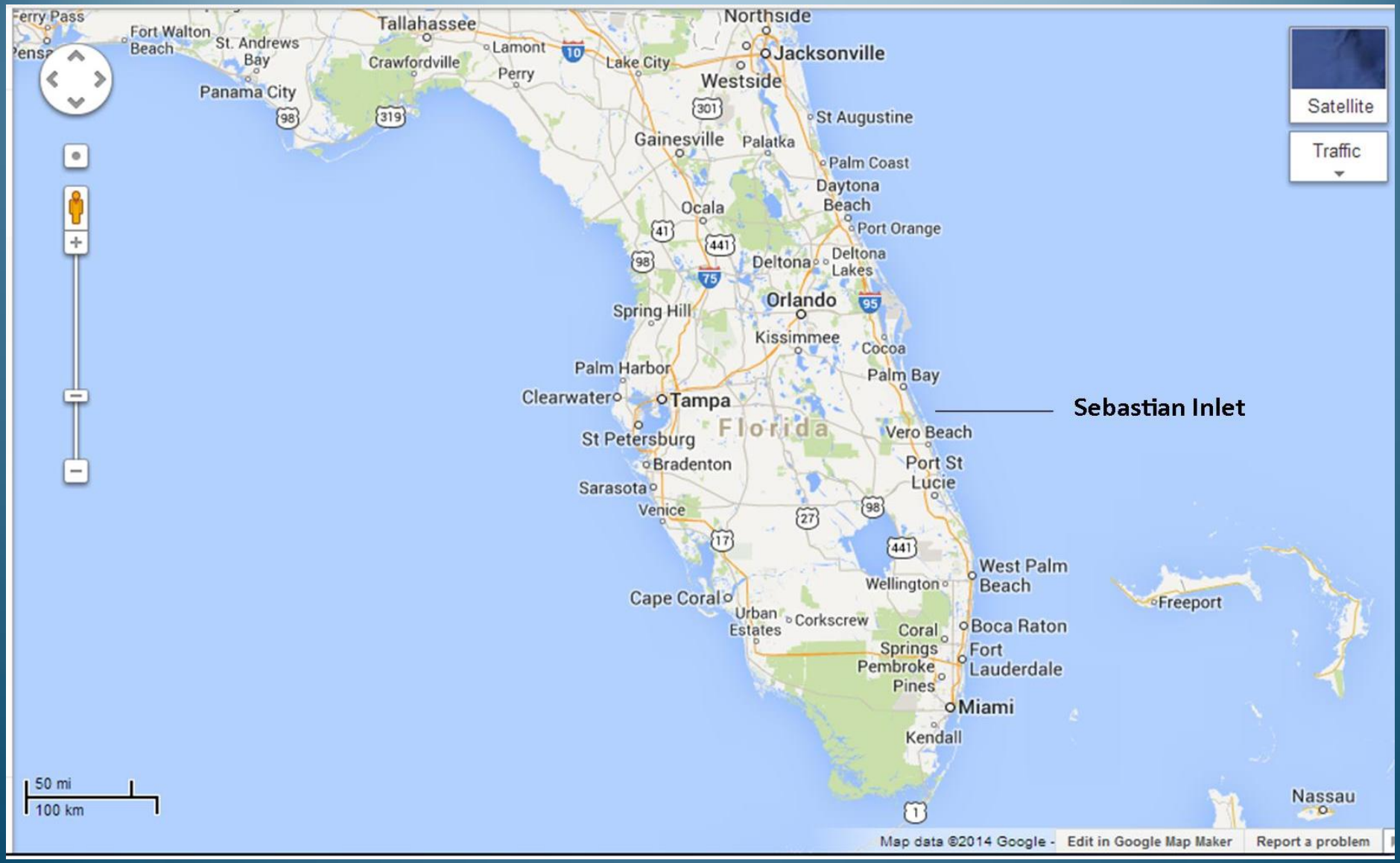
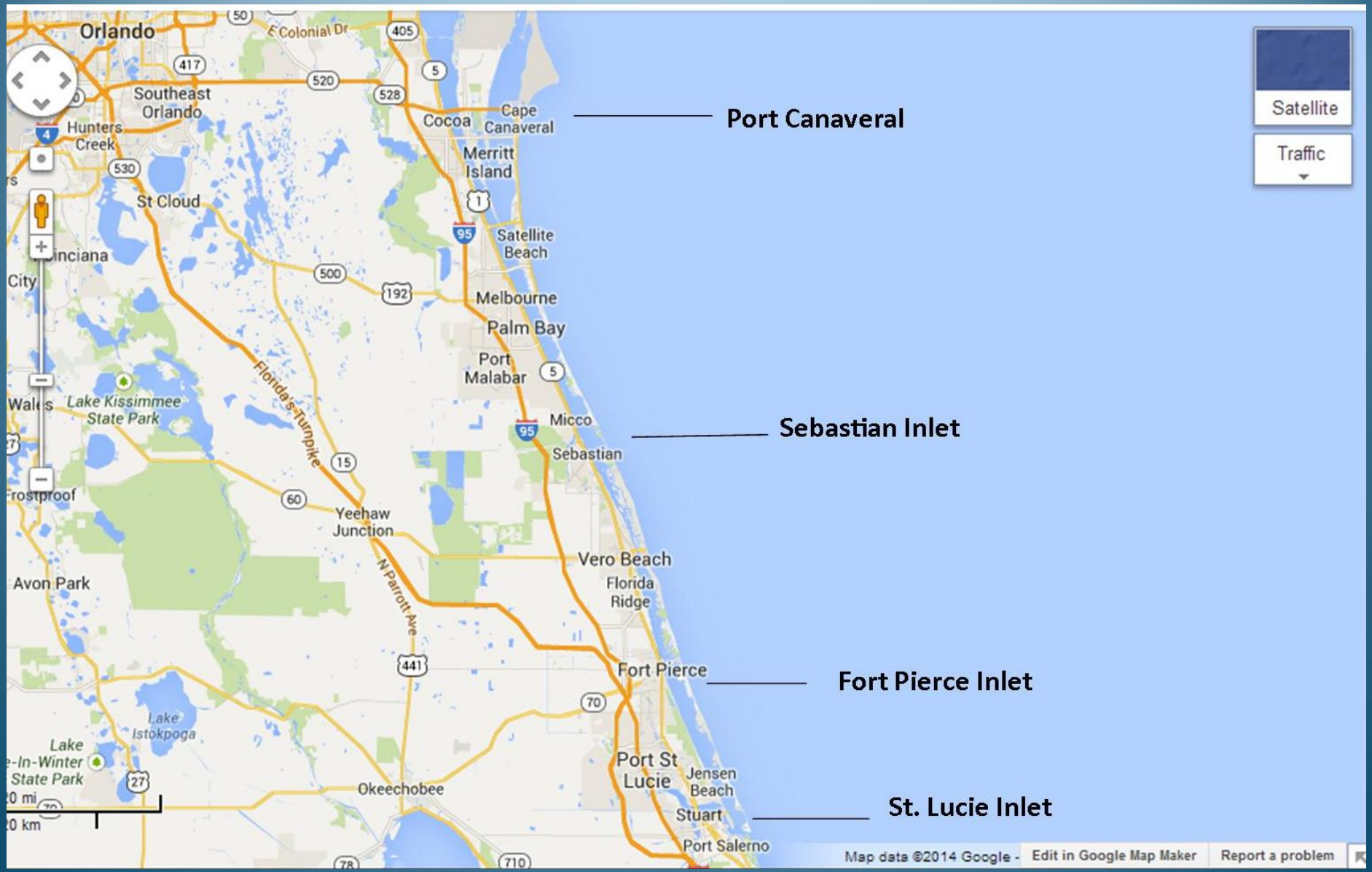
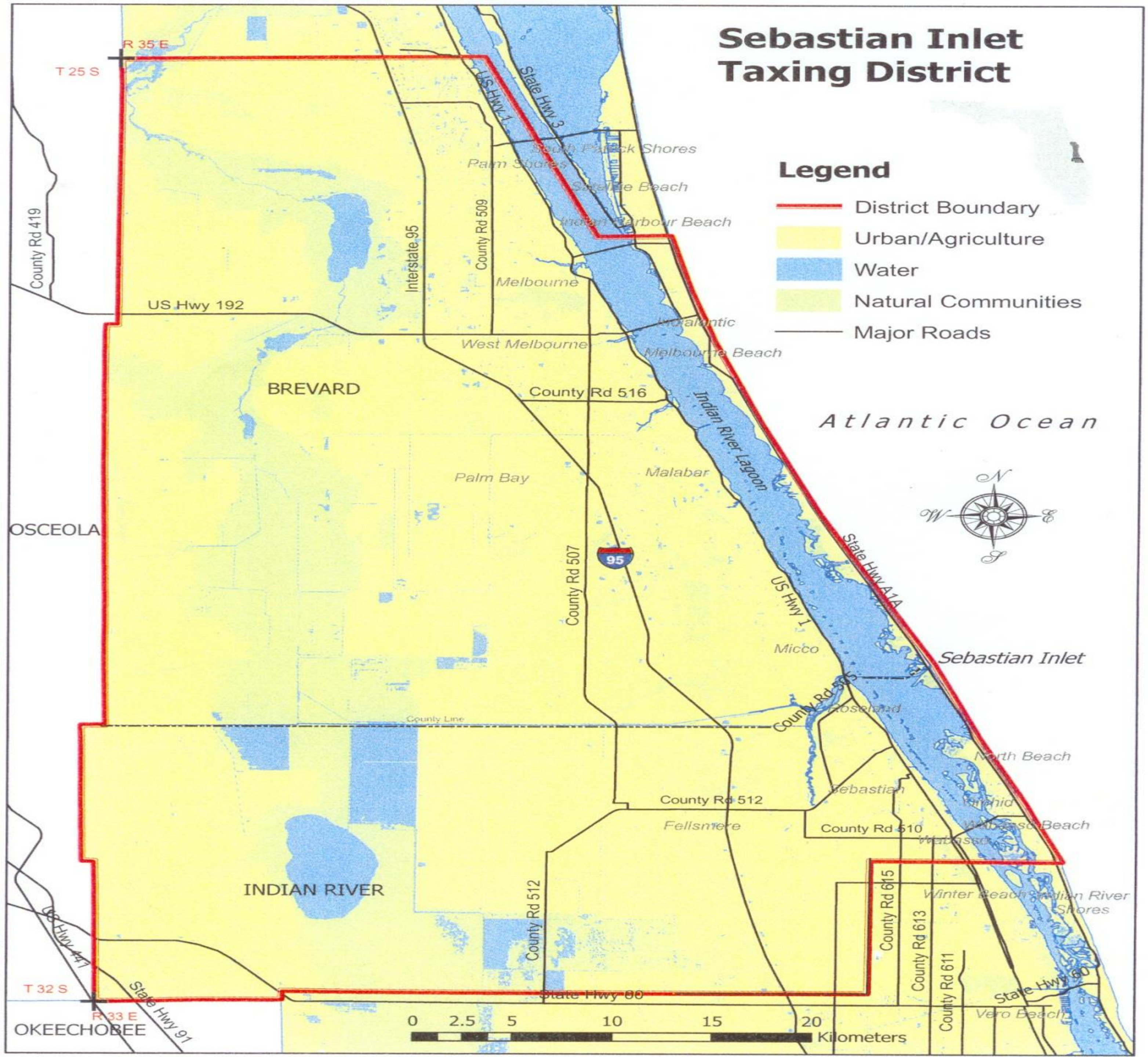
Regional Economic Benefits of the Sebastian Inlet

Cardno ENTRIX

SEBASTIAN INLET DISTRICT
ESTABLISHED 1919


Sebastian Inlet
Florida
Tallahassee
Jacksonville
Northside
Westside
Lake City
Gainesville
Palatka
St Augustine
Palm Coast
Daytona Beach
Port Orange
Ocala
Deltona
Deltona Lakes
Orlando
Spring Hill
Kissimmee
Cocoa
Palm Bay
Palm Harbor
Clearwater
Tampa
St Petersburg
Bradenton
Sarasota
Venice
Vero Beach
Port St Lucie
West Palm Beach
Wellington
Cape Coral
Urban Estates
Corkscrew
Coral Springs
Boca Raton
Fort Lauderdale
Pembroke Pines
Miami
Kendall
Freeport
Nassau
Fort Walton Beach
St. Andrews Bay
Panama City
Crawfordville
Lamont
Perry
Satellite
Traffic
50 mi
100 km
Map data ©2014 Google -
Edit in Google Map Maker
Report a problem

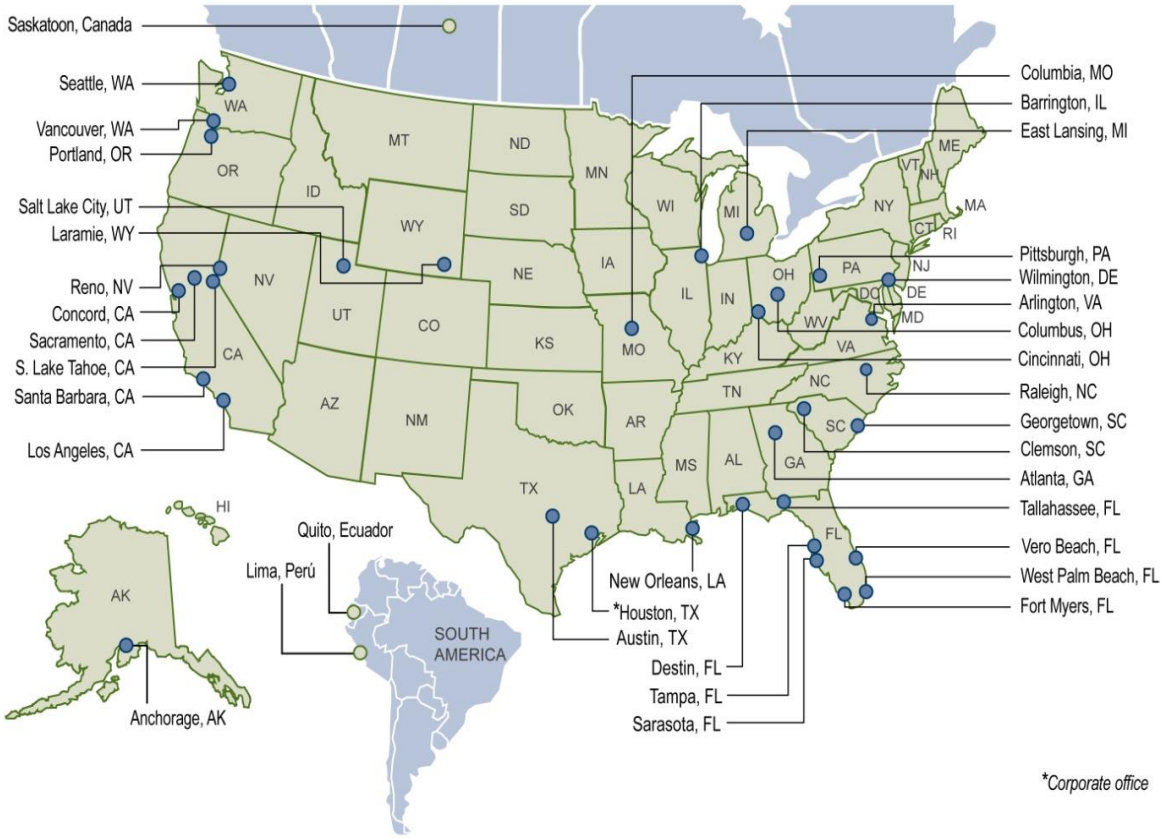

Port Canaveral
Sebastian Inlet
Fort Pierce Inlet
St. Lucie Inlet
Orlando
Southeast Orlando
Hunters Creek
St Cloud
Cocoa
Cape Canaveral
Merritt Island
Satellite Beach
Melbourne
Palm Bay
Port Malabar
Micco
Sebastian
Vero Beach
Florida Ridge
Fort Pierce
Port St Lucie
Jensen Beach
Stuart
Port Salerno
Okeechobee
Yeehaw Junction
Avon Park
Lake Kissimmee State Park
Lake Istokpoga
Lake Wales
Frostproof
Florida's Turnpike
N Parrott Ave
E Colonial Dr
Satellite
Traffic
Map data ©2014 Google
Edit in Google Map Maker
Report a problem


Sebastian Inlet
Taxing District
Legend
District Boundary
Urban/Agriculture
Water
Natural Communities
Major Roads
Atlantic Ocean
N
S
E
W
R 35 E
T 25 S
T 32 S
R 33 E
County Rd 419
US Hwy 192
Interstate 95
County Rd 509
US Hwy 1
State Hwy 3
Palm Shores
Melbourne
West Melbourne
Melbourne Beach
County Rd 516
Indian River Lagoon
BREVARD
OSCEOLA
Palm Bay
Malabar
95
County Rd 507
US Hwy 1
State Hwy A1A
Micco
Sebastian Inlet
County Line
North Beach
County Rd 512
Fellsmere
County Rd 510
INDIAN RIVER
County Rd 615
County Rd 613
County Rd 611
Winter Beach
Indian River Shores
State Hwy 60
Vero Beach
US Hwy 441
State Hwy 91
OKEECHOBEE
0 2.5 5 10 15 20
Kilometers

Previous Studies

Recreational Fishing	1990	$437 million/yr
IRL NEP	2007	$3.7 billion/yr
FIND	2010	$44 million/yr

Overview of Cardno ENTRIX



- Largest private groups of agricultural and natural resource economists in the U.S.
- 25 economists including seven with doctoral degrees and sixteen with master's degrees or MBAs.
- Expertise integrated across all business lines, particularly water resources, land use management, and environmental litigation support.
- Economics staff is located in eight of our 33 US offices including Tampa.

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Objective and Scope of Work

- Identify and quantify the regional economic impacts, including business activity, income, employment, and tax revenue generated in the Sebastian Inlet District (SID) as a result of adequately maintaining navigation on the Sebastian Inlet

1. Literature review of existing studies
2. Survey recreational boaters and marine related businesses
3. Regional economic impacts of boating activity
4. Increased time and expense to regional boaters to access alternate inlets
5. Property value premium
6. Natural resource value

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Boater Survey

Recreational Boater Survey

Based on a sample of registered boaters (with active registrations) in the study area

Approximately 9,700 active boaters living in the SID

Mail survey to 700 boaters and online survey

520 responses (440 complete surveys)

Summary of Vessel Characteristics Reported in Recreational Boating Survey

Vessel Type	Count	Frequency	
Motor outboard	325	80.0%	
Motor inboard	56	14.0%	
No motor or sail	10	2.0%	
Sail inboard	10	2.0%	
Sail outboard	7	2.0%	
Sail no motor	0	0.0%	

	Mean	Standard Deviation	Maximum	Minimum
Boat Length (feet)	22	6	52	10

Source: Recreational Boating Survey Sponsored by the Sebastian Inlet Commission

Boating Activities Reported in Recreational Boating Survey	
Propulsion	Frequency
Fishing	75.6%
Day cruising or sailing	16.2%
Scuba diving or snorkeling	3.3%
Watersports	3.1%
Overnight cruising	1.8%
Total	100.0%

Source: Recreational Boating Survey Sponsored by the Sebastian Inlet Commission

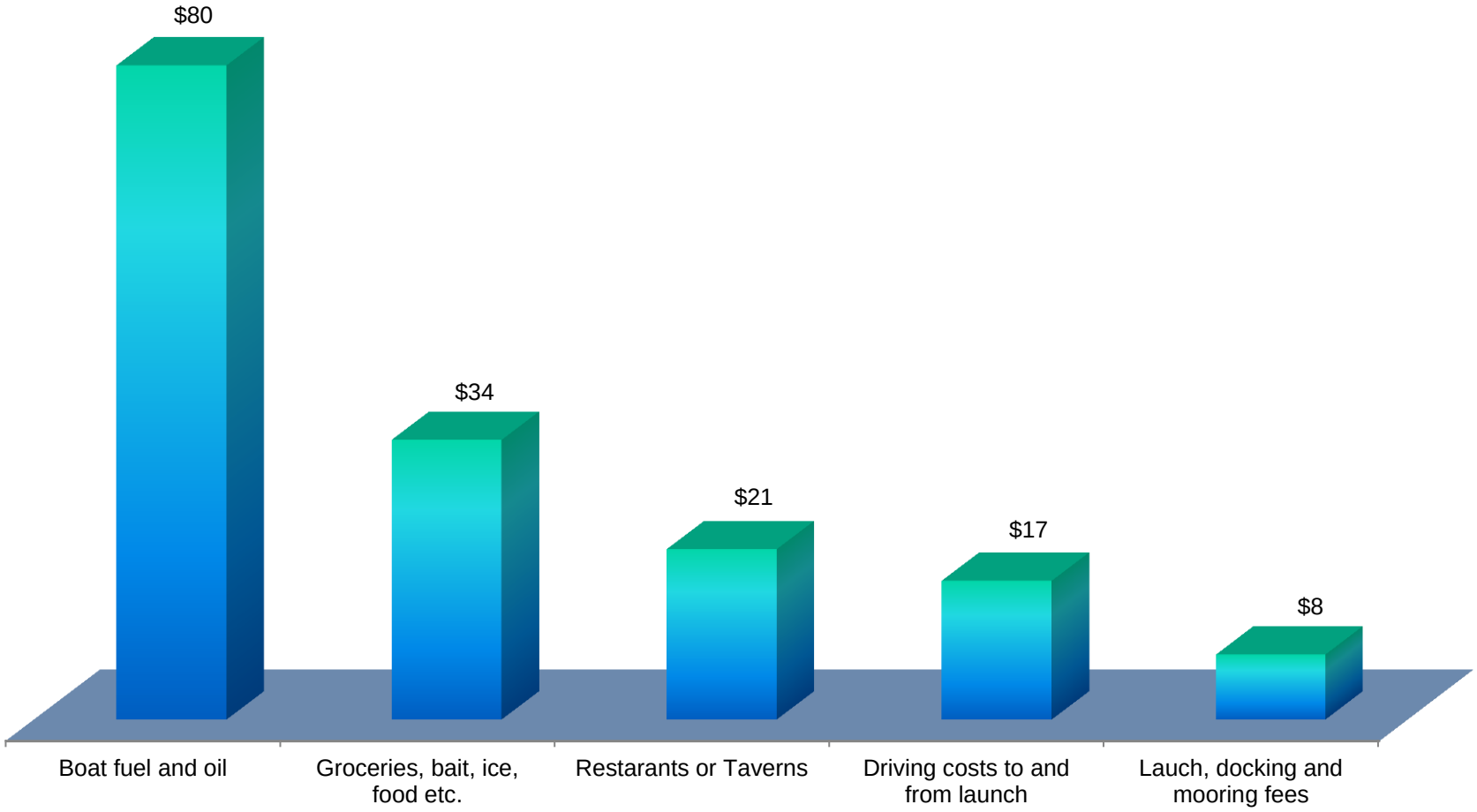
Number and Characteristics of Boating Trips Reported in Recreational Boating Survey

Trips by season	Count	Frequency
Winter	3,591	17.4%
Spring	5,360	26.0%
Summer	7,007	34.0%
Fall	4,658	22.6%
Total trips for 2012	20,616	100.0%

	Total	Mean	Standard Deviation	Maximum	Minimum
No. of trips that involved navigating Sebastian Inlet	9,483	25	34	240	0
No. of trips visiting Sebastian Inlet State Park	3,959	10	22	240	0
No. of trips visiting existing offshore artificial reefs	1,664	4	17	200	0
Average no. of persons per trip	na	2.7	0.8	4.0	1.0
Average no. of miles traveled on trip (on water)	na	3.8	2.5	9.0	1.0

"na" = not applicable. Source: Recreational Boating Survey Sponsored by the Sebastian Inlet Commission

Average Trip Expenditures per Boater ($160 per trip total)



Average annual expenditures per boater ($4,308 per year total)

Marine Related Business Survey

- *Identified 77 marine related businesses in study area*
  - Bait and Tackle
  - Marinas
  - Charter Boats
  - Marine Service and Boat Dealers
- *Developed online survey and emailed to businesses*
  - 23 responses (31 percent)
  - 20 complete and semi complete responses (26 percent of sample)
  - Very few reported revenues

Marine Related Businesses

Dependent Upon Sebastian Inlet

Expected Declines in Boating Activity and Business Revenues if Sebastian Inlet were not Navigable

	Marinas	Charter Operators	Marine Trades	Hotels and Food and Beverage	Weighted Composite Value
Recreational Fishing in IRL	50%	80%	80%	45%	68%
Near Shore Fishing	50%	90%	90%	67%	76%
Offshore Fishing	50%	95%	95%	90%	81%
Recreational boating in IRL (non-fishing)	50%	50%	50%	20%	47%
Offshore recreational boating (non-fishing)	50%	95%	95%	90%	81%
Revenue Decline	80%	40%	40%	20%	50%

Source: Marine Related Business Survey Sponsored by the Sebastian Inlet Commission

Example of comments

- "*Inshore fishing that we have would decline rapidly which would generate less people wanting to fish the waters*"

- *"The lagoon would become a cesspool and all fishing would be negatively affected*"

- "*I would consider relocating further south to Ft. Pierce or Stuart. I am in this area because of the inlet. No inlet to the ocean, I'm gone south*"

- "*Since we are dependent on tourism, the total economic environment would take a hit. It may not be obvious the first year but recreational boating and charter fishing would go away. This would impact the number of people coming to the area and the hotel industry would lose that segment of the market*"

Overview of Methodology

- Based on boating survey and secondary data set, estimate total annual recreational boating trips
  - "*Florida Boating Access Facilities Inventory and Economic Study*" Prepared for: the Florida Fish and Wildlife Conservation Commission. August, 2009.

- Apply average trip and annual expenditures to estimate total annual expenditures in study area by boaters

- Based on analysis conducted by FDEP for state parks estimate SISP visitation expenditures net of activity already estimated

- Based on results of marine business survey estimate "inlet dependent expenditures"

- Estimate regional impacts of inlet dependent expenditures using IMPLAN input output models

Natural Resource Value (sea grass)

- Based on seagrass inventory and mapping survey conducted by the St. Johns Water Management District and published by the Florida Fish and Wildlife Conservation Commission (FFWC) and Hazen and Sawyer Study

- 3,780 acres in the Northern Indian River Lagoon Sebastian Segment
  - "*Seagrass acreage in the Sebastian segment has almost tripled since 1943, primarily a consequence of the permanent opening at Sebastian Inlet, which has been maintained since 1948*."

- Hazen estimate - $4,600 per acre ($5,076 per acre adjusted for inflation)

- Annual value of seagrass supported by the Inlet is $19.2 million. Capitalized over a 30-year period at a 3.0 percent discount rate the value is $395.5 million

Property Values

- Relied on expert elicitation – surveyed local real estate professionals
- Threshold of about 10 to 15 miles from the Inlet effect of SI muted by the presence of alternative inlets (Cape Canaveral Inlet to the north and Fort Pierce Inlet to the south).
- Within each of these two separate waterfront market segments there is a market premium of 5 percent per property for each mile decrease in distance between a home and the Inlet
- Based on property value data from the Florida Department of Revenue and GIS, estimated that the annual value is $60 million and capitalized assuming a 30-year period $1.8 billion (about 15 percent of waterfront property value within 10 miles north and south of inlet)

Summary of Economic Benefits

Related to Sebastian Inlet

- **Generates $93 million in business revenues**
- **Creates $48 million worth of annual income**
- **Supports an estimated 970 local jobs**
- **Generates about $8 million in state and local tax revenue**
- **Supports seagrass colonies worth $19 million per year**
- **Contributes about $1.8 billion to local property values**

Questions and Discussion

Sebastian Inlet Economics