



Economic Analysis of the District Waterways 2023 Update Final Report Martin

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Executive Summary

The Martin County portion of the ICW comprises 22 miles, entering at Jensen Beach and ending around Jupiter, where the Intracoastal Waterway enters Palm Beach County. In Martin County the ICW intersects with the Okeechobee Waterway, which provides for inland navigation between the Atlantic Ocean and the Gulf of Mexico. Within Martin County, The Florida Inland Navigation District (District) is the state sponsor for Federal navigation projects along the Intracoastal Waterway (ICW) and Okeechobee Waterway (OWW). Over \$52.5 million has been invested in the Martin portion of the ICW and OWW in the past 35 years.

Industry capitalization on funding is concentrated in Martin County on the number of sport fishing boat builders. A manufacturing facility along the OWW has been recently purchased and is currently being upgraded. There is also a new marina that has been approved for construction with 400 indoor boat storage slots for 9 to 53 ft vessels with 165 slips that can accommodate vessels up to 175ft. Economically, the additions of these industries are beneficial to the region.

The economic impact of the Florida Inland Navigation District (District)'s navigation projects in Martin County has been estimated as of March 2023. Benefits of the District's ongoing maintenance programs, as well as an increased maintenance alternative scenario, was prepared. For purposes of the estimate, the ICW is defined as all navigable waterways within the District's boundaries including the Atlantic Intracoastal Waterway, the Okeechobee Waterway, and all waterways that are physically connected to it. The portion of the ICW and OWW that runs through Martin County is considered to be the Intracoastal Waterway (ICW) and the Okeechobee Waterway (OWW) and both are referenced this way throughout the document. Martin county is environmentally focused and do not allow access directly on waterway unless living on it or city owned.

Continued investments and ongoing operations of the Intracoastal Waterway benefit the public, marine businesses and recreational users, the twelve-member counties, and other government agencies. To estimate total benefits, a series of impacts were evaluated:

1. Spending by recreational boaters and their effects on local businesses and wage creation
2. Spending by tourists, including Floridians and out-of-state visitors and their effects on local businesses and wage creation
3. Proximity effects of both the ICW and OWW on real estate
4. Specialty Sectors such as commercial fish landings, boat building, and waterway maintenance.

The indirect and induced economic impacts generated from each of the spending categories were estimated using IMPLAN, an econometric modelling application that generates regional economic impact multipliers. **Table 1** provides a summary of the economic impacts:

Table 1. Estimated Economic Impacts of the ICW in Martin County

Impact Type	Employment	Labor Income	Value Added	Output
		(in Millions \$)		
Local Recreational Boaters	4,254	\$131	\$221	\$357
Floridian Tourists	166	\$5	\$9	\$15
Out-of-State Tourists	5,341	\$160	\$272	\$462
Specialized Sectors	247	\$14	\$19	\$49
Total Annual Impacts	10,008	\$311	\$521	\$882
Property Value Impacts, Annualized				\$330
Estimated Economic Impacts Including Property Amenity Values				\$1,212

*The total contribution of the ICW and OWW to 2022 property values of \$5.5 billion, was annualized at 6% discount rate and this annual value is \$330 million.

Source: TBG Work Product, from Surveys, published FWC data, and Martin Property Appraiser data

Hedonic modelling is a statistical approach to teasing out the share of property value that is attributable solely to the proximity to an amenity – in this case, both the ICW and OWW. By holding constant other factors such as lot size, number of bedrooms, etc., and using actual property sales over the prior two years, the amenity value attributable to housing located on or very close to the waterways was estimated at \$330 million, annualized. Martin’s total property “just value” is reported by its property appraiser at almost \$45 billion.¹ By applying a capitalization rate of 6%, the annualized flow of regional income attributable to the amenity value in the local economy can be isolated. Hedonic modelling for Martin County found that property value impacts contribute 12% to total property values within the county. The Intracoastal Waterway (ICW) premiums make up about \$4.3 billion of the property values. The Okeechobee Waterway (OWW) premiums make up about \$1.2 billion of the property values. Single family and multifamily residential properties directly along the ICW enjoy a real estate premium of 60% and total \$2.6 billion. Single family and multifamily residential properties directly along the OWW enjoy a real estate premium of 13% and total \$349 million. Single family residential properties that are waterfront with access to the ICW, but not directly on the ICW, benefit from a real estate premium of 27% and total \$116 million. Single family residential properties that are waterfront with access to the OWW, but not directly on the OWW, benefit from a real estate premium of 27% and total \$436 million.

Property amenity values are estimated at \$4.3 billion, out of the county’s total reported Just Value of \$45 billion, broken down as shown in **Table 2**. Premiums extend to tributaries that connect to the ICW; more than 2,000 single family homes are located on tributaries, and over 5,000 multi-family units.

¹FDOR, State-wide Summary Information by County, Preliminary 2017 Report.

Table 2. Estimated Property Value Premiums

	Waterfront to ICW	Non-Waterfront	Tributary frontage/ Access to ICW
Premium % of Sales Price	60%	23%-25%	27%
Estimated Premium (in Millions \$)	\$2,587	\$1,562	\$116

Source: TBG Work Product

The economic benefits of district maintenance include the generation of tax revenues for local, state and federal governments. **Table 3** provides a breakdown of calculated tax impacts totalling about \$119 million in annual revenues.

Table 3. Estimated Tax Revenues of the ICW in Martin County

Impact Type	State & Local	Federal (In millions \$)	Total
Local Recreational Boaters	\$20.96	\$23.49	\$44.45
Floridian Tourists	\$1.12	\$1.28	\$2.40
Out-of-State Tourists	\$31.83	\$40.02	\$71.85
Specialty Sectors	\$0.91	\$2.70	\$3.61
Total Annual Impacts	\$54.82	\$67.49	\$122.30

Source: TBG Work Product, IMPLAN

Finally, a series of benchmarks to assist local marine resource managers was compiled. The metrics capture trends in the number of boat registrations, available boat slips, etc. 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.

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Introduction

The Balmoral Group was retained to estimate the economic impact of District investments in Martin County. The District operates four main programs:

- the Long Range Dredged Material Management Plan (DMMP), which provides for maintenance operations and improvements for the ICW and OWW and a permanent infrastructure of land for perpetual management of the ICW and OWW;
- the Waterways Assistance Program, which provides cost share resources for various public improvements such as public access, public safety, and inlet management;
- the Cooperative Assistance Program, which leverages Federal, State and Regional resources to implement public ICW and OWW improvements, and
- A Public Information Program.

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 ICW and OWW. 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. Surveys and interviews of recreational users of the Intracoastal Waterway (ICW) and Okeechobee Waterway (OWW) in Martin County and a determination of the direct impact of these concerns;
- II. Specific economic impacts of specialty sectors, including the high-end yacht servicing market and commercial fishing;
- III. The value of properties influenced by the ICW and OWW in Martin County, and the specific amenity value of proximity to the ICW and OWW;
- IV. The total economic impact of the ICW and OWW in Martin County, including indirect and induced impacts associated with sales, income, employment, and taxes, using an input-output model;
- V. The generation of tax revenues for local, state and federal governments;
- VI. The changes to the District's economic impact under two maintenance scenarios; and
- VII. Metrics that have been identified as meaningful for tracking the impact of marine industry activity.

I. Direct Impacts of Commercial Businesses and Recreational Users of the Waterways

Recreational Users

To estimate the spending of recreational users of the ICW and OWW, and their impact on commercial businesses through spending, surveys were conducted of Florida boat owners and visitors to Florida who indicated that they used a boat in Martin County during the prior 12-month period.

Local/Florida Boat Owners

The population of Martin County has increased by 6% since the previous economic assessment in 2010. Currently, the Florida Office of Economic and Demographic Research estimates population at 159,615.² The vessel registration statistics suggest that of the total number of households in Martin, 10% use the ICW and/or OWW. Those that own a boat have also decreased by 6%. Survey data obtained from Florida-registered recreational boaters in 2017 was used to estimate spending adjusted for 2022 dollars. Spending varied by boat size, with the highest average spending reported by owners of larger boats (exceeding 26'). **Table 4** shows a breakdown of reported annual expenditures by boat size. For purposes of economic modeling, data were aggregated to small (less than 16'), medium (16 – 26') and large (greater than 26') boats.

Table 4. Florida Recreational Boater Spending Categories by Boat Size, Martin County

	Less than 16'	16' to 26'	26' or greater
Overall Annual Expenditure	\$571,745	\$660,997	\$571,745
Share of Total Expenditure	1%	46%	53%
Average Annual Costs:			
Storage	\$1,142	\$560	\$3,261
Maintenance	\$1,190	\$1,646	\$5,517
Insurance	\$298	\$1,154	\$3,446
Average Annual Trip Costs on the ICW:			
Food	\$2,737	\$3,395	\$7,376
Transportation & Accommodation	\$3,421	\$7,410	\$10,872
Fees & Recurring Costs	\$-	\$3,390	\$966
Gear or Specialized Equipment	\$2,737	\$9,239	\$8,781
Average Annual Trip Costs off the ICW:			
Food	\$4,106	\$1,889	\$1,724
Transportation & Accommodation	\$4,106	\$1,595	\$5,795
Fees & Recurring Costs	\$-	\$691	\$843
Gear or Specialized Equipment	\$-	\$1,008	\$7,040

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

² Most recent available data from April 1st, 2022.

Tourism

Tourists who use the ICW or OWW also contribute to the economic impact of the maintenance of the ICW and OWW. A 2017 survey of about 1000 visitors to Florida from across the US found that 15% identified Martin County as a destination they had visited at least once in the last 12 months to participate in activities using the Waterways. Data from Visit Florida indicates that in 2022 (the most recent data available), 137.6 million tourists visited Florida, with 996,818 visitors to Martin County. Of those, 22% would generate an estimate of 222,406 ICW-specific visitors. This number was used as a proxy for tourists from other U.S. States that were users of the District's Waterways.

The average out of state visitor respondent reported spending approximately \$1,801 annually. Florida residents that visited Martin County reported spending approximately \$211 per year. The share of expenditures on fuel, food and other categories is shown in **Table 5**.

Table 5. Breakdown of Annual Average Tourist Spending on Recreational Boating, Martin County

Item	All FL visitors	Out of state visitors
Food, Restaurants	\$56	\$486
Transportation & Lodging	\$77	\$584
Fees & Recurring Expenses	\$30	\$536
Specialized Gear or Equipment	\$49	\$200

Source: TBG Work Product, Surveys, FDEP

Total spending from in-state and out-of-state tourists' activities aggregates to \$332 million annually.

II. Specialty Sectors

Recreational boaters are by far the greatest users of the Waterways, and the spending by local (Martin 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 "hidden sectors."

In the case of Martin County, there are at least three hidden sectors of economic impact:

- Boat Building
- The dredging expenses themselves; and
- Commercial Fishing

Boat Building

Martin County has a strong cluster of boat-building and related businesses with 34 businesses engaged in the Boat Building (NAICS 336612) and Ship Building and Repairing (336611) industries. These businesses provide for nearly 500 jobs with major companies including Shearwater Boats and Willis Custom Yachts.

Such noted before, there is also a new marina that has been approved to be built with 400 indoor boat storage slots for 9 to 53 ft vessels with 165 slips that can accommodate vessels up to 175ft. Economically, the additions of these industries are beneficial to the region. The dense sport fisher boat manufacturers in the county also stimulates the economy positively.

Expenditures by Florida Inland Navigation District & US Army Corps of Engineers

Dredging and other maintenance expenses for the Waterways occur sporadically and are federally and state funded. Local support and coordination are managed by the District, which also implements a Long Range Dredged Material Management Plan (DMMP) and several grant programs. While local efforts would be embedded in regional trade flows, federal transfers to the private sector on a sporadic basis would not be picked up by recreational boating activity.³ Accordingly, for Martin County, \$38,000 in annualized average costs of dredging and \$387,000 in annualized average expenditures for funding additional ICW and OWW related projects such as new boat ramps, dock extensions and marina expansions, were used as input values from the Florida Inland Navigation District Grants. For 2022, the District has provided grant funding to assist Martin County with the development of an access site for commercial businesses. For capital projects, FIND expends an annual average of \$2 million annually for maintenance of the waterways in Martin County which primarily includes Crossroads. In addition, the US Army Corps of Engineers spends nearly \$260,000 annually for maintenance dredging activities. Since 1990, total spending is over \$52.5 million.

Commercial Fishing

Martin County's location along the East Coast of Florida provides premier fishing opportunities beyond the recreational uses. Sportfishing is widely popular with the St. Lucie Inlet providing access to ocean waters that are in proximity to the Gulf Stream. This access allows commercial vessels to bring in large quantities of sportfish including Mackerel, Swordfish, Tilefish and Bonito. Commercial fisheries impact economic sectors differently than any of the other listed categories. Using the value of all Commercial Landings in Martin County in 2022, the industry contributes spending of \$4.3 million.

III. Property Values

Property values associated with the ICW and OWW were compiled for contextual analysis. Market values for the more than 2,200 Martin County properties directly fronting the ICW total more than \$3.5 billion, of which nearly \$3.3 billion was generated by residences fronting the ICW in 2022. Commercial properties add another \$137 million. **Table 6** provides a breakdown of the property values of properties fronting the ICW by property type.

Table 6. ICW-Fronting Property Value by Property Type, Martin County

DOR Category	Count	Average Just Value, 2022 (in dollars)	Total Just Value, 2022 (in Millions \$)
Commercial	40	\$3,418,758	\$136.8
Government	8	\$303,624	\$2.4
Industrial/ Institutional	6	\$2,246,698	\$13.5
Miscellaneous/Vacant	76	\$739,069	\$56.2
Residential – Multifamily/Condo	1,465	\$438,037	\$641.7
Residential – Single Family	664	\$3,902,524	\$2,591.3
Totals	2,259	\$1,523,608	\$3,441.8

Source: FDOR, Property Appraiser

Amenity Values of the Waterways

The premium associated with proximity to the ICW and OWW is substantial. Properties have value regardless of their location. Economic valuations that assess the value of specific attributes – in this case, proximity to the ICW and OWW- 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 “dis-amenities,” such as a landfill. **Appendix 2** outlines the approach employed summarizes the variables analyzed.

The value of proximity to the ICW can be quantified by comparing the value of properties close to the ICW with properties that are not in proximity. Property appraiser records show that Martin County residential properties overall average \$517,418 in market value, based on sales data from FDOR. By comparison, properties that are within one mile of the ICW average \$1 million and properties within one mile of the OWW average \$632,494 (**Table 7**). Removing beach premium for those in proximity to the IWW reduces nearby property values to \$680,000.

Table 7. Single Family Residential Property Sales in 2021-2022 and proximity, Martin County

Distance	Count	Average Sale Price, 2022 (in dollars)	Total Property Sales, 2022 (in Millions \$)
Martin County overall	7,457	\$517,418	\$3,858
Within 1 Mile of the ICW	2,266	\$1,018,196	\$2,307
Within 1 Mile of the OWW	1,508	\$632,494	\$953
Beach Front	29	\$13,653,303	\$396
Within 1 mile of ICW, not Beachfront	2,237	\$854,397	\$1,911
Within 500 Meters of the Beach	65	\$9,470,578	\$616
W/in 1 mile or ICW, not in Proximity to Beach	1,969	\$680,369	\$1,340

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

Published research by The Balmoral Group and others has found that proximity to waterways adds a premium to property values at distances of up to 1,500 meters (0.9 miles or 4,921 feet). Hedonic modeling found that the real estate premium value enjoyed by Martin County that is specifically attributable to ICW frontage or proximity totaled \$4.3 billion for single-family residences in 2022 and the real estate premium value enjoyed by Martin County that is specifically attributable to OWW frontage or proximity totaled \$1.2 billion for single-family residences.

The premium for frontage location on the ICW accounts for almost one-third of the value for properties fronting the ICW and 18% of values for properties within 1500 meters of the ICW. Additionally, the properties that are directly fronting tributaries, or waterways connected to the ICW, accounts for 27% of the sales values of properties that are waterfront.

The premium for frontage location on the OWW accounts for over 13% of the sales value for properties fronting the OWW and 8% of sales values for properties within 1500 meters of the OWW. Additionally, the properties that front tributaries, or waterways connected to the OWW, accounts for 27% of the sales values of properties that are waterfront.

Of the total \$11 billion in property values over the 24-month period covering calendar years 2021 and 2022, approximately \$3.2 billion is related to waterfront single family homes. Of the \$3.2 billion, about \$1.9 million in value was attributable solely to ICW frontage, holding other factors constant such as size, number of bedrooms/bathrooms/garages and age; about \$238 million in value was attributable solely to OWW frontage, holding other factors constant such as size, number of bedrooms/ bathrooms/ garages and age.

The properties that are not waterfront to the district's waterways, but are directly located on a tributary or canal connecting benefit from a 27% premium. This is significant to the value of properties within Martin County, as there are over 2,000 single-family residences on tributaries or canals connecting to

the ICW and OWW. Of the \$2 billion in values related to these properties, about \$552 million in value was attributable to tributary frontage.

Martin County has over 5,000 residences near the ICW that are not single-family units and using similar share of sales price as indicative of proximity premiums, the amenity value attributable to ICW proximity for condominiums totals \$663 million for waterfront and an additional \$221 million for near-ICW properties, resulting in a total \$4.3 billion premium associated with the ICW. The premium resulting from ICW proximity for all properties is \$256 million annualized.

Additionally, Martin County has over 5,000 residences near the OWW that are not single-family units and Using similar share of sales price as indicative of proximity premiums, the amenity value attributable to OWW proximity for condominiums totals \$110 million for waterfront and an additional \$122 million for near-OWWW properties, resulting in a total \$1.2 billion premium associated with the OWW. The premium resulting from OWW proximity for all properties is \$73 million annualized. For context, total property value in Martin County is about \$45 billion, according to the Florida Department of Revenue, and.

For context, total property value in Martin County is about \$45 billion, according to the Florida Department of Revenue, and premiums associated with the ICW account for 9% and premiums associated with the OWW account for 3%.

The effects of this premium on the County can be calculated by extrapolating the ICW waterfront coefficient to the entire set of ICW-waterfront properties. **Table 8** provides a breakdown of the premium associated with current waterfront properties that is attributable solely to the ICW.

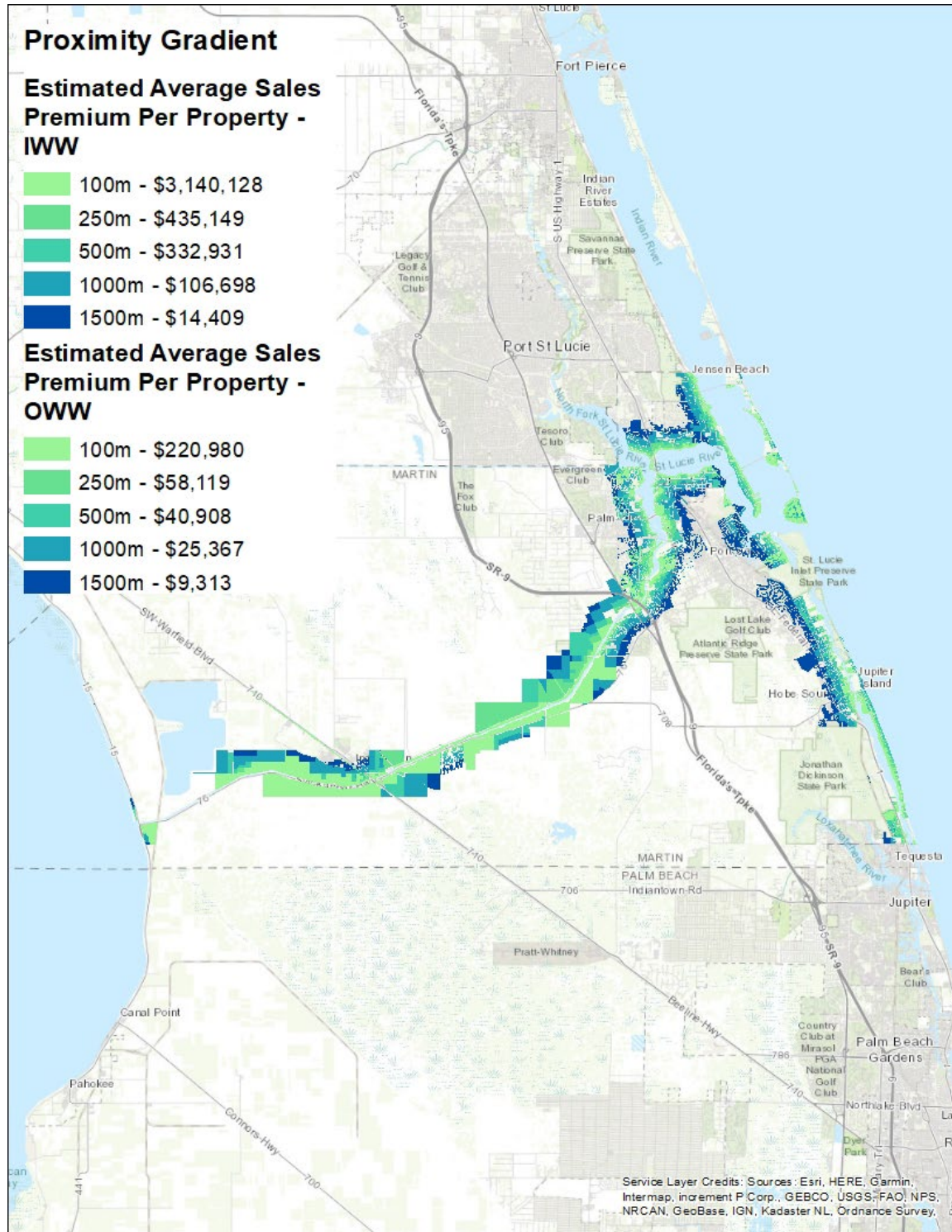
Table 8. Amenity Value of the ICW & OWW in Martin County – in millions \$

Amenity Value	Waterfront	100m (non-waterfront	250m	500m	1,000m	1,500m	Tributary/ Canal
Intracoastal Waterway							
Premium %	60%	25%	23%	20%	14%	5%	27%
Single Family Residences	\$1,923	\$96	\$412	\$565	\$258	\$21	\$116
Multi-Family/ Condos	\$663	\$0	\$89	\$87	\$28	\$16	\$0
Total Amenity Value	\$2,587	\$96	\$501	\$652	\$286	\$37	\$116
Okeechobee Waterway							
Premium %	13%	12%	11%	9%	6%	3%	27%
Single Family Residences	\$239	\$33	\$93	\$96	\$80	\$15	\$436
Multi-Family/ Condos	\$110	\$21	\$40	\$40	\$10	\$7	\$4
Total Amenity Value	\$349	\$54	\$132	\$136	\$90	\$22	\$440

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

Figure 1 illustrates the proximity effect on property values for a selected stretch of the ICW. The legend shows the decline in average premium value per parcel in each successive distance gradient from the ICW.

Figure 1. Average Premium for All Parcels Within 1,500m of the ICW, Martin County



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

IV. Total Economic Impact of the Waterways in Martin County

To estimate the overall economic impacts associated with the ICW, The Balmoral Group used IMPLAN®, an econometric modelling application that generates regional economic impact multipliers. **Figure 2** describes how economic impact models, such as IMPLAN®, translates the investment in the ICW (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.⁴

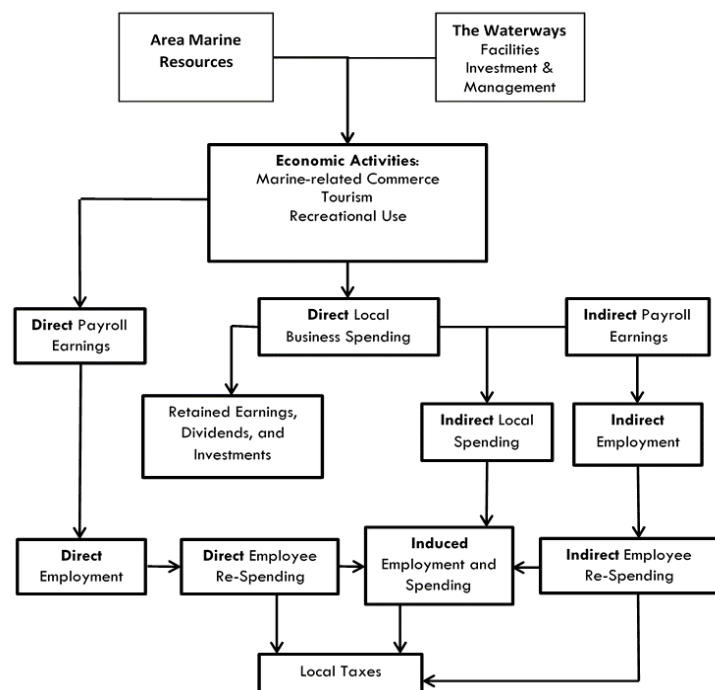
The spending associated with recreational boaters and tourists provide direct inputs for IMPLAN modeling.

Four IMPLAN models were prepared for the baseline analysis:

1. Recreational boater spending by Martin County residents, varied by boat size;
2. Tourist spending by In-State Visitors to Martin County; and
3. Tourist spending by Out-of-State Visitors to Martin County
4. Specialty Sectors

Regional economic impacts generated by all four are summarized in **Table 9**. In addition to the \$882 million in annual impacts, the unannualized estimated impact on property values totals \$330 million. Combined, the impact of the ICW can be estimated at nearly \$1.2 billion

Figure 2. Input-Output Model for Waterways Economic



⁴ The Bureau of Economic Analysis falls within the U.S. Department of Commerce.

Table 9. Estimated Regional Economic Impacts of the ICW in Martin County, by Source

Impact Type	Employment	Direct Effect	Indirect Effect	Induced Effect	Output
(in Millions \$)					
Local Recreational Boaters	4,254	\$289.1	\$68.3	\$0.0	\$357.3
Floridian Tourists	166	\$9.9	\$2.4	\$2.2	\$14.5
Out-of-State Tourists	5,341	\$313.5	\$77.3	\$70.8	\$461.5
Specialized Sectors	247	\$36.6	\$8.5	\$3.7	\$48.8
Total Annual Impacts	10,008	\$649	\$156	\$77	\$882
Property Value Impacts, Annualized					\$330
Estimated Economic Impacts Including Property Amenity Values					\$1,212

Source: TBG Work Product from Surveys, FWC data and Martin County Property Appraiser data

The overall economic impacts are generated by four categories:

1. Recreational boaters registered in Martin County
2. Tourists from Florida
3. Out-of-State tourists
4. Specialized sectors

Table 10 shows a breakdown of the spending by each of the four categories.

Table 10. Spending by Impact Type

Impact Type	Total Spending (in Millions \$)
Local Recreational Boaters	\$214
Floridian Tourists	\$12
Out-of-State Tourists	\$401
Specialized Sectors (including commercial fish landings)	\$4.4
Total	\$632

Source: TBG Work Product

Recreational Boaters Registered in Martin County

Local boaters generate \$214 million in annual spending (**Table 12**), which results in a total economic contribution of \$217 million, as shown in **Table 11**.

Table 11. Estimated Annual Economic Impacts of District Waterways from Resident Boaters

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	3,587	\$109.96	\$184.92	\$289.06
Indirect Effect	667	\$21.47	\$35.62	\$68.28
Total Effect	4,254	\$131.43	\$220.54	\$357.34

Source: TBG Work Product, IMPLAN

Table 12 provides a breakdown of total spending by boat size.

Table 12. Total Annual Spending from Resident Boaters

Categories by Size	Total Spending
Boats Less than 16'	\$40,720,451
Boats 16' to 26'	\$114,596,986
Boats 26' or Greater	\$58,816,942
Total	\$214,134,379

Source: TBG Work Product, IMPLAN

Tourist Spending by In-State Visitors to Martin County

Visitors to Martin County from across the State generate annual spending of \$12 million. After adjusting the model to reflect spending that leaves the area, known as leakage, the effects of in-state tourists total \$14.5 million as shown in Table 13.

Table 13. Estimated Annual Economic Impacts of District Waterways, Florida Visitors

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	124	\$3.63	\$6.21	\$9.87
Indirect Effect	23	\$0.75	\$1.24	\$2.38
Induced Effect	19	\$0.71	\$1.26	\$2.25
Total Effects	166	\$5.09	\$8.72	\$14.50

Source: TBG Work Product, IMPLAN

Out-of-State Tourists

Tourists from out-of-state generate annual spending of about \$401 million. After adjusting the model to reflect spending that leaves the area, known as leakage, the direct effects of out-of-state tourists total about \$313 million. Including indirect and induced effects, the total economic impact of the Waterways from out-of-state tourists aggregates to total impacts of \$462 million as shown in Table 14.

Table 14. Estimated Annual Economic Impacts of District Waterways, Out-of-State Visitors, Martin County

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	3,967	\$113.36	\$192.35	\$313.49
Indirect Effect	764	\$24.71	\$40.47	\$77.26
Induced Effect	609	\$22.37	\$39.65	\$70.77
Total Effects	5,341	\$160.44	\$272.47	\$461.51

Source: TBG Work Product, IMPLAN

Specialized Sectors

Specialty Sectors within Martin County contribute to 247 jobs and \$14.1 million in labor income. **Table 15** provides a detailed breakout, showing that direct effects of the spending total about \$49 million. A breakout of each sector follows.

Table 15. Estimated Annual Economic Impacts of District Waterways, Specialty Sectors

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	171	\$10.0	\$12.8	\$36.6
Indirect Effect	52	\$3.0	\$4.4	\$8.5
Induced Effect	24	\$1.2	\$2.2	\$3.7
Total Effects	247	\$14.1	\$19.4	\$48.8

Source: TBG Work Product, IMPLAN

Boat Building

With 34 businesses engaged in the Boat and Ship Building and Repairing industries. These businesses provide for nearly 500 jobs with major companies including Shearwater Boats and Willis Custom Yachts (**Figure 3**). **Table 16** provides a summary showing that these services add \$45 million in output for Martin County.

Table 16. Estimated Annual Economic Impacts of District Waterways, Yacht Services

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	144	\$9.2	\$10.1	\$33.8
Indirect Effect	51	\$3.0	\$4.4	\$8.4
Induced Effect	21	\$1.0	\$2.0	\$3.3
Total Effects	216	\$13.2	\$16.5	\$45.5

Source: TBG Work Product, IMPLAN

Dredging

Dredging and other maintenance expenses for the Waterways occur sporadically and are federally and state funded. For Martin County, \$38,000 in annualized average costs of dredging and \$387,000 in annualized average expenditures for funding additional ICW and OWW related projects such as new boat ramps, dock extensions and marina expansions, were used as input values from the Florida Inland Navigation District Grants. For 2022, the District has provided grant funding to assist Martin County with the development of an access site for commercial businesses. **Table 17** shows the effects of maintenance of districts waterways.

Table 17. Estimated Annual Economic Impacts of District Waterways, Maintenance

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	5	\$398,379	\$353,368	\$500,000
Indirect Effect	1	\$33,969	\$42,439	\$79,963
Induced Effect	1	\$36,455	\$69,887	\$116,929
Total Effects	6	\$468,802	\$465,694	\$696,892

Source: TBG Work Product, IMPLAN

Commercial Fishing

Commercial fisheries impact economic sectors very differently than any of the listed categories. Using the value of all Commercial Landings in Martin County in 2022, the industry contributes spending of \$4.3 million; a 91% increase since 2017. **Table 18** provides a detailed breakout, showing that direct effects of the spending total about \$2.3 million. This is a result of the large amount of leakage that occurs in this industry; most of the effects of this sector occur outside of Martin County.

Table 18. Estimated Annual Economic Impacts of District Waterways, Commercial Fishing

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	22	\$0.40	\$2.30	\$2.32
Indirect Effect	0	\$0.00	\$0.00	\$0.01
Induced Effect	2	\$0.09	\$0.15	\$0.27
Total Effects	24	\$0.49	\$2.46	\$2.61

Source: TBG Work Product, IMPLAN

Figure 3. Willis Custom Yachts



Source: Marlin Magazine

V. Tax Revenues

The economic benefits of District maintenance include the generation of tax revenues for local, state and federal governments. **Table 19** and **Table 20** provide a breakdown of calculated tax impacts based on the sectors used in this report, showing contribution to various public revenue streams annually from navigable waterways in Martin County. Overall, about \$119 million in annual revenues are generated.

Table 19. State and Local Tax Revenues from District Waterways, Martin County – in millions \$

Description	Employee Compensation	Tax on Production and Imports	Households	Corporations	Total Annual Impacts
Local Recreational Boaters	\$0.07	\$20.12	\$0.64	\$0.13	\$20.96
In-State Visitors	\$0.00	\$1.07	\$0.03	\$0.01	\$1.12
Out-of-State Visitors	\$0.12	\$30.38	\$1.08	\$0.24	\$31.83
Specialty Sectors	\$0.00	\$0.89	\$0.01	\$0.01	\$0.91
Total Annual Impacts	\$0.20	\$52.47	\$1.77	\$0.39	\$54.82

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

Table 20. Federal Tax Revenues from District Waterways, Martin County – in millions \$

Description	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations	Total Annual Impacts
Local Recreational Boaters	\$10.31	\$0.67	\$2.25	\$9.14	\$1.13	\$23.49
In-State Visitors	\$0.56	\$0.03	\$0.12	\$0.49	\$0.06	\$1.28
Out-of-State Visitors	\$18.02	\$0.99	\$3.40	\$15.54	\$2.07	\$40.02
Specialty Sectors	\$1.69	\$0.03	\$0.02	\$0.92	\$0.03	\$2.70
Total Annual Impacts	\$30.58	\$1.72	\$5.79	\$26.10	\$3.29	\$67.49

Source: TBG Work Product, IMPLAN

VI. Metrics

Florida Tax Watch, an independent nonpartisan nonprofit research entity, identified nine key performance indicators to gauge the health of the marine industries in Martin County. 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 Martin County
2. Inventory of local businesses establishments and employment engaged in marine activities, including marinas, boating, fishing, tours and water sports
3. Taxable sales from marine industry establishments
4. Inventory of local marinas and boat ramps, including number of slips by size category and inventory of boat ramps and available parking for vehicles and trailers and
5. Inventory of boat racks and storage capacity.

Each is addressed in turn.

Boat Registrations

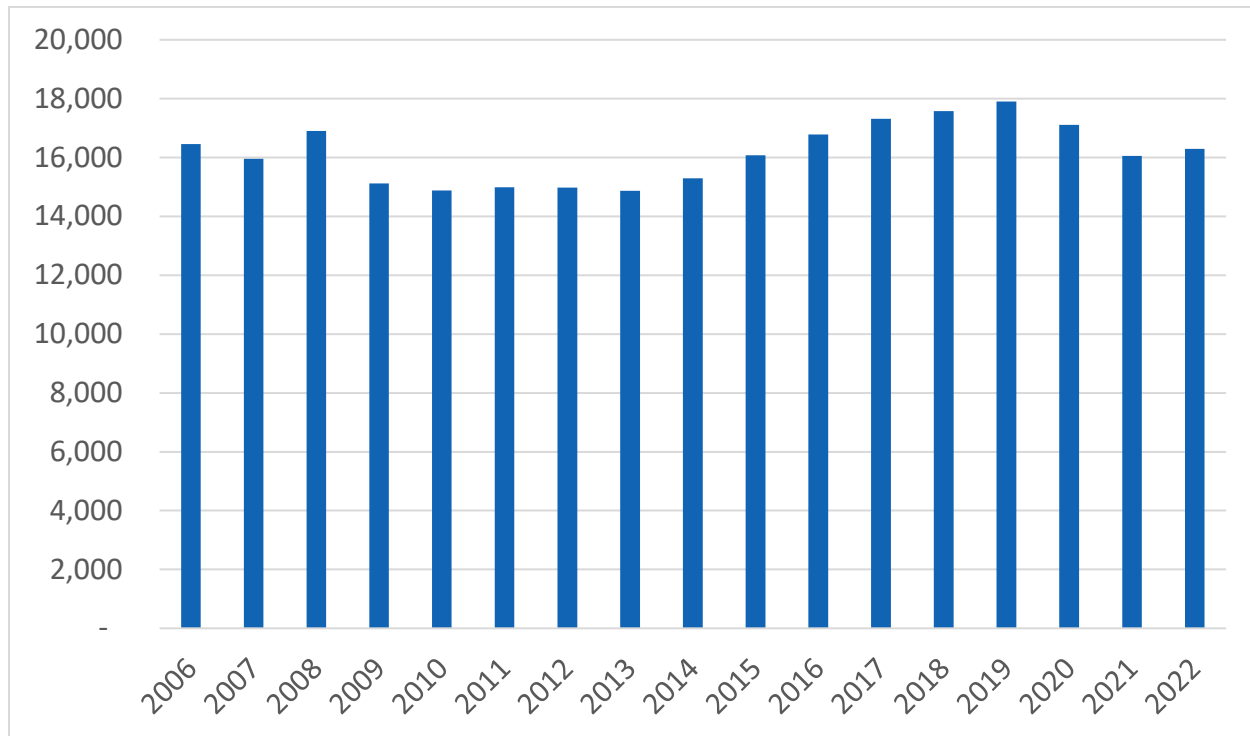
Boat registration data were received from the Florida Department of Highway Safety and Motor Vehicles' (FHSMV) registration database. **Table 21** shows the statistics regarding annual vessel registrations. The total number of vessels in Martin County have steadily remained above 14,000 since 2013, and high a record high in 2019 at 18,000 (**Figure 3**).

Table 21. Annual Vessel Statistics – Martin County

Year	Pleasure	Dealer/Commercial	Total	Annual Change
2010	14,883	769	15,652	
2011	14,985	760	15,745	1%
2012	14,972	730	15,702	0%
2013	14,871	735	15,606	-1%
2014	15,294	756	16,050	3%
2015	16,079	757	16,836	5%
2016	16,778	770	17,548	4%
2017	17,320	787	18,107	3%
2018	17,579	797	18,376	1%
2019	17,903	807	18,710	2%
2020	17,104	761	17,865	-5%
2021	16,050	689	16,739	-6%
2022	16,295	705	17,000	2%

Source: FHSMV

Figure 4. Total Martin County Vessel Registrations – Pleasure Vessels



Source: FHSMV

The registrations reflect 91% Pleasure Vessels, 5.1% Exempt/Government/Other Vessels and 4.1% Commercial Vessels, as shown in **Table 22**; A breakdown of counts by length categories used later in the analysis is shown in **Table 23**.

Table 22. Breakdown of Martin Registration Types

Registered Use	Count
Commercial/ Exempt/Gov't/Other	705
Recreational	16,295
Total	17,000

Source: FHSMV

Table 23. Breakdown of Martin County Vessel Lengths – Recreational, Excluding Canoes

Length	Count
Under 16'	3,908
16' to 26'	8,851
26' to 40'	2,824
40' to 65'	526
65'+	79
Total	16,188

Source: FHSMV

Waterway-Users

It is expected that not all vessels within the county 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. Data limitations have provided the values as estimates. The census of potential waterway users based on vessel types shows that about 87% of vessels would likely use the waterways. **Table 24** 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 district 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 25** provides a breakdown of the vessels adjusted for the total vessels in non-use of the waterways.

Table 24. Vessel Length Group owned by individuals excluding airboats

Length Group	Number of vessels
Under 16’	2,376
16’ to 26’	5,673
26’ and more	1,887
Total	9,935

Source: FHSMV

Table 25. Pleasure Vessel Counts by Boat Length, Adjusted for Non-Use of Waterways

Length Group	Number of vessels
Under 16’	2,376
16’ to 26’	5,018
26’ and more	1,698
Total	9,092

Source: FHSMV

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. There are over 250 businesses in Martin County that are marine related and employ 1,900 persons as described in **Table 26**. While the two largest sectors in terms of businesses are Retail Trade which includes businesses such as bait and tackle shops, and Other Services, the Manufacturing sector employs the highest number of people and includes boat builders.

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

2-Digit NAICS	Description	Businesses	Employment	Total Annual Wages	Avg. Per Employee
11	Agriculture & Fishing	**	**	**	**
23	Construction	11	92	\$4,953,196	\$53,839
31-33	Manufacturing	41	529	\$33,592,136	\$63,501
42	Wholesale Trade	9	109	\$5,619,868	\$51,558
44-45	Retail Trade	55	334	\$19,796,744	\$87,321
47-48	Transportation & warehousing	35	94	\$4,051,032	\$43,096
52	Finance and investing	**	**	**	**
53	Real Estate, Rental and Leasing	**	**	**	**
54	Professional, Scientific, and Technical Services	11	31	\$2,078,380	\$67,045
56	Administrative and Support and Waste Management and Remediation Services	**	**	**	**
61	Educational Services	**	**	**	**
71	Arts, Entertainment, and Recreation	23	342	\$23,435,832	\$68,526
72	Accommodation & Food Services	**	**	**	**
81	Other Services (Except Public Administration)	51	369	\$16,130,916	\$43,715
99	Unclassified	**	**	**	**
	Total	259	1,940	\$112,051,048	\$57,758

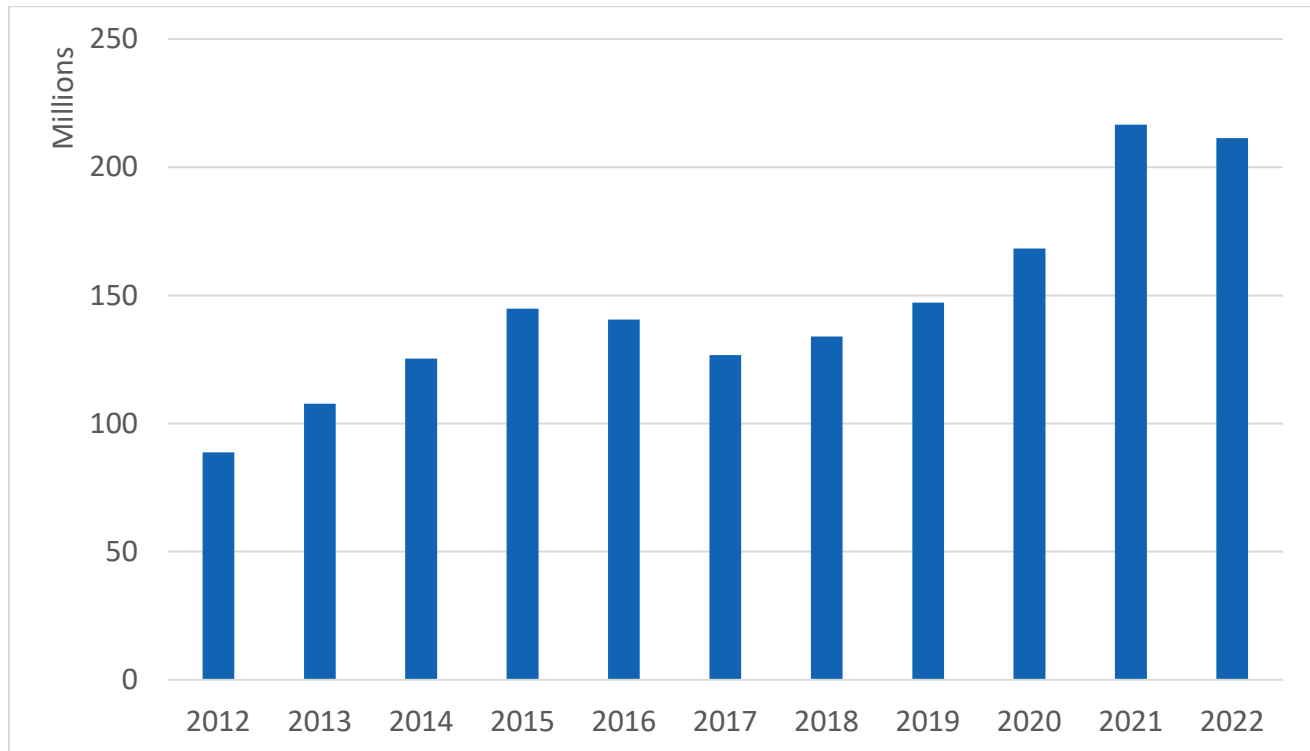
Source: QCEW. Note, the data are obtained from the Florida Department of Economic Opportunity, which compiles the QCEW data quarterly and reports annual averages.

Note: ** denotes Confidentiality where there are less than 4 employers in a category

Taxable Sales from Marine Industry Establishments

Taxable sales were compiled for Martin county boat dealerships (Kind Code 28), as reported by the Florida Department of Revenue. **Figure 4** reflects record boat dealership sales since 2012, and sales now exceed \$211 million annually – a 67% increase from 2017 reported sales.

Figure 5. Reported Sales, Martin County Boat Dealers

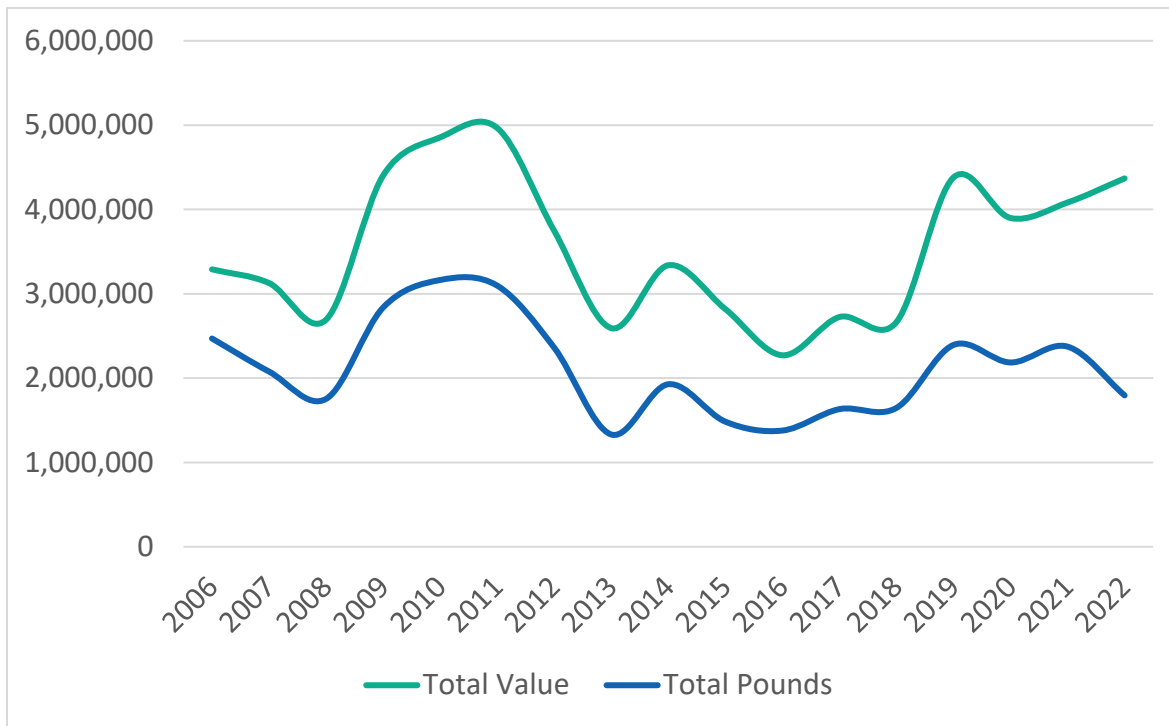


Source: FHSMV

Commercial Fish Landings

Martin County's location along the East Coast of Florida provides premier fishing opportunities beyond the recreational uses. Sportfishing is widely popular with the St. Lucie Inlet providing access to ocean waters that are in proximity to the Gulf Stream. This access allows commercial vessels to bring in large quantities of sportfish including Mackerel, Swordfish, Tilefish and Bonito. **Figure 5** provides a graphic representation of the trends in landings versus value since 2006; values reached a peak in 2011 with \$5 million in commercial harvests. In 2022, Spanish Mackerel was the top landed species reaching 686,000 pounds followed by King Mackerel at 520,000 pounds. However, King Mackerel fetches a higher commercial harvest value with an estimated total value of nearly \$2 million followed by Spanish mackerel at \$1.2 million. Landings data for Martin were obtained from Florida Fish & Wildlife Commission and are provided in **Table 27**.

Figure 6. Commercial Fish Landings, by Weight and Value, Martin County



Source: FWC

Table 27. Commercial Fish Landings: Total Value, Pounds and Average Price

Year	Total Value	Total Pounds	Average Price
2006	\$3,289,700	2,469,705	\$1.33
2007	\$3,127,116	2,077,759	\$1.51
2008	\$2,692,266	1,753,650	\$1.54
2009	\$4,402,309	2,836,836	\$1.55
2010	\$4,854,672	3,163,432	\$1.53
2011	\$4,966,114	3,096,847	\$1.60
2012	\$3,745,902	2,360,640	\$1.59
2013	\$2,592,520	1,331,204	\$1.95
2014	\$3,338,298	1,927,484	\$1.73
2015	\$2,818,497	1,483,758	\$1.90
2016	\$2,270,817	1,378,090	\$1.65
2017	\$2,724,644	1,632,235	\$1.67
2018	\$2,664,496	1,646,893	\$1.62
2019	\$4,379,569	2,393,288	\$1.83
2020	\$3,898,657	2,185,606	\$1.78
2021	\$4,082,336	2,373,215	\$1.72
2022	\$4,368,278	1,795,198	\$2.43

Source: FWC

Inventory of Boat Ramps and Marinas

An inventory of boat ramps and marinas in Martin county and statewide was obtained from the Florida Boating Access Facilities Inventory and Economic Study (2016).⁵ **Table 28** provides a summary of access facilities by use type, and **Figure 6** showcases their locations.

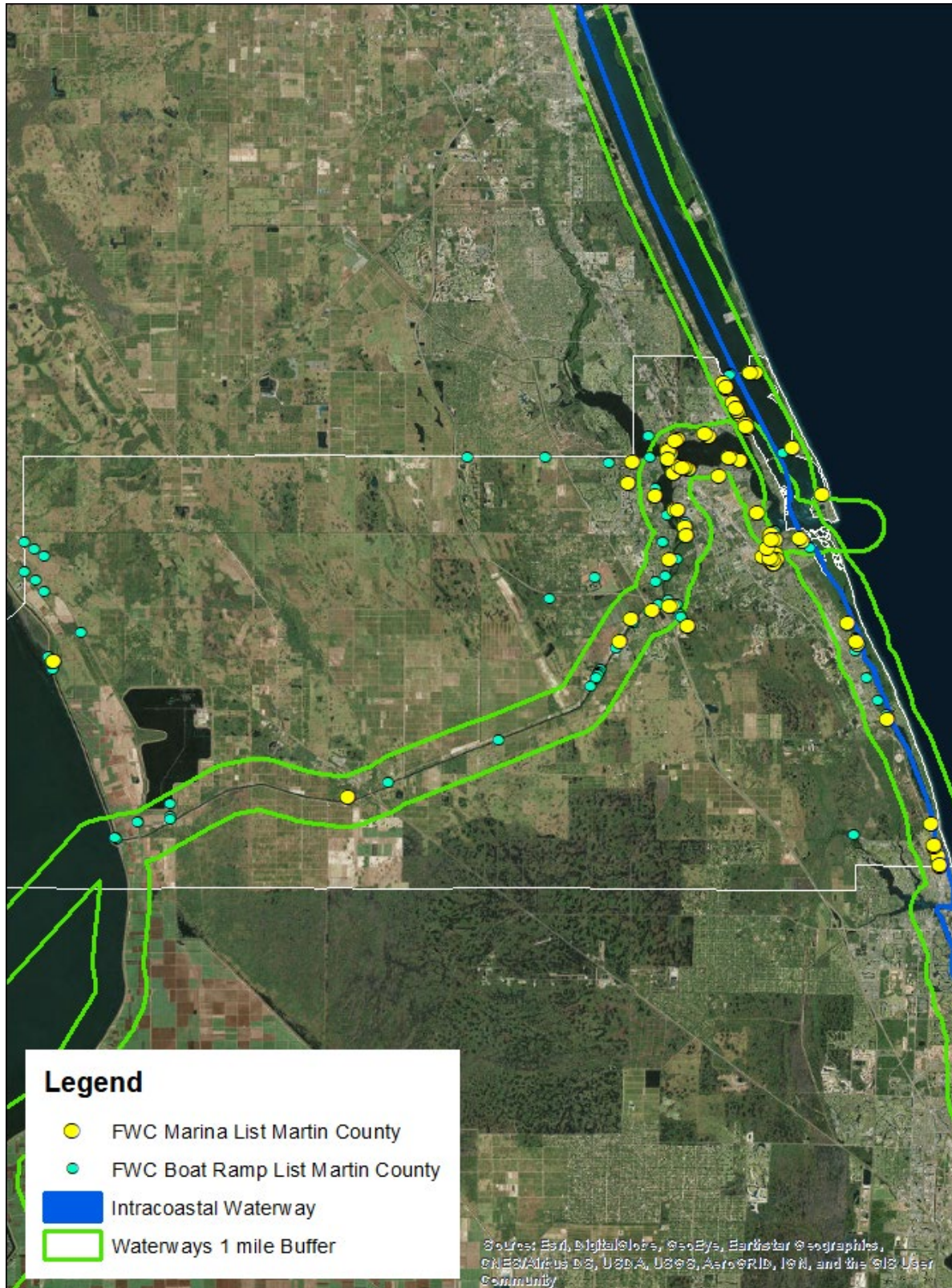
Table 28. Access Facility by Use Type, All of Martin County

Type	Facility Access Use Type	Boat Ramp Count	Marina Count	Total Access Facilities
Commercial	Commercially Owned for Business Use Only	8	28	36
Government	Government Owned for Government Business Only	10	6	16
Private	Community Association for Residents Only	21	17	38
Private	Private Club	1	5	6
Private	Single Family Residence	14	-	14
Public	Commercially Owned for General Public Use	1	-	1
Public	Commercially Owned for Restricted Public Use	5	10	15
Public	Government Owned for General Public Use	18	-	18
Public	Undetermined	2	23	25
Total		80	89	169

Source: FWC Boat Ramp Inventory Database, May 2022

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 7. Boat Ramps and Marina facilities, Martin County



Source: FWC Boat Ramp Inventory Database, May 2017

Inventory of Marinas

Table 29 provides a summary of marina facilities with wetslips, and **Table 30** provides a count of marina facilities with wet slips disaggregated by the type of water access.

Table 29. Detailed Description of Marina Facilities - Martin County

Use Type	Marina Facility Type	Count	Wet Slips	Rental Slips	Marina Operations Slips	Transient Slips
Commercial	Boat Dealer/Repair/Storage	8	31	14	0	5
Commercial	Commercial Marina	17	512	461	22	1
Commercial	Restaurant	3	0	0	0	0
Government	Public owned & oper/Government/Military	6	33	0	33	0
Private	Condominium	5	102	0	0	0
Private	Private SF/Townhouse/Duplex	12	80	0	0	0
Private	Private Club	5	236	112	0	1
Public	Hotel/Motel/Resort/Camp/RV Park	10	190	77	8	0
Public	Other	23	223	56	0	0
Total		89	1407	720	63	7

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

Table 30. Count of Marina Facilities by Water Access Type, Martin County

Water Access	Count
Canal	8
Harbor/Bay/Lagoon	20
Lake	1
River/Creek/Bayou	60
Total	89

Source: FWC

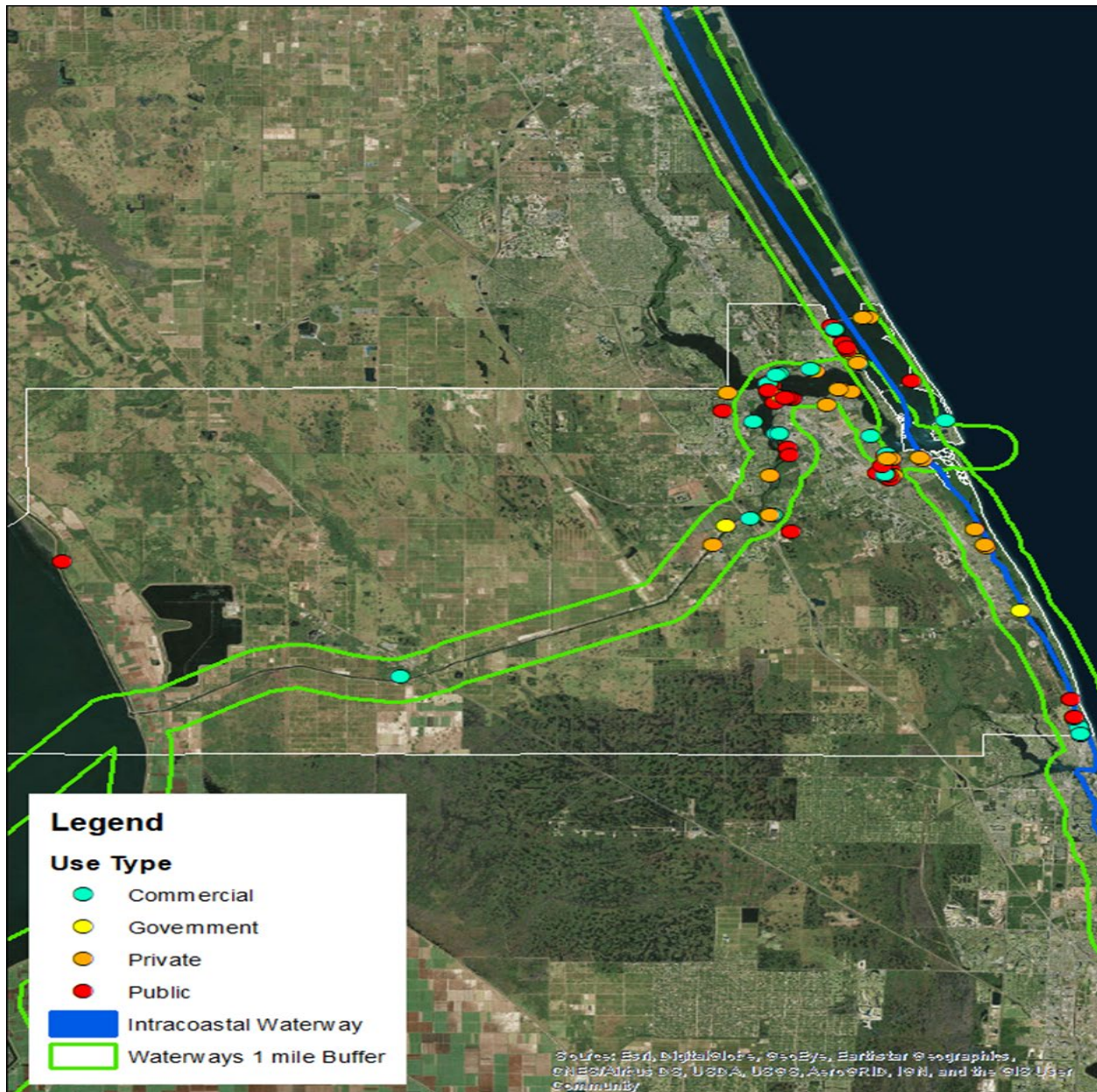
Table 31 provides an inventory of marina facilities with dry stack storage, and **Figure 7** showcases their locations in Martin County. Number of Racks (inside/outside) is the number of racks for boats in the inside of dry stack buildings/outside stacks.

Table 31. Marina Facilities with Drystack Storage, Martin County

Marina Facility Type	Count	# of Racks (Inside)	# of Racks (Outside)
Commercial	28	1021	597
Government	6	0	0
Private	22	0	0
Public	33	0	0
Total	89	1021	597

Source: FWC

Figure 8. Marine Facilities by Use Type



Source: FWC Marine Databases

Inventory of Boat Ramps

An inventory of local boat ramps in Martin County was conducted to identify ramps and available parking for vehicles and trailers. **Table 32** provides the results for all boat ramps within Martin County and a breakdown of parking spaces available. An inventory of ramp type and parking available for ramps within 1 mile of the ICW is summarized in **Table 33**.

Table 32. Inventory of Boat Ramps for All of Martin County

Use Type	Description: Ramp Use Type	Count	Trailer	Handicap Trailer	Vehicle	Handicap Vehicle
Commercial	Commercially Owned for Business Use Only	8	10	0	0	0
Government	Government Owned for Government Business Only	10	8	0	0	0
Private	Community Association for Residents Only	21	46	0	0	0
Private	Private Club	1	0	0	0	0
Private	Single Family Residence	14	0	0	0	0
Public	Commercially Owned for General Public Use	1	0	0	0	0
Public	Commercially Owned for Restricted Public Use	5	0	0	0	0
Public	Government Owned for General Public Use	18	434	11	236	24
Public	Undetermined	2	22	0	3	0
Total		80	520	11	239	24

Source: FWC *hand launch dataset includes kayak launches

Table 33. Boat Ramps on ICW on or connecting to ICW, Martin County

Use Type	Description: Ramp Use Type	Count	Trailer	Handicap Trailer	Vehicle	Handicap Vehicle
Commercial	Commercially Owned for Business Use Only	7	8	0	0	0
Government	Government Owned for Government Business Only	3	8	0	0	0
Private	Community Association for Residents Only	21	46	0	0	0
Private	Private Club	0	0	0	0	0
Private	Single Family Residence	13	0	0	0	0
Public	Commercially Owned for General Public Use	1	0	0	0	0
Public	Commercially Owned for Restricted Public Use	5	0	0	0	0
Public	Government Owned for General Public Use	18	434	11	236	24
Public	Undetermined	2	22	0	3	0
Total		70	518	11	239	24

Source: TBG Work Product, FWC *hand launch dataset includes kayak launches

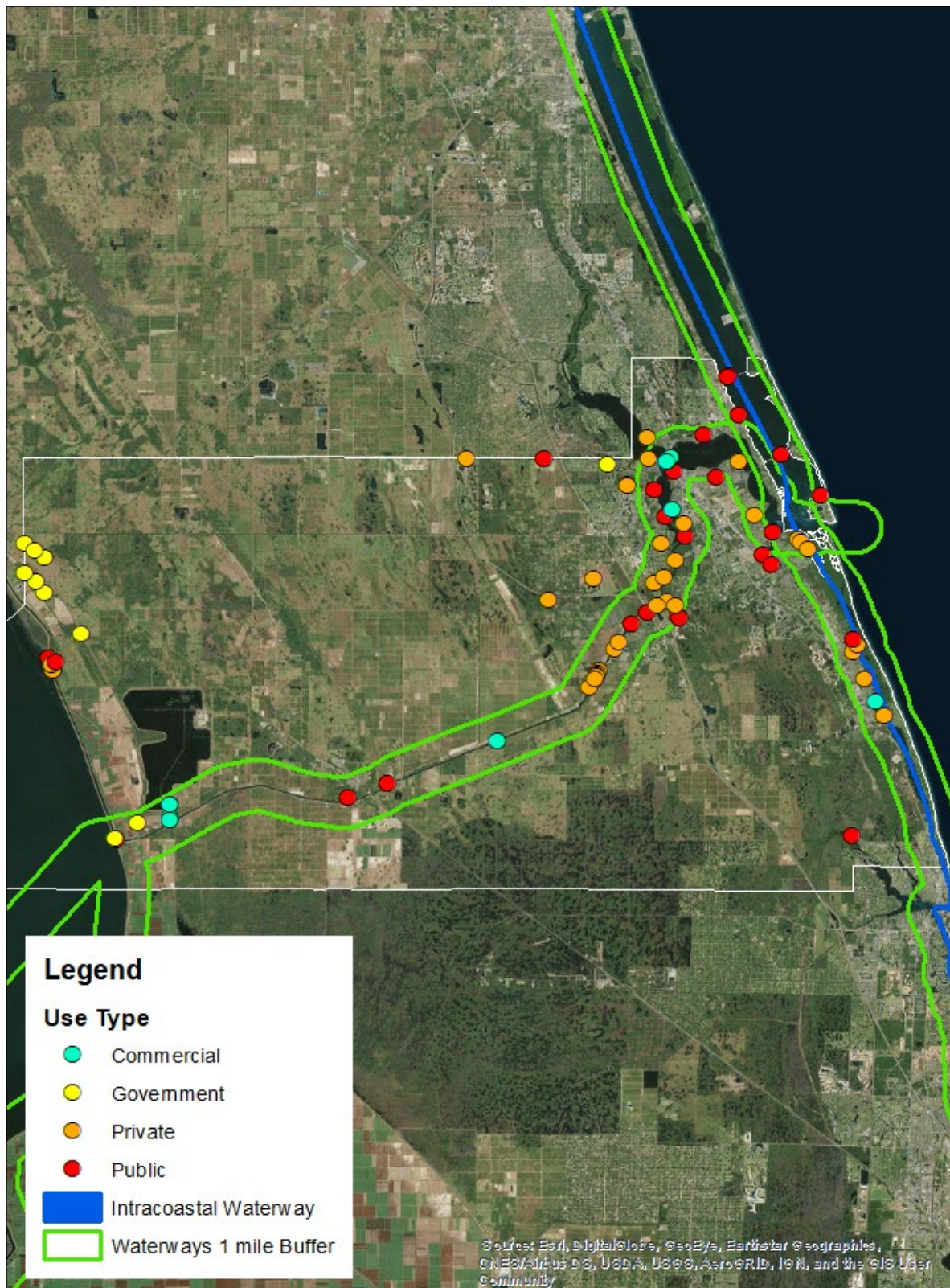
Table 34 shows an inventory of total ramp lanes for Boat Ramps either on the ICW or connecting to the ICW, and **Figure 8** showcases their locations.

Table 34. Total Ramp Lanes by Use Type and Distance to ICW, Martin County

Use Type	Description: Ramp Use Type	Connecting to ICW	All of Martin County
Commercial	Commercially Owned for Business Use Only	11	12
Government	Government Owned for Government Business Only	3	10
Private	Community Association for Residents Only	21	21
Private	Private Club	0	1
Private	Single Family Residence	13	14
Public	Commercially Owned for General Public Use	4	4
Public	Commercially Owned for Restricted Public Use	6	6
Public	Government Owned for General Public Use	33	33
Public	Undetermined	2	2
Total		93	103

Source: FWC Boat Ramp Database

Figure 9. Boat Ramp Access by Use Type



Source: FWC Boat Ramp Database

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