

Susan Snyder's Thoughts for April 1, 2016's meeting

- 1) Federal and state research shows SW FL manatee population is declining. (1)
- 2) "Although no statistical contrasts have been performed among regions [in FL], evidence suggests that estimates of adult survival in this unit [Southwest FL] (Langtimm et al 2004) are lower than those of all other management units, probably due to the combined effects of chronic human-related (watercraft) mortality and episodic mortality events caused by red tide." (2)
- 3) Southwest Florida is estimated to contain 38% of the manatee population in the state. (3) Another source says 41.3%. (4)
- 4) Watercraft account for 31.8 % of the known causes of death of all ages of manatees in Southwest FL. (5)
- 5) Collier County is the 3rd deadliest county in the state for manatees with 365 deaths in 15 years. (6)
- 6) There are many certainties and uncertainties for the future of the county:
 - A) Population will continue to increase in the county. The 2010 Countywide Peak Season population estimation was 387,183. In 14 years (2030), the projection is 530,717, an increase of 143,534 people or 37%. (7) Boat sales are up and will continue to rise, and more and more people are using, and will continue to use, Collier County waterways.
 - B) Climate is changing and sea level is rising. How will these changes affect boat use and manatee populations in Collier County?
 - C) Red tides are common, can be fatal to manatees, and will likely increase because intense rainfall (result of climate change) results in more runoff carrying nutrients to coastal waters.
 - D) Seagrasses are being stressed by poor water quality and other human causes, like prop damage.

I feel it would be prudent of us to err on the side of caution in deciding how to best plan for future manatee survival in Collier County.

Our Task:

Aerial data we are looking at for manatees was collected 2006-2008, 8 to 10 years ago. The aerial boat data was collected 2006-2007, 9 to 10 years ago. The two variables we are attempting to analyze.. boat traffic use and manatee use aren't consistent, they

change on a daily basis. Dated aerial survey data is not very useful for our committee. Manatees are constantly moving and boat traffic fluctuates. FWC has stated "These [manatee] surveys are inexact because of changing weather conditions, water clarity, manatee behavior, and other factors. As a result, scientists are reluctant to base their evaluations of the manatee population on these surveys." (8) As a committee, we really need to look at additional information.

Data we have been given divides the year into Cold Season (Nov - March) and Warm Season (April - Oct), but the division is only marginally useful. Manatees are seen throughout the year in various locations. Concentrations occur because of water temperature, mating behavior, availability of food, and other factors, not because of the date on the calendar. Boat traffic fluctuates with air temperature, the day of the week, and special times like holidays and spring breaks. "Peak season for recreational boating in Collier is January - May, centered in March/April." Note: March would be an FWC identified Cold month and April would be an identified Warm month. (9)

In considering FWC recommended speed zones, we should consider at least 9 things:

- 1) Boat data provided in the aerial studies in 2006-2007.
- 2) Current indicators of boat use in specific areas: presence of marinas, boat storage garages, private docks, and boat ramps.
- 3) Boat and manatee access points to and from the Gulf.
- 4) Manatee data as indicated in aerial studies in 2006-2008.
- 5) Sighting information that has been reported to FWC by the public, FWC officers on the water, Collier County Sheriffs on the water, and data and photographs we can collect from people who have witnessed the presence of manatees.
- 6) The "destruction of essential manatee habitat." (This item is quoted from Section 2, page 3, (2) (a) 1. c in our notebook as what the Commission utilizes in determining restrictions).
- 7) The "existence of features within the area that are essential to the survival of, or are known to attract manatees, such as seagrasses or other food sources, favorable water depths, and fresh or warm water sources." (This item is quoted from Section 2, page 3, item (2) (a) 2 e ... in our notebook as what the Commission utilizes in determining restrictions.)
- 8) The "characteristics of the waterway." (This item is quoted from Section 2, page 3, item (2) (a) 2. f... in our notebook as what the Commission utilizes in determining restrictions).
- 9) Projected population growth for the county

Beginning on the next page is my assessment of the Northern Most Region identified by FWC except for N4 (Doctors Pass/ Moorings Bay. I considered the items listed above, made speed zone recommendations, and included a rationale statement.

Northern Most Region

N1: Little Hickory Bay Central:

Boat Use indicators:

Marina in Lee county is nearby and boats are rented there
Boat Storage Garage
Multiple Private Docks

Gulf access locations:

North to Lee County and South to Wiggins Pass

Current Speed Zones:

The bay itself is idle speed around periphery; 30 mph in channel.
Going South from bay to Wiggins Pass, is a 30/20 zone with one tight bend at idle speed.

Manatee Use:

Manatee use and Fast Overlap was low during both seasons in aerial study 2006-2007.

But, there have been 7 manatee boat-related deaths north of Wiggins Pass since 1998. Reference: Tab 3, Figure 18 p. 41. Most recent death December 2008; Most recent collision with boat: April 2015

Reference: Tab 4: pages 3 & 4

Other Considerations: Some areas are very tight bends in narrow channels bordered by red mangroves

I recommend FWC option #2 with slight change: Change all (omit: "or part") of the narrow section (roughly between markers 5 and 18) to shore-to-shore Slow Speed /Minimal Wake Zone. The total length of the channel in this section is approximately 1.3 miles.

(Rationale: I have boated the area, experienced heavy boat traffic, and conversed with a marine sheriff volunteer about boat and waverunner use of the area. As is obvious from manatee strikes, the currently posted speed zones in the narrow sections of this region are not protecting manatees, nor are they safe for people using the water.)

N2: Cocohatchee River:

Boat Use Indicators:

Marina Bay and Pelican Isle Yacht Club both have multiple docks
There are other multiple private docks along the river
Cocohatchee River Marina rents boat and yacht dock slips
The County Cocohatchee River Park has a very actively used boat ramp

Gulf access locations:

Wiggins Pass

Current Speed Zones:

Most of the river (going upstream from a little east of Marina Bay and Island Marina) is 30/20 zone pursuant to existing FWC rule. There is a shore-to-shore slow speed zone on the lower section of the river (to the west) and the inshore portion of Wiggins Pass.

Manatee Use:

Manatee use in warm season was moderate. One manatee was observed in cold season. Reference: Tab 3, Figure 5 p. 28.
In 1990, there was a boat-related manatee death very close to this area. Reference: Tab 3, Figure 18 p. 41.

Other Considerations:

Wiggins Pass is the closest exit point to the Gulf for all boats in the eastern portion of the Cocohatchee River, as well as boats launched from the many docks in the Vanderbilt Lagoon, the Baker-Carroll marina, the County Cocohatchee River Park Ramp and the Delnor-Wiggins State Park Ramp. As a result, there is a lot of boat use in this area and Wiggins Pass is also where manatees enter and exit the Cocohatchee River and the Gulf of Mexico.

“There are inconsistencies in posted speed zone signage that are likely confusing to boaters.” Example: Going North from Water Turkey Bay to the Pass, FWC has posted “Slow Speed.” At the pass with no further signage going toward Water Turkey Bay and Vanderbilt Lagoon, the county per Ordinance 97-10 posted “Idle Speed.” Thus, the same channel has different speeds going north and south. (10)

Shoaling is a problem at the pass, which creates depth and channel use problems for all water vehicles and manatees.

I recommend a different Option. The inshore portion of Wiggins Pass should be changed from Slow Speed/ Minimal Wake Zone to Idle Speed/ No Wake Zone, as should the areas of the Cocohatchee River immediately North, South, and east of the Pass. Keep the 30/20 Zone east of US 41 and change the 30/20 Zone west of US 41 to a shore-to-shore Slow Speed/ Minimal Wake Zone.

(Rationale: The inshore portion of Wiggins Pass is the most congested area in this region. It also experiences shoaling and is the entrance and exit for manatees to the Cocohatchee River. The change in the existing speed zone west of US 41 from 30/20 to Slow Speed is a much better transitional change to the proposed idle speed zone at the pass. This change would also better protect the manatees entering the area to feed, mate, and nurse, and the change would provide more safety for people using the water. Keeping the existing 30/20 speed instead of eliminating any manatee protection East of US 41 protects the manatees and small boaters. Having canoed the area, it is difficult for a small boat to get to safety when boats are going 30 mph in the channel, let alone faster

than that. Even at 30 mph, manatees certainly will not have the opportunity to escape injury.

N3: Vanderbilt Lagoon:

Boat Use Indicators:

Single family docks line the Vanderbilt Channel on "Finger Streets"
Multiple condominium and hotel docks
Baker Carroll Point Marina with docks
South Bay Marina (at southern end of Vanderbilt Lagoon) rents pontoon boats
Delnor-Wiggins State Park Ramp

Gulf access locations:

Wiggins Pass

Current Speed Zones:

This area is a shore-to-shore Slow speed zone pursuant to the existing FWC rule. The Slow speed continues into Water Turkey Bay and Wiggins Pass to the north. Current information indicates there is a local idle speed zone in this area. [Posted signage is confusing and signs have been missing since 2004 ... Hurricane Charlie]

Manatee Use:

- A) Although aerial surveys by FWC in 2006-2008 shows low manatee use in the warm season and no use in the cold season I, and others living in the area, have made several personal sightings.
- 1) March 28, 2008, there was a pair of manatees swimming near the Delnor-Wiggins Boat ramp. I have a photograph.
 - 2) In 2012, there was a mating herd just south of Water Turkey Bay. The herd, consisting of at least 10 individuals, was photographed and reported to Chris Boland (Imperiled Species Division of FWC) by phone call at 850-922-4330 on March 27, 2012. He said he would document the sighting. That herd was seen for more that a week in late March through early April. Besides photographs, I have other documentation.
 - 3) March 2015, a mother and nursing calf were seen near the Delnor-Wiggins boat ramp.
 - 4) November & December 2015, a manatee was observed swimming along the seawall at Baker Carroll Point, south of Water Turkey Bay in the Vanderbilt Channel.
 - 5) Other manatees have been seen over the years in various locations in N3.
- B) There are seagrasses in the area.

Other Considerations:

The channel through Water Turkey Bay to Wiggins Pass is narrow.

The channel through Water Turkey Bay to Wiggins Pass is shallow. A posted sign says 3 feet at low tide.

Because of these conditions, motorized boats and manatees must use the same narrow, shallow channel. Surrounding water is too shallow for motorized boats and manatees, especially at low tide.

County Ordinance 97-10 designates the waterway from Vanderbilt Lagoon north to Wiggins Pass as an "Idle Speed/ No Wake Zone", but the county never applied to FWC to have that speed limit permitted so it isn't posted and can't be enforced.

I recommend a different Option. Change this area to a shore-to-shore FWC Idle Speed/ No Wake Zone to prevent manatee/ boat collisions.

(Rationale: Given the frequent manatee sightings in the area, the presence of seagrasses, the large quantity of boats using the area, and the narrow width and shallow depth of the channel, this area is a critical manatee habitat that needs protection. With speed posted as "Idle Speed/ No Wake" from the Vanderbilt Lagoon to Wiggins Pass, there would be reduced speed zone complexity and confusion, and less destruction of seagrasses. In addition to protecting manatees and their environment, an "Idle Speed / No Wake Zone" would provide more safety for all water users and better protect property.)

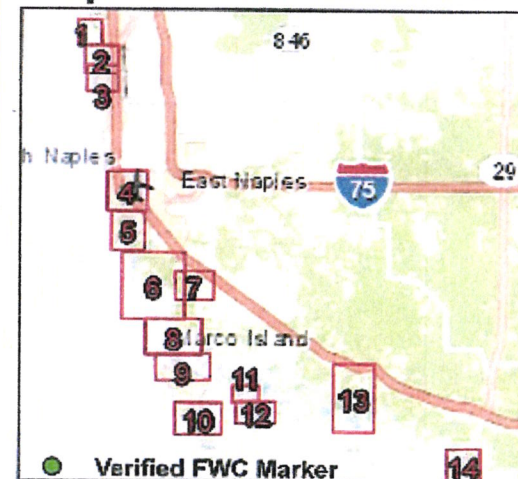
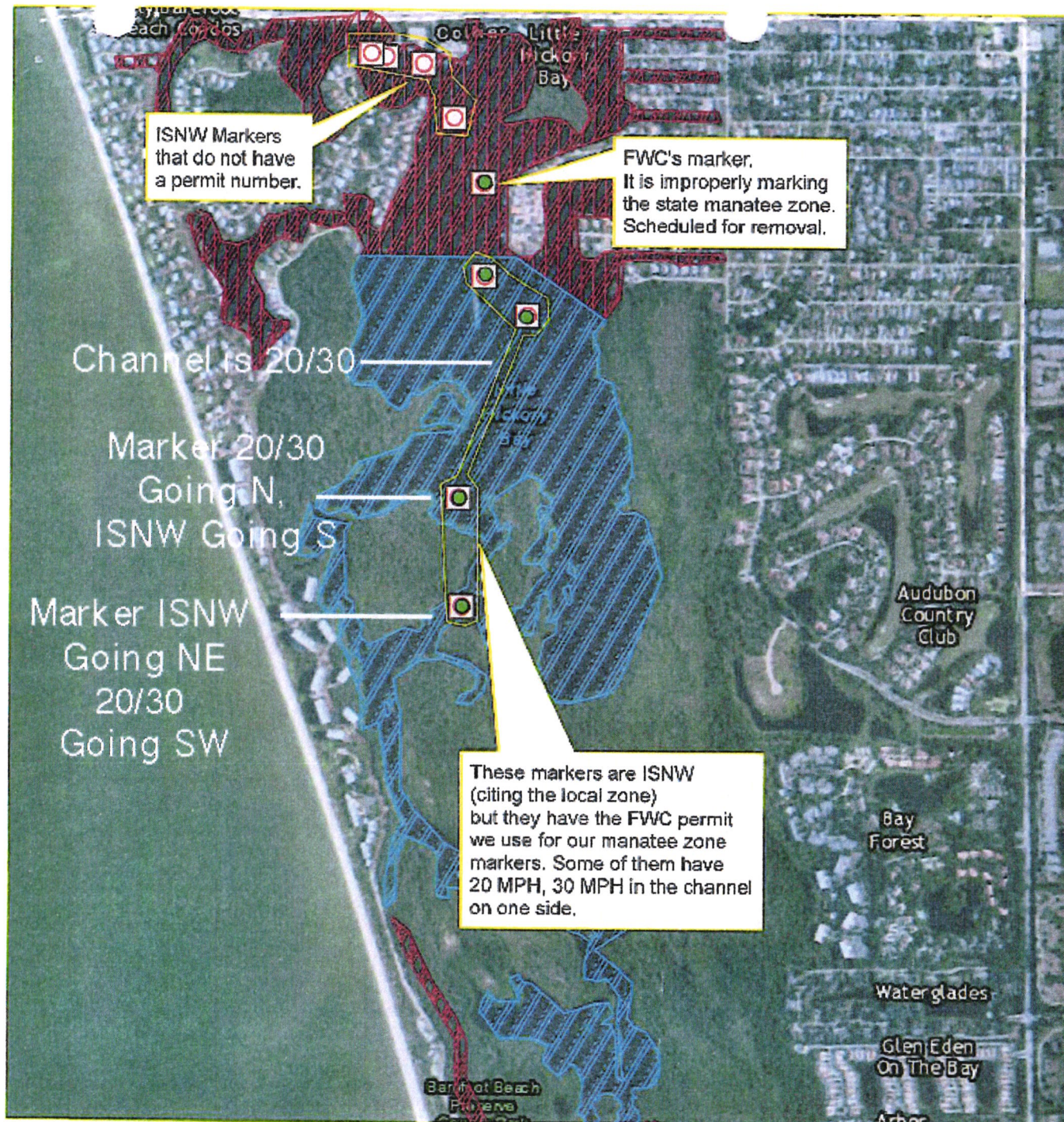
Clam Pass?

There are no Potential Zone Changes for Clam Pass listed with other designated North Region areas described on pages 3-5 in the last section of our notebook, and as shown on the map in Figure 1 on page 16 in the third tab of our notebook. The May 1995 Collier County Manatee Management Plan (NRD-SP-93-01) included this area as an "Idle Speed/No Wake" area. It appears that the Clam Pass region was totally excluded in the Amended May 1997 Collier County Manatee Management Plan (68-C-22.023 F.A.C). That exclusion was carried over into the present FWC considerations. However, Table 4 (pg. 22) shows manatees were sighted by aerial surveys in that area in warm seasons 2006 - 2008. Table 5 (pg. 23) shows there was some manatee-boat overlap. Figure 5 (pg. 28) shows several manatees were detected in the aerial surveys in Inner Clam Pass and near Outer Clam Pass. Figure 19, page 42 shows there are four instances in Inner Clam Bay where there was perinatal manatee mortality, proving that manatees are using the area. Also, Clam Pass has been recognized as the only coastal Natural Resource Protection Area in Collier County, providing migrating manatees with seagrasses, marine algae, shallow warm water, and a safe foraging and resting habitat. Why isn't Clam Pass being considered for manatee protection?

- 1) "2007 West Indian Manatee 5 Year Review by U.S. Fish and Wildlife Service, Southeast Region." <<http://www.fws.gov/northflorida/Manatee/2007%205-yr%20Review/2007-Manatee-5-Year-Review-Final-color-signed.pdf>> p. 65.
- 2) "Florida Manatee Management Plan December 2007" <<http://www.colliergov.net/home/showdocument?id=18398>> p. 6
- 3) "U.S. Fish & Wildlife Service North Florida Ecological Services Office." <<http://www.fws.gov/northflorida/Manatee/manatee-gen-facts.htm>>
- 4) "2007 West Indian Manatee 5 Year Review by U.S. Fish and Wildlife Service, Southeast Region." <<http://www.fws.gov/northflorida/Manatee/2007%205-yr%20Review/2007-Manatee-5-Year-Review-Final-color-signed.pdf>> p. 54
- 5) "2007 West Indian Manatee 5 Year Review by U.S. Fish and Wildlife Service, Southeast Region." <<http://www.fws.gov/northflorida/Manatee/2007%205-yr%20Review/2007-Manatee-5-Year-Review-Final-color-signed.pdf>> p. 66.
- 6) Compiled from "Yearly Morality Summaries" 2000-2014 and "2015 Manatee Mortalities":<<http://myfwc.com/research/manatee/rescue-mortality-response/mortality-statistics/>>
- 7) "Collier County: Location" <http://www.colliergov.net/Home/ShowDocument?id=43859>>
- 8) "U.S. Fish & Wildlife Service North Florida Ecological Services Office." <http://www.fws.gov/northflorida/Manatee/manatee-gen-facts.htm>>
- 9) "A Recreational Boating Characterization of Collier County, Florida August 2009" <<http://nsgl.gso.uri.edu/flsgp/flsgps09001.pdf>>
- 10) "Collier County Recreational Boat Traffic Study April 2010", <<http://www.colliergov.net/home/showdocument?id=29594>> p. 10.

Hickory Bay Map 1

Date: 10/27/2015



- MARKER INVENTORY
- State Manatee Protection Areas**
- ▨ 20 MPH, 30 MPH IN MARKED CHANNEL
- ▨ SSMW, 30 MPH IN MARKED CHANNEL

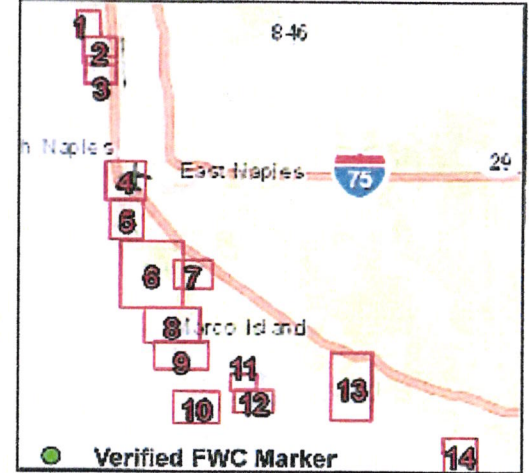
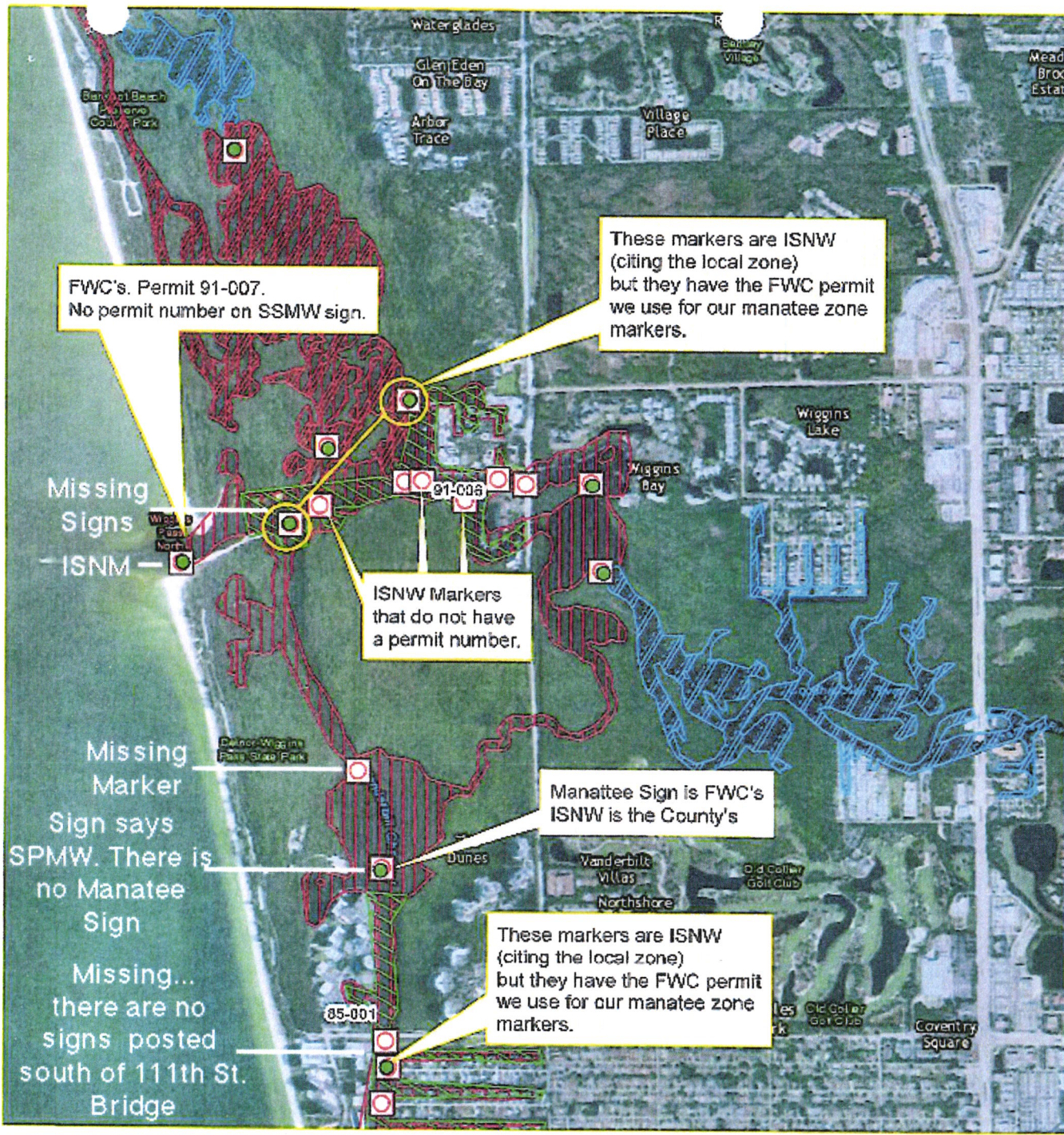
Map by Haden Macbeth - Boating and Waterways
 0 0.15 0.3 0.6 Miles

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Wiggins Pass Map 2

Date: 10/27/2015



- MARKER INVENTORY
- ▨ LOCAL ZONES
- State Manatee Protection Areas**
- ▨ 20 MPH, 30 MPH IN MARKED CHANNEL
- ▨ SSMW (ALL YEAR)
- ▨ SSMW, 30 MPH IN MARKED CHANNEL

Map by Haden Macbeth - Boating and Waterways
0 0.2 0.4 0.8 Miles

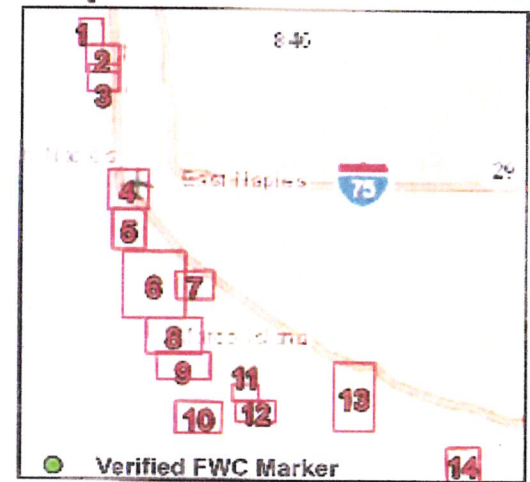
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Vanderbilt Channel Map 3

Date: 10/27/2015



- MARKER INVENTORY**
- LOCAL ZONES**
- State Manatee Protection Areas**
- 20 MPH, 30 MPH IN MARKED CHANNEL**
- SSMW (ALL YEAR)**

Map by Haden Macbeth - Boating and Waterways
 0 0.175 0.35 0.7 Miles

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