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Executive Summary

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AN ECONOMIC ANALYSIS OF THE DISTRICT'S WATERWAYS IN MARTIN COUNTY

Submitted to

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Jupiter, Florida

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EXECUTIVE SUMMARY

INTRODUCTION AND SUMMARY OF FINDINGS

The purpose of this report is twofold: (1) to identify and quantify the total economic impact of the waterways operated, maintained, or within the boundaries of the Florida Inland Navigation District (the District) in Martin County; and (2) to estimate the influence of the waterways on property values in the county. For the purpose of this report, the District's waterways include the Intracoastal Waterway, the Okeechobee Waterway, and all waterways that are physically connected to them. The expected impacts to the Martin County economy and to property values for three waterway conditions were evaluated: (1) existing conditions; (2) cessation of maintenance of the waterways (resulting in vessel draft restrictions of three feet MLW on the waterways); and (3) increased maintenance of the waterways (resulting in vessel draft restrictions of ten feet MLW). This analysis also addresses the influence that the waterways have had on the construction of larger, more expensive homes on the waterways.

The results of the analysis are summarized below:

- Impacts of the waterways under existing conditions:
 - \$326.2 million in business volume
 - \$123.5 million in personal income
 - 4,237 jobs
 - \$588 million in property values
- Expected impacts of the waterways assuming a cessation of waterways maintenance:
 - Decrease of \$177.8 million in business volume
 - Decrease of \$64.1 million in personal income
 - Decrease of 2,209 jobs
 - Decrease of \$292 million in property values
- Expected impacts of the waterways assuming an increase in waterways maintenance:
 - Increase of \$60.9 million in business volume
 - Increase of \$22.7 million in personal income
 - Increase of 768 jobs
 - Increase of \$5.1 million in property values

Background

With reduced federal funding, the local sponsors of the nation's inland navigation systems are being required to shoulder a larger portion of the maintenance costs. For example, studies have shown that maintenance of the Atlantic Intracoastal Waterway Project in Florida requires expenditures of \$7.8 million each year while Federal funding remains at \$3.2 million per year. The



Maintaining the waterways within the District's 11-county area to allow the continuation of recreational boating activities will cost an estimated \$7.8 million annually

District has made a decision not to allow the waterways to deteriorate by deferring maintenance projects and has elected to fund this budgetary shortfall. This investment by the District may total up to \$230 million over the 50-year planning period of the waterway. With such a large potential investment, the District needs to educate the general public as well as federal, state, and local public officials of the economic importance of expending these monies to meet the needs of the waterways.

The Atlantic Intracoastal Waterway is a 1,391-mile federally and locally maintained channel between Trenton, New Jersey, and Miami, Florida. The Florida segment, which was completed in

1965, is 370 miles long and follows coastal rivers and lagoons past numerous tourism-oriented communities.



The District's waterways primarily serve Florida's large recreational boating industry, as pictured above at Manatee Pocket

The waterway from the Florida/Georgia border to Miami was constructed and is maintained by the Jacksonville District Corps of Engineers in cooperation with the Florida Inland Navigation District, the local sponsor for the waterway. Continued maintenance dredging is required because the channel is subject to sedimentation from upland erosion and

coastal sediment migration through ocean inlets. A Long Range Dredged Material Management Plan for meeting dredged material management requirements over the next 50 years has been developed and is presently being implemented.

The Intracoastal Waterway in Martin County

The Intracoastal Waterway extends about 22 miles through Martin County. The waterway enters the county just north of Jensen Beach and proceeds through the Indian River, several land cut sections, and Hobe Sound before reaching Palm Beach County. Stuart is the largest population center on the waterways of Martin County. Two bascule bridges traverse the waterway, connecting Jensen Beach and Stuart, on the mainland, with Hutchinson Island. South of Hutchinson Island, St. Lucie Inlet, at the confluence of the Indian and St. Lucie rivers, allows access from the waterway to the Atlantic Ocean. The St. Lucie River allows water access northwest into St. Lucie County via the North Fork of the St. Lucie River. A bascule bridge, connecting the community of Hobe Sound to Jupiter Island, crosses the waterway immediately before the waterway enters Hobe Sound. The shorelines of the waterway are sparsely populated in this area, mainly because the Jonathan Dickinson State Park occupies most of the mainland along the waterway. The Okeechobee Waterway, which allows inland navigation from the east coast to the west coast of Florida, transverses Martin County. The Okeechobee Waterway in Martin County extends from the Intracoastal Waterway west through the St. Lucie River, south through the South Fork St. Lucie River, and southwest to the St. Lucie Canal to Lake Okeechobee.



The Okeechobee Waterway, pictured above at the I-95 bridge, transverses Martin County and allows inland navigation from Florida's east to west coasts

THE ECONOMIC IMPACT OF MARINE RELATED BUSINESS IN MARTIN COUNTY

In general terms, there are two types of economic impacts or benefits associated with an inland navigation system, National Economic Development (NED) benefits and Regional Economic Development (RED) benefits. Inland waterway systems have historically been evaluated to determine economic feasibility based on NED benefits, which are economic benefits to the nation and not a particular region. The purpose of this analysis is to estimate the regional benefits generated by the waterways in Martin County.

Regional benefits can be classified as direct, indirect, induced, and total. The direct impacts of the waterways are the goods and services purchased from marine related businesses in Martin County. Direct impacts include the initial round of spending and employment generated by business activity that is directly dependent on the waterways. Indirect impacts consist of the goods and services purchased by marine related businesses in Martin County. These impacts are the additional “rounds” of spending that result from the initial sales by waterway-impacted businesses. Induced impacts consist of increased household purchases of goods and services (such as food, clothing, and housing) by employees of businesses directly and indirectly impacted by the waterways. In short, navigation on the waterways results in dollars being pumped into the region which generate primary and secondary economic benefits to the area, benefits which include increased business activity (sales), personal income (wages), and employment (jobs).

Many techniques have been developed to estimate the types and levels of regional economic impacts. These models are based on the understanding of a regional economy as an interdependent entity. IMPLAN is a regional impact model that enables the evaluation of the economic impact of specific activities such as construction or operation of public works projects, retail, wholesale, manufacturing, and service sales within an economy. IMPLAN was used in this analysis to estimate the regional economic impacts of the waterway.

Identifying and Quantifying Current Marine Related Business Volume

A database of 349 marine related businesses in Martin County was developed from various sources. These businesses were surveyed by mail and telephone to obtain information on their marine related business patterns and practices. A total of 159 completed surveys were obtained, resulting in a response rate of 46 percent.

Characteristics of Marine Related Business

Selected findings of the marine related business survey are presented below:

- About 46 percent of the businesses are located on or adjacent to the waterway.

- 35.8 percent are dependent on being on or adjacent to the waterway.
- The three most prominent lines of business are services, retail trade, and manufacturing.
- 92.5 percent of the respondent's business volume is marine or water related.
- Most marine industry firms employ less than four people and have annual revenues of less than \$500,000.
- 78 percent of the firms believe their revenue would decrease if vessel drafts were restricted to three feet.
- 49 percent of the firms believe their revenue would increase if vessel drafts were 10 feet.

The 349 businesses in the database were aggregated to 27 similar business types, which were classified as generating a commercial benefit or a recreational benefit. Commercial business types were assumed to consist of boat charters/rentals. The remaining business types were classified as recreational.

The total marine-related business activity in Martin County, as calculated from the survey responses, is estimated at \$307.5 million, including

\$302.2 million that are expected to generate recreational benefits and \$5.2 million that are expected to generate commercial benefits.



Marinas on the waterways are among the 349 firms in the county that generate \$307 million in retail sales of marine related business annually

The \$307.5 million in business activity was distributed by type of activity as follows:

- \$24.1 million in construction activity
- \$4.2 million in transportation activities
- \$92.1 million in retail trade
- \$14.3 million in used boat sales
- \$35.9 million in manufacturing activities
- \$25.9 million in wholesale trade

- \$367,000 in finance activities
- \$110.4 million in service activities

The location of the 349 businesses in the county are presented in Figure 1, color coded by business activity. Businesses conducting more than one type of activity were classified according to their predominate activity.

Current Purchases of Non-Marine Related Items

To estimate the economic impacts of non-marine related items purchased from businesses not located on the waterways, 336 recreational boaters and fishermen were interviewed on the waterway throughout Martin County. A summary of purchasing patterns of recreational boaters that were interviewed are presented below:

- Survey respondents purchased an average of \$54.47 per outing at establishments not located on the waterway.
- Larger boats that are not trailered tend to spend less money at establishments not located on the waterways.
- Smaller vessels spend almost all their expenditures at establishments not located on the waterways.
- Total expenditures on non-marine items at establishments not located on the waterways include \$15.9 million for gasoline and \$9.8 million for food, drinks, and ice.

Characteristics of Recreational Boaters

Highlights of the results of the interviews of the 336 recreational boaters are presented below:

- The primary local residence of boaters:
 - Martin County - 67 percent
 - St. Lucie County - 20 percent
 - Palm Beach County - 4 percent
 - Other - 9 percent
- The primary permanent residence of the boaters:
 - Florida - 98 percent
 - Michigan – 1 percent
 - Other - 1 percent
- There was an average of 2.9 persons per boat; the most common occurrence was two persons per boat.

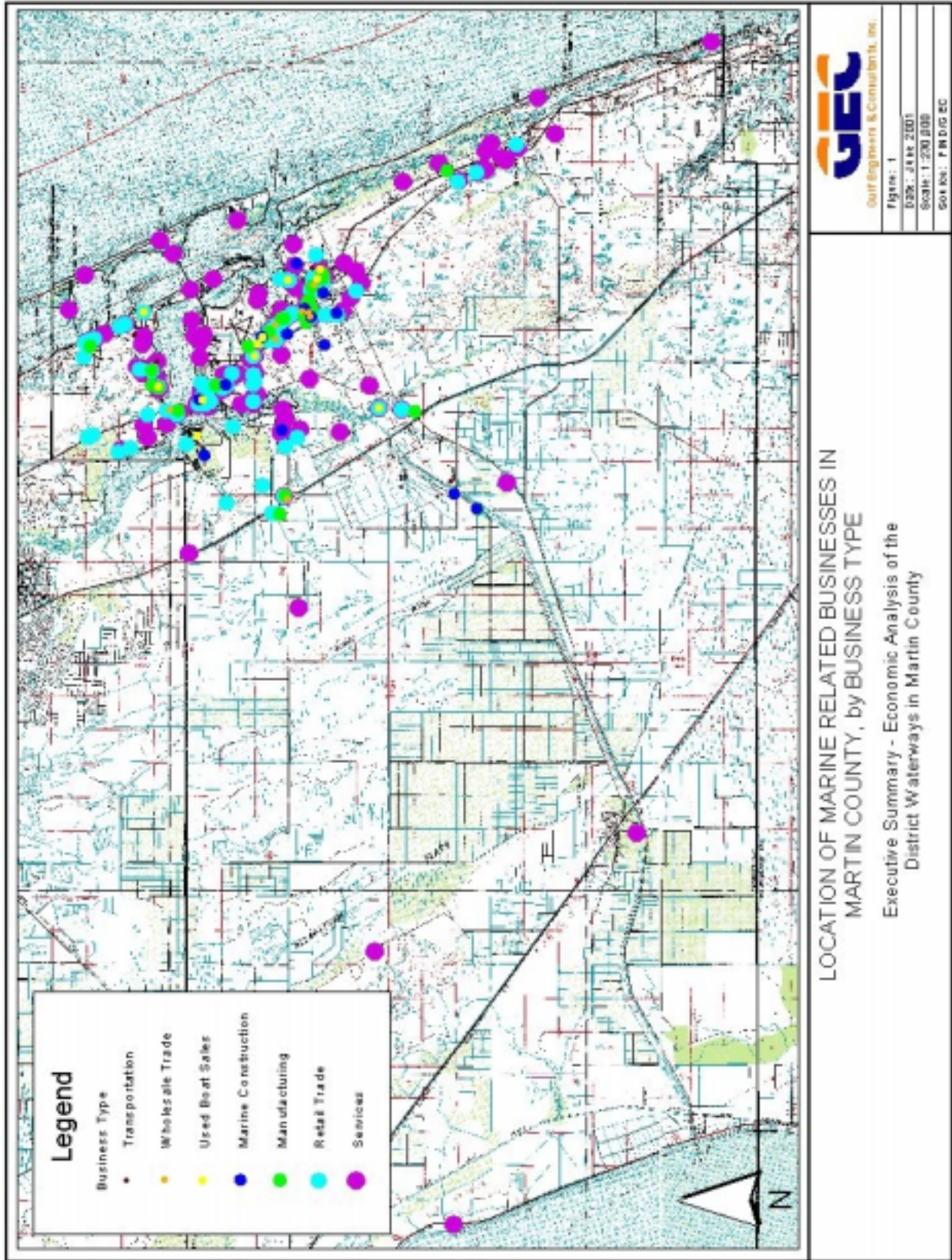


Figure 1

- 16 percent owned a second boat, and 2 percent owned two other boats.
- 81 percent of boaters used an outboard boat, 10 percent used an inboard, and 6 percent used “other boat” types.
- Of the boaters that owned more than one boat, the boats that were not being used on the day of the interview were typically outboards, followed by personal watercraft.
- The length of boats owned by the boaters ranged between 6 feet and 53 feet, with most being between 16 and 26 feet.
- 56 percent of the boaters were on half-day trips, 41 percent were on full-day trips, and 3 percent were on multiple day trips.
- The three primary purposes of the boating trips were fishing, pleasure boating, and other activities.
- 38.9 percent of the boaters intended to stay in inland waters.
- 61.1 percent of boaters intended to access offshore waters.
- 85 percent of all boats are stored at home on a trailer, and 11 percent are stored at some type of commercial storage facility.
- Boaters that store their boat at a commercial storage facility pay an average of \$2,261 per year.
- Boaters annually spend an average of \$1,033 on maintenance and \$399 on boat insurance premiums.
- 7 percent of the people interviewed had incurred damage to their boat while using the waterway in the past year.
- The most frequent type of damage was to the hull, followed by propeller damage and damage to the vessel’s in/outboard drive.
- The most frequent cause of damage was an unknown source or object in the water, followed by grounding the vessel and hitting a submerged object.

Current Economic Impact of Marine Related Activities

The retail sales of the 349 marine related businesses in Martin County generate a total of \$315.4 million in local business volume, \$118.9 million in personal income (wages), and 4,054 jobs. The greatest impacts are generated by service type activities.

The \$25.7 million in retail purchases (\$15.9 million for gasoline sales and \$9.8 million for food, drinks, and ice) by recreational boaters from establishments not located on the waterways were

estimated to generate economic impacts of \$10.8 million in business volume, \$4.6 million in personal income, and 183 jobs.

The current total economic impact of the waterways (marine related businesses and the purchase of non-marine related items) consist of \$326.2 million in business volume, \$123.5 million in personal income, and 4,237 jobs (Table 1).



Recreational boating activity in Martin County contributes a total of \$326 million in sales, \$123 million in income and 4,237 jobs to the local economy

Table 1. Summary of Total Economic Impacts Attributable to the Waterways

Activity	Recreational Economic Impacts				Commercial Economic Impacts				Total Economic Impacts			
	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Business Volume (Millions)	212.04	50.36	55.89	318.29	5.24	1.33	1.41	7.98	\$217.28	\$51.69	\$57.30	\$326.27
Personal Income (Millions)	80.99	18.48	20.99	120.46	2	0.51	0.53	3.04	\$82.99	\$18.9	\$21.52	\$123.50
Employment	2,640	643	796	4,079	118	20	20	158	2,758	663	816	4,237

Economic Impact of a Cessation of Waterways Maintenance

If maintenance of the waterways in Martin County was to cease, it is believed that shoaling would eventually result in an effective vessel draft limitation of three feet. This in turn would result in a reduction of marine related business generated by vessels drafting in excess of three feet.

Based on the responses of businesses surveyed for this analysis, an average of 56.8 percent of marine related business activity would be lost if vessel drafts were limited to three feet MLW. The largest impacts are expected in the service sector, followed by the retail trade sector, manufacturing, the wholesale trade sector, and construction.

The total economic impact expected to be generated with three-foot vessel draft restrictions on the waterways (marine related businesses and the purchases of non-marine related items) is presented in Table 2. The total impact includes \$148.4 million in business volume, \$59.3 million in

personal income, and 2,028 jobs. *This is a reduction of \$177.8 million in business volume, \$64.1 million in personal income, and 2,209 jobs compared to existing conditions on the waterways.*

Table 2. Summary of Total Economic Impacts Attributable to the Waterways Assuming Vessel Draft Restrictions of Three Feet

Activity	Recreational Economic Impacts				Commercial Economic Impacts				Total Economic Impacts			
	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Business Volume (Millions)	98.76	21.39	27.27	147.42	0.68	0.17	0.18	1.03	\$99.44	\$21.56	\$27.45	\$148.45
Personal Income (Millions)	40.69	8.09	10.22	59.00	0.26	0.06	0.07	0.39	\$40.95	\$8.15	\$10.29	\$59.39
Employment	1,335	285	387	2,007	15	3	3	21	1,350	288	390	2,028

Economic Impact of an Increase in Waterways Maintenance

The full implementation of the District’s Dredge Material Management Plan would result in a higher state of maintenance of the waterways and an increase in vessel draft restrictions to 10 feet MLW. This increase in draft allowance would permit deeper draft vessels to fully utilize the waterways in Martin County.

According to marine related businesses surveyed for this analysis, increasing vessel drafts on the waterways to 10 feet MLW would result in an overall average increase in business volume of 19.8 percent, from the current level of \$307.5 million to \$368.3 million (a \$60.7 million increase). The increase is expected to be distributed as:

- \$5.1 million in construction activity
- \$ 1.0 million in transportation services
- \$ 17.3 million in retail trade
- \$ 2.3 million in used boat sales
- \$ 3.7 million in manufacturing
- \$ 6.9 million in wholesale trade
- \$ 44,000 in finance services
- \$ 24.1 million in services activities.

This higher maintenance scenario should not significantly impact the sale of non-marine related items by businesses that are not located on the waterways. These impacts should be equivalent to those under current waterways conditions.

The combined total impacts (marine related businesses and purchases of non-marine related items) under this scenario are presented in Table 3. Total impacts include \$387.1 million in business volume, \$146.2 million in personal income, and 5,005 jobs. *This is an increase of \$60.9 million in business volume, \$22.7 million in personal income, and 768 jobs compared to existing conditions on the waterways.*

Table 3. Summary of Total Economic Impacts Attributable to the Waterways Assuming Vessel Draft Restrictions of 10 Feet

Activity	Recreational Economic Impacts				Commercial Economic Impacts				Total Economic Impacts			
	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
Business Volume (Millions)	212.04	50.36	55.89	318.29	46.04	10.85	11.99	68.875	\$258.08	\$61.21	\$67.88	\$387.17
Personal Income (Millions)	80.99	18.48	20.99	120.46	17.32	3.93	4.52	25.771	\$98.31	\$22.41	\$25.51	\$146.23
Employment	2,640	643	796	4,079	618	138	170	926	3,258	781	966	5,005

THE IMPACT OF THE WATERWAYS ON PROPERTY VALUE IN MARTIN COUNTY

Current Impact of the Waterways on Property Values

This analysis evaluates the waterways’ impact on the value of residential and commercial property and boat slips.

Residential Property

The impact of the waterways in Martin County on property values was estimated by comparing values of properties located directly on the Intracoastal Waterway to values of properties located on waterways connected to the Intracoastal Waterway that have varying vessel draft restrictions and to properties that have no access to the waterways.



Residential home sites along the Intracoastal Waterway are some of the most prized locations in the county, which is reflected in their average appraised value of \$425,795

Table 4 illustrates the type of residential property, the average appraised value, and the average building size for the residential parcels used in this analysis. The data indicates that the Intracoastal Waterway has a positive influence on residential property values in Martin County throughout the length of the waterways and that an estimate of the influence of the waterways on property values, based upon comparison with neighboring parcels, is not biased by other factors, such as socioeconomic conditions or concentration of parcels in an affluent area of the county. Therefore, we can safely assume that if the waterways did not exist, existing properties on the waterways would exhibit the same characteristics (in terms of size and value) of neighboring properties that were developed without waterway access.

Table 4. Characteristics of Residential Properties in Martin County in Subdivisions Containing Properties Adjacent to the Intracoastal Waterway

Type of Property	Number of Parcels	Average Total Appraised Value	Average Building Size (Square Feet)
Non-canal (dry parcel)	5,735	\$210,935	2,033
Waterfront Parcels	3,141	\$425,795	2,585
Ocean Front *	195	\$1,926,658	3,893

* Not used to determine the influence of waterways on property values

The methodology used to estimate the current influence of the waterways on residential property values assumes that if the waterways did not exist, the number and size of houses would be the same as they currently are, but the value of these houses, on a per-square-foot basis, would decrease to reflect current values of non-waterway property. The current average per-square-foot value increases from \$122.42 for existing dry parcels to \$194.34 for waterfront properties, or an increase of \$71.92 per square foot. When this value is applied to the number of square feet of residential waterfront structures, the waterways provide in an increase of \$584 million in residential property values.

Commercial Property

The current impact of the waterways on commercial property values can be defined as the difference between the value of the property under its current use and the value of the same property if the waterway did not exist. To determine that difference, the value of commercial parcels on the waterway would have to be compared to the value of commercial property and/or single family residences near the waterway. However, to conduct such a comparison, the quantity of land

encompassed in these parcels would be needed in order to determine the size and value of structure that could have been developed on each parcel if the waterways did not exist. The quantity of land in each parcel is not available in the Property Appraiser's Office records. Therefore, a detailed analysis of how the parcel could have been developed and the resulting value of the land and structure cannot be conducted.

The appraised value of the 35 marinas in Martin County is based on their income. These appraised values are much lower than the market values of these marinas. Without the waterways, the land used by these marinas would be used for other purposes. Either commercial or residential use of this land would probably increase its appraised value. However, the market values of the marina properties would probably decrease. Because of the relatively small total value of these marinas (\$28.0 million) compared to the residential property value (\$1.34 billion) evaluated in this analysis, the inability to estimate the change in commercial property values should not significantly impact the overall findings.

Boat Docks

The Property Appraiser's Office appraises, and assesses taxes for, a majority of boat docks located at residences along the waterways as an amenity to the land based improvements (the house). Therefore, the dock's appraised value is included in the total appraised value of the property's land based improvements. It is estimated that 80 to 90 percent of boat docks are appraised in this manner. The remaining boat docks located at residences on the waterways, numbering approximately 248, have, for various reasons, been appraised and taxed separate from land based improvements. The total value of these docks was based on values and counts obtained from the Property Appraiser's Office. The average boat dock value of \$15,894 was multiplied by the total number of boat docks (248) that are appraised separately from land based improvements, yielding a total value of \$3.9 million. It is assumed that boat docks were built as a result of the waterway, and without the waterway the boat docks would not exist. Therefore, the entire \$3.9 million value of these 248 boat docks is considered to be a current impact of the waterway on property values. The other residential boat docks in the county are appraised as a portion of the land based improvements, and impacts to their value are addressed in the Residential Property section of this report.

Total Current Impacts to Property Values

It is estimated that the waterways in Martin County have resulted in a total increase in property values of approximately \$588 million. This total includes an increase of \$584 million in residential property values and \$3.9 million in boat docks that are appraised separately from land based improvements. Because of a lack of sufficient data on the amount of land encompassed in

each commercial property parcel, the impact on commercial property values cannot be accurately estimated.

Changes in Property Values Due to a Cessation of Waterways Maintenance

If vessel drafts were restricted to three feet MLW, the value of property on the waterways would decrease. In order to estimate the impacts of reduced waterway depths, property values of parcels with access to waterways with varying vessel drafts must be compared to each other. For the purpose of this analysis, it is assumed that properties on the Intracoastal Waterway have access to a channel at least six feet deep. However, the vessel draft restrictions of canals connecting to the Intracoastal Waterway were assumed to vary. A comparison of the difference in property values on restricted draft waterways to property values on the Intracoastal Waterway illustrates part of the expected change in property value if vessel drafts were restricted to three feet MLW on the Intracoastal Waterway.

Residential Property

A comparison of property types in the county indicates that canal front parcels have higher values than non-canal front parcels and that the degree of vessel draft accessibility of the Intracoastal Waterway further enhances property values. Canals with restricted access to the Intracoastal Waterway supply residents of canal front parcels with additional privacy and quiet, and perhaps some aesthetic value, which have a positive influence on property values. However, it is not evident that canals with restricted access to the Intracoastal Waterway increase property values more than canals without access to other waterways.

On a county-wide basis, waterfront properties are valued 59 percent higher than properties without waterway access. The difference between dry parcel property values and waterfront parcels with restricted draft access in the four neighborhoods reviewed varies between 14 and 104 percent. Restricted draft access waterfront property is defined as property that can be accessed by vessels that draft less than three feet of water. The difference in value between dry parcels and deep access waterfront parcels varies between 32 and 223 percent. The difference in property values spans a wide range in these subdivisions, but the additional value provided by restricted waterways is estimated at approximately half the additional value provided by non-restricted waterways.

The reduction in property values resulting from decreased waterway maintenance was estimated at \$292 million by applying the expected decrease in market value (\$35.96 per square foot), as presented in Table 5, to the current total square feet of building area (8,120,609 square feet).

Table 5. Adjustment of Market Value Per Square Foot of Building Area

Category	Market Value Per Square Foot	Adjusted Market Value Per Square Foot	Value Difference Per Square Foot
Non-canal	\$122.42	-	-
Waterfront Parcels	\$194.34	\$158.38	\$35.96

Commercial Property

The appraised value of commercial property is determined in part by the income the property generates. As part of this analysis, the change in marine business revenue for various business types was estimated assuming a cessation of maintenance of the waterway. The estimate is based upon a survey of marine related businesses. If maintenance of the waterways ceased and, as a result, vessel drafts were restricted to three feet, marine related businesses indicated that only 28.2 percent of existing business volume at marinas would be retained. The majority of their business would be lost because deeper draft vessels would not be able to access their facilities. The existing property value of marinas is appraised at \$28.0 million. Under the assumption that appraised commercial property values are directly impacted by business revenue, a reduction of 71.8 percent (100 percent minus 28.2 percent of the business remaining) of business revenue at marinas should result in a reduction of 71.8 percent of the current appraised value, or a reduction to \$7.8 million. Such a reduction in property value assumes that the property remains in its current use. However, since marinas are not likely to remain in business after such a drastic reduction in income, the property will probably convert to other commercial uses. As stated under the analysis of the current impact of the waterways on commercial property values, sufficient data is not available to estimate property values should the use of the property be converted to non-waterway related use.

Boat Docks

Many boat docks at private residences are used to dock vessels drafting in excess of three feet. Since these boats will no longer be able to access the boat docks, the value of larger boat docks is expected to decline. However, data are not available to indicate the number of docks that are used to accommodate vessels drafting in excess of 3 feet. Therefore, for those docks that are appraised separately from the property's land based improvements, an accurate estimate of the impact to their values due to decreased maintenance of the waterways, cannot be made. However, it should be noted, that the total appraised value of these boat docks is \$3.9 million. Therefore, any decrease in value in these docks should be less than \$3.9 million and will be minimal in comparison

to the decrease expected in residential property values; the impact to which includes the expected decrease in value of the majority of boat docks that are appraised as part of the residential property value.

Total Impact to Property Values of a Cessation of Waterways Maintenance

In summary, if maintenance of the waterways were to cease and vessel drafts were restricted to three feet MLW, it is estimated that residential property values along the waterways would decrease by up to \$292 million. Due to the lack of sufficient data, the impact to commercial property and boat docks that are appraised separately from land based improvements cannot be accurately estimated, although any impact to these assets should be minimal in light of their total appraised value compared to residential property values.

Change in Property Values Due to Increased Waterways Maintenance

Residential Property

Because of the limited amount of the waterways that currently have 10-foot depths, there are few homogeneous neighborhoods or areas in Martin County that can be analyzed to help estimate the impact to residential property values if the waterways were maintained at 10 feet MLW. Based on the small samples of properties on waterways with 10-foot vessel drafts, there appears to be no significant value placed on docking a deep draft vessel at a home site. The neighborhoods that do have access to deep draft waterways also have other amenities, such as high ground elevation, which provides flood protection and impacts property values. For this reason, it cannot be determined if deep water access would significantly impact residential property values in Martin County (other than slight increases to boat dock values that are included in the overall value of the property). This is not to say that selected property values would not increase if vessel drafts were increased, but there is no evidence from the available data that it would significantly increase the total value of property in the county. This is in part due to the limited number of properties that would be impacted by a deeper draft channel, which would only benefit owners of mega yachts and commercial vessels.

Commercial Property

Increasing the vessel draft restriction to 10 feet MLW on the waterway would allow larger vessels to access commercial facilities and should result in an increase in income generated by marinas and boatyards. The income method of assessing property tax, used by the Property Appraiser's Office as an alternative assessment method, results in property values increasing in conjunction with business volume. The survey of marina owners conducted as part of this analysis indicated that these businesses expected an increase in revenue of 16.2 percent if vessels drafting up

to 10 feet could access their facilities. It was assumed that a proportional increase in property value would also occur.

Marinas are currently valued at \$28.0 million. An increase of 16.2 percent in property value, resulting from an increase in business volumes, would equate to a \$4.5 million increase.

Boat Docks

An increase in vessel draft restrictions to 10 feet MLW may result in an increase in the overall value of boat docks in the county. If larger vessels can access the county's waterways, an increase in demand for boat docks that can accommodate larger vessels may occur. The expected increase in value of the majority of boat docks at residences on the waterways is included in the Residential Property section. This section of the report only addresses the expected increase in value of residential boat docks that are appraised separately from land based improvements by the Property Appraiser's Office.

The expected increase in business volume generated at marinas was estimated by marina owners as 16.2 percent. This increase was used as a proxy for the expected increase in boat slip rental revenue and the expected increase in residential boat dock values. The 248 boat docks that are appraised separately from the land based property improvements are currently estimated to be valued at \$3.9 million. A 16.2 percent increase in value would result in an additional \$630,000 in the value of these 248 boat docks.

Total Impact to Property Values of Increased Waterways Maintenance

If maintenance of the waterways were to increase and vessel draft restrictions were increased to 10 feet MLW, property values in the county would be expected to increase by \$5.1 million. There is no evidence that residential property values would significantly increase other than a slight increase in the value of boat docks that are included in the total value of land based improvements. Commercial property values may increase slightly by \$4.5 million, and boat dock values that are appraised separately from land based improvements could increase by \$630,000.

Summary

Current Impacts

The current impacts of the waterways in Martin County include \$326.2 million in business volume, \$123.5 million in personal income, 4,237 jobs, and \$588 million in property values. Furthermore, the waterways result in the construction of larger, more luxurious homes in the county.

Impacts of a Cessation of Waterways Maintenance

If maintenance of the waterway ceases and vessel drafts are restricted to three feet MLW, there is expected to be a reduction of \$177.8 million in businesses volume, \$64.1 million in personal income, 2,209 jobs, and up to \$292 million in property values.

Impacts of Increased Waterways Maintenance

If maintenance of the waterway increased and vessel drafts were increased to 10 feet MLW, there is expected to be an increase of \$60.9 million in business volume, \$22.7 million in personal income, 768 jobs, and an increase of \$5.1 million in property values from current conditions.

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