Economic Impact Analysis of the Sebastian Inlet District

Final Report 2023

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Executive Summary

Sebastian Inlet is a barrier island inlet that connects the Atlantic Ocean to the Indian River Lagoon. The area is a popular beach destination, with a unique environmental setting, calm tidal pools, jetties, a fishing pier, boardwalks and surfing opportunities. The inlet itself is maintained by the Sebastian Inlet District (District) which encompasses portions of southern Brevard county and northern Indian River county. The District's objective is to maintain the navigational channel connecting the Indian River and the Atlantic Ocean, as defined by its May 1919 Charter. The inlet splits Sebastian Inlet State Park, which is popular for residents and tourists for its recreational opportunities, drawing nearly 800,000 visitors to the park alone annually. The inlet's unique features support healthy aquatic ecosystems and direct access to the Atlantic Ocean in a region which would lack access otherwise. Without the maintenance of the inlet, including its channel, jetties, and nearby beaches, the ecosystems nearby likely wouldn't thrive in the manner they currently do, resulting in declined opportunities for recreation and business activity driven by the inlet.

This report provides an estimate of the economic impact of the District's management activities as of August 2023. Continued investments and ongoing operations of the inlet channel benefit the public, marine businesses and recreational users, and other government agencies. To estimate total benefits, a series of impacts were evaluated:

1. Spending by recreational boaters and tourists
2. Proximity effects of the Sebastian Inlet on real estate
3. Spending by specialized sectors, and
4. The economic value of key natural resources sustained by the District, particularly seagrasses.

The indirect and induced economic impacts generated from each of the spending effects were estimated using IMPLAN, an econometric modeling application that generates regional economic impact multipliers. The Sebastian Inlet supports $536 million in value added impacts and 9,000 jobs. In addition, the Inlet supports $6.5 million in property value impacts annually as described in **Table 1**.

Table 1. Estimated Economic Impacts of Sebastian Inlet District

Impact Type	Employment	Labor Income	Value Added (in Millions $)	Output
Recreational boaters	1,202	$42	$67	$150
Tourism	7,769	$295	$459	$954
Specialized sectors	119	$6	$10	$13
Total Annual Impacts	9,090	$343	$536	$1,117
Property Value Impacts, annualized				$6.5
Estimated Economic Impacts including Property Amenity Values				$1,124

*The total contribution of the Waterways to 2022 property values of $103 million was annualized at 6% discount rate; this annual value is $6.5 million. Source: TBG Work Product, published FWC data, and Property Appraiser data

Surveys were conducted to gather information from local users of the Inlet regarding their activities, economic and spending behavior, and frequency of use. The information found that local users spend a considerable amount of leisure time at the Inlet – averaging 48 visitor days per year. The surveys revealed that without channel maintenance, boating frequency would reduce by 35% on average.

District services have a critical role in local economic output. Area marinas that rely on the Inlet estimate 60% of their revenues would be negatively impacted without the continued services provided by the Sebastian Inlet District.

Area marinas that rely on the Inlet estimate 30% of their business as local and 70% as out-of-area, reflecting the draw of the Inlet of economic activity – and that nearly 60% of their revenues would be negatively impacted without the continued services provided by Sebastian Inlet District. Data from Florida Department of Economic Opportunity reveals that the Sebastian Inlet supports 170 marine-related businesses which directly support 2,000 jobs.

The economic benefits of district's inlet maintenance include the generation of tax revenues for local, state and federal governments. **Table 2** provides a breakdown of calculated tax impacts totalling about $99 million in annual revenues.

Table 2: Estimated Tax Revenues of the Sebastian Inlet

Impact Type	State & Local	Federal	Total
	(In millions $)		
Local recreational boaters	$3.6	$8.0	$11.7
Tourists	$28.3	$58.1	$86.4
Specialized Sectors	$0.5	$1.3	$1.8
Total Annual Impacts	$32.4	$67.5	$99.9

Source: TBG Work Product, IMPLAN

In addition to status quo, the impacts of an alternative scenario in which the channel is no longer maintained to current functionality was assessed. Boating frequency would reduce by 35% and businesses estimate nearly 60% of revenues would be negatively impacted resulting in a loss of $65 million in value added and 1000 jobs.

Finally, a series of benchmarks to assist local marine resource managers were compiled. The metrics capture trends in the number of boat registrations, marine-related businesses, commercial fishing, and an inventory of boat ramps and marinas including available boat slips. to understand whether marine assets can be better utilized or where resource allocation may be improved. The metrics are provided in the final section of the report, and provide a baseline for evaluation of trends going forward.

ECONOMIC ANALYSIS
OF THE SEBASTIAN INLET DISTRICT

TOTAL ANNUAL VALUE ADDED $536M

TOTAL BOAT REGISTRATIONS

20,000

registered annually on average within the District

MARINE-RELATED BUSINESSES

170

local businesses in the Sebastian Inlet District area employing over 2,000 people

ACCESS FACILITIES SLIP SPACES

1,251

total slip spaces across 37 marinas and 30 boat ramps within the District

COMMERCIAL FISHING

1.3 Million

pounds of fish landed at $3.4M in value annually

117 ACRES OF SEAGRASS

provide over $3.4M in resource value annually

Literature supports that just 2.5 acres of seagrass support over 100,000 fish and 100 million invertebrates

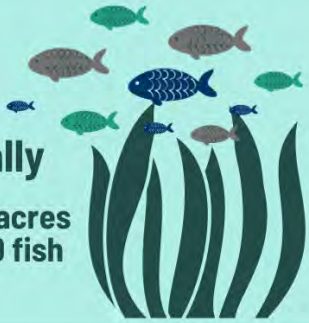


Table of Contents

Introduction 8
I. Literature Review 9
Seagrass Health 11
II. Survey of Recreational and Commercial Users 12
Recreational 12
Vessel Users 13
Non-Vessel/ Shoreline Users 14
Commercial 15
III. Impacts of Recreational Users and Commercial Businesses 17
Recreational Users 18
Local/Florida Boat Owners 19
Sebastian Inlet Visitors & Shoreline Users 20
Specialty Sectors 21
Expenditures by Sebastian Inlet District 22
Commercial Fishing 22
Tax Revenues 23
IV. Property Amenity Values 23
V. Changes under Reduced Maintenance 26
VI. Natural Resource Values 27
VII. Metrics 28
Boat Registrations 28
Waterway-Users 31
Business Establishments and Employment in Marine Activities 32
Taxable Sales from Marine Industry Establishments 34
Commercial Fish Landings 35
Inventory of Ramps and Marinas 37
Inventory of Marinas 39
Inventory of Boat Ramps 40
Bibliography 43
Appendix 1: Survey Results 47
Recreational Users 47
Businesses 47

List of Figures

Figure 1. Sebastian Inlet Seagrass 11
Figure 2. Recreational Users' Primary Activities 12
Figure 3. Primary Vessel Characteristics 13
Figure 4. Business Survey Respondents by Type 15
Figure 5. Business Revenues Reported by Survey Respondents 16
Figure 6. Input-Output Model for Waterways 17
Figure 7. Average Premium for All Parcels Within 4 miles of the Sebastian Inlet 25
Figure 8. Brevard County Total Vessel Registrations, 2006-2022 28
Figure 9. Indian River County Total Vessel Registrations, 2006-2022 29
Figure 10. Reported Sales, Brevard County Boat Dealers 35
Figure 11. Reported Sales, Indian River County Boat Dealers 35
Figure 12. Commercial Fish Landings, by Weight and Value, Brevard County 36
Figure 13. Commercial Fish Landings, by Weight and Value, Indian River County 37
Figure 14. Boat Ramps and Marinas Inventory 38
Figure 15. Marina Facilities by Facility Type 39
Figure 16. Boat Ramp Inventory by Ramp Type 41
Figure 17. Boat Ramps by Waterbody Type 42

List of Tables

Table 1. Estimated Economic Impacts of Sebastian Inlet District 2
Table 2: Estimated Tax Revenues of the Sebastian Inlet 3
Table 3. Selected Articles on Sebastian Inlet 9
Table 4. Recreational Boater Spending Categories by Boat Size 14
Table 5. Recreational Spending Categories by Shoreline Users 14
Table 6. Estimated Annual Economic Impacts of the Sebastian Inlet, by Source 18
Table 7. Spending by Impact Type 18
Table 8. Florida Recreational Boater Spending Categories by Boat Size 19
Table 9. Total Spending from Resident Boaters 20
Table 10. Estimated Economic Impacts, Resident Boaters 20
Table 11. Estimated Economic Impacts, Visitors 21
Table 12. Estimated Economic Impacts, Specialized Sectors 21
Table 13. Estimated Economic Impacts, District Activities 22
Table 14. Estimated Economic Impacts, Commercial Fishing 23
Table 15. Tax Revenues from District Waterways 23
Table 16. Single Family Residential Property Sales in 2021-2022 and Waterway Proximity 24
Table 17. Amenity Value of Sebastian Inlet – in millions of $ 24
Table 18. Estimated Impacts with Reduced Maintenance 26
Table 19. Annual Vessel Statistics – Brevard & Indian River Counties 29
Table 20. Vessel Length Group by Registration Use 30

Table 21. Vessel Registrations by Businesses and Individuals 30
Table 22. Vessel Registrations by Vessel Type 31
Table 23. Vessel Length Group owned by individuals excluding airboats, SID Area 32
Table 24. Pleasure Vessel Counts by Boat Length, Adjusted for Non-Use of Waterways 32
Table 25. Local Business Establishments Engaged in Marine Activities, Brevard County 33
Table 26. Local Business Establishments Engaged in Marine Activities, Indian River County 33
Table 27. Local Business Establishments Engaged in Marine Activities, SID Area 34
Table 28. Commercial Fish Landings, Brevard & Indian River County 36
Table 29. Access Facility by Use Type, SID 37
Table 30. Detailed Description of Marina Facilities with Wet slips 40
Table 31. Detailed Description of Marina Facilities with Drystack 40
Table 32. Inventory of Boat Ramps, Saltwater/ICW Access 42

Appendix 1: List of Figures

Figure A-1. Respondent's Zip Code of Residence 47
Figure A-2. Primary Recreational Use of the Sebastian Inlet 48
Figure A-3. Breakdown of Boat Ownership by Boat Length 48
Figure A-4. Vessel Ownership - Number of Vessels 49
Figure A-5. Respondent's Boat Ownership by Boat Types 49
Figure A-6. Primary Vessel Storage 50
Figure A-7. Frequency Using Sebastian Inlet & Surrounding Waters 50
Figure A-8. Vessel Users Access on Most Recent Outing 51
Figure A-9. Number of Days Most Recent Boating Trip 53
Figure A-10. Most Recent Recreational Trip to the Sebastian Inlet, Number of Persons 53
Figure A-11. Accommodations associated with use of Sebastian Inlet 54
Figure A-12. Using the District's Waterways to Travel Between Counties 54
Figure A-13. Changes to Enhance Recreational Opportunities, Boaters 55
Figure A-14. Frequency Using District's Waterways 56
Figure A-15. Time Spent on the District Waterway on the Most Recent Trip 57
Figure A-16. Number of Persons Participating on Most Recent Outing 57
Figure A-17. Accommodations Most Recent Outing in Sebastian Inlet 58
Figure A-18. Changes to Enhance Recreational Opportunities, Shoreline Users 58
Figure A-19. Respondents by Gender 59
Figure A-20. Respondents' Reported Age at Time of Survey 59
Figure A-21. Highest Level of Education Completed 60
Figure A-22. Annual Household Income of Respondents 60
Figure A-23. Businesses Respondents by Type 61
Figure A-24. Business Revenues Reported by Survey Respondents 61
Figure A-25. Marina Services in Addition to Slips and Storage 62

Introduction

Sebastian Inlet is a barrier island inlet that connects the Atlantic Ocean to the Indian River Lagoon. The area is a popular beach destination, with a unique environmental setting, calm tidal pools, jetties, a fishing pier, boardwalks and surfing opportunities. The inlet itself is maintained by the Sebastian Inlet District (District) which was chartered more than 100 years ago to maintain the navigational channel connecting the Indian River Lagoon and the Atlantic Ocean. The inlet provides a means for recreational and commercial boaters and fisherman to access offshore waters at the Brevard and Indian River County line. The inlet also provides endless recreational benefits (camping, fishing, swimming, surfing, etc.) for local residents and tourists as it bisects the Sebastian Inlet State Park. In addition, economic activity is generated by businesses whose operations are related to the inlet and associated waterways, such as marinas, charter boat services, marine repair facilities, etc., and businesses whose operations are less obvious in relation but are impacted through the sale of household goods and services (such as food, clothing, shelter, gas, etc.). All of these business activities are related to, or linked to, the operation of the inlet and associated waterways and contribute to the local economy by generating business sales, employment, and personal income within the local economy. The Balmoral Group (TBG) was retained to estimate the economic impact of the Sebastian Inlet District (the District) investments in maintaining the inlet. This economic impact analysis updates the values from the 2013 study.

To ensure continued public support and investment, the District requires accurate, current estimates quantifying the economic value of the District's continued maintenance and investment in the Waterways. The information is used to explain the importance of investment and operations to the public, marine businesses and recreational users, and other government agencies. To achieve its objectives, the report contained herein includes the following sections:

I. Literature review of existing studies related to the Sebastian Inlet
II. Survey of recreational users and commercial businesses
III. The total economic impact of the Waterways, including indirect and induced impacts associated with sales, income, employment, and taxes, using an input-output model, and the generation of tax revenues for local, state and federal governments
IV. The value of properties influenced by the Sebastian Inlet, and the specific amenity value of proximity
V. The changes to the District's economic impact under a decreased maintenance scenario;
VI. Natural Resource valuation of seagrasses; and
VII. Metrics that have been identified as meaningful for tracking the impact of marine industry activity.

I. Literature Review

The Balmoral Group reviewed several recent Florida-based studies to better understand the economic impact of Sebastian Inlet and to review the various methods of analysis. The range of studies includes economic analysis for the region, enhanced recreational/commercial uses with respect to navigation, and seagrass monitoring and restorations that have occurred in the area. The findings of the literature that exists as it relates to the Sebastian Inlet District and its activities include:

- The Sebastian Inlet State Park draws 882,000 visitors annually contributing to $106 million in economic impacts
- The Indian River Lagoon and the Intracoastal Waterway are major economic drivers in the region that benefit from the maintenance of the Sebastian Inlet
- Seagrasses are important to sustaining the economic impacts through healthy fisheries

Table 3 provides a list of recent articles published, providing an overview of selected current literature on the quantifiable estimates associated with the benefits of the Sebastian Inlet. Brief summaries of the articles follow.

Table 3. Selected Articles on Sebastian Inlet

Year	Author	Topic – Quantifiable Estimates
2022	Florida State Parks Foundation	Economic Impact and Visitation to the Sebastian Inlet State Park; 882,000 visitors and $106 million in impacts
2023	The Balmoral Group	Economic Impact of the Intracoastal Waterway in Brevard and Indian River Counties
2023	Atkins	Seagrass Monitoring Report, Sebastian Inlet District (117 acres of seagrass recorded)
2018	U.S Ocean and Coastal Economics	77% of state's output relates to coastal economies
2021	Marine Industries Association of South Florida	Florida's marine industries support 270,000 jobs and $24.6 billion in impacts statewide
2013	Cardno Entrix	Sebastian Inlet Specific Impacts

Florida has experienced steady growth in boat registrations for decades, and the coastal economy has grown faster than the Florida statewide average. Coastal economies are also performing well when it comes to output, as a 2016 study from U.S Ocean and Coastal Economics found that shore-adjacent counties generated 77.2% of the state's output. In Florida, as of 2020, the statewide economic output of

the marine industry was estimated by the Marine Industries Association of South Florida at $24.6 billion, including the creation of 270,000 jobs.

Estimates for the Indian River Lagoon show significant impacts associated with the resources and the recreational opportunities that they provide. The Indian River Lagoon (IRL) occupies 40% of the eastern coast of Florida covering 6 counties. Estimates from the Indian River Lagoon Council support that the lagoon generates $7.6 billion annually. In the Sebastian Inlet area, which encompasses the central IRL, approximately half of all boaters in Brevard and Indian River County recreate within the Sebastian Inlet District region. Recent studies by the Balmoral Group show that in Brevard County the Intracoastal Waterway managed by the Florida Inland Navigation District support $1.5 billion in economic output and $346 million in annual property impacts; for Indian River County, the impacts are $478 million in output and $171 million in annual property impacts. The Sebastian Inlet is expected to have comparable effects.

There has been significant economic impact accredited specifically to the Sebastian Inlet District and the State Park. The State Parks' system shows the most recent estimates (2022) of the Sebastian Inlet State Park which crosses the Inlet, contributes approximately $106 million in economic impact. The Sebastian Inlet fact sheet, reports around 882,000 visitations to the state park supporting 1,490 jobs. The spending and visitation numbers however are only for the State Park itself and do not include other activities such as local boaters or the commercial businesses that rely on the Inlet.

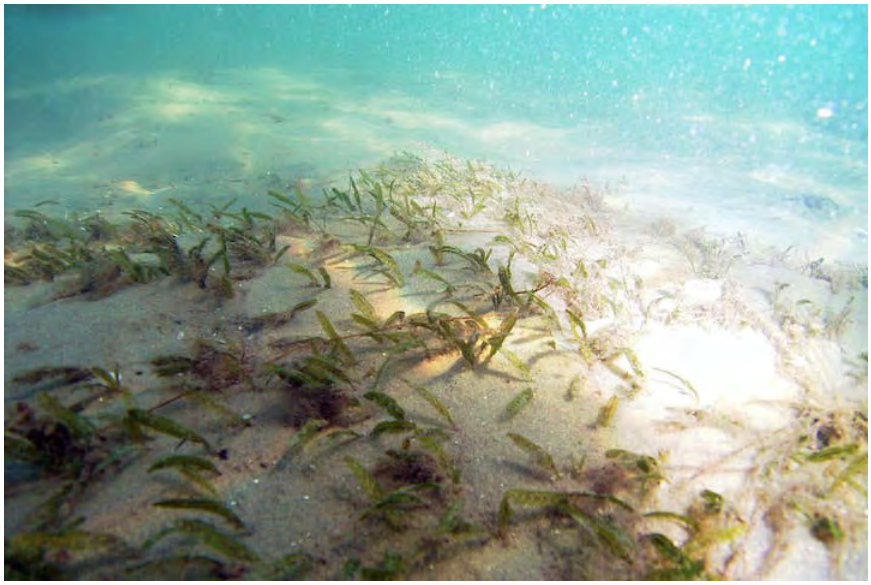
Overall estimates for the Sebastian Inlet District are limited with the most recent study completed by Cardno Entrix in 2013 showing the Inlet generated an annual economic impact of $200 million in total. The study reports that Indian River County had reported business revenues in 2013 of $93 million, $48 million in annual income, $8 million in state tax revenues, and the creation of around 970 local jobs. The approach involved measuring economic impacts through survey data, estimating annual visitation expenditures, analyzing results of the marine business survey, and constructing regional level macroeconomic models to estimate regional impacts of inlet dependent expenditure. The economic impact analysis was conducted with an input-output model using IMPLAN.

The study by Cardno observes the enhanced recreational use with recreational expenditures estimated at $1.3 million and recreational use value to $762 million, in its existing environmental condition. The researchers found that fishing trips in the study area accounted for 15% of angling trips along the eastern shore. The study also found that 76% of visitations to the inlet came from people whose primary activity was fishing, followed by watersports (3%) and scuba diving or snorkeling (3%). Visitor spending is estimated to generate about 60 percent of this activity, and regional residents generate 40 percent. Recreational expenditures associated with activities such as boating, nature watching, and shoreline visitation totaled $1.3 billion, and the income generated for these activities was nearly $630 million.

Seagrass Health

An environmental opportunity for economic growth is seen within the seagrass populations in the Indian River Lagoon coastal community and Sebastian Inlet specifically. Recent studies and the Sebastian Inlet Seagrass Monitoring Program looking into water quality and its impacts on seagrass populations weigh-in to see the many positive effects that seagrass population growth has on the ecosystem and local economy. Water quality from the years 1994 to 2020 in the Indian River Lagoon Coastal Community has had a steady increase, showing positive improvements in water quality on a yearly basis. Currently, water quality is being tested on levels of phosphorous, nitrogen, chlorophyll-a, factors of excess algae, and water turbidity. The seagrass populations in the Sebastian Inlet community specifically have improved since 2012. This improvement is great news considering the massive loss of seagrass numbers in 2010-2012. Seagrass is an indicator of the overall health of the ecosystem, with recent gains in total acreage of seagrass in the Sebastian Inlet waterway from roughly 108 acres in 2019, 112 acres in 2020, to over 120 acres in 2021. Improvements in the habitat will resume following the stable increase in seagrass. These improvements will bring economic prosperity with fishing, recreational activities, tourism, and the overall economic value of the Sebastian Inlet District. Literature supports that just 2.5 acres of seagrass support over 100,000 fish, 100 million invertebrates, and up to $10,000 per acre in economic activity, although estimates from the literature support higher resource values of $29,000 per acre. **Figure 1** shows an example of seagrass growth within the Sebastian Inlet.

Figure 1. Sebastian Inlet Seagrass



Source: Sebastian Inlet District

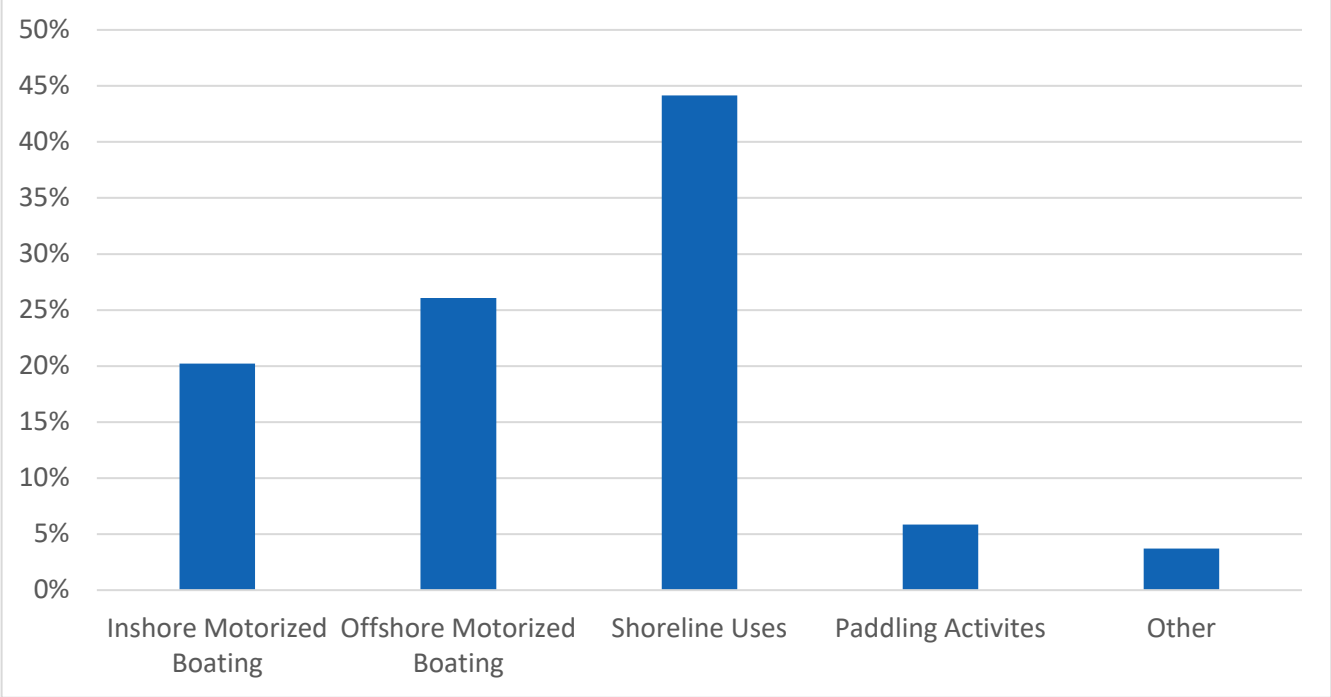
II. Survey of Recreational and Commercial Users

A survey was conducted to capture spending and use patterns associated with recreational users and marine-related businesses in the Sebastian Inlet region. The survey data was used throughout the update of economic impacts associated with the Inlet. This section provides selected results. Appendix 1 shows the summary statistics for the responses to the survey.

Recreational

Recreational users were the key respondents of the survey instrument with 188 responses received. The majority of respondents were local users of the waterways[1]. While the Inlet allows boaters to access the ocean, the unique features of Sebastian Inlet and the Sebastian Inlet State Park draw a large number of non-vessel users. Boaters accounted for 46% of recreational users that responded to the survey and those engaging in shoreline uses and paddling activities accounted for 54%; the distribution is shown in **Figure 2**.

Figure 2. Recreational Users' Primary Activities



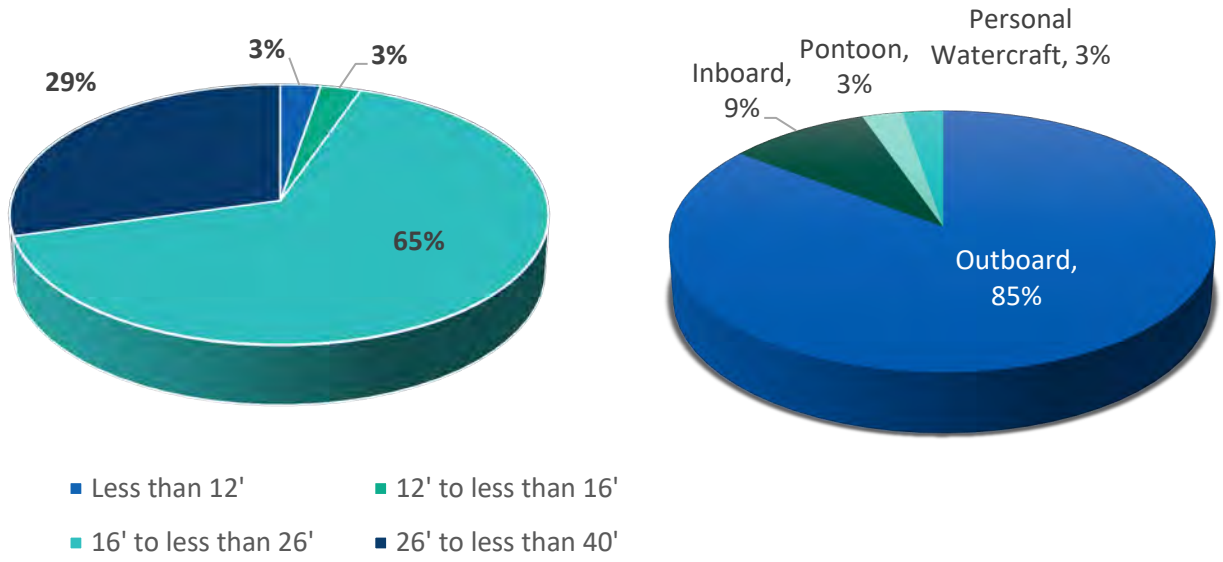
Source: TBG Work Product, Sebastian Inlet District Survey

[1] 82% of respondents indicated they live within Brevard or Indian River County. A small portion (8 respondents), indicated they live outside of Florida.

Vessel Users

Vessel-users that responded to the survey were predominately vessel-owners in the Sebastian Inlet region, with 88% of respondents indicating that they are the vessel owner. **Figure 3** shows the breakdown of survey respondents' primary vessel characteristics which includes length and propulsion type. 65% of vessel owners indicated that their primary vessel length is between 16 feet and 26 feet, and 29% indicated their primary vessel is greater than 26 feet, and a smaller share of respondents (6%) indicated their primary vessel is less than 16 feet; the distribution is similar to the distribution of the population of vessel owners in the Sebastian Inlet region based on data from the Florida Department of Highway Safety of Motor Vehicles. The types of vessels used in the Sebastian Inlet area are primarily outboard vessels, with 85% of respondents indicating their vessel is an outboard, however personal watercraft, or jet skis, account for 3% of the respondents.

Figure 3. Primary Vessel Characteristics



Source: TBG Work Product, Sebastian Inlet District Survey

Table 4 shows a breakdown of the reported annual expenditures by boat size.

Table 4. Recreational Boater Spending Categories by Boat Size

	Less than 16'	16' to 26'	Greater than 26'
Average Days	23	40	39
Annual Trip Costs:			
Food & Beverages	$150	$3,416	$5,495
Transportation & Accommodation	$615	$4,844	$10,599
Fees & Recurring Costs	$89	$1,499	$4,036
Gear & Other	$150	$750	$1,149
Total	$1,004	$10,509	$21,280
Average Annual Ownership Costs:			
Storage	$0	$758	$3,629
Maintenance	$300	$1,263	$3,871
Insurance	$266	$594	$2,199

Source: TBG Work Product, Sebastian Inlet District Survey

For purposes of input-output modelling, data were aggregated to small (less than 16'), medium (16 – 26') and large (greater than 26') boats. It should be noted that a high degree of correlation existed between storage and maintenance costs, indicating some respondents may have answered the questions as related, rather than independent, costs.

Non-Vessel/ Shoreline Users

Shoreline-users that responded to the survey were the greatest share of respondents in the Sebastian Inlet region. To use the Inlet in a shoreline capacity, most users would have to access the Sebastian Inlet State Park. It is expected fees associated with the State Park would be captured herein. **Table 5** shows a breakdown of the reported annual expenditures.

Table 5. Recreational Spending Categories by Shoreline Users

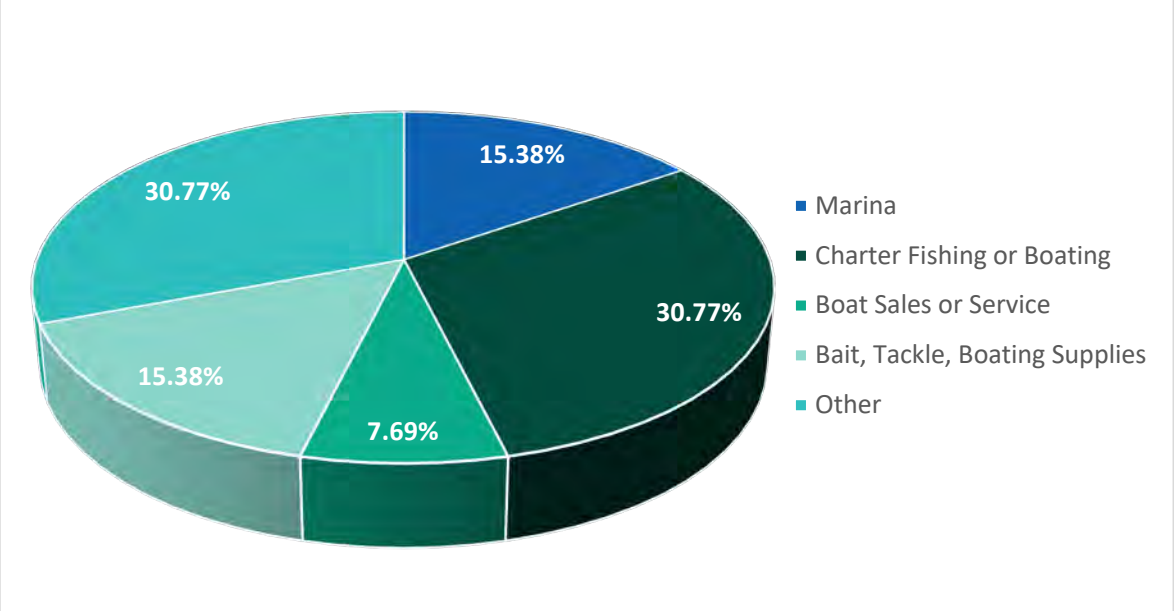
	Shoreline Users
Average Days	48
Avg. Count of Persons per Trip	3.5
Average Annual Expenditures:	
Food & Beverages	$1,479
Transportation & Accommodation	$1,697
Fees & Recurring Costs	$973
Gear & Other	$295
Total	$5,815

Source: TBG Work Product, Sebastian Inlet District Survey

Commercial

To better understand the overall economic impacts the survey also included local businesses that rely on the inlet. **Figure 4** shows the distribution of the types of respondents. The businesses that responded were primarily engaged directly in marine-related industries such as Marinas, Charter boats, or Bait and Tackle Shops. Nearly a third of businesses that responded indicated they engaged in an industry that was not listed, or "Other", however the comments indicate these businesses are engaging in either an educational or industry service capacity, or have overlap with multiple industries listed.

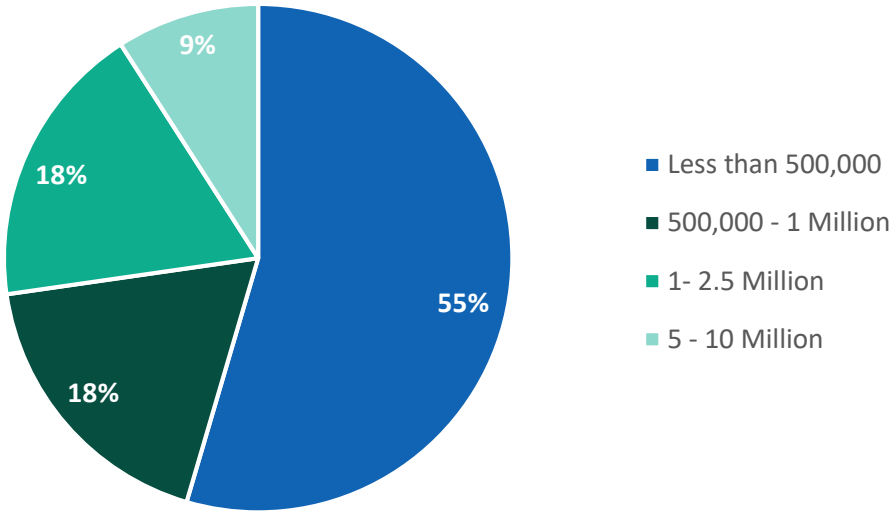
Figure 4. Business Survey Respondents by Type



Source: TBG Work Product, Sebastian Inlet District Survey

Survey respondents primarily operate under $1 million in annual revenues, as shown in **Figure 5**, however a small portion indicated revenues greater than $5 million annually.

Figure 5. Business Revenues Reported by Survey Respondents



Source: TBG Work Product, Sebastian Inlet District Survey

For Marinas, on average nearly 50% of visitors and boaters live outside of the Sebastian Inlet area, and of those visitors, nearly 70% were not Florida residents. Additionally, marinas in the Sebastian Inlet area primarily have customers with Vessels in the 16' and under category or 16' to 26' length group.

Businesses engaged in charter fishing or boating indicate that a high share of their customers are engaging in inlet-related activities on the intracoastal side, however some respondents indicate a higher share related to fishing in Atlantic waters that are 3 miles or less from the shore.

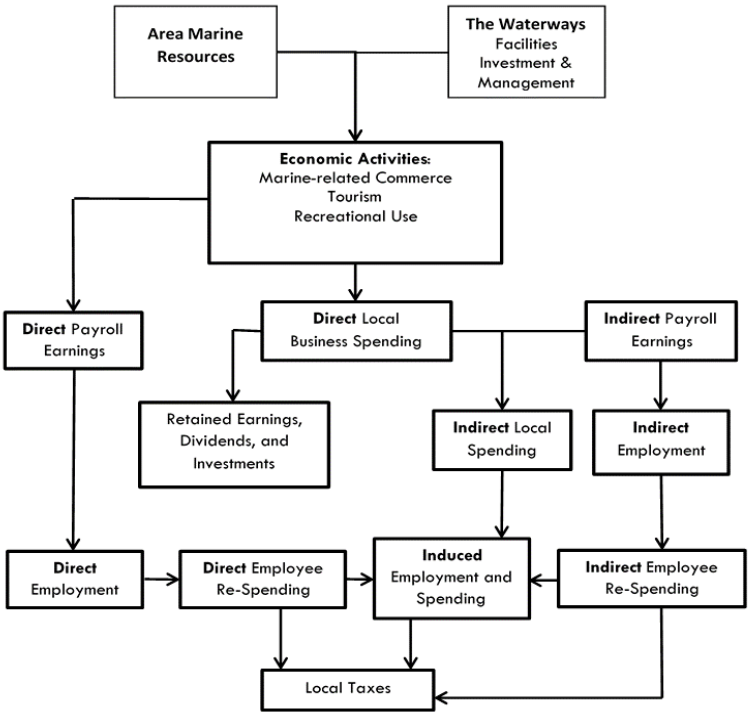
To understand how revenues would be impacted if the Sebastian Inlet were not maintained, businesses were asked about their best estimate regarding the share of revenues impacted, estimates range from 0% - 100%, with an average of 59% indicated across the businesses. Businesses engaged in marine-related businesses such as marinas, charter vessels, boat sales and bait/tackle shops indicated the highest shares of impact, with several indicating their business would close entirely.

III. Impacts of Recreational Users and Commercial Businesses

To estimate the overall economic impacts associated with the Sebastian Inlet, The Balmoral Group used IMPLAN®, an econometric modeling application that generates regional economic impact multipliers. **Figure 6** describes how economic impact models, such as IMPLAN®, translates the investment in the Waterways (including maintenance dredging) into business spending, employment, earnings, and taxes. To improve the level of public acceptance and appreciation of the I-O model output, The Balmoral Group understands the importance of explaining how economic impact multipliers are selected and applied.

IMPLAN® estimates the flows of supply and demand between and within counties by industry sector, and converts this estimate of cash flows to economic impacts – measured through jobs, revenues, and personal income. An important element of input-output modeling is understanding these flows, and using appropriate data to determine how much of a boat dealer's stock, for example, was purchased from within the dealer's county, versus from an adjacent county, or from elsewhere in the region or state. The local purchases generate indirect and induced impacts, while those that leave the area (which is defined by the scope of the analysis – in this case, regional or county) do not. The IMPLAN software calculates the specific margins based on data prepared by the Bureau of Economic Analysis.[2]

Figure 6. Input-Output Model for Waterways Economic Impacts



The spending associated with recreational boaters and tourists provide direct inputs for IMPLAN modeling, as do the hidden sectors and maintenance dredging.

Three IMPLAN models were prepared for the baseline analysis:

1. Recreational boater spending by residents;
2. Tourist spending; and
3. Business revenues generated by specialized sectors.

Regional economic impacts generated by all five are summarized in **Table 6**. In addition to the $1 billion in annual impacts, the estimated impact on property values totals $6.5 million. Combined, the impact of the Waterways can be estimated at just over $1.1 billion.

[2] The Bureau of Economic Analysis falls within the U.S. Department of Commerce.

Table 6. Estimated Annual Economic Impacts of the Sebastian Inlet, by Source

Impact Type	Employment	Direct Effect	Indirect Effect	Induced Effect	Output
		(in Millions $)			
Local Recreational Boaters	1,202	$114	$37	$0	$150
Tourists	7,769	$653	$190	$111	$954
Specialized Sectors	119	$9	$1	$3	$13
Total	9,090	$775	$228	$114	$1,117
Property Value Impacts, annualized					$6.5
Estimated Economic Impacts including Property Amenity Values					$1,124

*The total contribution of the Sebastian Inlet to 2022 property values of $103 million, was annualized at 6% discount rate and this annual value is $6.5 million. Source: TBG Work Product, from Surveys, published FWC data, and Brevard & Indian River Property Appraiser data

The overall economic impacts are generated by three categories:

1. Local Recreational boaters
2. Tourists
3. Specialized sectors

Table 7 shows a breakdown of the spending by each of the four categories.

Table 7. Spending by Impact Type

Categories by Size	Total Spending
Local Recreational boaters	$131,396,000
Tourists	$759,017,000
Specialized sectors	$8,851,000
Total	**$899,264,000**

Source: TBG Work Product

Recreational Users

To estimate the spending of recreational users of the Waterways, and their impact on commercial businesses through spending, data on Florida boat owners and visitors to Florida who indicated that they used a boat in Brevard and Indian River County is utilized. TBG and the District conducted a survey of recreational users in the Sebastian Inlet Region that provided for spending data for those that engage in boating activities in the inlet area and those that use the inlet area for shoreline activities such as surfing, snorkeling, paddle boarding, fishing from the shore, etc. The survey results were predominately residents within the Sebastian Inlet region, and their frequency of use and spending associated with their activities were used to estimate the spending of resident boaters.

The Sebastian Inlet draws hundreds of thousands of visitors annually, with the state park recording nearly 800,000 visitors annually. While several survey respondents indicated shoreline uses including

park access, a 2018 survey conducted by TBG provided additional insight into the spending patterns and use associated with the shoreline activities of visitors, adjusted to 2022 dollars[3].

Local/Florida Boat Owners

The population of Brevard and Indian River Counties has increased by 8% over the last 5 years. Currently, the Florida Office of Economic and Demographic Research (EDR) estimates Brevard County's population at 627,544 and Indian River County's Population at 165,559. The population within the Sebastian Inlet District is estimated by the 2020 US Census Bureau's American Community Survey (ACS) at 370,719.

TBG obtained vessel registrations from the Florida Department of Highway Safety and Motor Vehicles including annual statistics, and a database of registrations which provide a snapshot in time of the types of vessels by zip code. Despite the moderate increase in population, Brevard County has observed a 7% decrease in the number of boat owners and Indian River County observed a 1% decrease in vessel ownership. The database shows a total of 39,091 registered boats in Brevard and Indian River Counties. Of which, 30,008 are registered boats in Brevard County and 9,083 are registered boats in Indian River County. The District region accounts for approximately 51%, or 19,973 of the total boat registrations in Brevard and Indian River Counties. As a whole, 63% or 5,705 of all Indian River County boat registrations and 48% or 14,268 of all Brevard County boat registrations are within the Sebastian Inlet region.

Additionally, it is assumed that a share of the vessels will not use saltwater waterbodies such as airboats, or those primarily used on freshwater bodies of water; the dataset was adjusted to remove the population of vessels that do not use or do not regularly use the District's waterways either by vessel type or by the share reported in survey data as not using district waterways. Approximately 79% are using the waterways regularly. A breakdown of the vessel registrations is described in the Metrics Section of this report.

Survey data obtained from resident recreational boaters in the Sebastian Inlet region was used to estimate spending. **Table 8** shows a breakdown of reported annual expenditures by boat size.

Table 8. Florida Recreational Boater Spending Categories by Boat Size

	Less than 16'	16' to 26'	Greater than 26'
Annual Trip Costs:			
Food & Beverages	$150	$3,416	$5,495
Transportation & Accommodation	$615	$4,844	$10,599
Fees & Recurring Costs	$89	$1,499	$4,036
Gear & Other	$150	$750	$1,149
Total	$1,004	$10,509	$21,280

Source: TBG Work Product, Surveys, Department of Highway Safety and Motor Vehicles

[3] A limited number of responses from visitors in the 2023 survey for Sebastian Inlet resulted in the supplementation of spending data. The supplemental data is derived from prior surveys for the Florida Inland Navigation District and the Florida Department of Environmental Protection, conducted by TBG.

When accounting for boaters that do not use the waterway regularly or use their vessels for other activities such as freshwater boating, approximately 15,690 local registered boaters utilize the Sebastian Inlet District's waterways, supporting that on average nearly 9% of vessels are not using the waterways regularly. The region is dominated by medium sized (16' to 26') vessels, accounting for 60% of vessels, however the smaller number of large vessels over 26' in length contribute a significant share of waterway-related spending as these users spend significantly more and use the waterways nearly as often as the medium-sized vessels. The spending data was applied to the population of vessels using district waterways, with **Table 9** providing a breakdown of total spending by boat size.

Table 9. Total Spending from Resident Boaters

Categories by Size	Total Spending
Boats Less than 16'	$4,990,000
Boats 16' to 26'	$99,209,000
Boats 26' or greater	$27,197,000
Total	$131,396,000

Source: TBG Work Product, IMPLAN

Local boaters generate $131 million in spending (**Table 7**), which results in a total economic contribution of nearly $150 million and 1,200 jobs as shown in **Table 10**.

Table 10. Estimated Economic Impacts, Resident Boaters

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	961	$31,704,000	$51,101,000	$113,545,000
Indirect Effect	241	$10,304,000	$16,104,000	$36,834,000
Total Effect	1,202	$42,008,000	$67,205,000	$150,379,000

Source: TBG Work Product, IMPLAN

Sebastian Inlet Visitors & Shoreline Users

Tourists including those who use boats and those engaging in shoreline activities such as fishing from jetties, paddling activities including kayaking, and surfing among other uses in the District's waters in and around Sebastian Inlet also contribute to the economic impact of the maintenance of the Sebastian Inlet. A 2017 survey of more than 983 visitors to Florida from across the US found that 20% identified Brevard County and 8% identified Indian River County as a destination they had visited at least once in the last 12 months to participate in activities using the Intracoastal Waterway (ICW). Visit Florida data indicates that in 2022 (the most recent data available), 137.6 million tourists visited Florida, with 1.4 million visitors to Brevard County and 721,487 visitors to Indian River County. Of those, 31% would generate an estimate of 453,385 Intracoastal waterway-specific visitors in Brevard and 17% would generate 122,785 Intracoastal waterway-specific visitors in Indian River County. This number was used as a proxy for tourists from other U.S. States that were waterway users. The Sebastian Inlet draws hundreds of thousands of visitors annually, with the state park recording nearly 800,000 visitors

annually. Using similar shares of in-state and out-of-state visitors, as well as shoreline uses and boaters, the total 781,000 visitors was adjusted.

Total spending from tourists' activities including engaging in shoreline activities such as surfing within the Sebastian Inlet region aggregates to $1.2 billion annually. Shoreline users and visitors to the Sebastian Inlet Region generate annual spending of $759 million, with total impacts of more than $954 million as shown in **Table 11**.

Table 11. Estimated Economic Impacts, Visitors

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	5,825	$207,814,000	$312,599,000	$653,092,000
Indirect Effect	1,239	$53,727,000	$83,394,000	$190,001,000
Induced Effect	705	$33,435,000	$62,715,000	$110,767,000
Total Effects	**7,769**	$294,976,000	$458,707,000	$953,860,000

Source: TBG Work Product, IMPLAN

Specialty Sectors

Recreational boaters are by far the greatest users of the waterways in the Sebastian Inlet region, and the spending by local (Brevard County and Indian River County) and visiting boaters accounts for a substantial portion of the economic impact. There are other sectors that are not accounted for through either source, either because they are outside the normal regional input-output multipliers accounted for in regional flows, or because the entities generating the impact are not captured by traditional survey methods for locals or tourists. For purposes of economic impact modeling these are referred to as "specialty sectors."

In the case of the Sebastian Inlet region, there are at least two sources of specialty sector economic impacts:

1. The district's expenses themselves
2. The commercial fishing industry

Specialized Sectors include the maintenance dredging activities and commercial fishing; while the inlet has some benefits from the district's waterways, the portion that is directly attributable to shipments on the ICW are not readily available to be teased out. The value of the industries that reportedly use the ICW are noted, but their impacts are not quantified. **Table 12** summarizes the specialized sectors' impacts.

Table 12. Estimated Economic Impacts, Specialized Sectors

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	91	$4,629,000	$7,255,000	$8,851,000
Indirect Effect	9	$527,000	$641,000	$1,169,000
Induced Effect	19	$916,000	$1,760,000	$3,024,000
Total Effects	119	$6,072,000	$9,655,000	$13,045,000

Source: TBG Work Product, IMPLAN

Expenditures by Sebastian Inlet District

Dredging and other maintenance expenses for the Sebastian Inlet is managed by the Sebastian Inlet District, which also implements a Sebastian Inlet Management Plan. The budget data for the Sebastian Inlet District shows that nearly $22 million has been invested in navigation or dredging-related projects in the District's political boundaries for an annualized value of $5.47 million over 5 years. This value includes expenditures for the Sand trap Dredging, Maintenance of the Channel and channel extension, Ocean and Inlet meteorological studies, and construction programs which includes beach maintenance and for the inlet shorelines and jetties.

For the Sebastian Inlet, an annualized value of $5.4 million in expenditures by the District for funding waterway related projects such as channel maintenance, were used as input values for spending. **Table 13** summarizes the specialized sectors' impacts.

Table 13. Estimated Economic Impacts, District Activities

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	55	$4,306,000	$3,898,000	$5,471,000
Indirect Effect	9	$523,000	$635,000	$1,157,000
Induced Effect	18	$858,000	$1,649,000	$2,833,000
Total Effects	81	$5,687,000	$6,182,000	$9,461,000

Source: TBG Work Product, IMPLAN

Commercial Fishing

Commercial fisheries impact the economic sector differently than any of the listed categories. The shrimping industry in Brevard is significant with 2.1 million pounds of rock shrimp harvested in 2022; white shrimp adds 12% to the commercial shrimping industry value. In Indian River County, king mackerel, spanish mackerel, and blue crab are the lead species for pounds and value of landings, with mackerel reliant on offshore waterway access. This is important to highlight as without the Inlet access, the commercial fishing industry in Indian River county would be minimal. Supplementing the commercial landings data with data from the Florida Department of Revenue's Quarterly Census of Employment and Wages (QCEW), it is expected nearly all of the commercial landings in Indian River County could be attributed to the Sebastian Inlet, totaling $1.5 Million in 2022. In Brevard County, Port Canaveral draws much of the commercial fishing landings, however, the QCEW data reveals that 20% of the employment and wages in commercial fishing falls within the Sebastian Inlet region; this share was used to apportion a percentage of the landings value in Brevard County, or $1.9 million of the total $9.4 million landed in 2022. Using the value of Commercial Landings in portions of Brevard County and Indian River County in 2022, the industry contributes spending of $3.4 million. This number is close to that of the ex-vessel values of landings.

Table 14 provides a detailed breakout, showing that direct effects of the spending total about $2 million.

Table 14. Estimated Economic Impacts, Commercial Fishing

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	37	$323,000	$3,356,000	$3,380,000
Indirect Effect	0	$4,000	$6,000	$12,000
Induced Effect	1	$58,000	$111,000	$191,000
Total Effects	38	$385,000	$3,474,000	$3,584,000

Source: TBG Work Product, IMPLAN

Tax Revenues

The economic benefits of District maintenance include the generation of tax revenues for local, state and federal governments. **Table 15** provides a breakdown of calculated tax impacts based on the five different sectors used in this report, showing contribution to various public revenue streams annually from navigable waterways in Brevard and Indian River Counties. Overall, nearly $100 million in annual revenues are generated.

Table 15. Tax Revenues from District Waterways

Description	Local	State	Federal	Total Annual Impacts
Recreational Boaters	$1,767,000	$1,882,000	$8,014,000	$11,662,000
Tourists	$13,737,000	$14,541,000	$58,129,000	$86,407,000
Specialized Sectors	$234,000	$253,000	$1,342,000	$1,829,000
Total Annual Impacts	$15,738,000	$16,676,000	$67,485,000	$99,898,000

Source: TBG Work Product, IMPLAN. *Note: no local income tax hence $0.

IV. Property Amenity Values

Property values associated with the waterways were compiled for contextual analysis. Market values for the more than 10,000 Brevard County properties and 3,100 Indian River County properties directly fronting the Intracoastal Waterway total more than $11 billion, of which nearly $8.4 billion was generated by residences fronting the ICW in 2022. The Sebastian Inlet District accounts for 21% of the total residential value.

The premium associated with proximity to the Inlet is substantial. Economic valuations that assess the value of specific attributes – in this case, proximity to the Sebastian Inlet - are known as hedonic models. Hedonic modeling involves using regression analysis to hold constant variables that affect housing prices – such as number of bedrooms or bathrooms, square footage, whether a property has a swimming pool, etc. In doing so, it is possible to statistically measure the value of "amenities," such as proximity to beach access, a popular park, or "disamenities," such as a landfill. The value of proximity to the Sebastian Inlet can be quantified by comparing the value of properties close to the Inlet with properties that are not in proximity.

Property records from the Florida Department of Revenue, Brevard County Property Appraiser, and Indian River County Property Appraiser show that residential properties within the Sebastian Inlet region

overall average $473,000 in market value, based on sales during the past 24 months. By comparison, properties that are within one mile of the Intracoastal average $537,000. Removing beach premium reduces nearby property values to $489,000, which is still 4% more than the value of the average Brevard or Indian River County home sale. **Table 16** provides details.

Table 16. Single Family Residential Property Sales in 2021-2022 and Waterway Proximity

Distance	Count	Average Sale Price (in dollars)	Total Property Sales (in Millions $)
Brevard County Overall	23,984	$396,410	$9,508
Indian River County Overall	7,431	$540,108	$4,013
Sebastian Inlet District Overall	16,737	$473,894	$7,932
Within 1 mile of Intracoastal	3,796	$537,175	$2,039
Within 1 mile, not Beachfront	3,705	$489,141	$1,812
Beachfront	91	$2,492,873	$227
Within 7 miles of Inlet	1,087	$661,178	$719

Source: TBG Work Product, Brevard County Property Appraiser, Florida Department of Revenue

Hedonic modeling found that the real estate premium value enjoyed by Brevard and Indian River Counties that is specifically attributable to proximity totaled $89 million for single family residences in 2022. Survey data revealed that users of the Sebastian Inlet are primarily within 7 miles, or 11,500 meters, of the Inlet or Sebastian Inlet State Park. The coefficient for locations closest to the Inlet accounts for more than a 3.5% of the market value and 2% of sales values for properties within 7 miles, holding other factors constant such as size, number of bedrooms/bathrooms/garages and age.

There are more than 3,000 residences along the waterways in the Sebastian Inlet District that are not single-family units. Using similar share of sales price as indicative of proximity premiums, the amenity value attributable to proximity for condominiums totals $22 million, resulting in a total premium of $108 million associated with the Sebastian Inlet proximity. The proximity premium associated with properties is $6.5 million annualized. For context, total property value is about $107 billion in Brevard County and $37.5 billion in Indian River County, according to the Florida Department of Revenue.

Table 17 provides a breakdown of the premium associated with current waterfront properties that is attributable solely to the Waterways.

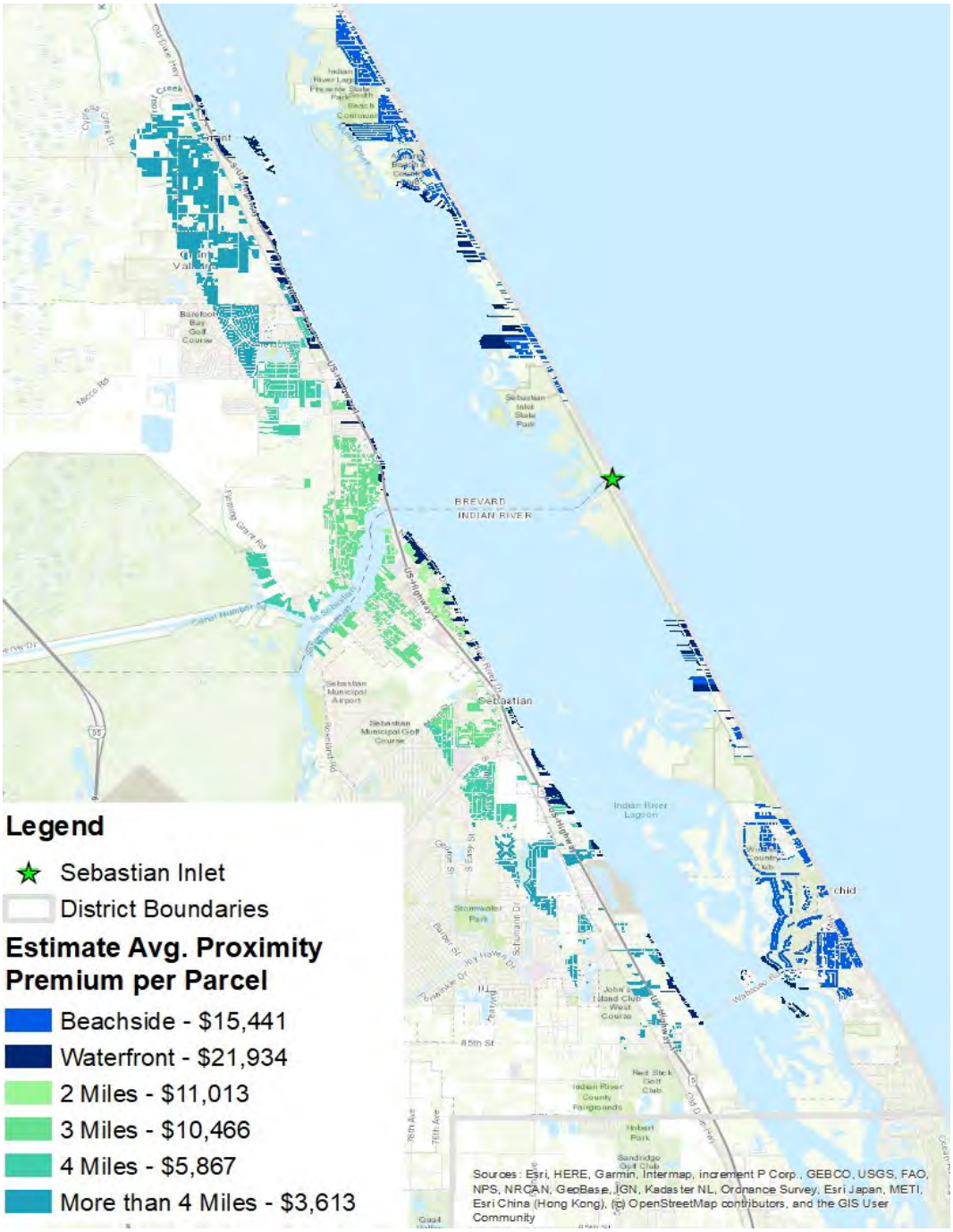
Table 17. Amenity Value of Sebastian Inlet – in millions of $

	Waterfront	Beachside	Less than 2 miles	2 – 4 miles	More than 4 miles	Total
Premium %	3.5%	2.9%	2.0%	1.3%	0.4%	
Single Family Residences	$12	$36	$2	$26	$9	$86
Multi-Family/Condos	$4	$5	$6	$3	$4	$22
Total Amenity Value	$17	$41	$25	$29	$13	$108

Source: TBG Work Product, Brevard County Property Appraiser, Florida Department of Revenue

Figure 7 illustrates the proximity effect on property values for a selected stretch of the waterway. The legend shows the decline in property values that is reflected in each successive distance gradient from the Waterway.

Figure 7. Average Premium for All Parcels Within 4 miles of the Sebastian Inlet



Source: TBG Work Product, Brevard County Property Appraiser, Indian River County Property Appraiser, FDOR

V. Changes under Reduced Maintenance

The economic impact under current conditions assumes continued channel and shoreline maintenance of the Sebastian Inlet, but as funding sources shift over time, other scenarios are possible, such as cessation of maintenance, in which maintenance is insufficient to keep current depths intact and shoaling in of some areas may occur.

If vessel drafts were not maintained, business volume is estimated to decrease by $128 million annually, personal income of $41 million would be lost, and 1,000 jobs would be at risk. This compares to less than $5 million in annual spending by the District to maintain the inlet.

Surveys revealed that recreational boating frequency would on average be reduced by 35% without maintenance. However, individual changes range between zero and 100%. Commercial businesses indicated that without channel maintenance on average revenues would decrease by 59%, with some estimates as high as 100%. As an estimate of initial changes in business activity under this scenario, the share of boats that would no longer be able to navigate was subtracted from business spending, with the associated expenditure per boat per year, and the input-output model applied to the revised direct spending number.

Comparing current economic benefits to benefits expected if the channel was no longer maintained, the Sebastian Inlet area would realize a decrease in business sales of $128 million, a decrease in personal income of $41 million, and a decrease of 1,000 jobs. **Table 18** shows the results.

Table 18. Estimated Impacts with Reduced Maintenance

Low Maintenance	Employment Effects	Labor Income Losses	Value Added Losses	Output Effects
Recreational Boaters	-180	-$6,301,000	-$10,081,000	-$22,557,000
Tourists	-764	-$29,104,000	-$45,353,000	-$92,935,000
Specialized Sectors	-119	-$6,072,000	-$9,655,000	-$13,045,000
Total	-1,063	-$41,477,000	-$65,089,000	-$128,537,000

Source: TBG Work Product, IMPLAN

VI. Natural Resource Values

The Indian River Lagoon, which spans 156-miles from Ponce de Leon Inlet in Volusia County to the southern boundary of Martin County, is rich in its biodiversity supporting over 4,400 species of plants and animals. The Indian River Lagoon is an important economic driver for the region that it encompasses, with 2016 estimates showing over $7.4 billion in economic value attributable to the lagoon (SJRWMD). There are five coastal inlets along the lagoon, and Sebastian Inlet is critical to the health of the Indian River Lagoon in the southern portion of Brevard County and Northern portion of Indian River County. The hydrology of the Sebastian Inlet and the Indian River lagoon is important for maintaining salinity levels which directly supports the area's most tractable natural resource, seagrass.

The Sebastian Inlet District is an important stakeholder of the health of the ecosystem in which it encompasses and contributes directly to the benefits of the region and supporting healthy fisheries. After completion of a 10.7-acre navigation channel extension in 2007, the District followed a five-year seagrass mitigation and monitoring program which was continued through 2015 after the District underwent an additional widening to the channel (Atkins 2013 & 2014). Since 2016, the District has continued its abbreviated monitoring program with Atkins and has recently completed the 2022 monitoring event. The coverage monitored in 2022 was approximately 117 acres of seagrass, showing a slight decrease (6.03-acres) from 2021 estimates (Atkins 2023).

To estimate the benefits of ecosystem services such as seagrass restoration, non-market values are applied as natural resources often do not have traditional market values associated with their existence. Literature values are applied to estimate the benefits of healthy ecosystems of the Indian River Lagoon's seagrass beds that the District has monitored since its mitigation efforts. A 2016 paper by Dewsbury, et al. Observed ecosystem economic valuation literature for values of seagrasses. A popular method for valuing seagrasses observes the resource for its productivity value. Applying a value of $29,000 per acre per year of value, the seagrass monitoring and mitigation efforts in the Sebastian Inlet have an approximate annual value of $3.4 million; this number is likely conservative (Ibid, 2014).

At $29,000 per acre per year of value, the seagrass monitoring and mitigation efforts in the Sebastian Inlet have a total annual value of over $3.4 million

Education efforts to garner support for seagrass restoration efforts would prove fruitful. Literature shows that using willingness-to-pay measures to value seagrasses reveal gaps in research, primarily due to lack of awareness. A recent case study conducted by researchers at the University of Florida's Food and Resource Economics Department studied the Willingness to Pay for Coastal Estuarine Resources on Florida's Nature Coast. Consistent with literature, the researchers find that for seagrasses, the willingness to pay per household ranges from $18.02 to $35.86 for 55% and 80% seagrass abundance respectively.

VII. Metrics

Florida Tax Watch, an independent nonpartisan nonprofit research entity, identified key performance indicators to gauge the health of the marine industries in the Sebastian Inlet District. The Balmoral Group was asked to assist with compilation of the metrics in the course of the data collection effort for the economic analysis. The following metrics were identified:

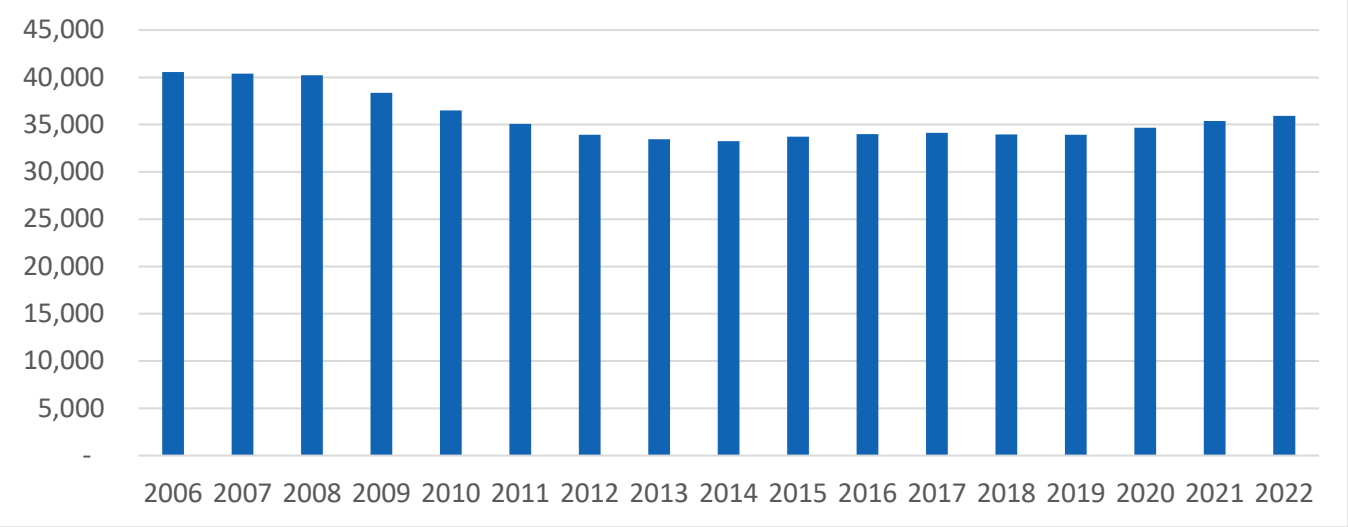
1. Boat registrations in Brevard County, Indian River County, and Sebastian Inlet Area
2. Inventory of local businesses establishments engaged in marine activities, including marinas boating, fishing, tours and water sports and employment supported by these establishments
3. Taxable sales from marine industry establishments
4. Inventory of local marinas, including number of slips by size category
5. Inventory of boat ramps and available parking for vehicles and trailers

Each is addressed in turn.

Boat Registrations

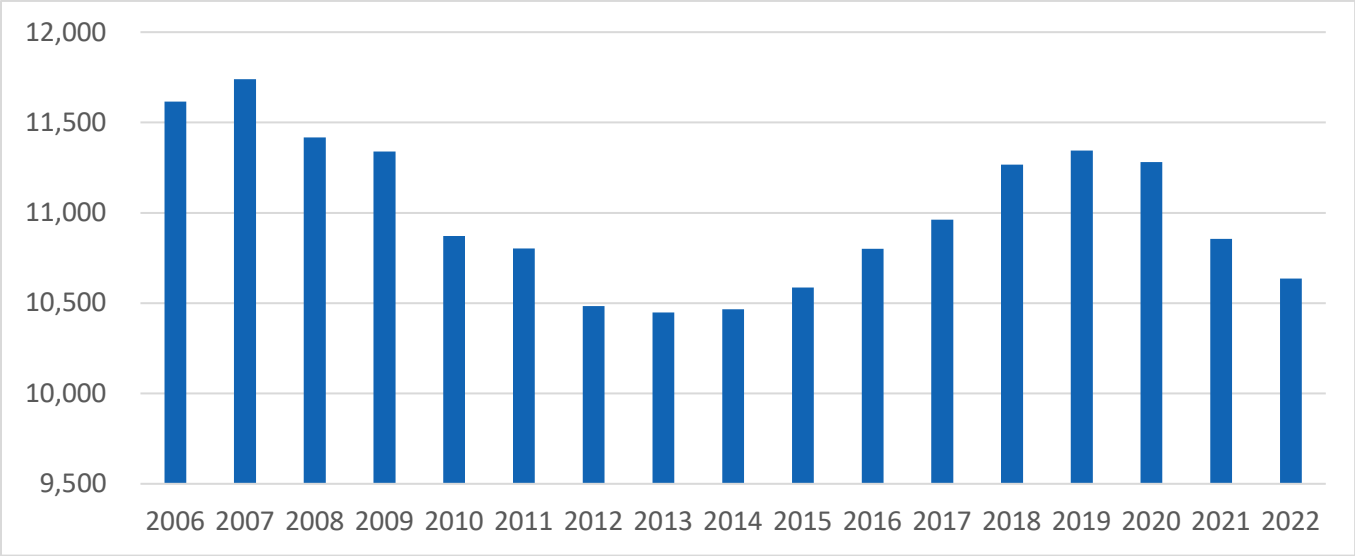
The Sebastian Inlet District encompasses portions of Brevard County and Indian River County. Data from the Florida Department of Highway Safety and Motor Vehicles on annual county-level registrations shows the trends in vessel registrations For Brevard County, there has been a slight increase in total vessels registered as of 2022, with a modest increase of 5% since 2021 (**Figure 8**). For Indian River County, vessel registrations, trends have been less stable over time with a low of 10,400 observed in 2013, however registrations reached 11,300 in 2019 before falling slightly to 10,600 in 2021 (**Figure 9**). Detailed data showing the annual changes for each county since 2010 is described in **Table 19**.

Figure 8. Brevard County Total Vessel Registrations, 2006-2022



Source: Florida Department of Highway Safety and Motor Vehicles Annual Registration Statistics by County

Figure 9. Indian River County Total Vessel Registrations, 2006-2022



Source: Florida Department of Highway Safety and Motor Vehicles Annual Registration Statistics by County

Table 19. Annual Vessel Statistics – Brevard & Indian River Counties

	Brevard County				Indian River County			
Year	Pleasure	Dealer/ Comm.	Total	Annual Change	Pleasure	Dealer/ Comm.	Total	Annual Change
2010	35,130	1,367	36,497		10,467	465	10,932	
2011	33,712	1,378	35,090	-4%	10,352	451	10,803	-1%
2012	32,641	1,302	33,943	-3%	10,047	437	10,484	-3%
2013	32,185	1,271	33,456	-1%	9,983	466	10,449	0%
2014	31,995	1,271	33,266	-1%	10,018	448	10,466	0%
2015	32,448	1,283	33,731	1%	10,117	470	10,587	1%
2016	32,731	1,268	33,999	1%	10,356	444	10,800	2%
2017	32,911	1,235	34,146	0%	10,548	414	10,962	2%
2018	32,734	1,237	33,971	-1%	10,842	425	11,267	3%
2019	32,743	1,199	33,942	0%	10,927	418	11,345	1%
2020	33,524	1,165	34,689	2%	10,890	390	11,280	-1%
2021	34,219	1,177	35,396	2%	10,494	362	10,856	-4%
2022	34,678	1,240	35,918	2%	10,274	363	10,637	-2%

Source: FHSMV

A breakdown of counts by length categories are shown in **Table 20**.

Table 20. Vessel Length Group by Registration Use

Length Group	Brevard			Indian River		
	Pleasure	Comm./ Govt/ Other	Total	Pleasure	Comm./ Govt/ Other	Total
Under 16'	12,532	129	**12,661**	3,374	68	**3,442**
16' to 26'	18,435	462	**18,897**	5,765	175	**5,940**
26' to 40'	2,662	144	**2,806**	834	56	**890**
40' to 65'	394	20	**414**	129	6	**135**
More than 65'	20	5	**25**	10	1	**11**
Canoes	635	3	**638**	162	1	**163**
Dealers		477	**477**		56	**56**
Total	**34,678**	**1,240**	**35,918**	**10,274**	**363**	**10,637**

Source: FHSMV

Boat registration data were received from the Florida Department of Highway Safety and Motor Vehicles' (FHSMV) registration database. The Department pulled all current registration records from Brevard County and Indian River County up to January 2023. There are 39,091 records in the database, which includes 30,008 for Brevard County and 9,083 for Indian River County; **Table 21** shows the breakdown of business registrations versus individual registrations for the region and the Sebastian Inlet District-related zip codes.[4]

Table 21. Vessel Registrations by Businesses and Individuals

	Count	Brevard & Indian River Counties	Sebastian Inlet Area	SID Share
Brevard County	Businesses	829	434	52%
	Individuals	29,179	13,834	47%
	Total	**30,008**	**14,268**	**48%**
Indian River County	Businesses	347	215	62%
	Individuals	8,736	5,490	63%
	Total	**9,083**	**5,705**	**63%**
Grand Total		**39,091**	**19,973**	**51%**

Source: FLHSMV

The dataset was reduced to include only pleasure vessels, **Table 22** shows the Vessel registrations by type of vessel as certain types are more likely to use the waterways within the District's boundaries.

[4] Registration data received removed confidential information, that would allow for geocoding to estimate the share in the SID itself; however, the data retained the zip code information which was used to define the SID-area.

The table describes vessel registrations by individuals including all uses and separately for only registrations indicating primary use is for pleasure.

Table 22. Vessel Registrations by Vessel Type

	Individuals, All Uses				Individuals, Pleasure Use Only			
	County Totals		SID Area		County Totals		SID Area	
Vessel Type	Brevard	Indian River	Brevard	Indian River	Brevard	Indian River	Brevard	Indian River
Airboat	829	282	402	191	819	275	399	188
Auxiliary Sailboat	479	58	259	33	315	43	167	24
Cabin Motorboat	1,415	438	664	270	1,244	380	596	236
Canoe	508	136	218	82	504	131	218	80
Houseboat	23	2	13	2	17	1	11	1
Inflatable	550	157	271	100	546	157	270	100
Open Motorboat	17,840	5,806	8,539	3,620	17,170	5,539	8,232	3,449
Other	2,010	588	931	366	1,837	530	851	328
Pontoon	1,725	454	731	300	1,698	449	719	299
Personal Watercraft	3,454	767	1,656	493	3,413	764	1,649	493
Sailboat	346	48	150	33	272	40	126	29
Total	**29,179**	**8,736**	**13,834**	**5,490**	**27,835**	**8,309**	**13,238**	**5,227**

Source: FLHSMV

Waterway-Users

It is expected that not all vessels would use district waterways, with some providing operation on freshwater waterbodies. The dataset was further reduced to counts of vessels that exclude the vessel type "Airboat" as these users typically do not use the Intracoastal Waterway or Inlets attached to the Intracoastal including Sebastian Inlet. The vessels within the SID area accounts for nearly 51% of all vessels within the Brevard and Indian River Region. The census of potential waterway users based on vessel types shows that about 90% of vessels would likely use the waterways. **Table 23** provides an estimated breakdown of the vessel length groups to estimate the population of vessels using the District's waterways, however it should be noted that of the total vessels within the county, a smaller portion will use the waterways on a regular basis.

Based on survey data regarding the use of the Sebastian inlet waterways and survey data from the 2017 DEP outdoor recreation use of saltwater boating for county residents, the vessel counts by boat length were adjusted to reflect the share of residents that use the waterway regularly. **Table 24** provides a breakdown of the vessels adjusted for the total vessels in non-use of the waterways.

Table 23. Vessel Length Group owned by individuals excluding airboats, SID Area

Length Group	Number of vessels
Under 16’	5,279
16’ to 26’	10,301
26’ and more	1,497
Total	**17,077**

Source: FHSMV

Table 24. Pleasure Vessel Counts by Boat Length, Adjusted for Non-Use of Waterways

Length Group	Number of vessels
Under 16’	4,970
16’ to 26’	9,441
26’ and more	1,278
Total	**15,689**

Source: FHSMV, Survey Data

Business Establishments and Employment in Marine Activities

An inventory was prepared of local business establishments engaged in marine activities, including marinas, boating, fishing, tours and water sports. **Table 25** provides a summary by North American Industry Classification System (NAICS) code of employment and number of establishments in Brevard County. Business level data was obtained from the Florida Department of Economic Opportunity for Quarter 2, 2022. The data was sifted through for other businesses that might have been overlooked due to their NAICS code being unobvious such as “Other Household Goods Repair and Maintenance” which included businesses involved in fiberglass work, boatyard maintenance, boat detailing, etc. that was revealed upon reviewing the database. The list also includes estimations on employment for the marine-related businesses (manufacturers, repair and service, retailers, and related businesses) located in Brevard County and Indian River County.

Table 25. Local Business Establishments Engaged in Marine Activities, Brevard County

2-Digit NAICS	Description	Businesses	Employment	Annual Wages (in Millions)	Avg. Per Employee
11	Agriculture and Fishing	7	36	$1.59	$44,043
23	Construction	26	234	$15.86	$67,763
31-33	Manufacturing	39	1,175	$62.81	$53,451
42	Wholesale Trade	19	127	$5.54	$43,625
44-45	Retail Trade	40	487	$23.65	$48,557
48-49	Transportation and warehousing	39	693	$35.06	$50,587
52-61; 99	Misc. Services: Finance and Insurance; Real Estate, Rental and Leasing; etc.	26	165	$8.68	$52,613
71	Arts, Entertainment, and Recreation	27	448	$15.40	$34,384
72	Accommodation and Food Services	27	805	$22.53	$27,984
81	Other Services (Except Public Admin.)	16	36	$1.52	$42,252
Total		**266**	**4,206**	**$192.62**	**$45,798**

Source: QCEW. Note, the data are obtained from the Florida Department of Economic Opportunity, which compiles the QCEW data quarterly and reports annual averages. **denotes confidentiality

Table 26. Local Business Establishments Engaged in Marine Activities, Indian River County

2-Digit NAICS	Description	Businesses	Employment	Total Annual Wages	Avg. Per Employee
11	Fishing	4	28	$1.17	$41,857
23	Construction	8	28	$1.14	$40,866
31-33	Manufacturing	6	74	$4.30	$58,131
44-45	Wholesale & Retail Trade	14	79	$5.18	$65,535
48	Transportation and warehousing	7	8	$0.61	$76,427
51-56,99	Misc. Services: Finance and Insurance; Real Estate, Rental and Leasing; etc.	12	120	$9.63	$80,234
71	Arts, Entertainment, and Recreation	5	35	$1.47	$42,069
72	Accommodation and Food Services	7	306	$8.80	$28,770
81	Other Services (Except Public Admin.)	9	19	$0.57	$30,043
Total		**72**	**697**	**$32.88**	**$47,176**

Source: QCEW. Note, the data are obtained from the Florida Department of Economic Opportunity, which compiles the QCEW data quarterly and reports annual averages. **denotes confidentiality

Table 27. Local Business Establishments Engaged in Marine Activities, SID Area

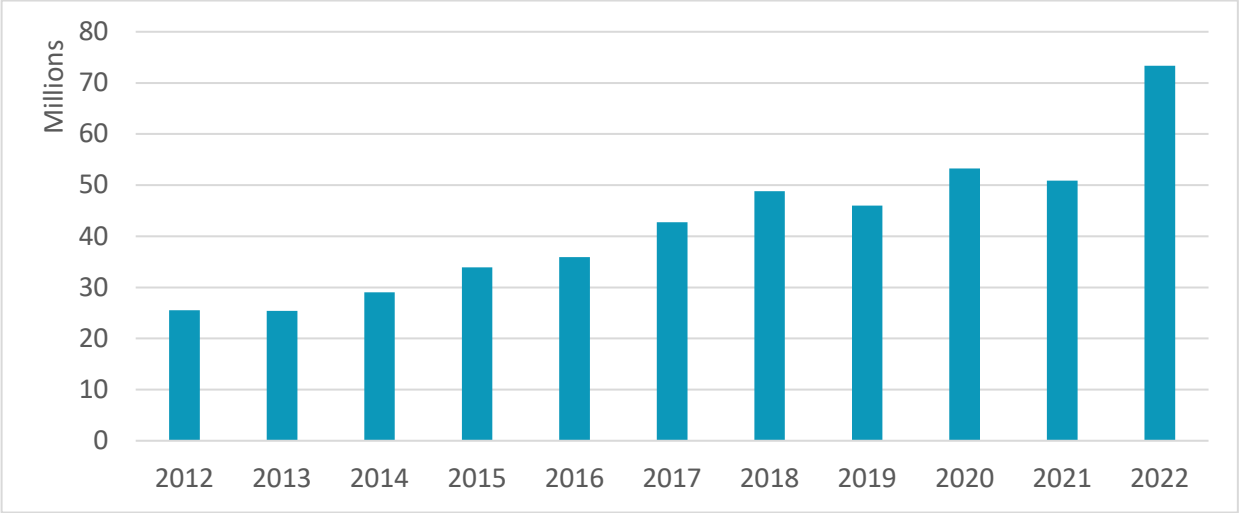
2-Digit NAICS	Description	Businesses	Employment	Total Annual Wages	Avg. Per Employee
11	Agriculture and Fishing	6	31	$1,490,396	$48,077
23	Construction	20	117	$4,310,492	$36,842
31-33	Manufacturing	17	404	$22,845,248	$56,548
42	Wholesale Trade	11	62	$2,887,428	$46,571
44-45	Retail Trade	27	390	$18,604,488	$47,704
48-49	Transportation and warehousing	19	26	$1,224,716	$47,104
51	Information	**	**	**	**
52	Finance and investing	**	**	**	**
53	Real Estate and Rental and Leasing	**	**	**	**
54	Professional, Scientific, and Technical Services	4	23	$761,344	$33,102
56	Administrative and Support and Waste Services	**	**	**	**
71	Arts, Entertainment, and Recreation	23	254	$9,417,176	$37,075
72	Accommodation and Food Services	19	624	$16,266,572	$26,068
81	Other Services (Except Public Administration)	9	13	$627,612	$48,278
99	Unclassified	**	**	**	**
Total		**170**	**2,034**	**$86,745,316**	**$42,648**

Source: QCEW. Note, the data are obtained from the Florida Department of Economic Opportunity, which compiles the QCEW data quarterly and reports annual averages. **denotes confidentiality

Taxable Sales from Marine Industry Establishments

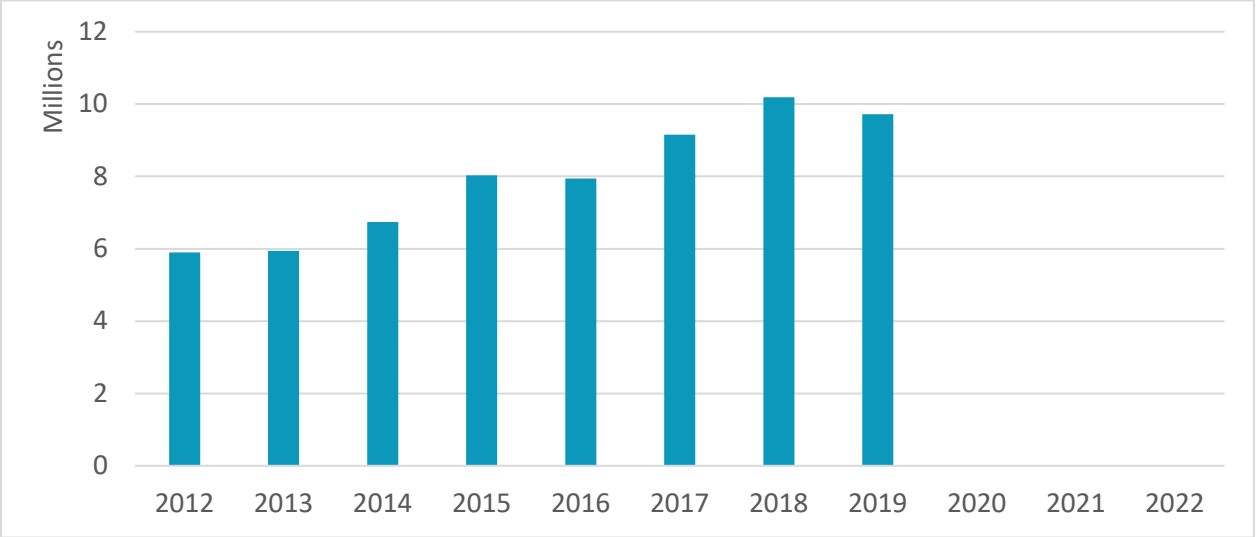
Taxable sales were compiled for boat dealerships (Kind Code 28), as reported by the Florida Department of Revenue. **Figure 10** reflects record boat dealership sales through 2022; the boat dealerships in Brevard County have experience substantial growth since stabilizing during the pandemic with sales exceeding $72 million annually. Indian River County experiences a smaller share of boat dealership sale as shown in **Figure 11.** Data is not displayed for years 2020-2022 due to confidentiality requirements by FDOR and FDEO.

Figure 10. Reported Sales, Brevard County Boat Dealers



Source: Florida Department of Revenue

Figure 11. Reported Sales, Indian River County Boat Dealers



Source: Florida Department of Revenue, Florida Sales Tax Return Data (Form-10)

Commercial Fish Landings

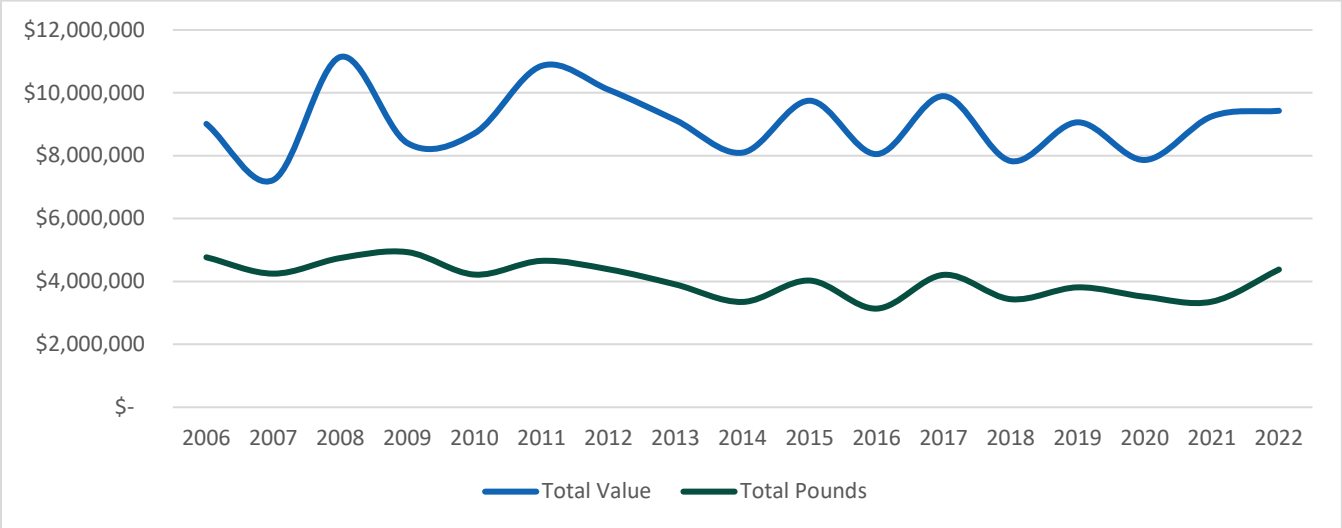
Landings data for Brevard and Indian River Counties were obtained from Florida Fish & Wildlife Commission and are provided in **Table 28.** In Brevard County, the landings have remained relatively stable over time. There was a moderate increase in the total value landed and a 30% increase in total pounds over 2021. This trend is shows graphically in **Figure 12**. In Indian River County, pounds landed have dropped significantly over time reaching a low of 439,534 in 2022, this trend is shows graphically in **Figure 13**.

Table 28. Commercial Fish Landings, Brevard & Indian River County

Year	Brevard County			Indian River County		
	Total Value	Total Pounds	Avg. Price	Total Value	Total Pounds	Avg. Price
2006	$9,012,203	4,769,360	$1.89	$2,054,286	1,035,725	$1.98
2007	$7,229,451	4,249,448	$1.70	$2,701,945	1,225,206	$2.21
2008	$11,141,539	4,746,063	$2.35	$2,509,523	1,429,306	$1.76
2009	$8,400,630	4,933,130	$1.70	$2,276,003	1,251,048	$1.82
2010	$8,711,666	4,219,086	$2.06	$2,039,605	1,151,805	$1.77
2011	$10,855,808	4,656,422	$2.33	$1,825,997	948,619	$1.92
2012	$10,097,394	4,387,449	$2.30	$1,667,080	713,184	$2.34
2013	$9,131,441	3,904,999	$2.34	$1,366,654	662,099	$2.06
2014	$8,098,480	3,349,341	$2.42	$1,223,317	647,222	$1.89
2015	$9,749,638	4,029,412	$2.42	$1,932,772	816,669	$2.37
2016	$8,051,176	3,137,124	$2.57	$2,033,480	862,578	$2.36
2017	$9,894,236	4,211,013	$2.35	$1,836,666	725,029	$2.53
2018	$7,830,246	3,436,419	$2.28	$1,759,460	657,872	$2.67
2019	$9,062,157	3,813,748	$2.38	$1,378,195	575,838	$2.39
2020	$7,863,507	3,514,071	$2.24	$1,245,441	527,471	$2.36
2021	$9,251,447	3,359,151	$2.75	$1,531,360	665,887	$2.30
2022	$9,429,254	4,379,644	$2.15	$1,486,807	439,534	$3.38

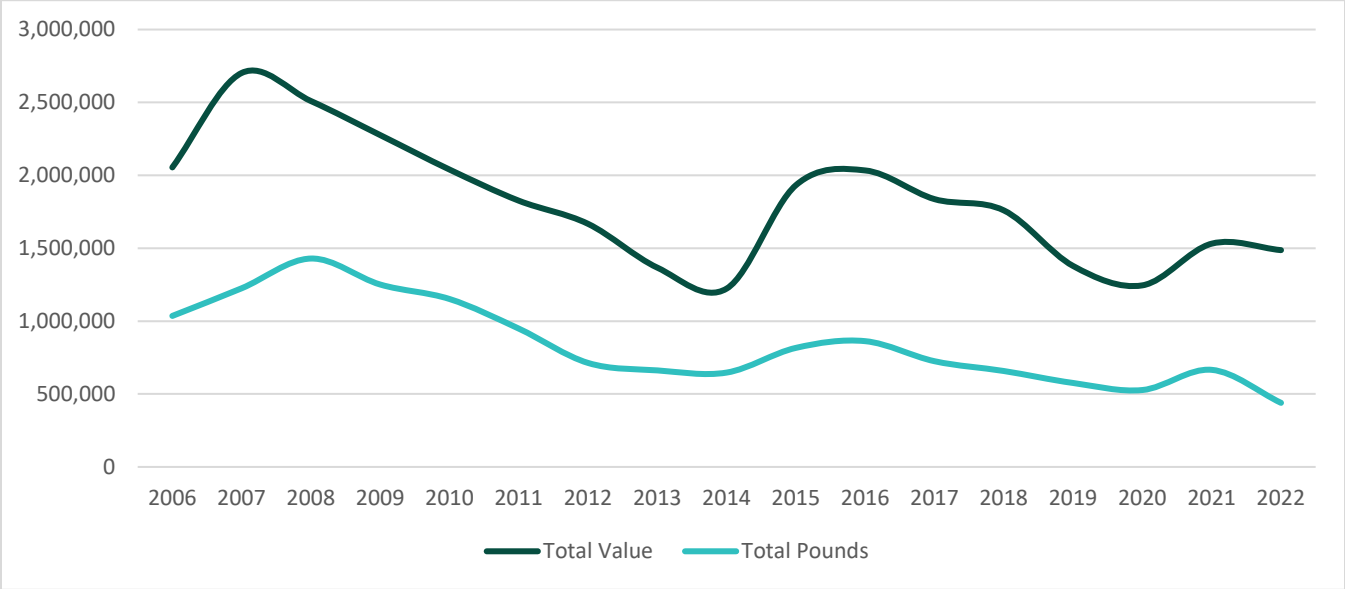
Source: FWC

Figure 12. Commercial Fish Landings, by Weight and Value, Brevard County



Source: FWC

Figure 13. Commercial Fish Landings, by Weight and Value, Indian River County



Source: FWC

Inventory of Ramps and Marinas

An inventory of boat ramps and marinas was obtained from the Florida Boating Access Facilities Inventory and Economic Study (2023) and is displayed in **Figure 14**.[5] **Table 29** provides a summary of access facilities by use type. **Figure 14** shows the locations of boat ramps and marina facilities in the Sebastian Inlet District.

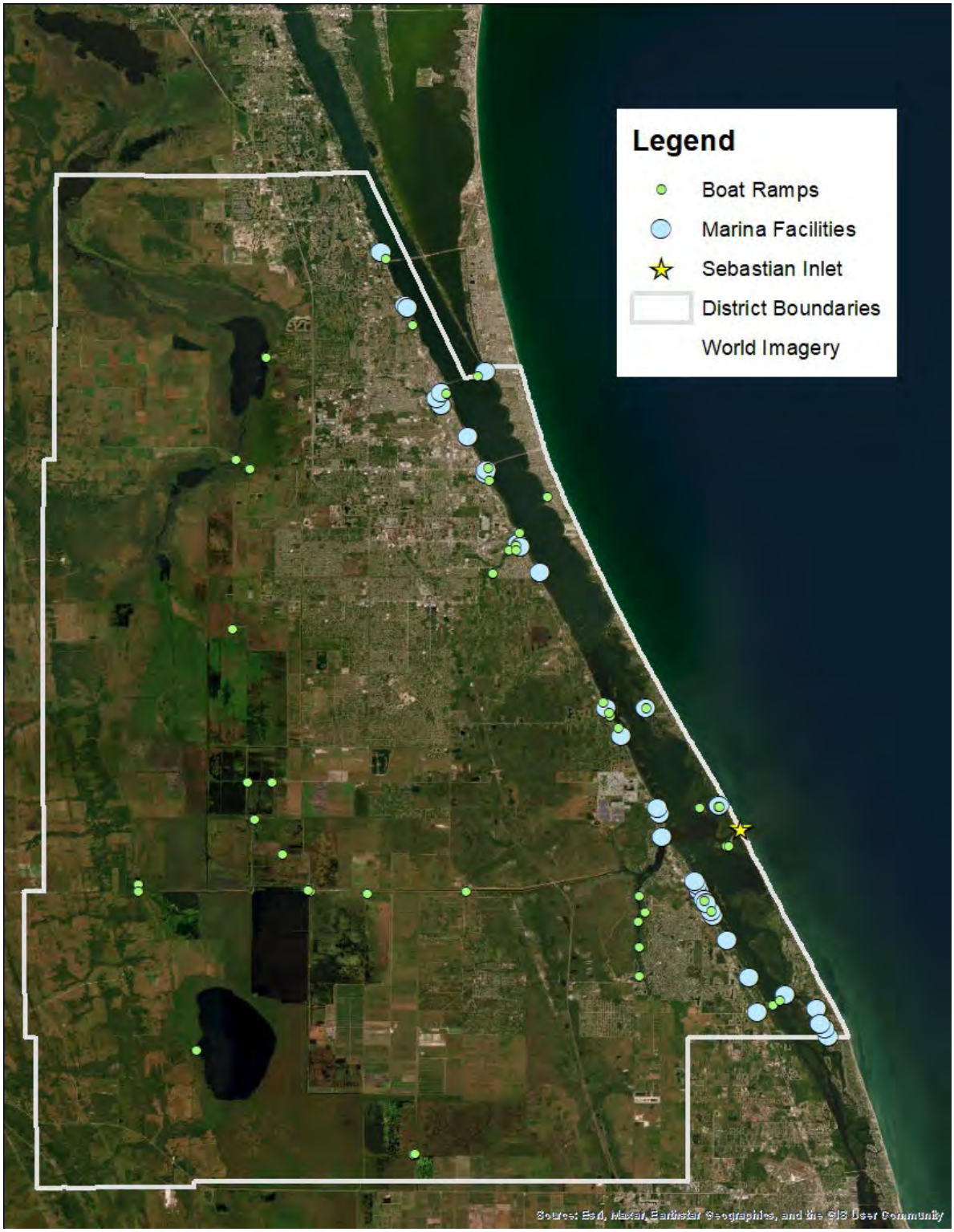
Table 29. Access Facility by Use Type, SID

Facility Access Use Type	Boat Ramp Count	Marina Count
Commercially Owned for Business Use Only		8
Community Association for Residents Only		7
Private Club		1
Commercially Owned for General Public Use	1	16
Government Owned for Restricted Public Use	1	3
Government Owned for General Public Use (Freshwater)	28	
Undetermined	21	2
Total	**51**	**37**

Source: FWC

[5] The marina inventory database was updated in 2016 although it appears that the data are identical to the 2009 data in the original study. Boat Ramp inventory database was updated May 2022.

Figure 14. Boat Ramps and Marinas Inventory

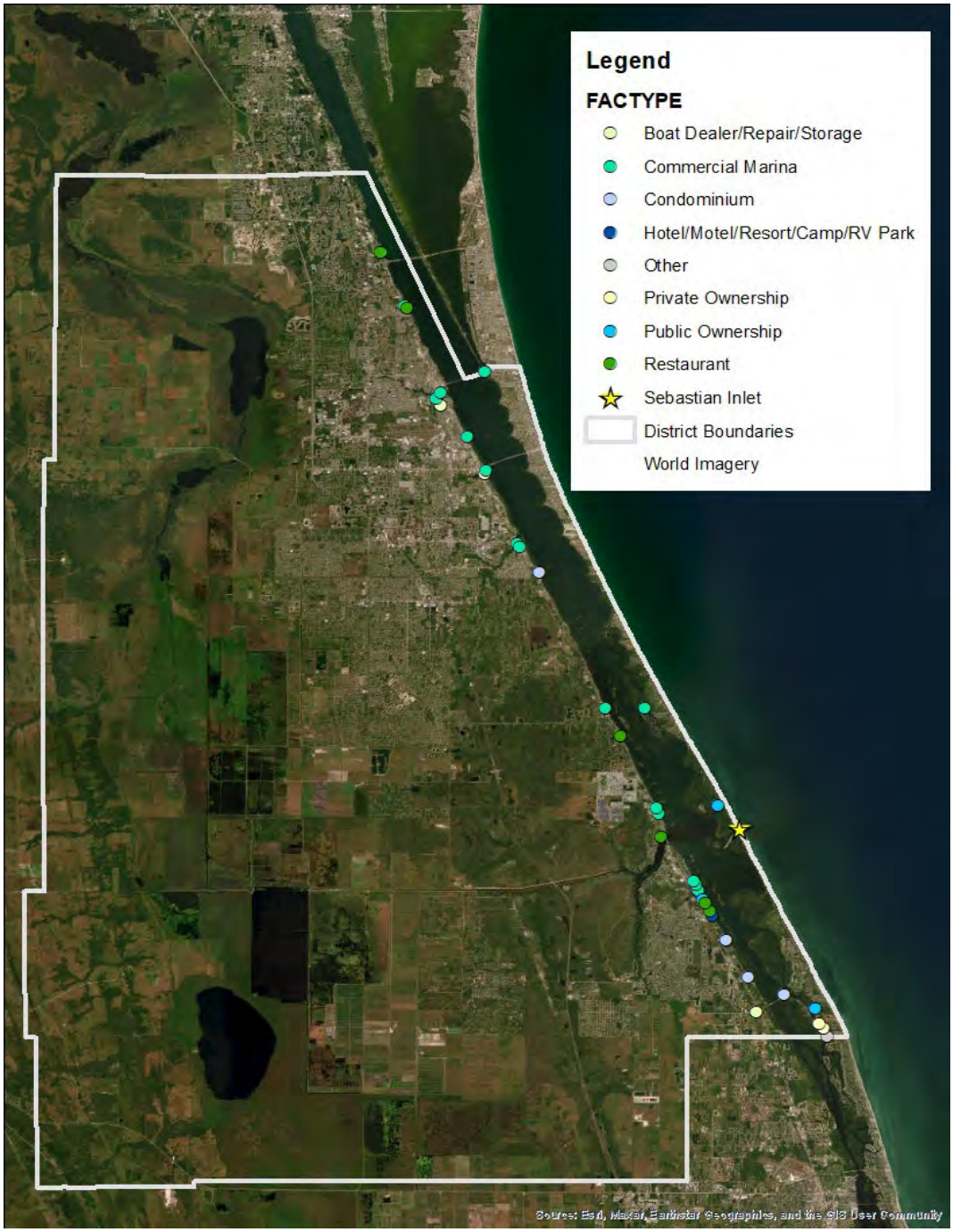


Source: FWC

Inventory of Marinas

All marina facilities have direct access to the Intracoastal Waterway as shown in **Figure 15** which categorizes marinas by use type. **Table 30** provides a summary of the marina facilities with wetslips in the Sebastian Inlet District and **Table 31** provides a summary of the facilities with Dry Stack and Outside Storage.

Figure 15. Marina Facilities by Facility Type



Source: FWC

Table 30. Detailed Description of Marina Facilities with Wet slips

Use Type	Marina Facility Type	Count	Wet Slips	Rental Slips	Transient Slips
Commercial	Boat Dealer/Repair/Storage	**2**	**0**	**0**	**0**
Commercial	Commercial Marina	**16**	**877**	**12**	**12**
Private	Condominium	**5**	**87**	**0**	**0**
Private	Private Club	**1**	**42**	**0**	**0**
Private	Private Other	**3**	**12**	**8**	**8**
Private	Restaurant	**6**	**122**	**0**	**0**
Public	Public owned	**3**	**71**	**0**	**0**
Other	Other	**1**	**0**	**0**	**0**
Total		**37**	**1211**	**20**	**20**

Source: FWC. Note: Marina Operations Slips is the number of wet slips reserved for marina operations (including marina-owned rental and charter boats).

Table 31. Detailed Description of Marina Facilities with Drystack

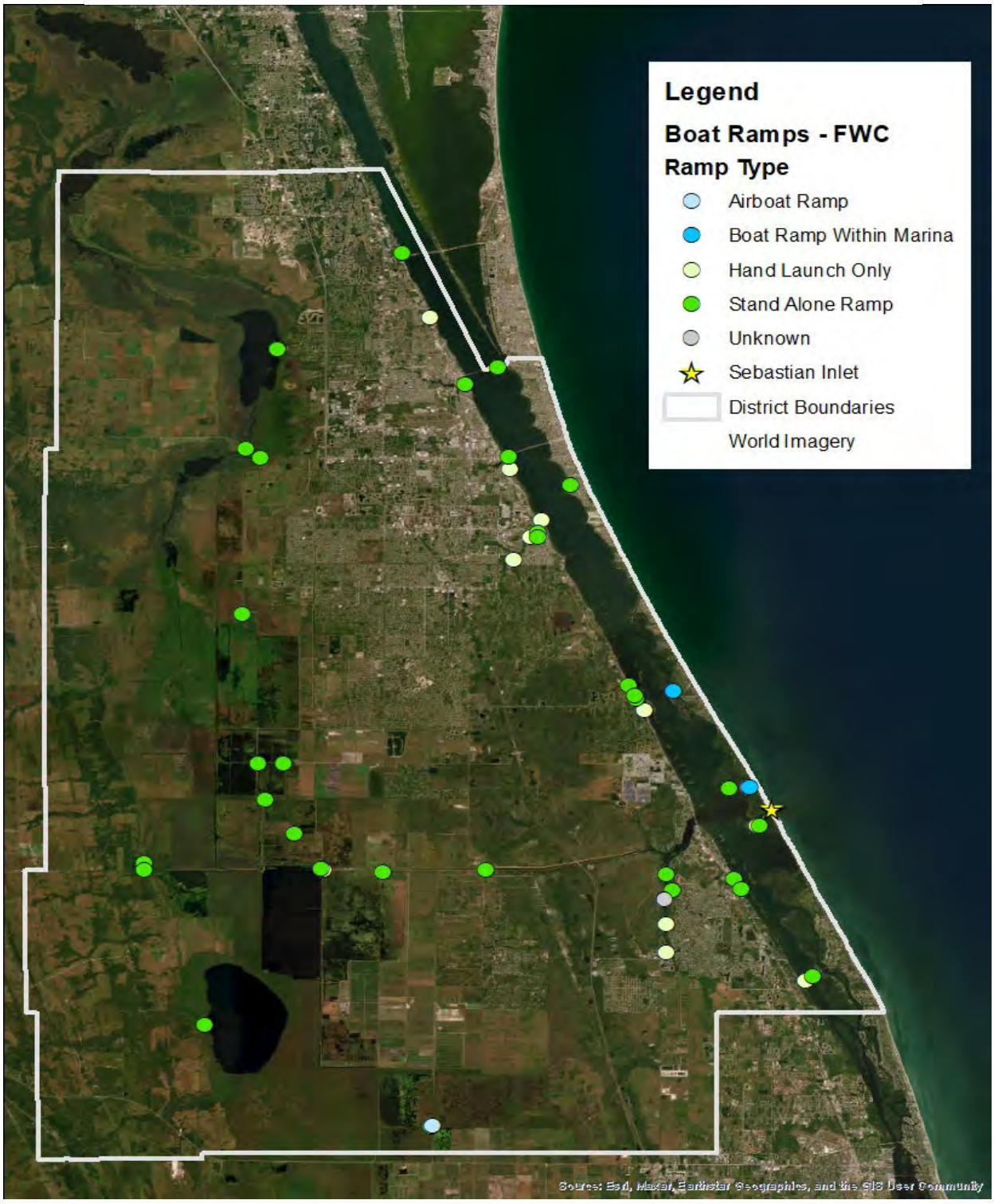
Use Type	Marina Facility Type	Count	# of Racks (Inside)	# of Racks (Outside)	Outside Storage
Commercial	Boat Dealer/Repair/Storage	2	0	0	0
Commercial	Commercial Marina	16	150	119	28
Private	Condominium	5	0	0	6
Private	Private Club	1	0	0	2
Private	Private Other	3	0	0	2
Private	Restaurant	6	0	0	5
Public	Public owned	3	0	0	3
Other	Other	1	0	0	0
Total		**37**	**150**	**119**	**46**

Source: FWC. Note: Marina Operations Slips is the number of wet slips reserved for marina operations (including marina-owned rental and charter boats).

Inventory of Boat Ramps

An inventory of local boat ramps in the Sebastian Inlet District was conducted to identify ramps and available parking for vehicles and trailers. **Figure 16** is a map of boat ramps by use type and **Figure 17** shows the waterbody types the ramps are located on. **Table 32** provides the results for all boat ramps within the Sebastian Inlet District and a breakdown of parking spaces available connected to the Intracoastal or Inlet.

Figure 16. Boat Ramp Inventory by Ramp Type



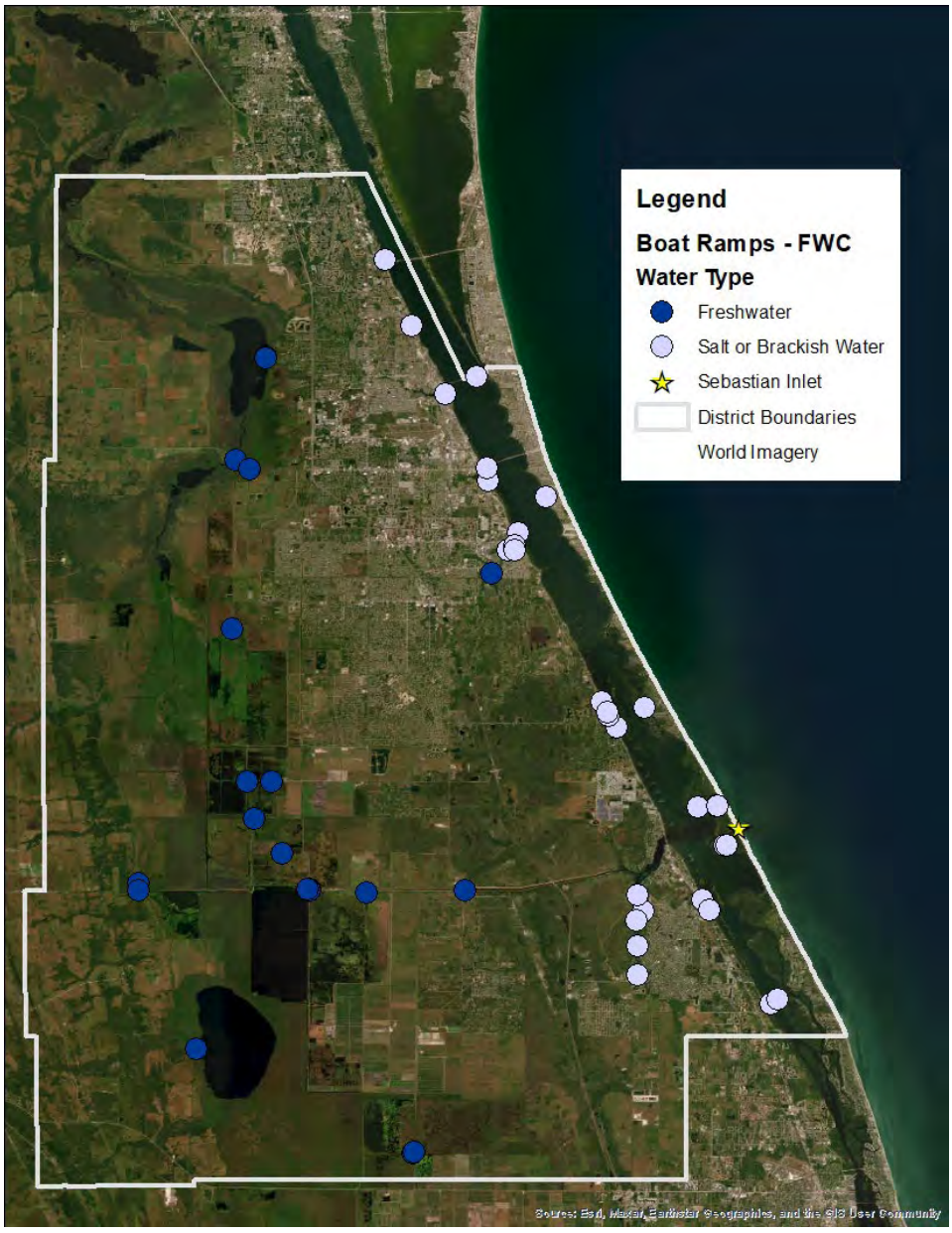
Source: FWC

Table 32. Inventory of Boat Ramps, Saltwater/ICW Access

Ramp Type	Count	Trailer	Accessible Trailer	Vehicle	Accessible Vehicle
Commercially Owned for General Public Use	1	12	0	25	0
Government Owned for General Public Use	28	485	5	384	33
Government Owned for Restricted Public Use	1	0	0	0	0
Grand Total	**30**	**497**	**5**	**409**	**33**

Source: FWC *hand launch dataset includes kayak launches

Figure 17. Boat Ramps by Waterbody Type



Source: FWC

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Appendix 1: Survey Results

Survey Methodology

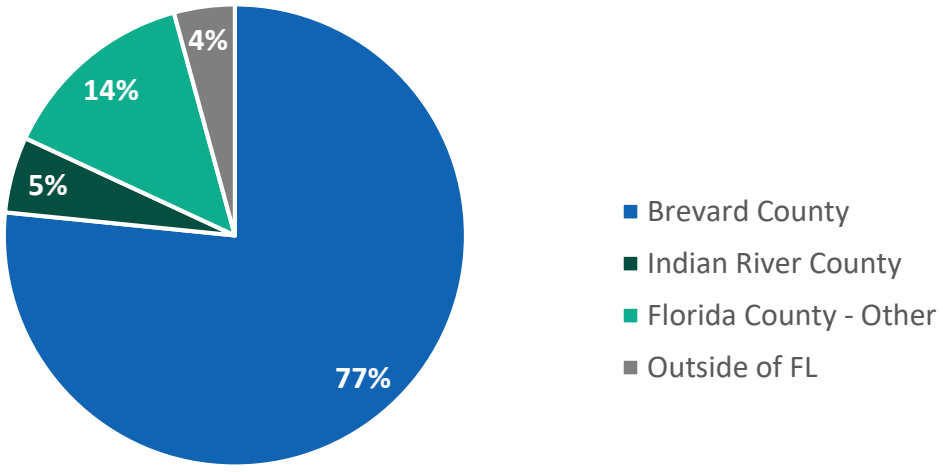
The Balmoral Group and the Sebastian Inlet District coordinated on development and outreach to gather survey responses. The survey was featured in online form through TBG's networks as well as the District's website and social media channels; additionally, District staff engaged in contacting local businesses to gather responses for the business portion of the survey. The survey featured two variations:

1) Recreational Users, whom are either local residents or visitors engaging in non-business activities such as recreational boating, fishing, shoreline activities such as paddling via kayaks or paddle boards, swimming, surfing, etc., and
2) Businesses, which are entities that rely on and benefit from the Sebastian Inlet's maintenance including marinas, commercial fishers, restaurants, etc.

Results of Recreational Users

A total of 188 responses were received for the recreational users' survey. Respondents of the Recreational User survey were asked about their location via zip code to support the spending categories of residents or non-residents within the District. **Figure A-1** shows the results of the respondents' locations indicated, with the majority of respondents are within Brevard and Indian River County and follow the proportions of residents within each.

Figure A-1. Respondent's Zip Code of Residence

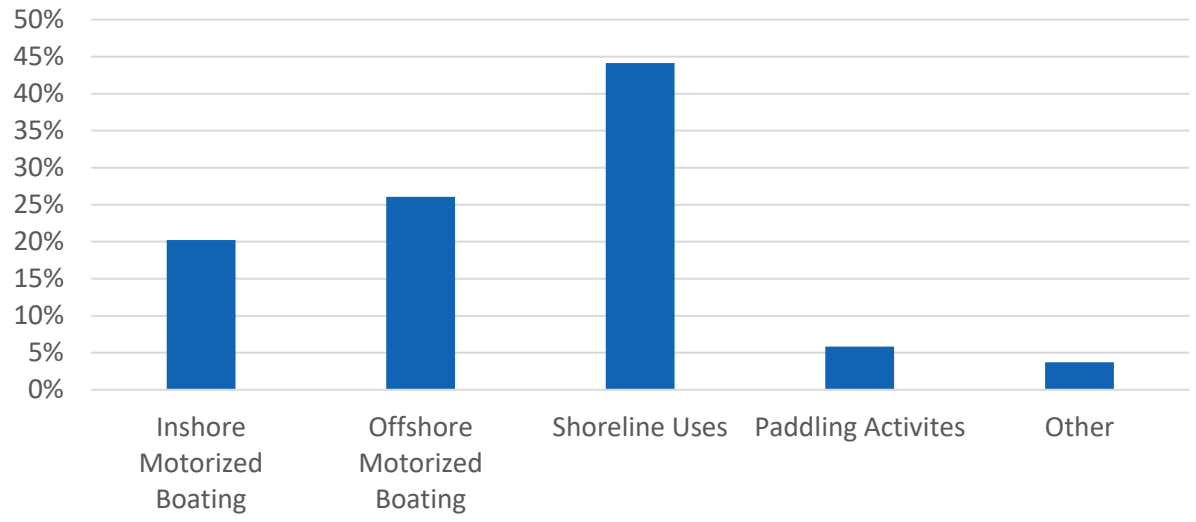


Source: TBG Work Product, Surveys

Respondents were subsequently asked about their primary use of the Sebastian Inlet. The leading usage of the Inlet involves "Shoreline Uses", including activities such as surfing, swimming, windsurfing, fishing from shore or jetties, sunbathing, etc. **Figure A-2** shows nearly 45% of respondents indicated shoreline uses with an additional 10% from paddling activities and other

uses. Respondents that selected "other" primarily indicated uses consistent with camping and shoreline fishing.

Figure A-3. Primary Recreational Use of the Sebastian Inlet

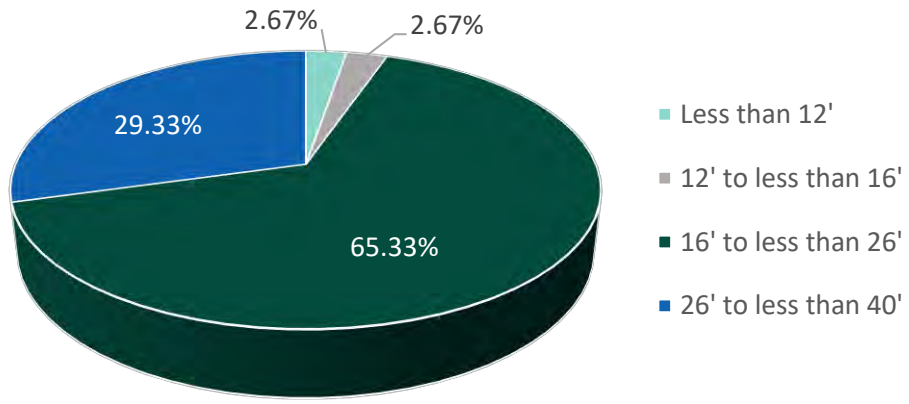


Source: TBG Work Product, surveys

Vessel Owners

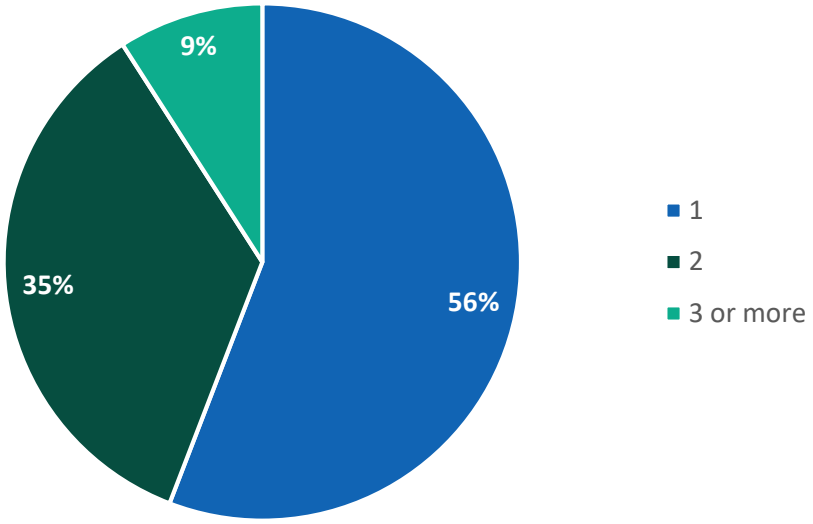
As boating is most closely associated with maintenance of the channel depths, vessel users were asked additional questions as they pertained to their vessel ownership, spending, and inlet activity. Survey respondents whose primary use is either "Inshore Motorized Boating" or "Offshore Motorized Boating" were distributed across boat size and type of boat as to expectations, and consistent with vessel registration data from the Florida Department of Highway Safety and Motor Vehicles (FHSMV) with the largest share of respondents in the 16' to 26' category; a breakdown is provided in **Figure A-3**. 65.33% of boat owners owned boats in the medium size range.

Figure A-4. Breakdown of Boat Ownership by Boat Length



The majority of respondents own only 1 vessel, however over a third indicated having at least two, as shown in **Figure A-4**.

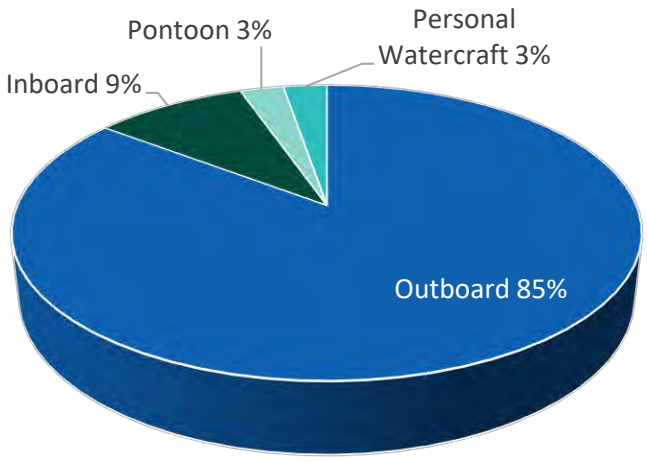
Figure A-5. Vessel Ownership - Number of Vessels



Source: TBG Work Product, surveys

The vast majority (85%) of recreational boaters accessing the Sebastian Inlet were use vessels with outboard motors, followed by vessels with inboard motors (9%), as shown in **Figure A-5.**

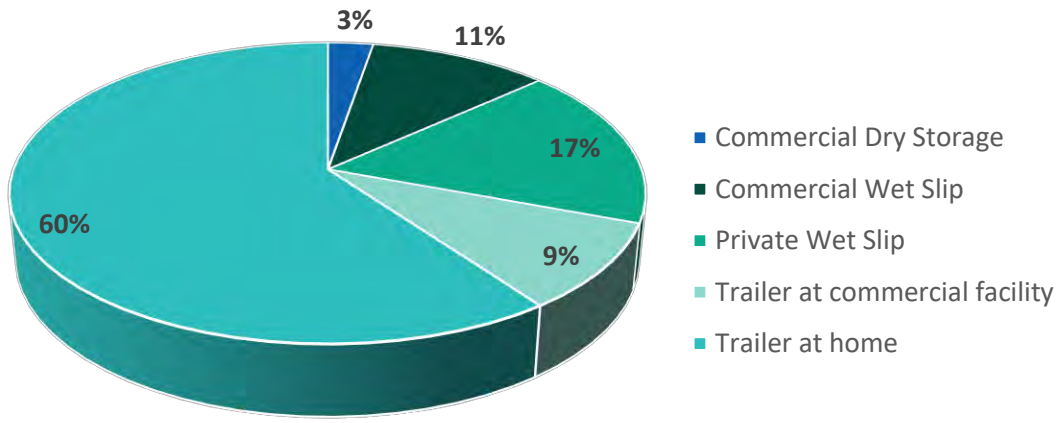
Figure A-6. Respondent's Boat Ownership by Boat Types



Source: TBG Work Product, surveys, Florida Department of Highway Safety and Motor Vehicles

The majority of respondents indicate storing their primary vessel via a trailer at home; this is expected because of high storage costs to hold it at a commercial facility. **Figure A-6** shows that that nearly 20% of survey respondents store their primary vessels at either a commercial facility either via drystack or wet slip. At least 12% of respondents are storing their vessel via a private wetslip.

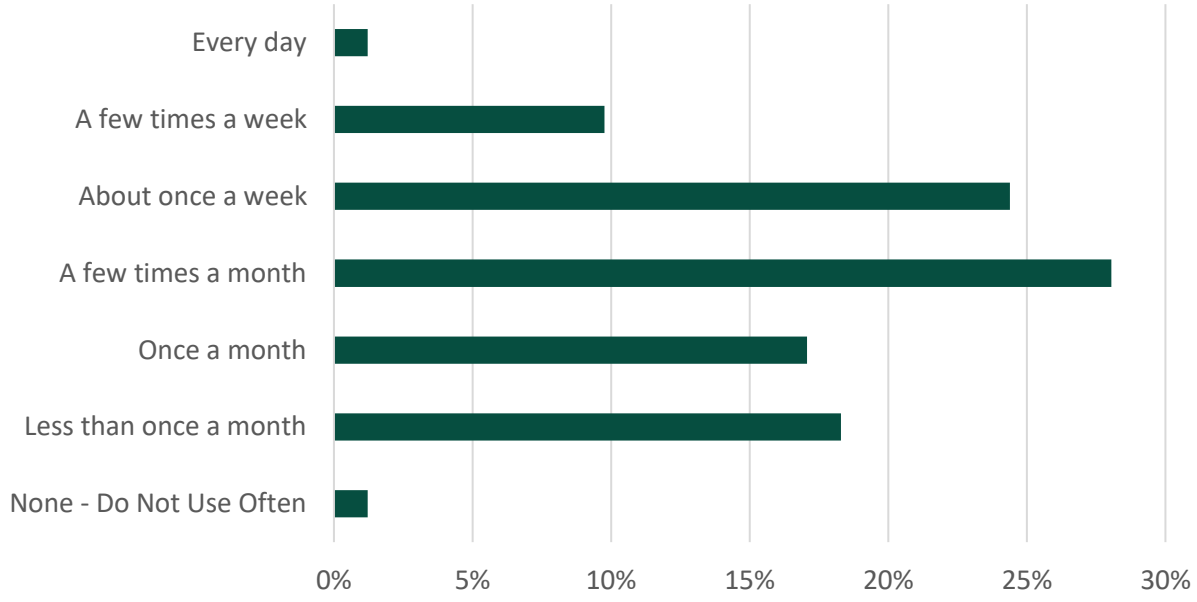
Figure A-7. Primary Vessel Storage



Source: TBG Work Product, surveys

Following the questions around vessel ownership characteristics, vessel owners were asked about their frequency utilizing the Inlet and surrounding areas and questions regarding their activities and spending. **Figure A-7** shows that vessel owners indicate using the Inlet and surrounding areas somewhat frequently, as "A few times a month" is the leading (28%) response. However, the share of answers varies with an evenly spread of responses. "Few times a week" (17%), "Once a week" (17%), "Less than once a month" (16%), and "Once a month" (15%) all have very similar count of answers from respondents.

Figure A-8. Frequency Using Sebastian Inlet & Surrounding Waters



Source: TBG Work Product, surveys

The majority (79%) of the total respondent's report "fishing" as their primary purpose of their last boating trip in the ICW, as shown in **Table A-1**. The following purpose is "Pleasure Boating" (53%). This is illustrated by the total number of respondent's (68) and respondents could choose multiple for an outing on the boat as a response.

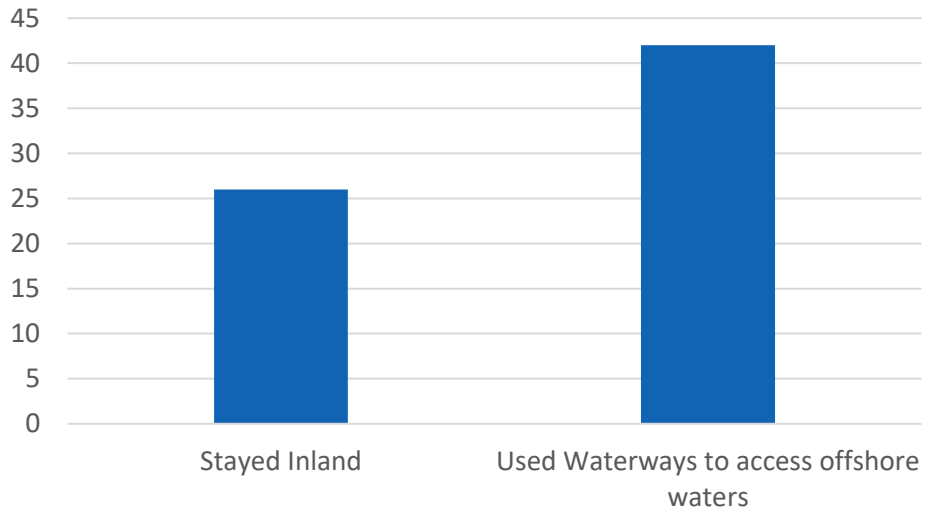
Table A-1. Primary Purpose of Boating Trip

Purpose of Last Boating Trip	Share
Fishing	79%
Pleasure Boating	53%
Commercial Fishing	1%
Water Sports	9%
Sailing	0%
Other	9%

Source: TBG Work Product, survey

An important component of the survey captured vessel users' activities regarding Inlet access. The survey results show that a large share of vessel users are using the inlet to access offshore waters as shown in **Figure A-8**.

Figure A-9. Vessel Users Access on Most Recent Outing



Source: TBG Work Product, surveys

To estimate the spending associated with use of Sebastian Inlet, respondents were asked about their use and spending associated with boating on and off the waterways. **Table A-2 and A-3** shows the breakdown of average days recreating and average annual expenditures by vessel size for while on the waterways and off the waterways.

Table A-2. Average Days recreating Annually and Per day Expenditures

Boat Length	Average Days	Expenditures per Day	Average Annual
Less than 16'	8	$78	$1,000
16' to less than 26'	40	$264	$10,500
More than 26’	39	$538	$20,800
Total	38	$334	$12,600

Source: TBG Work Product, surveys

Table A-3. Average Annual Expenditures by Motorized Boats

Boat Length	Food	Transportation & Accommodation	Fees	Gear	Other
Less than 16'	$150	$615	$89	$150	$150
16' to less than 26'	$3,416	$4,844	$1,499	$750	$3,416
More than 26’	$5,495	$10,599	$4,036	$1,149	$5,495

Source: TBG Work Product, surveys

Table A-4 shows the average annual costs of storing, maintaining, and insuring boats based off the respondent’s answers in the survey. From the table, boats in the 26’ to less than 40’ spend, on average, much more than all other applicable boat lengths. This is expected based off size and care needed for these boats.

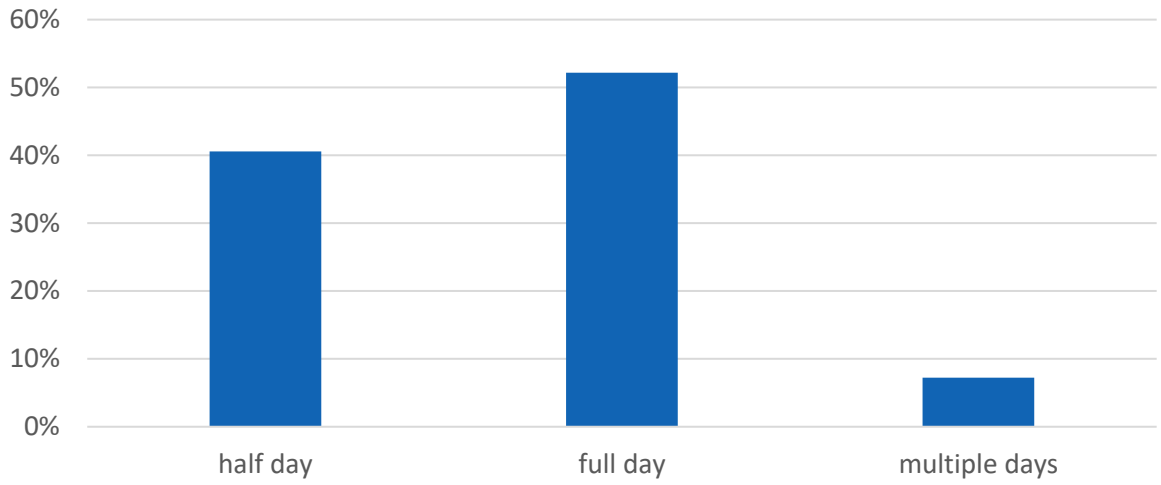
Table A-4. Annual Costs for Boat Storage, Maintenance, and Insurance

Average Costs of Owning Boat by Length			
Boat Length	**Storage**	**Insurance**	**Maintenance**
Less than 16'	$0	$300	$266
16' to less than 26'	$758	$1,263	$594
More than 26'	$3,629	$3,871	$2,199
Average	**$1,667**	**$1,051**	**$1,996**

Source: TBG Work Product, surveys

When recreating in the Sebastian Inlet and surrounding waters, boaters are frequently engaging in full day outings, however as **Figure A-9** shows, 7% are engaging in multiple day outings. Those engaging in boat trips that extend multiple days are often engaging in multiple day trips with on average 45% of their reported trips annually extending to multiple days with an average of 3 days per trip.

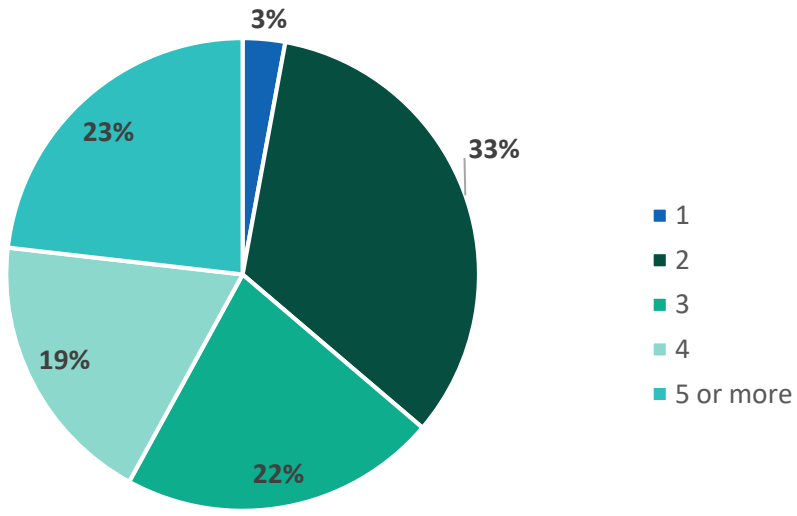
Figure A-10. Number of Days Most Recent Boating Trip



Source: TBG Work Product, surveys

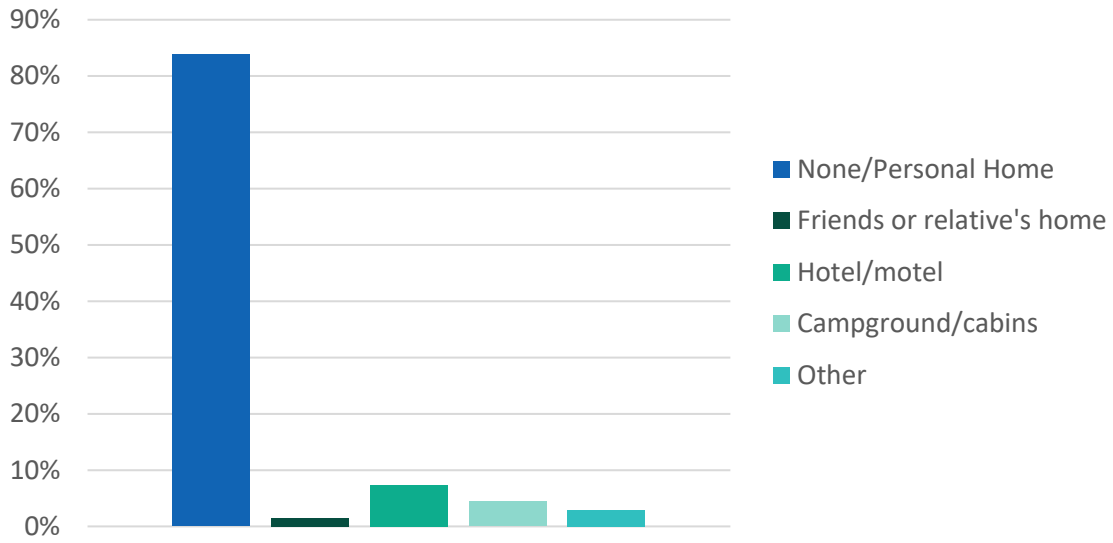
Figure A-10 shows the number of people that were on the boat owners' vessel during their most recent trip to Sebastian Inlet. On average, vessel owners report 3 persons engaging during their trips on the waterways in and around Sebastian Inlet. Associated with boat size, more persons are reported for boats greater than 26 feet in length and those with vessels under 16 feet in length report an average of 2 people recreating via boat.

Figure A-11. Most Recent Recreational Trip to the Sebastian Inlet, Number of Persons



Similar to the results of the analysis of recreational users' locations, boat owners are primarily local with 82% reporting their accommodations associated with their use of the inlet are their personal home, as shown in **Figure A-11.**

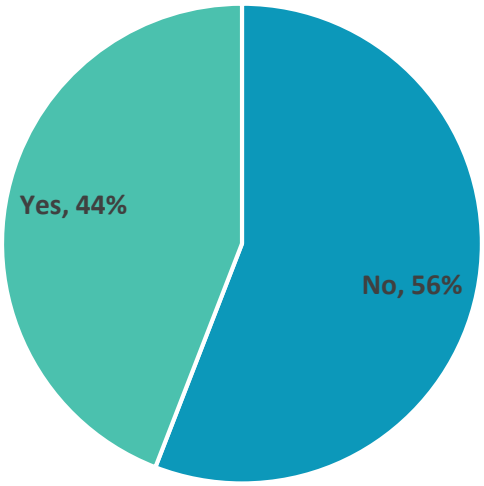
Figure A-12. Accommodations associated with use of Sebastian Inlet



Source: TBG Work Product, surveys

Figure A-12 presents respondent's use of the Sebastian Inlet District's waterways to travel between counties. A majority stated "No", they are only recreating within the District's waters (56%), however nearly 44% are travelling beyond the District.

Figure A-13. Using the District's Waterways to Travel Between Counties



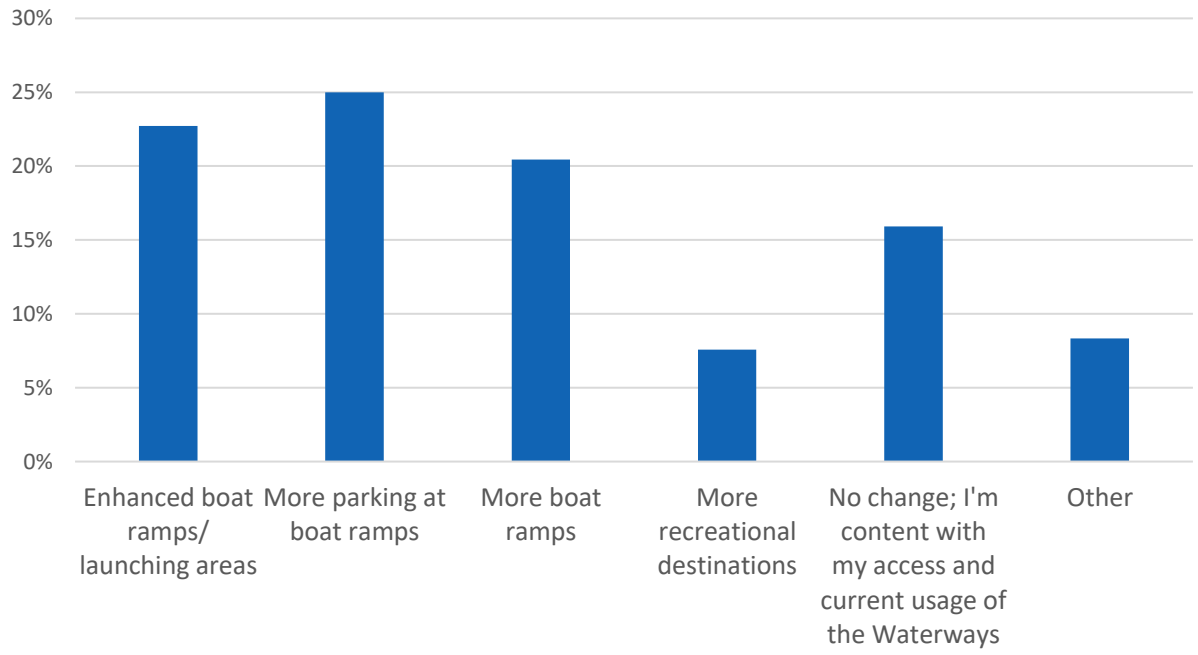
Source: TBG Work Product, surveys

Vessel drafts are important when considering waterway maintenance, as a reliable and confident draft is needed to ensure safe boating when recreating. Respondents were asked about their vessel drafts necessary to safely recreate. On average, vessel users report 2 feet of draft, however some indicated higher values including up to 6 feet.

An important finding of the vessel owners' use of district's waterways included their frequency using the waterways and how that would change if the inlet was no longer maintained. Vessel users indicate that on average, their boating frequency would decrease by about 34% if the inlet was no longer maintained. The results trend higher for vessel owners that have boats greater than 26 feet, with an average decline in use of 41%.

In addition to maintenance, the survey asked the respondents what changes could increase their use of the Sebastian Inlet area. Many survey respondents indicated being satisfied with the current level of amenities available to access and use the Sebastian Inlet, with 16% indicated "no change; I'm content with my access and current usage of the waterways". However, among the options that could enhance access and opportunities available to vessel users, more than 20% indicate more or enhanced ramps and parking would result in higher frequency of recreation as shown in **Figure A-13**.

Figure A-14. Changes to Enhance Recreational Opportunities, Boaters

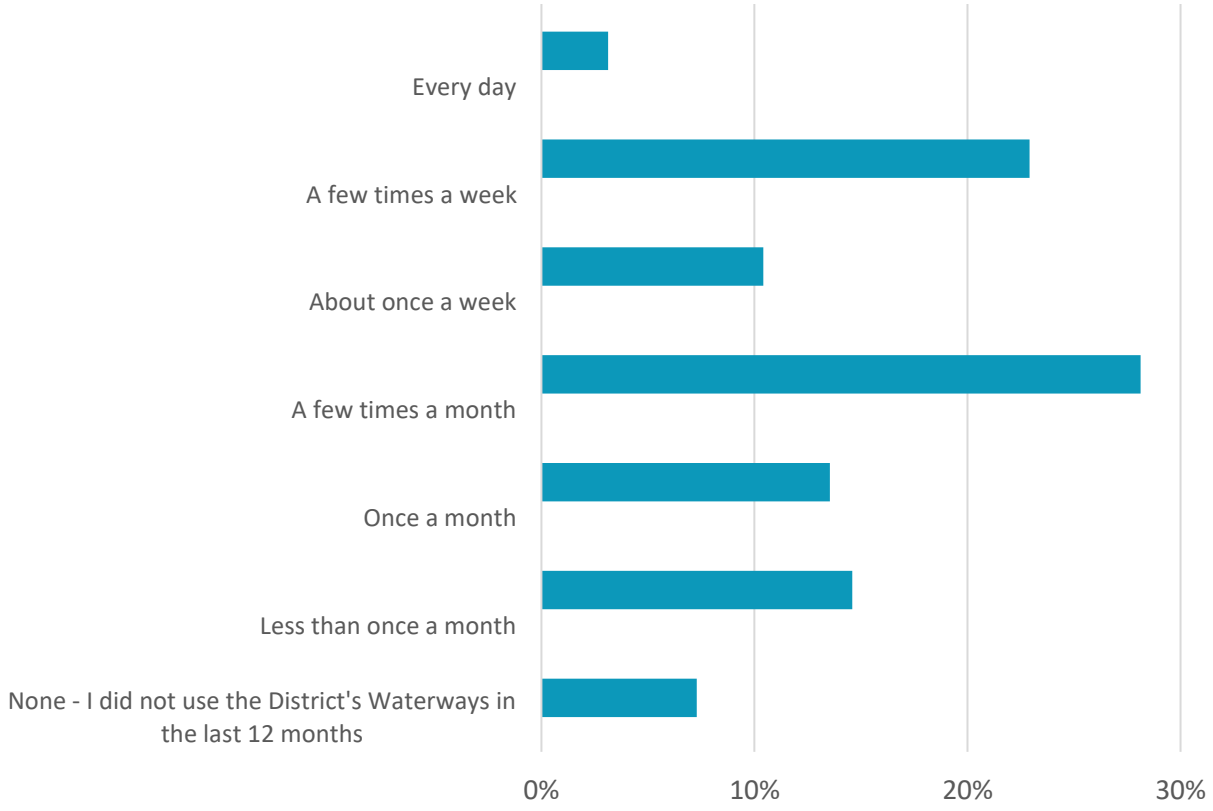


Source: TBG Work Product, surveys

Shoreline Users

The majority of survey respondents indicated using the Sebastian Inlet and surrounding waters for shoreline-associated recreation including fishing from jetties, paddle boarding, kayaking, camping, surfing, etc (54%). While the survey respondents were primarily local, a higher share of the respondents that are not local reported engaging in shoreline-based recreation. Shoreline users reported using the District's waterways relatively frequent, with 28% indicating a few times a month as shown in **Figure A-14**.

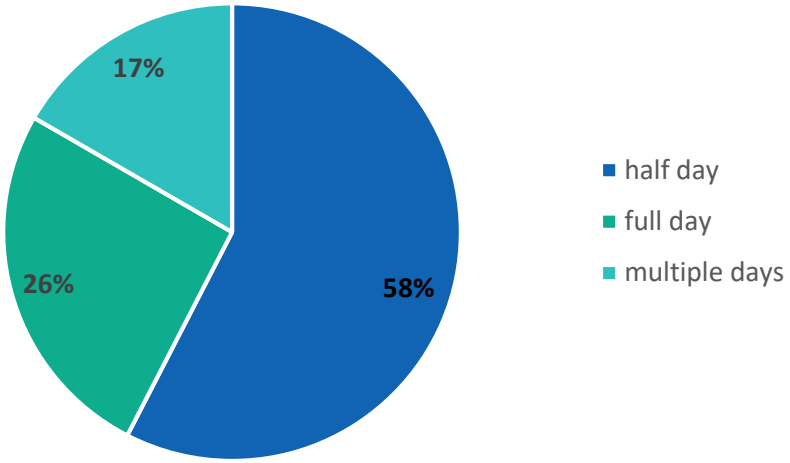
Figure A-15. Frequency Using District's Waterways



Source: TBG Work Product, Surveys

Figure A-15 shows the time spent on waterways from respondents engaging in shoreline-based activities. Unlike boaters, who are more frequently engaging in full-day outings, shoreline users more frequently report half day outings. However, while it may be easier for shoreline-users to commit to less time recreating than boaters, shoreline users are more likely to engage in longer outings more often than boaters, with 17% reporting their trips result in multiple day outings. The recreational users' engaging in multiple day trips report a high frequency of multiple day outings associated with their use of Sebastian Inlet (66%) with an average of 6 days per trip.

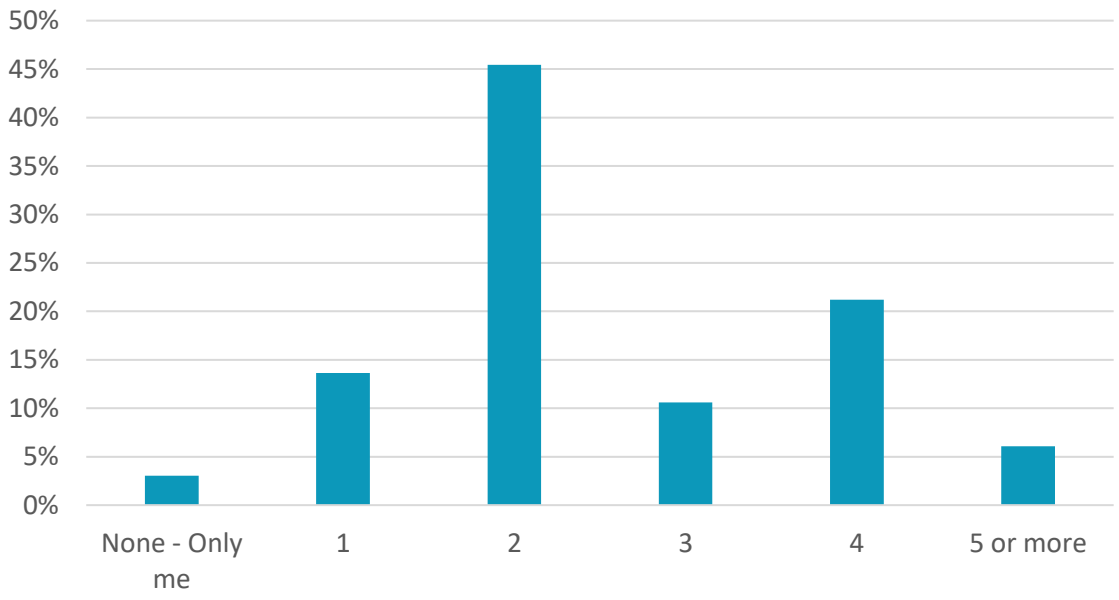
Figure A-16. Time Spent on the District Waterway on the Most Recent Trip



Source: TBG Work Product, Surveys

Figure A-16 presents the number of people that were on the most recent boating trip for each respondent. The majority of respondents indicate 2 persons participated on their most recent trip to recreate in the Sebastian Inlet.

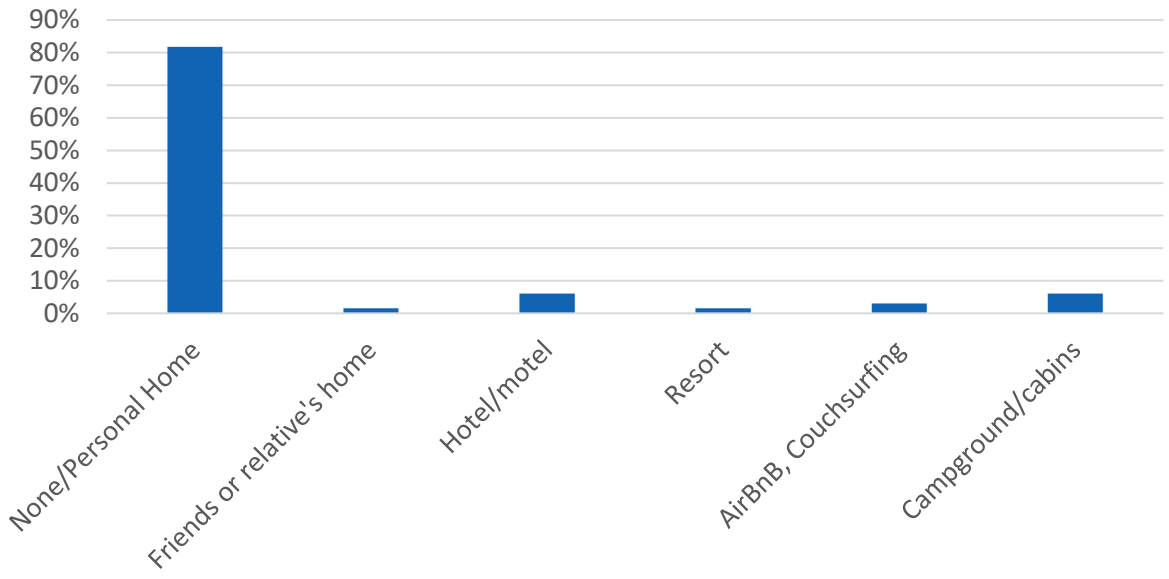
Figure A-17. Number of Persons Participating on Most Recent Outing



Source: TBG Work Product, surveys

Similar to boaters, the majority of respondents indicate using their personal home as their accommodations for their outings when recreating in Sebastian Inlet, as described in **Figure A-17**.

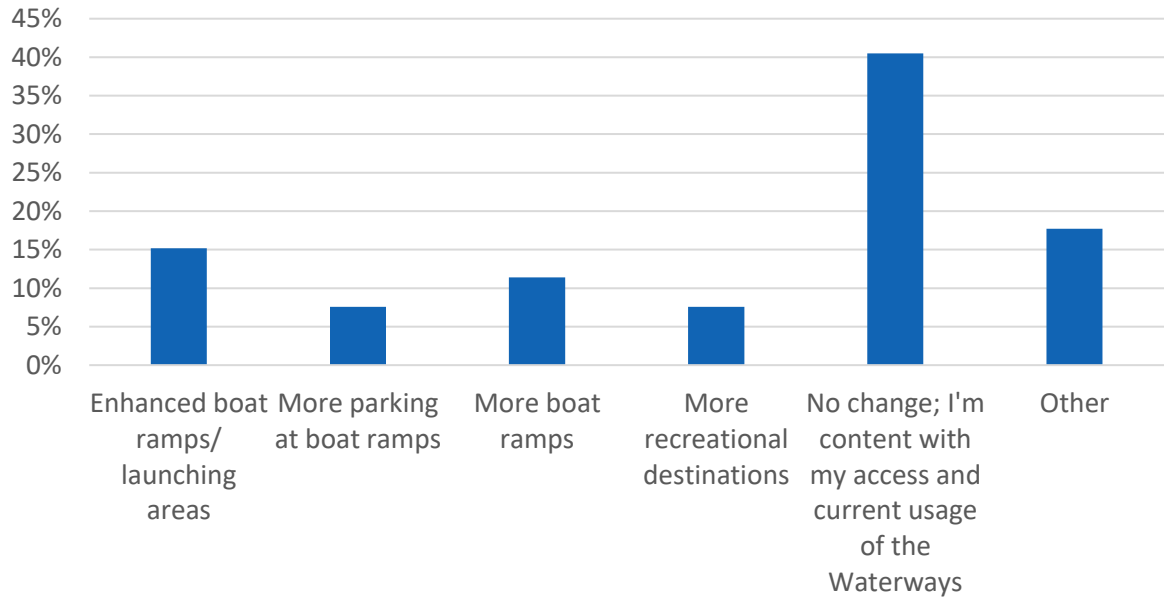
Figure A-18. Accommodations Most Recent Outing in Sebastian Inlet



Source: TBG Work Product, surveys

In addition to use and spending, the survey asked the respondents what changes could increase their use of the Sebastian Inlet area. Many survey respondents indicated being satisfied with the current level of amenities available to access and use the Sebastian Inlet, with 40% stating "no change; I'm content with my access and current usage of the waterways". However, among the options that could enhance access and opportunities available to vessel users, more than 34% indicate more or enhanced ramps and parking would result in higher frequency of recreation as shown in **Figure A-18**.

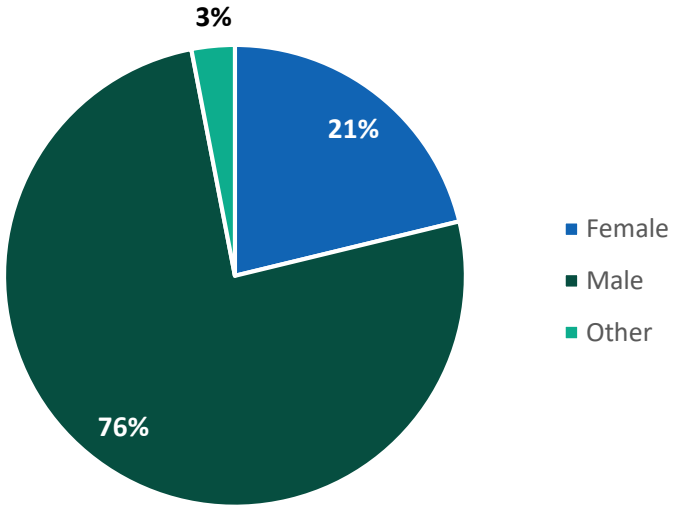
Figure A-19. Changes to Enhance Recreational Opportunities, Shoreline Users



Demographics of Recreational Users

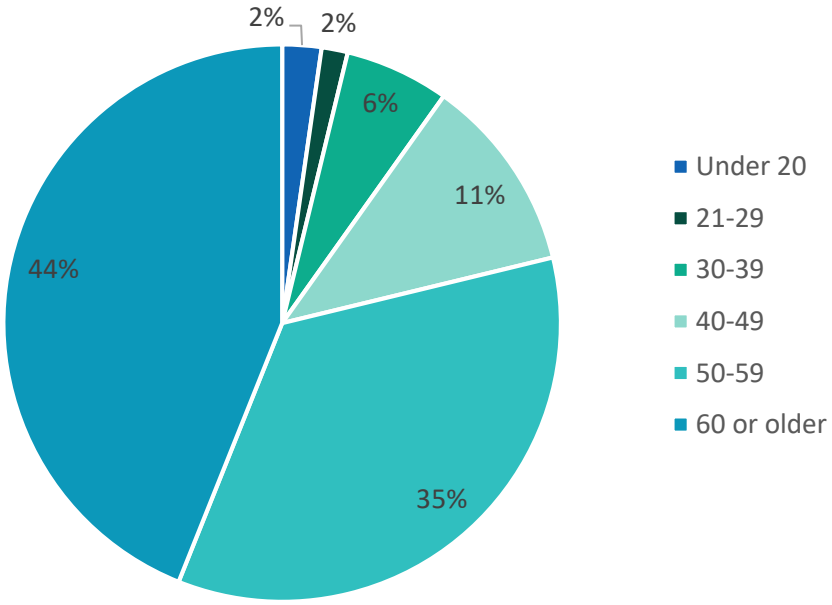
Demographic data was collected on survey respondents to understand the spending patterns and demographics of waterway users within the Sebastian Inlet District; 70% of survey respondents completed demographic questions. Demographic data collected included Gender, Age, Education and Income. To summarize, respondents were primarily male and over 50 as described in **Figure A-19** and **Figure A-20**.

Figure A-20. Respondents by Gender



Source: TBG Work Product, surveys

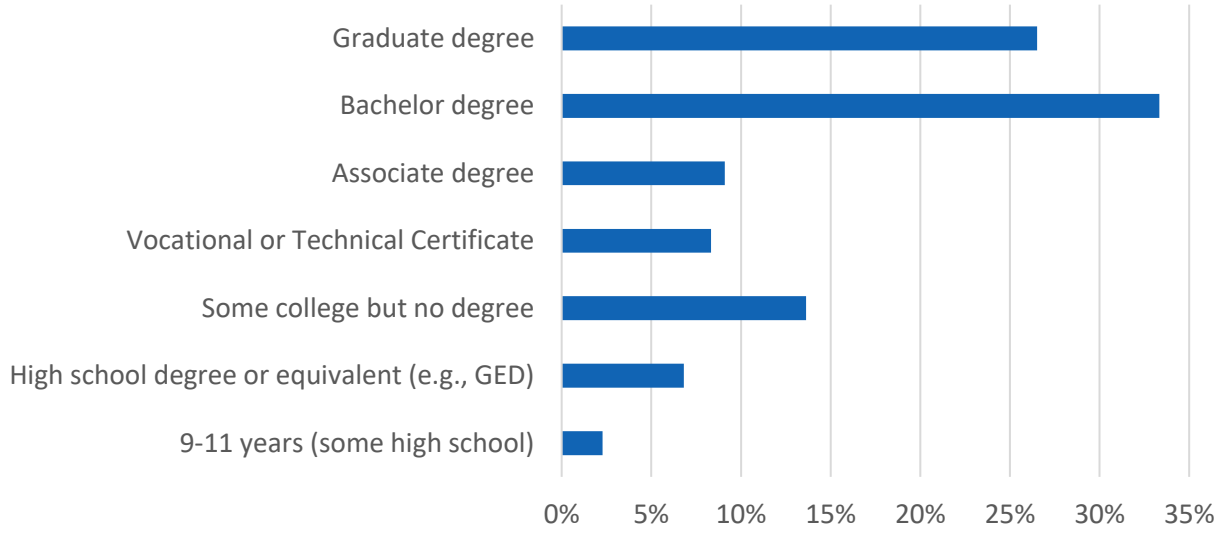
Figure A-21. Respondents' Reported Age at Time of Survey



Source: TBG Work Product, surveys

Figure A-21 shows the highest level of education completed by each respondent. A majority had some level of college education with the most with a bachelor's degree, and second most with a graduate degree.

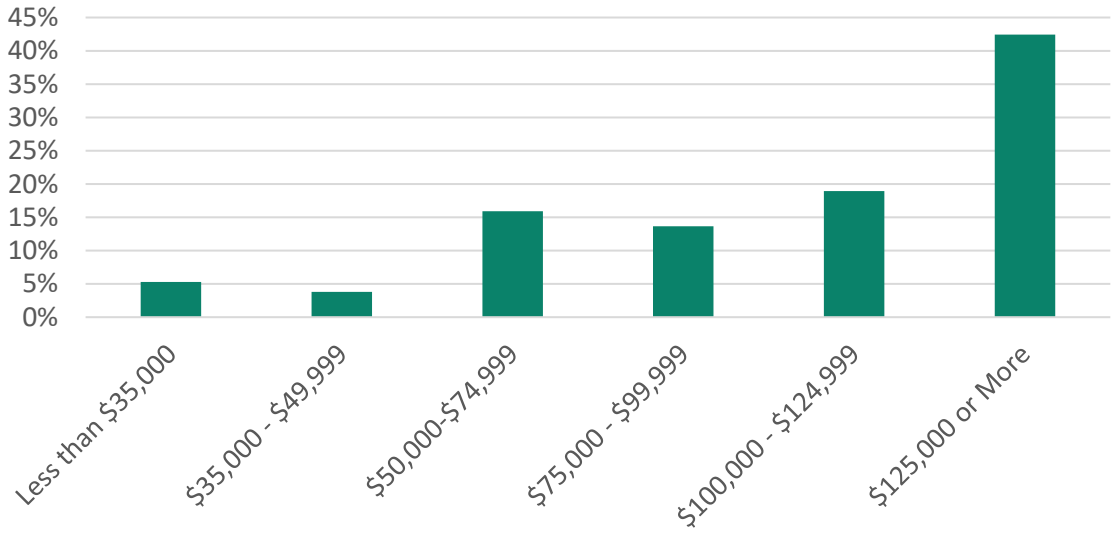
Figure A-22. Highest Level of Education Completed



Source: TBG Work Product, surveys

Household income is an important indicator of spending associated with recreational activities. **Figure A-22** shows that most respondents indicated having a household income of $125,000 or more with a fairly even distribution between $50,000-$74,999, $75,000-$99,999, and $100,000-$124,999 income groups.

Figure A-23. Annual Household Income of Respondents

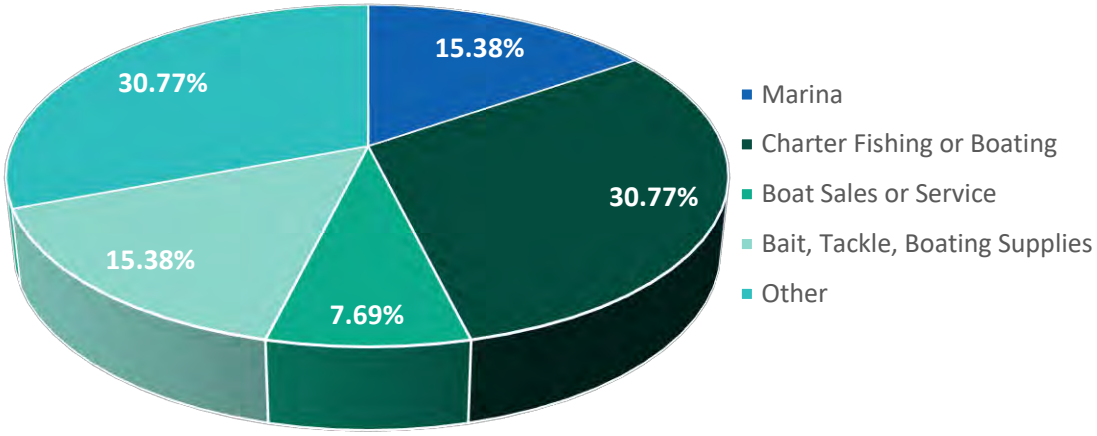


Source: TBG Work Product, surveys

Results of Businesses relying on Sebastian Inlet

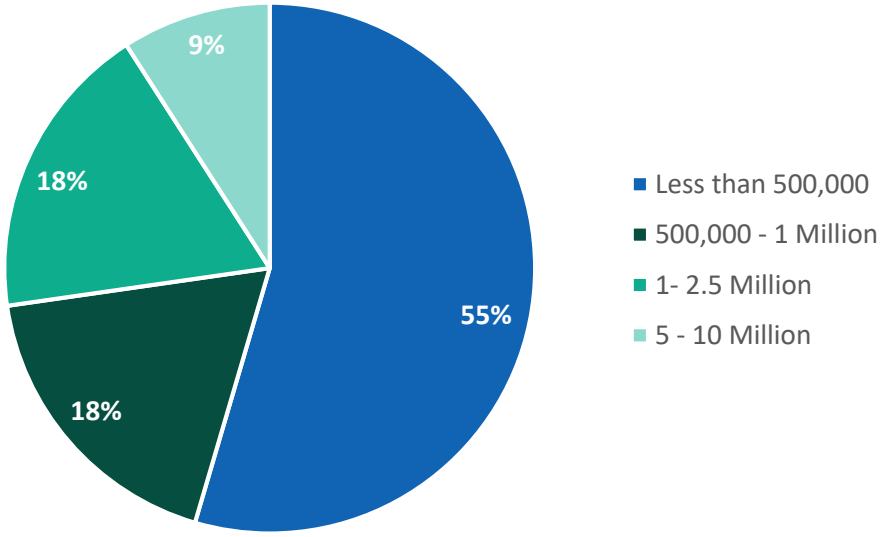
In addition to recreational users, TBG surveyed local businesses to better understand their use of the Sebastian Inlet and how their revenues are impacted from its maintenance or would be impacted in the event it was not maintained. 13 businesses responded to the survey, **Figure A-23** shows the breakdown of the responses received for businesses within the Sebastian Inlet area.

Figure A-24. Businesses Respondents by Type



Survey respondents primarily operate under $1 million in annual revenues, as shown in **Figure A-24**, however a small portion indicated revenues greater than $5 million annually.

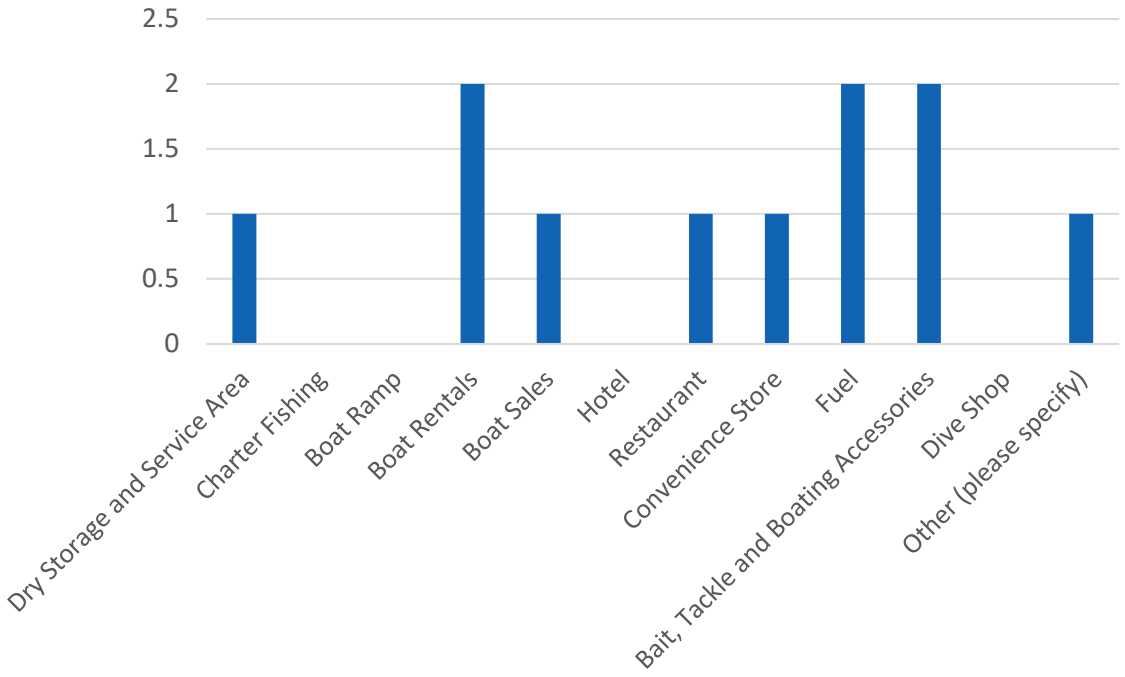
Figure A-25. Business Revenues Reported by Survey Respondents



Source: TBG Work Product, Sebastian Inlet District Survey

Marinas are important generators of recreation-related expenditures in the region, allowing boat owners to store their vessels at designated facilities with specialized services. Additionally, marinas also support some commercial fishing businesses and host fishing tournaments. **Figure** A-**25** shows the breakdown of additional services provided by area marinas.

Figure A-26. Marina Services in Addition to Slips and Storage



For Marinas, on average nearly 50% of visitors and boaters live outside of the Sebastian Inlet area, and of those visitors, nearly 70% were not Florida residents. Additionally, marinas in the Sebastian Inlet area primarily have customers with Vessels in the 16' and under category or 16' to 26' length group. Marinas report drafts consistent with larger vessels, with 5' on average accommodating 95% of their clients.

Tournaments are important drivers of recreation activities and spending from persons not actively using the water. Marinas engaging in hosting fishing tournaments report multiple per year and host more than 40 vessels, all utilizing the Sebastian Inlet to access offshore waters.

Charter fisherman engage in activities including commercial fishing and hosting visitors looking for premier fishing opportunities within the Sebastian Inlet. The businesses that respondent indicate larger vessels more commonly associated with accessing near-shore or offshore waters and utilizing the Sebastian Inlet. Reported vessel drafts were consistent with vessel drafts reported by recreational boaters with an average of 3 feet.

Businesses engaged in charter fishing or boating indicate that a high share of their customers are engaging in inlet-related activities on the intracoastal side, however some respondents indicate a higher share related to fishing in Atlantic waters that are 3 miles or less from the shore. More importantly, charter fishing businesses report high frequency with over 200 trips per year on

average, with an average of 68% of their trips navigating the Sebastian Inlet. Additionally, visitors engaging in business with charter businesses are not local, with 66% of visitors outside of the area.

When charter businesses make purchases related to their vessels, the majority is retained locally, with businesses reporting an average of 76% of their expenses purchased from local businesses in the Sebastian Inlet region. Charter businesses' trip related expenses are predominately local, with 84% reported on average in the local Sebastian Inlet region. Charter businesses are important local drivers when compared to the other marine-related businesses, such as boat dealers and tackle shops, which report lower shares spent locally (22%).

To understand how revenues would be impacted if the Sebastian Inlet were not maintained, businesses were asked about their best estimate regarding the share of revenues impacted, estimates range from 0% - 100%, with an average of 59%. Businesses engaged in marine-related businesses such as marinas, charter vessels, boat sales and bait/tackle shops indicated the highest shares of impact, with several indicating their business would close entirely. Additionally, businesses were asked about their business' response in the event the channel wasn't maintained, with several indicating they would have to relocate or would be out of business.