Recent Growth and Economic Impact of the Recreational Marine Industry in Southeast Florida's Tri-County Region – 2022

Completed by

THOMAS J. MURRAY & ASSOCIATES, INC.

For

MARINE INDUSTRIES ASSOCIATION OF SOUTH FLORIDA

And

GREATER FORT LAUDERDALE ALLIANCE

February 2023

Marine Industries Association of South Florida
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EXECUTIVE SUMMARY

The recreational marine and boating industry is a significant sector of Florida's economy. Manufacturing, retailing, and service sectors comprising the industry have expanded as the State's resident and tourist populations increased. This study is an update of earlier efforts to quantify the economic significance of the recreational marine and boating industry in Broward, Miami-Dade and Palm Beach Counties ("Tri-County") and Florida as a whole, based upon indicators of change within the industry.

This update describes the trends in ownership and operation of recreational boats, and further estimates retail sales, employment, and industry output associated with the retail sale of new and used motorboats, supplies, and outboard motors by Florida's marine industry.

Key Findings:

Over the past four years between fiscal year 2018 and 2022 historic growth in the marine industry has occurred throughout the State and Tri-County areas.[3] As depicted in Figure 1, the overall increase in marine related retail sales in Broward County was 154 %, Miami-Dade 101%, and Palm Beach 144 % over the period.

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[1] Marine Industries Association of South Florida, 221 SW 3rd Avenue, Fort Lauderdale, Florida 33312. www.miasf.org

[2] Greater Fort Lauderdale Alliance, 110 E. Broward Blvd., Suite 1990, Fort Lauderdale, FL 33301. www.gflalliance.org

[3] Florida's Fiscal Year begins July 1st and ends June 30th. Therefore, the changes noted since the last Tri-County economic study cover a period including July 2018 through June 2022.

- For fiscal year 2022 Florida State-wide gross retail sales of boat and motor products totaled $18.7 billion– an increase of 197 % since July 2018.
- The Tri-County marine industry-based retail sales grew an estimated 138 %.
- The Tri-county region represented 38.4 % ($7.187 billion) of Florida's gross marine sales during the 2022 fiscal year.
- The Tri-County's marine industry had an estimated economic impact of $18.524 billion in gross output – an increase of $ 6.497 billion from $12.027 billion in 2018.
- Included in the region's economic impacts were an estimated $6.942 billion in wages and earnings, $9.868 billion in value-added, and an associated 141,860 jobs.
- By virtue of the business activity, $863.0 million in taxes are paid at the local and State level.
- Broward County contributed $3.889 billion in sales for this sector, generating an overall economic impact of $9.957 billion.
- Miami-Dade County contributed $1.499 billion in sector sales with a total economic impact of $3.872 billion.
- Palm Beach County's $1.798 billion in sector sales supported $4.694 billion in total economic output.

FIGURE I: GROSS MARINE SALES – FLORIDA & TRI-COUNTY – FY 2006-2022

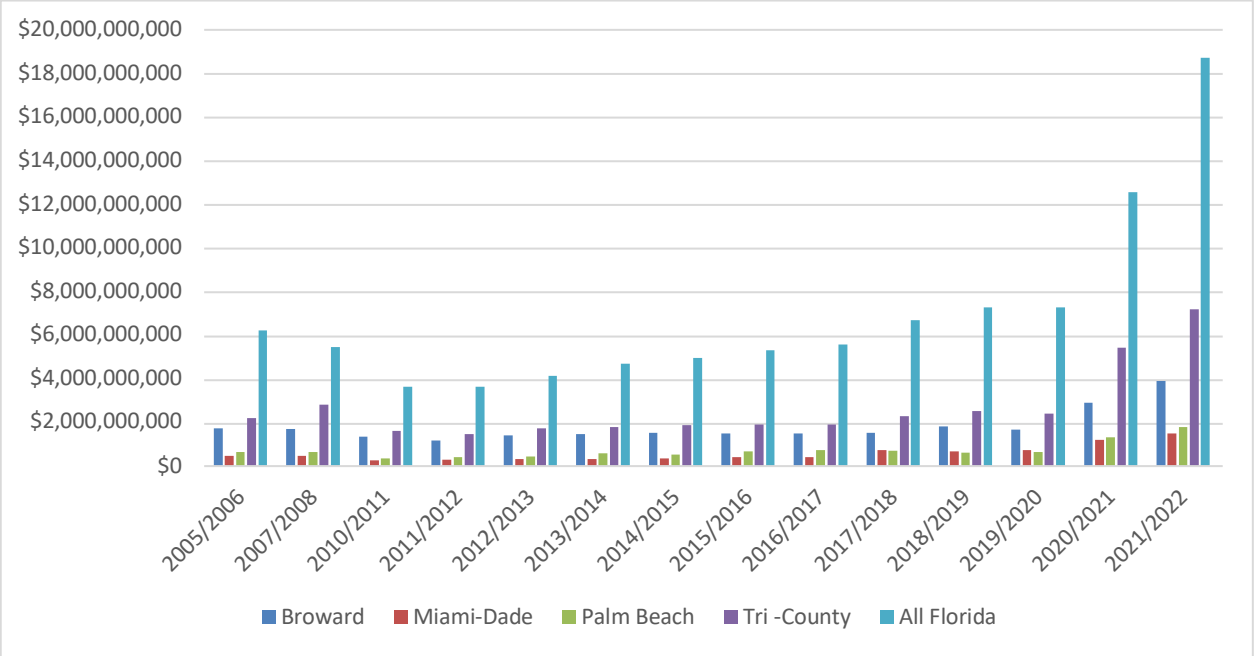


TABLE I: SUMMARY OF ESTIMATED ECONOMIC IMPACTS OF MARINE INDUSTRY BY MEASURE *TRI-COUNTY REGION*, FLORIDA 2022				
Impact Measure	**Total Employment (Jobs)**	**Total Earnings (M$)**	**Value Added (M$)**	**Total Output (M$)**
Direct	87,220	$4,048	$4,744	$9,033
Indirect	23,214	$1,296	$2,169	$4,336
Induced	31,425	$1,599	$2,955	$5,155
Total	**141,860**	**$6,942**	**$9,868**	**$18,524**

INTRODUCTION

The purpose of this study, performed on behalf of the Marine Industries Association of South Florida ("MIASF") is to provide a contemporary estimate of the economic activity associated with the recreational marine industry in the Southeastern Florida's Tri-County region (Broward, Miami-Dade, and Palm Beach counties).

This research brings the most recently completed survey-based industry data forward in conjunction with the most recent fiscal year information for FY 2022.[4]

Florida Recreational Marine Industry Overview — Relative Growth 2018- 2022

The data time-series analyzed herein continues to demonstrate that the recreational boating industry is a significant industry throughout the State of Florida and continues to grow. The industry depicted includes a wide range of industrial and commercial activities including manufacturing, wholesale and retail trade, and related marine services.

Industry Structure

The initial comprehensive primary survey completed by E&Y in 1995, gathered 1993 fiscal year data from the "marine and maritime" industry in *Broward County*, Florida. Primary research indicated a population of some 720 marine-related companies within Broward County, which were the subject of the survey. Reportedly 240 completed and useable surveys provided the basis for the E&Y economic impact analysis.

The extensive survey attempted to disaggregate the "marine and maritime" sector into 74 components making up the following general trade sectors:

- Manufacturing including boats, marine supplies, yachts, sail making, others
- Wholesale distribution including boats, marine supplies, others
- Retail sales including 15 sub sectors from boat and marine supplies sales to ship liquidators
- Services comprised 43 sub sectors including yacht brokers, boat charters, boat and equipment repair, hauling, delivery, signage, towing, naval architects, etc.

[4] The first study of this kind in the region was entitled "Economic Impact of the Recreational Marine Industry, Broward County, Florida, June 1995" (4). The original study, completed by Ernst & Young LLP ("E&Y") was conducted on behalf of the Broward County Economic Development Council, Inc. (now known as "Greater Alliance") and utilized 1993 industry survey data.

- Dockage includes businesses that provide rental storage for boats and ancillary services such as repair, fuel, bait and tackle, and other dry goods.

Recreational Watercraft Registered in Tri-County Region

The most current available licensing statistics for FY 2021 (*Table 1*) indicate the Tri-County region as a whole is home to 155,103 registered recreational water-craft – up from 144,303 in 2018. Miami-Dade County registered the most watercraft within the Tri-County increasing by 11% (64,327to 71,742), from 2018 to 2021. Over the same period, Broward County increased by 4 % (44,096 to 46,230); and Palm Beach County boat registrations grew by 3 % (35,880 to 37,131).[5]

TABLE 1 — NUMBERS OF RECREATIONAL WATERCRAFT REGISTERED IN FLORIDA'S LEADING MARINE INDUSTRY COUNTIES FY 2018- 2021

COUNTY	2021 (#)	2018 (#)	% Of State 2018	% Of State 2021
Broward	46,230	44,096	4.83%	4.68%
Palm Beach	37,131	35,880	3.93%	3.76%
Miami-Dade	71,742	64,327	7.05%	7.26%
Pinellas	52,328	48,936	5.36%	5.30%
Manatee	24,117	18,757	2.06%	2.44%
Lee	49,007	46,354	5.08%	4.96%
Martin	16,050	17,320	1.90%	1.62%
Hillsborough	40,749	40,082	4.39%	4.13%
Monroe	26,813	26,467	2.90%	2.71%
Duval	27.094	26,037	2.85%	0.00%
Top Ten Counties	**364,194**	**368,256**	**40.36%**	**36.87%**
All other Counties	**623,575**	**544,136**	**59.64%**	**63.13%**
Florida Total	**987,769**	**912,392**	**N/A**	**100.00%**

Source: Fla. Bureau of Titles and Registrations Florida Department of Highways and Motor Vehicle Safety. FY 2021 data is latest available as of date of this report.

[5] The boating registration numbers are for the fiscal year end (June 30) to be consistent with other data used in the study. https://www.flhsmv.gov/motor-vehicles-tags-titles/vessels/vessel-owner-statistics. Fiscal year 2021 is the most recent compilation of Florida recreational boat registration.

Boat Related Spending – Kind Code 28 Retail Sales

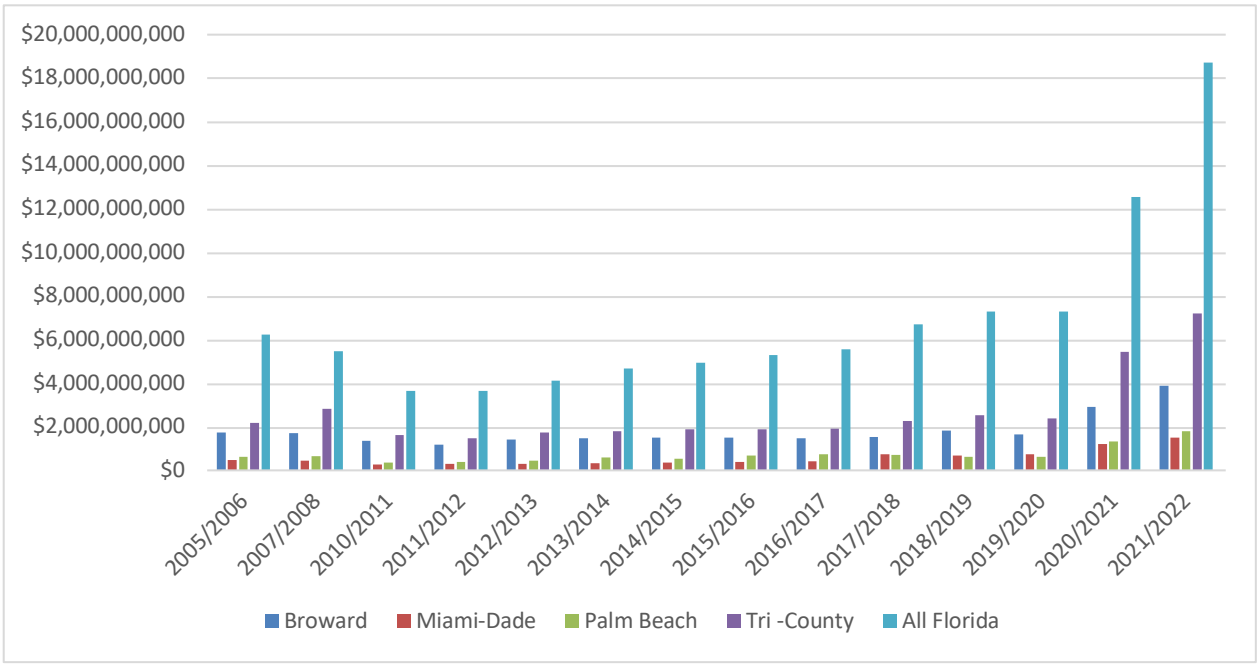
While the number of registered boats is one indicator of activity, expenditures arising from the diverse boating industry sector are more basic to measurement of economic impacts. In terms of traditional economic base theory, the export and sale of boats manufactured, outfitted, and reconditioned; and the sale of related equipment and services, etc.; better explains the economic impact of the marine industry than the simple number of boats registered and the costs of their operation.

As the most consistent measure of activity in the boat related retail market, the *Kind Code 28 sales* have been utilized in most economic studies of the boating industry in Florida *(Table 2)*.

The original E&Y study, upon which earlier updates have been based, relied primarily on the Florida Department of Revenue (FDOR) *Kind Code 28* Retail Sales for Broward County and the State. *Kind Code 28* is defined as: "Boat Dealers: Establishments primarily engaged in the retail sales of new and used motorboats and other watercraft, marine supplies, and outboard motors. The classification includes boat dealers – retail; Marine supply dealers – retail; Motorboat dealers – retail; Outboard motor dealers – retail."

As depicted in Figure 1, boating related retail sales have trended upward over the past two decades and increased dramatically between 2018 and 2022.

FIGURE 1: GROSS MARINE SALES – FLORIDA & TRI-COUNTY – FY 2006-2022



As shown in Table 2, for the ten leading counties in the marine trade sector, the *overall* increase over the 2018-2022 period was 117.0%. Broward's sales have increased over the same period at a faster pace than the State as a whole. Since publication of the 2018 economic impact estimates, Broward marine gross sales have increased over $2.3 billion (154.0 %). Combined, the Broward, Miami-Dade, and Palm Beach County ("Tri-County") areas currently represent nearly $7.2 billion (38%) of gross marine sales statewide.

TABLE 2 —TRENDS IN MARINE GROSS SALES ($) (KIND CODE 28) FOR SELECTED COUNTIES FISCAL YEARS 2018-2022

COUNTY	2022 ($)	2022 % State	2018 ($)	2018 % State	% Change 2018-2022
Broward	$3,889,699,287	21%	$1,530,655,597	23 %	154%
Palm Beach	$1,798,357,790	10%	$735,692,433	10 %	156%
Miami-Dade	$1,499,774,754	8%	$746,741,500	11 %	101%
Tri- County	$7 ,187,831,831	38%	$3,013,089,531	48%	138%
Pinellas	$298,976,535	2%	$817,982,826	12 %	-63%
Manatee	$860,732,517	5%	$466,291,767	7 %	85%
Lee	$940,073,704	5%	$466,291,767	7 %	102%
Martin	$512,311,558	3%	$205,325,265	3 %	150%
Hillsborough	$1,242,597,062	7%	$101,949,005	2 %	1119%
Monroe	$214,923,383	1%	$210,412,245	3 %	2%
Collier	$264,240,768	1%	$70,734,102	1 %	274%
Top Ten Counties	**$11,521,687,359**	**62%**	**$5,318,358,718**	**79 %**	**117%**
All other Counties	**$7,198,661,137**	**38%**	**$1,385,718,774**	**21 %**	**21%**
Florida Total	**$18,720,348,496**	**100%**	**$6,704,077,491**	**100 %**	**179%**

Source: Kind Code 28 "Motorboat and Yacht Dealer" Gross Sales. FDOR Tax Research. Watercraft numbers. Fla. Bureau of Titles and Registration and Florida Department of Highway and Motor Vehicle Safety. The 2022 data is the most recently available fiscal year data.

The supporting Table 3 depicts the *statewide* trend in the marine industry in terms of the numbers of recreational motorboats registered in Florida, and the corresponding levels of retail sales as reported through the Florida Department of Revenue. Florida's marine recreational boating retail sector combined for retail sales of $18.7 billion in FY2022. Since 2018, such sales have grown by $12.4 billion (179.0%).

TABLE 3 — FLORIDA STATEWIDE # REGISTERED RECREATIONAL BOATS, (KIND CODE 28) SALES ($), AND GROSS SALES FISCAL YEARS 2001-2022

Fiscal Year (July 1-June 30)	# Of State Registered Recreational Boats	"Kind Code 28 Sales" ($)	Gross Sales ($) per watercraft
FY 2001	839,679	$4,988,970,000	$5,941
FY 2002	857,762	$4,721,122,000	$5,504
FY 2003	886,664	$5,077,760,039	$5,512
FY 2004	915,777	$5,583,016,805	$6,021
FY 2005	920,768	$5,996,265,209	$6,512
FY 2006	988,652	$6,229,057,000	$6,301
FY 2007	933,418	$6,157,337,567	$6,597
FY 2008	921,834	$5,457,069,000	$5,920
FY 2009	861,897	$4,000,043,000	$4,641
FY 2010	901,737	$3,387,495,621	$3,757
FY 2011	889,895	$3,646,185,898	$4,097
FY2012	870,031	$3,639,001,164	$4,183
FY 2013	864,673	$4,124,510,524	$4,770
FY 2014	872,234	$4,675,843774	$5.361
FY 2015	883,332	$4,949,703,773	$5,603
FY 2016	899,285	$5,296,452,870	$5,890
FY 2017	912,392	$5,565,953,511	$6,100
FY2018	925,141	$6,705,148,829	$7,247
FY 2019	935,742	$7,290,852,750	$7,792
FY 2020	959,816	$7,277,218,138	$7,582
FY 2021	987,769	$12,866,328,183	$13,026
FY 2022	N/A	$18,720,348,496	$*18,952*

Source: Kind Code 28 "Motorboat and Yacht Dealer" Gross Sales. FDOR Tax Research. Watercraft numbers. Fla. Bureau of Titles and Registration and Florida Department of Highway and Motor Vehicle Safety. FY 2021 boat registration data is the most recent available. The FY 2022 spending- per-boat estimate is based upon the 2021 registration numbers and the FY 2022 spending data.

Economic Impact Analysis

Economic impact analysis is an attempt to provide an estimate of the *total* impact of any economic activity in any region, including not only the primary (direct) economic impact, but also the secondary (indirect) and, in some analyses, tertiary (induced) impacts.

Because of the interrelationships among the many sectors of an economy, any new or induced basic economic activity will generate additional waves of economic impact. For example, the manufacturing of boats and related equipment will generate additional activity among the suppliers of inputs as well as among the transporters of these goods, the warehouses, and the retailers. Further, a boat rental may generate activity for lodging, which also indirectly generates economic activity for cleaners, suppliers, accountants and programmers whose employment supports the operation of the hotel. In an analogous way, these activities generate multiple rounds of economic activity; i.e. a "ripple effect".

To perform the impact analysis, initial information on the level of primary or "basic" economic activity for the industry studied is needed. For example, measuring the total impact of manufacturing first requires an estimate of the volume of the production of newly manufactured goods.

Secondly, it is necessary to gather information on the interrelationships among the sectors of the regional economy, in order to estimate the value of the inter-industry "multipliers". That is, some understanding from which industries the subject sector buys its production inputs, and to which sectors its final products are sold, is needed. Understanding both the purchases of inputs and sale of goods and services by the subject sector allows the "forward" and "backward" linking of the sector's economic activity. This permits the tracing of expenditures as they "ripple" throughout, directly and indirectly, impacted sectors. (Appendix 1)

The Input-Output Model

Impact analysis begins with introducing a change in the output of goods and using the multiplier model to analyze the effects on a region's economic base. The standard input-output model estimates the direct, indirect, and induced economic implications of some basic economic activity. The secondary effects (the indirect and induced impacts), along with the basic economic activity estimates, provide an estimate of the "multiplier" effects from the basic activity (direct impact).

In the standard input-output model, measures of aggregate economic activity are used as a basis for estimating the total economic impact of the activity. For example, measures of direct employment or total sales in an industry are obtained, and these are then used as a basis for evaluating the total impact. As discussed earlier in this report, in the case of marine industry studies to-date, estimates of the gross retail sales by "motorboat and yacht" category (Revenue Kind Code 28") were obtained and used as an indication of changes in the "direct impact" of the industry.

Given this measure of the direct contribution of the industry, an estimate is made of the indirect impacts using information on the interactions between these industry sectors and other marine related sectors, which are dependent upon the boat-related industry.

For example, suppliers of materials into the boat manufacturing or repair process are also dependent upon the sale of boats in the specific revenue sector. These impacts are referred to as the "indirect impacts". Such "indirectly" dependent sectors would include other types of manufacturing such as chemicals and allied products; necessary marine paints and resins; and "fabricated metals" inputs such as fabricated structural metals, hardware, screws, and other required materials. Similarly, declines in the primary activity resonate negatively through the region.

Finally, positive or negative changes in the activity (and its indirect impacts) will generate some increases or decreases in the general level of employment and income in the study area. The extra income generated in this way will lead to a tertiary level of economic impact through the higher level of household expenditures on goods and services; much of which, again, will be spent within the study area. These effects are referred to as the "induced impacts" of the industry.

Such approaches to the measurement of the economic impact of the recreational marine industries in certain counties, and throughout the State, have been completed over the past thirty years.

The IMPLAN Model

Many economic impact studies use information from the "Economic Impact For Planning" model ("IMPLAN"). This model was developed using a combination of direct survey data obtained through national surveys of inter-industry interaction, and then "shares down" the inter-industry relationships to the local or regional level based upon the structure or employment structure of industries in the state or region. The IMPLAN model used herein includes industry linkages specific to Miami-Dade, Broward, and Palm Beach Counties, ("Tri-County") as well as the State of Florida.6

From these government derived regional inter-industry relationships, output, income and employment multipliers are estimated.

Thus, in terms of simple analysis of the aggregate impacts of activity on the regional economy, published government estimates of the multiplier are used. The use of the IMPLAN multipliers for the present analysis is considered reasonable.

6 IMPLAN modelling conducted by Dr. Alan W Hodges, retired Director of University of Florida Implan Center. Data Source: Implan Group LLC, IMPLAN Pro software, standard models, Florida County 2019-2021 data years.

TRI-COUNTY MARINE INDUSTRY ECONOMIC IMPACT — 2022

Industry Output and Impacts

Current estimates of economic activity for five general marine industry sectors are provided in Table 4. As discussed, the "sharing" of the marine recreation business sectors was previously estimated from primary county level surveys within the Tri-County region. Such surveys are beyond the scope of this update as such the general sharing of overall activity developed here is derived from a compilation of the most recent trade surveys in the region and considered to be the best available data currently available. Studies such as these should be viewed as "glimpses" of the economic activities that arise from the general "marine industry" classification.

TABLE 4: ESTIMATED MARINE RELATED BUSINESS REVENUE BY BUSINESS TYPE AND COUNTY, 2022

ACTIVITY	Broward	Miami-Dade	Palm Beach	Total Region
Manufacturing	$1,060,827,078	$409,029,478	$490,461,215	$1,960,317,772
Wholesale Trade	$1,502,838,361	$579,458,428	$694,820,055	$2,777,116,843
Retail Trade	$3,889,699,287	$1,499,774,754	$1,798,357,789	$7,187,831,830
Dockage (marinas)	$795,620,309	$306,772,109	$367,845,911	$1,470,238,329
Marine Services	$1,591,240,617	$613,544,218	$735,691,823	$2,940,476,658
Total	**$8,840,225,652**	**$3,408,578,986**	**$4,087,176,793**	**$16,335,981,432**

Given the estimated levels of marine trade gross revenues the IMPLAN model provides current estimates of the direct, indirect, and total output generated. The results are displayed below beginning with Broward County's marine industry in Table 5 below.

Broward County's marine industry had an estimated economic impact of $9.957 billion in gross output including $3.734 billion in wages and earnings, $5.299 billion in value-added.

TABLE 5: SUMMARY OF ESTIMATED ECONOMIC IMPACTS OF MARINE INDUSTRY BY MEASURE BROWARD COUNTY, FLORIDA 2022			
Impact Measure	**Total Earnings (M$)**	**Value Added (M$)**	**Total Output (M$)**
Direct	$2,177	$2,543	$4,853
Indirect	$697	$1,167	$2,334
Induced	$859	$1,589	$2,771
Total	**$3,734**	**$5,299**	**$9,957**

In addition to the Broward County estimates, current summaries for adjoining Miami-Dade County (Table 6), and Palm Beach County (Table 7) are presented below.

Miami-Dade County's marine industry had an estimated economic impact of $3.872 billion in gross output –including $1.452 billion in wages and earnings, $2.063 billion in value-added.

TABLE 6: SUMMARY OF ESTIMATED ECONOMIC IMPACTS OF MARINE INDUSTRY BY MEASURE MIAMI -DADE COUNTY, FLORIDA 2022			
Impact Measure	**Total Earnings (M$)**	**Value Added (M$)**	**Total Output (M$)**
Direct	$847	$992	$1,888
Indirect	$271	$453	$906
Induced	$334	$618	$1,078
Total	**$1,452**	**$2,063**	**$3,872**

Palm Beach County's marine industry had an estimated impact of $4.694 billion in gross output – $1.757 billion million in wages and earnings, $2.506 billion in value-added.

TABLE 7: SUMMARY OF ESTIMATED ECONOMIC IMPACTS OF MARINE INDUSTRY BY MEASURE PALM BEACH COUNTY, FLORIDA 2022

Impact Measure	Total Earnings (M$)	Value Added (M$)	Total Output (M$)
Direct	$1,024	$1,209	$2,292
Indirect	$328	$548	$1,096
Induced	$405	$749	$1,306
Total	**$1,757**	**$2,506**	**$4,694**

The three counties comprise the Tri-County region and share in the extensive marine industry economic base. The "Tri-County" region also defines the "Miami-Dade Metropolitan Statistical Area (MSA)". Combining the totals for employment, earnings and output for the three individual counties, a summary of economic impacts is generated for the Tri-County region as presented in Table 8.

The Tri-county region marine industry is estimated to have generated $18.524 billion in output, with associated employment of 141,860, providing $6.942 billion in total earnings and $9.868 in value added to the region.

TABLE 8: SUMMARY OF ESTIMATED ECONOMIC IMPACTS OF MARINE INDUSTRY BY MEASURE TRI-COUNTY REGION, FLORIDA 2022

Impact Measure	Total Employment (Jobs)	Total Earnings (M$)	Value Added (M$)	Total Output (M$)
Direct	87,220	$4,048	$4,744	$9,033
Indirect	23,214	$1,296	$2,169	$4,336
Induced	31,425	$1,599	$2,955	$5,155
Total	**141,860**	**$6,942**	**$9,868**	**$18,524**

By virtue of the business activity, taxes are paid at the local and state level, and Table 9 summarizes the estimated revenues collected throughout the Tri-County region.

TABLE 9: TRI-COUNTY MARINE INDUSTRY LOCAL & STATE TAX IMPACTS 2022 BY REGION & COUNTY (M$)

Impact Region	Broward County	Miami-Dade	Palm Beach	Tri-County
Indirect Business Taxes	**$476.2**	**$195.3**	**$191.5**	**$863.0**

ASSUMPTIONS AND LIMITING CONDITIONS

Any estimate of economic impacts is only as good as the basic information that is fed into the input-output model. In performing this research, the best current information was used to attempt to fully characterize the level and mix of impacts generated by the marine industry and its dependent economy. The conclusions of impact contained herein are based upon more recent studies completed since the original E&Y 1994 Broward County study. When reviewing the original survey, it is clear that it included economic activity of non-Broward County firms. Subsequent updates to that report were made to explicitly include Dade and Palm Beach Counties.

This assessment uses the most recent macro-economic data with the IMPLAN Input-Output model. Prior estimates relied on the original RIMS model employed by EY. As such, certain earlier RIMS multipliers, particularly employment, were outdated; not considering for example the significant changes in output per manhour throughout the industry. For example, the overall estimates of output per employee in the current study are nearly 3 times those used in the EY 1993 benchmark. [7]

In view of that and given the uncertainty surrounding the recent two years of employment retrenchment and shifting with the new employment estimates, estimates are reported here for the entire region. Further there appears to be a shift in the location of some of the employments from Broward into the adjoining counties. Much of this could be in view of the fact, that IMPLAN does a better assessment in many ways by taking into consideration the intraregional aspects of "in-commuters". This aspect is noteworthy given the increasing importance of highly mobile marine contractors which essentially conduct much of their business across one county line to another. In view of this the assessment of employment for the combined multi-county region is considered appropriate as the region comprises the Miami Metropolitan Statistical Area (SMSA). For the region these employment impact estimates appear to be at the same level as 2018.

In view of this, it is felt that these current estimates of magnitude of the impact measures are warranted, given the documented trend in secondary data collected by the state of Florida in monitoring activity in the marine industry economy over the study period.

[7] The IMPLAN data suggest that most employment multipliers during the study period (2020 for 2022) are smaller than 2018. This is likely due to widespread job layoffs and resignations, and a downsizing of the workforce by many businesses that continues even today.
Additionally, there were massive government assistance payments made during 2020-2022, the period of this study. This is demonstrated in all levels but particularly the indirect and induced sectors. For example, a 2020 estimate of total employment associated with the marine industry in the region was 148,908 suggesting similar retrenchment in employment despite the growth in overall marine industry sales activity. Additionally marine industry continued to seek employees to meet the growing demand during the period.

The original surveys conducted by E&Y which underpin the original Broward County analysis, indicated that the Kind Code 28 retail sector represented approximately 34% of the marine industries direct output in 1993. (4) A 1999 economic impact study in Palm Beach County concluded that retail accounted for over 50% of the direct economic impact in that County. (7) Since that time additional survey derived economic assessments have been completed for the Florida Inland Navigation District ("FIND") on regional waterways and corresponding periodic economic impact assessments (17,18,19,20). Among these subsequent studies (17) provides the best available assessment of the relative share of retail sales to overall sector sales; representing approximately 43% of the overall recreational marine business revenue in the region.

Some confusion has surrounded the identification of "Kind Code 28" establishments, which are not specifically involved in the retail sale of boats, and accessories. For example, the Kind Code system also has a separate code (#83), which includes: "establishments primarily engaged in operating marinas. These establishments rent boat slips and store boats, perform a general range of other boat-related services including incidental boat repairs. They frequently sell food, fuel, fishing supplies, and may sell boats."[8]

Given this situation, the use of Kind Code 28 data as a basis for comprehensive industry economic impact estimation should be acknowledged for its limited nature. In fact, the Kind Code 28 sales relate almost entirely to the *sales* of boats and equipment at retail, missing characterizations of the other related expenditures and economic activity associated with the operation of boats in Florida.

The impact multiplier estimates used herein are appropriately conservative as the multipliers for each sector are applied in this IMPLAN analysis after "margining' the gross sales revenue by sector. For example, the retail margin used herein is 25% and the wholesale margin is estimated at 21%, accordingly 75% to 79% of the value comes off the direct input values for these two activities.

Finally, it is noteworthy these estimates include no provision for local impacts of Florida sales made by out of state entities. According to the FDOR, the significant increase in such out-of-state gross sales published in the FY 2022 report is thought to be primarily due to a rise in the number of out-of-state registrations with a Kind Code. 28. This occurred because, effective July 1, 2021, out-of-state businesses with economic nexus in Florida were *required* to register and collect Florida sales tax. This has led to a dramatic increase in the sheer amount of out-of-state sales recorded . Even though the business is out of state, entities may be required to register or file tax in Florida. According to FDOR,

[8] According to personnel at FDOR familiar with the coding of "Kind Codes", the determination of whether or not, a marine boating business goes into Kind Code 28 is a "judgment call," depending upon whether more than 50% of a company's revenues arise from boat sales (Kind Code 28)

some common examples of activities that create a business connection (also called "nexus") in Florida include, for example:

"Having employees, agents, or independent contractors conducting sales or other business activities in Florida; maintaining an office or other place of business in Florida; assembling, installing, servicing, or repairing products in Florida.; delivering goods to Florida customers using a company-owned or leased truck, etc."

At the time of this study, information is not available to assess how much of these sales actually generate economic impacts in Florida or the Tri-County region, but clearly not including any of these significant transactions is conservative; yet the author believes warranted, without more specific information. According to FDOR reports such " out-of-state sales" were $16.4 billion during FY 22 just under the recorded gross "in-state sales" for Industry Kind code 28. If the breakdown of these out of state sales is similar to that of the in-state sales approximately 38% would have "nexus" in the Tri-County region, amounting to approximately $6.0 billion.

To summarize, 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.

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APPENDIX 1

2022 SUMMARY IMPACTS BY NAICS SECTOR FOR TRI-COUNTY REGION				
NAICS	**Employment (Jobs)**	**Labor Income (M$)**	**Value Added (M$)**	**Output (M$)**
11 Ag, Forestry, Fish & Hunting	393	$10,288,219	$35,208,488	$43,538,935
21 Mining	14	$733,916	$2,139,891	$7,463,640
22 Utilities	170	$37,299,624	$148,894,501	$282,796,538
23 Construction	453	$29,149,210	$50,412,519	$108,403,442
31-33 Manufacturing	7,225	$469,146,848	$556,914,212	$2,232,665,136
42 Wholesale Trade	3,469	$327,612,525	$708,767,844	$1,289,744,830
44-45 Retail trade	17,012	$1,053,574,732	$1,682,334,476	$2,460,689,896
48-49 Transportation & Warehousing	4,562	$156,119,917	$205,959,166	$463,244,907
51 Information	1,224	$164,894,242	$347,288,121	$704,919,673
52 Finance & insurance	4,454	$334,754,008	$484,529,658	$1,192,355,632
53 Real estate & rental	6,395	$168,733,087	$1,063,586,310	$1,927,847,646
54 Professional- scientific & tech svcs	4,393	$350,434,428	$464,621,777	$741,599,033
55 Management of companies	1,201	$141,601,832	$164,078,451	$276,291,419
56 Administrative & waste services	6,200	$252,818,127	$302,404,119	$542,870,549
61 Educational svcs	1,167	$53,241,723	$63,497,384	$96,561,870
62 Health & social services	6,155	$373,956,268	$428,780,809	$720,571,176
71 Arts- entertainment & recreation	68,269	$2,689,949,493	$2,679,872,056	$4,609,943,523
72 Accommodation & food services	4,774	$142,618,187	$221,367,701	$387,608,067
81 Other services	4,002	$161,754,824	$197,038,195	$316,382,087
92 Government	329	$23,677,944	$60,478,859	$118,040,075
Total	141,860	$6,942,359,154	$9,868,174,540	$18,523,538,074

Source: North American Industrial Classification System (NAICS). IMPLAN.

ECONOMIC IMPACT DEFINITIONS & GLOSSARY OF TERMS

Terms are presented in groups within a logical rather than alphabetical order.

Region defines the geographic area for which impacts are estimated. Regions are generally an aggregation of one or more counties. This analysis includes estimates for individual counties and the Tri-County region of Broward, Miami-Dade, and Palm Beach Counties also referred to as the Miami-Ft. Lauderdale-West Palm Beach MSA.

Sector is a grouping of industries that produce similar products or services. Most economic reporting and models in the U.S. are based on the Standard Industrial Classification system (SIC code) or the North American Industrial Classification System (NAICS).

Impact analysis estimates the impact of a change in output or employment resulting from a change in final demand to households, governments or exports.

Input-output (I-O) model. An input-output model is a representation of the flows of economic activity between industry sectors within a region. The model captures what each business or sector must purchase from every other sector in order to produce its output of goods or services. Using such a model, flows of economic activity associated with any change in spending may be traced either forwards (e.g., spending generates employee wages which induces further spending) or backwards (e.g., purchases of boats that leads boating trade to purchase additional inputs – fiberglass resin, upholstery, etc.). Multipliers for a region may be derived from an input-output model of the region's economy.

Final Demand is the term for sales to final consumers (households or government). Sales between industries are termed **intermediate sales**. Economic impact analysis generally estimates the regional economic impacts of final demand changes.

Direct effects are the changes in economic activity during the first round of spending. **Secondary effects** are the changes in economic activity from subsequent rounds of re-spending. There are two types of secondary effects: **Indirect effects** are the changes in sales, income or employment within the region in backward-linked industries supplying goods and services to businesses. For example, the increased sales in input supply firms resulting from more wood products industry sales are an indirect effect. **Induced effects** are the increased sales within the region from household spending of the income earned in the boating industry and supporting industries. Employees in the boating industry and supporting industries spend the income they earn on housing, utilities, groceries, and other consumer goods and services. This generates sales, income and employment throughout the region's economy. **Total effects** are the sum of direct, indirect, and induced effects.

Multipliers capture the size of the secondary effects in a given region, generally as a ratio of the total change in economic activity in the region relative to the direct change**.** Multipliers may be expressed as ratios of sales, income or employment, or as ratios of total income or employment changes relative to direct sales. Multipliers express the degree of interdependency between sectors in a region's economy and therefore vary considerably across regions and sectors. **Type I** multipliers include only direct and indirect effects. **Type II** multipliers also include induced effects. **Type SAM** multipliers used by IMPLAN additionally account for capital investments and transfer payments, such as welfare and retirement income. A **sector-specific multiplier** gives the total changes to the economy associated with a unit change in output or employment in a given sector**. Aggregate multipliers** sum multiplier effects across many sectors with a single number. They are based on an assumed distribution of spending across these economic sectors, i.e., a weighted average of sector specific multipliers with the percentage of spending in each sector as the weighting factor.

Purchaser prices are the prices paid by the final consumer of a good or service. **Producer prices** are the prices of goods at the factory or production point. For manufactured goods, the purchaser price equals the producer price plus a retail margin, a wholesale margin, and a transportation margin. For services, the producer and purchaser prices are equivalent.

Margins. The retail, wholesale, and transportation margins are the portions of the purchaser price accruing to the retailer, wholesaler, and grower, respectively. Only the retail margins of many goods purchased by consumers accrue to the local region, as the wholesaler, shipper, and manufacturer often lie outside the local area.

Measures of economic activity: Sales or output is the dollar volume of a good or service produced or sold. **Final Demand** is sales to final consumers, including households, governments, and exports. **Intermediate sales** are sales to other industrial sectors. **Income** is the money earned within the region from production and sales. Total income includes **personal income** (wage and salary income, including income of sole proprietor's profits and rents). **Jobs** or employment is a measure of the number of jobs required to produce a given volume of sales/production, usually expressed as full-time equivalents, or as the total number including part time and seasonal positions. **Value Added** is the sum of total income and indirect business taxes. Value added is the most commonly used measure of the contribution of a region to the national economy, as it avoids double counting of intermediate sales and captures only the "value added" by the region to final products. **Indirect Business Taxes** includes taxes on sales, property, and production, but it excludes employer contributions for social insurance and taxes on income.

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