering existing zoning classifications to prioritize water-dependent and water-related uses, SC2050’s Future Land Use Element could utilize overlay districts in appropriate waterfront areas to accomplish the same goals. Currently SC2050 has no overlay districts focused on WWFs. Addition of zoning categories focused on WWFs could combine use of water-dependent and water-related requirements to implement a no-net loss policy for existing public access.²¹ A no-net-loss policy could be implemented through strict prohibition of conversion to non-water-dependent uses or such conversion could be allowed only with specified mitigation, such as contribution to an acquisition fund established for access. Sites identified as appropriate for future public access/WWF could be zoned for such even if the existing use would then become a non-conforming use.

When considering water-dependent and water-related uses, the County should add a requirement to develop an inventory of sites currently not used for water dependent purposes that would be suitable for future development/redevelopment as water dependent uses. “Water-dependent use” and “water-related use” are addressed again in the section on SC2050 Coastal Planning as statutes require it be addressed there.

¹⁸ Water dependency is referred to repeatedly in Florida Statutes, including at 342.07(1); 342.201(2)(b); 253.03(15); 163.3178(2)(a); 163.3178(5); and 163.3178(6). The Florida Administrative Code defines water-dependent use at 9J-5.003(137) and water-related use at 9J-5.003(139). While the federal Coastal Zone Management Act does not use the phrase “water-dependent use,” the Act does evince a similar intent. *See, e.g.* 16 U.S.C.S. § 1452(2)(D), (E) (2000). Section 16 U.S.C. 1452(2)(D) describes Congress’ finding and declaration that “coastal-dependent” uses should be given priority in the development and management of the coastal zone by states while 16 U.S.C. § 1452(2)(E) says the same for public access for recreation purposes.

¹⁹ Additional information on zoning as a tool for waterfronts is available at under the heading “Local Government Tools” and the bullet “Zoning” at <http://www.law.ufl.edu/conservation/waterways/waterfronts/access.shtml>.

²⁰ *See, infra* section III.B.1 (discussing acquisition funding for WWFs).

²¹ Smart Charlotte 2050 utilizes a “no-net-loss” policy for wetlands. *See* Smart Charlotte 2050: Env. Goal 3.

Policy 2.1.4 on abandonment of right of ways should be strengthened. A good model would be the following language:

No right-of-way, road, street, or public accessway giving access to any publicly accessible waters in the County, shall be closed, vacated or abandoned except in those instances wherein the petitioner(s) offers to trade or give to the County comparable land or lands for a right-of-way, road, street or public accessway to give access to the same body of water, such access to be of such condition as not to work a hardship to the users thereof, the reasonableness of the distance and comparable land being left to the discretion of the Board of County Commissioners.²²

In addition, the County could add a policy that it would “identify, inventory, and characterize existing right-of-ways, easements and other public property interests adjacent to or capable of providing public access.”²³

B. Coastal Planning (CST) Element

Florida Statutes require that a coastal planning element include “[a] shoreline use component which identifies public access to beach and shoreline areas and addresses the need for water-dependent and water-related facilities, including marinas, along shoreline areas. Such component must include the strategies that will be used to preserve recreational and commercial WWFs as defined in s. 342.07.”²⁴ SC2050’s CST may comply with statutory mandates for addressing WWFs in coastal management elements.

1. Current Language in Smart Charlotte 2050 CST

The SC2050 CST specifically addresses the legislative requirement to preserve working water waterfronts in CST Policy 1.2.6:

The County shall develop strategies to preserve recreational and working waterfronts as defined in F.S. 342.07 and F.S. 163.3178(2)(g); continue to identify reasonable and appropriate public access to beach and shoreline areas; and shall address the need for water-dependent and related facilities including marinas and shoreline facilities. (i.e., Charlotte County Marina Siting Study, Gus Antonini, 1998, and per F.S. 163.3178(2)(g)). Siting of access shall be in compliance with the Florida Fish and Wildlife

²² Washington County, Florida, Code of Ordinances, sec. 10.03.03; Bay County, Florida, Code of Ordinances, sec. 12.04.03; Palm Beach County, Florida, Code of Ordinances, sec. 22-45.

²³ Right of ways may offer significant access for the public when properly utilized. Maine has developed its Right-of-Way Discovery Program to research forgotten or ignored rights of way providing access to the shore.

²⁴ Sec. 2, Ch. 2005-177, Laws of Florida (2005) (codified at FLA. STAT. §163.3178(2)(g) (2009)).

Conservation Commission and US Fish and Wildlife Service regulations and guidelines.

The County will study the feasibility of providing economic and other incentives to encourage the provision of public access at privately-owned beach front properties. Such incentives may include tax relief, density bonuses, or other benefits to the property owner intended to offset financial or other burdens associated with providing public access.²⁵

While this is positive language for waterfronts, it is unclear whether this language alone sufficiently “identifies public access to beach and shoreline areas and addresses the need for water-dependent and water-related facilities” and “include[s] the strategies that will be used to preserve recreational and commercial working waterfronts.” While CST Objective 1.2 seeks to “establish criteria or standards which identify allowable shoreline uses, giving priority to water dependent uses while minimizing negative impacts to coastal habitats, species, and surrounding land uses,” many of the policies under this objective focus on requiring compliance with federal and state standards and permits rather than seeking to preserve or promote waterfronts.²⁶ Only the language of Policy 1.2.6—quoted above—and Policy 1.2.4 specifically mention preserving or promoting recreational and WWFs or public access.

Policy 1.2.4 discusses acquisition of waterfront property for improved public access to the Gulf of Mexico.

With the assistance of the Beaches and Shores Advisory Committee, Marine Advisory Committee, Recreation and Parks Advisory Committee, and other private and public entities, the County will identify waterfront properties suitable for acquisition and development to provide improved public access to the Gulf of Mexico. The County will seek funding from West Coast Inland Navigation District (WCIND), Florida Recreation Development Assistance Program (FRDAP), and Florida Boating Improvement Program (FBIP) as well as other sources, including local revenues, for development of water dependent facilities.²⁷

CST Policy 1.3.2 reaffirms the importance of public access acquisition by stating that the County shall secure public access easements adjacent to coastal shorelines as part of the development review process when feasible.

²⁵ Smart Charlotte 2050: CST Policy 1.2.6 Development of Coastal, Water Dependent Activities. This language is repeated at CST, Development in High Hazard Area, CST Policy 1.10.

²⁶ *See, e.g.* Smart Charlotte 2050: CST policies 1.2.1; 1.2.2; 1.2.3; 1.2.5; 1.2.6; 1.2.8; and 1.2.10. It is, of course, positive and necessary that this element so clearly accounts for the need to protect coastal resources and acknowledges the importance of manatee protection. *See, e.g.* CST Policies 1.2.9; 1.2.10; 1.4.7; 1.4.8; 1.4.9; and 1.4.10.

²⁷ Smart Charlotte 2050: CST Policy 1.2.4 Acquisition of Waterfront Property.

Various references to acquisition for public access could be united by creation in SC2050 of a WWF acquisition program within the County. An acquisition program to preserve/promote WWFs has become much more viable during the last two years for two reasons. First, the collapse of the housing boom has slowed the demand for waterfront property and stemmed the rise in prices. Second, in 2008 the Florida Legislature passed a bill containing a provision for acquisition funding for WWFs.²⁸ Development of a Community Redevelopment Area (CRA)²⁹ and proposing a project in the CRA that protects/preserves WWFs and promotes the objectives of the CRA plan contributes significantly to prioritizing an application for state acquisition funds.³⁰ The County is also more likely to receive a grant for an acquisition project if the County's comp plan has a Future Land Use category, zoning district, or overlay district designed to protect and preserve WWFs.³¹ If the County were also to develop an acquisition fund for WWFs, matching funds provided by such a fund improve the chances of receiving state acquisition funding.³²

Note that the 9J-5 requirements for the coastal planning element have data and analysis requirements that include details of existing water-dependent and water-related uses and inventories of all public access facilities.³³ It is not clear that SC2050 sufficiently indicates either existing data and analysis inventories or those which shall be undertaken by the County. The CST does include an assessment of parking facilities related to public access.³⁴

2. Recommendations to Improve Smart Charlotte 2050 FLU for Waterfronts

SC2050's CST should either contain express definitions of water-dependent use and water-related use or cross reference these if they are added to the FLU element. SC2050's CST should also contain inventories of all public access points, water-dependent uses, and water-related uses. In addition, SC2050's CST should contain criteria for prioritizing water-dependent and water-related uses.³⁵

Development along the water to promote public access to marine recreation can create conflicts between efforts to direct development away from the coastal high hazard area (CHHA) and

²⁸ FLA. STAT. §380.5105 (2009).

²⁹ *See* Community Redevelopment Act of 1969, FLA. STAT. §§ 163.330-.463 (2009).

³⁰ FLA. ADMIN. CODE r. 9K-9.006(1)(a) (2009).

³¹ FLA. ADMIN. CODE r. 9K-9.006(5)(b) (2009).

³² FLA. ADMIN. CODE r. 9K-9.006(4) (2009).

³³ FLA. ADMIN. CODE r. 9J-5.012(2)(a) and (g); 9J-5.012(3)(b)3; 9J-5.012(3)(c)9 and 14 (2009).

³⁴ Smart Charlotte 2050: CST Policy 1.3.3.

³⁵ Such criteria would also then be applied in either the zoning classification modifications recommended for Smart Charlotte 2050's FLU or as part of the overlay district[s] implementing water-dependent and water-related use prioritization.

limiting public expenditures that subsidize coastal development. SC2050 directly addresses this potential conflict by creating an exception to restrictions on development within the CHHA for maintenance of existing levels of service and for recreation and open space uses.³⁶ This limitation could limit some types of recreational and WWFs. One way around this for some types of water-dependent or water-related recreational sites would be explicitly define them as “recreation and open space uses.” Another way to accomplish this would be to establish a level of service for various types of recreational waterfront uses such boat ramps, marinas, mooring fields, boardwalks/other visual access, and piers.³⁷ However, none of these strategies would necessarily preclude the negative effects of CHHA exclusion on commercial waterfronts endeavors. To address this, the exceptions to development restrictions in the CHHA could be expanded to include water-dependent and water-related development that fits within the definition of a recreational or commercial working waterfront. In any case, design and construction requirements should be added as necessary to address the very significant concerns associated with any development in the CHHA.

Another way to protect natural resources while promoting access and WWFs is to create the recreational surface water use policy encouraged by statute³⁸ and which includes a boat facility siting plan (BFSP). Note that the 2006 legislation specifies that “manatee protection in the recreational surface water use policies should reflect applicable guidance outlined in the Boat Facility Siting Guide prepared by the Fish and Wildlife Conservation Commission.”³⁹ This recommendation offers Charlotte County the opportunity to fulfill this statutory planning recommendation at the same time that the County cooperates with the Florida Fish and Wildlife Conservation Commission in development of a manatee protection plan, which also uses the Florida Fish and Wildlife Conservation Commission guidance document on BFSPs. In any case, the draft SC2050 plan already indicates that the County shall cooperate with the Florida Fish and Wildlife Conservation Commission in development of a manatee protection plan⁴⁰ and development of a BFSP.⁴¹ Committing more clearly to development of the BFSP will, then, fulfill multiple statutory provisions and address the pressure FWC is beginning to exert on the County to develop a manatee protection plan.

³⁶ Smart Charlotte 2050: CST, Development in High Hazard Areas, Goal 1.

³⁷ Under the Smart Charlotte 2050 CST’s “ESTABLISH LEVEL OF SERVICE STANDARDS IN THE COASTAL PLANNING AREA (CPA),” the County could add an LOS development requirement for different kinds of public access, including specifically boat ramps/lanes and associated parking; fishing pier length; public board walks/viewing sites; dry storage; slips/wet storage; mooring for transient and resident vessels, etc. It is unclear what the “Coastal Planning Area” encompasses as the link in this section connects to a document entitled “Charlotte County Florida 5’ Sea Level Rise.”

³⁸ FLA. STAT. §163.3177(6)(g)2 (2009).

³⁹ Sec. 2, Ch. 2006-220, Laws of Florida (2006).

⁴⁰ Smart Charlotte 2050: CST Policy 1.4.7 (“The County shall continue to work with the appropriate State and Federal agencies to develop a manatee protection plan which balances the need for manatee protection and the need for recreational and commercial uses.”).

⁴¹ Smart Charlotte 2050: FLU Policy 5.6.4.

C. Transportation Element (TRA)

While there are not statutory requirements related to WWF for the transportation element, SC2050's TRA has some positive language related to WWFs.

SC2050's TRA states an intent to "incorporate waterway facilities in its multimodal transportation planning."⁴² This element also notes that the "County shall include Charlotte Harbor and other waterways in its multimodal planning for recreational and other activities as warranted."⁴³

Within this element, it would also be good to encourage connection of marina facilities to the developing public transportation system as this is a valuable resource for transient boaters; thus, such connections might be limited to marinas or times of years with a larger number of transient boaters.

D. Natural Resources Element (ENV)

The comprehensive plan contains a positive focus on land acquisition for environmental protection.⁴⁴ As noted above, land acquisition (or less-than-fee purchases) can also be a valuable tool for preserving and promoting WWFs. The County may want to consider whether some WWF uses might be compatible with the resource protection goals of the acquisition plan in the SC2050ENV element. Anytime goals and land overlap for WWFs and resource protection, this could present excellent possibilities for leveraging funds from two local land acquisition funds,⁴⁵ thus improving the chances of securing state funds.⁴⁶

The current structure for protection of wetlands may impede ability to do siting of public access or maritime infrastructure facilities. For example:

The County shall consider commercial intensive and industrial land uses to be incompatible with wetlands. The County shall not approve the designation of new commercial intensive or industrial land uses when the property under review contains or is within 200 feet of a Category I or II wetland unless it can be proven through a science-based analysis that such action will not adversely affect wetland functions and values. Charlotte County may approve such designation of lands when Category III wetlands are present. Where such land use designations already exist adjacent to

⁴² Smart Charlotte 2050: TRA Objective 1.5 Seaport Facilities.

⁴³ Smart Charlotte 2050: TRA Policy 1.5.1 Evaluate and Plan Modifications.

⁴⁴ *See, e.g.*, Smart Charlotte 2050: ENV Policy 1.4.5; 2.2.5-2.2.7.

⁴⁵ Smart Charlotte 2050: ENV Policy 2.2.7 encourages leveraging acquisition funding.

⁴⁶ *See supra* discussion of acquisition in section III.B.1.

wetlands, any development which occurs in these locations will be reviewed per ENV Policies 3.1.3 and 3.1.5.

These prohibitions on commercial intensive or industrial land use within 200 feet of a Category I or II wetland will present additional difficulties for approval of certain types of WWF facilities.⁴⁷ A better approach might be to allow only water-dependent and water-related industrial or intensive commercial uses within 200 feet of Category I or II wetlands as long as the proposed project presents reasonable assurances that the proposed project will not adversely affect wetland function and values.

In addition, prohibitions on hazardous substances could also make siting of new boat repair facilities more difficult.⁴⁸

E. Parks, Recreation and Cultural Resources (PRC) Element

Statutes now require that the recreation and open space element of all local comprehensive plans include waterways.⁴⁹ The PRC element of SC2050 likely fulfills this statutory requirement.

SC2050's PRC element includes consideration of blueways.⁵⁰ The PRC element could strengthen the recreation aspect of waterways by cross referencing or reiterating the FLU Policy 6.3.14 which indicates that County "County shall work toward the creation of additional public and private boat access points including kayaks and canoes along the Peace River, Shell Creek and Prairie Creek, consistent with a Manatee Protection Plan as applicable." The SC2050's PRC element also emphasizes that the County will work to maintain and develop access to the water and marine resources through acquisition of waterfront property and working to preserve WWFs.⁵¹ PRC policy 1.1.3 and 1.1.4 also include waterways considerations.⁵²

⁴⁷ A good example would be boat repair facilities for non-trailerable boats.

⁴⁸ "The use, storage, transmission, or generation of hazardous substances. . . is prohibited within wetlands." Smart Charlotte 2050: ENV Policy 3.1.7 Prohibited Uses.

⁴⁹ Sec. 1, Ch. 2005-177, Laws of Florida (2005) (codified at FLA. STAT. §163.317(6)(e) (2009)).

⁵⁰ Smart Charlotte 2050: PRC Policy 1.1.1. Park Classifications.

⁵¹ Smart Charlotte 2050: PRC Policy 1.1.3. ("The County shall continue public acquisitions of waterfront property and, through public resources and public/private partnerships, seek new opportunities to preserve working waterfronts, expand and maintain public beach and water access and protect coastal and marine resources.").

⁵² "The County shall continue public acquisitions of waterfront property and, through public resources and public/private partnerships, seek new opportunities to preserve working waterfronts, expand and maintain public beach and water access and protect coastal and marine resources." Smart Charlotte 2050: PRC Policy 1.1.3. "The County shall encourage responsible use of waterways and marine resources by evaluating the characteristics and needs of the County's boating population, both

PRC policy 1.1.4 on boating access presents an excellent place to cross reference a level-of-service (LOS) requirement for waterfront recreational facilities if an LOS were adopted for waterfront uses. Florida Statutes require local governments to set certain LOSs⁵³ and local governments may add other LOSs. An LOS can serve as a valuable tool for various types of recreational waterfront uses such as boat ramps, marinas, mooring fields, boardwalks/other visual access, and piers. Some jurisdictions in the state have taken this step and serve as a model for adopting LOSs for waterfront and public access uses. Martin County, Florida, includes a recommended level of service provision for waterfront recreational facilities. These levels of service include: full service beaches and beach access; fishing access; and boat ramps.⁵⁴ New Smyrna Beach, Florida also contains a boat ramp level of service requirement in its comprehensive plan. Putnam County, Florida, has included concurrency requirements in the Recreation and Open Space Element of its comprehensive plan. These requirements include determining levels of service for public access to waterfronts, including parking spaces and boat ramps.⁵⁵

The PRC could add a goal to the effect of: “Create a publicly-accessible system of local waterway recreation capabilities linked to the regional maritime infrastructure network.” Such a goal could include as an objective: “To maximize the recreational and commercial opportunities provided by the waterways of Charlotte County without jeopardizing the environmental values of these waterways or any threatened or endangered species.” Policies under this could include “The County shall identify, inventory and characterize its system of waterways in terms of use, capacity and relationship to recreational and commercial working waterfronts” and “The County hereby establishes a “no-net-loss policy for public access and boating facilities on the waterways of Charlotte County.”

IV. Conclusion

This analysis concludes that SC2050 may comply with the statutory requirements for comprehensive plans relative to recreational and commercial working waterfronts (WWF) legislation. Many of the sections of SC2050 related to statutory requirements for WWF legislation are so general as to not give as much confidence as might be warranted by Charlotte County’s proactive work relative to boating and public access to the navigable waters of the State. Existing and developing data and analysis should be referenced. Adding some of the specific criteria and strategies outlined in the above analysis would result in SC2050 clearly meeting the statutory requirements for WWFs and public access. A particularly important recommendation that should be acted upon is to define and integrate water-dependent and

residents and visitors, and providing public access for motorized and non-motorized watercraft and mooring facilities.” Smart Charlotte 2050; PRC Policy 1.1.4.

⁵³ FLA. STAT. §§ 163.3177(3)(a), (10)(f) and 163.3180(1)(b) (2009).

⁵⁴ Martin County, Florida, Comprehensive Plan, Recreation Element, section 7.7.

⁵⁵ Putnam County, Florida, Comprehensive Plan, Recreation and Open Space Element.

water-related use prioritization into SC2050's Future Land Use and Coastal Management elements.

***Appendix E: Outlining the Development of a Charlotte County
Manatee Protection Plan***

DATE: 11.20.2009

Outline for Development of a Manatee Protection Plan: Charlotte County

This memorandum outlines the background of manatee protection in Florida, recommendations for the development of a Charlotte County manatee protection plan (“MPP”), and incorporation of the MPP into local planning.

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LIST OF ACRONYMS

BFSP.....	Boat Facility Siting Plan
DCA.....	Florida Department of Community Affairs
DEP.....	Florida Department of Environmental Protection
FL MMP.....	Florida Manatee Management Plan (from FWC)
FWC.....	Florida Fish and Wildlife Conservation Commission
MPP.....	Manatee Protection Plan
USFWS.....	United States Fish and Wildlife Service
USFWS MRP.....	United States Fish and Wildlife’s Florida Manatee Recovery Plan

SUMMARY

An MPP is a state-approved, comprehensive planning document addressing manatee data, strategies, and management actions to protect manatees through protection of their habitat and avoidance of manatee-boat collisions. The objectives and general parameters of MPPs are set forth in Attachment K to the *Governor and Cabinet's October 1989 Policy Directive* (“the Directive”). The minimum requirements of MPPs are set forth at Florida Statutes section 379.2431(2)(t). This statute designated sections of the Directive as necessary components for an effective MPP and lists additional recommended measures beyond the minimum requirements.

MPPs are subject to the approval of the Florida Fish and Wildlife Conservation Commission (“FWC”). FWC stated its intention to issue guidance documents explaining how the Attachment K criteria are to be used. To date, those guidance documents have not been issued. Instead, FWC has emphasized that it wishes to maintain maximum flexibility for local governments and local information to drive development of MPPs appropriate to local conditions. The boat facility siting plan comprises an important element of an MPP; guidance documents already exist for development of this part of an MPP. Even though not specifically mentioned in the literature on boat facility siting plans, mooring fields should be included in an MPP’s boat facility siting plan.

Thirteen “key” counties for manatee recovery were originally mandated to create MPPs. FWC has authority to develop rules to identify “substantial risk” counties that would also be required to develop MPPs; FWC has chosen not to do this at this time and instead focuses on development of guidance documents for MPPs and offering assistance with MPP development for counties that do not yet have an MPP. This is part of FWC’s effort to encourage all counties with significant numbers of manatee to develop MPPs. Voluntary development of an MPP is good policy as MPPs mesh with other local government planning requirements and recommendations and will make state and federal permitting easier and faster for appropriate projects in the county.

Counties with MPPs are encouraged, but not required, to adopt MPPs as part of the comprehensive land use plan. The coastal management element of a comprehensive plan is the best place to incorporate an MPP. The thirteen key counties are required to adopt the boat facility siting plan of the MPP as part of the comprehensive plan; Charlotte County does not fit in this category, but FWC recommends this process for all MPPs.

Charlotte County’s emphasis on boating, public access, and marine planning along with the revisions to the county’s comprehensive plan make now an auspicious time for the county to consider development of an MPP. The MPP can increase boater safety, improve water quality, protect estuarine habitat for many species, and, of course, protect manatee. The MPP will also likely lead to greater speed and certainty in permitting processes for maritime-related facilities. As part of this impact on permitting, an adopted MPP will impact state and federal permit review regardless of whether it is directly incorporated into Charlotte County’s comprehensive plan.

DISCUSSION

I. Manatee Protection Background

The manatee (*Trichechus manatus*) is the official marine mammal of the State of Florida.¹ Manatees are listed as an endangered species under the federal Endangered Species Act² and the Florida Endangered and Threatened Species Act.³ Manatees are also protected under the federal Marine Mammal Protection Act of 1972.⁴ Florida enacted the Florida Manatee Sanctuary Act of 1978 to provide additional, independent protection to the manatee, including deeming the entire State of Florida a “refuge and sanctuary for the manatee.”⁵

The United States Fish and Wildlife Service (“USFWS”) and the FWC are jointly responsible for manatee protection. The USFWS is authorized to protect manatee under the ESA.⁶ As required for all listed endangered species, the USFWS developed the *Florida Manatee Recovery Plan* (“USFWS MRP”) to “assure long-term viability of the Florida manatee . . . and to ensure a healthy, self-sustaining population of manatees in Florida by reducing or removing threats to the species’ existence.”⁷ The USFWS MRP is a guidance document, persuasive in nature, but not a binding regulation.⁸ The USFWS MRP lists the development of MPPs as a needed manatee recovery action.⁹

The FWC is authorized to protect manatee under the Florida Manatee Sanctuary Act of 1978.¹⁰ In December 2007, the FWC issued the *Florida Manatee Management Plan* (“FL MMP”) to

¹ FLA. STAT. § 15.038(1) (2009).

² 16 U.S.C.A. §1531 *et seq.*; 50 C.F.R. 17.11 (2009).

³ FLA. STAT. § 379.2291 *et seq.* (2009); FLA. ADMIN. CODE r. 68A-27.003(dd).

⁴ 16 U.S.C.A. 1362 *et seq.* (2009).

⁵ FLA. STAT. § 379.2431(2)(a) (2009).

⁶ 16 U.S.C.A. § 1531 (2009).

⁷ U.S. Fish and Wildlife Service, Florida Manatee Recovery Plan 2001 Amendments.

⁸ 16 U.S.C.A. § 1533(f) (2009), Biodiversity Legal Foundation v. Norton, 285 F.Supp.2d 1, 13-14 (D.D.C. 2003). *See also* U.S. Fish and Wildlife Service, Florida Manatee Recovery Plan, 3rd Revision, Frequently Asked Questions.

⁹ U.S. Fish and Wildlife Service, Florida Manatee Recovery Plan, at 31 and 36.

¹⁰ FLA. STAT. § 379.2431(2) (2009); FLA. STAT. § 20.331(c)1 (2009) (manatee rulemaking authority). *Caribbean Conservation Corp., Inc., v. Florida Fish and Wildlife Cons. Comm.*, 838 So.2d 492, 501-03 (FL 2003). *See also* FLA. STAT. § 379.2432 (2009) (codifying legislative intent to empower the FWC to protect manatees):

It is the intent of the Legislature that the commission request the necessary funding and staffing through a general revenue budget request to ensure that manatees receive the *maximum protection*

“provide the framework for conserving and managing manatees in Florida.”¹¹ Like the USFWS MRP, the FL MMP “is a planning document; not a rule or regulation.”¹² “The [FL MMP] addresses the key tasks outlined in the [USFWS MRP] and is complimentary with that plan.”¹³ The framework for conserving and managing manatee in the FL MMP includes development of MPPs in a cooperative manner between the FWC and the counties.¹⁴ An MPP must be approved by the FWC,¹⁵ which coordinates with the USFWS.¹⁶

II. “Key” Counties and “Substantial Risk” Counties Required to Adopt MPPs

A. Original Thirteen “Key” Counties

In 1989, the State of Florida developed a policy directive for manatee protection (“the Directive”). The Directive identified thirteen “key” counties in which manatees regularly occur— Brevard, Broward, Citrus, Collier, Duval, Indian River, Lee, Martin, Miami-Dade, Palm Beach, St. Lucie, Sarasota and Volusia.¹⁷ These counties were required to develop MPPs consistent with the criteria set forth in “Schedule K” of the Directive.¹⁸ The “key” counties’ MPPs were approved by the FWC in the following years:¹⁹

Citrus	1991
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possible. The Legislature recognizes that strong manatee protection depends upon consistently achieving a high degree of compliance with existing and future rules. The commission shall conduct standardized studies to determine levels of public compliance with manatee protection rules, and shall use the results of the studies, together with other relevant information, to develop and implement strategic law enforcement initiatives and boater education plans. Drawing upon information obtained from the compliance studies and the implementation of enforcement initiatives together with boater education plans, the commission shall identify any impediments in consistently achieving high levels of compliance, and adjust their enforcement and boater education efforts accordingly. [*Emphasis added.*]

¹¹ FL MMP at iv.

¹² *Id.*

¹³ *Id.*

¹⁴ *See generally id.*

¹⁵ FLA. STAT. § 379.2431(2)(t) (2009).

¹⁶ FL MMP at 36.

¹⁷ The Directive at 3.

¹⁸ FLA. STAT. § 379.2431(t)1 (2009).

¹⁹ *See* FL MMP, at 52.

Collier	1991
Miami-Dade	1995
Duval	1999
Indian River	2000
Martin	2002
St. Lucie	2002
Brevard	2003
Lee	2004
Sarasota	2004
Volusia	2005
Broward	2007
Palm Beach	2007

B. Substantial Risk Counties

In addition to the original thirteen key counties, “[a]rea-specific [MPPs] need to be developed by all counties in which manatees regularly occur to ensure the long-range protection of the species and its habitat.”²⁰ In accordance with this policy, counties not identified in the Directive but deemed a “substantial risk” county by the FWC, must also develop MPPs.²¹ The FWC is authorized to promulgate regulations establishing the criteria for a “substantial risk” county,²² but has opted not to do so.²³ Rather, the FWC prefers a cooperative approach to

²⁰ The Directive, Attachment K.

²¹ FLA. STAT. § 379.2431(t)2 (2009).

²² *Id.*

²³ *See* FL MMP (2007), at 53.

developing MPPs.²⁴ It does not appear that FWC currently intends to change this approach. The FWC stated its intent to issue guidance documents that “evaluate all counties with manatee use and identify the relative risks of those counties for manatees. The documents will describe what data sources will be used and how the data will be analyzed and evaluated in making the risk assessment.”²⁵

III. Manatee Protection Plan (MPP) Requirements

The Directive set forth the objectives and general parameters of MPP requirements. Florida Statutes section 379.2431(2)(t) sets forth the minimum requirements of MPPs. This statute also designated by reference sections of the Directive as (1) necessary components for an effective MPP and (2) additional recommended measures beyond the minimum requirements in the statute.

As set forth in the Directive, the objectives of MPPs are:

to reduce the number of boat-related manatee mortalities; to achieve an optimal sustainable manatee population (the goal of the Marine Mammal Protection Act); to protect manatee habitat; to promote boating safety; and to increase public awareness of the need to protect manatees and their environment.²⁶

The Directive set forth initially the general parameters of MPPs:

These plans will address manatee-human interactions, land use (including boat facility siting), and the protection of suitable habitat (including water quality, thermal refugia, freshwater sources, and grass beds). The information needed to prepare manatee protection plans will include manatee studies, habitat assessments, and, if available, boating studies to evaluate boater use patterns and activities.²⁷

Florida Statutes section 379.2431(2)(t)2, set forth the minimum elements required of MPPs to achieve the objectives and satisfy the general parameters set forth in the Directive; the minimum requirements are:

- 1) education about manatees and manatee habitat;
- 2) boater education;
- 3) an assessment of the need for new or revised manatee protection speed zones;
- 4) local law enforcement; and

²⁴ *Id.*

²⁵ *Id.*

²⁶ The Directive, Attachment K.

²⁷ *Id.*

- 5) a boat facility siting plan to address expansion of existing and the development of new marinas, boat ramps, and other multislip boating facilities.²⁸

Florida Statutes section 379.2431(2)(t)1 requires MPPs to be consistent with the necessary components of effective MPPs set forth in Attachment K to the Directive, which are:

- a. location and capacity of all marina facilities (including dry storage) in the county (proposed and existing);
- b. location of all boat ramps in the county (proposed and existing);
- c. boating activity patterns, including travel routes and major destination areas;
- d. manatee sighting information for the county;
- e. manatee mortality for the county;
- f. any aquatic preserves; Outstanding Florida Waters or other refuge/reserve information;
- g. port facility information;
- h. location of significant habitat resources, such as grass beds, warm water discharges and fresh water sources;
- i. location of manatee protection and boating safety speed zones in the county (proposed and existing);
- j. location of manatee information displays; and
- k. other relevant data as determined by the Department of Natural Resources.²⁹

The Directive also recommended additional MPP elements to increase manatee protection; the recommended elements are:

- a. boating expansion criteria;
- b. identification of recommended areas for water-related activities requiring high boat speeds, such as water skiing, boat races and certain types of commercial fishing;
- c. a plan for marking navigation channels in currently unmarked waterways used by manatees.
- d. new or expanded speed zones, refuges or sanctuaries for the regulation of boat speeds in critical manatee areas;
- e. installation of manatee educational displays at all boating facilities;
- f. development and dissemination of a pamphlet to county boaters describing manatee protection and boating safety speed zones in the area, and recommendations for boaters on how to avoid hitting manatees;
- g. inclusion of manatee and marine habitat educational material in the county school board's elementary, middle school and high school curricula;
- h. development of appropriate aquatic plant control methods in manatee areas;
- i. identification of land acquisition projects to increase refuges, reserves and preserves for manatee protection; and
- j. other actions as specified by the Department of Natural Resources.

²⁸ FLA. STAT. § 379.2431(2)(t)2 (2009).

²⁹ Cf. FWC Draft Manatee Protection Plan Guidelines (2004) ("2004 Draft MPP Guidelines") (discussing Attachment K criteria) available at http://www.broward.org/bio/manatees_guidelines.htm.

All existing approved MPPs were approved under the Attachment K criteria in cooperation with the FWC.³⁰ FWC has stated that it will develop general guidance documents but has not yet done so;³¹ nonetheless, FWC has given guidance to jurisdictions during developing of MPPs.³² The forthcoming FWC guidance “documents will also provide explanations of how the criteria of Attachment K are used to consider approvals of county [MPPs] and other guidance for the development of county MPPs.”³³ In the absence of definitive, state-wide FWC guidance, it appears that analysis of compliance with the Attachment K criteria must be based upon the available data regarding manatee in the county and a comparative analysis of other county approaches in cooperation with FWC.³⁴

IV. Boat Facility Siting Plan (BFSP)

“Boat facility siting elements are [important and] necessary components of area-specific [MPPs]. Boat facility siting must address marinas with wet slips and dry storage, and

³⁰ See FL MMP, at 53-54.

³¹ FL MMP, at 53-54. The FWC has not yet issued the Attachment K guidance. However, a draft of Manatee Protection Plan Guidance appears on the Broward County website. See *infra* note 32. An FWC official indicated that the guidance documents were still in the development stage. Personal communication of Patrick Williams with Carol Knox, FWC Imperiled Species Management Section, November 2, 2009,

³² FWC Draft Manatee Protection Plan Guidelines (2004) (“2004 Draft MPP Guidelines”) available at http://www.broward.org/bio/manatees_guidelines.htm. See also Broward County Manatee Protection Plan, at 103 (noting the 2004 Draft MPP Guidelines as “Reviewed Literature”). It appears that this document is an early draft of guidelines for the Attachment K criteria. As a draft document the 2004 Draft MPP Guidelines are not binding, particularly because the 2007 FL MMP stated an intention to issue new guidance and FWC stated that guidance is forthcoming. However, the 2004 Draft MPP Guidelines appear to provide guidance that likely remains relevant. Of note is the description of the approval process:

Once all of the above information has been accumulated, county staff, a committee or consultant drafts a manatee protection plan, which is reviewed at the local level through administrative staff and county-appointed committees, FWS, FWC and other concerned parties. FWC staff typically provides technical assistance and reviews many stages of the draft from outline to final product. Also, the FWC has funded contracts for plan development. Once the plan is finalized, it is then submitted to the County Commission for approval. The County Commission may hold one or two public meetings to receive public comment. Workshops or public hearings may also be held in selected municipalities. The MPP may be revised to address any issues that arise at these public meetings and then resubmitted to the local governing body. Mechanisms for intergovernmental coordination between the county and municipalities are put in place. Once the County Commission approves the plan, it is then transmitted to the FWC for approval. The FWC Executive Director is delegated to approve the plans. Due to the complexity of issues a county must address in its plan and the range of information that must be collected, plans are usually several years in development.

³³ FL MMP, at 53-54.

³⁴ Cf. FL MMP (2007), at 53 (“Counties have satisfied these criteria using varying approaches according to the specific data and information available to the particular county.”).

boat ramps. The objectives of boat facility siting plans are: to determine appropriate dock densities for particular areas; and to develop criteria for designating special use areas (i.e., for water skiing, jet skiing, and commercial fishing).”³⁵

The FWC defines a boat facility siting plan as:³⁶

a Commission-approved, county-wide plan for the development of boat facilities (docks, piers, dry storage areas, marinas and boat ramps) which specifies preferred locations for boat facility development based on an evaluation of natural resources, manatee protection needs, and recreation and economic demands.

While the list of boating facilities does not include mooring fields, this comes as no surprise since an emphasis on the importance of mooring fields is relatively new in Florida.

Nonetheless, the mooring field currently being permitted by Punta Gorda and any other planned or potential mooring fields or sites should be included in the Boat Facility Siting Plan (BFSP) as they will also generate boat traffic and potential interactions with manatees and manatee resources, though the impact of mooring fields may deserve different treatment than that of wet and dry slips; this issue is discussed further below on pages 12-13.

The BFSP forms part of the MPP reviewed by FWC, but the BFSP is also a planning tool and intended to be part of a local government’s comprehensive planning process. Thus, the Florida Department of Community Affairs (DCA)—Florida’s statewide agency overseeing comprehensive planning—is also a key player in development of a BFSP. Three documents, two from DCA and one from FWC, assist in understanding what should be included in a BFSP.³⁷ One of DCA’s documents also specifically addresses the procedural and public participation aspects of developing a BFSP.³⁸ The following includes information from these

³⁵ The Directive, Attachment K.

³⁶ FWC Boat Facility Siting Guide, August 2000.

³⁷ These documents, referenced in Appendix 3, are 1) Preparing a Boat Facility Siting Plan, Best Management Practices for Marina Siting, A Guidebook to Assist Local Governments in Qualifying for the DRI Exemption for Marinas (March 2003); 2) Boat Facility Siting Guide (2000); and 3) Recommended Steps in Analyzing Data Towards a Manatee Protection Plan's Boat Facility Siting Element (2000).

³⁸ Preparing a Boat Facility Siting Plan, Best Management Practices for Marina Siting, A Guidebook to Assist Local Governments in Qualifying for the DRI Exemption for Marinas (March 2003), <http://www.dca.state.fl.us/fdcp/dcp/marinasiting/Files/MarinaGuide.pdf>. This document also emphasizes that the BFSP can be an avenue to an exemption to DRI (development of regional impact) requirements in statute for

three documents but focuses on data rather than processes. These requirements overlap with those for MPPs generally.

A boat facility siting plan must include:

- a. An inventory of existing boat facilities and natural resources;
- b. An evaluation of boat use and traffic patterns;
- c. Criteria on which proposed sites will be screened;
- d. A list and map of preferred locations, unacceptable locations, and locations which are acceptable with specific conditions;
- e. Appropriate dock densities; and
- f. Boat facility siting policies including a policy for the expansion of existing boat facilities.

Note that legislation passed in 2006 recommends that local governments with a coastal management element develop recreational surface water use policies in their coastal management element;³⁹ this legislation lists the same criteria for the surface water use policies as are required for the BFSP. Thus, Charlotte County's use of these criteria can fulfill both the MPP's BFSP requirements and the additional statutory planning recommendations for recreational surface water use policies.⁴⁰

The FWC developed the following steps for analyzing data for an MPP's boat facility siting element:⁴¹

- a. Identify boating activities and existing boat storage,
- b. Identify the relative use of manatees within a county,
- c. Identify areas of boat/manatee overlap,
- d. Minimize boat/manatee overlap by creating a siting policy or plan,
- e. Seagrass/SAV analysis, and
- f. Balancing manatee protection needs with zoning and other county needs.

Since DCA will review the BFSP during adoption of the BFSP as part of the local government's comprehensive plan, DCA considers the following key questions in determining whether a BFSP is sufficient:

marinas. This is no longer the case as now all marinas are exempted regardless of whether there is a BFSP. FLA. STAT. § 380.06(24)k (2009).

³⁹ Section 2, Laws of Florida ch. 2006-220 (codified at FLA. STAT. § 163.3177(6)(g)2).

⁴⁰ *Id.* (designating the same criteria for surface water use policies adopted within a county comprehensive plan with a coastal management element).

⁴¹ *See Recommended Steps in Analyzing Data Towards a Manatee Protection Plan's Boat Facility Siting Element* (2000) (providing a detailed breakdown of each step).

- Does the plan properly adopt a boating facility siting plan either directly or by reference?
- Does the plan include supporting data and analysis which demonstrates a reasonable likelihood that the siting plan or policies will adequately protect natural resources, including manatees and their habitat?
- Does the plan provide meaningful and predictable guidelines or criteria so that developers, interest groups, citizens and local government officials can review the policies and understand where marinas are allowed? If maps are not used, do the policies set forth an adequate process for determining the eligibility of potential or future sites, such as the use of a scoring system or other objective review criteria?
- Do the siting criteria address key protection concepts, such as adequate water depth, minimizing impacts to important habitats and minimizing boating interaction through high manatee concentration zones?⁴²

The DCA offers to address these questions in an “informal, courtesy” review.⁴³

DCA incorporated a comparative analysis of accepted MPP boat facility siting plans into the document “*Preparing a Boat Facility Siting Plan, Best Management Practices for Marina Siting.*” While somewhat dated—six MPPs have been developed since this analysis⁴⁴—it is still helpful to review as it indicates some themes in BFSPs. For example, BFSPs typically use either a zoning or points approach in limiting boating/slip densities.

One point for Charlotte County to be aware of when considering an MPP and BFSP is that the emphasis on protection of manatees means that greater importance is placed on *powerboats* than on *sailboats* as the former present greater risks of manatee collisions and harm. Thus, mooring fields, which are typically frequented primarily by sailboats and not powerboats, should not necessarily be calculated to have the same impact to manatee as wet/dry slips that promote or allow increased *powerboat* traffic. This is not to say that increased sailboat traffic may not have an impact on manatee. Sailboats may give rise to water quality issues through illegal discharges, although one can argue that such discharges are less likely in a mooring field than under uncontrolled anchoring. It may also be possible that a mooring field will actually aid in the protection of manatee habitat in the form of sea grass; the use of designated

⁴² Best Management Practices for Marina Siting (2003), at 9-10.

⁴³ *Id.*

⁴⁴ Plans approved since this analysis include plans for Brevard, Lee, Sarasota, Volusia, Broward, and Palm Beach counties.

moorings may be less harmful to submerged resources such as sea grass than is indiscriminate anchoring that may take place in sea grass beds.

V. Development, Adoption, and Legal Impact of MPPs and BFSPs

When developing an MPP and BFSP, FWC recommends working directly with FWC staff so that FWC and the county (or consultants) work directly together to develop the draft. The timing and amount of public input into the drafting is within the discretion of the local government; FWC recommends at least two public hearings on the initial draft document prepared by the county/consultant and FWC.

Counties required to create an MPP may adopt the entire MPP as an ordinance amending the county comprehensive land use plan but are not required to do so.⁴⁵ Even when not required to adopt the entire MPP as part of the comprehensive plan, this is encouraged as such action gives greater assurance that the MPP will be properly implemented.⁴⁶ Counties required to develop an MPP *are* required by statute to adopt the BFSP portion of their MPP as a comprehensive plan amendment.⁴⁷ While this does not apply to Charlotte County, FWC will likely expect Charlotte County to adopt the BFSP as part of Charlotte County's comprehensive plan.

An MPP or BFSP may be adopted as an amendment to a comprehensive land use plan in accordance with the procedures required by Florida Statutes sections 163.3187 – 3189, and Florida Administrative Code sections 9J-5 (review of local government comprehensive plan) and 9J-11 (submitting proposed and adopted plan amendments to the Department of Community Affairs). Note that if the BFSP is part of the recreational surface water use policy recommended by Florida Statute section 163.3177(6)(g)2, then amendment of the

⁴⁵ See generally FLA. STAT. § 379.2431(2)(t) (2009).

⁴⁶ FWC Draft Manatee Protection Plan Guidelines (2004) (“2004 Draft MPP Guidelines”) available at http://www.broward.org/bio/manatees_guidelines.htm.

The FWC encourages county/municipal governments to adopt MPPs as an amendment to the county's comprehensive plan or by county/municipal ordinance. The individual components, especially boat facility siting, should be consistent with the local comprehensive plan, ordinances, and land use codes while addressing important manatee habitat areas.

⁴⁷ FLA. STAT. § 379.2431(2)(t)3 (2009).

comprehensive plan to include these is exempt from the limitation of only two comprehensive plan amendments per year.⁴⁸

Appropriate portions of a comprehensive plan into which the MPP or BFSP can be incorporated are the conservation element⁴⁹ or the coastal management element.⁵⁰ The coastal management element of a comprehensive plan is required to include objectives for maintenance, restoration, and enhancement of the coastal zone; continued existence of viable populations of wildlife and marine life; balanced conservation principles for coastal zone resources; and proposed management and regulatory techniques, among others.⁵¹ This element must also contain policies, including regulatory and management techniques, to limit the impacts and cumulative impacts of development or redevelopment on water quality and living marine resources.⁵² The element should also identify regulatory and management techniques to establish criteria for marine siting.⁵³ The conservation element of a comprehensive land use plan is required to include an analysis of “areas of important marine habitats and threatened or endangered species.”⁵⁴ The conservation element must contain goal statements.⁵⁵ For each goal statement, objectives must be stated that address the elements of Florida Statutes section 163.3177(6)(d), and “conserve, appropriately use and protect . . . marine habitat.”⁵⁶ For each objective, the conservation element must contain policies that “address implementation activities for the . . . restriction of activities known to adversely affect the survival of endangered and threatened wildlife [and] protection and conservation of the natural functions

⁴⁸ FLA. STAT. § 163.3177(6)(g)2 (2009) (exempting recreational surface water use policy plan amendments from the limitations in FLA. STAT. § 163.3187(1)).

⁴⁹ FLA. STAT. § 163.3177(6)(d) (2009) (a comprehensive plan must include: “a conservation element for the conservation, use, and protection of natural resources in the area, including . . . water, water recharge areas . . . rivers, bays, lakes, harbors . . . wildlife [and] marine habitat[.]”).

⁵⁰ FLA. STAT. § 163.3177(6)(g) (2009).

⁵¹ FLA. STAT. § 163.3177(6)(g)(1) (2009).

⁵² FLA. ADMIN. CODE r. 9J-5.012(3)(c)1 (2009).

⁵³ FLA. ADMIN. CODE r. 9J-5.012(3)(c)9 (2009).

⁵⁴ FLA. ADMIN. CODE r. 9J-5.013(1)(a)5 (2009).

⁵⁵ FLA. ADMIN. CODE r. 9J-5.013(2)(a) (2009).

⁵⁶ FLA. ADMIN. CODE r. 9J-5.013(2)(b)4 (2009).

of . . . marine habitats.”⁵⁷ While it would be possible to place parts of the BFSP in each element, it may be best to incorporate the entire BFSP as a single part of the comprehensive plan in one element or the other so that the context and continuity of the BFSP is maintained.

When a county adopts an MPP, it may matter little whether the county expressly incorporates the MPP as a whole or the BFSP into the county’s comprehensive plan. As part of the benefit of an MPP adopted by the county is greater certainty in the permitting process, it stands to reason that permitting agencies will be using the MPP/BFSP when reviewing permits. Any work that requires a permit from the DEP, water management districts, U.S. Army Corps of Engineers, or FWC will likely be examined to see if it is compatible with the adopted MPP. This usually happens through inter-agency coordination and consultation. For example, activities that may affect manatees and which require a permit from DEP will lead to consultation of DEP with FWC, who will review the MPP. Projects requiring U.S. Army Corps of Engineers permits and that may affect manatee will result in formal or informal consultation with the U.S. Fish and Wildlife Service, which, in turn, will consult with FWC, who will base their comments on the proposed project’s compliance with the adopted MPP. Thus, an adopted MPP will impact not only the unincorporated county lands, but also incorporated municipalities within the county. In this respect, it may be wise to include municipalities in the creation of the MPP as much as feasible.

VI. Conclusion

Charlotte County would be well advised to work with FWC and DCA to develop an MPP. Counties to the north and south of Charlotte have approved MPPs. Charlotte County has manatees and manatee habitat as well as significant boating activity and infrastructure. Development of an MPP and adoption of a BFSP will help ensure that proposed projects that are consistent with the MPP and BFSP should not experience delays or problems in the permitting process due to manatee issues. Furthermore, Charlotte County is already working extensively to address marine and boating issues and is updating its comprehensive plan. The

⁵⁷ FLA. ADMIN. CODE r. 9J-5.013(2)(c)5-6 (2009).

work required to develop an MPP should be integrated into these existing efforts. Doing so will not significantly increase the burden of the existing efforts on the part of the County and, in fact, may in some ways lessen the burden as FWC has offered assistance to the County to develop a Charlotte County MPP. An MPP should increase boater safety, facilitate recreation planning, and protect estuarine habitat important for many species.⁵⁸ Finally, it is very likely that pressure for Charlotte County to develop an MPP will only increase over time, possibly via significant slowdowns and hurdles for permit reviews by state and federal agencies. Incorporating development of Charlotte County's MPP into current county processes will, in the long run, save the County from confronting the political problems associated with a permitting slow down and establishment of a separate process to develop an MPP soon after a marine planning process and comprehensive plan rewrite.

Appendix 1: Federal Manatee Information

- United States Fish and Wildlife Service Manatee Recovery Plan (2001) (“USFWS MRP”), <http://www.fws.gov/northflorida/Manatee/Recovery%20Plan/manatee-recovery-plan.htm>

Appendix 2: State of Florida Manatee Information

- Recommendations to Improve Boating Safety and Manatee Protection For Florida Waterways, Presented at the Request of the Governor and Cabinet (October 24, 1989) (referred to above as “Governor and Cabinet's October 1989 Policy Directive” or “the Directive”), http://myfwc.com/docs/WildlifeHabitats/Manatee_BS_Governor1989.pdf
- Manatee mortality info available at http://research.myfwc.com/features/category_sub.asp?id=224 1
- Florida Fish and Wildlife Commission Manatee Management Plan (2007), http://myfwc.com/docs/WildlifeHabitats/Manatee_MgmtPlan.pdf

Appendix 3: State of Florida Boating Facility Plan Information

- Preparing a Boat Facility Siting Plan, Best Management Practices for Marina Siting, A Guidebook to Assist Local Governments in Qualifying for the DRI Exemption for Marinas (March 2003),

⁵⁸ FWC, Manatee Protection Plan Guidelines (2004), available at http://www.broward.org/bio/manatees_guidelines.htm.

<http://www.dca.state.fl.us/fdcp/dcp/marinasiting/Files/MarinaGuide.pdf>

- Boat Facility Siting Guide (2000),
http://myfwc.com/docs/WildlifeHabitats/Manatee_Boatsiting2000.pdf
- Recommended Steps in Analyzing Data Towards a Manatee Protection Plan's Boat Facility Siting Element (2000),
<http://www.dca.state.fl.us/fdcp/dcp/marinasiting/Files/FFWCCrecommendations.pdf>

Appendix 4: Sample Manatee Protection Plans

- Clay County Manatee Protection Plan (January 2006),
http://myfwc.com/wildlifehabitats/Manatee_MPP.htm
- Palm Beach County Manatee Protection Plan (June 2006),
http://myfwc.com/wildlifehabitats/Manatee_MPP.htm
- Brevard County Manatee Protection Plan (January 2003),
http://myfwc.com/wildlifehabitats/Manatee_MPP.htm
- Miami-Dade Manatee Protection Plan Data and Information Collection Final Report (July 2009),
http://myfwc.com/wildlifehabitats/Manatee_MPP.htm

Appendix 5: Florida Statutes Related to Manatee and Manatee Protection

- FLA. STAT. § 15.038 – State Marine Mammal and State Saltwater Mammal (designating the manatee as the Florida state marine mammal).
- FLA. STAT. § 20.331 – Fish and Wildlife Conservation Commission (requiring any rules adopted by the FWC to be in accordance with Chapter 120, Florida Statutes).
- FLA. STAT. § 253.0345 – Special Events; Submerged Land Leases (setting forth guidelines for State issuance of permits for construction of structures for boat shows but exempting areas “where manatees are known to frequent”).
- FLA. STAT. § 253.04 – Duty of Board to Protect, etc., State Lands; State May Join In Any Action Brought (creating a duty on the part of the Board of Trustees of the Internal Improvement Trust Fund to protect manatee grass).
- FLA. STAT. § 258.42 – Maintenance of Preserves (the presence of manatees must be considered when siting multi-slip and commercial docks).

- FLA. STAT. § 327.47 – Competitive Grant Programs (requiring the FWC to develop and administer a grant program to fund manatee avoidance).
- FLA. STAT. § 373.118 – General Permits; Delegation (FL DEP may issue general permits to construct marinas and boat fields that will be exempt from Development of Regional Impact review if the development is in compliance with the county comprehensive plan and the county has implemented a MPP).
- FLA. STAT. § 373.4132 – Dry Storage Facility Permitting (no permit for construction of dry docks for 10 or more vessels shall issue without a showing of no harm to manatees).
- FLA. STAT. § 374.977 – Inland Navigation Districts; Manatee Protection Speed Zones, Responsibility for Sign Posting (FWC shall post manatee protection speed zone markers).
- FLA. STAT. § 379.2291 – Endangered and Threatened Species Act (FWC shall develop “measurable and biological goals that define manatee recovery” and use those goals in development of manatee management plans, evaluating existing and proposed protection rules and determining progress in achieving manatee recovery).
- FLA. STAT. § 379.2431 – Marine Mammals; Regulation (declaring the State of Florida a manatee protection zone; offering protection independent of the Endangered Species Act; authorizing permits to possess manatee for scientific research; prohibiting harm to manatees; requiring forfeiture of equipment used in harming manatee that is owned by the perpetrator of the harm; FWC boat speed rules shall be reviewed by counties; FWC shall give 60 days’ notice of manatee rules promulgated; county must form a boat speed rule review committee to comment on proposed rules within 60 days by addressing best available scientific evidence, seasonal factors and the balance of the public interest and manatee protection; FWC may comment on marina expansion; FWC may regulate boat speed in areas that manatee inhabit on a regular basis, including designated portions of certain counties; FWC shall regulate activity near power plants and warm water discharges; no intent to unnecessarily interfere with recreational and fishing uses of water; FWC may create boat lanes; FWC shall adopt rules for Manatee Cove and Banana River in Brevard County; FWC shall account for boating safety in rules; FWC may designate areas where manatee appear periodically and promulgate rules therefore;

FWC may designate safe haven areas to be crossed only at idle speed; local governments may regulate boat speeds except in the Florida Intracoastal Waterway; FWC shall evaluate the use of boat bumpers; penalties imposed for violations; counties in the Directive must adopt MPPs; setting forth minimum requirements for MPPs; where measurable biological goals have been achieved existing rules shall be given great weight in determining the need for additional rules)

- FLA. STAT. § 379.2432 – Manatee Protection; Intent; Conduct of Studies; Initiatives and Plans (requiring FWC to request sufficient funds to achieve the “maximum protection possible” for manatees).
- FLA. STAT. § 379.2433 – Enhanced Manatee Protection Study (requiring and setting forth guidelines for an enhanced manatee protection study).
- FLA. STAT. § 379.407 – Administration; Rules; Publications; Records; Penalties; Injunctions (deeming harm to manatees a “major violation” and setting forth penalties of \$200 to \$600 and/or 60 days imprisonment for a first offense and \$350 to \$1,100 and/or 12 months imprisonment).
- FLA. STAT. § 403.813 – Permits Issued at District Centers; Exceptions (despite exceptions otherwise, local government docks need a permit where operated near a manatee habitat).
- FLA. STAT. Const. Art. 4 § 9 – Fish and Wildlife Conservation Commission (setting forth the powers, duties and authority of the FWC).

Appendix 6: Florida Administrative Code Sections Related to Manatee

- FLA. ADMIN. CODE r. 68C-22.001 – Scope and Purpose (FWC shall regulate boat speed and operation where the “best scientific information” shows that “manatee inhabit an area on a regular basis”; protection zones are necessary where the absence of restrictions will likely result in injury, death or harassment to manatees or the destruction of essential manatee habitat; in determining whether restrictions are necessary the FWC will consider (a) patterns and intensity of boating activities, (b) seasonal patterns of manatee use, (c) the number of manatees that use the area on a regular or periodic basis, (d) the manatee mortality trends, (e) existence of features that assist or attract manatees, such as food sources, favorable water depths, and fresh or

warm water sources, (f) characteristics of the waterway; and (g) whether the Commission's measurable biological goals that define manatee recovery are being achieved in the region that is being considered; great weight to be given to achievement of measurable biological goals; balancing or recreational and fishing use against manatee needs).

- FLA. ADMIN. CODE r. 68C-22.002 – Definitions (including of note “undue interference” and “harassment”).
- FLA. ADMIN. CODE r. 68C-22.003 – Regulated Activities (including procedures for General Guidelines and Application Procedures, Law Enforcement, Emergency Situations, General Activities, Resident Access to Limited Entry Areas, Commercial Fishing and Professional Guiding, Testing of Motors or Vessels by Manufacturers, Resident Access Through Speed Controlled Areas and Boat Races).
- FLA. ADMIN. CODE r. 68C-22.004 – Management Provisions (speed markers to be in conformance with FLA. ADMIN. CODE r. 68D-23 *et seq.*).
- FLA. ADMIN. CODE r. 68C-22.005 - .026 – County Zones (§ 68C-22.005 - .015 (**Charlotte**)).
- FLA. ADMIN. CODE r. 68D-36.107 – Minimum Training Requirements for Personal Watercraft (water taxi drivers must be trained in manatee awareness)
- FLA. ADMIN. CODE r. 68D-36.107 – Waters Exempt from Permitting (aquatic plant management activity using herbicides or mechanical harvesting equipment is precluded when manatee are in the control area in exempt waters).
- FLA. ADMIN. CODE r. 68F-20.0055 – Management Method Criteria and Standards, Operations and Reporting Requirements (management activities using herbicides are precluded when manatees are present and must cease immediately upon discovery of manatees).
- FLA. ADMIN. CODE r. 68F-54.001 – Program Criteria and Standards (mechanical operations must cease when manatee are sited within 50 feet).
- FLA. ADMIN. CODE r. 15C-14.004 – Vessel Registration by Counties (county agent issuing certificate of registration and decals shall remit monies collected for manatee preservation pursuant to F.S.A. 327.22(2) to the Department of Highway Safety and Motor Vehicles.

- FLA. ADMIN. CODE r. 18-20.0004 – Management Policies Standards and Criteria (commercial docking facilities may not be sited within state designated manatee sanctuaries; manatee awareness signs are a required part of a wetland resource of environmental resource permit in areas with known manatee concentration).
- FLA. ADMIN. CODE r. 68F-20.0055 – Forms of Authorization (permit exemptions for activities on sovereign submerged lands do not apply to manatee No Entry Zones).
- FLA. ADMIN. CODE r. 18-21.021 – Applications for Aquacultural Activities (applications for docks and aquaculture related actions require a site plan showing the location of manatee protection zones).
- FLA. ADMIN. CODE r. 28-24.033-34 – Port Facilities (water ports exempt from Development of Regional Impact Review must undergo a FL DEP review to determine if the area is frequented by manatees).
- FLA. ADMIN. CODE r. 40B-400.051 – Exemptions (private and local government docking facilities do not need an environmental resource permit unless the activity will take place in a manatee habitat).
- FLA. ADMIN. CODE r. 40B-400.17 – General Permit for Construction, Alteration or Maintenance of Boat Ramps and Associated Docks (general permit does not apply to docks in certain waters accessible to manatees in Levy and Dixie counties).
- FLA. ADMIN. CODE r. 40C-4.051 – Exemptions (private and local government docking facilities do not need an environmental resource permit unless the activity will take place in a manatee habitat).
- FLA. ADMIN. CODE r. 40D-4.051 – Exemptions (private and local government docking facilities do not need an individual environmental resource permit unless the activity will take place in a manatee habitat).
- FLA. ADMIN. CODE r. 40D-8.041 – Minimum Flows (sets minimum flow for various waters including those inhabited by manatees).
- FLA. ADMIN. CODE r. 40D-400.417 – General Permit for Installation, Alteration or Maintenance of Boat Ramps and Associated Docks (general permit does not apply to docks in certain waters accessible to manatees in **Charlotte** County).

- FLA. ADMIN. CODE r. 40E-4.051 – Exemptions from Permitting (private and local government docking facilities do not need an environmental resource permit unless the activity will take place in a manatee habitat).
- FLA. ADMIN. CODE r. 40E-400.417 – General Permit for Construction, Alteration or Maintenance of Boat Ramps and Associated Docks (general permit does not apply to docks in certain waters accessible to manatees in **Charlotte** County).
- FLA. ADMIN. CODE r. 62-341.428 – General Permit for Floating Vessel Platforms and Floating Boat Lifts (construction of such vessels must be in conformance with all manatee regulations in § 68C, F.A.C.).
- FLA. ADMIN. CODE r. 62-341.490 – Noticed General Permit for Dredging by the West Coast Inland Navigation District (activities conducted within the general permit (1) instruct personnel of presence of manatees, (2) advise of civil penalties, (3) make siltation barriers, (4) operate vessels without a wake, (5) protect manatees if sited within 100 feet, (6) report injuries to manatees, (7) post temporary signs).
- FLA. ADMIN. CODE r. 62-341.490 – Conditions for Issuance of Individual Permits (applicants for dry docks of more than 10 vessels must show there are no secondary impacts and will meet the public interest, including manatee protection).
- FLA. ADMIN. CODE r. 68-1.008 – Due Process Procedures (sets forth FWC authorities in connection with manatees, including research, management and take permits).

Appendix F: Charlotte County Marine Regulatory Study

**Marine Regulatory Study
for Charlotte County Florida**

by

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with research assistance from James Choate, Esq.

Sea Grant College Program
University of Florida
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Submitted to
Charlotte County Natural Resources Program

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Coastal Regulatory Policies, Programs, and Context

A. Federal

1. Coastal Zone Management Act

The Coastal Zone Management Act requires that activities affecting a state's coastal zone receive a certification of compliance with the coastal zone management program of the affected state.¹ While the Coastal Zone Management Act is explained in more detail below (see *Part I. B. 1. Florida Coastal Management Program*), it does not present significant concerns for coastal and marine regulation or activities independent of other regulatory considerations discussed elsewhere below.

2. Water Quality Certification

According to current U.S. Army Corps of Engineers' (USACE) regulations, Charlotte County will need a certification by the State of Florida that "an activity that may result in a discharge of a pollutant into the waters of the U.S." will comply with the applicable effluent limitations and water quality standards.²

Compliance with Florida water quality standards promulgated pursuant to federal law occurs in the context of the Florida Department of Environmental Protection's (FDEP) rules and the state's environmental resource permitting (ERP) process. In the case of Charlotte County, the County may simply apply for an ERP permit from FDEP, and issuance of the permit by FDEP demonstrates compliance with water quality standards.³

In conclusion, although a water quality certification will be necessary for many marine activities, it is not expected to cause permitting impediments or obstacles beyond those included below related to a state Environmental Resource Permit.

3. Federal Marine Mammal Protection Act

¹ 33 C.F.R. § 320.3(b) (2010).

² 33 C.F.R. § 320.3(a) (2010).

³ FLA. ADMIN. CODE r. 62-343.070(9) (2010). The relationship between environmental resource permits and applications for compliance with state water quality standards is set forth in rule 62-343.070(9) of the Florida Administrative Code, as promulgated by the Florida Department of Environmental Protection (FDEP). This rule set forth that essentially, the application for, and issuance of, a state environmental resource permit constitutes an application for, and issuance of, water quality certification, unless the permit states otherwise. See FLA. ADMIN. CODE r. 62-343.070(9) (2010).

“The Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 *et seq.*) expresses the intent of Congress that marine mammals be protected and encouraged to develop in order to maintain the health and stability of the marine ecosystem. The Act imposes a perpetual moratorium on the harassment, hunting, capturing, or killing of marine mammals and on the importation of marine mammals and marine mammal products without a permit from either the Secretary of the Interior or the Secretary of Commerce, depending upon the species of marine mammal involved. Such permits may be issued only for purposes of scientific research and for public display if the purpose is consistent with the policies of the Act. The appropriate Secretary is also empowered in certain restricted circumstances to waive the requirements of the Act.”⁴

In 2003, the U.S. Fish and Wildlife Service (USFWS) contemplated issuing MMPA Incidental Take Regulations for the Florida Manatee.⁵ Ultimately, the USFWS determined that it was not able to find that “incidental take [would] have a negligible impact on any of four stocks of Florida manatee.”⁶ As a result, the USFWS withdrew its November 2002 MMPA Proposed Rule to authorize the incidental take of Florida manatees.⁷

Further, on May 7, 2003, the USFWS rescinded a January 22, 2003 Memorandum entitled “Consultation Procedures to be Followed for All Watercraft-related Access Activities Occurring with Peninsular Florida,” and directed that Endangered Species Act (ESA) consultations for government activities pertaining to watercraft-related access should follow standard ESA § 7 procedures.⁸

In sum, while the MMPA prohibits “take” of marine mammals, as long as marine activities do not significantly threaten manatee and are not interfering with a manatee warm-water refuge, the MMPA should not constitute a significant concern.

⁴ 33 C.F.R. § 320.3(k) (2010).

⁵ <http://www.fws.gov/northflorida/Manatee/federal-manatee-MMPA-regs.htm>.

⁶ RECORD OF DECISION PROPOSED RULEMAKING FOR THE INCIDENTAL TAKE OF SMALL NUMBERS OF FLORIDA MANATEES (*Trichechus manatus latirostris*) RESULTING FROM GOVERNMENT PROGRAMS RELATED TO WATERCRAFT OPERATION AND WATERCRAFT ACCESS IN THE STATE OF FLORIDA, 1 (May 5, 2003), http://www.fws.gov/northflorida/Manatee/Documents/MMPARules/Record-of-Decision-May-2003/ROD%2005_05_03.pdf.

⁷ *Id.*

⁸ <http://www.fws.gov/northflorida/Manatee/Documents/policies/directors-rescission-memo-050703.htm>.

B. State

1. Florida Coastal Management Program

The federal Coastal Zone Management Act⁹ (CZMA) includes a section requiring that federal agency activity (i.e. federal funding or permitting) that “affects any land or water use or natural resource of the coastal zone” must, to the maximum extent practicable, be consistent with policies of the state that are approved as part of the state’s coastal management program.¹⁰ This right of Florida to review federal actions or federally-funded projects is known as “federal consistency.”

Florida’s approved coastal management program includes parts of twenty-four different state statutes, including statutes related to beach management,¹¹ comprehensive planning,¹² state lands,¹³ transportation,¹⁴ and environmental protection,¹⁵ among others.¹⁶

Federal consistency review is implemented in Florida through the coordination of nine state agencies and Florida’s five water management districts. The Florida State Clearinghouse¹⁷ within FDEP administers federal consistency review in Florida. Projects requiring federal consistency review may be submitted to the Clearinghouse, which will then forward the information to appropriate agencies and collect the responses from involved agencies. If an agency finds an inconsistency, it must identify with which statute the proposal conflicts and give alternatives, if possible, that would allow for a finding of consistency with the Florida Coastal Management Program.

⁹ 16 U.S.C. § 1451, *et seq.*

¹⁰ Coastal Zone Management Act § 307 (16 U.S.C. §1456).

¹¹ FLA. STAT. Chapters 161 (Beach and Shore Preservation) and 553 (Building and Construction Standards).

¹² FLA. STAT. Chapters 163, Part II and 186 (State and Regional Planning).

¹³ FLA. STAT. Chapters 253 (State Lands) and 258 (State Parks and Preserves).

¹⁴ FLA. STAT. Chapters 334 (Transportation Administration) and 339 (Transportation and Finance).

¹⁵ FLA. STAT. Chapters 373 (Water Resources), 376 (Pollutant Discharge Prevention and Removal), 403 (Environmental Control), and 582 (Soil and Water Conservation).

¹⁶ Relevant statutes and regulations are available at:
<http://www.dep.state.fl.us/cmp/federal/laws.htm>.

¹⁷ http://www.dep.state.fl.us/secretary/oip/state_clearinghouse/.

Florida Statute section 380.23(6) gives review authority to each agency that has authority under one of the twenty-four statutes that comprises Florida's Coastal Management Program.¹⁸ FDEP, the Florida Fish and Wildlife Conservation Commission, and other Florida agencies thus maintain significant authority to impact federally-permitted and federally-funded projects in Florida's coastal zone and even some projects that extend beyond Florida's coastal zone.

Most marine activities will not likely have to go through the Florida State Clearinghouse for federal consistency review since state-issued environmental resource permits (ERPs) (Part IV, Chapter 373, Fla. Statutes) will be needed. ERPs, when issued, serve as notice of the State of Florida's finding of consistency for federally-licensed or federally-permitted activities.¹⁹ Federal permits/approvals are addressed in *Part III. A.* (Federal), and involve the United States Army Corps of Engineers, U.S. Coast Guard, Environmental Protection Agency, and U.S. Fish and Wildlife Service. For more information on federal consistency in Florida, see: <http://www.dep.state.fl.us/cmp/federal/index.htm>.

In conclusion, it is not expected that the Florida Coastal Management Program will contain impediments to most marine activities other than impediments already included elsewhere in this document.

2. Florida Division of Aquaculture / Florida Department of Environmental Protection

The Florida Division of Aquaculture, part of the Florida Department of Agriculture and Consumer Services (FDACS), classifies waters for the suitability of harvesting molluscan shellfish (Oysters, Clams, and Mussels) based on public health concerns.²⁰ One of the potential pollution sources that FDACS must consider (as part of the U.S. Food and Drug Administration National Shellfish Sanitation Program) is the impact of marine traffic. In light of this requirement, FDACS has regulations requiring commercial and recreational boaters engaged in molluscan shellfish harvesting to have an approved marine sanitation device (or other suitable container) on board the vessel.²¹

¹⁸ FWC's specific authority under Florida's approved Coastal Management Program includes Florida Statutes Chapter 379, Fish and Wildlife Conservation (except sections 379.2551 and 379.362).

¹⁹ FLA. STAT. § 380.23(1) (2010).

²⁰ FLA. ADMIN. CODE r. 5L-1.003 (2010).

²¹ FLA. ADMIN. CODE r. 5I-1.008(3) (2010).

FDACS will generally not allow molluscan shellfish harvesting in and around marinas or docking facilities. FDACS' maps classify potential shellfish harvesting waters as follows:

- (1) Approved area - an area in which it is indicated by a sanitary survey or other monitoring program data that fecal material, pathogenic microorganisms, radio nuclides, harmful chemicals, and marine biotoxins are not present in dangerous concentrations.²²
- (2) Closed area (closed waters) - a growing area where the harvesting of shellfish is not permitted. Closed areas include prohibited and unclassified areas as well as temporarily closed approved, conditionally approved, restricted, and conditionally restricted areas.²³
- (3) Conditionally approved area - an area in which it is indicated by a sanitary survey or other monitoring program data that the area is subjected to intermittent microbiological pollution and, under such conditions, is temporarily unsuitable as a source of shellfish for direct marketing. Such an area shall be managed by an operating procedure that will assure that shellfish from the area are not harvested from waters not meeting approved area criteria.²⁴
- (4) Conditionally restricted area - an area in which it is indicated by a sanitary survey or other monitoring program data that the area is subjected to intermittent microbiological pollution and, under such conditions, is temporarily unsuitable as a source of shellfish for relaying or depuration. Such an area shall be managed by an operating procedure that will assure that shellfish from the area are not harvested from waters not meeting restricted area criteria.²⁵
- (5) Prohibited area - an area from which the taking of shellfish is not permitted.²⁶
- (6) Restricted area - an area in which it is indicated by a sanitary survey or other monitoring program data that fecal material, pathogenic microorganisms, radio nuclides, harmful chemicals, and marine biotoxins are not present in dangerous concentrations such that shellfish harvested from such an area and subjected to a suitable and effective purification process are safe for human consumption.²⁷

²² FLA. ADMIN. CODE r. 5L-1.002(3) (2010).

²³ FLA. ADMIN. CODE r. 5L-1.002(6) (2010).

²⁴ FLA. ADMIN. CODE r. 5L-1.002(9) (2010).

²⁵ FLA. ADMIN. CODE r. 5L-1.002(10) (2010).

²⁶ FLA. ADMIN. CODE r. 5L-1.002(44) (2010).

²⁷ FLA. ADMIN. CODE r. 5L-1.002(50) (2010).

(7) Unclassified area - an area for which no recent sanitary survey exists.²⁸

Although FDACS strongly recommends that anchoring and mooring not be permitted in or near any shellfish harvesting waters, FDEP is ultimately responsible for permit determinations related to mooring and docking, and certain other marine activities.²⁹ Accordingly, FDEP is required by rule to deny permits for proposed activities if the permit would result in FDACS closing shellfish harvesting waters.³⁰ Specifically within Charlotte County, FDEP will apply Rule 3.2.5 of the Basis of Review for Environmental Resource Permit Applications, as issued by the Southwest Florida Water Management District (SWFWMD).³¹ Rule 3.2.5, Basis of Review for Environmental Resource Permit Applications³² states as follows:

3.2.5 Class II Waters; Waters Approved for Shellfish Harvesting.

The special value and importance of shellfish harvesting waters to Florida's economy as existing or potential sites of commercial and recreational shellfish harvesting and as a nursery area for fish and shellfish is recognized by the District.³³ In accordance with section 3.1.1(d), the District shall:

a. deny a permit for a regulated activity in Class II waters which are not approved for shellfish harvesting unless the applicant submits a plan or proposes a procedure to protect those waters and waters in the vicinity. The plan or procedure shall detail the measures to be taken to prevent significant damage to the immediate project area and the adjacent area and shall provide reasonable assurance that the standards for Class II waters will not be violated;

²⁸ FLA. ADMIN. CODE r. 5L-1.1002(68) (2010).

²⁹ Under operating agreements between Florida's water management districts and FDEP, FDEP has the responsibility for permitting various marine activities (e.g. docking facilities, boardwalks, shore protection structures, etc.). See *Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S., Between Southwest Florida Water Management District and Department of Environmental Protection*, section II.A.1. (July 1, 2007).

³⁰ See FLA. ADMIN. CODE r. 62-330.200(3)(b) (2010); Table 62-330.200(3)-2. (2010).

³¹ *Id.*

³² Southwest Florida Water Management District, *Environmental Resource Permit Applications within the Southwest Florida Water Management District: Management and Storage of Surface Waters*, Part B, B3-8 (Sept. 5, 2009).

³³ Southwest Florida Water Management District.

b. deny a permit for a regulated activity in any class of waters where the location of the system is adjacent or in close proximity to Class II waters, unless the applicant submits a plan or proposes a procedure which demonstrates that the regulated activity will not have a negative effect on the Class II waters and will not result in violations of water quality standards in the Class II waters;

c. deny a permit for a regulated activity that is located directly in Class II or Class III waters which are classified as approved, restricted, conditionally approved, or conditionally restricted for shellfish harvesting. This provision shall not apply to maintenance dredging of navigational channels, the construction of shoreline protection structures, the installation of transmission and distribution lines for carrying potable water, electricity or communication cables in rights-of-way previously used for such lines, for clam and oyster culture, and for private, single family boat docks that meet the following criteria for installation in such waters:

1. there shall be no more than two boats moored at the dock;
2. no overboard discharges of trash, human or animal waste, or fuel shall occur at the dock;
3. any non-water dependent structures, such as gazebos or fish cleaning stations, shall be located on the uplands;
4. prior to the mooring of any boat at the dock, there shall be existing structures with toilet facilities located on the uplands;
5. any proposed shelter shall not have enclosed sides;
6. the mooring area shall be located in waters sufficiently deep to prevent bottom scour by boat propellers; and
7. any structures located over grassbeds shall be designed so as to allow for the maximum light penetration practicable.³⁴

Thus, according to SWFWMD Rule 3.2.5, FDEP will likely *deny* permit requests for activities in the following waters, as classified by FDACS:

³⁴ *Id.*

- (1) Approved;
- (2) Restricted;
- (3) Conditionally approved; and
- (4) Conditionally restricted for shellfish harvesting.³⁵

Further, in light of SWFWMD Rule 3.2.5, FDEP will potentially *grant* permit requests for activities in the following waters, as classified by FDACS:

- (1) Unclassified and
- (2) Prohibited.³⁶

Because “unclassified” and “prohibited” area classifications do not allow shellfish harvesting, FDEP may be able to issue permits for marine activities in these areas if proposed activities do not threaten other resources.

Charlotte County contains the following three (3) shellfish harvesting areas.³⁷

- (1) Myakka River (#60) Shellfish Harvesting Area in Charlotte and Sarasota Counties / Map #60³⁸
- (2) Lemon Bay (#5602) Shellfish Harvesting Area in Charlotte and Sarasota Counties / Map #56³⁹
- (3) Gasparilla Sound (#58) Shellfish Harvesting Area in Charlotte and Lee Counties / Map #58⁴⁰

For the current status of shellfish harvesting waters, see:

http://shellfish.floridaaquaculture.com/seas/seas_southgulf.htm.

In conclusion, shellfish harvesting waters severely limit any marine activities requiring an ERP permit from FDEP. Currently, and as explained above, it appears that “prohibited waters” and “unclassified” (as classified by FDACS in regards to shellfish

³⁵ Southwest Florida Water Management District, *Environmental Resource Permit Applications within the Southwest Florida Water Management District: Management and Storage of Surface Waters*, Part B, B3-8 (Sept. 5, 2010).

³⁶ *Id.*

³⁷ http://www.floridaaquaculture.com/seas/seas_shamap.htm.

³⁸ <http://www.floridaaquaculture.com/pdfmaps/60.pdf>.

³⁹ <http://www.floridaaquaculture.com/pdfmaps/56.pdf>.

⁴⁰ <http://www.floridaaquaculture.com/pdfmaps/58.pdf>.

harvesting) would be the only permissible areas for marine activities requiring an ERP permit from FDEP.

3. Relevant Recent State Developments in the Law

i. 2005-158 / General Permits for Local Governments

In 2005, the Florida Legislature passed a law requiring that the Florida Department of Environmental Protection (FDEP) establish one or more general permits for local governments to construct, operate, and maintain various water-related facilities (e.g. public marina facilities, public mooring fields, public boat ramps, including associated courtesy docks, and associated parking facilities located in uplands).⁴¹ Pre-existing noticed general permits allowed for construction of certain boat ramps and accessory docks,⁴² certain piers and associated structures,⁴³ and floating vessel platforms and floating boat lifts.⁴⁴ After holding a series of public meetings to gain public input on the new law, FDEP concluded that, as far as public mooring fields, a general permit would not be feasible.

For more information regarding general permits in Charlotte County, see:

⁴¹ Laws of Florida 2005-158, sec. 6, codified at FLA. STAT. § 373.118(4) (2009). In its entirety, the relevant subsection reads:

The department shall adopt by rule one or more general permits for local governments to construct, operate, and maintain public marina facilities, public mooring fields, public boat ramps, including associated courtesy docks, and associated parking facilities located in uplands. Such general permits adopted by rule shall include provisions to ensure compliance with part IV of this chapter, subsection (1), and the criteria necessary to include the general permits in a state programmatic general permit issued by the United States Army Corps of Engineers under s. 404 of the Clean Water Act, Pub. L. No. 92-500, as amended, 33 U.S.C. ss. 1251 et seq. A facility authorized under such general permits is exempt from review as a development of regional impact if the facility complies with the comprehensive plan of the applicable local government. Such facilities shall be consistent with the local government manatee protection plan required pursuant to chapter 379 and shall obtain Clean Marina Program status prior to opening for operation and maintain that status for the life of the facility. Marinas and mooring fields authorized under any such general permit shall not exceed an area of 50,000 square feet over wetlands and other surface waters. All facilities permitted under this section shall be constructed, maintained, and operated in perpetuity for the exclusive use of the general public. The department shall initiate the rulemaking process within 60 days after the effective date of this act.

⁴² FLA. ADMIN. CODE r. 62-341.417 (2010).

⁴³ FLA. ADMIN. CODE r. 62-341.427 (2010).

⁴⁴ FLA. ADMIN. CODE r. 62-341.428 (2010).

<http://www.dep.state.fl.us/south/ERP/ERP.htm>. FDEP's district office covering Charlotte County is the South District Office, 2295 Victoria Ave., Suite 364, Fort Meyers, FL 33902-2549. The phone number for the South District Office is 239-344-5600.

ii. Pilot Program for Mooring Fields and Anchoring Regulation

In 2009, the Florida Legislature passed a law creating a pilot program for local governments to create public mooring fields and simultaneously gain the authority to regulate anchoring of non-liveaboard vessels *outside* the boundaries of a mooring field.⁴⁵ Any such ordinance, however, must first be approved by the Florida Fish and Wildlife Conservation Commission before it becomes enforceable.⁴⁶ Without participating in the pilot project, a local government is forbidden from regulating the anchoring of non-liveaboard vessels outside the boundaries of an established mooring field.⁴⁷ The pilot program areas are to be associated with properly permitted mooring fields.⁴⁸

Charlotte County is not participating in this pilot program. Existence of the program will have no specific positive or negative impact on the siting or permitting of a mooring field in Charlotte County.

iii. Working Waterfronts Legislation

For more information regarding the Working Waterfronts Legislation of 2005 and 2006, see *Part II. D. 1. (Working Waterfronts Legislation)*.

4. Water Management Districts / Florida Department of Environmental Protection

Most of Charlotte County is located within the Southwest Florida Water Management District (SWFWMD),⁴⁹ although a small portion at the southern end of the county crosses into the South Florida Water Management District (SFWMD).⁵⁰

⁴⁵ Laws of Florida Chapter 2009-086, section 48, codified at FLA. STAT. § 327.4105.

⁴⁶ FLA. STAT. § 327.4105(3) (2010).

⁴⁷ FLA. STAT. § 327.60(2)(f) (2010).

⁴⁸ FLA. STAT. § 327.4105 (2010).

⁴⁹ FLA. STAT. § 373.069(2)(d) (2010).

⁵⁰ FLA. STAT. § 373.069(2)(e) (2010).

Under operating agreements between Florida’s water management districts and FDEP, FDEP has responsibility for permitting for marine activities/structures including docking facilities, boardwalks, shore protection structures and piers, and the adjacent docking and boating related development and navigational dredging.⁵¹ Since the SWFWMD will seldom ever exercise its permitting authority under the operating agreement between it and FDEP, no SWFWMD permitting information is included here. For more information regarding FDEP’s permitting process, see *Part III. B. 1.* (Florida Department of Environmental Protection).

In sum, although SWFWMD rules may be applicable for various marine-related permit decisions, such rules will typically be enforced by FDEP (as explained in the section covering FDEP’s permitting process (e.g. *Part III. B. 1.*, as well as *Part I. B. 2.*)).

5. Regional Planning Councils

The Southwest Florida Regional Planning Council (SWFRPC) is the regional planning council serving Charlotte County.⁵² SWFRPC is an area-wide association of local governments serving the six counties of Charlotte, Collier, Glades, Hendry, Lee, and Sarasota,⁵³ and is one of eleven Florida regional planning councils mandated by Chapter 186 of the Florida Statutes.⁵⁴ F.S. 186 establishes the powers and responsibilities for RPCs.⁵⁵

SWFRPC publications can be found at: <http://www.swfrpc.org/resources.html>.

For more information, SWFRPC can be contacted at:

Southwest Florida Regional Planning Council
1926 Victoria Avenue
Fort Myers, Florida 33901
Phone: 239-338-2550

⁵¹ *Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S., Between Southwest Florida Water Management District and Department of Environmental Protection*, section II.A.1.i. and II.A.1.o. (July 1, 2007). (“Adjacent docking and boating related development includes parking areas for the docking facility, dry storage facilities, boat sale and supply facilities, maintenance and repair facilities, associated seafood loading and processing facilities, restaurants, harbor master and marina administration facilities.”).

⁵² <http://www.swfrpc.org/about.html>.

⁵³ <http://www.swfrpc.org/about.html>.

⁵⁴ <http://www.swfrpc.org/about.html>.

⁵⁵ <http://www.swfrpc.org/about.html>.

Fax: 239-338-2560

Suncom: 749-7720

Fax: 749-7724

<http://www.swfrpc.org/index.shtml>

The role of SWFRPC is to serve as a technical and coordination entity rather than as a permitting entity. Thus, the SWFRPC should have little or no direct impact on Charlotte County's marine activities other than to serve as a resource for planning issues.

6. Classes of Waters of the State

All surface waters of the State of Florida have been classified according to designated uses as follows:⁵⁶

- CLASS I Potable Water Supplies (*most stringent* water quality criteria)
- CLASS II Shellfish Propagation or Harvesting
- CLASS III Recreation, Propagation, and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife
- CLASS IV Agricultural Water Supplies
- CLASS V Navigation, Utility, and Industrial Use⁵⁷ (*least restrictive* water quality criteria)

"The surface waters of the State of Florida are classified as Class III - Recreation, Propagation, and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife, except for certain waters which are described in this subsection 62-302.400(12), F.A.C."⁵⁸ Thus, in Charlotte County, all waters are Class III waters, with the exception of the following listed water bodies (classified as Class I or Class II).⁵⁹

- CLASS I Alligator Creek - North and South Prongs from headwaters to the water control structure downstream of SR 765-A.

Port Charlotte Canal System - Surface waters lying upstream of, or directly connected to, Fordham Waterway upstream of Conway Boulevard.

⁵⁶ FLA. ADMIN. CODE r. 62-302.400(1) (2010).

⁵⁷ *Id.*

⁵⁸ FLA. ADMIN. CODE r. 62-302.400(10) (2010).

⁵⁹ FLA. ADMIN. CODE r. 62-302.400(12)(b)8 (2010).

Prairie Creek - DeSoto County Line and headwaters to Shell Creek.

Shell Creek - Headwaters to Hendrickson Dam (east of Myrtle Slough in Section 20, T40S, R24E).

CLASS II Lemon Bay, Placida Harbor, and Tributaries - Northern Charlotte County Line south to Gasparilla Sound and bounded on the east by SR 775.

Charlotte Harbor, Myakka River, and Gasparilla South - Waters except Peace River upstream from the northeastern point of Myakka Cutoff to the boat ramp in Ponce de Leon Park in south Punta Gorda, Catfish Creek north of N. Lat. 26 [degrees] 50' 56", and Whidden Creek north of N. Lat. 26 [degrees] 51' 15."⁶⁰

The water classification of an area can significantly limit permissible activities. For example, Class II waters are subject to additional permit requirements.⁶¹ Also relevant, Class II waters potentially limit permissible activities as explained in *Part I. B. 2.* (Florida Department of Aquaculture / Florida Department of Environmental Protection).

In conclusion, water bodies classified as Class II waters require consideration of additional criteria for an ERP permit from FDEP or SWFWMD.

7. Outstanding Florida Waters

Outstanding Florida Waters (OFWs) receive the highest protection of any water body within the State of Florida, with the Florida Department of Environmental Protection (FDEP) acting as the agency responsible for administering the OFW program. FDEP rules set forth that "[n]o degradation of water quality, other than that allowed in subsections 62-4.242(2) and (3), F.A.C., is to be permitted in Outstanding Florida Waters and Outstanding National Resource Waters, respectively."⁶² Thus, 62-4.242(2), F.A.C. states that "[n]o Department permit or water quality certification shall be issued for any proposed activity or discharge within an Outstanding Florida Waters, or which significantly degrades, either alone or in combination with other stationary installations, any Outstanding Florida Waters, unless the applicant affirmatively demonstrates that"⁶³

⁶⁰*Id.*

⁶¹ FLA. ADMIN. CODE r. 40D-4.302(1)(c) (2010).

⁶² FLA. ADMIN. CODE r. 62-302.700(1) (2010).

⁶³ FLA. ADMIN. CODE r. 62-4.242(2) (2010).

the “proposed activity of discharge is clearly in the public interest,”⁶⁴ *and*, that the “existing ambient water quality within Outstanding Florida Waters will not be lowered as a result of the proposed activity or discharge, except on a temporary basis during construction for a period not to exceed thirty days.”⁶⁵

Further, 62-4.242(3)(a), F.A.C. states that “[a]ll discharges or activities that may cause degradation of water quality in Outstanding National Resource Waters are prohibited,” but allows an exception⁶⁶ where “the proposed activity of discharge is clearly in the public interest.”⁶⁷

In Florida, “[a] water body may be designated as an Outstanding Florida Water or an Outstanding National Resource Water in addition to being classified as Class I, Class II, or Class III. A water body may also have special standards applied to it. Outstanding Florida Waters and Outstanding National Resource Waters are listed in Rule 62-302.700, F.A.C.”⁶⁸

Currently, Charlotte County contains OFWs within one National Wildlife Refuge, two State Recreation Areas, one State Reserve, three State Aquatic Preserves, and one Special Waters, for a total of eight OFW-designated water bodies. These OFWs are set forth below:

Charlotte County OFWs within National Wildlife Refuges.⁶⁹

(1) Island Bay⁷⁰ Charlotte County

Charlotte County OFWs within State Parks, State Wildlife Parks, and State Recreation Areas.⁷¹

(1) Don Pedro Island Charlotte County
State Recreation Area⁷²

⁶⁴ FLA. ADMIN. CODE r. 62-4.242(2)(a)2 (2010).

⁶⁵ FLA. ADMIN. CODE r. 62-4.242(2)(a)2.b (2010).

⁶⁶ FLA. ADMIN. CODE r. 62-4.242(3)(a)2 (2010) (exempting § 62-4.242(2)(a)2).

⁶⁷ FLA. ADMIN. CODE r. 62-4.242(2)(a)2 (2010).

⁶⁸ FLA. ADMIN. CODE r. 62-302.400(10) (2010).

⁶⁹ FLA. ADMIN. CODE r. 62-302.700(b) (2010).

⁷⁰ FLA. ADMIN. CODE r. 62-302.700(b)12 (2010).

⁷¹ FLA. ADMIN. CODE r. 62-302.700(c) (2010).

⁷² FLA. ADMIN. CODE r. 62-302.700(c)18 (2010).

(5-14-86; as mod.
4-19-88)

- (2) Port Charlotte Beach Charlotte County
State Recreation Area⁷³
(12-1-82)

Charlotte County OFWs within State Preserves, State Underwater Archaeological Preserves, and State Reserves.⁷⁴

- (1) Charlotte Harbor Charlotte County
State Reserve⁷⁵
(as mod. 4-19-88)

Charlotte County OFWs within State Aquatic Preserves.⁷⁶

- (1) Cape Haze⁷⁷ Charlotte County / Lee County
- (2) Gasparilla Sound- Charlotte County / Lee County
Charlotte Harbor⁷⁸
(as mod. 10-4-90)
- (3) Lemon Bay⁷⁹ Charlotte County / Sarasota County
(4-19-88; as mod.
10-4-90)

Charlotte County Special Waters.⁸⁰

- (1) Myakka River⁸¹ Charlotte County / Sarasota County
between State Road 771
(El Jobean Bridge) and

⁷³ FLA. ADMIN. CODE r. 62-302.700(c)66 (2010).

⁷⁴ FLA. ADMIN. CODE r. 62-302.700(e) (2010).

⁷⁵ FLA. ADMIN. CODE r. 62-302.700(e)4 (2010).

⁷⁶ FLA. ADMIN. CODE r. 62-302.700(h) (2010).

⁷⁷ FLA. ADMIN. CODE r. 62-302.700(h)8 (2010).

⁷⁸ FLA. ADMIN. CODE r. 62-302.700(h)15 (2010).

⁷⁹ FLA. ADMIN. CODE r. 62-302.700(h)22 (2010).

⁸⁰ FLA. ADMIN. CODE r. 62-302.700(i) (2010).

⁸¹ FLA. ADMIN. CODE r. 62-302.700(i)22 (2010).

the Charlotte-Sarasota County line, except for artificial water bodies, defined as any water body created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (4-19-88).

In conclusion, marine activities requiring an ERP permit that are proposed in OFWs will be held to a higher permitting standard. To receive a mooring permit within an OFW, the applicant must demonstrate that the activity is “clearly in the public interest” rather than just demonstrating that the activity is not contrary to the public interest⁸² as set out in the ERP permitting guidelines.⁸³ While the permitting guidelines give detail on what factors will be considered, they give little guidance as to the additional burden “clearly in the public interest” represents over “not contrary to the public interest.” In any case, a recreational activity that does not damage resources should be considered “clearly in the public interest” due to its direct benefit to the public.

8. Aquatic Preserves

Florida statutory law defines an “aquatic preserve” as “an exceptional area of submerged lands and its associated waters set aside for being maintained essentially in its natural or existing condition.”⁸⁴ Each aquatic preserve in Florida requires

⁸² “Additional criteria for activities in surface waters and wetlands. As part of an applicant’s demonstration that an activity regulated under this part will not be harmful to the water resources or will not be inconsistent with the overall objectives of the district, the governing board or the department shall require the applicant to provide reasonable assurance that state water quality standards applicable to waters as defined in s. 403.031(13) will not be violated and reasonable assurance that such activity in, on, or over surface waters or wetlands, as delineated in s. 373.421(1), is not contrary to the public interest. However, if such an activity significantly degrades or is within an Outstanding Florida Water, as provided by department rule, the applicant must provide reasonable assurance that the proposed activity will be clearly in the public interest.” FLA. STAT. § 373.414(1) (2010).

⁸³ See the SWFWMD’s Part B: Basis for Review of ERPs (http://www.swfwmd.state.fl.us/files/database/site_file_sets/17/erp_basis_of_review.pdf).

⁸⁴ FLA. STAT. § 258.37(1) (2010).

designation⁸⁵ as one or more of the following principal types: (1) Biological;⁸⁶ (2) Aesthetic;⁸⁷ and/or (3) Scientific.⁸⁸ Charlotte County contains the following three aquatic preserves.⁸⁹

- (1) Cape Haze Aquatic Preserve,⁹⁰
- (2) Gasparilla Sound-Charlotte Harbor Aquatic Preserve,⁹¹ and
- (3) Lemon Bay Aquatic Preserve.⁹²

Sovereign submerged lands within an aquatic preserve are subject to additional statutory limitations (which apply to moorings under the definition of “dock”);⁹³ the statute does not prohibit mooring fields within preserves.⁹⁴ Additional administrative rules implement the additional protections and permitting requirements for aquatic preserves.⁹⁵ These rules are contained in Chapter 18-20, F.A.C. (Florida Aquatic Preserves) and complement the regulations for all sovereignty submerged lands contained in Chapter 18-21, F.A.C. (Sovereignty Submerged Lands Management). Chapter 18-21 is addressed in *Part III. B. 2.* (Board of Trustees of the Internal Improvement Trust Fund) below.

i. Chapter 18-20, F.A.C. (Florida Aquatic Preserves)

Chapter 18-20, F.A.C. defines⁹⁶ “preserve or aquatic preserve” as:

⁸⁵ FLA. STAT. § 258.38 (2010).

⁸⁶ “‘Biological type’ means an area set aside to promote certain forms of animal or plant life or their supporting habitat.” FLA. STAT. § 258.37 (2010).

⁸⁷ “‘Aesthetic type’ means an area set aside to maintain certain scenic qualities or amenities.” FLA. STAT. § 258.37 (2010).

⁸⁸ “‘Scientific type’ means an area set aside to maintain certain qualities or features which have scientific value or significance.” FLA. STAT. § 258.37 (2010).

⁸⁹ FLA. STAT. § 258.39 (2010).

⁹⁰ FLA. STAT. § 258.39(29) (2010). This same statutory section gives a metes and bounds description of the preserve.

⁹¹ FLA. STAT. § 258.392 (2010). This same statutory section gives a metes and bounds description of the preserve.

⁹² FLA. STAT. § 258.3925 (2010). This same statutory section gives a metes and bounds description of the preserve.

⁹³ FLA. STAT. § 258.42 (2010).

⁹⁴ FLA. STAT. § 258.42(e)(3)e (2010).

⁹⁵ See FLA. ADMIN. CODE r. 18-20 (2010).

⁹⁶ “Aquatic preserve” is also defined in FLA. STAT. § 258.37(1) (2010).

any and all of those areas which are exceptional areas of sovereignty lands and the associated water body so designated in Part II of Chapter 258, Florida Statutes, including all sovereignty lands, title to which is vested in the Board, and such other lands as the Board may acquire or approve for inclusion by the Legislature. These areas also include the water column over such lands, which have been set aside to be maintained in an essentially natural or existing condition of indigenous flora and fauna and their supporting habitat and the natural scenic qualities and amenities thereof.

Further, section 18-20.004, F.A.C. sets forth the management policies, standards, and criteria for

“activities on sovereignty lands within aquatic preserves.”⁹⁷ These include strict limitations on bulkheading and filling⁹⁸ and limitations on dredging.⁹⁹ In applying aquatic preserve rules to docks, the following requirements apply:

STANDARDS AND CRITERIA FOR DOCKING FACILITIES¹⁰⁰

(a) All docking facilities, whether for private residential single-family docks, private residential multi-slip docks, or commercial, industrial, or other revenue generating/income related docks or public docks or piers, shall be subject to all of the following standards and criteria.

1. No dock shall extend waterward of the mean or ordinary high water line more than 500 feet or 20 percent of the width of the waterbody at that particular location, whichever is less.

2. Certain docks fall within areas of significant biological, scientific, historic or aesthetic value and require special management considerations. The Board shall require design modifications based on site specific conditions to minimize adverse impacts to these resources, such as relocating docks to avoid vegetation or altering configurations to minimize shading.

3. Docking facilities shall be designed to ensure that vessel use will not

⁹⁷ FLA. ADMIN. CODE r. 18-20.004 (2010).

⁹⁸ FLA. ADMIN. CODE r. 18-20.004(1)(c) (2010).

⁹⁹ FLA. ADMIN. CODE r. 18-20.004(1)(d) (2010).

¹⁰⁰ FLA. ADMIN. CODE r. 18-20.004(5) (2010).

cause harm to site-specific resources. The design shall consider the number, lengths, drafts, and types of vessels allowed to use the facility.

4. In a Resource Protection Area 1 or 2, any wood planking used to construct the walkway surface of a facility shall be no more than eight inches wide and spaced no less than one-half inch apart after shrinkage. Walkway surfaces constructed of material other than wood shall be designed to provide light penetration which meets or exceeds the light penetration provided by wood construction.

5. In a Resource Protection Area 1 or 2, the main access dock shall be elevated a minimum of five (5) feet above mean or ordinary high water.

6. Existing docking facilities constructed in conformance with previously applicable rules of the Board and in conformance with applicable rules of the Department are authorized to be maintained for continued use subject to the current requirements of Chapter 18-21, Florida Administrative Code. Should more than 50 percent of a nonconforming structure fall into a state of disrepair or be destroyed as a result of any natural or manmade force, the entire structure shall be brought into full compliance with the current rules of the Board. This shall not be construed to prevent routine repair.¹⁰¹

The following categories provide further, more-tailored regulation based upon dock-type:

- (1) Private residential single-family docks;¹⁰²
- (2) Private residential multi-slip docks;¹⁰³ or
- (3) Commercial, industrial, or other revenue generating/income related docks or public docks or piers).¹⁰⁴

“Persons interested in obtaining details of particular preserves should contact the Office of Coastal and Aquatic Managed Areas, Department of Environmental Protection, 3900 Commonwealth Blvd., Mail Station 235, Tallahassee, FL 32399 (telephone: (850) 245-2094; website: <http://www.dep.state.fl.us/coastal/>).”¹⁰⁵

¹⁰¹ FLA. ADMIN. CODE r. 18-20.004(5)(a) (2010).

¹⁰² See FLA. ADMIN. CODE r. 18-20.004(5)(b) (2010).

¹⁰³ See FLA. ADMIN. CODE r. 18-20.004(5)(c) (2010).

¹⁰⁴ See FLA. ADMIN. CODE r. 18-20.004(5)(d) (2010).

¹⁰⁵ FLA. ADMIN. CODE r. 18-20.002(7) (2010).

The Board of Trustees of the Internal Improvement Trust Fund (Board) only allows a “sale, lease, or transfer” of sovereignty lands when it is in the public interest.¹⁰⁶ A balancing test is used to determine whether the social, economic, and/or environmental benefits clearly exceed costs to allow a finding that the “sale, lease, or transfer” would be in the public interest.¹⁰⁷ Relevant benefit categories include, *inter alia*, “[p]ublic access (public boat ramps, boatslips, etc.),” and “[p]rovide boating and marina services (repair, pumpout, etc.),”¹⁰⁸ while relevant cost categories include, *inter alia*, “[r]educd/degraded water quality” and “[i]ncreasing navigational hazards and congestion.”¹⁰⁹

Further, assuming the Board would make a favorable finding, all docking facilities in an aquatic preserve require a lease from the Board in accordance with the application procedures and fees of Chapter 18-21, F.A.C.¹¹⁰ Section 18-20.004(1)(e), F.A.C. only allows for a lease, easement, or consent of use for ten enumerated activities. Among these is the “[c]reation or maintenance of a commercial/industrial dock, pier, or a marina.”¹¹¹ Thus, a lease for an activity in an aquatic preserve is only allowed after a finding that such lease is in the public interest. Also noteworthy, a base rate of *two times* the base rate determined in 18-21.011(1)(b)(1), F.A.C. may apply to leases in aquatic preserves in some cases.¹¹²

In conclusion, obtaining a lease for a marine activity in an aquatic preserve is possible; however, securing a lease will require demonstrating that such activity will not harm the resources of the preserve (such as seagrass or other benthic resources) and will be “clearly in the public interest” due to the greater safe mooring possibilities offered by the activity.

¹⁰⁶ FLA. ADMIN. CODE r. 18-20.004(1)(b) (2010). “‘Public interest’ means demonstrable environmental, social, and economic benefits which would accrue to the public at large as a result of a proposed action, and which would clearly exceed all demonstrable environmental, social, and economic costs of the proposed action. In determining the public interest in a request for use, sale, lease, or transfer of interest in sovereignty lands or severance of materials from sovereignty lands, the Board shall consider the ultimate project and purpose to be served by said use, sale, lease, or transfer of lands or materials.” FLA. ADMIN. CODE r. 18-20.003(46) (2010).

¹⁰⁷ FLA. ADMIN. CODE r. 18-20.004(2) (2010).

¹⁰⁸ FLA. ADMIN. CODE r. 18-20.004(2)(b) (2010).

¹⁰⁹ FLA. ADMIN. CODE r. 18-20.004(2)(c) (2010).

¹¹⁰ FLA. ADMIN. CODE r. 18-20.004(1)(j) (2010).

¹¹¹ FLA. ADMIN. CODE r. 18-20.004(e)4. (2010).

¹¹² FLA. ADMIN. CODE r. 18-21.011(1)(b)5 (2010).

9. State Manatee Protection Zones

State Manatee Protection Zones promulgated by the Florida Fish and Wildlife Conservation Commission (FWC) that affect boating activities within Charlotte County are found in 68C-22.015, F.A.C. There are currently “idle speed” zones (all year),¹¹³ “slow speed” zones (all year),¹¹⁴ and “25 MPH” zones (all year)¹¹⁵ that are all aimed at protecting manatees in Charlotte County.

Within Charlotte County, FWC maintains two idle speed zones (year round),¹¹⁶ six slow speed zones (year round),¹¹⁷ and seven 25 MPH zones (year round).¹¹⁸

¹¹³ “‘Idle Speed’ and ‘Idle Speed No Wake’ may be used interchangeably and mean that a vessel must proceed at a speed no greater than that which will maintain steerageway and headway. At no time is any vessel required to proceed so slowly that the operator is unable to maintain control over the vessel or any other vessel or object that it has under tow.” FLA. ADMIN. CODE r. 68C-22.002(1) (2010).

¹¹⁴ “‘Slow Speed’ and ‘Slow Speed Minimum Wake’ may be used interchangeably and mean that a vessel must be fully off plane and completely settled into the water. The vessel must then proceed at a speed which is reasonable and prudent under the prevailing circumstances so as to avoid the creation of an excessive wake or other hazardous condition which endangers or is likely to endanger other vessels or other persons using the waterway. Due to the different speeds at which vessels of different sizes and configurations may travel while in compliance with this definition, there is no specific numerical speed assigned to Slow Speed. A vessel that is:

- (a) Operating on plane is not proceeding at this speed;
- (b) In the process of coming off plane and settling into the water or coming up onto plane is not proceeding at this speed;
- (c) Operating at a speed that creates an excessive wake or other hazardous condition which unreasonably or unnecessarily endangers other vessels or other persons using the waterway, or is likely to do so, is not proceeding at this speed;
- (d) Completely off plane and which has fully settled into the water and is proceeding at a reasonable and prudent speed with little or no wake is proceeding at this speed.” FLA. ADMIN. CODE r. 62C-22.002(4) (2010).

¹¹⁵ “‘Maximum 25 MPH Speed Zone’ means a controlled area within which a vessel’s speed made good over the bottom, measured in statute miles, shall not exceed 25 miles per hour. Although it is the intention of the Commission to allow those vessels capable of attaining a planning configuration at 25 MPH to do so, this speed limit shall not be construed as permitting the reckless or careless operation of a vessel, in violation of Section 327.33, F.S., or authorizing any vessel to travel at an unsafe speed, in violation of navigation rule 6, as adopted pursuant to Section 327.33, F.S., by reason of:

- (a) Having an elevated bow which restricts visibility, or
- (b) Producing an excessive wake or other hazardous condition that endangers or is likely to endanger other vessels, other persons using the waterway, or natural resources of the state.” FLA. ADMIN. CODE r. 68C-22.002(5) (2010).

¹¹⁶ FLA. ADMIN. CODE r. 68C-22.015(2)(a) (2010).

¹¹⁷ FLA. ADMIN. CODE r. 68C-22.015(2)(b) (2010).

¹¹⁸ FLA. ADMIN. CODE r. 68C-22.015(2)(c) (2010).

The FWC-controlled idle speed zones (year round) cover the following geographic areas:

- (1) Turtle Bay, Southeast Entrance¹¹⁹
- (2) Turtle Bay, Mid-bay Area¹²⁰

The FWC-controlled slow speed zones (year round) cover the following geographic areas:

- (1) Lemon Bay area¹²¹
- (2) Peace River, U.S. 41 Bridge to Interstate 75 (I-75) Bridge¹²²
- (3) Peace River, Interstate 75 (I-75) Bridge to Harbor Heights Area¹²³
- (4) Shell Creek¹²⁴
- (5) Hunter Creek¹²⁵
- (6) Deep Creek¹²⁶

The FWC-controlled 25 MPH zones (year round) cover the following geographic areas:

- (1) Lemon Bay Area¹²⁷
- (2) Placida Harbor Area¹²⁸
- (3) Turtle Bay¹²⁹
- (4) Peace River, Interstate 75 (I-75) Bridge to Harbor Heights Area¹³⁰
- (5) Peace River, North of Harbor Heights Area¹³¹

¹¹⁹ FLA. ADMIN. CODE r. 68C-22.015(2)(a)1 (2010).

¹²⁰ FLA. ADMIN. CODE r. 68C-22.015(2)(a)2 (2010).

¹²¹ FLA. ADMIN. CODE r. 68C-22.015(2)(b)1 (2010).

¹²² FLA. ADMIN. CODE r. 68C-22.015(2)(b)2 (2010).

¹²³ FLA. ADMIN. CODE r. 68C-22.015(2)(b)3 (2010).

¹²⁴ FLA. ADMIN. CODE r. 68C-22.015(2)(b)4 (2010).

¹²⁵ FLA. ADMIN. CODE r. 68C-22.015(2)(b)5 (2010).

¹²⁶ FLA. ADMIN. CODE r. 68C-22.015(2)(b)6 (2010).

¹²⁷ FLA. ADMIN. CODE r. 68C-22.015(2)(c)1 (2010).

¹²⁸ FLA. ADMIN. CODE r. 68C-22.015(2)(c)2 (2010).

¹²⁹ FLA. ADMIN. CODE r. 68C-22.015(2)(c)3 (2010).

¹³⁰ FLA. ADMIN. CODE r. 68C-22.015(2)(c)4 (2010).

¹³¹ FLA. ADMIN. CODE r. 68C-22.015(2)(c)5 (2010).

(6) Shell Creek¹³²

(7) Lower Hunter Creek¹³³

“The zones described in subsection 68C-22.015(2), F.A.C., are depicted on maps accessible at the <https://www.flrules.org/gateway/ruleNo.asp?id=68C-22.015>. The maps are intended as depictions of the above-described zones. In the event of conflict between the maps and descriptions, the descriptions shall prevail.”¹³⁴

In sum, as long as boating activities follow FWC’s speed zone requirements for State Manatee Protection Zones in Charlotte County, such speed limitations should not constitute a significant concern. However, since Charlotte County is coming under pressure from the State to develop a manatee protection plan, any marine activities that would serve to increase water traffic, particularly motorboat traffic, may present concerns and uncertainties in the permitting process. Development of a manatee protection plan may further limit the possible areas for certain marine activities, but on the positive side, it may also result in quicker permitting with less uncertainty.

C. Local Regulations

Chapter 3-1 (Boats, Docks and Waterways) of Charlotte County’s Land Development and Growth Management Code covers the operation of watercraft generally.

Chapter 3-5, Article XIII (Shoreline Protection) governs beach and dune protection, enforcement, and standards.

Chapter 3-5, Article XV (Surface Water and Wetland Protection) sets forth (1) development activities conducted within wetlands and natural surface waters, (2) upland buffer zones, (3) dock construction in natural surface waters, and (4) marina regulations.

For local regulations, because the Smart Charlotte 2050 Comprehensive Plan will likely result in modification to the Charlotte County’s local code upon official implementation, the above-referenced chapters of Charlotte County’s Land Development and Growth Management Code are subject to change and have not been subjected to thorough analysis here.

¹³² FLA. ADMIN. CODE r. 68C-22.015(2)(c)6 (2010).

¹³³ FLA. ADMIN. CODE r. 68C-22.015(2)(c)7 (2010).

¹³⁴ FLA. ADMIN. CODE r. 68C-22.015(3) (2010).

Comprehensive Plans

A. State

FLA. STAT. § 187.201 (2010) sets forth Florida's state-wide comprehensive plan, as it relates to "coastal and marine resources," as follows:

(8) COASTAL AND MARINE RESOURCES.--

(a) *Goal.*--Florida shall ensure that development and marine resource use and beach access improvements in coastal areas do not endanger public safety or important natural resources. Florida shall, through acquisition and access improvements, make available to the state's population additional beaches and marine environment, consistent with sound environmental planning.

(b) *Policies.*--

1. Accelerate public acquisition of coastal and beachfront land where necessary to protect coastal and marine resources or to meet projected public demand.
2. Ensure the public's right to reasonable access to beaches.
3. Avoid the expenditure of state funds that subsidize development in high-hazard coastal areas.
4. Protect coastal resources, marine resources, and dune systems from the adverse effects of development.
5. Develop and implement a comprehensive system of coordinated planning, management, and land acquisition to ensure the integrity and continued attractive image of coastal areas.
6. Encourage land and water uses which are compatible with the protection of sensitive coastal resources.
7. Protect and restore long-term productivity of marine fisheries habitat and other aquatic resources.

8. Avoid the exploration and development of mineral resources which threaten marine, aquatic, and estuarine resources.
9. Prohibit development and other activities which disturb coastal dune systems, and ensure and promote the restoration of coastal dune systems that are damaged.
10. Give priority in marine development to water-dependent uses over other uses.¹³⁵

“The [Florida] Department of Community Affairs [FDCA] is the state’s land planning and community development agency. Its role is to assist Florida’s communities as they meet the needs of Florida’s ever-expanding population. The department ensures that new growth complies with the state’s vital growth management laws, while also helping established communities revitalize their older or traditional neighborhoods.”¹³⁶

In conclusion, the “coastal and marine resources” section of the state-wide comprehensive plan aims to balance sound environmental planning with public access to the marine environment. Accordingly, the state-wide comprehensive plan is not expected to cause permitting impediments or obstacles to marine activities in Charlotte County. In fact, the State Comprehensive Plan can give weight to the argument that recreational activities are “clearly in the public interest” if the activity serves to promote public access at the same time that it will help protect resources from unregulated anchoring for example.

B. Regional

For more information regarding Regional Comprehensive Plans, see *Part I. B. 5* (Regional Planning Council). It is expected that Regional Comprehensive Planning should have little or no direct impact on Charlotte County’s marine activities.

C. Water Management District

Most of Charlotte County is located within the Southwest Florida Water Management District (SWFWMD),¹³⁷ although a small portion at the southern end of the county

¹³⁵ FLA. STAT. § 187.201 (2010).

¹³⁶ <http://www.dca.state.fl.us/AboutUs.cfm>.

¹³⁷ FLA. STAT. § 373.069(2)(d) (2010).

crosses into the South Florida Water Management District (SFWMD).¹³⁸ Comprehensive planning obligations related to the SFWMD do not appear to affect the majority of marine activities.

D. Local Government

The Smart Charlotte 2050 Comprehensive Plan, not yet officially in effect, contains several sections applicable to marine activities. The current Charlotte County Comprehensive Plan, with updates, is available at: http://www.charlottecountyfl.com/ComprehensivePlan/chapter_1.asp. As it is anticipated that the Smart Charlotte 2050 plan will soon be in effect, this work analyzes Smart Charlotte 2050 instead of the current comprehensive plan.

This section first addresses a relatively new state planning recommendation related to marine activities.

1. Working Waterfronts Legislation

In the 2005 and 2006 legislative sessions, the Florida Legislature addressed the significance of public access to the navigable waters of the state. Specifically, in Chapter 2005-157, Laws of Florida, the Legislature required that local governments, through their comprehensive plans, seek to preserve and promote recreational and working waterfronts, particularly including public access to the navigable waters of Florida. This is accomplished through several comprehensive planning requirements: (1) the recreation and open space element of all local comprehensive plans now must include waterways; (2) the coastal management element must include a “shoreline use component that which identifies public access to beach and shoreline areas and addresses the need for water-dependent and water-related facilities, including marinas, along shoreline areas. Such component must include the strategies that will be used to preserve recreational and commercial working waterfronts as defined in s. 342.07”; and (3) the future land use element of coastal counties “must include, without limitation, regulatory incentives and criteria that encourage the preservation of recreational and commercial working waterfronts as defined in s. 342.07.”

In Chapter 2006-220, Laws of Florida, the Legislature again took up the issue of public water access and comprehensive planning. Section 2(2) of Chapter 2006-220 encourages, but does not require, a local government that has a coastal management element in its comprehensive plan to adopt recreational surface water use policies that consider and include applicable criteria for factors such as natural resources, manatee

¹³⁸ FLA. STAT. § 373.069(2)(e) (2010).

protection needs, protection of working waterfronts, protection of public access to the water, recreation demands, and economic demands.

For more information, see the University of Florida's Law Conservation Clinic: Waterways & Waterfronts – A Community Guide and Policy Tools website.¹³⁹ Also see “Memo: Compliance of Smart Charlotte 2050 with Working Waterfronts Legislation.”¹⁴⁰

In conclusion, Working Waterfronts Legislation encourages recreational surface water use policies, which in turn, promotes marine activities for recreational purposes. This should be referenced when arguing that recreational development is “not contrary to the public interest” or “clearly in the public interest” when applying for a lease for sovereign submerged lands.

2.Comprehensive Plan Elements

Smart Charlotte 2050 defines “boating facility” as:

All single or multiple use facilities, associated features, and services (public or private) that provide for boating access, regardless of vessel size or use, to the coastal environment; including, but not limited to, boat ramps, jetties, marinas, yacht clubs, docks, slipways, piers, mooring fields, boat storage areas, lifts, locks, communication facilities, etc.

i. Future Land Use Element (FLU) (Smart Charlotte 2050 Comprehensive Plan)

Objective 2.3 of the Future Land Use Element (FLU) for the Smart Charlotte 2050 Comprehensive Plan explains the County's objectives as they relate to the protection of water quality and water quantity.¹⁴¹ Specifically, FLU Policy 2.3.2 contains a Charlotte Harbor Management Plan that adopts by reference the Charlotte Harbor Aquatic Preserves Management Plan (May 1983), the Charlotte Harbor Surface Water Improvement and Management (SWIM) Plan (January 15, 1993), and the Lemon Bay Aquatic Preserve Management Plan (June 1991).¹⁴²

¹³⁹ <http://www.law.ufl.edu/conservation/waterways/index.shtml>.

¹⁴⁰ Thomas Ruppert, Memo – Compliance of Smart Charlotte 2050 with Working Waterfronts Legislation (Dec. 4, 2009).

¹⁴¹ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=5#contentelement_4859.

¹⁴² *Id.*

Objective 5.6 of the FLU Element explains the County's objectives as they relate to the Working Waterfronts legislation detailed above.¹⁴³ Specifically, Objective 5.6 aims to preserve recreational and commercial working waterfronts and public access to water with expedited permitting, tax deferrals (for water dependent uses), encouraging public marina use, and a county-wide boat facility siting plan.¹⁴⁴ FLU Policy 6.3.13 reaffirms this by encouraging creation of additional boat access points along the Peace River, Shell Creek, and Prairie Creek.¹⁴⁵

ii. Natural Resources Element (ENV) (Smart Charlotte 2050 Comprehensive Plan)

ENV Objective 1.4 (Water Quality) aims “[t]o ensure that human health and the natural environment are not damaged by water contamination” by recognizing water quality standards, water quality monitoring, protection guidelines, interagency coordination, etc.¹⁴⁶

ENV Objective 2.1 (Marine Protections) aims “to protect marine and estuarine habitats to ensure long-term viability and productivity of finfish, shellfish, other aquatic communities, seagrass and oyster bed resources.”¹⁴⁷ Specifically, ENV Policy 2.1.1 (Marine and Estuarine Protection) mandates that the County “shall implement protections to marine and estuarine resources as identified in the objectives and policies of the Coastal Planning element.”¹⁴⁸

ENV Policy 3.1.5 (All Wetlands Impact Limitations) requires that the County limit impacts in wetlands to “non-commercial water dependent uses and structures such as boardwalks, docks or boat ramps constructed in a manner to minimize impacts to wetlands and aquatic resources.”¹⁴⁹ This policy could potentially affect the ability of the

¹⁴³ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=5#contentelement_6849.

¹⁴⁴ *Id.*

¹⁴⁵ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=5#contentelement_6925.

¹⁴⁶ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=6#contentelement_5856.

¹⁴⁷ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=6#contentelement_5857.

¹⁴⁸ *Id.*

¹⁴⁹ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=6#contentelement_7192.

County to develop new—or expand existing—marinas and facilities when located in wetlands.

iii. Coastal Planning Element (CST) (Smart Charlotte 2050 Comprehensive Plan)

The Coast Planning Element (CST), in its entirety, is highly relevant to marine activities in Charlotte County, and has a stated purpose as follows:

“As required by Florida Statutes, the Coastal Planning element (CST) sets forth goals, objectives and policies to guide Charlotte County’s decisions and to plan for and, where appropriate, restrict development where such activities would damage or destroy coastal resources, and limit public expenditures while protecting the health, safety, and welfare of the citizens of Charlotte County.

Also, the Coastal Planning element provides an inventory and analysis of natural resources and land use concerns specific to the County’s coastal area; including beach and coastal systems, beach erosion, public access to the shoreline and coastal waters, development and maintenance of infrastructure in the coastal area, existing and future land use activities in the coastal area, and hurricane evacuation times and shelter capacity.

A more detailed explanation of the State requirements which the following Goals, Objectives and Policies attempt to address can be seen in the associated Data & Analysis section.

All references to any ordinances, statutes or regulations contained herein shall, unless otherwise noted, be deemed to be those in effect as of the date of adoption of this element and thereafter as amended, renumbered or otherwise revised.”¹⁵⁰

Specifically, CST Goal 1 (Coastal Resource Protection) and its associated objectives and policies govern many potential marine activities within the Coastal Planning Area (CPA).¹⁵¹

¹⁵⁰ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#region-middle.

¹⁵¹ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_7870.

For example, expansion of existing or development of new land-based boating facilities will likely need to evaluate and make plans to minimize the impact on coastal resources (i.e. coastal wetlands, vegetation, wildlife, their habitats, including protective buffers and zones, and water quality prior to project approval, during, and after construction) (CST Policy 1.1.5 Coastal Resource Clearing Permit).¹⁵²

CST Policy 1.1.8 (Coastal Resources Protection Program) states that the “County shall develop strategies with public and private stakeholders to protect, maintain, and, where feasible, restore native submerged aquatic vegetation, benthic communities and water quality in the County, particularly Lemon Bay, the Peace and Myakka Rivers, and Charlotte Harbor.”¹⁵³

CST Policy 1.2.4 (Acquisition of Waterfront Property) promotes acquisition of land for public access purposes even as Policy 1.2.5 (Water-dependent Uses) requires that the County minimize adverse impacts to coastal resources that may be associated with water dependent uses.¹⁵⁴

CST Goal 1 also contains Policy 1.2.7 (Location of New Boat Ramps), which significantly limits the location of new boat ramps based on available water depth and protection of natural resources, thus eliminating all areas with less than four feet of natural depth at mean low water between the proposed ramp and the nearest navigable channel.¹⁵⁵

Policy 1.2.9 (New Boating Facility Preferences) gives preference of new boating facilities to the expansion of suitable existing facilities rather than the development of new facilities.¹⁵⁶

CST Goal 1 contains many other policies relevant to marine activities and construction including, but not limited to, policies that require wastewater treatment for new or

¹⁵² http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_7207.

¹⁵³ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_7206.

¹⁵⁴ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_7211.

¹⁵⁵ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_7213.

¹⁵⁶ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_7252.

expanded marine facilities,¹⁵⁷ ensure sufficient upland facilities for new boating facilities and ensure that these do not adversely impact sensitive or rare upland habitats,¹⁵⁸ limitations to help protect water quality,¹⁵⁹ and policies related to manatee protection.¹⁶⁰

CST Goal 2 (Estuarine Quality Protection) aims to “[p]rotect, maintain, and improve coastal surface and ground water quality and provide criteria or standards for prioritizing shoreline uses, giving priority to water-dependent uses,”¹⁶¹ and must be consulted with when considering marine activities within the County.

CST Goal 3 (Development in High Hazard Areas) recites the following goal:

Direct people from settling in the Coastal High Hazard Area (CHHA) and limit public expenditures that subsidize development and redevelopment in the CHHA except for restoration or enhancement of coastal resources. The CHHA includes all areas located within a landfalling Tropical Storm or Category 1 Hurricane Storm Surge zone as illustrated on FLUM Series Map #14, which are based on the Sea, Lake, and Overland Surge from Hurricanes (SLOSH) model prepared by the Southwest Florida Regional Planning Council under contract to the State of Florida Department of Community Affairs, Division of Emergency Management.¹⁶²

CST Goal 4 (Coastal Planning Area) states as follows:

Address development and post-disaster redevelopment and outline principles for mitigating the effects of natural disaster and reducing or eliminating the exposure of human life and public and private property to coastal hazards.¹⁶³

¹⁵⁷ Smart Charlotte 2050 Coastal Planning Element, CST Policy 1.2.13 (http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_5624).

¹⁵⁸ *Id.* at CST Policy 1.2.10-4 (http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_7902).

¹⁵⁹ *Id.* at CST Policy 1.2.10-6, 7, 8, 9, and 10 (http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_7902).

¹⁶⁰ *Id.* at CST Policies 1.4.7 through 1.4.10 (http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_5640).

¹⁶¹ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_5667.

¹⁶² http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_7876.

¹⁶³ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=52#contentelement_5696.

In sum, the CST Element contains many goals, objectives, and policies that directly affect marine activities within the County.

iv. Recreation and Open Space Element (REC) (Smart Charlotte 2050 Comprehensive Plan)

The following REC Policies are relevant to marine activities in Charlotte County:

REC Policy 1.1.3 (Waterfronts and Beaches)¹⁶⁴

The County shall continue public acquisition of waterfront property and, through public resources and public/private partnerships, seek new opportunities to preserve recreational and commercial working waterfronts, expand and maintain public beach and water access and protect coastal and marine resources.

REC Policy 1.1.4 (Boating Access)¹⁶⁵

The County shall encourage responsible use of waterways and marine resources by evaluating the characteristics and needs of the County's boating population, both residents and visitors, and providing public access for motorized and non-motorized watercraft and mooring facilities.

REC Policy 2.1.5 (Aquatic Facilities)¹⁶⁶

The County shall provide a variety of recreational aquatic facilities to be maintained, programmed and staffed in compliance with recognized standards to serve active recreation needs of youth and adults.

In conclusion, with goals, policies, and objectives to meet the Working Waterfronts legislation as well as recreational demand, the Smart Charlotte 2050 Comprehensive Plan would appear to encourage a wide array of marine activities. At the same time, policies will constrain where and how marine activities and related land-side facilities can be added. Among the most important points related to marine activities and regulation in Smart Charlotte 2050 are limits on the location of new boat ramps,

¹⁶⁴ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=11#contentelement_7256.

¹⁶⁵ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=11#contentelement_7864.

¹⁶⁶ http://www2.charlottefl.com/CompPlan/main/view_doc.aspx?show_comments=true&docid=11#contentelement_5790.

preference for expanding appropriate existing boating infrastructure rather than adding new facilities, and the environmental policy that limits impacts in wetlands to non-commercial uses.

Permits

Despite the array of federal and state laws and requirements that may affect marine activities, it is the State of Florida's policy to streamline federal and state permitting as much as possible for wetlands and navigable waters.¹⁶⁷ As a result, Florida has established a streamlined permitting system that allows applicants in most situations to complete a single application. This single application will then be distributed and reviewed by all necessary regulatory agencies, which will contact the applicant if more information is required. An applicant's application to FDEP will include a seamless review of a request for permission to use State lands contemporaneously with regulatory review for the required environmental resources permit.¹⁶⁸

A. Federal

Federal permitting requirements come from several potential sources of law. Most of these will be relatively hidden from the applicant as most permitting requirements will be addressed by the U.S. Army Corps of Engineers (USACE) and its permitting processes. The permit applicant will not even have to submit a separate application directly to the USACE as the application to the Florida Department of Environmental Protection will be forwarded to USACE.¹⁶⁹ As part of USACE permitting, USACE is required by the terms of additional federal laws to consult with resource protection agencies about other resources. These are addressed in turn below.

1. U.S. Army Corps of Engineers

i. Rivers and Harbors Act

Under § 10 of the Rivers and Harbors Act of 1899 (RHA), USACE issues permits for "structures and/or work in or affecting navigable waters of the United States." The

¹⁶⁷ FLA. STAT. §§ 373.4143, 373.4144 (2010).

¹⁶⁸ FLA. ADMIN. CODE r. 18-21.00401 (2010).

¹⁶⁹ See Operating Agreement Between the U.S. Army Corps of Engineers, The Florida Department of Environmental Protection, The South Florida Water Management District, The St. Johns River Water Management District, and the Suwannee River Water Management District Concerning Regulatory Programs for Activities in Wetlands and other Surface Waters, 1998, available at http://www.dep.state.fl.us/water/wetlands/docs/erp/USCOE_DEP_WMD_OpAgree.pdf.

definition of “navigable waters of the United States” under § 10 of the RHA includes “all ocean and coastal waters within a zone three geographic (nautical) miles seaward from the baseline.”¹⁷⁰ USACE has interpreted the substantive jurisdiction granted to it under § 10 of the RHA to cover “structures and/or work in or affecting navigable waters of the United States.”¹⁷¹ USACE regulations define “structure” to “include without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other obstacle or obstruction.”¹⁷² “Work” is defined as “includ[ing] without limitation, any dredging or disposal of dredged material, excavation, filling, or other modification of a navigable water of the United States.”¹⁷³ Thus, a mooring field, for example, will need authorization from USACE for installing mooring buoys as part of a mooring field since these constitute structures that affect the navigable waters of the United States. Similarly, any associated dock or pier would also need to secure a permit from USACE under § 10 of the RHA.

USACE’s review of a permit application under § 10 of the RHA focuses primarily on the impacts of the proposed activity to navigation. Proper placement of a mooring field to avoid impacts to navigation should preclude any navigation problems with this review.¹⁷⁴ Review under § 10 of the RHA also includes application of the general public interest criteria established by regulation,¹⁷⁵ which considers environmental impacts. In many instances this environmental review does not result in substantially more or different protections for the environment than state and local permitting, although in some instances permit conditions, mitigation, or other protection proposed by USACE may differ.

¹⁷⁰ 33 U.S.C § 403; 33 C.F.R. §§ 329.12, 322.3(a) (2009).

¹⁷¹ 33 C.F.R. § 322.3(a) (2009).

¹⁷² 33 C.F.R. § 322.2(b) (2009).

¹⁷³ 33 C.F.R. § 322.2(c) (2009).

¹⁷⁴ *See* 33 C.F.R. § 322.5(d) (2009) (“In the absence of overriding public interest, favorable consideration will generally be given to applications from riparian owners for permits for piers, boat docks, moorings, platforms and similar structures for small boats. Particular attention will be given to the location and general design of such structures to prevent possible obstructions to navigation with respect to both the public’s use of the waterway and the neighboring proprietors’ access to the waterway. Obstructions can result from both the existence of the structure, particularly in conjunction with other similar facilities in the immediate vicinity, and from its inability to withstand wave action or other forces which can be expected. District engineers will inform applicants of the hazards involved and encourage safety in location, design, and operation. District engineers will encourage cooperative or group use facilities in lieu of individual proprietary use facilities.”).

¹⁷⁵ 33 C.F.R. § 322.2(e) (2009).

Depending on the type of proposed marine activity, USACE might issue either an individual permit or a “letter of permission.” In either case, the presence of critical manatee habitat located throughout Charlotte County will require that USACE consult with the U.S. Fish and Wildlife Service regarding manatees and any other endangered species. This is discussed further below in the section on the Endangered Species Act (*Part III. A. 4. i*).

USACE regulations require that a permit application under either § 10 of the RHA or § 404(b) of the Clean Water Act be complete and include all potentially regulated activities reasonably related to the same project.¹⁷⁶

In conclusion, most environmental impacts of marine activities will, in general, not present significantly greater issues in USACE permitting than in state permitting. Separate problems could, however, arise under USACE permitting if a proposed marine activity could be construed to interfere with navigation, such as being too close to a channel or boating routes.

ii. Section 404(b) of the Clean Water Act

Under § 404 of the Clean Water Act (CWA) the U.S. Army Corps of Engineers (USACE) “may issue permits... for the discharge of dredged or fill material into the navigable waters at specified disposal sites.”¹⁷⁷

USACE regulations define “fill material” as “material placed in waters of the United States which has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of a water of the United States.”¹⁷⁸ Examples of “fill material” include “rock, sand, soil, clay,... and materials used to create any structure or infrastructure in waters of the United States.”

The “discharge of fill material” is defined as “the addition of fill material into waters of the United States.”¹⁷⁹ USACE regulations go on to state that this includes:

Placement of fill that is necessary for the construction of any structure or infrastructure in a water of the United States; the

¹⁷⁶ 33 C.F.R. § 325.1(d)(2) (2009).

¹⁷⁷ 33 U.S.C.S. 1344(a) (2009).

¹⁷⁸ 33 C.F.R. § 323.2(e)(1) (2009).

¹⁷⁹ 33 C.F.R. § 323.2(f) (2009).

building of any structure, infrastructure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, or other uses; causeways or road fills; dams and dikes; artificial islands; property protection and/or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for structures such as sewage treatment facilities, intake and outfall pipes associated with power plants and subaqueous utility lines; placement of fill material for construction or maintenance of any liner, berm, or other infrastructure associated with solid waste landfills; placement of overburden, slurry, or tailings or similar mining-related materials; and artificial reefs.¹⁸⁰

“Dredged material” is defined as “material that is excavated or dredged from waters of the United States”¹⁸¹ and “discharge of dredged material” is defined in USACE regulations as “any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States.”¹⁸²

The process for issuance of a § 404(b) dredge and fill permit is similar to that for a permit under § 10 of the RHA. USACE regulations state that “a permit will be granted unless the district engineer determines that it would be contrary to the public interest.”¹⁸³ All USACE permits must satisfy this “public interest requirement” and undergo what is referred to as “public interest review” which involves “balancing the favorable impacts [of a proposed activity] against the detrimental impacts.”¹⁸⁴ Public interest review involves consideration of the “cumulative impacts” of the proposed activity, including all reasonably foreseeable benefits and detriments.

In sum, and as stated above for § 10 of the RHA, most environmental impacts of marine activities will, in general, not present significantly greater issues in USACE permitting than in state permitting (assuming that state permits will go through consultation with state and federal resource protection agencies).

¹⁸⁰ *Id.*

¹⁸¹ 33 C.F.R. § 323.2(c) (2009).

¹⁸² 33 C.F.R. § 323.2(d)(1) (2009).

¹⁸³ 33 C.F.R. § 320.4(a) (2009).

¹⁸⁴ 33 C.F.R. § 320.1(a)(1) (2009).

2. U.S. Coast Guard

Charlotte County is part of the Seventh District of the U.S. Coast Guard.¹⁸⁵ The Seventh District does not maintain anchorage areas or anchorage grounds in Charlotte County,¹⁸⁶ but it does have a shipping safety fairway and a Charlotte shipping anchorage area.¹⁸⁷ These areas either prohibit permanent structures or severely limit them.¹⁸⁸

The Seventh District can be contacted at:

Commander
USCG Seventh District
Brickell Plaza Federal Building
909 SE 1st Avenue
Miami, FL 33131-3050
<http://www.uscg.mil/d7/>

3. U.S. Environmental Protection Agency

Under Section 404(c) of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) may exercise a veto over USACE's decision to issue a section 404 permit.¹⁸⁹ Although rarely used, "Section 404(c) [veto] authority may be exercised before a permit is applied for, while an application is pending, or after a permit has been issued."¹⁹⁰ "An EPA Regional Administrator initiates a 404(c) action if he or she determines that the impact of a proposed permit activity is likely to result in: significant degradation of municipal water supplies (including surface or ground water) or, significant loss of or damage to fisheries, shellfishing, wildlife habitat, or recreation areas."¹⁹¹

¹⁸⁵ 33 C.F.R. § 80.748 (2010); 33 C.F.R. § 80.750 (2010).

¹⁸⁶ See 33 C.F.R. Part 110.

¹⁸⁷ 33 C.F.R. § 166.200(50)-(51) (2010) (establishing a Charlotte shipping safety fairway and a Charlotte shipping anchorage area).

¹⁸⁸ 33 C.F.R. § 166.105-110 (2010).

¹⁸⁹ <http://www.epa.gov/owow/wetlands/pdf/404c.pdf>.

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

In conclusion, the EPA will not likely become directly involved in a § 404 permit decision (if a § 404 permit is needed) for a marine activity in Charlotte County, unless the EPA disagrees with the Corps' decision to grant the permit.

4. U.S. Fish and Wildlife Service Consultation

i. Endangered Species Act

Congress enacted the Endangered Species Act of 1973 (ESA) to protect endangered or threatened species and their ecosystems.¹⁹² The Secretary of the Interior and the Secretary of Commerce have joint authority to administer the ESA.¹⁹³ “Generally, marine species are under the jurisdiction of the Secretary of Commerce and all other species are under the jurisdiction of the Secretary of the Interior.”¹⁹⁴ The Department of the Interior administers the ESA through the United States Fish and Wildlife Service (USFWS), and the Department of Commerce administers the ESA through the National Marine Fisheries Service (NMFS).¹⁹⁵ Despite the general rule that marine species fall under the Department of Commerce, manatees fall under the Department of the Interior, and are thus under the jurisdiction of the USFWS.¹⁹⁶ The State of Florida may provide more protection, but not less protection, than provided under the ESA.¹⁹⁷ Conversely, Florida cannot prohibit an activity that the ESA authorizes by exemption or permit.¹⁹⁸

Section 9(a)(1) of the ESA prohibits the unauthorized “take” of endangered species.¹⁹⁹ The term “take” means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”²⁰⁰ The ESA additionally protects the habitat of threatened species from “significant modification or degradation.”²⁰¹

¹⁹² See Endangered Species Act of 1973 § 2(b) and (c).

¹⁹³ Endangered Species Act of 1973 § 3(15).

¹⁹⁴ 73 F.R. 47868-01, 47868.

¹⁹⁵ See 73 F.R. 47868-01, 47868.

¹⁹⁶ www.fws.gov/habitatconservation/marine_mammals.html.

¹⁹⁷ Endangered Species Act of 1973 § 6(f).

¹⁹⁸ *Id.*

¹⁹⁹ Endangered Species Act of 1973 § 9(a)(1) [*Note*: this is 16 U.S.C. § 1538(a)(1)].

²⁰⁰ Endangered Species Act of 1973 § 3(19).

²⁰¹ *Defenders of Wildlife v. Martin*, 454 F. Supp. 2d 1085, 1095 (E.D. Wash. 2006) (“The term ‘harm’ as used in the ESA includes any “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding,

Section 7(a)(2) of the ESA places an obligation on federal agencies to consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service (USFWS/NMFS), as appropriate, to determine whether “any action authorized, funded, or carried out by” (hereinafter “agency action”) the federal agency will affect endangered species or their critical habitat.²⁰² Federal funding or the need for a federal permit constitutes sufficient “federal action” to trigger the obligation to consult with USFWS/NMFS; although any federal agency involved in a project may choose to have an informal consultation before determining whether formal consultation is needed.²⁰³ If the federal agency involved determines during informal consultation “that the action is not likely to adversely affect listed species or critical habitat” and USFWS/NMFS agrees in writing, then the consultation process is over.²⁰⁴ If the federal agency determines that its action may adversely affect endangered species or their critical habitat, it is required to send USFWS/NMFS a formal “written request for consultation.”²⁰⁵

The formal consultation concludes when USFWS/NMFS issues a Biological Opinion, which “should address both the jeopardy and critical habitat prongs of Section 7 by considering the current status of the species, the environmental baseline, the effects of the proposed action, and the cumulative effects of the proposed action.”²⁰⁶ The Biological Opinion must take into consideration “the life cycle and behavioral pattern” of the threatened species when determining whether the critical habitat would be adversely modified.²⁰⁷

If a Biological Opinion finds “jeopardy or adverse modification” to a listed species or their critical habitat, USFWS/NMFS would suggest “reasonable and prudent alternatives” (RPAs) to the federal agency’s proposed action.²⁰⁸ The federal agency may adopt the RPAs suggested by USFWS/NMFS, refuse to fund or permit the activity, request an exemption from the Endangered Species Committee, consult with

feeding or sheltering.” 50 C.F.R. § 17.3. This definition includes “significant ... modification or degradation” of a listed species’ habitat.”).

²⁰² The Endangered Species Committee may exempt a federal agency from this consultation obligation pursuant to Section 7(h).

²⁰³ Final Endangered Species Act Section 4(b)(2) Report, page 38 (citing 50 C.F.R. § 402.02).

²⁰⁴ 50 C.F.R. § 402.13.

²⁰⁵ *Id.* (citing 50 C.F.R. § 402.12(a)).

²⁰⁶ *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service* 378 F.3d 1059, 1063 (9th Cir. 2004) (citing 50 C.F.R. § 402.14(g)(2)-(3)).

²⁰⁷ *Miccosukee Tribe of Indians v. U.S.*, 566 F.3d 1257, 1271 (11th Cir. 2009).

²⁰⁸ Endangered Species Act of 1973 § 7(b)(3)(A).

USFWS/NMFS again with a modified proposal, or proceed with the action if the federal agency is satisfied that the final action is not likely to jeopardize the continued existence of the endangered species involved.²⁰⁹

Section 10 of the ESA allows USFWS/NMFS to issue permits, otherwise prohibited, for activities that only incidentally “take” an endangered species.²¹⁰ An applicant seeking an incidental take permit must first submit a “conservation plan” to USFWS/NMFS.²¹¹ After reviewing the conservation plan, USFWS/NMFS must certify that (1) the taking will be incidental, (2) the applicant will mitigate harm to the species or its habitat “to the maximum practical extent,” (3) the applicant has the ability to adequately fund the conservation plan, (4) the harm will not “appreciably reduce the likelihood of the survival and recovery of the species,” and (5) any additional measures imposed by USFWS/NMFS will be met.²¹²

“If the proposed action would not jeopardize the species but still might result in incidental harm to it, the Service attaches to the Biological Opinion an Incidental Take Statement establishing the terms and conditions under which the Incidental Take Statement may occur. 50 C.F.R. § 402.14(i).”²¹³ If USFWS/NMFS provides the federal agency with “reasonable and prudent measures” (RPMs) it “considers necessary or appropriate to minimize” adverse impacts, compliance with the RPMs is binding on the permittee.²¹⁴ The Incidental Take Statement must also “contain an adequate trigger for re-consultation, and that a trigger must be expressed in population terms unless it is impractical to do so.”²¹⁵

The Florida Manatee, Gulf Sturgeon, and Smalltooth Sawfish, as federally protected species, potentially affect permissible marine activities in Charlotte County. Marine activities should seek to avoid listed critical habitat and will also need to assess whether the activity may affect an endangered species. If “take” of an endangered species is likely, some form of mitigation will be necessary as will an incidental take statement. For information regarding State Manatee protection zones in Charlotte County, see *Part I. B. 9. (State Manatee Protection Zones)*.

²⁰⁹ <http://www.fws.gov/Endangered/esa-library/pdf/consultations.pdf>.

²¹⁰ Endangered Species Act of 1973 § 10(a)(1).

²¹¹ Endangered Species Act of 1973 § 10(a)(2)(A).

²¹² Endangered Species Act of 1973 § 10(a)(2)(B).

²¹³ <http://www.esablwg.com/esalaw/ESBlawg.nsf/d6plinks/KRII-7RS3AS> (ESA § 10(a)(1)(B)).

²¹⁴ *Id.*; Endangered Species Act of 1973 § 10(a)(2)(B) and (C).

²¹⁵ *Miccousukee Tribe of Indians v. U.S.*, 566 F.3d 1257, 1275 (11th Cir. 2009).

Florida Manatee

The Charlotte County area has significant amounts of manatee critical habitat.²¹⁶ Charlotte County should consult informally with the Florida Fish and Wildlife Conservation Commission to determine whether additional listed species may inhabit areas that could be considered for placement of interfering infrastructure.

Charlotte County contains the following two (2) federally protected manatee areas:²¹⁷

(1) The Lemon Bay Manatee Refuge

The Lemon Bay Manatee Refuge is described as those waters of Lemon Bay lying south of the Sarasota/Charlotte County, Florida, boundary and north of a line north 60 degrees 14' 00" E (true) parallel with a series of small islands approximately 1.6 kilometer (1 mile) south of the Bay Road Bridge; containing approximately 383.61 ha (948.06 acres).²¹⁸

Watercraft are required to proceed at slow speed, 40 kilometers per hour (25 miles per hour) within the channel, year-round. Watercraft are prohibited from operating in excess of slow speed outside of the channel and operating at speeds in excess of 40 kilometers per hour (25 miles per hour) within the channel, year-round.²¹⁹

(2) The Peace River Manatee Refuge

The Peace River Manatee Refuge is described as all waters of the Peace River and certain associated water bodies north and east of the U.S. Highway 41, Charlotte and De Soto Counties, Florida; containing approximately 1,698.11 ha (4,196.11 acres).²²⁰

²¹⁶ See 50 C.F.R. § 17.95 (2010) (listing “The Myakka River downstream from Myakka River State Park, Sarasota and Charlotte Counties; the Peace River downstream from the Florida State Highway 760 bridge, De Soto and Charlotte Counties; Charlotte Harbor north of the Charlotte-Lee County line, Charlotte County; Caloosahatchee River downstream from the Florida State Highway 31 bridge, Lee County”).

²¹⁷ 50 C.F.R. § 17.108(c) (2010). For a map of these areas, see <http://www.fws.gov/northflorida/manatee/Documents/MPARules/index-federal-mpa-maps.htm>.

²¹⁸ 50 C.F.R. § 17.108(c)(6)(i) (2010); <http://www.fws.gov/northflorida/Manatee/Maps/Final-lemon-bay-refuge.pdf>.

²¹⁹ 50 C.F.R. § 17.108(c)(6)(ii) (2010); <http://www.fws.gov/northflorida/Manatee/Maps/Final-peace-river-refuge.pdf>.

²²⁰ 50 C.F.R. § 17.108(c)(7)(i) (2010).

In the Peace River within Charlotte County, watercraft are required to travel at slow speed within a posted shoreline buffer between the U.S. Highway 41 and I-75 bridges. The buffer is approximately 300 meters (1,000 feet) from shore except in a slightly larger area north and west of I-75 to be consistent with the Florida Fish and Wildlife Conservation Commission's recently adopted regulations. Watercraft are allowed to travel at a maximum speed of 40 kilometers per hour (25 miles per hour) year-round outside the buffer. Watercraft are prohibited from traveling in excess of slow speed within the posted shoreline buffer between the U.S. Highway 41 and I-75 bridges and are further prohibited from operating in excess of 40 kilometers per hour (25 miles per hour) outside the buffer throughout the year.²²¹

In the Peace River within Charlotte County and upstream of I-75 to red channel marker "14," watercraft are required to travel at slow speed outside of the marked navigation channel. Watercraft are allowed to travel at a maximum speed of 40 kilometers per hour (25 miles per hour) year-round inside the marked navigation channel. Watercraft are prohibited from traveling in excess of slow speed in areas outside of the navigation channel, and are further prohibited from traveling in excess of 40 kilometers per hour (25 miles per hour) inside the marked navigation channel year-round.²²²

(iv) In the waters of the Peace River in Charlotte and De Soto Counties upstream of red channel marker "14," watercraft are allowed to travel at a maximum speed of 40 kilometers per hour (25 miles per hour) year-round. Watercraft are prohibited from traveling in excess of 40 kilometers per hour (25 miles per hour), year-round in this area.²²³

(v) Within the waters of Jim Long Lake and Hunter Creek in Charlotte and De Soto Counties, watercraft are required to travel at slow speed year-round. Watercraft are prohibited from traveling in excess of slow speed in this area year-round.²²⁴

²²¹ 50 C.F.R. § 17.108(c)(7)(ii) (2010).

²²² 50 C.F.R. § 17.108(c)(7)(iii) (2010).

²²³ 50 C.F.R. § 17.108(c)(7)(iv) (2010).

²²⁴ 50 C.F.R. § 17.108(c)(7)(v) (2010).

(vi) Within the waters of Deep Creek in Charlotte and De Soto Counties, watercraft are required to travel at slow speed year-round. Watercraft are prohibited from traveling in excess of slow speed in this area year-round. ²²⁵

(vii) Within the waters of Shell Creek in Charlotte County, watercraft are required to travel at slow speed year-round with the following exception. Should a U.S. Coast Guard or State of Florida approved marked navigation channel be established in that portion of Shell Creek approximately 1.6 kilometers (1 mile) downstream of the Seaboard Railroad trestles, watercraft will be allowed to travel at a maximum speed of 40 kilometers per hour (25 miles per hour) in this section of Shell Creek upon posting by the Fish and Wildlife Service or the Florida Fish and Wildlife Conservation Commission. Watercraft are prohibited from traveling in excess of slow speed in this area year-round.²²⁶

Information and guidance relating to federal manatee protection regulations may be found online at:

<http://www.fws.gov/verobeach/index.cfm?Method=programs&NavProgramCategoryID=4&programID=34&ProgramCategoryID=4>.

For more information, contact:

Kalani Cairns
U.S. Fish & Wildlife Service
South Florida Ecological Services Office
772-562-3909 x 240

Due to the fact that Charlotte County is included in the Florida Manatee's variable range, each given marine activity/project will need to assess whether Florida Manatees exist or are found at the site regardless of whether or not the site is included in critical habitat.

Gulf Sturgeon

²²⁵ 50 C.F.R. § 17.108(c)(7)(vi) (2010).

²²⁶ 50 C.F.R. § 17.108(c)(7)(vii) (2010).

The Gulf Sturgeon (*Acipenser oxyrinchus desotoi*), a federally threatened species, is under the joint jurisdiction of the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS).

As recognized in the NMFS rules designating critical habitat, the “FWS will maintain primary responsibility for recovery actions and NMFS will assist in and continue to fund recovery actions pertaining to estuarine and marine habitats.”²²⁷

Even though current critical habitat for the Gulf Sturgeon does not include Charlotte County, the USFWS recognizes the waters of Charlotte County as a place where the Gulf Sturgeon is known to inhabit.²²⁸ Due to the fact that Charlotte County is included in the Gulf Sturgeon’s variable range, each given marine activity/project will need to assess whether Gulf Sturgeon exist or are found at the site regardless of whether or not the site is included in critical habitat.

Information and guidance relating to federal, Gulf Sturgeon protection regulations may be found online at: <http://www.nmfs.noaa.gov/pr/species/fish/gulfsturgeon.htm>.

For further information, see <http://sero.nmfs.noaa.gov/pr/sturgeon.htm>, and contact:

Dr. Stephania Bolden
NOAA Fisheries Service
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701
727-824-5312

Small-tooth Sawfish

The National Marine Fisheries Service (NMFS) designated critical habitat for the Small-tooth Sawfish (*Pristis pectinata*), a federally endangered species, in September 2009 (74 F.R. 45353). According to the NMFS designation:

The critical habitat consists of two units: the Charlotte Harbor Estuary Unit, which comprises approximately 221,459 acres of coastal habitat; and the Ten Thousand Islands/Everglades Unit (TTI/E), which comprises approximately 619,013 acres of coastal habitat. The two units are located

²²⁷ 50 C.F.R. § 226.214 (2010).

²²⁸ <http://www.fws.gov/verobeach/images/pdflibrary/Charlotte%20County3.pdf>.

along the southwestern coast of Florida between Charlotte Harbor and Florida Bay.²²⁹

Specifically, NMFS rules set forth the official boundaries of the critical habitat for Charlotte County as follows:

(1) Charlotte Harbor Estuary Unit

The Charlotte Harbor Estuary Unit is located within Charlotte and Lee Counties. The unit includes Charlotte Harbor, Gasparilla Sound, Pine Island Sound, Matlacha Pass, San Carlos Bay, Estero Bay, and the Caloosahatchee River. The unit is defined by the following boundaries. It is bounded by the Peace River at the eastern extent at the mouth of Shell Creek at 81 [degrees] 59.467' W, and the northern extent of the Charlotte Harbor Preserve State Park at 26 [degrees] 58.933' N. At the Myakka River the unit is bounded by the SR-776 Bridge and in Gasparilla Sound by the SR-771 Bridge. The COLREGS-72 lines between Gasparilla Island, Lacosta Island, North Captiva Island, Captiva Island, Sanibel Island, and the northern point of Estero Island are used as the coastal boundary for the unit. The southern extent of the unit is the Estero Bay Aquatic Preserve, which is bounded on the south by the Lee/Collier County line. Inland waters are bounded by SR-867 (McGregor Boulevard) from Punta Rassa Road to SR-80 near Fort Myers, then by SR-80 (Palm Beach Boulevard) to Orange River Boulevard, then by Orange River Boulevard to Buckingham Road, then by Buckingham Road to SR-80, and then following SR-80 until it is due south of the Franklin Lock and Dam (S-79), which is the eastern boundary on the Caloosahatchee River and a structural barrier for sawfish access. Additional inland water boundaries north and west of the lock are bounded by North Franklin Lock Road to North River Road, then by North River Road to SR-31, then by SR-31 to SR-78 near Cape Coral, then by SR-78 to SR-765, then by SR-765 to U.S.-41, then by U.S.-41 to U.S.-17 (Marion Avenue) in Punta Gorda, then by U.S.-17 to Riverside Drive, and then by Riverside Drive to the eastern extent of the Peace River at 81 [degrees] 59.467' W. From the northern extent of the Charlotte Harbor Preserve State Park at 26 [degrees] 58.933' N, inland waters are bounded westward along that latitude to Harbor View Road, then by Harbor View Road to U.S.-41, then by U.S.-41 to SR-776, then by SR-776 to the Myakka River Bridge.²³⁰

²²⁹ 74 F.R. 45353; <http://www.nmfs.noaa.gov/pr/pdfs/fr/fr74-45353.pdf>.

²³⁰ 50 C.F.R. § 226.218(b)(1) (2010).

However, pursuant to ESA section 3(5)(A)(i), critical habitat does not include “all areas containing existing (already constructed) federally authorized or permitted man-made structures such as channels or canals maintained at depths greater than 3 ft. at MLLW, boat ramps, docks, and marinas deeper than 3 ft. at MLLW.”²³¹

Also noteworthy, Charlotte Harbor is exempt to the above geographic boundaries as an “area not included in critical habitat.”²³²

The Small-tooth Sawfish Recovery Plan is available at 74 F.R. 3566.²³³

Information and guidance relating to Small-tooth Sawfish protection may be found online at: <http://www.nmfs.noaa.gov/pr/species/fish/smalltoothsawfish.htm>.

For further information, see <http://sero.nmfs.noaa.gov/pr/SmalltoothSawfish.htm>, and contact:

Shelley Norton
NOAA Fisheries Service
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701
(727) 824-5312
Shelley.Norton@noaa.gov

Due to the fact that Charlotte County is included in the Small-tooth Sawfish’s variable range, each given marine activity/project will need to assess whether Small-tooth Sawfish exist or are found at the site regardless of whether or not the site is included in critical habitat.

²³¹ 50 C.F.R. § 226.218(c)(1) (2010).

²³² 50 C.F.R. § 226.218(c)(2)(i) (2010) (“Areas not included in critical habitat. Critical habitat does not include the following particular areas where they overlap with the areas described in paragraph (b) of this section:

(2) Pursuant to ESA section 3(5)(A)(i), all waters identified as existing (already constructed) federally authorized channels as follows:

(i) Charlotte Harbor.”).

²³³ <http://www.nmfs.noaa.gov/pr/pdfs/fr/fr74-3566.pdf>.

In conclusion, critical habitat areas (for both Florida Manatees and Small-tooth Sawfish) are not ideal candidates for some marine activities. Charlotte County will need to assess marine activities and their associated sites on a case-by-case basis in how such activities may potentially impact Florida Manatees, Gulf Sturgeon, and Small-tooth Sawfish.

ii. Essential Fish Habitat (Magnuson-Stevens Act)

The Magnuson-Stevens Act (MSA) seeks to protect habitats necessary for all life stages of fishing in order to promote healthy fisheries now and into the future. Thus, the MSA requires the National Marine Fisheries Service (NMFS) to reduce, to the extent practicable, adverse impacts to Essential Fish Habitat (EFH). The MSA defines an EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” Charlotte County waters contain EFHs for Stone Crab, coastal migratory pelagics, red drum, reef fish, shrimp, and spiny lobster.²³⁴

NMFS implements the EFH through a consultation process that is required whenever a federal agency authorizes, funds, undertakes, or proposes to authorize, fund, or undertake any action that may adversely affect any established EFH.²³⁵

USACE is responsible for determining whether the action in question may adversely affect an EFH. If USACE determines that an EFH may be adversely affected, USACE “must provide NMFS with a written assessment of the effects of that action on the EFH.” NMFS is obligated to recommend conservation measures if NMFS determines or receives information that an EFH would be adversely affected by agency action.²³⁶ In such a case, USACE must respond in writing describing measures it proposes to avoid, mitigate, or offset the adverse impacts on an EFH, or explain its reasons for proposing to proceed inconsistently with NMFS’ recommendations.²³⁷

For EFH maps of MSA species potentially impacting marine activities in Charlotte County, see <http://sero.nmfs.noaa.gov/hcd/efh.htm>.

²³⁴ See maps available at <http://sero.nmfs.noaa.gov/hcd/efh.htm>.

²³⁵ Magnuson-Stevens Act § 305(b)(2); 16 U.S.C. § 1855(b)(2) (2009); 50 C.F.R. § 600.920 (2009).

²³⁶ Magnuson-Stevens Act § 305(b)(4); 16 U.S.C. § 1855(b)(4) (2010); 50 C.F.R. § 600.925 (2010).

²³⁷ Magnuson-Stevens Act § 305(b)(4)(B); 16 U.S.C. § 1855(b)(4)(B) (2010).

In conclusion, the degree to which the MSA might cause any significant permitting impediments or obstacles to Charlotte County marine activities should be assessed on a case-by-case basis based upon the activity and its potential effects on EFHs.

B. State

1. Florida Department of Environmental Protection

Florida Statutes allow the Florida Department of Environmental Protection (FDEP) and the water management districts to exempt from regulation any activity they determine to have only minimal or insignificant individual or cumulative impact to the waters of the state.²³⁸ Thus, some activities may be exempt from the regulations giving rise to the need for a permit. To receive a *de minimis* exemption from FDEP permitting requirements, an application must be made in writing, and submitted to the appropriate local office of FDEP with a description of the proposed project and a request for the exemption.²³⁹ If the exemption is granted, an exemption fee of at least \$100, but not exceeding \$500, will be charged to the applicant.²⁴⁰ Additionally, even where this exemption applies, authorization to use sovereign submerged lands is still required.²⁴¹ Note that as part of the additional protections for aquatic preserves, authorization in the form of a lease, easement, or consent of use is required for many marine activities occurring in a preserve.²⁴²

i. Environmental Resource Permits

Florida Statutes have specific provisions to ensure that activities in surface waters do not harm the State's water resources.²⁴³ Florida implements this protection through the authority of FDEP and the state's water management districts to require permits with conditions for certain work affecting water in Florida.²⁴⁴ These permits, known as

²³⁸ FLA. STAT. § 373.406(6) (2008).

²³⁹ For more information regarding ERP permits in Charlotte County, see: <http://www.dep.state.fl.us/south/ERP/ERP.htm>.

²⁴⁰ FLA. STAT. § 373.109(1)(c) (2008).

²⁴¹ FLA. STAT. § 253.77 (2008).

²⁴² See FLA. ADMIN. CODE r. 18-20.004 (2010).

²⁴³ FLA. STAT. § 373.414 (2008).

²⁴⁴ FLA. STAT. § 373.413(1) (2008). 62-343.050 Permits Required. Florida Administrative Rule code 62-343.050 states:

Except as otherwise provided in Section 373.4145, F.S., or subsections 373.414(11) through (16), F.S., or unless expressly exempted by law or Department rule, a noticed general, standard general, or individual environmental resource permit must be obtained

environmental resource permits (ERPs), may be issued by either FDEP or the local water management district, depending on the proposed activity.²⁴⁵

FDEP and the Southwest Florida Water Management District have their own substantive criteria for conducting this review. However, the criteria for each contain enough similarities that a general discussion of them here should suffice.

Florida Statutes guide the permitting criteria for ERPs and seek to ensure that proposed projects “will not be harmful to the water resources of the district”²⁴⁶ and that applicants provide reasonable assurances that the proposed project is not contrary to the public interest.²⁴⁷ To demonstrate that a proposed project is not harmful to water resources, applicants are required to give reasonable assurance that water quality standards will not be violated and that the project is not contrary to the public interest.²⁴⁸ Additional criteria which allow an applicant to demonstrate that a proposed project is not contrary to the public interest include: 1) Whether the project will adversely affect the health, safety or welfare of others; 2) Whether the activity will adversely affect the conservation of fish and wildlife, including endangered or threatened species; 3) Whether the activity will adversely affect navigation or the flow of water or cause harmful erosion or shoaling; 4) Whether the activity will adversely affect the fishing or recreation values or marine productivity in the vicinity of the activity; 5) Whether the activity will be of a temporary or permanent nature; 6) Whether the activity will adversely affect or will enhance significant historical and archaeological resources; and 7) Consideration of the current condition and relative value of functions being performed by areas affected by the proposed activity.²⁴⁹

from the Department, as provided in Chapters 62-330 and 62-341, F.A.C., and this chapter, prior to construction, alteration, operation, maintenance, abandonment, or removal of any stormwater management system, dam, impoundment, reservoir, or appurtenant work or works, including dredging or filling in, on, or over wetlands and other surface waters, as determined by the methodology ratified by Section 373.4211, F.S., and codified in rule Chapter 62-340, F.A.C.

²⁴⁵ See *Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S., Between Southwest Florida Water Management District and Department of Environmental Protection*, section II.A.1.i. and II.A.1.o. (July 1, 2007).

²⁴⁶ FLA. STAT. § 373.413(1) (2010).

²⁴⁷ FLA. STAT. § 373.414(1) (2010).

²⁴⁸ *Id.* If the activity is proposed in an Outstanding Florida Water, the applicant must demonstrate that the project is “clearly in the public interest.”

²⁴⁹ FLA. STAT. § 373.414(1)(a)1-7 (2010).

These statutory criteria are further elaborated in the rules of FDEP and the water management districts.²⁵⁰

Whether FDEP or the relevant water management district evaluates the permit, the substantive criteria applied to determine whether a permit should be issued are very similar. The permitting processes for all the districts and FDEP also possess great similarities, but of course, as noted below, points of contact will differ. The similarity in the substantive criteria for issuance among the districts and between the districts and FDEP stem from the fact that the districts receive their permitting authority from FDEP. Additionally, FDEP has adopted many of the permitting rules developed by the water management districts and applies these rules when FDEP evaluates a permit.²⁵¹

a. Applying for a Permit

The first step in the formal application process for an ERP permit is to have a pre-application meeting with FDEP staff.²⁵² For more information, see: <http://www.dep.state.fl.us/south/ERP/ERP.htm>, and contact Lucy Blair in FDEP's South District office (covering Charlotte County) at 329-344-5618 or lucy.blair@dep.state.fl.us.

In most instances a marine activity subject to ERP permitting will require a standard permit. In this case, when FDEP applies the rules of the Southwest Florida Water Management District (SWFWMD), FDEP will apply the SWFWMD Basis of Review for Environmental Resource Permit Applications.²⁵³ Relevant permitting standards from the review are set forth generally in Rule 3.1.1 and 3.2.5 of the Basis of Review for Environmental Resource Permit Applications.

Additional criteria exist for permitting project in, on, or over wetlands or other surface waters. These include consideration of the impacts on fish and wildlife, including endangered and threatened species; navigation; and fishing and recreational values.²⁵⁴ The most restrictive part of the permitting process is that FDEP will consider notes that a permit shall be denied "in Class II or Class III waters which are classified as approved,

²⁵⁰ See, e.g. FLA. ADMIN. CODE rr. 40D-4.301 (SWFWMD); 40D-4.302 (SWFWMD); 40E-4.301 (SWFWMD); and 40E-4.302 (SWFWMD).

²⁵¹ Rules of the water management districts, adopted by FDEP under an operating agreement, for use in FDEP permitting appear in Chapter 62-330 of the Florida Administrative Code.

²⁵² FLA. ADMIN. CODE r. 62-343.070(1) (2010).

²⁵³ Available electronically at http://www.swfwmd.state.fl.us/files/database/site_file_sets/17/erp_basis_of_review.pdf.

²⁵⁴ *Id.* at section 3.1.1(a).

restricted, conditionally approved, or conditionally restricted for shellfish harvesting.”²⁵⁵
In addition, rules indicate that permits will be denied in or adjacent to *any* Class II waters without protections for the Class II waters.²⁵⁶

3.2.5 Class II Waters; Waters Approved for Shellfish Harvesting

The special value and importance of shellfish harvesting waters to Florida's economy as existing or potential sites of commercial and recreational shellfish harvesting and as a nursery area for fish and shellfish is recognized by the District. In accordance with section 3.1.1(d), the District shall:

a. deny a permit for a regulated activity in Class II waters which are not approved for shellfish harvesting unless the applicant submits a plan or proposes a procedure to protect those waters and waters in the vicinity. The plan or procedure shall detail the measures to be taken to prevent significant damage to the immediate project area and the adjacent area and shall provide reasonable assurance that the standards for Class II waters will not be violated;

b. deny a permit for a regulated activity in any class of waters where the location of the system is adjacent or in close proximity to Class II waters, unless the applicant submits a plan or proposes a procedure which demonstrates that the regulated activity will not have a negative effect on the Class II waters and will not result in violations of water quality standards in the Class II waters;

c. deny a permit for a regulated activity that is located directly in Class II or Class III waters which are classified as approved, restricted, conditionally approved or conditionally restricted for shellfish harvesting. This provision shall not apply to maintenance dredging of navigational channels, the construction of shoreline protection structures, the installation of transmission and distribution lines for carrying potable water, electricity or communication cables in rights-of-way previously used for such lines, for clam and oyster culture, and for private, single family boat docks that meet the following criteria for installation in such waters:

²⁵⁵ *Id.* at section 3.2.5(c) (referenced by section 3.1.1(d) and incorporated by reference into Florida Administrative Code rule 40D-4.302(1)(c)).

²⁵⁶ *Id.*

1. there shall be no more than two boats moored at the dock;
2. no overboard discharges of trash, human or animal waste, or fuel shall occur at the dock;
3. any non-water dependent structures, such as gazebos or fish cleaning stations, shall be located on the uplands;
4. prior to the mooring of any boat at the dock, there shall be existing structures with toilet facilities located on the uplands;
5. any proposed shelter shall not have enclosed sides;
6. the mooring area shall be located in waters sufficiently deep to prevent bottom scour by boat propellers; and
7. any structures located over grassbeds shall be designed so as to allow for the maximum light penetration practicable.

FDEP will forward the application for any project in, on, or over surface waters to the U.S. Army Corps of Engineers and the Florida Fish and Wildlife Conservation Commission.²⁵⁷ Unless the deadline is waived by the applicant, FDEP must grant or deny a permit within ninety days of receiving a complete application.²⁵⁸

In conclusion, ERP permitting may prevent many marine activities in Class II or III waters approved, restricted, conditionally approved, or conditionally restricted for shellfish harvesting.

b. General

General ERP permits issued by the Southwest Florida Water Management District are as follows:

40D-40.040, F.A.C. General Environmental Resource Permits.

(1) Three types of General Environmental Resource Permits are issued pursuant to this chapter and Chapter 40D-4, F.A.C. They are:

²⁵⁷ FLA. ADMIN. CODE r. 62-343.090(2)(g) (2010).

²⁵⁸ FLA. ADMIN. CODE r. 62-343.090(2)(i) (2010).

(a) General Environmental Resource Permit for Minor Surface Water Management Systems. The conditions for issuance for this permit are contained within Rule 40D-40.301, F.A.C.;

(b) General Environmental Resource Permit for Surface Water Management Systems. The conditions for issuance of this permit are contained within Rule 40D-40.302, F.A.C.; and

(c) General Environmental Resource Permit for Site Conditions Assessment. The conditions for issuance of this permit are contained within Rule 40D-40.302, F.A.C.

Also, for more information regarding FDEP's newly-developed general permits, see *Part I. B. 3. i* (2005-158 / General Permit for Local Governments).

c. Conceptual and Individual

(2) Standard General, Individual, and Conceptual Approval Permit Procedures.

(a) Those specific classes of surface water management systems which meet the criteria in Chapter 62-330, F.A.C., are eligible for a standard general, individual, or conceptual approval permit.

(b) Applications for standard general, individual, and conceptual approval permits shall be submitted on Form 62-343.900(1), to the appropriate Department office, as set forth in Rule 62-343.080, F.A.C.²⁵⁹

Once an application has been submitted to FDEP, FDEP has thirty days within which to determine whether the application is complete or to request additional information needed to rule on the permit application.²⁶⁰ FDEP will forward the application for any project in, on, or over surface waters to the U.S. Army Corps of Engineers and the Florida Fish and Wildlife Conservation Commission.²⁶¹ Unless the deadline is waived

²⁵⁹ FLA. ADMIN. CODE r. 62-343.090(2) (2009).

²⁶⁰ FLA. ADMIN. CODE r. 62-343.090(2)(c) (2009).

²⁶¹ FLA. ADMIN. CODE r. 62-343.090(2)(g) (2009).

by the applicant, FDEP must grant or deny a permit within ninety days of receiving a complete application.²⁶²

ii. Water Quality

FLA. ADMIN. CODE § 62-343.070(9): A complete application for an individual or standard general environmental resource permit for activities in, on, or over wetlands or other surface waters shall constitute an application for certification of compliance with state water quality standards pursuant to Section 401, Public Law 92-500, 33 U.S.C. Section 1341. Issuance of an environmental resource standard general or individual permit shall also constitute issuance of such state water quality certification, unless a permit is issued pursuant to the net improvement provisions for water quality provided by paragraph 373.414(1)(b), F.S., or unless otherwise specifically stated in the permit, in which case issuance of the permit shall not be considered issuance of such water quality certification. Similarly, an application for certification shall constitute an application for a noticed, standard general, or individual environmental resource permit. Noticed general permits, as described in Chapter 62-341, F.A.C., also constitute water quality certification for the activity described in the general permit or exemption when the activity is performed according to all applicable rules of the Department and all general and specific conditions of the exemption or general permit. Water quality certification shall be waived for applications that qualify as an exemption under Chapter 373 or 403, F.S., or Chapter 62-330, F.A.C

In conclusion, a certification of compliance with state water quality standards will be obtained as part of the ERP process.

2. Board of Trustees of the Internal Improvement Trust Fund

Section 253.77, F.S., states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, an applicant is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.

An applicant cannot receive an ERP until all requirements of Chapter 253 or 258, F.S., have been met.²⁶³ To receive permission to use sovereign submerged lands, the proposed project must not be contrary to the public interest.²⁶⁴

²⁶² FLA. ADMIN. CODE r. 62-343.090(2)(i) (2009).

A single application shall be submitted and reviewed for activities that require an individual or standard general environmental resource permit under Part IV of Chapter 373, F.S., and a proprietary authorization under Chapter 253 or 258, F.S., to use sovereign submerged lands. In such cases, the application shall not be deemed complete, and the timeframes for approval or denial shall not commence, until all information required by applicable provisions of Part IV of Chapter 373, F.S., and proprietary authorization under Chapter 253 or 258, F.S., and rules adopted thereunder for both the environmental resource permit and the proprietary authorization is received.²⁶⁵

In addition to statutory authority to control the environmental impacts of activities in wetlands or waters, the State of Florida is the owner of most of the submerged land in Florida and thus has proprietary authority as well. Submerged lands owned by the State of Florida are known as “sovereign submerged lands.” The Board of Trustees of the Internal Improvement Trust Fund (BTIITF) administers the State’s ownership rights over sovereign submerged lands and holds this land in trust for the people of Florida.²⁶⁶ The BTIITF has established a requirement for permission to use the State’s sovereign submerged lands. In instances in which the Florida Department of Environmental Protection (FDEP) or the State’s water management districts have environmental permitting authority, the BTIITF has delegated decision-making authority for related use of sovereign submerged lands to these agencies.²⁶⁷

An applicant’s application to FDEP will include a seamless review of a request for permission to use State submerged lands contemporaneously with regulatory review for the required environmental resources permit.²⁶⁸

According to Chapter 18-21, Florida Administrative Code, an “activity” within, or the use of, sovereignty lands requires Board approval for consent of use, lease, easement, sale, or transfer of interest in such sovereignty lands or materials. Activity includes, but is not limited to, the construction of docks, piers, boat ramps, boardwalks, mooring pilings,

²⁶³ FLA. ADMIN. CODE r. 62-343.075(2) (2009).

²⁶⁴ FLA. ADMIN. CODE r. 18-21.004 (2009).

²⁶⁵ FLA. ADMIN. CODE r. 62-343.075(1) (2009).

²⁶⁶ FLA. STAT. §§ 253.001, 253.12 (2008).

²⁶⁷ FLA. STAT. § 253.003(1) (2008).

²⁶⁸ FLA. ADMIN. CODE r. 18-21.00401 (2010).

dredging of channels, filling, removal of logs, sand, silt, clay, gravel or shell, and the removal or planting of vegetation on sovereignty lands.²⁶⁹

In sum, many marine activities in or over sovereign submerged lands will require a determination by the Board (or FDEP) that the proposed activity is in the public interest.

3. Florida Fish and Wildlife Conservation Commission

i. Mooring balls / Signage

Within Chapter 327 of the Florida Statutes, public moorings fall within the definition of “marina.”²⁷⁰ However, much ambiguity surrounds whether or not a mooring field is also part of the statutory scheme governing “uniform waterway markers” as an integral part of the newly revised Chapter 327 of the Florida Statutes. Per Florida Fish and Wildlife Conservation Commission (FWC) rules, “uniform state waterway marking system” is defined as “the system of aids to navigation, information markers, regulatory markers, and mooring buoys, as specified in Part 66 of Title 33 of the Code of Federal Regulations.”²⁷¹ Further, the definition of “marker” includes “mooring buoys,” and “mooring buoy” means a device that is permanently secured to the bottom of a body of water and to which a vessel may be secured when not underway.²⁷² Thus, a “mooring buoy” as part of a public mooring field will be subject to FWC permit requirements for “uniform waterway markers.”

For more information, see FWC’s “Guidelines for Posting uniform waterway markers in Florida’s waterways,”²⁷³ as well as the FWC Waterways Management webpage at: http://www.myfwc.com/recreation/boat_waterways_index.htm.

ii. Manatee Signage

Manatee educational signs are non-regulatory and informational in nature. Because new or expanding marinas and boat ramps in manatee habitat are required by state and

²⁶⁹ FLA. ADMIN. CODE r. 18-21.003(2) (2010).

²⁷⁰ FLA. STAT. § 327.02(20) (2010) (“‘Marina’ means a licensed commercial facility which provides secured public moorings or dry storage for vessels on a leased basis. A commercial establishment authorized by a licensed vessel manufacturer as a dealership shall be considered a marina for nonjudicial sale purposes.”).

²⁷¹ FLA. ADMIN. CODE r. 68D-23.103(1)(1) (2010).

²⁷² *Id.*

²⁷³ FWC & USFWS, *Guidelines for Posting uniform waterway markers in Florida’s waterways* (March 2008), http://www.myfwc.com/docs/RecreationActivities/Boat_WaterwayMarkerGuidelines.pdf.

federal regulatory agencies to install and maintain manatee educational type signs, such signs may also have to be erected when implementing regulated marine activities in manatee habitat.²⁷⁴ Approval for the types and locations of signs required by permit or lease are coordinated by the Florida Fish and Wildlife Conservation Commission's Imperiled Species Management Section.²⁷⁵ The types of signs and process for approval can be found at:

http://myfwc.com/wildlifehabitats/manatee_signs.htm

http://www.myfwc.com/docs/WildlifeHabitats/Manatee_EducationalSign.pdf

For more information, contact:

Florida Fish and Wildlife Conservation Commission
Imperiled Species Management Section
620 South Meridian Street, 6-A
Tallahassee, FL 32399-1600
Phone: 850-922-4330
ImperiledSpecies@MyFWC.com

Conclusion

Restrictions related to (1) shellfish harvesting waters (FDACS / FDEP), (2) Charlotte County Comprehensive Plan and Land Development Code limitations, (3) state and federal manatee protection zones/areas (FWC and USFWS respectively), and (4) EFH are some of the more notable potential obstacles to marine activities in Charlotte County. Many of these concerns will likely arise automatically through the state Environmental Resource Permit application process due to informal consultations between state and federal resource agencies. However, these problems may only arise after Charlotte County has invested significant time and effort into a project and site. Thus, even at the very early stages of considering proposed marine activities or projects, the County should consider informal meetings with the resource and regulatory agencies listed here to understand what the possible constraints might be, thus facilitating the permitting process once the County finalizes its intentions.

²⁷⁴ FWC, *Manatee Signs*, http://myfwc.com/wildlifehabitats/manatee_signs.htm.

²⁷⁵ *Id.*