A Recreational Boating Characterization for Collier County, Florida

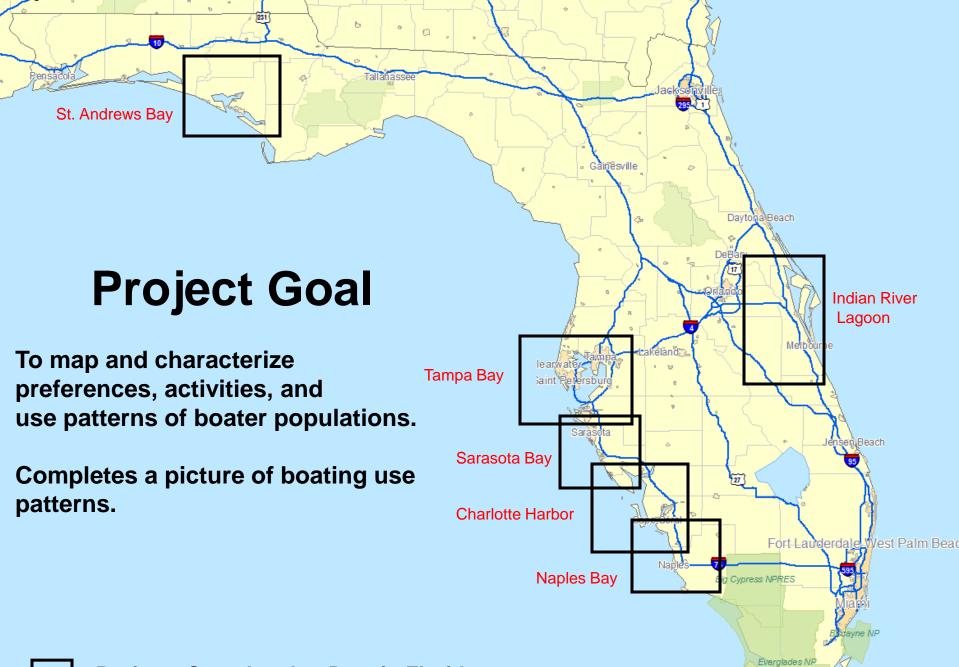
Presented By:

Bryan Fluech Florida Sea Grant Extension Agent County Extension Director, UF/IFAS Collier County, Florida

At The: National Working Waterfronts & Waterways Symposium March 25-28, 2013 Tacoma, Washington

# Outline

- Project Goal & Objectives
- Survey Instrument
- GIS Database Design
- Spatial Patterns Analysis
- Descriptive Analysis for Collier boaters
  - Applications



**Projects Completed to Date in Florida** 

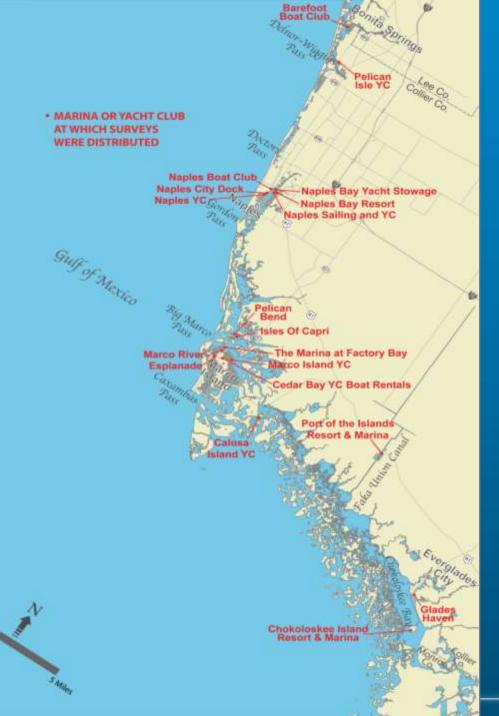
# Questions to be Answered

- Who are the boaters? (demographics)
- Where are boaters coming from?
- Where and how do they access the water?

- Where do they travel on the water?
- What are preferred destinations?
- What activities are conducted?

### **Sample Elements**

- Marina Wet Slip
  Dry Storage Facility
  Public Ramp
  Drivete Deek
- Private Dock



### Marina Sample

Project personnel visited 27 marinas; unable to obtain access at four.

They logged vessel registration numbers or vessel names and hailing ports.

Logged information was used to obtain vessel owner names and addresses from VTRS or USCG databases.

The result was information for 1,823 unique vessel owners who were then sent a mail survey.

Marina personnel addressed and mailed 804\_of the 1,823\_surveys.





### **Ramp Sample**

13 Collier County ramps were visited multiple times between 6/08 and 6/09.
- 3 weekend days per month (7,180)
- weekdays at busy ramps (623)

Logged tow vehicle and trailer license plate numbers for **7,803** new and repeat users.

Owner name and mailing address acquired for <u>**3,666**</u> unique VTRS matches.





### **Dock Sample**

Shoreline data was used to select waterfront parcels from Collier County property records.

Then matched names and addresses of vessel owners from VTRS to parcel owner names and addresses from property records.

The result was <u>**2,161</u>** vessels owners associated with a shorefront parcel.</u>

They served as the dock sample for the mail survey.



## Map-Based Boater Survey



### PART 1. PLEASE DRAW THE ROUTES OF YOUR LAST TWO BOATING TRIPS

This questionnairs has how maps. Map A (to the right of these questions) shows the Naples and Nanco lained areas in detail. Maps I on the reverse solid shows present efficience react appropriate map or maps, please privide information about your last two beating trips in the past 12 and markin. This will include marking your lawsh or departure sites, desarrow your boating your boating used marking your boating activity spots or destinations along those nouts. Neare order a site "instructions for demainty mouths and destinations" houses on the maps. Thank you!

### If you have not boated in the Collier County area in the past year, please check here and return the survey in the postage-paid envelope. Again, we thank you.

### PART 2. PLEASE DESCRIBE YOUR LAST TWO BOATING TRIPS

Question 1. About what time did you get on the water for each of the two trips that you draw on the

First trip (solid line)	AM	PM
Decision in processing from	CAME	(PM

Question 2. About how long were you on the water on each of the two trips that you drew on the map? (Please write in the number of hours or deps.)

CONTRACTOR AND A CONTRACT	First trip (solid line)	Hours	Days
	CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWN		

Question 3. Please circle the day(1) of the week that you took each of the two trips that you draw on the map

Pinst trip (solid line) Mon Tue Wed Thu PH Sat Sun Second my standard fine) Mon Tue Wed Thu Fit. Sat Sun

Question 4. Please circle the month in which you took each of the two trips that you drew on the map

Pint trip (solid line) Jan Feb Mar Apr May Jan July Aug Sep Oct Nov Dec Sansyst trip (standard line) Jan Ten Ate: Apr May Jan July Aug Sep Oct New Sec.

Question 5. From the list below, please check the tox beside the type of boat that you used on each of the two trips that you drew on the map.

Trip 1	Boat Type	Trip 2
0	Personal Watercraft:Jet Ski	0
10	Kayah Row Carrow	-0
	Sailboat (no cabin)	
11	Ballinger laufer sammer	10
0	Speed Beat (no cabin)	0
10	Name of Child ( John Labor)	0
	Open Fisherman/Fiets/Skiff	
13	Chatara Specificherman (arbit calere)	11
	Power Cruiser (with cabin)	
- 01	Omit Haur	1 15
0	Ponteen Boat	10
0.03	Either barecity?	100

Question 6. Please enter the length and draft of the locat(k) that you identified above. (Draft is how far below the water your prop. hull, or keel extends.)

Finit trip (solid line) Length (leet) Draft (leet-inches)

	Longth (best)	Braft From exchange
Departy his interfact lines.	Consider State 1	

Question 7. Please indicate the departure site type of your first and second trips by checking the appropriate box.

Trip 1	Departure Site Type	Trip 2
	Boat ramp	
	Dereits/Causers	0
	Marina wet slip	
0	Photos in confederation doub	1 12
	Marina dry storage	

### If you departed from a ramp, marina, or shoreline/causeway, please answer the following question If you departed from a residential or conduminiam dock, please skip to Question 13

Question 8. Please provide the name or location of the ramp, marina, or shoreline/causeway from which you departed on each of your last two trips that you drew on the map.

Second tria:

kestion \$. About how long does it take to drive from your home to the ramp, marina, or shoreline/causeway that you identified in Question 8?

Eicst trig: Hours \_\_\_\_\_ Minutes \_\_\_\_\_

Question 10. Is there a boat ramp that you would like to use, but avoid? Yes . No .

Second tria: Hours \_\_\_\_\_

First trip:

Please check all of the following that apply to the namp you would like to use, but avoid.

Minutes

Question 11. What is important to you in selecting a ramp, marina, or shandine/causeway? (In the table below, check the local that describes how important each factor is to you.)

Stationent	Very Important	Important	Neutral	Unimportant	Very Unimportant
as Press wohr access	1.	0		Q:	100
b) Restroom availability	0	0	0	0	
() the parking or restorts fee	- 0	-17	0		
d) Well-marked access channels					
all Pressently to my favorite facebry sparts	<u> </u>	-17	101	0	- 0 -
f) Adequate parking					
pi Availability of failing scaption, frail	13	- 11	0	0	- ED -
h) Short wait to launch	0	- 0		0	
2 Mantenanus service	12	13	- 0 -	13	11
() Fuel availability	0	0		0	0
E) Pump and Josephillip	0	13	0	0	0
i) Nearby amenities (e.g., restaurant)					
k) Proceedy to my factor			- 0		
0 Ease of launching and retrieving boat					
ni: Salt and mount patting and	0.	- 11	0	17.	23
ni Other			0		

Question 12. At which sites, if any, have you feit the need for additional access to the water? Please mark these sites with an 'A' on your trip map.

Question 13. In which areas, if any, here you experienced the greatest amount of boat congestion on the water? Please mark congested mass on the map with the letter "C." ("Congestion" refers to the average of more boats than you would prefit?)

### PART 3. PLEASE DESCRIBE YOUR TYPICAL BOATING TRIPS

Question 54. In the bases below, please write the number of days per month that you operated your boat in the Collier County mapped area in the part year.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nev	Dec

Question 15. Which of the following are important to you in selecting your typical boating routes? (For a-i in the table below, check the box that beat describes your opinion.)

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
a) I try to avoid congested areas/crowds.					0
11 / Ky to excell shafting agent	0	- 12	11		
c) The fishing is good.					
a) I profer solil marked sharme's	0		63	- 131	12-1
e) i prefer calm, protected waters.	0	0	.0		
El latere are requiriant. I just southe anaphit		- 13	-13	- 10.0	100
g) Easy access to supplies or fuel			C1		
b) Court access to my lacente bearing spore.	0	- 25	-01	(1)	12
0 I enjoy the scenic beauty					
p Oltar	0	- 12	- 11	11	- 11

Question %. What are your activities on your typical boating trips? (Check all that apply.)

	Beach Picnicking	Nature Viewing	Sightseeing
	Cruising	Daytime Anchoring	Socializing
	Diving	Overnight Anchoring	Visiting Restaurant
	Fishing	Saling	Swimming
	Sking/Water Sports	Beach Camping	Jet Skiing
-	Others Associated		

			DE YOU	
1100	 ovar, u	1000010	JE TOU	COLL.

Question 17. How long have you been operating a boat in the Collier County area? \_\_\_\_\_ years.

Question 18. Have you ever taken a boating safety or seamanship course? Yes D No D

Question 18. In what year were you barn?

Question 28. What is the ZIP code of your primary residence?

Question 21. What detracts most from your Collier County beating experience?

Question 22. What is needed most to improve your Collier County boating experience?

PLEASE RETURN THIS QUESTIONNAIRE IN THE ENCLOSED POSTAGE-PAID ENVELOPE. THANK YOU VERY MUCH FOR YOUR TIME AND PARTICIPATION.

# **Map-Based Boater Survey**

PART 1.	PLEASE D	FLAW THE	ROUTES	OF YOUR L	AST TWO	BOATING	TRIP

This questionnaire has teo maps. Map A (b) the right of these questions) shows the Naples and Marco bland energies in dutal. Map (b) (in the revenue addit shows greated afforce area. On the more appropriate map or maps, please previde information about your last hos boating trips in the part 12months. This will include marking your launch or departure show, drawing your boating thread random and marking your boating altrivity posts or desirations along these rootes. Please refer to the "Instructions for drawing results and feedinations" because in the mast your, please effect to the "Instructions for drawing results and feedinations" because in the mast your, please chart has the "If you have not boated in three Callier County areas in the mast your, please chart have.

and return the survey in the postage-paid envelope. Again, we thank you.

### PART 2. PLEASE DESCRIBE YOUR LAST TWO BOATING TRE

About what time did you get on map? (for example, 2:30 AM)	the water for each of t	he two trips that you	a drew on th
First his (selid line)	AM	PM	

table below, check the box that best describes how important ear						
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b) Restroom availability	0	0	0			
the parking or tested free		- 17	0			
I) Well-marked access channels						
a) Pressently to my favorite faceting sparts	0	-12	101			
Adequate parking						
Availability of failing scapters, trail	13	- 11	0			
ij Short wait to launch	0					
Adamenanus service	12	13	- 0 -			
Fael availability			0			
Pump and Installing	C	13	- 0			
Nearby amenities (e.g., restaurant)						

The survey questionnaire was sent in 3 waves to account for seasonality

- June-July
- November
- March

# Boaters were asked if they were willing to answer a follow-up questionnaire

C) 004

Question 8. Please provide the name or location of the ramp, marina, or shoreline/causeway from which you departed on each of your last two trips that you drew on the map.	Question
Exat trip:	Guestion
Second trip:	Common
Question 9. About how long does it take to drive from your home to the ramp, marina, or shorefine/pauseway that you identified in Question 8?	
Exst.trig: Hours Minutes	
Second trig: Hours Minutes	Question
Question 18. Is there a boat ramp that you would like to use, but avoid? Yes 🗌 No 🗌	
If yes, please name the namp:	
Please check all of the following that apply to the ramp you would like to use, but avoid.	
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amount of boat congestion the letter "C." ("Congestion

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final	Disagree	Strongly Disagree
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1	- 53	1000
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1	- 10.1	1000
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1	(1)	12 (1)
]		

### sk all that apply.)

Sightseeing
 Socializing
 Visiting Restaurant

unty area? \_\_\_\_\_ yea

He? Yes D No D

n 29. What is the ZIP code of your primary residence?

Question 21. What detracts most from your Collier County boating experience?

Question 22. What is needed most to improve your Collier County boating experience?

PLEASE RETURN THIS QUESTIONNAIRE IN THE ENCLOSED POSTAGE-PAID ENVELOPE THANK YOU VERY MUCH FOR YOUR TIME AND PARTICIPATION.

# **Map-Based Boater Survey**



the. This marking	sap or maps, please provide informati will include marking your launch or de your boating activity spots or destin a for drawing routes and destination	parture sites, drawing ations along those ro	your boating travel routes, utos. Please refer to the	
	re not boated in the Collier County on the survey in the postage-paid en			
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	maps (or example, 1.30 Mar)			
	First trip (solid line)	AM	PM	

tow long were you on the water on each of the two trips that you drew on the map? - write in the number of hours or deps.)						
trip (solid line)	Hours	Days				
and tray interested literal	Photo	Days.				

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b) Restroom availability	0		0	0	
c) the parking or teached; fee	- 0	-11	0		
d) Well-marked access channels					
a) Presidently to any favorite trading sports	0	-13	101	0	
f) Adequate parking					
pi Availability of failing boastlers, built	17	- 11	0	0	ED -
h) Short wait to launch	0			0	
E Mamenanus service	12	13		13	
() Fuel availability	0		0	0	0
b) Plans and Josephillip	0.	13	0	0	0
j) Nearby amenities (e.g., restaurant)					
k) Presently to my faulter	- 11	0	- D -	0	0
() Ease of launching and retrieving boat					
ni Salt and secure participante	11-	-0	0	17.	123
nj Other					

- 9,309 surveys mailed
- 2,067 surveys returned
  - 21% overall return rate
  - 17% return rate for long surveys
  - 50% return rate for short surveys (repeats)

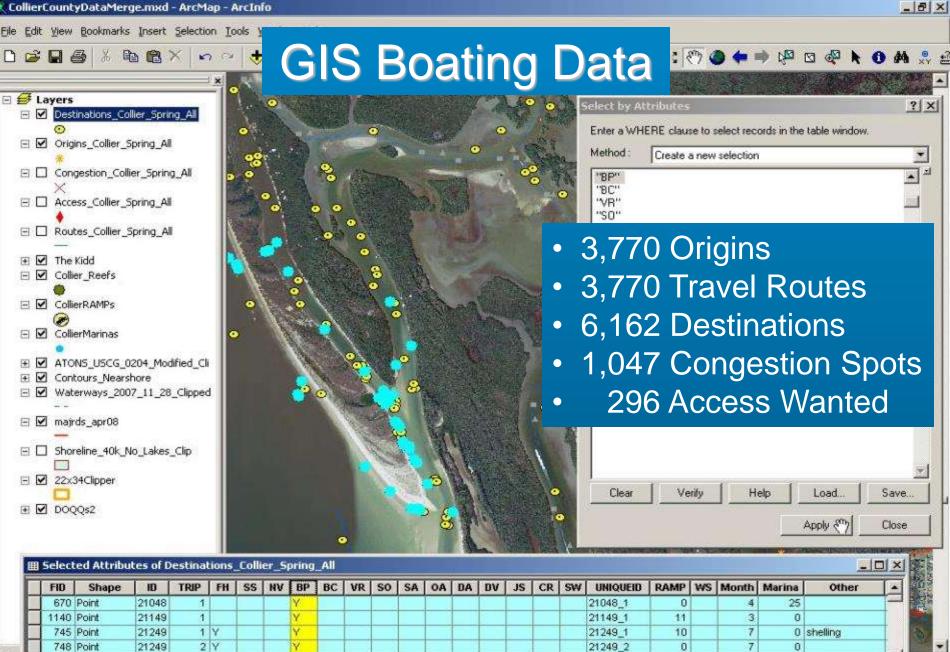
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	Second trig:		
Question 9.		es it take to drive from your h y that you identified in Quest	
	First trig: Hours	Minutes	
	Second trig: Hours	Minutes	
Question 1		mp that you would like to use.	
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If yes, p	I. Is there a boat ra lease name the ram	mp that you would like to use.	, but avoid? Yes 🗌 No 🗆
If yes, p Please o	<ol> <li>Is there a boat ran lease name the ran sheck all of the follo</li> </ol>	np that you would like to use. p:	but avoid? Yes D No D

				100
 MART 4.	PLEAS	E DESCR	NOR YOU	HSELF

Question 17. How long have you been operating a boat in the Collier County area? years.
Question 18. Have you ever taken a boating safety or seamanship course? Yes  No  No
Question 18. In what year were you born?
Question 28. What is the ZIP code of your primary residence?
Question 21. What detracts most from your Collier County beating experience?
Question 22. What is needed most to improve your Collier County boating experience?

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CollierCountyDataMerge.mxd - ArcMap - ArcInfo



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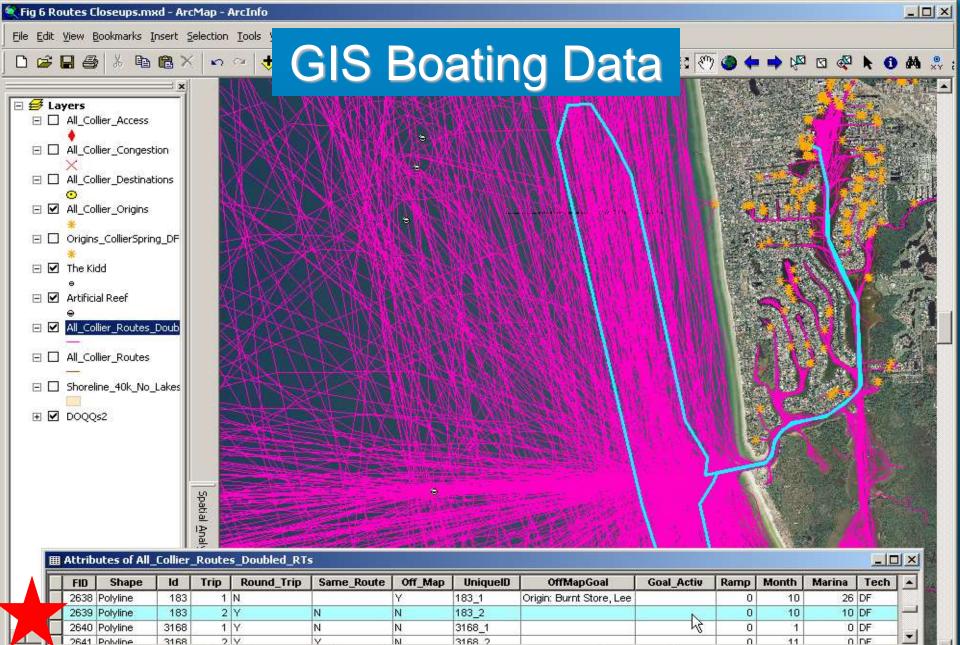
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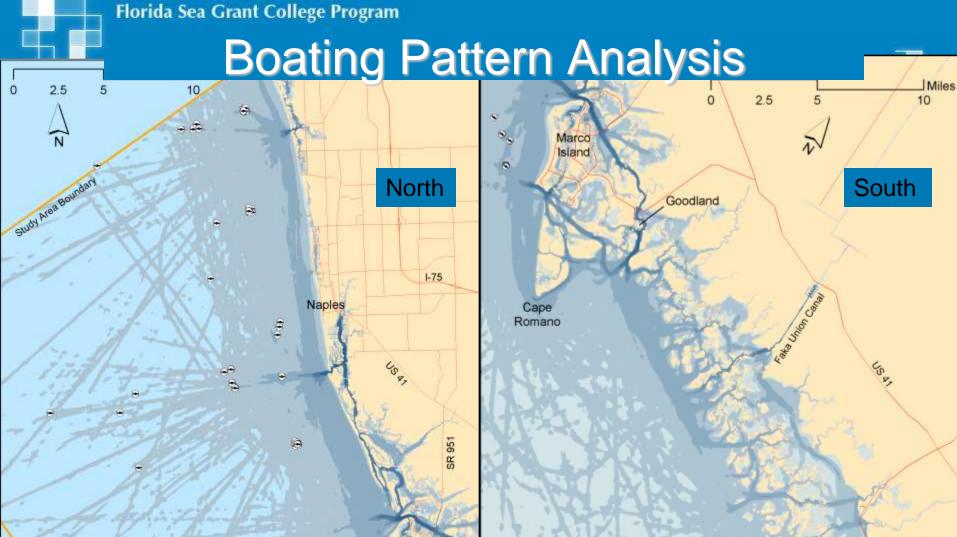
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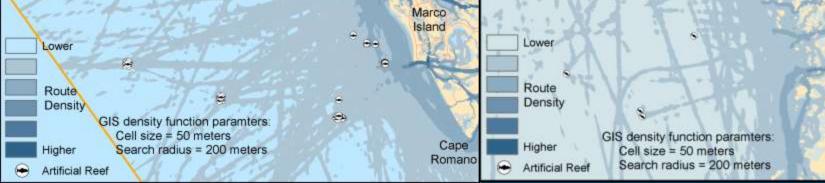
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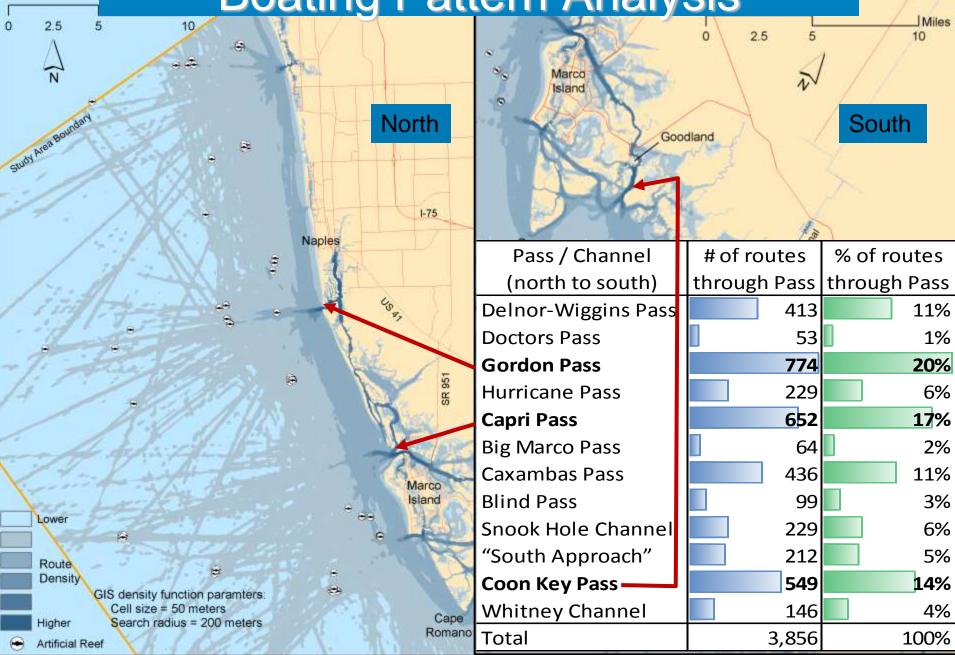
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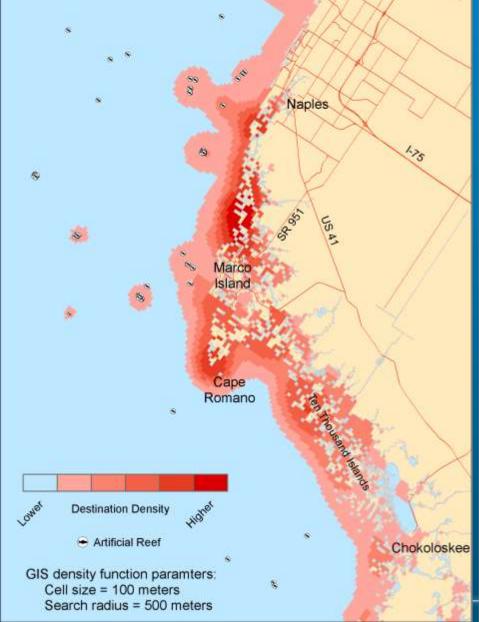


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### **Boating Pattern Analysis**



## **Boating Pattern Analysis**



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Miles

2.5

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0

O 0.25 0.5 N Survey Data Point (Reported Favorite Destination)

GIS density function parameters: Cell size = 25 meters Search radius = 250 meters

> Big Marco Pass

> > Marco

Island

## **Boaters' Activities by Category**

	All Areas		Wiggins Pass		
Activity	% Boaters	Rank	% Boaters	Rank	
Fishing	78	1	43	1	
Nature Viewing	54	2	31	5	
Cruising	45	3	38	2	
Sight Seeing	41	4	31	6	
Beach Picnicking	41	5	27	7	
Socializing	39	6	31	4	
Visit Restaurants	35	7	32	3	
Swimming	30	8	23	8	
Day Anchor	24	9	17	9	
Beach Camping	14	10	6.3	13	
Diving	11	11	9.5	12	
Overnight Anchor	10	12	10	11	
Water Ski/Sports	9.6	13	11	10	
Sailing	3.6	14	1.9	15	

# Typical Respondent: Detractors

Perceives that lack of seamanship/boating knowledge or "common courtesy" and a lack of parking at, for example, Bayview Park and Collier Blvd. Boating Park detracts most from their boating experiences.

Detractor Sub-Category (n = 1,424 responses)	Response Number	Overall Percentage	Rank (39 total)
Other boaters' behaviors	169	11.9	1
Inadequate ramp parking	110	7.7	2
Too few public ramps / ramp congestion	104	7.4	3
Congestion on waterways	99	7.0	4
Speed zones / No wake zones	98	6.9	5
PWC operators	79	5.5	6
Lack of dredging (shoaling)	77	5.4	7
No detractors	72	5.1	8
Speeding and big wakes	66	4.6	9
Water pollution / Floating trash	49	3.4	10

# Reasons for Selecting Favorite Launch or Departure Sites

Reason / Description	Response Number	Response Score	Rank
Well-marked channels	889	1.02	1
Safe and secure parking	894	1.59	2
Adequate parking	888	1.61	3
Ease of launching / retrieving boat	884	1.75	4
Proximity to favorite boating spots	877	1.84	5
Short wait to launch	874	1.99	6
Proximity to home	889	2.35	7
No parking or launch fees	865	2.44	8
Availability of restrooms	875	2.46	9
Deep-water access	880	2.53	10

# Reasons for Selecting Favorite Travel Routes

Reason / Description	Response Number	Response Score	Rank
Enjoy scenic beauty	1209	1.60	1
Avoid congested areas	1218	1.73	2
Fishing is good	1198	2.03	3
Prefer well-marked channels	1220	2.07	4
Quick access to favorite boating spots	1163	2.16	5
Prefer calm, protected waters	1212	2.25	6
Avoid shallow water	1228	2.38	7
Easy access to supplies or fuel	1176	2.98	8
None are important – just cruise around	1070	3.72	9

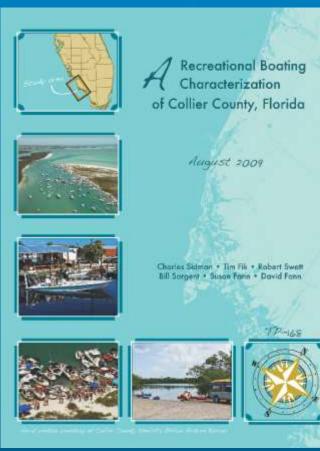
# **County** Applications

### Collier Blvd. Boat Ramp Expansion

### BP Oil Spill Artificial Reef Grant



### Thank You



### http://nsgl.gso.uri.edu/flsgp/flsgps09001.pdf

Dr. Bob Swett- rswett@ufl.edu Bryan Fluech - fluech@ufl.edu

