

**Mega Yacht Economic Analysis for the Las Olas Marina
Expansion Feasibility Study
Fort Lauderdale, Florida**

Prepared by
THOMAS J. MURRAY & ASSOCIATES, INC.

January 2013

On behalf of
CITY OF FORT LAUDERDALE

Assumptions and Limiting Conditions

Information from secondary sources was utilized in this report. While the author believes such information is accurate, the author does not represent or warrant any information from secondary sources. Opinions contained herein are strictly those of the author. The author shall not be liable to any person or entity for actions taken in reliance thereon. This report is issued as of the date first above written. The author is under no obligation to update this report for any change in circumstances, information, law, etc. Only the addressee is entitled to rely upon this report.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	I
The Luxury Yacht Market Situation	I
Las Olas' Competitive Situation & Revenues.....	II
INTRODUCTION	1
EVALUATION OF LAS OLAS MARINA MARKET POTENTIAL	2
The Luxury Yacht Market Situation	2
Basis for Projected Demand	3
U.S. Army Corps of Engineers.....	4
U.S. Customs Service — Miami, Port Everglades, Palm Beach	5
Florida Boat Yard & Marina Surveys.....	6
Mega Yacht Chartering.....	7
Estimated Number of Charter Mega Yachts in the South Florida Region	9
Brokering of Mega Yachts	11
Las Olas' Competitive Situation & Revenues.....	11
Depth	11
Storage/Occupancy.....	12
CONCLUSION.....	17
REFERENCES	18

Mega Yacht Economic Analysis for the Las Olas Marina Expansion Feasibility Study Fort Lauderdale, Florida

Prepared by
THOMAS J. MURRAY & ASSOCIATES, INC.

December 2012

On behalf of
CITY OF FORT LAUDERDALE

EXECUTIVE SUMMARY

The Luxury Yacht Market Situation

The Fort Lauderdale region¹ is at the forefront of the worldwide growth in business associated with luxury yachts of 80 feet or greater in length. For the past 25 years, the “mega yacht” industry has undergone a dramatic expansion in new construction, the brokered sale of new and previously owned mega yachts, and in the activity of existing yachts for charter.

- Fort Lauderdale represents the world’s most significant cluster of professional services and talents necessary for the world’s growing mega yacht sector.
- As of December 2012, 692 mega yachts were under construction worldwide. The average size of the new vessels is increasing and is most recently estimated to be 135 feet.
- An estimated 15 of every 100 newly built mega yachts will frequent the Fort Lauderdale region for cruising, repair and maintenance and dockage.
- An estimated 1,500 mega yachts were present in the region’s waters during 2012.
- Specifically of relevance to the Las Olas Marina proposal is the increasing size of mega yachts under construction. The U.S., Italy and the combined production of Holland and Turkey account for 2/3 of the world’s total yacht production.
- The average new build measures 180’ in Holland, 143’ in Turkey, 131’ in U.S. yards and 127’ in Italy.

¹ Unless otherwise denoted, the term “region” refers to the southeastern Florida “Tri-County” region, including Dade, Broward, and Palm Beach Counties.

Las Olas' Competitive Situation & Revenues

Fort Lauderdale currently provides the foremost base for an expanding worldwide mega yacht sector. The mega yacht support sector requires a wide range of talents. The region's clustering of a broad spectrum of necessary talents has positioned it at the forefront of mega yachting worldwide. Fort Lauderdale's prime east-coast position is a major location advantage, affording a singular opportunity to service the vast majority of the world's mega yacht fleet.

- Competition for the mega yacht business, from both U.S. and foreign regions, is increasing dramatically. Las Olas is well-suited to meet such competition.
- The owner of a mega yacht would, on average, save 15% of the total project cost by employing the Fort Lauderdale boat yards rather than competing European shipyards. This activity will help drive demand as well for large vessel berthing, such as proposed at Las Olas.
- The two major limiting factors identified by the mega yacht related industry, are the limitations of existing dockage and lift facilities in the U.S.
- Las Olas is well positioned to grow by virtue of the impediments facing established marinas in the region.
- Virtually all of the critical issues facing the regions' existing facilities are, at the same time, Las Olas strengths. The issues of limited ocean access and dockage for larger mega yachts; are industry constraints, which the Las Olas redevelopment specifically builds upon.
- The potential for new construction of competitive marinas is not significant in view of existing coastal regulatory constraints.
- Las Olas will benefit from established linkages between both local and non-local suppliers to the maritime industry. This leverages Fort Lauderdale's existing resources and capabilities.
- It is estimated that in the first year of expanded operations Las Olas will provide berthing to 75-100 mega yachts, approximately 5-10 % of the fleet currently cruising the region. Forty percent of these vessels will be 80'-100'; 20% will be 101'-120'; 19% will be 121'- 140' and the balance greater than 140'.

Fort Lauderdale has an extensive endowment in the servicing of complex vessels. This experience will be a considerable strength in serving the larger more complicated vessels, which contain systems of guidance, communication, hydraulics, etc., which are beyond the capabilities of many existing luxury yacht yards.

Currently large mega yachts visiting the region must pass by Fort Lauderdale due to a lack of suitable depths and berthing to accommodate this existing and growing market.

After the first year of expansion Las Olas will generate \$2.2- \$2.3 million in revenue from dockage and associated services. That level will continue to grow as larger vessels are berthed increasing the average slip rates by 2-4% per year in conjunction with increased occupancy growing at 1-2% per year.

The strategic location of the Fort Lauderdale facility on the east coast of the U.S. places it at the center of the Atlantic's mega yacht activity. As has been identified throughout this and related reports, the South Florida region of the U.S. is dominant in mega yacht presence. Further, its central position affords access to the largest charter mega yacht fleet — that which typically crosses the Atlantic to cruise both the Mediterranean and the Eastern U.S./Caribbean waters.

Mega Yacht Economic Analysis for the Las Olas Marina Expansion Feasibility Study Fort Lauderdale, Florida

Prepared by
THOMAS J. MURRAY & ASSOCIATES, INC.

January 2013

On behalf of
CITY OF FORT LAUDERDALE

INTRODUCTION

This study has been completed on behalf of the City of Fort Lauderdale. The analysis concerns itself specifically with the proposed expansion of the Las Olas' marina facilities ("the marina") at Fort Lauderdale, Florida.

The main objective of the study is to review the economic estimates of the expanded marina facility that have been provided by the City and its consultants. Additional market research is provided here to offer a broader context with which to assess the potential demand for the expanded dockages. Those findings are used to analyze the revenue projections being considered by the City.

Estimates of market demand for expanded berthing are reached by completing the following tasks:

- Characterization of the existing fleet of "mega" yachts (defined herein as pleasure vessels 80 feet and greater in length) in the market areas relevant to the Fort Lauderdale area.
- Reviewing databases, trade literature, and business intelligence.
- Extensive interviewing in the region associated with this inquiry and recently published industry studies.
- Updating the mega yacht demand analysis contained in a series of periodic reports from 1995-2008 prepared by the author.²

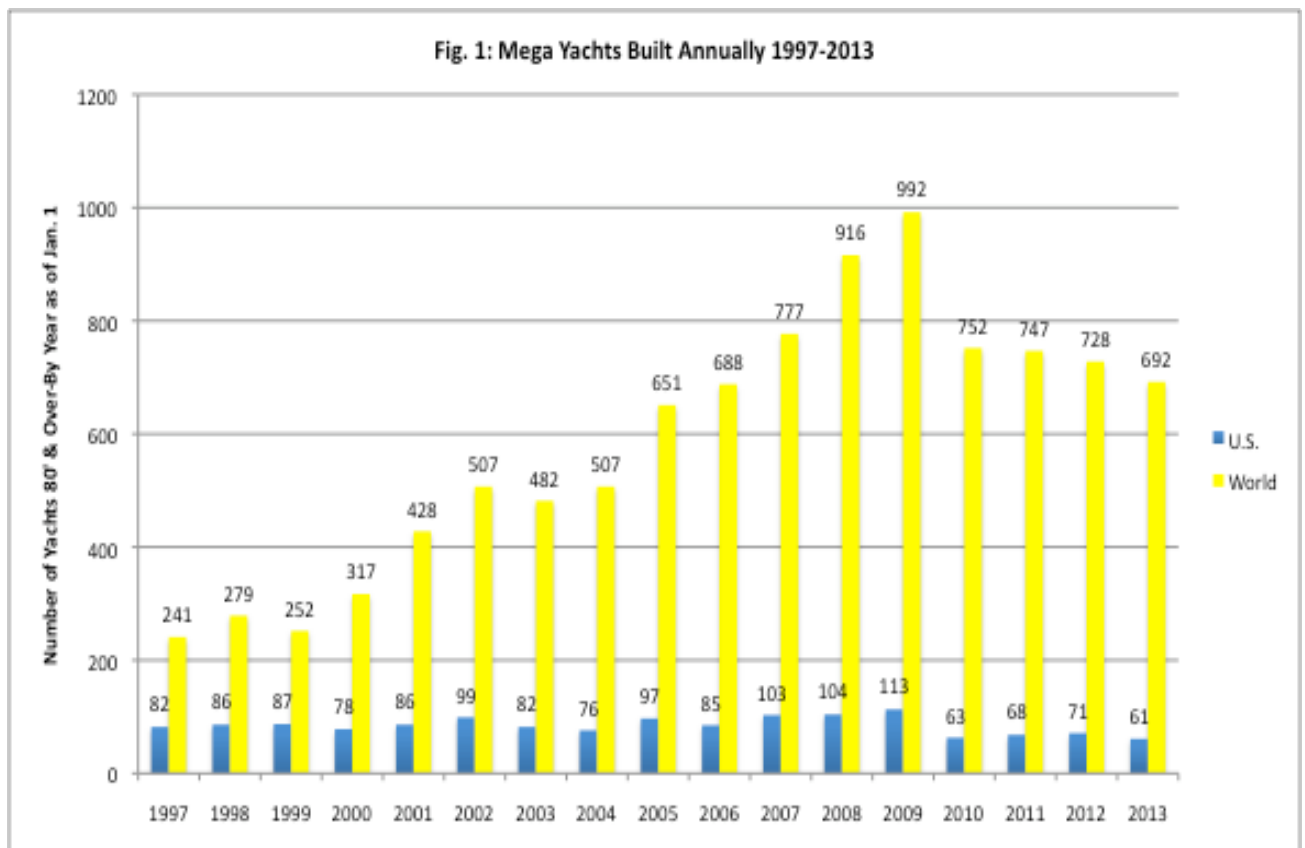
² Entitled "Recent Growth, Current Activity and Economic Impacts of Mega yachts In South Florida 1997-1998" the benchmark report was the first performed of the luxury yacht sector. Completed in October 1998, the study was performed on behalf of the Marine Industries Association of South Florida, Inc. and the Broward Alliance, Inc. It was further updated in 2007. Portions of those studies have been updated herein.

EVALUATION OF LAS OLAS MARINA MARKET POTENTIAL

The Luxury Yacht Market Situation

The yacht industry has experienced cyclical expansions and contractions throughout the twentieth century. Evident by numerous indicators, expansion continues in terms of the numbers, sizes, and cost of luxury yachts under construction, reconstruction, and use worldwide and in the U.S. Nowhere has such growth in the activity of luxury yachts measuring 80' or longer ("mega yachts") been experienced more dramatically than in the southeastern U.S.

As shown in the following graph (Figure 1), as of December 2012, Showboats International (a leading periodical and authority on mega yachts worldwide) reported 692 yachts under construction worldwide. The same source reported the greatest growth in the 100-149' range.³



³ ShowBoats International December 2012.

At the end of 2012, the U.S. ranked fourth overall in the world, in numbers of yachts under construction. In 2012, seventy-one yachts with an average length of 131' were reportedly built in the U.S. yards.⁴ Specifically of relevance to the Las Olas facility proposal is the increasing size of mega yachts under construction. The U.S., Italy and the combined production of Holland and Turkey account for 2/3 of the world's total yacht production. The average new build measures 180' in Holland, 143' in Turkey, 131' in U.S. yards and 127' in Italy.⁵ The rate of increase of new mega yacht construction has declined as depicted above, however in terms of the overall size of the sector, within the period reflected above, the number of mega yachts operating worldwide increased by nearly 10,000 including over 1,400 estimated to have been built by U.S. yards over this period. To summarize for every 100 new mega yachts constructed worldwide an estimated 15 will cruise in South Florida.

Table 1 depicts the pace of accrual in the fleet of larger mega yachts, which constitute a major portion of the dockage market sought with the proposed Las Olas Marina expansion.

TABLE 1: ESTIMATED NUMBER OF MEGA YACHTS CONSTRUCTED WORLDWIDE MEASURING AT LEAST 80 FEET IN "LENGTH OVERALL" (1998-2013)⁶				
Length Overall	1998	2006	2009	2013
80-99 feet	122	302	403	213
100-119 feet	58	146	190	142
120-149 feet	41	110	193	151
150 feet +	41	130	206	186
<i>Total Number</i>	262	688	992	692

Basis for Projected Demand

For this analysis, the mega yacht "market region" is primarily considered to include vessels of 80' in length and greater, positioned in the East Coast of the U.S., Western Mediterranean and Caribbean waters.

As with the worldwide numbers, there is no definitive, readily available method for tracking operations or the numbers of mega yachts entering the region. In view of this, available government associated and private documentation is used. Such sources serve both as

⁴ Ibid.

⁵ Ibid.

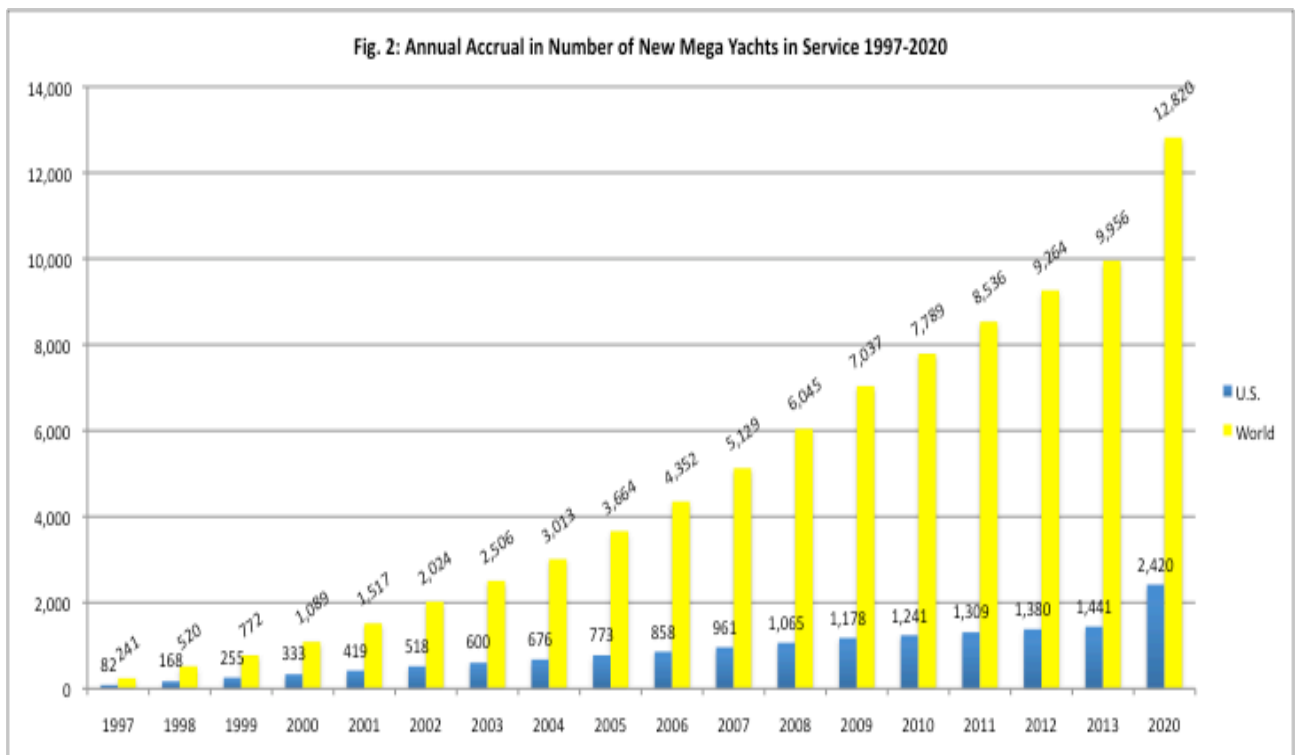
⁶ Ibid.

indicators of overall trends in numbers of mega yachts, and also provide a “control” in the estimation of the absolute numbers of these vessels in the region.⁷

The following sources were utilized to develop the estimated fleet of mega yachts active in the Fort Lauderdale region:

U.S. Army Corps of Engineers

A 1997 study by the Army Corps of Engineers indicated that the fleet of “mega yachts” numbered approximately 5,000 worldwide. According to the study, at any given time 10-15% of these vessels would be operating in the South Florida region. The same study noted industry estimates that during the 1970’s, between 200 and 250 mega yachts were under construction annually worldwide.⁸ As documented above, those numbers have more than doubled over the past 15 years. Worldwide an estimated 10,000-15,000 mega yachts are operating with approximately 1,500 active in the South Florida region.



⁷ For a variety of reasons, sometimes business-related sometimes personal, vessels which may be home based in the region, may actually be documented or registered outside of particular states.

⁸ “Palm Beach County IWW Limited Reconnaissance Report” Limited Reevaluation Report. U.S. Army Corps of Engineers. Jacksonville District, South Atlantic Division. March 1997.

As seen in Figure 2 above, the annual growth in the number of mega yachts has been quite significant in terms of expanding the overall fleet from the estimated 5,000 operating in 1997. While it is reasonable to expect that some of that original fleet has been removed from service over the years, the growth in new vessels has added greatly to that base number. Nearly 10,000 new mega yachts have entered service over this period. While the rate of growth has slowed in recent years, growth has been robust nonetheless. For the sake of projection it is assumed that the next 7 year period (to 2020) will exhibit the same relative growth as seen over the prior 7 year period. This would bring the worldwide number of mega yachts built since 1997 to nearly 13,000; significantly adding to the remaining vessels included in the 5,000 worldwide mega yachts estimated in 1997. South Florida can be expected to continue to share in this growth which will mean an estimated 2,000 mega yachts will constitute the relevant market for local marinas, boat yards and industry who are increasingly well positioned with enhanced dredging and access depths to meet the needs of the world's mega yacht fleet.

U.S. Customs Service — Miami, Port Everglades, Palm Beach

Non-published information provided by the U.S. Customs Service is reflected in the following Tables 2 & 3. This data indicates that 904 foreign registered vessels completed the required "License to Cruise in the Waters of the U.S." (*Cruising Permit*) for Port Everglades during 2012, with the Port of Miami documenting 366, and Palm Beach 383. Overall, it is estimated that about 50% of those 1,854 cruising vessels are in the "mega yacht" category, and enter the waters primarily to cruise and have work completed at boat yards and docks at available marinas in the area. A second class of mega yachts, which do not file the cruising permits, but rather pay Custom's duty, are included in the "Formal Entrance Totals." In summary, based upon this data, 1,854 foreign flagged vessels obtained cruising permits to enter the South Florida region and an additional 1,093 purchased formal entry.⁹

A third source of mega yacht activity in the South Florida region, are the vessels which cruise and have work completed which are neither local nor foreign, but rather are U.S. owned mega yachts domiciled outside of the region. No available current estimate of those additional mega yachts is available.

⁹ Personal communications U.S. Customs Ports: Port Everglades, Miami, and Palm Beach, Florida. In order to enter the U.S., recreational vessels must complete a document, which allows it to arrive and depart from the U.S. and to cruise in U.S. waters for one year from date of issue. Mega yachts, which do not file the cruising permits, but rather pay Custom's duty, are included in the "Formal Entrance Totals" also estimated above. The CY2012 numbers did not include the last two months of the year and a linear expansion is used here to estimate the final total.

TABLE 2. CRUISING LICENSE ISSUANCE TOTALS¹⁰			
	CY 2010	CY 2011	CY 2012
Port of Palm Beach	364	368	383
Port Everglades	935	906	904
Port Miami	345	365	366
Port of Key West	76	73	76
Port of Fort Pierce	120	118	126
<i>Totals</i>	1,840	1,830	1,854

TABLE 3. FORMAL ENTRANCE TOTALS¹¹			
	CY 2010	CY 2011	CY 2012
Port of Palm Beach	22	30	29
Port Everglades	668	699	716
Port Miami	281	285	305
Port of Key West	1	1	0
Port of Fort Pierce	55	30	43
<i>Totals</i>	1,027	1,045	1,093

This positive trend in transient yacht activity in the Fort Lauderdale region is particularly important to the proposed marina expansion as most of the transient vessels will require dockage and related services, while in the Fort Lauderdale region.

One additional indicator of the importance of the region to mega yachts and the growth in such vessels was the 53rd Annual Fort Lauderdale International Boat Show. As reported in the Official Show Directory this past year, the show hosted the largest single gathering of mega yachts in one location. Over 212 mega yachts from around the world were present, with the largest reported to be the 284' "Cakewalk". The Las Olas Marina location hosted primarily mega yachts with the largest being the 175' "Proteus". Sixty-seven vessels with at total length of 6,062 feet were displayed at the site's 7 docks, including the temporary floating "X Dock". Two thirds of the boats displayed were mega yachts.

Florida Boat Yard & Marina Surveys

In order to gain descriptive and financial information for use in market analysis and related impact modeling, interviews with boat yards directly involved in building, maintaining, and

¹⁰ Ibid

¹¹ Ibid

refitting vessels of the mega yacht category have been conducted periodically by *Thomas J. Murray & Associates*.

There are 37 firms in Broward County, 31 in Dade County, and 14 in Palm Beach County reported to have the NAICS classification as recreational boatyards. Of this total (82), an estimated 17 companies have the dockage and lift capacities to handle mega yachts up to 130'. Recent upgrades in lift capacity such as at "Derecktor of Florida" in conjunction with dredging have made the haul out of even larger vessels possible in Fort Lauderdale. The Las Olas Marina facility will be well suited to accommodate these *larger* mega yachts" as the controlling depth of the ICW in front of Las Olas increases to the planned 17'.

Mega Yacht Chartering

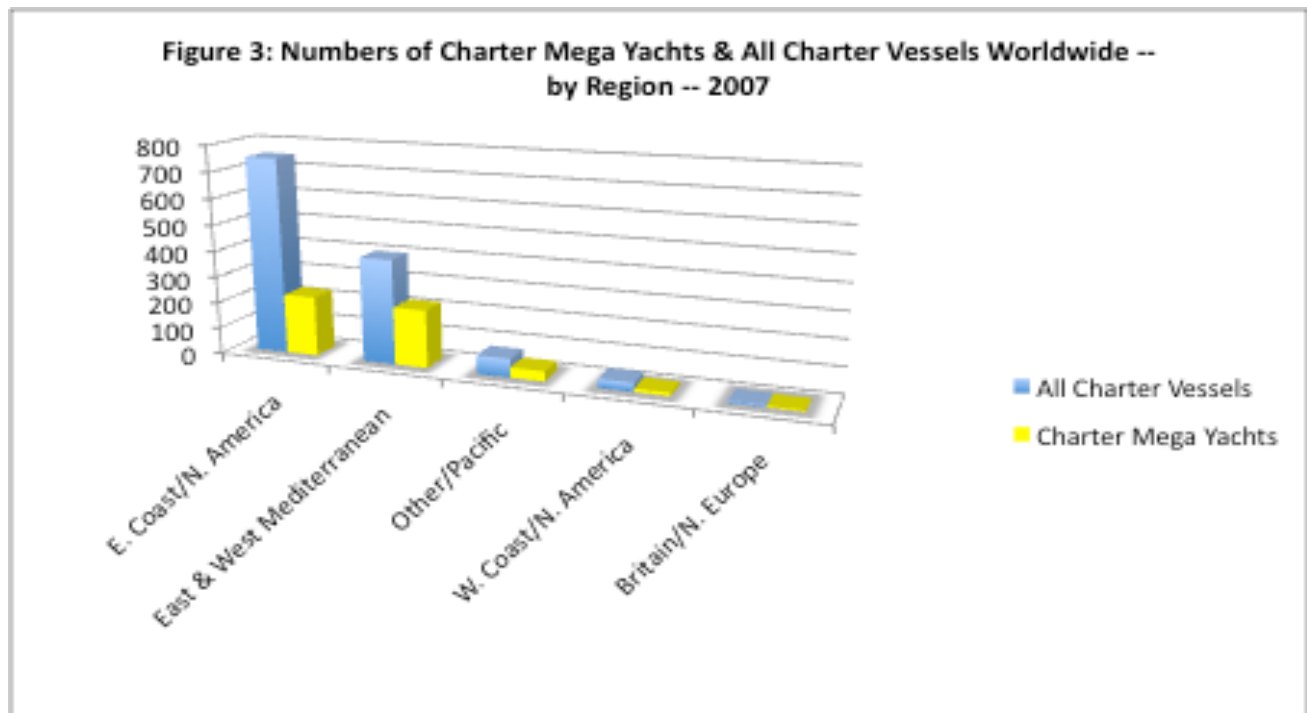
Another important indicator of the level of potential mega yacht business in the South Florida region is the level of yacht chartering, which has for nearly two decades been a rapidly growing component of the worldwide mega yacht business. While Fort Lauderdale is not considered to be a leading charter destination, its central location for the Atlantic charter fleet has implications for Las Olas potential market. Fort Lauderdale is acknowledged to provide a gateway to the Caribbean region for mega yachts transiting from Europe en-route to southern cruising grounds. Similarly, it serves as point of departure for those yachts transiting the Atlantic to return seasonally to the Mediterranean cruising grounds.

Today the charter industry is having a significant value-added impact on the major yacht industry.¹² Overall, there are generally considered to be about 4-5 "clearinghouses" of mega yacht charters in the South Florida region. Consensus estimates are that approximately 500 mega yachts are chartered worldwide, or about 5% of the fleet.¹³

Of the world total, the region is home base of repairs and maintenance to an estimated 250 mega yachts (50% of the worldwide fleet) as shown in Figure 3, and detailed in Table 4. In general, the charter fleets' necessary annual yard work will occur roughly October through November and then again in the spring. On average, chartered mega yachts would be in the boat yard for about 2 months per year.

¹² Capital Ship OpCit. Volume VII, Number 3. March 31, 1997

¹³ The use of the word charter does not include the extensive "Bareboat Chartering" businesses, which operate fleets of generally "standardized" smaller craft focusing mostly on the Bareboat sailing charters of craft 30-50 feet.



While operating conditions and management of charter mega yachts vary, typically vessels take an average of 4-6 weeks per year for normal repair and maintenance. Further, every 4-5 years such vessels require much more extensive refurbishing, repair and maintenance. Many of the chartered vessels transit the Atlantic for the summer season in the Mediterranean; returning to the southeastern U.S. again in the late fall for the winter season; which is centered in the Caribbean. With enhanced dockage and water access, Las Olas Marina will provide a new and strategically located “gateway” to vessels of this type.¹⁴

The period of time a vessel is chartered generally ranges from 6-24 weeks. On the average, such charters would reasonably be expected to employ the vessel for 14 weeks annually. The Caribbean season generally begins around Christmas, and the Mediterranean and New England seasons in the summer. The amount of time spent in the region’s boat yards and marinas is also dependent upon the ultimate cruising destination.¹⁵ In any event, during these seasonal passages, Las Olas Marina will be positioned to provide ample mega dockage at controlling depths not provided by other facilities.

¹⁴ There is also considerable migration of such vessels to the northeastern U.S. and Canadian provinces for the summer season. Similarly, they will return to the southeast for the refit season and winter operations.

¹⁵ It should be restated that the periods in the boat yard outlined here, pertain to “routine” repairs and maintenance. Such periods increase dramatically during refitting, major overhauls or capital repair, interior refurbishing, paint work etc.

Estimated Number of Charter Mega Yachts in the South Florida Region

Information provided by charter industry professionals reflects the leadership if not dominance of the region in the mega yacht chartering sector.

Of the 96 charter brokers listed worldwide in the “Charter Data Bank International, Inc.” (“CDBI”), 27 companies are located in the Fort Lauderdale region or about 28% of the number of CDBI registered charter companies worldwide.¹⁶

In total, South Florida regional firms chartered 216 vessels — 34% of the mega yachts listed for charter in the international CDBI data.

A total of 348 vessels chartered worldwide were 80’ and over. 118 of the yachts chartered by charter brokers in the region were 80’ or larger.¹⁷

Another indicator of the region’s importance to the charter industry is the location and membership of the largest trade organization representing charter brokers in the U.S. The Ft. Lauderdale based “Charter Yacht Brokers Association” (“CYBA”) membership consists of 85 member companies involved in yacht chartering; of which 74 are located in the region.

TABLE 4: ESTIMATED NUMBERS OF CHARTER YACHTS AND CHARTER MEGA YACHTS AVAILABLE WORLDWIDE — BY VESSEL’S PRINCIPAL CHARTER REGION —			
Charter Region	Mega Yachts	All Vessel Sizes	% Fleet Mega Yachts
¹⁸ E. Coast N. Am.	229	750	31%
E. Mediterranean	111	180	69%
W. Mediterranean	110	220	62%
Britain/N. Europe	6	9	67%
W. Coast N. America	13	34	38%
Pacific/Ind. Oceans	22	42	52%
S.E. Asia	12	15	80%
Other	5	14	36%
<i>Total</i>	508	1264	40%

¹⁶ Discussions with industry members suggest that about 40% of the mega yacht charter business is conducted by businesses in the region. Worldwide it is estimated that about 80% of the mega yacht charter business is conducted by 10% of the charter brokers. Similar concentration is noted in the bare boat charter industry where 4% of the firms conduct 52% of the charter weeks booked.

¹⁷ Based upon statistics developed by Charter Data Bank International, Inc. Murray(3)

¹⁸ The South Florida region is the most immediate source of vessel haul out, maintenance and repair services such as will be provided by the new facility. The region includes the Bahamas.

While over one-half (54%) of all of the estimated crewed charter vessels listed in the CDBI record the South Atlantic as their primary location, this region hosts about one half (45%) of the mega yachts available for charter.¹⁹

The summary in Table 5 below depicts typical charter mega yacht operating expenses and shows an average of actual year-end financial information for three charter yachts. Of immediate interest is the dockage expenditure representative of larger mega yachts.²⁰

TABLE 5: ANNUAL OPERATING COSTS 130' CHARTER POWER YACHT		
Mega Yacht Cost Category	Cost (\$)	Percent of Overall Cost
Shipyard Expense	217,134	20%
Boat Supplies	52,254	4%
Repair & Maintenance	74,593	7%
Fuel & Oil	43,397	5%
Vessel Insurance	50,795	5%
Temporary Help	31,138	3%
Dockage	45,257	4%
Capital Equipment	17,265	2%
Gross Salaries (Crew)	329,424	30%
Other Fees & Owner Expense	48,326	5%
Food Crew, et. al.	84,448	8%
Communications	34,093	3%
Captains Petty Cash	24,599	2%
Transportation	23,954	2%
Uniforms & Laundry	10,350	less than 1%
Crew Insurance	7,461	less than 1%
Flower Expense	4,633	less than 1%
Entertainment Library	1,613	less than 1%
Total Expenses	\$1,100,734	(equals more than 100% due to rounding)

¹⁹ The Mediterranean charter fleet represents the largest concentration of mega yachts chartered worldwide (43%). The Mediterranean charter fleet listed in the CDBI consists of 56% mega yachts.

²⁰ Typically, mega yacht charter agreements are based upon a listed charter fee "+ all expenses". Such highly variable and significant costs may include fuel, liquor, etc. As noted, the partial economic impact calculations herein do not include these vessel expenditures.

Brokering of Mega Yachts

Much of the business related to local marinas and boat yards is actually generated by the activities of the South Florida region's yacht brokerages. Both in terms of the sale of "new builds" and existing mega yachts, the region leads the world in the brokerage sector.²¹ Reportedly the brokered sale of new-builds surpassed the sale of used mega yachts during the past two years.²² The yacht brokers in the overall mega yacht sector provide considerable synergism. For example, the broker's key role in the merchandising of mega yachts strongly influences the positioning of these vessels worldwide. The influence of the brokerage link between buyer and seller (including builders) cannot be overstated.

Las Olas' Competitive Situation & Revenues

Clearly the strategic location of the Fort Lauderdale facility on the east coast of the U.S. places it at the center of the Atlantic's mega yacht activity. As has been identified throughout this and related reports, the South Florida region of the U.S. is dominant in mega yacht presence. Further, its central position affords access to the largest charter mega yacht fleet — that which typically crosses the Atlantic to cruise both the Mediterranean and the Eastern U.S./Caribbean waters. In summary, Las Olas Marina's location affords opportunity to host the vast majority of the world's luxury yacht fleet.²³

Depth

Logistical issues facing other mega yacht centers, also serve to enhance Fort Lauderdale's competitive position. For example, planned and ongoing dredging projects will significantly enhance the current depth of Fort Lauderdale's New River and Dania Cut Canal. Depth constraints have previously restricted larger vessel access to the area. Access provided from the north and south by the Atlantic Intracoastal Waterway (ICW) will allow 15' controlling depth to enhance large vessel access. Larger mega yachts will continue to be provided access through the Port Everglades Inlet, connecting the Atlantic Ocean to the ICW. By virtue of these improvements and maintenance of this access, Las Olas Marina will manifest relatively unlimited access for mega yachts in terms of controlling water depth, access to the open ocean,

²¹ A 1991 study estimated that sixty percent (60%) of Florida's 527 yacht brokerage firms were located in the southeast principally the southeastern coast of Florida. It was estimated that the Florida yacht brokerage industry generated \$109 million in gross commissions and charter commissions in 1990. The study did not include the sale of new vessels, but did estimate that 5% of the total economic impact of the boating industry in Florida was attributable to this sector.(4)

²² Independent brokerage houses are considered the most important source of new yacht orders for shipyards. Capital Ship Volume VII, Number 3.

²³ Vessel managers estimate the South Florida share of the Caribbean/Mediterranean mega yacht fleet is about 2/3rds of the overall traffic between the Eastern and Western Atlantic yachting centers.

a sheltered location, and particularly relevant to Europe and the northeast, a year round ice-free facility.²⁴

Previously due to draft constraints, only vessels less than 160-ft. have been able to berth at local marinas and be serviced at area boatyards. As the waterways are deepened (with the current 15'-project conditions), larger vessels, up to 280-ft., may access these marinas and boatyards for services. Recent assessments of the ICW dredging projects in Broward County contain projections on large vessel growth and activity.²⁵ As the world fleet continues to expand --both in numbers and size--the deeper draft capabilities emerging in Fort Lauderdale will accommodate the larger and more numerous vessels. Such development will add demand to local infrastructure such as Las Olas Marina, local boat yards, and related trades.

Storage/Occupancy

The targeted marketing focus upon the mega yachts can reasonably be expected to draw upon an existing pool of target vessels. An expanded Las Olas Marina would have a unique opportunity to differentiate itself from competitors within the region - principally by virtue of the Las Olas deep water access. Such a clear logistical advantage would enhance the likelihood of achieving current berthing projections in terms of both occupancy and rates. The proposed expansion is in keeping with the overall trend at marinas in Florida and nationwide. As reflected in the new vessel build reports above, marinas are adapting to larger slip capabilities to accommodate the growing size of yachts while also responding to the increased storage of larger watercraft on land. For example dry storage complexes, such as in Fort Lauderdale are now accommodating vessels in the 50' range.

The current occupancy profile at Las Olas Marina, reflected in the table below, would shift to a larger vessel mix--as new floating docks are developed providing slips for the larger mega yachts. The current plan would expand the vessel dockage footage from the current 3,427 linear feet to 5,025 linear feet.²⁶ By all accounts, such yachts are already frequenting the region but finding limited controlling depths in some areas and associated limited berthing options. Industry sees the shift to larger slip capabilities as its future. As one marina operator indicated, by expanding the size of berths available, if needed, they could continue to be able to accommodate smaller boats in the larger slips, but current configurations limit the dockage available for increasingly larger fleet of mega yachts active in the region. The current vessels docked by size are reflected in Table 6 below. The average size of vessels docked at Las Olas currently is estimated to be 57'.

²⁴ Reportedly access to the very largest super yachts in excess of 300' may be limited by channel width and bascule bridge opening restrictions.

²⁵ *Economic Evaluation of the Deepening of Portions of the Intracoastal Waterway in Palm Beach and Broward Counties, Florida.* Florida Inland Navigation District. Jupiter, Florida. April 2011.

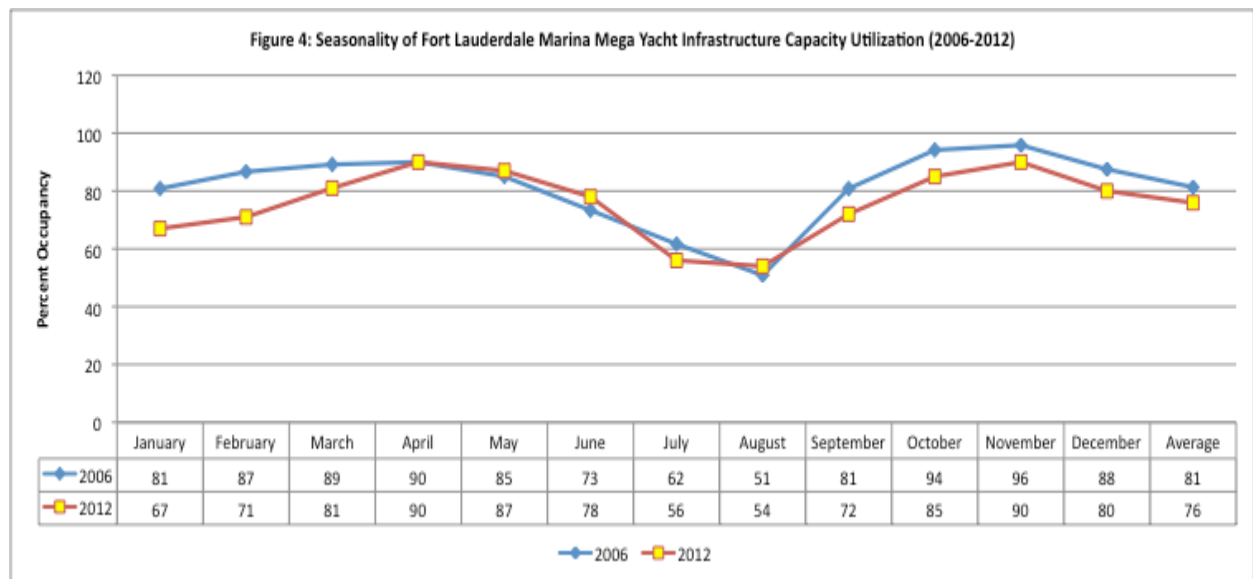
²⁶ "Intracoastal Option 2: Marina Expansion Assumptions". City of Fort Lauderdale

TABLE 6: LAS OLAS MARINA CURRENT USAGE – DECEMBER 2012²⁷		
Las Olas Marina (Current) Sizes (linear FT.)	Number of Boats	Total Berth Feet Occupied
30-40	15	525
41-50	9	405
51-60	3	165
61-70	7	455
71-80	2	150
81-90	2	170
91-100	0	0
101-110	3	315
111-120	0	0
121-130	0	0
131-140	1	135
141-150	1	145
<i>Totals</i>	43	2465

As reflected in Figure 4 below, typically Fort Lauderdale marinas experience their highest occupancy from October through May, then lower occupancy in June-September. Current improvement in hurricane insurance availability have mitigated more recent concerns and allowed the continued operation of such vessels in South Florida during the “hurricane season”. Nonetheless vessels will continue to heed what has become a rather traditional migratory schedule. The overall annual capacity utilization of mega yacht berthing in Fort Lauderdale was 81% in 2006 and is estimated to be 76% in 2012 somewhat higher than the current occupancy rate at Las Olas (72%).

Las Olas Marina’s orientation toward the larger ultra mega yachts of 150’ and greater (with very few exceptions such berths are not currently available in Fort Lauderdale marinas due to limited water depth access), will provide an increasing portion of its revenues, while likely constituting less than one half of the number of berths.

²⁷ Personal communication Jonathon Luscomb. Supervisor of Marine Facilities. City of Ft. Lauderdale. 12/5/12.



Based upon a 3-year average of actual financial data provided by the City Marina Staff, the Las Olas Marina generated total revenues of \$1,436,088 at an average occupancy rate of 71.9%. 84% of total revenue was direct dockage revenue of \$1,200,278. This translates to an effective overall berthing rate of \$0.96 per foot per day in its existing traditional slip layout and capacity of 3,427 linear feet.

With the same occupancy percentage assumptions applied, an expanded and more efficient Las Olas Marina of 5,025 lf will attract and provide dock space for an expected 75 to 100 visiting yachts with size ranges over 80'. These vessels will command a higher rate per foot as shown below in the Las Olas marina's current published rate schedule. This translates reasonably to an expected effective overall berthing rate of \$1.05 per foot per day and generates dock revenues of \$1,918,850 and total revenues of \$2,233,964 for year- 1 (FY 14/15) of marina expansion.

This is reflected in the dockage revenue shown in Figure 5 below, which includes actual and projected for Year 1 of marina expansion.²⁸

²⁸ The FY14/15 (year 1) expansion scenario is an extrapolation from actual occupancy rates/revenues per linear foot of dock most recently generated by existing foot print (3,427 linear feet) to the expanded footprint (5,025 linear feet). The dockage revenue is also assumed to constitute 84% of overall revenues in the first year of the expansion.

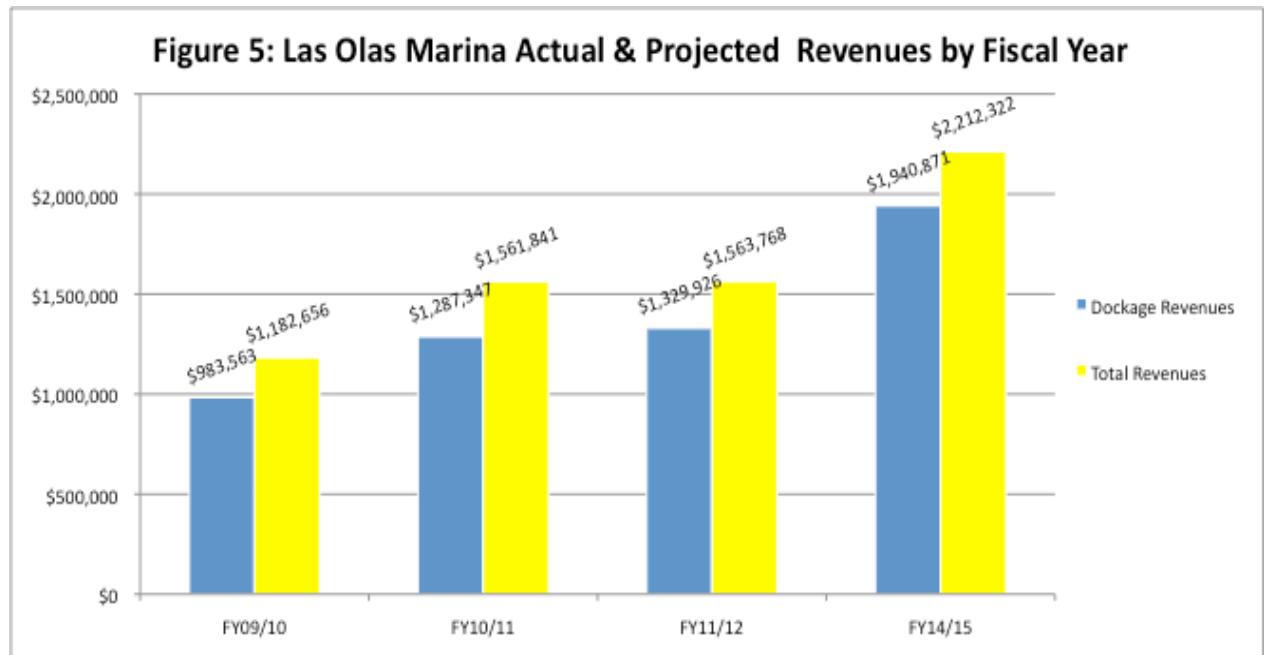


Table 7, reflects the current Las Olas dockage fee structure.

	<i>Daily</i>	<i>Monthly</i>	<i>3-Month</i>	<i>6-Month</i>	<i>Annual</i>
Floating Docks – 30'-35'	1.45	1.23	1.09	0.94	0.84
Slips – 36'to 70'	2.15	1.83	1.61	1.40	1.18
Slips – 51'to 50'	2.37	2.02	1.78	1.54	1.28
Slips – 71'to 90'	2.65	2.25	1.99	1.72	1.44
Slips – 91, and over	3.15	2.68	2.36	2.05	1.52
Face Piers A,B & C	5.15	4.38	3.86	3.35	2.77

This reconciles closely with the marina pro-forma estimates derived by *Sasaki Associates*, the City's consultant on marina design.²⁹ That firm's estimate of dockage fees to be collected in the first year following expansion is \$2,212,322 based upon a projected 74% occupancy and dockage revenues making up 86% of total revenues or \$1,940,871. This translates into an effective dockage rate of \$1.06 per foot per day. Based upon these estimates, and the overall status and growth trends shaping the future of the Las Olas Marina, it is felt that the revenue forecasts provided by *Sasaki* are within reason for the sake of planning projections. Further, by virtue of

²⁹ Personal Communication--"2012-09-18_Marina Option 2 Performa -30 Year. *xlsx*". Jon Tremontozzi, Sasaki Associates. December 7, 2012.

a growing mega yacht presence at the marina, with associated higher linear foot rates, as well as a 1-2% annual increase in occupancy it is felt that the assumptions regarding growth in the average dockage rates are reasonable. Relative to the existing and future overall market for mega yacht docking there is a shortage of berthing at accessible marinas for these vessels. Nonetheless there is some competition for the berthing from existing facilities including those located in Fort Lauderdale. A review of the published berthing rates by marinas suggests that Las Olas will be competitive in terms of pricing based upon existing structure and the estimate positive cash flow noted by Sasaki.

Comparisons among marinas are complicated by rate structures that are based upon different size classes used by marinas to estimate the cost per foot to dock. In addition to the common offering of daily berthing rates, individual marinas increasingly offer monthly, six month and annual rates at a relative discount to the daily rates. For example, “Bahia Mar Marina”, which currently offers 100 mega yacht berths, quotes rates in mega yacht size classes of 80’-89’, 100’-124’ and 125’-149’. Las Olas Marina publishes rates for mega yachts including 71’-90’, 91’-120’, 121’ and over, etc.

In order to normalize these rates for the sake of simple comparison, respective daily rates for all vessels over 70’ is used to evaluate relative berthing costs.³⁰ While clearly there are difference in location and access among the other Fort Lauderdale facilities comparing Las Olas and Bahia Mar are thought to provide the most comparable facilities and with the proposed expansion of Las Olas, will represent the vast majority of mega yacht berths. On average for vessels 70’ the current published *daily* rate at Las Olas is approximately \$3.65 compared to \$4.98 per foot at Bahia Mar.

³⁰ Published rates were obtained from personnel at Las Olas Marina and Bahia Mar Marina.

CONCLUSION

As outlined above, Las Olas Marina's location represents a region of diverse maritime capabilities; and as such, it is well-suited for the development of the expanded dockage.

Las Olas Marina is well positioned to grow by virtue of the impediments facing established marinas in the region. Virtually all of the critical issues, which face competitive region industry, are at the same time specific Fort Lauderdale strengths. The issues of limited ocean access and dockage for larger mega yachts for example, are areas where Las Olas will gain a comparative advantage.

Las Olas Marina builds on existing local resources and capabilities. The marina management involved, exhibit extensive background in the dockage of complex vessels. Clearly the growth in mega yachts relevant to the region is greatest in the larger more complicated vessels which contain systems of guidance, communication, hydraulics, etc. which are beyond the capabilities of many existing luxury yacht yards outside of the South Florida region. As such there are established linkages between both local and non-local suppliers to the maritime industry. The local industries unique capabilities are well-suited for a worldwide mega yacht sector, which currently reflects an unrelenting drive for product quality and cost competitiveness.

The forecast for the industry from a strategic position such as Las Olas' is, on balance, quite positive and in line with evolving industry environments. Other local maritime assets relative to the competition include advantages in labor costs and the general operating environment.

There are an increasing number of yachts looking to come to the U.S. for boat work between seasons, and seeking locations that have the ability to accommodate them in terms of water access and clustered expert service capabilities. With increased dredging and expansion of large vessel berthing, Fort Lauderdale will meet that market. With the current favorable exchange rate with primary European competitors, Fort Lauderdale is in a strong position to compete for vessel maintenance, repair and supply contracts, however without the availability of dockage for the larger mega yachts, vessels will have no choice but to *continue* to pass by Fort Lauderdale on the way to and from the Caribbean. For example, there are less than ½ dozen existing berths for vessels of 280' and greater in the Fort Lauderdale area. Larger mega yachts have stayed from time-to-time in Port Everglades; however, logistically it is complicated for the continual movement of cruise and commercial shipping activity within the Port. Reportedly additional costs of agent fees, trash removal, security guards, line handlers, and the like make that option relatively expensive as nearby marinas, which together have only 3 berths capable of handling a 280' yacht. In view of this, it is to be expected that the expanded Las Olas Marina will provide a missing link to the yachting sector while helping to further enhance the entire local marine industry.

REFERENCES

1. *“Economic Evaluation of the Deepening of Portions of the Intracoastal Waterway in Palm Beach and Broward Counties, Florida.”* Florida Inland Navigation District. Jupiter, Florida. April 2011.
2. *“Economic Impact of the Recreational Marine Industry-Broward, Dade, and Palm Beach Counties, Florida – 2010.”* The Broward Alliance and Marine Industries Association of South Florida. Fort Lauderdale, Florida. November 2010.
3. *“Recent Growth, Current Activity, and Economic Impacts of Mega Yachts in South Florida – 1997 – 2007.”* The Broward Alliance & Marine Industries Association of South Florida. October 2007.
4. *“Broward’s Recreational Marine Industry –Economic Activity Associated with In-Water & Dry Stack Boat Slips–August 2006.”* Marine Master Plan Committee. Marine Industry Association of South Florida, Inc., Fort Lauderdale, Florida. August 2006.
5. *“Recent Growth, Current Activity and Economic Impacts of Mega Yachts in South Florida 1997 – 2003.”* The Broward Alliance and Marine Industries Association of South Florida. Fort Lauderdale, Florida, 2003.