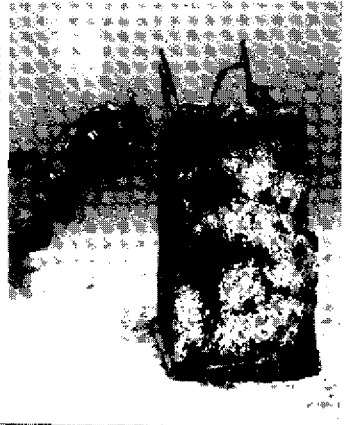
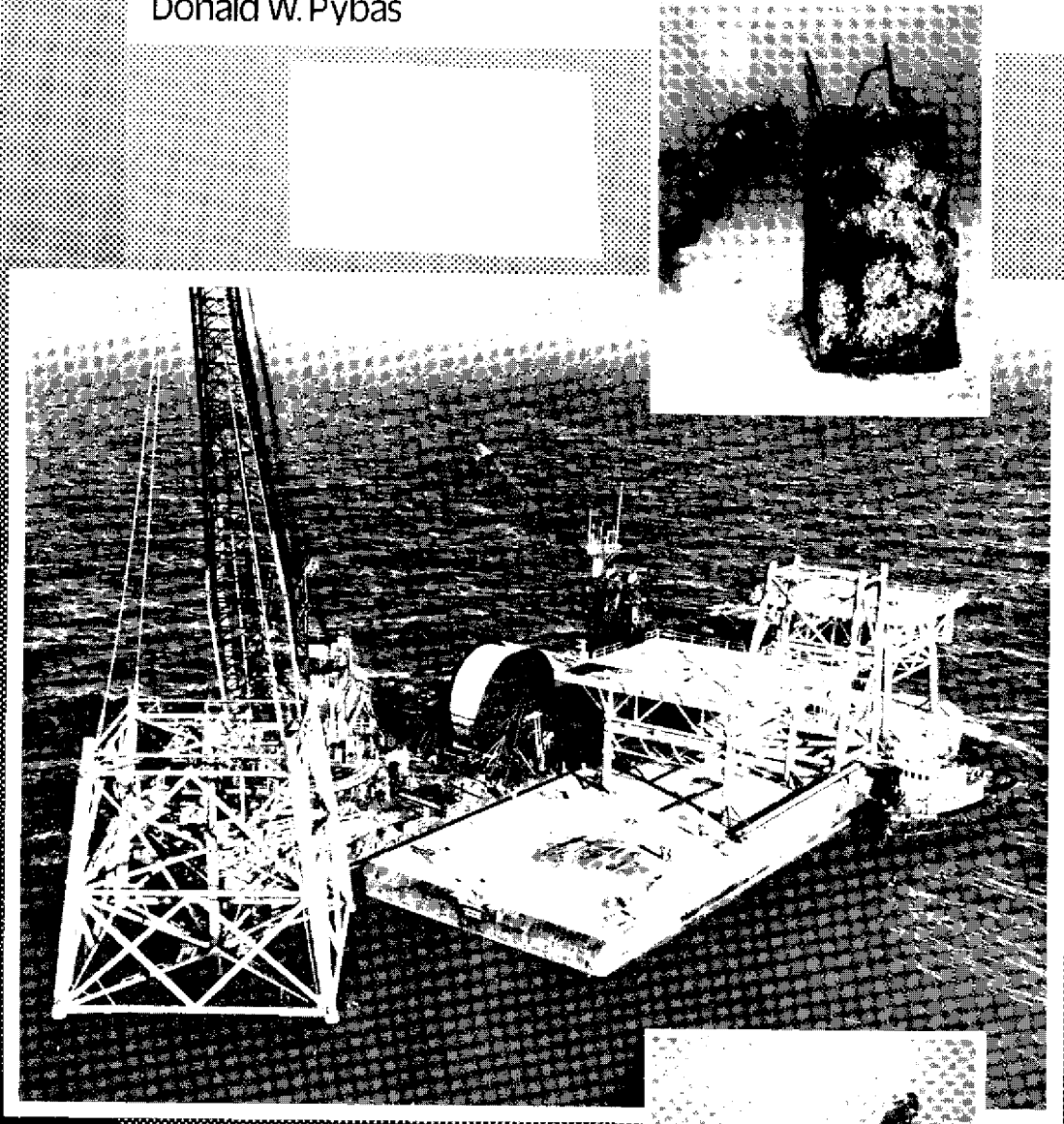


Atlas of **Artificial Reefs** in Florida

Donald W. Pybas



This atlas is dedicated to the late Donald Y. Aska for his efforts to make the world of artificial reefs better known in Florida.

Grant No. NA86AA-D-SG068

Project No. SGEP-9

Cover photographs show towing an obsolete petroleum platform for sinking in the Gulf of Mexico (Courtesy of Tenneco, Inc.), the submerged tug "Orion" (Courtesy of Harry Parker), and a concrete pipe reef (Courtesy of Robert Karafei).

ATLAS OF ARTIFICIAL REEFS IN FLORIDA

Donald W. Pybas

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Donald W. Pybas, Marine Extension Agent,
Sea Grant Extension Program, Miami, Florida

INTRODUCTION

This Atlas is designed to provide the public with a guide to locations and characteristics of permitted artificial reefs constructed for fishing and diving purposes in Florida's coastal waters.

A 1983 version (MAP-30) listed reefs based on permit applications filed with federal and state regulatory agencies and information from local reef building sources. This Atlas has been updated to include reefs whose existence has been confirmed by knowledgeable local sources. Unconfirmed data were used in a few areas where local information was not available or was incomplete, but where permit records or other information still indicated the existence of a reef. Inaccurate data may be included due to these reasons and the user is thus informed of this possibility. **THIS ATLAS IS NOT INTENDED FOR NAVIGATION PURPOSES.** Users of the Atlas are cautioned that the coordinates listed may or may not be corrected for plotting positions on nautical charts as many coordinates are "machine generated" numbers from onboard LORAN-C receivers. Correction factors should be determined by getting time differences for several fixed positions, such as channel markers or day beacons, and by averaging each secondary reading. The correction factors should be applied to the listed coordinates to determine chart Loran-C position. Of the several ways that Loran-C radio navigation can assist users, its repeatable accuracy, once adjusted for local correction factors, is more important than absolute accuracy.

Further information on Loran-C can be obtained from the U.S. Coast Guard by requesting the Loran-C Users Handbook (COMDTINST M 16562.3).

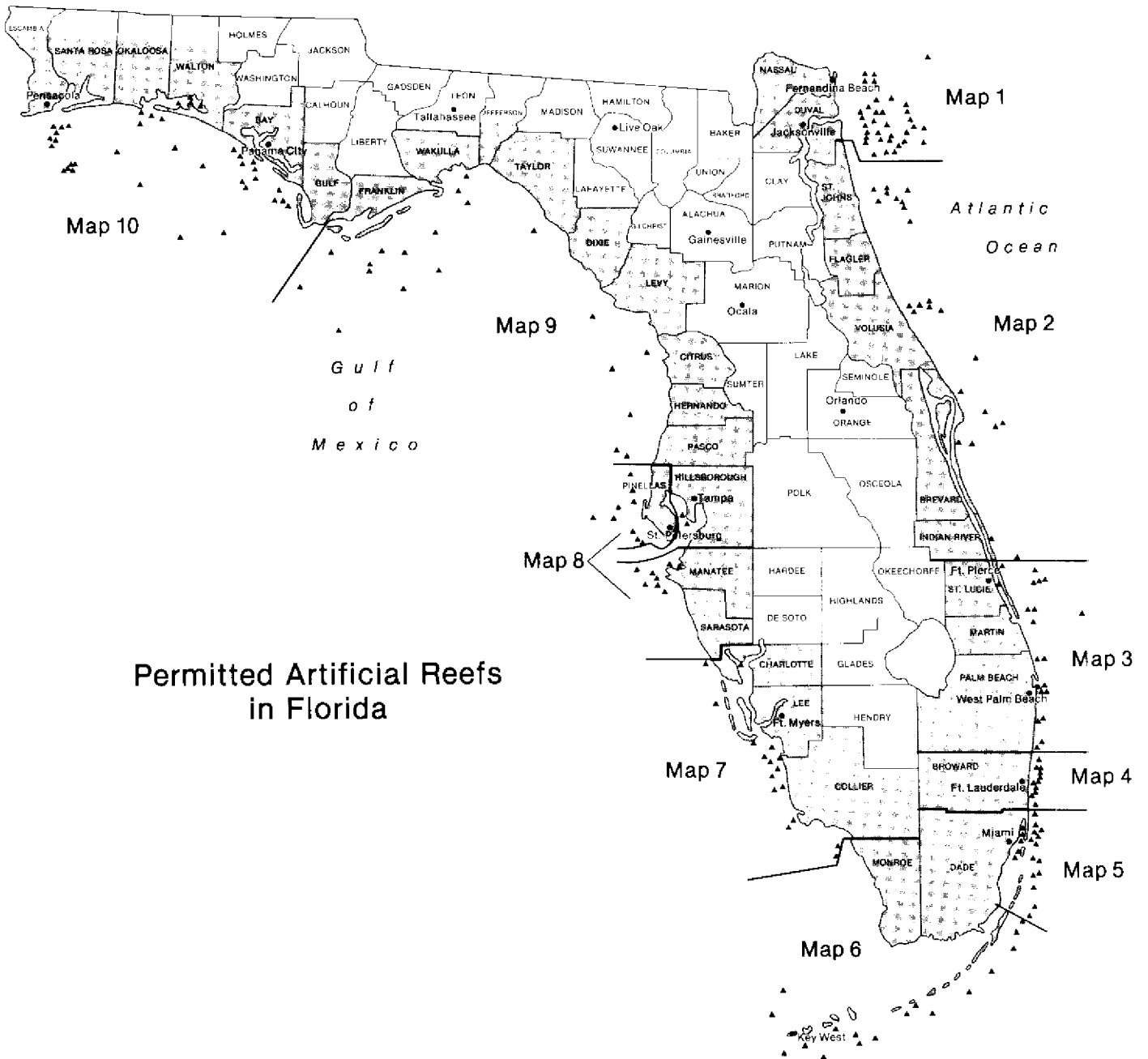
Users of this Atlas are also alerted to the fact that the coordinates listed may zero in on a marker buoy on or adjacent to the reef or may center on one corner or end buoy of a reef. In most cases the listed coordinate will be a component on the reef site or,

due to lack of local information, the geographic center of the permitted reef site. A depth finder should be used to accurately determine reef contours and optimum fishing sites.

Users may also find a slight deviation between listed longitude-latitude coordinates, and Loran-C coordinates if exact chart overlays are made. The coordinates may also not align precisely with "fish havens" noted on National Ocean Survey navigation charts. The coordinates are listed as reported by the best available local information sources. Differences can result from varying local recording procedures. Users are advised to consult local fishing clubs, guides, marinas, Chambers of Commerce or sportswriters to confirm specific fishing and diving sites when questions arise. A directory of persons and organizations concerned with artificial reefs in Florida is available from the Florida Sea Grant Extension Program (see back cover) or from local coastal county Cooperative Extension Service offices.

The survey leading to this publication was conducted during late 1986 and early 1987 and does not include reefs permitted and constructed after April 1987. The survey methodology consisted of mailings, telephone and personal contacts, archive searches and local Sea Grant Extension Program assistance. Gratitude is expressed to those persons and organizations who provided local information. Neither the author nor the Florida Sea Grant College Program can accept responsibility for the complete accuracy of the data contained herein.

The editor would like to acknowledge Mr. James Anderson and the staff of the Cartography Program of the Florida Resources and Environmental Analysis Center located at Florida State University, Tallahassee, Florida for an outstanding job in preparing the maps and typesetting the text.

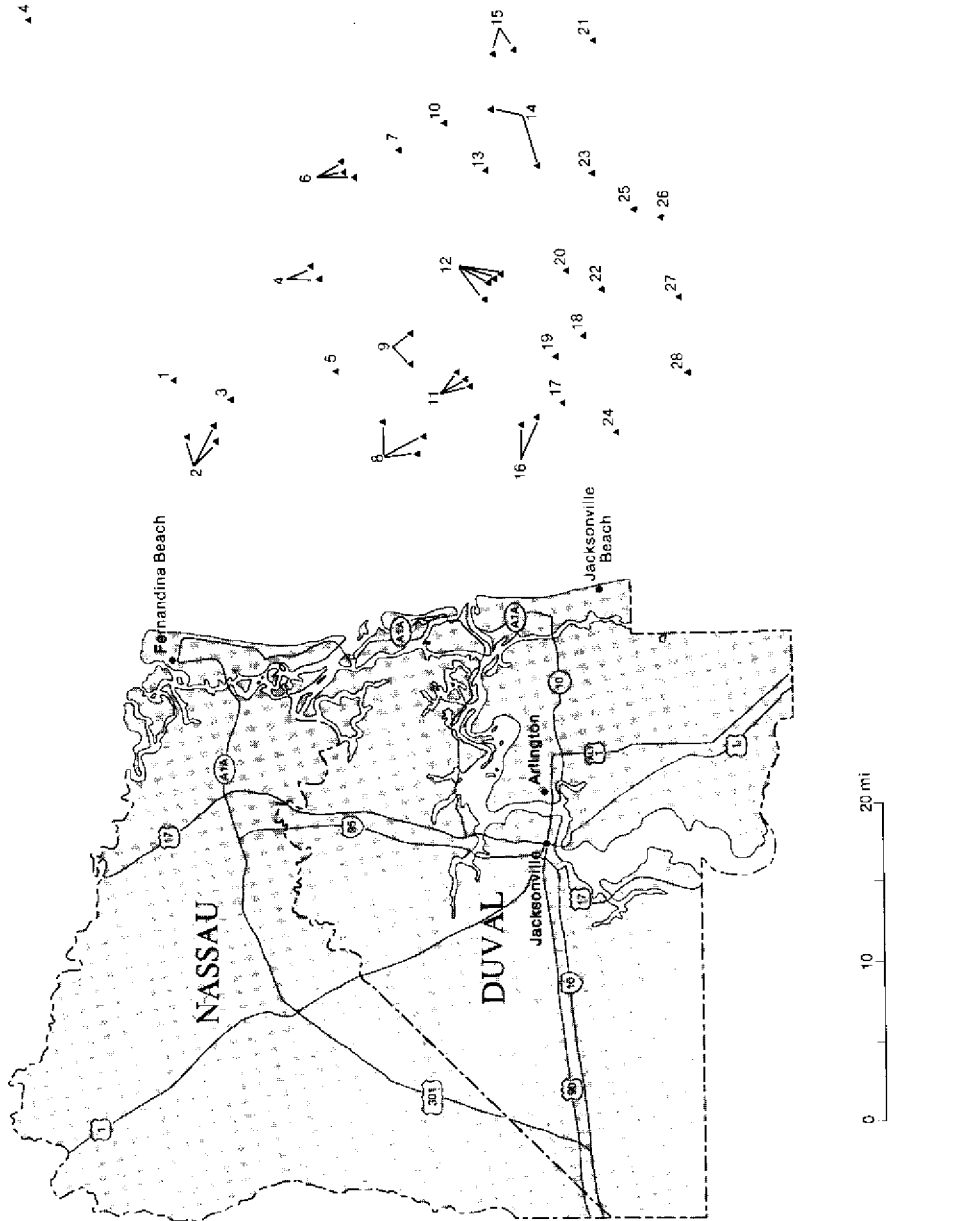


Permitted Artificial Reefs in Florida

For the purposes of portraying artificial reef locations, the state of Florida has been divided into ten coastal areas. They are presented in numerical order beginning with the northern Atlantic coast, proceeding south through the Keys and continuing north along the Gulf coast of the state. This map shows the general distribution of permitted reefs. For detailed information refer to the area maps and their accompanying data on reef characteristics and location.

Map 1: Nassau and Duval Counties

4



Year Built	Name	Latitude	Longitude	Loran C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
1	Sahimans Gully	30°40'07"	81°09'34"	45305.0 61875.0	70	15.1	Steel barge
2	Whitakers Snapper Hole	30°38'13"	81°13'22"	45314.4 61907.1	55	12.9	Steel barge
1984	Whitakers Snapper Hole	45326.8	61915.0	45326.8 61915.0	60	13.0	125' Steel barge
1986	Whitakers Snapper Hole	45317.3	61912.3	45317.3 61912.3	70	10.3	50' Steel hull
3	Fernandina Snapper Banks	30°36'35"	81°10'39"	45292.6 61899.0	70	14.4	Wood vessel

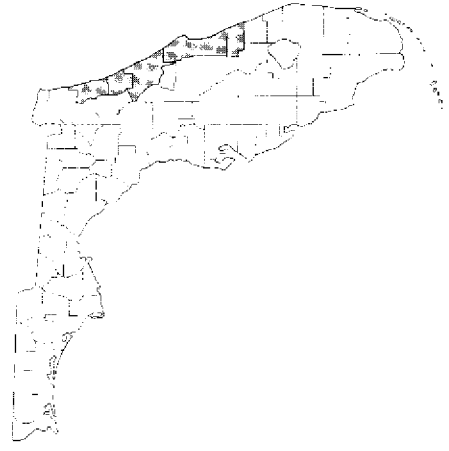
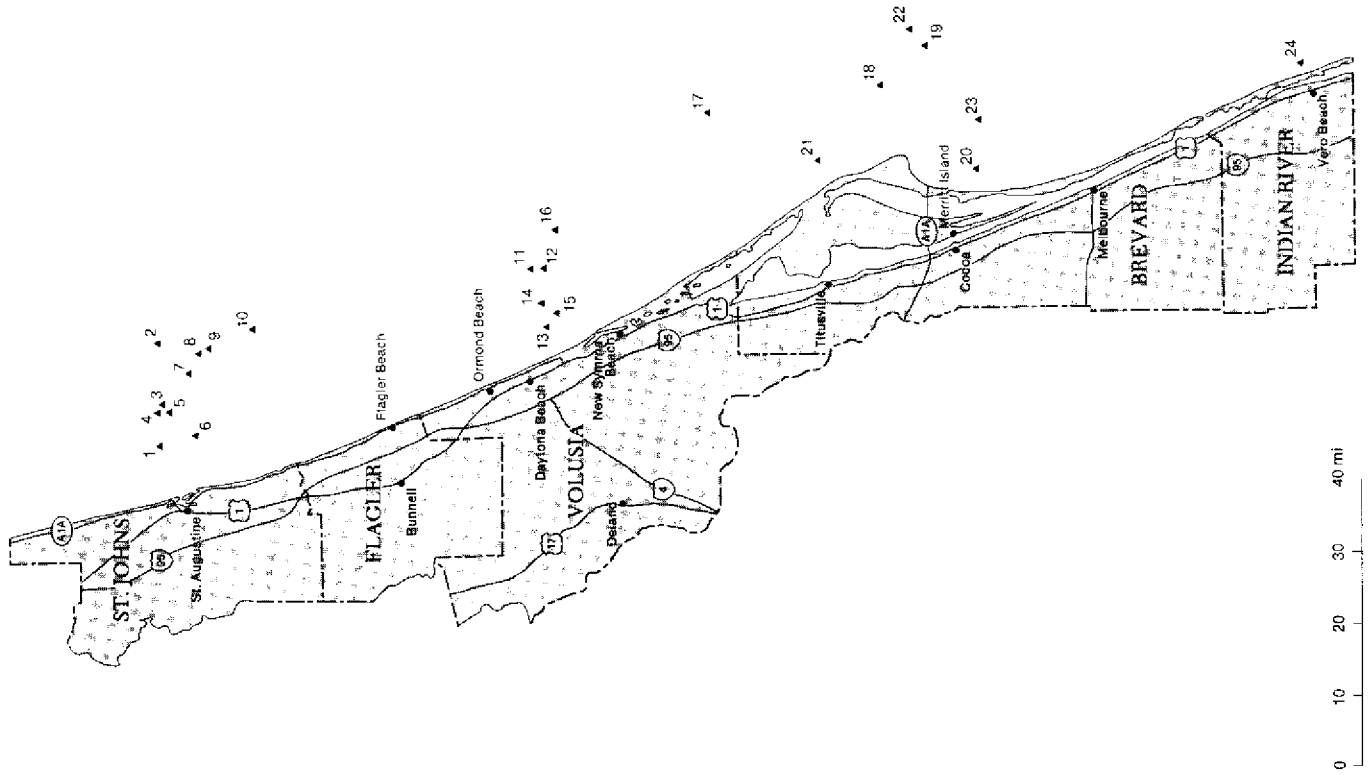
Nassau

Year Built	Name	Latitude	Longitude	Loran C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
4	Amberjack Hole	30°32'49"	81°03'10"	45210.5 61849.0	78	18.8	Barge, two tugs
	Amberjack Hole			45210.3 61852.3	76	18.5	Barge
	Amberjack Hole			45215.0 61646.6	67	19.3	Culverts
5	Rabbit's Lair	30°31'35"	81°10'09"	45247.8 61916.5	68	13.1	Wooden tug
6	Tanzlers Waters	30°29'37"	80°57'30"	45151.8 61814.5	90	22.2	Tug, barge
	Tanzlers Waters	30°29'37"	80°57'30"	45151.4 61800.0	86	23.5	204' barge
	Tanzlers Waters	30°29'37"	80°57'30"	45151.5 61815.1	86	22.2	150' tug
7	Tournament Reef	30°27'48"	80°56'01"	45129.8 61808.8	90	22.4	Materials information unavailable
8	Montgomery Reef	30°26'47"	81°13'12"	45235.5 61958.0	65	8.4	Autos, metal junk, concrete rubble
	Montgomery Reef			45234.5 61958.0		8.4	Barge
	Montgomery Reef			45232.7 61958.9	68	8.5	63' tug RELIANCE
	Montgomery Reef			45231.1 61959.7	66	8.5	Tug
	Montgomery Reef			45236.9 61961.9	65	8.0	Culverts
	Montgomery Reef			45248.8 61962.8	61	8.5	Barge
	Montgomery Reef			45249.5 61948.6	63	9.6	North wreck
	Montgomery Reef			45237.3 61958.6	65	8.4	120' steel barge
9	Busey's Bonanza	30°25'59"	81°08'10"	45196.0 61918.5	52	12.5	Drydock, barge, tug, vessel
	Busey's Bonanza			45195.8 61919.3	52	12.5	Tires
	Busey's Bonanza			45195.5 61919.6	54	12.5	Drydock
	Busey's Bonanza			45194.6 61917.6	54	12.5	Tug
	Busey's Bonanza			45210.8 61937.0	48	10.6	Two wrecks, (drydock)
10	Harm's Ledge North	30°24'59"	80°54'07"	45095.0 61806.5	92	24.5	Materials information unavailable
11	Jacksonville 9 Mi. Reef	30°23'32"	81°10'11"	45192.2 61944.9	72	10.4	Barge, steel tanks, culverts
	Jacksonville 9 Mi. Reef			45192.1 61944.8	72	10.5	Barge
	Jacksonville 9 Mi. Reef			45198.6 61945.2	58	10.5	Barge
	Jacksonville 9 Mi. Reef			45191.6 61949.6	56	10.4	Culverts, pillboxes
	Jacksonville 9 Mi. Reef			45191.5 61947.6	58	10.5	150' barge
	Jacksonville 9 Mi. Reef			45192.0 61948.0	58	10.5	Barge
	Jacksonville 9 Mi. Reef			45192.1 61946.6	70	10.4	Tug
	Jacksonville 9 Mi. Reef			45193.1 61948.6	68	10.4	Nine mile barge
	Jacksonville 9 Mi. Reef			45194.3 61946.8	63	10.2	Tanks
	Jacksonville 9 Mi. Reef			45193.0 61944.3	63	10.4	52' tug
12	East 14 & 15	30°23'24"	81°04'55"	45156.2 61901.2	65	15.0	Stadium demolition material
	East 14 & 15			45149.9 61887.5	68	16.4	Press box sections
	East 14 & 15			45149.4 61886.9	68	16.4	Culverts
	East 14 & 15			45143.9 61876.3	71	17.4	Tug, barge, culverts
	East 14 & 15			45149.1 61888.4	67	16.3	Press box sections
13	East of EF	30°22'34"	80°57'13"	45100.0 61940.5	90	21.6	Materials information unavailable

14	Harm's Ledge Harm's Ledge	30°22'20" 80°53'52"	45077.0 61813.7 45073.9 61847.9	98 90	24.7 22.7	Tug Materials information unavailable
15	1971 Blackmarns Reef Blackmarns Reef Blackmarns Reef Blackmarns Reef Blackmarns Reef	30°21'55" 80°50'05" 30°21'55" 80°50'05" 30°21'55" 80°50'05" 30°21'55" 80°50'05" 30°21'55" 80°50'05"	45050.0 61784.4 45047.5 61783.7 45050.7 61786.7 45051.2 61786.8 45040.2 61779.0	105 106 104 104 106	28.0 28.2 27.8 27.8 28.7	Several vessels, barges Ferry Barge Tug #2 Airplane wreck
16	1982 Blackmarns Reef Blackmarns Reef Pablo Grounds Pablo Grounds Pablo Grounds	30°21'55" 80°50'05" 30°21'55" 80°50'05" 30°20'18" 81°11'41" 30°19'52" 81°11'01" 30°19'52" 81°11'01"	45050.2 61785.2 45050.9 61788.8 45179.2 61969.8 45176.2 61970.3 45177.2 61970.2	104 103 73 67 67	27.8 27.6 9.9 10.1 10.0	North barge Sea going tug #1 Culverts, rubble, steel tanks, tires Maddox culverts Culverts
17	1967 Paul Mains Reef Paul Mains Reef	30°19'52" 81°11'01" 30°19'52" 81°11'01"	45179.2 61970.2 45179.2 61969.6	63 68	10.0 10.0	Pillboxes, culverts 90' barge
18	1967 Paul Mains Reef Paul Mains Reef Paul Mains Reef Paul Mains Reef Paul Mains Reef Middle Grounds	30°19'52" 81°11'01" 30°19'52" 81°11'01" 30°19'52" 81°11'01" 30°19'52" 81°11'01" 30°19'52" 81°11'01" 30°19'34" 81°08'37"	45189.9 61976.6 45171.5 61965.6 45174.4 61965.0 45174.0 61964.9 45170.0 61964.9 45170.6 61965.8 45171.0 61965.8 45141.7 61947.7	65 63 63 63 85	9.0 10.6 10.6 10.6 13.5	Steel tanks, culvert Barges, tugs, culverts North barge Banana boat, poegey boat Tug #1 south Navy barge Linden's msyts. culverts Concrete culvert
19	1982 Middle Grounds (Jap. Reef) Middle Grounds (Tug)	30°19'20" 81°08'37" 30°18'56" 81°08'59"	45141.4 61946.1 45131.6 61937.0	85 75	13.6 14.7	Japaneses FRP Reef Steel tug
20	Dunn's Run Claytons Holler Claytons Holler	30°18'56" 81°08'59" 30°18'41" 81°04'07" 30°18'41" 81°04'07"	45151.1 61952.2 45117.0 61912.5 45117.2 61914.3	72 80 82	13.0 16.7 16.7	Materials information unavailable Steel tugs Tug north
21	Claytons Holler	30°18'41" 81°04'07"	45116.0 61914.8	82	16.5	South tug
22	Casa Blanca Main 14 & 15 North of SS	30°17'35" 80°49'17" 30°17'35" 81°04'51" 30°17'18" 80°57'46"	45012.7 61795.2 45113.9 61922.8 45065.5 61865.5	105 76 72	28.3 14.9 21.2	LST, cables Materials information unavailable Materials information unavailable
23	Jacksonville Beach Wreck	30°16'19" 81°13'34"	45166.0 62001.0	60	10.5	Steel tanker, dredge pipe
24	1941 Southeast 16 & 17 Hospital Grounds East of PV	30°14'45" 80°59'19" 30°13'10" 81°00'08" 30°12'41" 81°04'52" 30°12'41" 81°09'36"	45056.9 61887.9 45050.5 61900.5 45078.0 61941.0 45106.0 61982.0	90 90 85 75	22.4 22.1 13.0 16.1	Materials information unavailable Materials information unavailable Materials information unavailable Tires, steel scaffolding
25	1977 Ponte Vedra Grounds Ponte Vedra Grounds	30°12'11" 81°09'36" 30°12'11" 81°09'36"	45107.0 61982.0 45107.0 61982.0	75 75	16.1 16.1	Steel plates Steel scaffolding
26	Ponte Vedra Grounds	30°12'11" 81°09'36"	45108.0 61982.5	75	16.1	Navy scaffolding
27	Ponte Vedra Grounds	30°12'11" 81°09'36"	45107.9 61982.4	75	16.1	Steel plates, tires
28	Ponte Vedra Grounds	30°12'11" 81°09'36"	45105.5 61983.8	75	16.1	Tires

Duval

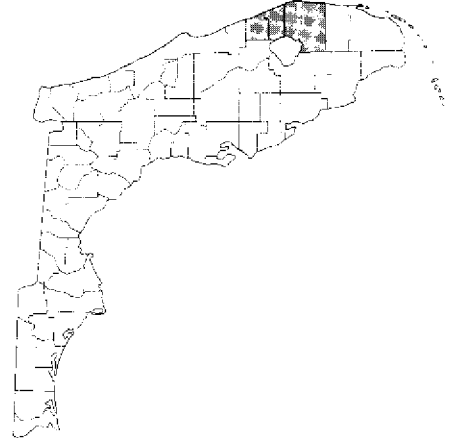
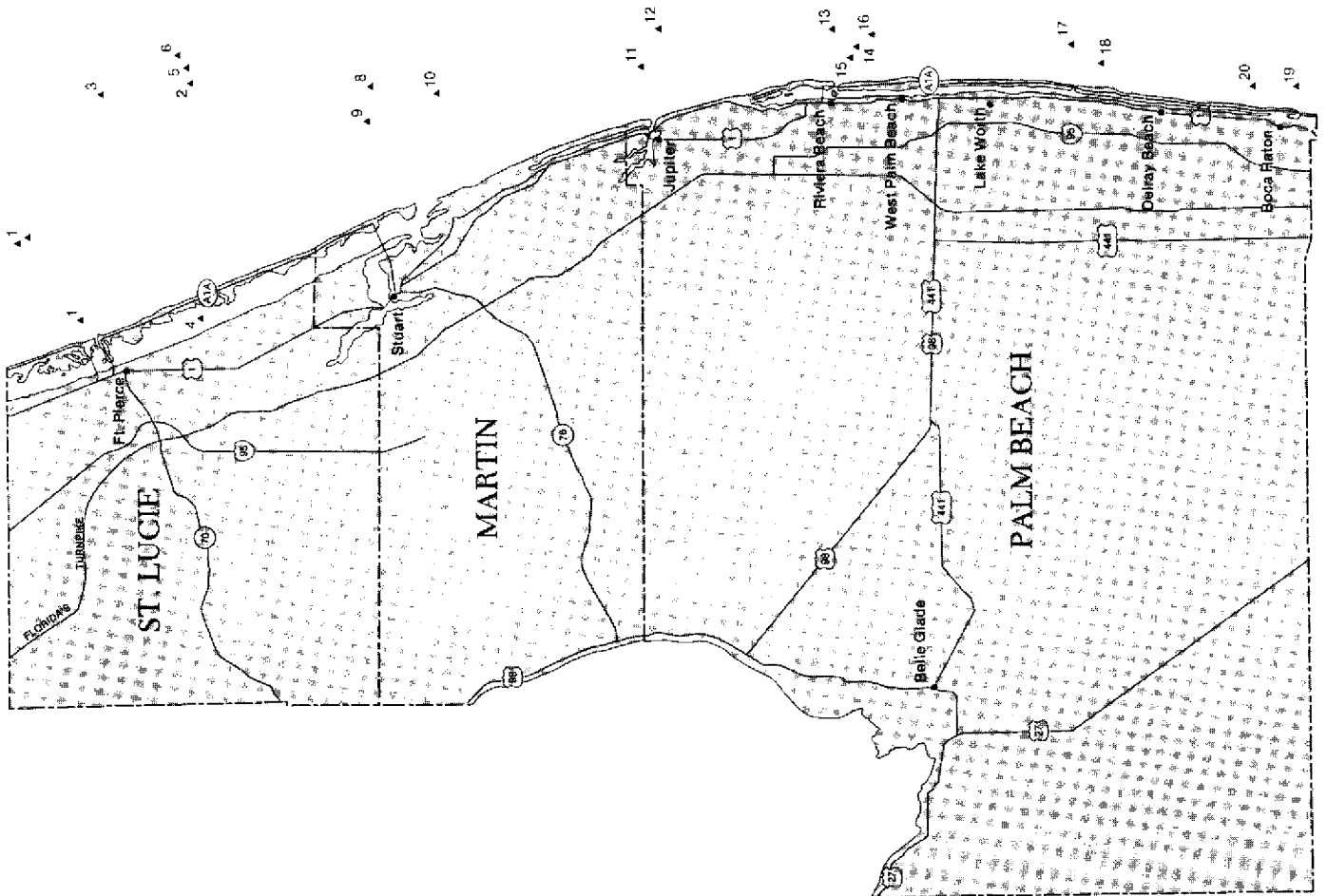
Map 2: St. Johns through Indian River Counties



Year Built	Name	Latitude	Longitude	Loran C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
1	1974 Four Mile Reef	29°56'26"	81°10'27"	44937.5	60	2.1	Tires (on natural reef)
2	1973 Dorothy Louise	29°56'10"	80°57'12"	44903.0	70	19.5	Concrete, old vessel
3	1976 Pop Warner Reef	20°56'03"	81°05'32"	44960.0	65	7.6	Tires
4	Leon Roddy-Boat	29°55'25"	81°07'36"	44955.0	63	7.0	Vessel
5	1974 Nine Mile North Reef	29°55'14"	81°05'20"	44952.3	56	8.9	Tires (on natural reef)
6	1974 Nine Mile South Reef	29°53'20"	81°06'22"	44944.8	60	7.3	Tires (on natural reef)
7	1973 Desco Boat	29°53'16"	81°00'31"	44903.0	70	12.8	Concrete, old vessel
8	1974 Inner Plane wreck	29°51'12"	80°58'14"	44873.0	70	15.1	Small plane, concrete culvert
9	1974 Outer Plane wreck	29°50'11"	80°57'11"	44858.0	72	16.4	Pieces of plane
10	Shipwreck*	29°45'32"	80°56'00"	44812.0	70	19.3	Old vessel
St. Johns							
11	1982 The Wreck	29°12'30"	80°46'00"	44461.7	75	10.0	Steel vessel, concrete beams, culverts
12	1981 Liberty Reef	29°11'58"	80°44'45"	44457.8	85	10.6	Liberty ship, MINDANAO
13	1971 County Reef	29°09'04"	80°53'20"	14528.0	60	4.4	Tires, autos, rubble
14	1972 Nine Mile	29°09'00"	80°49'00"	44473.4	70	6.5	Barge, autos, concrete rubble
15	1970 Wharton Tire Reef	29°08'54"	80°49'26"	14529.0	70	7.4	Concrete beams, culverts, rubble
16	1982 Cracker Ridge	29°08'47"	80°41'27"	44410.9	70	11.0	Barge, concrete beams, rubble
17	1986 Barge Wreck*	28°50'46"	80°25'26"	14514.6	73	29.0	350' barge with crane, 150 yds West of buoy
Volusia							
18	1970 Unnamed	28°30'00"	80°21'18"	14486.0	80	10.0	Concrete rubble, tires
19	1985 Brevard Reef Site #1	28°25'30"	80°17'30"	43866.0	85	17.0	Vessel DAMOCLES, concrete, culverts
20	1964 Unnamed	28°19'35"	80°33'25"	14460.9	25	2.0	Concrete blocks
21	Brevard Reef Site #2			44072.0	45	10.0	Concrete culvert
22	1987 Brevard Deep Site			43866.2	115-120	20.0	
23	1987 FAD Alley	28°18'25"	80°27'17"	43866.2	60	9.1	Trolling Alley of FADS
Brevard							
Indian River							
24	1987 FPL/FIT Experimental Reef	27°40'00"	80°20'00"	14405.0	38	1.2	Oil ash and cement blocks

* Indicates a well known 'wreck,' not necessarily a permitted reef.

Map 3: St. Lucie, Martin, and Palm Beach Counties



Year Built	Name	Latitude	Longitude	Loran C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
1	1961 North Beach Reefs	27°30'21"	80°16'55"	43346.4	29-35	1.0	Autos, concrete rubble
	1961 North Beach Reefs			43335.9	29-35	1.0	Autos, concrete rubble
	1961 North Beach Reefs			43332.8	29-35	1.0	Autos, concrete rubble
2	1987 Outer Reef Site	27°26'48"	80°10'24"	43205.0	125	1.5	No materials deployed at press time
3	1987 Inner Reef Site	27°23'48"	80°02'00"		55-60		Tug and barge to be deployed in 1987
4	1973 Unnamed	27°23'29"	80°02'00"				Unconfirmed
5	1986 Stan's Reef #2			43199.3	150	11.5	65' Tug, FADs
6	1985 Stan's Reef #1			43204.5	192	13.0	150' Oceangoing tug, FADs

St. Lucie

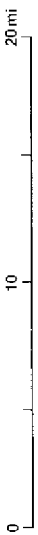
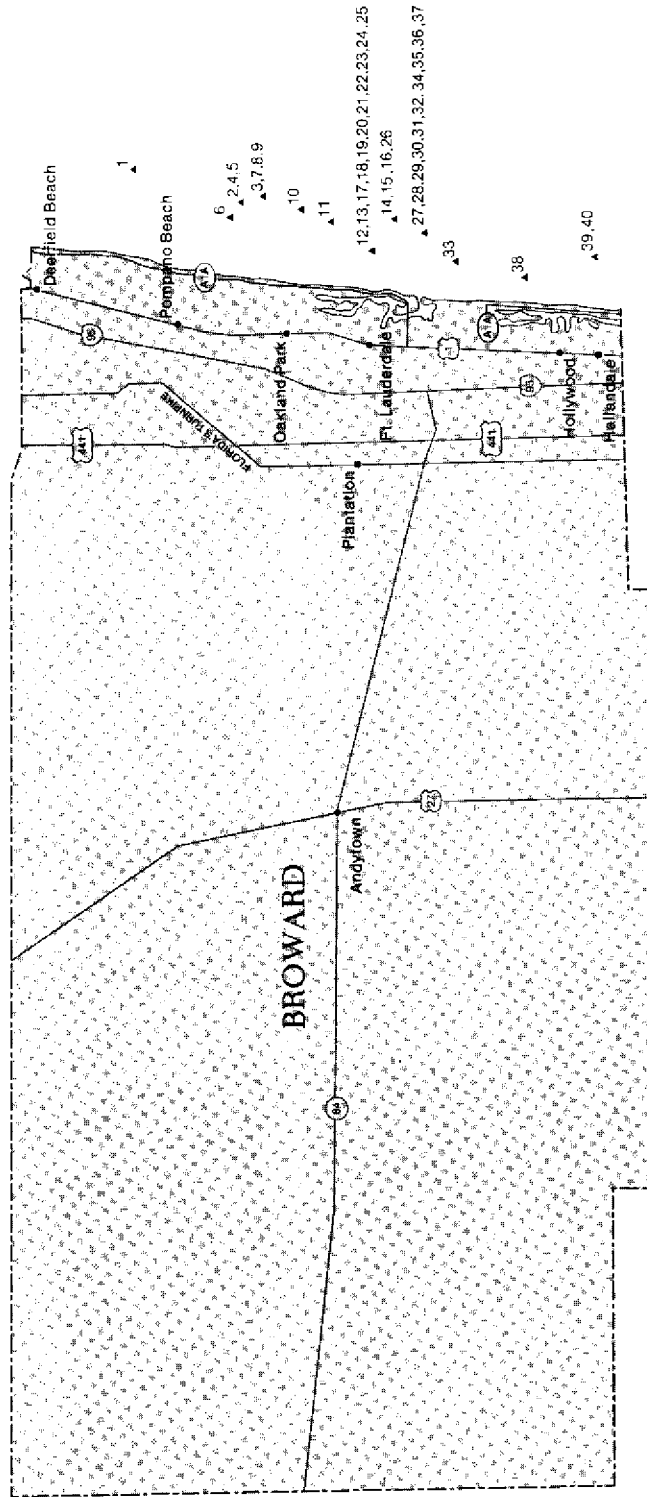
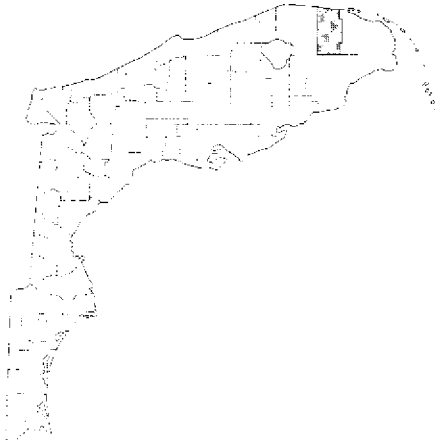
7	1984 FAD Trolling alley	27°13'48"	79°59'18"	43100.0	150-250		Line of FADs out to 43099.9/61965.4
8	1982 Capt. Al Sirotkin Reef	27°12'17"	80°02'18"	14374.0	85	8.0	Landing craft DAVID T., sand dredge
9	1980 Bill Donaldson Reef	27°12'10"	80°06'20"		58	3.25	Barges, concrete barrels, tubs, bowls, toilets
	1980 Bill Donaldson Reef			43106.5	58	3.25	Barges, concrete barrels, tubs, bowls, toilets
10	1971 Dr. Edgar Ernst Reef	27°09'30"	80°03'30"	43062.9	60	4.7	Barges, tires, bus bodies
	1971 Dr. Edgar Ernst Reef			43063.7	60	4.7	Barges, tires, bus bodies
	1971 Dr. Edgar Ernst Reef			43066.3	60	4.7	Barges, tires, bus bodies

Martin

11	1986 Jupiter Reef Site #1	26°58'01"	80°01'05"	14351.7		3.1	No material at press time
12	1986 Jupiter Reef Site #2	26°57'58"	79°59'22"	14353.0		4.5	No material at press time
13	1985 Palm Beach Reef #1	26°47'40"	79°59'34"	14335.7	125	2.1	Concrete culverts, metal pipes
14	1985 Palm Beach Reef #3	26°45'50"	80°00'15"	14431.8	87	1.2	Rolls Royce auto, barge, vessel OWENS
15	1965 Palm Beach Art. Reef	26°45'37"	80°01'00"	14331.4	65-95	1.0	Vessels AMARYLIS & MIZPAH, tires, metal PC boat
16	Palm Beach Site #2	26°45'07"	80°01'22"	14330.7	55-65	0.7	Materials type unknown
17	1986 Boynton Beach Reef #2	26°33'20"	80°01'11"	14310.2	150-200	1.2	Materials type unknown
18	1986 Boynton Beach Reef #1	26°31'54"	80°02'01"	14307.0	35-70	0.7	Materials type unknown
19	Boca Raton Reef #1	26°21'41"	80°02'07"	14284.0	68	0.8	Materials type unknown
20	Boca Raton Reef #2	26°31'54"	80°03'36"	14289.0	160-240	1.3	Materials type unknown

Palm Beach

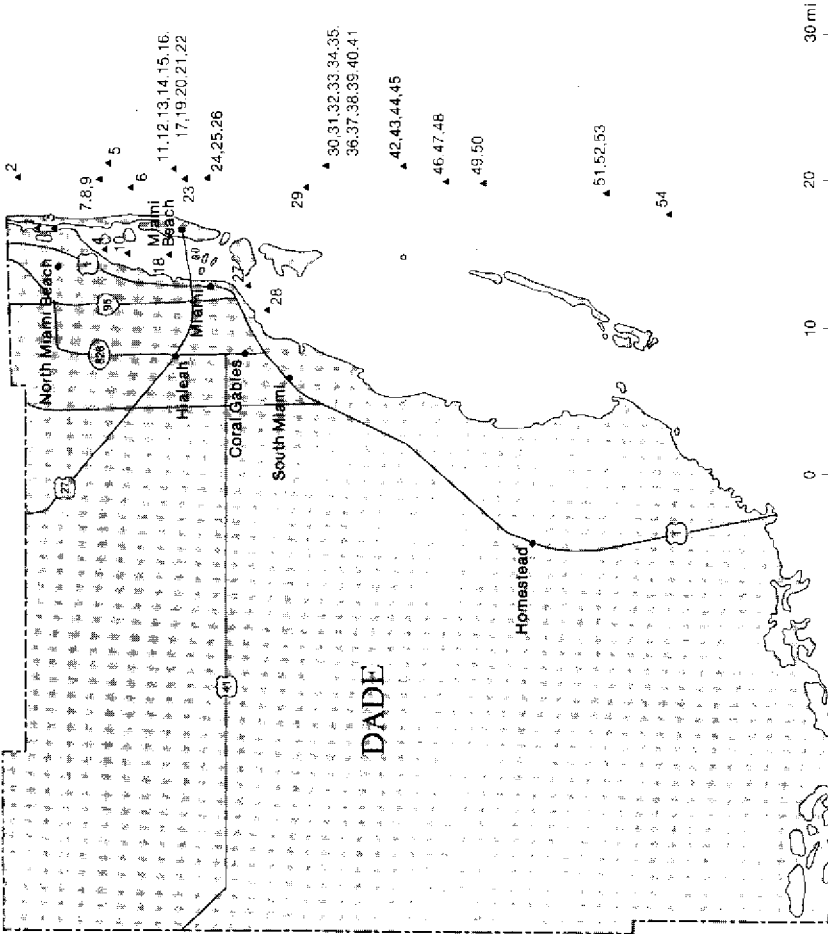
Map 4: Broward County



Year Built	Name	Latitude	Longitude	Loran C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
1	Deerfield Beach Reef	26°18'57"	80°02'58"	14283.8	90-400	2.0	No material to date
2	Rodeo Divers Reef	26°13'17"	80°03'43"	14273.6	78	1.1	Tugs, barge cement vessel, small vessels
3	Corey & Chris' (Rodeo)	26°13'10"	80°03'07"	14274.2	244	1.7	130' Steel barge
4	Renegade (Rodeo)	26°07'47"	80°03'14"	14273.4	190	1.5	150' Steel ship
5	Lowrance (Rodeo)	26°12'31"	80°03'19"	14272.8	180-210	1.5	440' Steel ship
6	Mako Reef (Rodeo)	26°12'03"	80°03'30"	14272.0	240	1.6	Numerous Mako hull molds
7	Caicos Express (Rodeo)	26°11'55"	80°03'19"	14271.8	237	1.6	190' Steel ship, CAICOS EXPRESS
8	Tote Machines	26°11'49"	80°03'19"	14271.6	200	1.5	160 pieces steel equipment
9	Chevron Tanks (Rodeo)	26°11'36"	80°03'27"	14271.3	170	1.5	39 Service station fuel tanks
10	FL League of Anglers	26°10'10"	80°03'04"	14269.2	388	2.2	150' Minesweeper
11	Rebel	26°09'37"	80°04'00"	14267.1	110	1.2	150' Steel ship, REBEL
12	Jay Scutti	26°08'49"	80°04'27"	14265.2	67	1.0	100' Steel tug boat, JAY SCUTTI
13	Mercedes I	26°08'37"	80°04'12"	14265.2	97	1.2	200' Steel ship, MERCEDES I
14	Bill Boyd Reef	26°08'33"	80°03'36"	14265.8	265	1.9	210' Steel ship
15	Qualmann Barge	26°08'13"	80°03'57"	14264.8	145	1.4	100' Barge
16	Trio Bravo	26°07'56"	80°03'54"	14264.4	145	1.4	140' Steel tug boat, TRIO BRAVO
17	Houseboat	26°07'48"	80°02'18"	14263.7	95	1.2	70 Steel houseboat, numerous small vessels
18	Riverbend	26°07'43"	80°04'08"	14263.8	98	1.2	Numerous small vessels
19	Grouper Grotto	26°07'46"	80°04'13"	14263.8	150	1.4	Fuel tanks, concrete culvert, FADS
20	Spaghetti Barge	26°07'46"	80°04'13"	14263.7	105	1.2	Barge, LCVF, small vessels
21	Great Lakes	26°07'41"	80°03'55"	14263.9	170	1.4	Dredge pontoons and equipment
22	Monomy	26°07'31"	80°04'21"	14263.2	60	1.0	82' Yacht, MONOMY
23	Osborne	26°07'35"	80°04'27"	14263.1	73	1.0	Barge, Erojacks, tires
24	Chevron I	26°07'24"	80°04'33"	14262.7	73	1.0	Fuel storage tanks, concrete culvert
25	Hog Heaven	26°07'23"	80°04'35"	14262.7	70	1.0	170' Barge
26	Powell Barge, DB 24	26°07'15"	80°03'41"	14263.5	314	2.1	100' Barge, concrete mixer drums
27	Rueben Reef	26°07'15"	80°04'36"	14262.5	70	1.0	PVC structure
28	U.S. Concrete Pipe	26°07'17"	80°04'30"	14262.5	70	1.0	300 tons concrete culvert
29	DNR Barges	26°07'14"	80°04'30"	14262.5	70	1.0	Two barges
30	Trolling Alley	26°07'06"	80°04'18"	14262.5	110	1.2	100 Fish Aggregating Devices
31	Powell Barges	26°07'00"	80°03'54"	14261.4	270	1.8	Two 100' barges
32	Fish Aggregating Device	26°06'40"	80°04'07"	14262.0	135	1.3	Subsurface buoy with 40' parasols
33	Erojacks Ft. Lauderdale	26°06'37"	80°05'54"	14259.8	14	0.3	Several hundred concrete Erojacks
34	Marrriott Reef	26°06'37"	80°04'32"	14261.4	71	1.0	DC-4 airplane
35	TE AMO	26°06'20"	80°03'52"	14261.8	215	1.5	105' Sailing vessel, TE AMO
36	Chris Craft Molds	26°06'09"	80°03'56"	14261.4	210-240	1.6	25 hull molds, small vessels and airplanes
37	Tracor/Navy Drydock	26°06'01"	80°03'53"	14261.2	220	1.6	200' Steel drydock
38	Erojacks Dania	26°03'46"	80°06'24"	14254.2	12	0.1	Several hundred concrete Erojacks
39	Tenneco II, Decks	25°58'11"	80°04'41"	14246.9	105	1.6	Three oil production platform decks
40	Tenneco II, Jackets	25°58'10"	80°04'27"	14247.3	190	2.1	Two oil production platform jackets

Broward

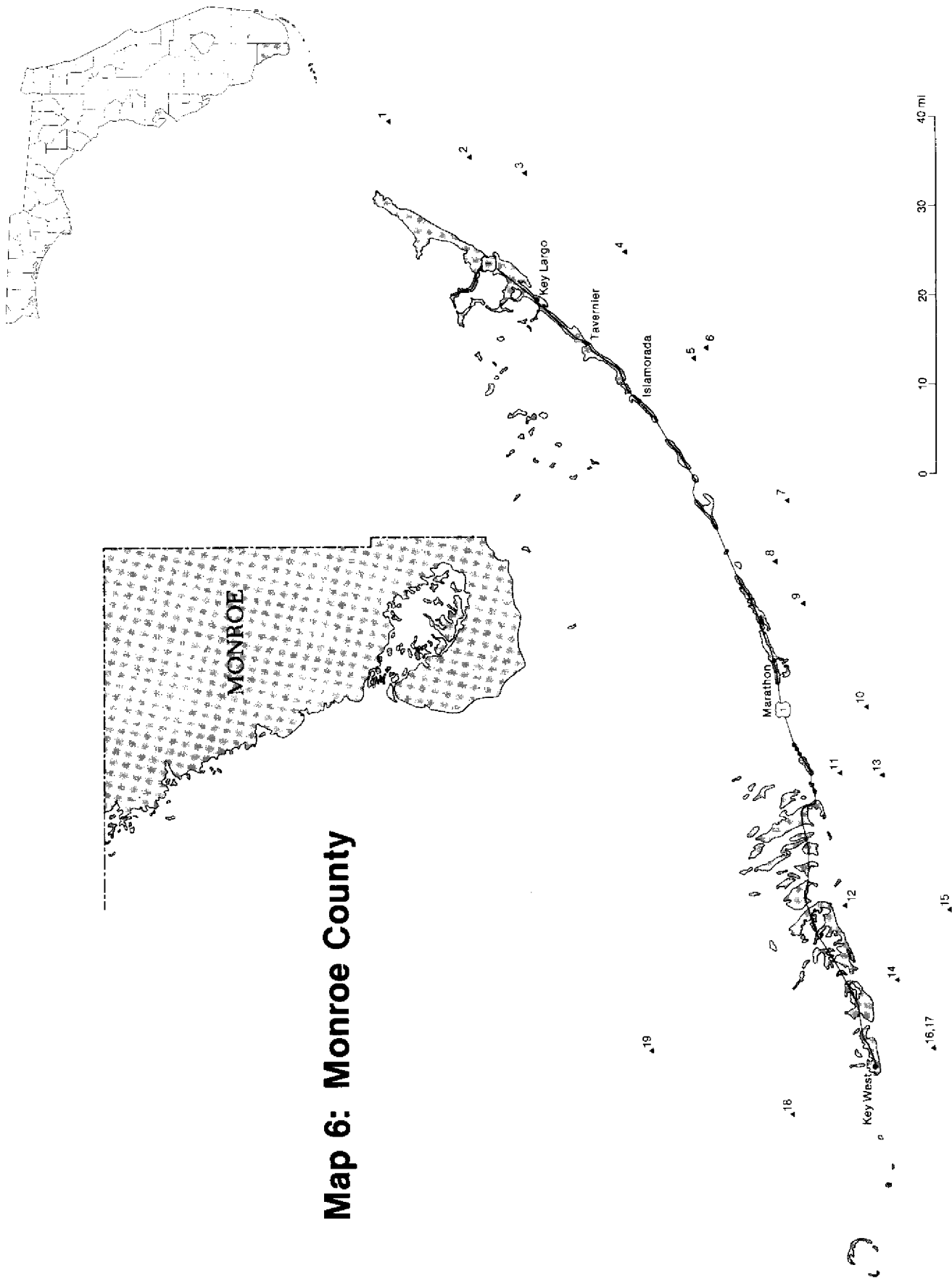
Map 5: Dade County



Year Built	Name	Latitude	Longitude	Lotus C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
1	1985 Dumfounding Bay Reef	25°56'54"	80°07'46"	In Dumfounding Bay 14246.1	35	0.1	Steel tanks, drums, concrete
2	1986 Cruz Del Sur				230	2.3	257' Steel freighter, CRUZ DEL SUR, on Tenneco II site
3	1987 Greynolds Park Reef	25°53'15"	80°09'04"	In Oleta River	12	0.1	Limerock boulders
4	1982 North Bayshore Park Reef	25°52'59"	80°03'39"	In Biscayne Bay 14239.0	5-7	0.1	Concrete rubble, pipe
5	1976 Liberty Ship			43104.5	372	2.5	520' Liberty Ship
6	1947 Crane Boom	25°52'00"	80°05'00"	14236.1	70-85	2.75	100' Crane boom
7	1986 Narwal			14239.7	115	2.1	137' Steel freighter, NARWAL
8	1985 Rossmerry			14239.6	240	2.25	195' Steel freighter, ROSSMERRY
9	1985 Andro			14237.7	103	2.0	165' Steel freighter, ANDRO
10	1979 Pelican Harbor Reef	25°50'45"	80°10'00"	In Biscayne Bay	5-7	0.1	Concrete pipe
11	1973 Fireboat	25°50'31"	80°04'02"	14234.8	222	2.25	110' Steel tug
12	1971 Minesweeper	25°50'01"	80°04'14"	14233.7	180	2	117' Minesweeper
13	1971 Lotus	25°49'22"	80°03'50"	14233.8	216	2.25	110' Coast Guard tender, LOTUS
14	1980 San Rapael			14233.2	330	2.5	200' Steel freighter, SAN RAPAEI
15	1980 Walka Q	25°49'22"	80°03'50"	14233.1	282	2.5	200' Steel freighter, WALKA Q

16	1971	Pimellions	25°49'06"	80°04'11"	14232.3	43112.4	135	1.75	120' Steel ferry, PIMELLIONS
17	1973	West End	25°45'05"	80°04'01"	14232.4	43111.3	228	2.25	130' LCI, WEST END
18	1982	Julia Tuttle Reef	25°48'48"	80°10'12"	In Biscayne Bay		28	0.1	Autos, boats, rubble, steel tanks, concrete culvert
19	1969	LCI	25°48'42"	80°04'03"	14231.7	43112.0	202	2.0	150' Landing craft
20	1978	Pipes	25°48'33"	80°04'02"	14231.5	43112.1	204	2.0	Scrap steel, rubble
21	1976	Deep Freeze	24°48'21"	80°04'23"	14230.7	43113.6	120	1.75	138' Transport vessel, DEEP FREEZE
22	1978	Dry Dock	25°48'19"	80°03'43"	14231.5	43111.4	330	2.5	Pontoon dock
23	1970	Hopper Barge	25°47'18"	80°03'54"	14229.5	43113.5	234	2.25	175' Metal barge
24	1984	Anchorage Area Reef	25°48'42"	80°04'03"	14229.0	43112.0	46	1.5	Vessels LANDS END and MARY ANN I
25	1985	Shamrock	25°48'33"	80°04'02"	14229.0	43112.1	44	1.5	120' Steel LCT, SHAMROCK
26	1986	John Koppin Memorial Reef	25°48'21"	80°04'23"	14229.3	43113.6	45	1.5	75' Steel barge, concrete pipe
27	1986	John Koppin Memorial Reef	25°48'19"	80°03'43"	14229.3	43111.4	45	1.5	Concrete bridge girders
28	1984	Rickenbacker Cswy Reef	25°44'51"	80°10'54"	In Biscayne Bay		10	.25	Concrete pilings, bridge rubble
29	1984	Mercy Hospital Reef	25°44'18"	80°12'40"	In Biscayne Bay		10	.10	Concrete bridge rails, bicycle racks
29		Bear Cut Barge*	25°43'30"	80°08'05"	14217.3	43112.2	6-10	1.25	100' Steel barge
30	1985	Proteus	25°42'09"	80°05'10"	14218.7	43123.5	72	3.75	220' Steel freighter, PROTEUS
31	1981	Shrimp, Drift boats	25°42'08"	80°05'17"	14218.6	43123.9	85-100	4.0	Barge, numerous wood and steel vessels
32	1976	Biscayne Wreck	25°42'00"	80°04'06"	14218.5	43123.9	55	3.5	120' Steel freighter
33	1977	Dade County Reef	25°42'00"	80°04'06"	14220.3	30805.7	220	5.0	Concrete rubble
34	1986	Mystic Isle	25°41'43"	80°04'24"	14219.4	43123.5	185	4.5	103' Steel ferry, MYSTIC ISLE
35	1982	Arida	25°41'28"	80°04'01"	14219.0	43122.9	210	4.75	203' Steel ship, STAR TREK, FADS
36	1982	Lakeland	25°41'26"	80°05'03"	14217.4	43123.5	88	4.0	165' Steel LCT, ARIDA
37	1983	South Seas	25°41'29"	80°04'23"	14218.6	43123.9	126-140	4.25	200' Steel ship, LAKE LAND, FADS
38	1982	Star Trek	25°41'28"	80°04'01"	14218.2	43122.9	73	3.75	175' Steel yacht, SOUTH SEAS
39	1985	Belcher Barge #27	25°41'28"	80°04'01"	14219.0	43122.9	210	4.75	203' Steel ship, STAR TREK, FADS
40	1981	Orlon	25°41'26"	80°05'03"	14217.4	43123.5	58	3.5	195' Steel barge
41	1982	Cement Mixer	25°41'05"	80°04'47"	14218.4	43123.9	95	4.0	118' Steel tug, ORION
42	1986	Steane D'Auray	25°36'43"	80°04'37"	14209.6	43133.9	75-92	4.0	Cement mixer bowls, storage tanks
43	1983	Moby One	25°34'48"	80°04'49"	14209.6	43133.9	68	4.0	110' Steel trawler, STEANE D' AURAY
44	1984	Ultra Freeze	25°24'36"	80°05'50"	14210.2	43153.9	97	5.0	75' Wood shrimp, MOBY I
45	1981	Hopper Barge	25°24'16"	80°06'26"	14211.1	43154.4	120	5.0	195' Steel freighter, ULTRA FREEZE
46	1980	Railroad Barge	25°23'57"	80°06'29"	14210.3	43154.4	163	5.25	150' Steel hopper barge
47	1983	Pioneer I			14206.9	43133.9	163	6.5	100' Steel barge
48	1983	Blue Fire			14205.2	43133.9	215	7.0	195' Steel freighter, PIONEER I, fuel tanks
49	1985	Sir Scott			14204.6	43153.9	110	6.5	175' Steel freighter, BLUE FIRE
50	1983	FPL Stacks North			14201.2	43154.4	220	4.75	267' Steel freighter, SIR SCOTT, FAD
51	1976	Santa Rita			14200.2	43154.4	185-195	4.5	32' Steel exhaust stacks 8' x 13' x 21'
52	1975	Almirante			14199.9	43154.4	185-195	4.5	51' Steel exhaust stacks 8' x 13' x 21'
53	1975	Belcher Barge			14188.9	43151.4	240-247	5.0	250' Steel ship, SANTA RITA
54	1986	Doc De Milly			14187.5	43153.9	122-132	4.75	180' Steel refrig. ship, ALMIRANTE
					14187.0	43154.4	117-122	4.75	85' Steel fuel barge
					14181.7	43154.4	140	5.0	287' Steel freighter, FADS

*Indicates a well known 'wreck,' not necessarily a permitted reef.

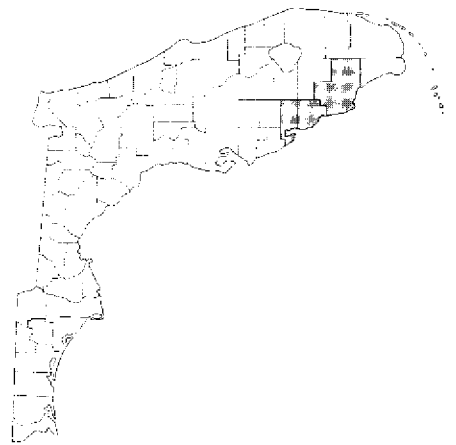
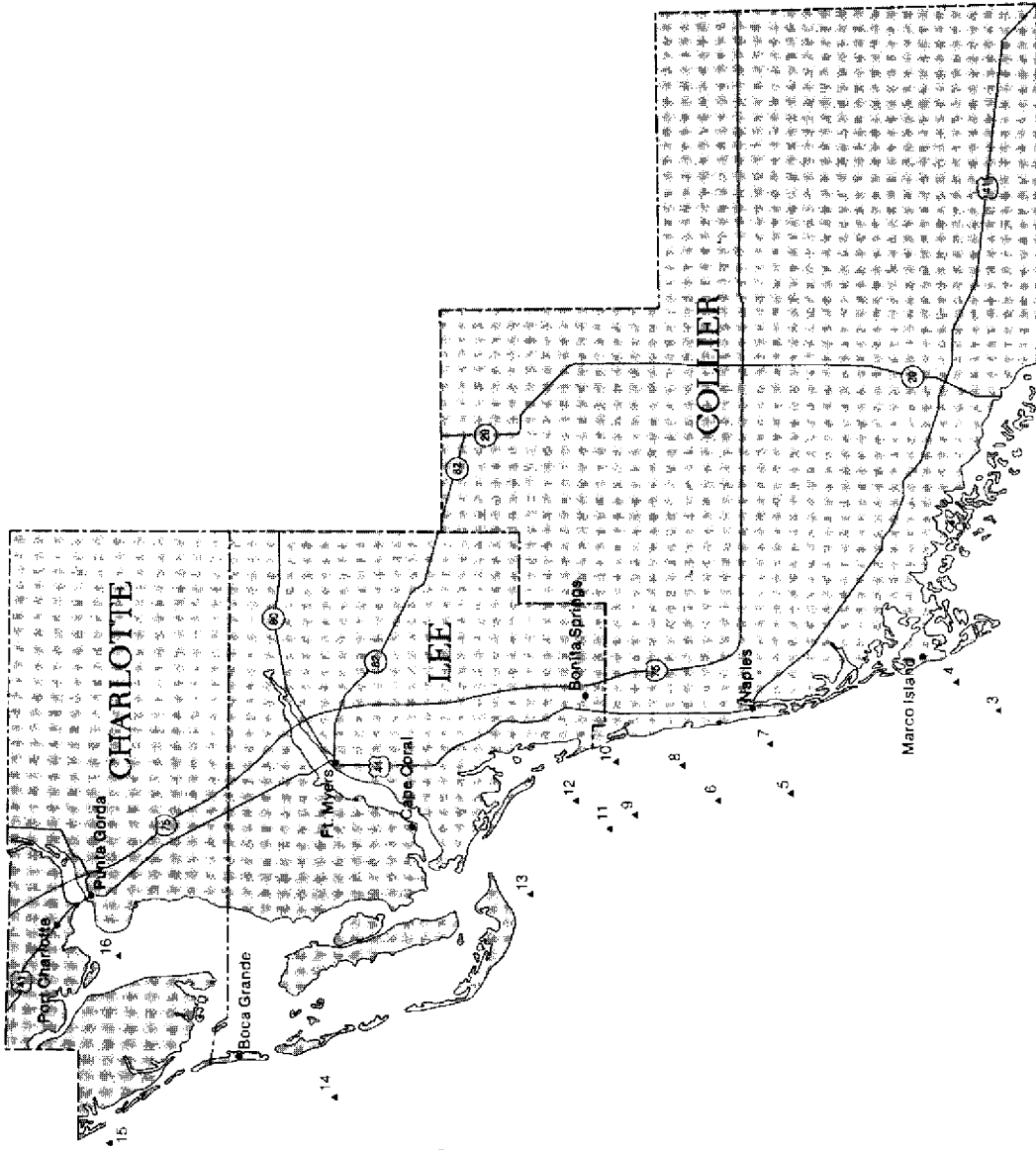


Map 6: Monroe County

Year Built	Name	Latitude	Longitude	Loran C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
1	1985 Conzelman Reef	25°20'00"	80°07'00"	14183.0	200-300	5.75	No materials to date
2	1978 Alva Chapman Reef	25°12'36"	80°11'36"	14160.4	220	8.0	Two concrete hulls, dredge pipe
3	Elbow Wreck *	25°07'21"	80°13'55"	14149.4	180	7.5	Large vessel
4	1987 Key Largo Artificial Reef	25°01'00"	80°23'10"	14122.6			
5	1981 Islamorada Art. Reef	24°51'42"	80°34'06"	14093.2	110	5.0	Concrete rubble
1984	Islamorada Art. Reef	24°51'42"	80°34'06"	14093.0	110	5.0	120' Steel barge, old Whale Harbor
1984	Islamorada Art. Reef	24°51'42"	80°34'06"	14093.2	120	5.0	287' freighter, EAGLE
1984	Islamorada Art. Reef	24°51'42"	80°34'06"	14094.0	115	5.0	Old Teatable Channel bridge
6	Nimrod*	24°51'05"	80°33'45"	14092.6	210	5.5	Vessel, unconfirmed
7	1986 Long Key Art. Reef			14054.3	26	2.5	Concrete bridge rubble
8	E. Turtle Shoal Art. Reef			14047.0	31		
9	1982 Marathon Reef	24°39'30"	80°58'30"	14033.7	115	5.0	Concrete, bridge rubble
1986	Marathon Reef	24°39'30"	80°58'30"	14034.0	115	5.0	180' freighter, THUNDERBOLT
10	1982 Seven Mile Bridge Reef	24°36'20"	81°10'00"	14006.8	115	2.0	Concrete and steel bridge rubble
1984	Seven Mile Bridge Reef	24°36'20"	81°10'00"	14007.3	115	2.0	Numerous sections of steel barge
11	1985 Bahia Honda Art. Reef			30349.6	30	2.6	Concrete rubble & bridge decks, pipe, steel
12	1982 Big Pine Art. Reef	24°33'00"	81°28'00"	13968.2	123	4.0	Shrimp boat PAPA JOE
13	1983 American Shoal Reef	24°34'00"	81°20'00"	13984.7	40-45	1.7	Concrete & bridge steel, rubble
14	1984 Labriola Reef	24°30'20"	81°37'54"	13944.1	13	4.2	Unconfirmed construction
15	1961 Wilkes Barre	24°28'48"	81°33'00"	13951.8	200-300	9.0	Cruiser
16	1985 Cayman Salv. Master Reef			13923.4	86	5.2	187' Steel freighter, CAYMAN SALVAGE MASTER
17	1983 Key West Tournament Reef	24°27'47"	81°46'15"	13922.2	180	7.0	213' Ship Curb
1983	Key West Tournament	24°27'47"	81°46'15"	13923.0	184	7.3	100' Steel barge LOLA
1983	Key West Tournament	24°27'47"	81°46'15"	13923.7	180	7.5	260' Ship L.S.M.R.
18	1983 Key West Gulfside Reef			13933.5	32	8.1	Steel I-beams and rubble
1983	Key West Gulfside Reef			13932.3	32	8.1	120' Steel barge
1983	Key West Gulfside Reef			13933.8	32	8.1	Small boats
1986	Key West Gulfside Reef			13933.4	32	8.1	Concrete, Steel
19	1985 Gunbor Art. Reef			13972.3	52	25.0	Steel ship superstructure

* Indicates well known 'wreck,' not necessarily a permitted reef.

Map 7: Collier, Lee, and Charlotte Counties

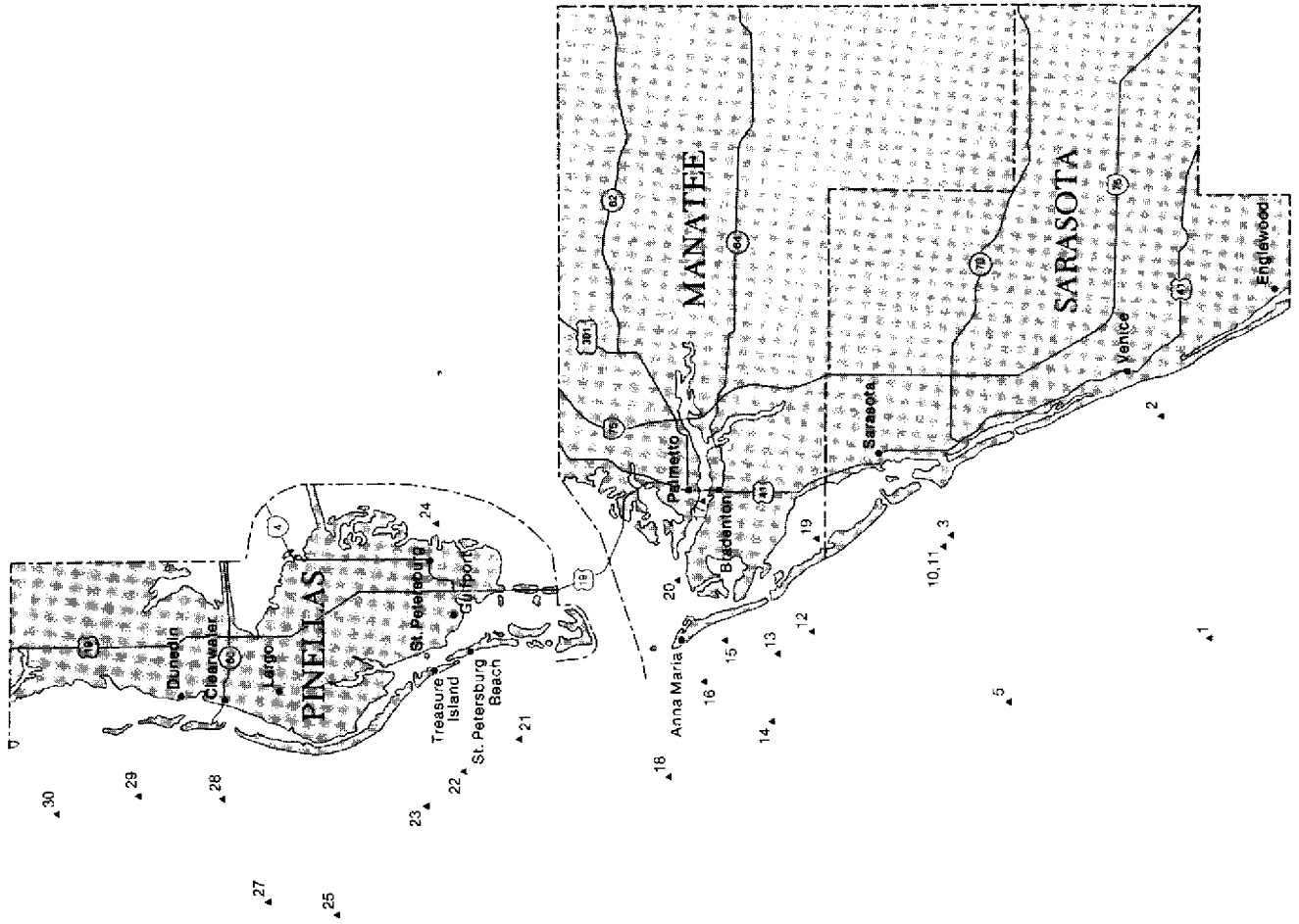


Year Built	Name	Latitude	Longitude	Loran C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
1	Everglades City-Pavilion Key	25°41'18"	81°28'00"	14090.5	14-16	6.0	No material at time of publication
2	Everglades City 3 Mi. Reef	25°44'54"	81°27'54"	14097.6	12-14	3.0	No material at time of publication
3	5 Mile Marco Is. Reef	25°52'42"	81°47'48"	14075.8	30-35	4.4	Concrete rubble, dredge pipe, pontoons, barges
1986	5 Mile Marco Is. Reef	25°51'35"	81°51'35"	14074.0	30-35	4.4	Dredge pipe, pontoon material
1986	5 Mile Marco Is. Reef	25°51'11"	81°51'11"	14073.7	30-35	4.4	Dredge pipe, pontoon material
1986	5 Mile Marco Is. Reef	25°51'11"	81°51'11"	14073.7	30-35	4.4	Dredge pipe, pontoon material
1986	5 Mile Marco Is. Reef	25°51'31"	81°51'31"	14074.2	30-35	4.4	Dredge pipe, pontoon material
1972	Two Mile Reef	25°55'24"	81°46'15"	14083.8	20-23	1.5	Tires, concrete rubble, cable, lime rock
1987	Gordon Pass 5 Mi. Reef	26°05'21"	81°43'44"	14090.5	28-30	5.0	Several airplane bodies by 12-87
1987	Doctors Pass 5 Mi. Reef	26°05'21"	81°54'30"	14099.1	27-28	5.0	Concrete culvert by 4-87
1974	Naples Reef	26°07'45"	81°50'45"	14100.1	24	2.0	Tires, steel piling, concrete rubble
1987	Clam Pass Reef	26°13'30"	81°52'08"	14110.1	22-24	2.8	No material at time of publication
1987	Wiggins Pass 5 Mi. Reef	25°17'15"	81°55'48"	14110.6	29-31	5.3	Pontoon boat, barge w/ crane due 12-87
1987	Wiggins Pass Conservancy Reef	25°18'21"	81°52'24"	14119.2	22-24	2.4	No material at time of publication
11	"G-H" Reef (D.J.H.)	26°20'45"	81°57'17"	14115.3	30		Concrete & steel rubble, vessels
1984	"G-H" Reef (D.J.H.)	26°20'32"	81°56'56"	14115.1	30		Concrete & steel rubble, vessels
1977	"A-B" Reef (M.A.Y.)	26°22'19"	81°55'22"	14122.1	20	2.5	Concrete rubble, old vessels, many barges
1983	"A-B" Reef (M.A.Y.)	26°22'49"	81°55'47"	14122.5	20	2.5	Concrete rubble, old vessels
1979	"C-D" Reef (SANIBEL)	26°24'26"	82°02'21"	14113.1	20	1.5	Concrete rubble, tires
13	"C-D" Reef (SANIBEL)	26°24'18"	82°03'06"	14111.3	20	1.5	Concrete rubble, tires
14	Boca Grande Fishing Reef	26°38'09"	82°18'09"	14112.1	32	2.8	Concrete
1960	Fish Haven	26°54'05"	82°21'48"	14141.4	22	0.6	Bridge rubble
1970	Fish Haven	26°54'08"	82°07'05"	14169.4	6.8	1.0	Tires

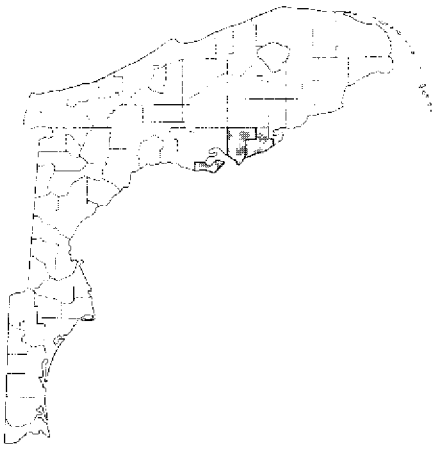
Collier

Lee

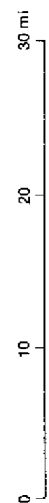
Charlotte



Map 8: Sarasota, Manatee and Pinellas Counties



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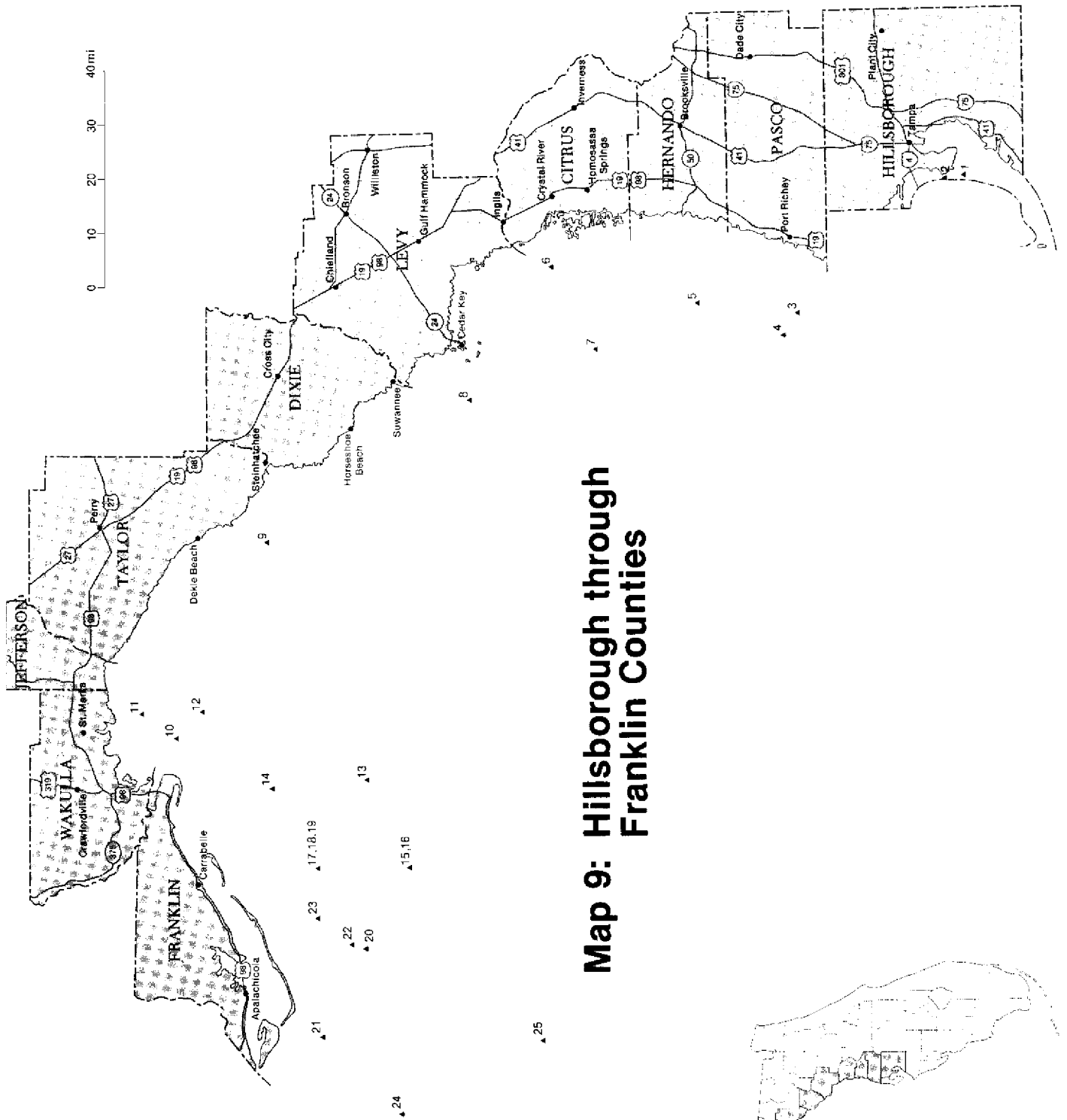


Year Built	Name	Latitude	Longitude	Loran C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
1	1985 M10 Reef	27°01'48" N	82°42'37" W	14114.8	67	15.7	Fiberglass boats, steel sailboats
2	1980 Reef "D" (Venice)	27°06'04" N	82°29'00" W	14154.5	25	1.2	Concrete bridge & pier rubble
3	1980 Reef "A" (Lido Key)	27°06'34" N	82°35'32" W	14166.1	30	2.1	Concrete piles, rubble, boxes
4	1986 Deep Reef #1	27°11'50" N	82°42'53" W	14069.7	125	39.0	No materials to date
5	1985 M8 Reef	27°12'38" N	82°45'11" W	14128.1	65	14.6	Landing craft
6	1986 Deep Reef #2	27°13'20" N	83°09'26" W	14081.6	110	32.1	No materials to date
7	1986 Deep Reef #4	27°15'20" N	83°07'32" W	14090.9	100-105	24.3	No materials to date
8	1986 Deep Reef #3	27°15'32" N	83°07'02" W	14091.9	105	25.2	No materials to date
9	1986 Deep Reef #5	27°15'41" N	83°06'22" W	14094.3	90	27.6	No materials to date
10	1981 Reef "B" (Lido Key)	27°17'33" N	82°36'22" W	14166.1	30	2.0	Concrete piles, rubble, boxes
11	1982 Reef "C" (Lido Key)	27°18'04" N	82°35'23" W	14169.5	20-25	1.6	Concrete bridge rubble
12	1987 Funerarius Reef	27°23'58" N	82°43'30" W	14166.6	35	3.2	Precast concrete cubes
13	1976 Reef "D" (3 miles)	27°26'33" N	82°44'48" W	14172.0	30	3.0	Tires, concrete rubble, tiles
14	1976 Reef "C" (7 miles)	27°26'33" N	82°49'12" W	14162.4	40	7.0	Tires, concrete rubble, tiles
15	1976 One Mile Reef	27°29'30" N	82°44'05" W	14180.0	21	1.0	Barge, tires, metal pipe
16	1976 Reef "B" (3 miles)	27°29'57" N	82°47'00" W	14175.0	30	3.5	Tires, concrete rubble, tiles
17	1975 Pt. Pleasant	27°30'22" N	82°35'00" W	In Manatee River	12	0.4	Tires, concrete rubble
18	1976 Reef "A" (7 miles)	27°31'15" N	82°52'42" W	14169.0	40	7.8	Tires, concrete rubble, tiles
19	1965 Sarasota Bay Reef	27°31'51" N	82°35'49" W	14182.9	92	1.0	Tires, concrete rubble, tiles
20	1975 Sneads Point	27°31'50" N	82°39'45" W	In Manatee River	15	0.1	Tires, concrete rubble
21	1975 St. Pete Beach Reef	27°40'36" N	82°51'45" W	14192.9	28	5.0	Cement rubble
22	1975 Treasure Island	27°44'30" N	82°52'51" W	14200.8	32	4.8	Cement culverts
23	1975 Madeira Reef	27°46'18" N	82°54'54" W	14201.0	32	6.3	Cement culverts
24	1975 St. Petersburg Reef	27°47'11" N	82°35'37" W	14242.6	38	1.7	Bridge rubble, concrete dolphins, boat
25	1975 Indian Shores Reef	27°51'24" N	83°01'48" W	14200.1	49	11.9	Cement rubble, 2 LSMs
26	1975 Pinellas Two Reef	27°52'30" N	83°11'24" W	14181.6	85	20.0	Tires, 250' steel barge
27	1982 Pinellas Two Reef	27°56'06" N	83°01'24" W	14181.7	85	20.0	180' Coast Guard Cutter BLACKTHORN
28	1974 Clearwater Reef	28°00'57" N	82°53'42" W	14233.3	24	9.8	LSM, barge, steel vessels, Japanese FRP
29	1975 Dunedin Reef	28°03'12" N	82°54'33" W	14247.9	25	3.3	Cement culverts, steel barge
30	1975 Tarpon Springs	28°08'15" N	82°55'51" W	14259.3	27	4.4	Cement culverts

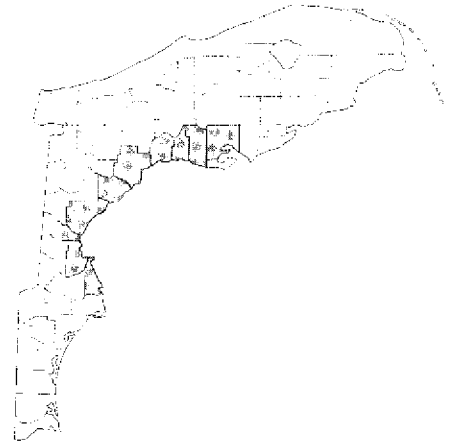
Sarasota

Manatee

Pinellas

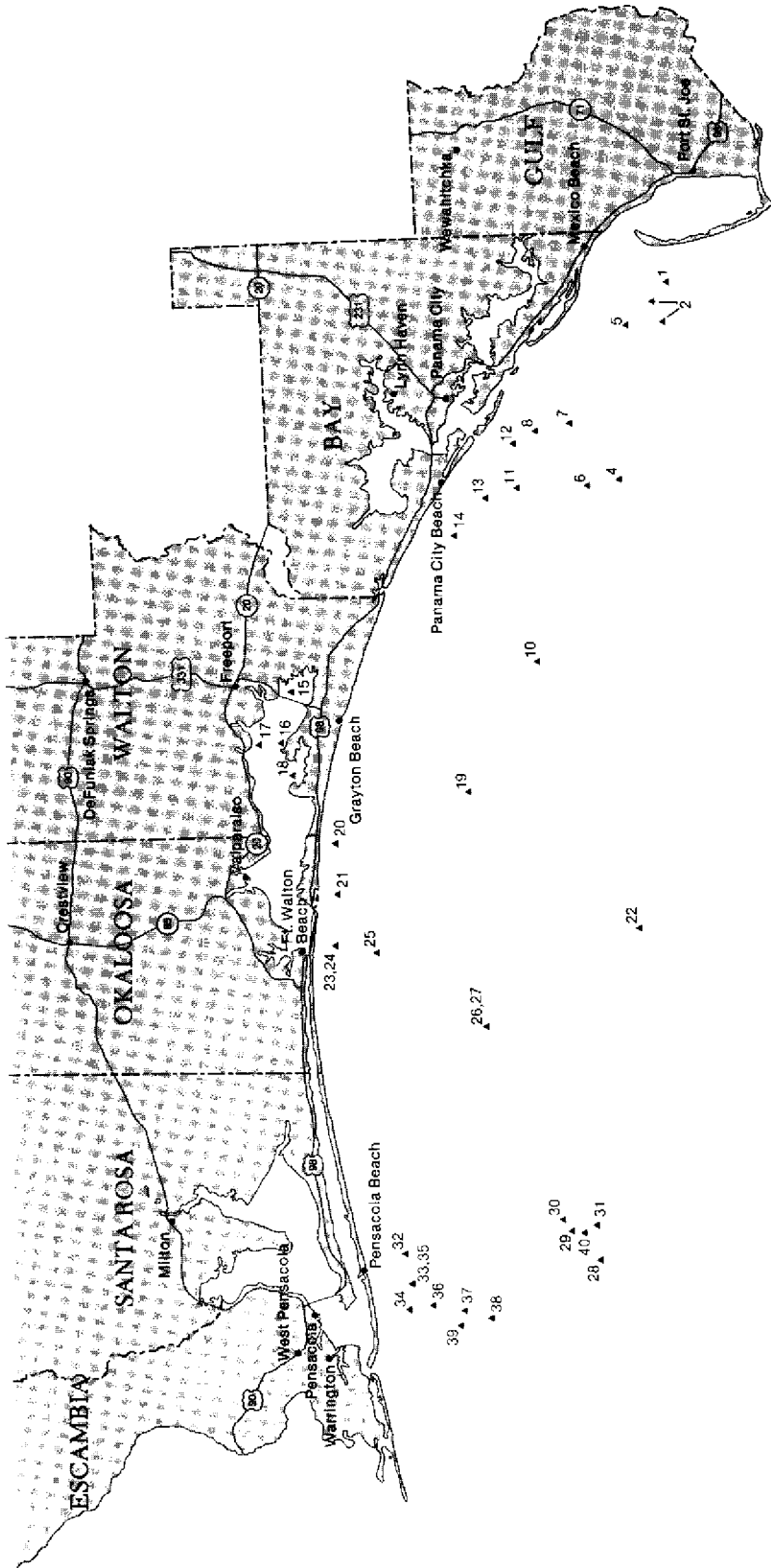


Map 9: Hillsborough through Franklin Counties

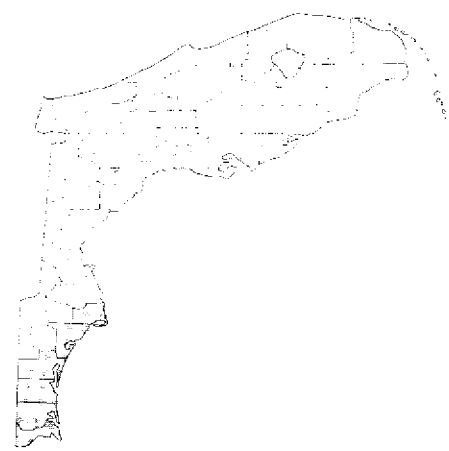


	Year Built	Name	Latitude	Longitude	Loran C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
Hillsborough	1	1987	27°50'00"	82°33'35"	14254.0	26	1.0	500 large clay pipe, due mid-1987
	2	1987	27°51'39"	82°33'50"	14257.5	24	0.6	Barges and concrete culvert
Pasco	3	1981	28°15'19"	82°57'27"	14275.4	25	9.0	Steel barges, steel cylinders,
	4	1982	28°17'42"	83°01'14"	14274.9	30	11.0	Steel barge, concrete culverts
Hernando	5	1977	28°30'00"	82°55'00"	14325.3	18	13.0	Tires, concrete rubble
	6	1964	28°53'06"	82°49'42"	14394.4	22	6.5	Autos, concrete rubble
Citrus	7	1983	28°47'24"	83°03'30"	14356.2	30	17.7	Concrete & iron culverts, metal
	8	1985	29°07'40"	83°12'28"	14398.5	20-25	9.0	450 concrete pipe
Taylor	9	1983	29°39'48"	83°37'36"	14460.6	21	11.0	Tires and concrete rubble
Wakulla	10	1964	29°55'42"	84°13'06"	14450.6	21-30	12.5	Concrete, tires
	11	1964	30°00'00"	84°09'15"	14478.3	20	5.0	Tires, concrete
	12	1986			14441.3	35	13.0	Steel barge, sunk near channel
Franklin	13		29°24'54"	84°21'54"	14310.4	70	15.0	Barge, concrete
	14	1981	29°30'48"	84°22'06"	14368.0	60	13.0	Barge, concrete
	15	1980	29°17'06"	84°36'48"	14227.8	105	35.0	Barge, concrete
	16	1979	29°17'55"	84°36'48"	14226.9	105	35.0	Obsolete oil rig (dismantled)
	17	1981	29°32'12"	84°37'06"	14288.4	70	13.0	Barge, concrete
	18	1982	29°31'05"	84°39'25"	14286.8	70	13.0	Concrete rubble, gas storage tanks
	19		29°31'05"	84°39'25"	14287.0	70	13.0	Barge, metal
20	1973		29°24'24"	84°51'48"	14198.2	85	13.0	50' Steel fishing vessel
21	1965		29°31'12"	85°07'36"	14153.9	45	6.5	Barge, concrete Concrete rubble
22	1983		28°17'00"	82°55'00"	14325.3	18	13.0	Tires, concrete rubble
23	1988		28°53'06"	82°49'42"	14394.4	22	6.5	Autos, concrete rubble
24	1942		28°47'24"	83°03'30"	14356.2	30	17.7	Concrete & iron culverts, metal
25	1987		29°07'40"	83°12'28"	14398.5	20-25	9.0	450 concrete pipe
26	1987		27°50'00"	82°33'35"	14254.0	26	1.0	500 large clay pipe, due mid-1987
27	1987		27°51'39"	82°33'50"	14257.5	24	0.6	Barges and concrete culvert
28	1981		28°15'19"	82°57'27"	14275.4	25	9.0	Steel barges, steel cylinders,
29	1982		28°17'42"	83°01'14"	14274.9	30	11.0	Steel barge, concrete culverts
30	1977		28°30'00"	82°55'00"	14325.3	18	13.0	Tires, concrete rubble
31	1964		28°53'06"	82°49'42"	14394.4	22	6.5	Autos, concrete rubble
32	1983		28°47'24"	83°03'30"	14356.2	30	17.7	Concrete & iron culverts, metal
33	1985		29°07'40"	83°12'28"	14398.5	20-25	9.0	450 concrete pipe
34	1983		29°39'48"	83°37'36"	14460.6	21	11.0	Tires and concrete rubble
35	1964		29°55'42"	84°13'06"	14450.6	21-30	12.5	Concrete, tires
36	1964		30°00'00"	84°09'15"	14478.3	20	5.0	Tires, concrete
37	1986			14441.3	35	13.0	Steel barge, sunk near channel	
38			29°24'54"	84°21'54"	14310.4	70	15.0	Barge, concrete
39	1981		29°30'48"	84°22'06"	14368.0	60	13.0	Barge, concrete
40	1980		29°17'06"	84°36'48"	14227.8	105	35.0	Barge, concrete
41	1979		29°17'55"	84°36'48"	14226.9	105	35.0	Obsolete oil rig (dismantled)
42	1981		29°32'12"	84°37'06"	14288.4	70	13.0	Barge, concrete
43	1982		29°31'05"	84°39'25"	14286.8	70	13.0	Concrete rubble, gas storage tanks
44			29°31'05"	84°39'25"	14287.0	70	13.0	Barge, metal
45			29°24'24"	84°51'48"	14198.2	85	13.0	50' Steel fishing vessel
46	1965		29°31'12"	85°07'36"	14153.9	45	6.5	Barge, concrete Concrete rubble
47	1983		28°17'00"	82°55'00"	14325.3	18	13.0	Tires, concrete rubble
48	1988		28°53'06"	82°49'42"	14394.4	22	6.5	Autos, concrete rubble
49	1942		28°47'24"	83°03'30"	14356.2	30	17.7	Concrete & iron culverts, metal
50	1987		29°07'40"	83°12'28"	14398.5	20-25	9.0	450 concrete pipe

*Indicates a well known 'wreck,' not necessarily a permitted reef.



Map 10: Gulf through Escambia Counties



Year Built	Name	Latitude	Longitude	Loran C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
1	1964 unnamed	29°50'24" 85°29'18"	14111.6	46802.0	40	4.4	Concrete rubble, prefab concrete
2	1971 Cluster of Ten Reefs	29°53'15" 85°32'00"	14105.3	46819.9	44-70	6.5-8.5	Autos
	Cluster of Ten Reefs	29°55'05" 85°32'00"	14088.0	46818.1			
3	1987 Parnell Reef	29°35'00" 86°16'00"	13700.0	46800.0	384	40.0	Tires bundles
4	1987 Raffield's Reef	29°55'00" 85°48'00"	14000.0	46900.0	110	16.0	Fiberglass boat parts, tires, steel
5	1979 Mexico Beach Site	29°54'06" 85°31'55"	14116.6	46845.5	54	17.0	Metal junk, tires
6	1979 Stage I Site	29°58'07" 85°48'49"	14011.3	46925.5	100	9.5	Concrete rubble
7	1974 Liberty Ship	29°59'03" 85°42'20"	14065.1	46918.6	74	8.0	Liberty ship
8	1979 Midway Site	30°02'23" 85°43'18"	14072.6	46949.6	71	5.0	Steel objects, tires, concrete, rubble
9	1987 T-Square Reef	28°37'05" 85°55'05"	13875.0	46770.3	132	23.0	Tires
10	1978 Grey Ghost	30°02'49" 86°05'32"	13891.1	46991.7	105	19.0	Steel tug, tires
1987	Grey Ghost (Archer Reef)	30°02'49" 86°05'32"	13891.1	46991.7	105	19.0	Tires, bundled
1987	Grey Ghost (Blount Reef)	30°03'00" 86°05'00"	13890.0	46990.0	105	19.0	Fiberglass boat parts, tires, steel
11	1978 Warsaw Site	30°04'16" 85°48'53"	14036.8	46977.2	77	5.0	Concrete rubble
12	1978 LOSS Pontoon	30°05'01" 85°44'02"	14078.5	46973.8	65	2.0	Tires, steel objects, concrete rubble
13	1980 PCMI Site	30°07'05" 85°49'29"	14042.8	46999.8	75	5.0	Barge, steel objects
14	1979 Fountainbleau Site	30°09'32" 85°53'33"	14019.8	47028.2	72	7.5	Concrete rubble
15	1972 unnamed	30°24'38" 86°08'48"	13933.2	47151.7	9	0.9	Unconfirmed existence
16	1972 unnamed	30°25'36" 86°14'18"	13883.2	47160.9	13	0.4	Unconfirmed existence
17	1972 unnamed	30°27'58" 86°14'34"	13885.9	47173.8	13	1.2	Unconfirmed existence
18	1972 unnamed	30°24'36" 86°17'35"	13847.3	47152.6	7	0.7	Tires, concrete rubble, unconfirmed
19	Landing Craft	30°09'08" 86°19'07"	13786.4	47054.6	102	12.4	LCM
20	1983 Dunbar Reef	30°21'00" 86°29'05"	13753.0	47131.9	75	3.0	Auto bodies, scrap metal, tire, rubble
21	1977 Bridge Rubble Reef	30°21'00" 86°29'05"	13720.4	47131.0	73	1.9	Several piles of concrete rubble
1977	Eglin Barge	30°21'04" 86°29'06"	13720.9	47132.8	72	1.5	100' barge
22	1982 Ozark	29°55'01" 86°34'09"	13602.3	46967.1	180	27.8	Target ship
23	1976 Pole Spot	30°22'03" 86°35'04"	13664.9	47138.0	75	1.3	Pier rubble
1976	Pole Spot	30°22'03" 86°35'04"	13664.7	47137.7	75	1.3	Pier rubble
1976	Pole Spot	30°21'04" 86°35'07"	13665.6	47138.2	75	1.3	Pier rubble
24	1977 Ft. Walton Barge	30°21'04" 86°35'07"	13660.7	47134.1	80	3.0	200 barge, rubble, also called "Brown Barge"
25	1977 Liberty Ship Reef	30°18'09" 86°36'02"	13648.1	47115.7	85	5.2	Liberty ship THOMAS HAYWARD
26	1979 Burgess Barge	30°09'04" 86°43'06"	13544.0	47062.3	118	14.2	Barge, also called "The 18 s Reef"

Year Built	Name	Latitude	Longitude	Loran C Coordinates	Depth (ft.)	Distance (Naut. mi.)	Composition
27	1980 Liberty Ship Reef	30°09'04"	86°43'06"	13544.2	47062.7	118	Liberty ship JOSEPH E. BROWN
28	1987 Woodburn Reef	29°20'00"	87°04'00"	13300.4	47010.1	138	Truck cabs
29	1987 Bodenstein Reef	29°58'00"	87°05'00"	30485.5	47024.5	144	Tires, appliances
30	1987 McKay Reef	30°04'00"	87°04'00"	13348.2	47028.0	156	Tires, appliances, shopping carts
Santa Rosa							
31	1982 Tenneco Reef	30°00'00"	87°04'00"	13324.5	47012.7	175	Dismantled oil platform, jacket portion
32	1982 Tenneco Reef	30°00'00"	87°04'00"	13324.1	47014.1	175	Dismantled oil platform, deck portion
33	1973 Casino Fishing Reef	30°17'02"	87°07'06"	13333.3	47115.0	60	Concrete rubble
34	1976 Liberty Ship Fish. Reef	30°16'03"	87°09'07"	13306.8	47102.5	67	Liberty ship JOSEPH MEEK
35	1974 Santa Rosa Barge Reef	30°17'25"	87°13'13"	13270.4	47107.4	45	Three coal barges, concrete rubble
36	1982 Barge			13306.9	47102.8	70-75	Barge
37	1943 Bridge Rubble			13278.0	47091.8	80	Concrete rubble scattered over 1/10 sq. mi.
38	1987 Escambia Site #7	30°11'07"	87°14'05"	13251.3	47077.1	90	Navy target ship, also called "Russian Freighter"
39	1987 Escambia Site #15	30°08'09"	87°14'09"	13250.0	47064.3	78	Due mid-87, prefab concrete units, rubble, scrap steel
40	1987 Jones Reef	30°03'30"	87°04'30"	13330.0	47078.5	140-150	Due mid-87, prefab concrete units, rubble, scrap steel
						10.5	Undetermined material

OTHER SOURCES OF INFORMATION

SLIDE/TAPE PRESENTATION: "Artificial Reefs." Arrangement for viewing may be made with the Sea Grant Extension Agent at local coastal county Extension offices or the show may be obtained on loan in writing from Motion Picture Services, Bldg. 116, IFAS, University of Florida, Gainesville, FL 32611.

PUBLICATIONS: The following publications can be obtained from the Sea Grant Extension Program, G022 McCarty Hall, University of Florida, Gainesville, FL 32611. Checks should be made payable to the **University of Florida** with Florida residents adding 5% sales tax.

- MAFS-9 CONSTRUCTING AN ARTIFICIAL REEF BUOY. 4 pps. (Single copy free).
- MAFS-20 ARTIFICIAL REEF SITE SELECTION AND EVALUATION. 4 pps. (Single copy free).
- MAP-9 RECREATIONAL USE REEFS IN FLORIDA—ARTIFICIAL AND NATURAL. (Map) (Single copy free).
- MAP-29 ARTIFICIAL REEFS: MATERIALS AND CONSTRUCTION. 12 pps. (Single copy free).
- SGEB-2 DIRECTORY OF ORGANIZATIONS AND PERSONS CONCERNED WITH ARTIFICIAL REEFS IN FLORIDA. 11 pps. (Single copy free).
- SGEB-4 ARTIFICIAL REEFS: PERMIT APPLICATION GUIDELINES. 8 pps. (Single copy free).
- SGEF-4 HELPING TO BUILD YOUR ARTIFICIAL REEF. Pamphlet. (Single copy free)
- SGR-41 ARTIFICIAL REEFS: CONFERENCE PROCEEDINGS 229 pps. Conference held September 13)15, 1979, Daytona Beach, FL (\$3.00).
- SGR-74 ANNOTATED BIBLIOGRAPHY OF ARTIFICIAL REEF RESEARCH AND MANAGEMENT. 275 pps. (\$5.00)

To obtain **FINANCIAL AND TECHNICAL ASSISTANCE FOR ARTIFICIAL FISHING REEFS**, contact the Florida Department of Natural Resources, 3900 Commonwealth Boulevard, Tallahassee, FL 32303.

INTERESTING FACTS ON ARTIFICIAL REEFS IN FLORIDA

Florida is the leading state in the number of active permitted artificial reefs, with 218 confirmed or otherwise documented. Several other states do, however, lead Florida in the actual number and variety of midwater fish attracting devices in use.

The first reef permit on file is dated November, 1918. The heaviest reef construction occurred during the 1970's when 92 reefs were permitted and activated. Over the years some 241 artificial reefs have been permitted. Many early reefs have been destroyed or shattered by storms, corroded away, or submerged into soft bottom areas, thus the discrepancy between permitted and active artificial reefs. On the basis of records in this report the trend in construction has been:

prior to 1950	3
1950-1960	1
1960-1970	15
1970-1980	92
1980-1982	36
1983-to date	81
unknown	26

A marked change has occurred in the type of reef materials used. In earlier days the availability and easy transport of surplus auto tires led to heavy use of these as convenient and inexpensive reef building materials. Surplus small craft and household plumbing, cooking and refrigerating appliances were also popular materials. However, corrosion, siltation, and storm-related turbulence often caused these reefs to deteriorate completely or to be dispersed to

the point of ineffectiveness.

A more recent trend has been to use more stable materials such as cast concrete, bridge rubble, culvert materials, large storage tanks, porcelain fixtures, decommissioned vessels and barges, and similar corrosion-resistant materials.

Several of the larger reefs have been constructed from Liberty ships, or similar large transport vessels. Most recently the first complete oil and gas drilling jacket and platform were deposited in two sections offshore of Pensacola, Florida. An earlier petroleum template had been deposited in the northern Gulf near Carrabelle. The latest production platforms donated by Tenneco Oil in September, 1985 were deployed just offshore the Broward-Dade coast in South Florida. Local reef building organizations are hopeful these contributions to Florida's fishing environment will be the forerunner of others from petroleum-producing companies.

Experimental research and designed reefs have been deployed off both the Atlantic and Gulf Coasts of Florida. Some of these have been of Japanese manufacture and were monitored to determine their effectiveness and adaptability to Florida's warm waters. Designed artificial reefs are being studied and considered by several organizations and agencies to further enhancement efforts.

Several nodes of heavy reef development exist of Duval, St. Johns, Broward, Dade, Monroe, Pinellas, Bay, Okaloosa, and Escambia counties. Only one county on the east coast and one on the gulf coast of Florida have no reefs on record, with all others having one or more.

