

**PART IV**

**MARINA ANALYSIS AND IMPACTS**

## 1.0 INTRODUCTION AND DATA SOURCES

This report discusses the current number and distribution of marinas in the Florida Keys and explores factors that affect demand for marina development in the Keys. Marinas and associated land uses are relatively limited in total land area, but are important in terms of their role in the Florida Keys life style and their potential environmental impacts.

Reliable data on the number, location, size, number of slips, and status of ancillary facilities for marinas in the Florida Keys are scarce and often contradictory (Table 1). The Florida Marine Research Institute (FMRI) maintains a marina dataset; FMRI provided the 2000 version of their dataset for this study (Appendix A). FMRI compiled marina information from three main sources: FMRI's Fisheries Independent Monitoring Program data (1999), Florida Marine Patrol records (1999) and American Business Index (1999). FMRI checked the location of all marinas using 1994/1995 Digital Ortho-Quarter Quadrangle aerial photography and verified marina addresses by directly contacting each marina. The QA/QC process lasted more than six months (FMRI, email from Mr. Doug Wilder to Mr. Rob Hudson, URS Corp., dated February 19, 2002).

**TABLE 1  
NUMBER OF MARINES AND ANCILLARY FACILITIES IN THE FLORIDA KEYS**

Source	Number of Marinas	Number of Slips	Number of Boat Ramps	Number of Boat Lanes
Kearney/Centaur 1990	N/R	5,086	125	N/R
Monroe County Year 2010 Comprehensive Plan	56	85	85	N/R
National Marine Fisheries Service 1996	163	8,952	125	134
Florida Marine Research Institute (Appendix A)	115*	N/R	65	N/R
State of Florida Division of Law Enforcement	239	N/R	N/R	N/R

N/R – Not reported.

\* There are another 77 entries in the database labeled “resort/hotels,” some of which may include marinas.

Data on the number of wet and dry slips is scarce and incomplete. Efforts by the Contractor to determine the number of slips and their characteristics were met with reluctance from marina owners to divulge proprietary information for public dissemination. The Florida Department for Environmental Protection (FDEP) office in Marathon reported that a complete inventory of marinas, together with their inventory of wet and dry slips, was not available. Their only source of this data was individual leasing files for particular marinas in the Keys, but this data source was not a complete representation of all marinas in the Keys because FDEP does not inspect all marinas.

The FMRI dataset includes 207 entries (Appendix A, Figure 1), and shows a concentration of marinas and related facilities in Marathon (47), Key Largo (41), Islamorada (29), and Key West (28). Other areas with more than five facilities are Long Key (10), Tavernier (7), and Pig Pine Key (6). The data set includes 65 boat ramps, 115 marinas, and 68 “resort/hotel,” many of which may include marinas.

**2.0 FACTORS AFFECTING DEMAND FOR MARINA AND RELATED FACILITIES**

Most of the demand for marina slips in the Florida Keys is related to boaters who use the facility for storage while their vessels are not in use. In areas with high levels of marine-based tourist activity, demand for marinas is created outside of the area. The Florida Keys and their associated recreational opportunities attract boaters from elsewhere. This externally based demand can be satisfied by rental of boats that are docked in the Keys year-round as well as by the use of local boat ramps to launch vessels that have been towed to the Keys. Therefore, the demand generated by boaters living outside the Florida Keys supplements the local demand. The magnitude of these external demands is almost impossible to estimate with acceptable accuracy.

**2.1 Number of Annual Tourists**

During a twelve-month period in 1995-1996 (National Oceanic and Atmospheric Administration (NOAA) *Visitor Profiles: Florida Keys & Key West*), there were 2.5 million "recreating visitors" to the Florida Keys who stayed for a total of 13.3 million days. The Upper and Middle Keys attracted 48% of these visitors, with another 43% going on to Key West.

The NOAA survey documented the expenditures associated with the use of marinas and related activities. Total expenditures reached \$166 million (Table 2); boating activities accounted for 45.7% of the total. On average, each tourist spent \$5.69 per day for boating activities during his or her stay in the Keys.

**TABLE 2  
MARINA-RELATED EXPENDITURES BY TOURISTS, 1995-1996**

<b>Expenditure Category</b>	<b>Annual Expenditure</b>
Boating	\$75.66 million
Fishing	\$43.88 million
Diving	\$46.01 million
Total	\$165.55 million

Source: NOAA; *Visitor Profiles: Florida Keys & Key West*

The large expenditures by visitors does not necessarily imply a clear demand for boat storage in marina slips. The NOAA study found that 95.8% of the visitors who used their own boats while in the Keys had towed them with a trailer from home. A total of 35.6% of all visitors to the Keys came from Florida, and almost 60% of those Florida visitors came from Miami-Dade, Broward or Palm Beach Counties. While visitors create a strong direct demand for launching and short-term docking facilities, local demand supports the development and operation of boat slips for long-term storage. The strongest marina demand created by tourists is in the form of boat rentals and charters that occupy slips on an extended basis.

## 2.2 Boat Registrations

While boat registrations are not direct determinants of marina demand, they are indicators of potential demand. More boats require additional slips and a substantial population growth rate indicates a strong potential market for marina development. From 1990 to 1998, boat registrations increased by 29.7% (Table 3). Therefore, the growth of registered boats locally can be expected to apply pressure for development of new marina facilities.

**TABLE 3  
MONROE COUNTY BOAT REGISTRATIONS**

	1990	1998	Percent Increase
Pleasure Boats	15,595	20,356	30.5
Commercial Boats	3,458	4,355	25.9
Total Boats	19,053	24,711	29.7

Source: *Florida Statistical Abstract*

## 2.3 Boating-Related Recreational Activities of Residents

More than three-fourths of the Keys residents use privately owned boats for some type of marine recreation over the span of a year (Table 4). Keys residents also participate heavily in activities that involve charter and party boats. The NOAA survey revealed that approximately 23,400 persons utilized these craft over the 12-month period. Keys residents rented approximately 650 boats per months for recreational purposes.

**TABLE 4  
PARTICIPANTS IN ANY TYPE OF BOAT USE**

	Key West		Lower Keys		Middle Keys		Upper Keys	
	Number	Percent <sup>(1)</sup>	Number	Percent <sup>(1)</sup>	Number	Percent <sup>(1)</sup>	Number	Percent <sup>(1)</sup>
Charter/ Party	6,472	8.15	5,032	6.34	4,862	6.12	7,062	8.90
Private	16,050	20.22	14,801	18.65	12,944	16.31	18,346	23.11
Rental	2,211	2.79	1,287	1.62	1,299	1.64	3,003	3.78

Notes: <sup>(1)</sup> Percent of total residents who participated in activity.

Source: NOAA, *Linking the Economy and Environment of Florida Keys/Florida Bay*

## 2.4 Number of Boater-Days

Visitors generate 60.6% of the boater-days (Table 5). This activity level represents a significant demand for rental and charter boats that occupy local marina slips.

**TABLE 5**  
**PERSON-DAYS OF BOAT USE, MONROE COUNTY**  
**(IN THOUSANDS)**

<b>Activities</b>	<b>Visitors</b>	<b>Residents</b>	<b>Total</b>
Snorkeling	1,261.0	746.5	2,007.5
Scuba Diving	408.8	169.6	578.4
Fishing	835.5	704.6	1,540.1
Sailing	80.6	87.9	168.5
Personal Water Craft	238.0	9.7	247.7
Other Boating	190.6	225.6	416.2
<b>TOTALS</b>	<b>3,014.5</b>	<b>1,943.9</b>	<b>4,985.4</b>

Source: NOAA, *Linking the Economy and Environment of Florida Keys/Florida Bay*

## **2.5 Summary of Factors Affecting Demand**

Tourist expenditures for boating, fishing and diving comprise a significant source of income to the local economy. Boat registrations in Monroe County increased about 30% from 1990 to 1998, while population grew less than 2% in the same period (U.S. Bureau of Census 2000). The high incidence of boating-related activities of residents is another strong indicator of sustained demand for marina development. Approximately 20% (16.3% to 23.1%, depending on subarea) of Monroe County residents participate in recreational activities that involve use of privately owned boats (Table 4). Both residents and visitors generate a total of 4.9 million boater-days in a year.

**APPENDIX**

**MARINAS AND RELATED FACILITIES IN THE FLORIDA KEYS  
(FROM FMRI)**

<b>Facility</b>	<b>City</b>	<b>Site Type</b>
Bahia Honda State Park Marina	Big Pine Key	M A
Big Pine Key Fishing Lodge Campground	Big Pine Key	MO
Keys Sea Center	Big Pine Key	M A
Little Palm Island	Big Pine Key	M
Old Wooden Bridge Fishing Camp	Big Pine Key	M A O
Sunshine Key Resort & Marina	Big Pine Key	M A O
Cudjoe Key Boat Ramp	Cudjoe Key	A
Venture Out	Cudjoe Key	M A
Club Nautico	Duck Key	O
Duck Key Marina	Duck Key	M
Hawks Cay Bridge	Duck Key	B A
Hawks Cay Resort & Marina	Duck Key	M A O
Boca Chica Channel Bridge	East Boca Chica Key	O
Crawl Key Boat Ramp	East Marathon	A
Bud Boats Inc	Grassy Key	A M
Coconut Palma's Marina	Grassy Key	M
Tom Harbor Channel Pier	Grassy/Duck Keys	O
Fred's Place	Homestead	M A
Abels Marina/Abels Tackle Box	Islamorada	M
Banks (Whale Harbor Bridge)	Islamorada	O
Bud-N-Mary Marina	Islamorada	M
Caloosa Cove Marina	Islamorada	M
Caribee Boat Sales & Marina	Islamorada	M
Cobra Marine	Islamorada	M
Coconut Cove Resort & Marina	Islamorada	MO
Coral Bay Marina Inc	Islamorada	M
Coral Bay Resort	Islamorada	O
Coral Harbor Club	Islamorada	O
Estes Fish Camp	Islamorada	M A O
Harbor Lights	Islamorada	A
Holiday Isle Marina	Islamorada	M A
Islamorada Yacht Basin (Lorelei Resta)	Islamorada	MO
Matecumbe Marina	Islamorada	M A
Matecumbe Resort	Islamorada	O
Matecumbe Yacht Club	Islamorada	O
Max's Marina	Islamorada	M
Papa Joe's Marina	Islamorada	M
Pelican Cove Resort	Islamorada	M A O
Plantation Yacht Harbor Resort	Islamorada	MO
Ragged Edge Resort	Islamorada	MO
Robbies Marina	Islamorada	M A O
Smuggler's Cove	Islamorada	M
Sunset Inn Resort	Islamorada	O
Treasure Harbor Marine	Islamorada	M
Tropical Air Resort	Islamorada	A O
Tropical Reef Motel	Islamorada	M A
Whale Harbor	Islamorada	M
Key Colony Beach Marina	Key Colony Beach	M
Adams Cut Bridge	Key Largo	O
Alabama Jack's	Key Largo	M A
America Outdoors Marina	Key Largo	M A O
American Diving Headquarters	Key Largo	A

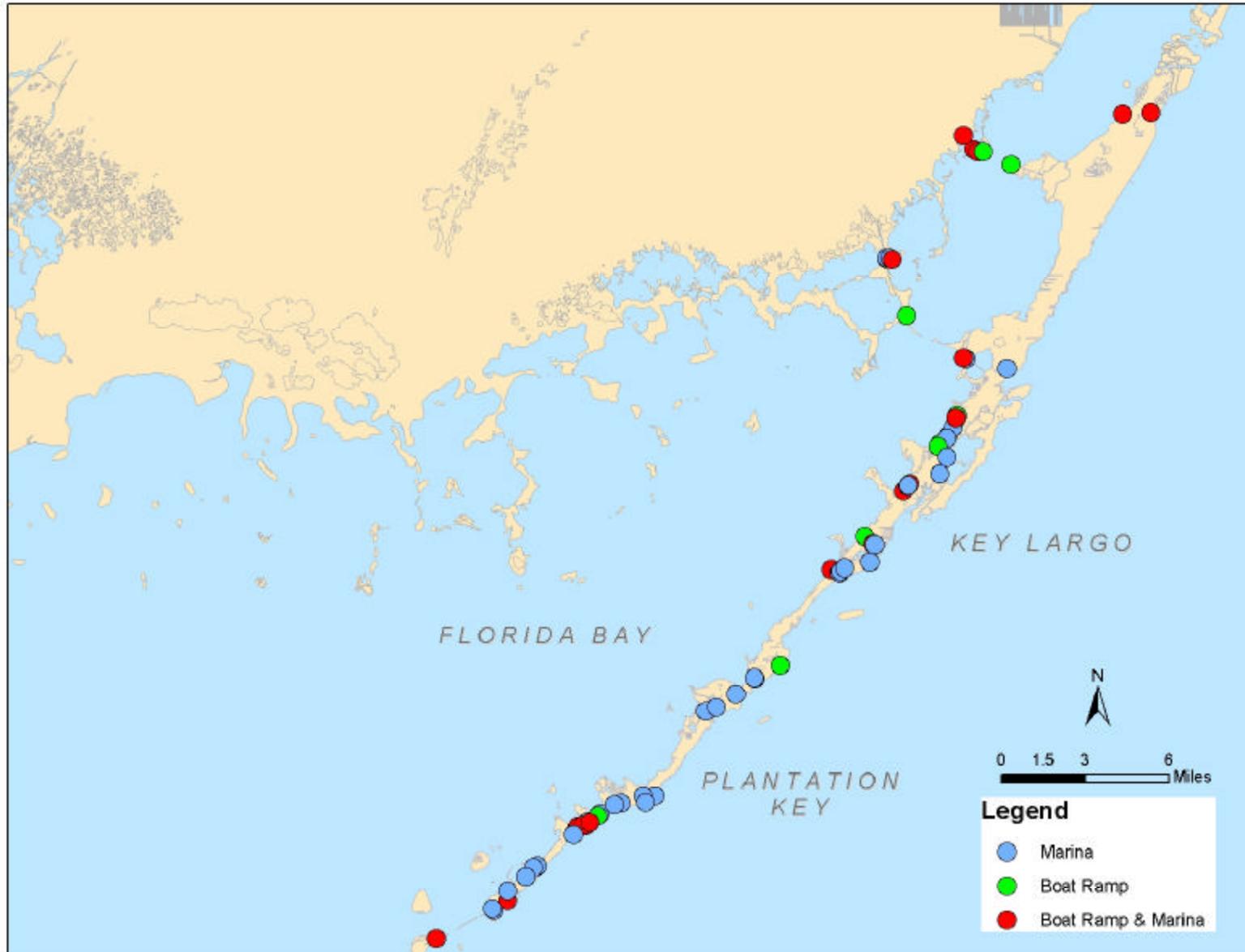
<b>Facility</b>	<b>City</b>	<b>Site Type</b>
Anchorage Resort	Key Largo	M
Best Western Suites at Key Largo	Key Largo	O
Blue Fin Marina	Key Largo	M
Blue Lagoon Resorts Int.	Key Largo	A O
Buttonwood Condo's	Key Largo	O
Calusa Camp Resort	Key Largo	M A O
Camper's Cove	Key Largo	MA
Captian Jax Travel Resort	Key Largo	A O
Caribbean Club Ramp	Key Largo	A J S
Family Paradise Island	Key Largo	MA
Garden Cove Marina	Key Largo	M
Hobo's Marina Inc	Key Largo	M
Holiday Inn Marina	Key Largo	O
Italian Fisherman Marina	Key Largo	M
John Pennekamp Coral Reef State Park	Key Largo	M O
Key Largo Anglers Club	Key Largo	MA
Key Largo Campground+Marina	Key Largo	M A O
Key Largo Harbor	Key Largo	O
Key Largo Ocean Resort+Marina	Key Largo	O
Kings Campground & Marina	Key Largo	A O
Koblick Marine Center	Key Largo	M
Landings of Largo	Key Largo	MA
Largo Park	Key Largo	M
Little Blackwater Sound Ramp	Key Largo	A P
Mandalay Marina & Tiki Bar	Key Largo	M
Marina Del Mar Resort & Marina	Key Largo	O
Marriot Resort	Key Largo	O
Molasses Reef Marina	Key Largo	M
Ocean Bay Marina	Key Largo	MA
Ocean Divers Marina	Key Largo	O
Ocean Reef Club	Key Largo	O
Pilot House Marina	Key Largo	M
Rock Harbor Marina	Key Largo	M
Roger's Marine	Key Largo	M
Rowells Marina	Key Largo	F M A
Sheraton Key Largo Bch. Resort	Key Largo	O
Silver Shores Leaseholder Association	Key Largo	O
A&B Marina	Key West	M
Blue Lagoon Watersports	Key West	O
Boyd's Campground	Key West	A O
Conch Harbor	Key West	M
Galleon Marina	Key West	M
Garrison Bight Marina	Key West	M
Geiger Key RV Park & Marina	Key West	MO
George Smathers Beach	Key West	O
Harborside Motel & Marina	Key West	O
Key West Bight Marina	Key West	M
Key West Hilton Resort & Marina	Key West	MO
Key West Municipal Marina	Key West	MA
Key West Oceanside Marina	Key West	MA
Key West Yacht Club	Key West	MO
Mallory Square	Key West	O
Murray Marine Sales & Service, Inc.	Key West	MO
NAS Boca Chica Marina	Key West	MO
Pelican Landing Resort	Key West	O

<b>Facility</b>	<b>City</b>	<b>Site Type</b>
Peninsular Marine Enterprises	Key West	M
Safe Harbour Marina	Key West	M
Sea Horse Adventures, Inc.	Key West	MA
Seaside Resort, Inc.	Key West	MA
Simonton Boat Ramp	Key West	A
Spencer's Boatyard	Key West	O
Sunset Harbor Moblie Home Park	Key West	A
Sunset Marina Key West, Inc.	Key West	M
Truman Annex Marina	Key West	M
U.S.1 Marina, Inc	Key West	M
Little Duck Key Boat Ramp	Little Duck Key	A
Dolphin Marina Association LTD	Little Torch Key	MA
Banks	Long Key	O
Banks	Long Key	O
Edgewater Lodge	Long Key	MAO
Fiesta Key K.O.A.	Long Key	MAO
Kt's Marina, Bait & Tackle	Long Key	MO
Long Key Channel Pier	Long Key	O
Long Key State Recreation Area	Long Key	O
Outdoor Resorts Marina	Long Key	MAO
Pier 68	Long Key	MO
Sea Bird Marina	Long Key	MA
Channel No. 2 Pier	Lower Matecumbe Key	O
Channel Two Wayside Park	Lower Matecumbe Key	O
Anchorlite Inc.	Marathon	M
Banana Bay Resort & Marina	Marathon	MAO
Bay View Inn & Marina	Marathon	MAO
Blackfin Resort & Marina	Marathon	MAO
Bluewaters Motel	Marathon	AO
Bonefish Marina & Condo Association	Marathon	MO
Bridge	Marathon	O
Buccaneer Resort	Marathon	MAO
Captain Hook's Marina	Marathon	M
Captain Pip's Inc.	Marathon	M
Coco Plum Marina	Marathon	M
Coral Lagoon Resort	Marathon	O
County Boat Ramp	Marathon	A
Driftwood Marina And Storage	Marathon	MO
Faro Blanco Bayside	Marathon	MAO
Faro Blanco Oceanside	Marathon	O
Fish and Fun Boat Rental	Marathon	MAO
Hidden Harbor Motel	Marathon	O
Holiday Inn Marina	Marathon	O
Jolly Roger Travel Park	Marathon	O
Key Lime Resort & Marina Club	Marathon	MO
Keys Boat Works, Inc.	Marathon	O
Knight's Key Campground and Marina	Marathon	MAO
Lagoon Resort & Marina	Marathon	O
Lion's Lair Travel Park	Marathon	MA
Marathon Boat Yard	Marathon	M
Marathon Key Beach Club	Marathon	M
Marathon Marina	Marathon	M
Marathon Recreation Complex	Marathon	AO
Marathon Yacht Club	Marathon	O
Marie's Yacht Harbor Club	Marathon	MAO

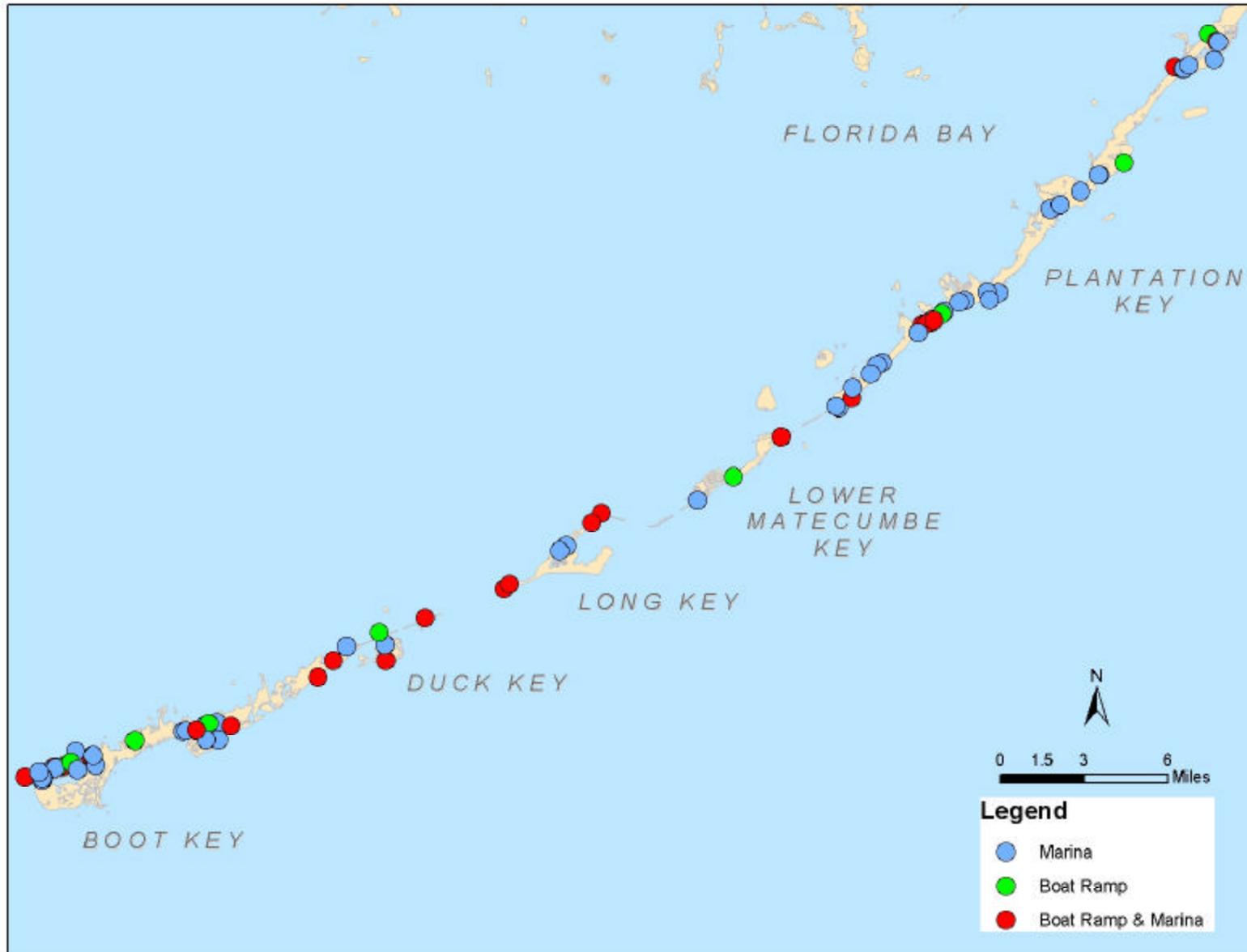
<b>Facility</b>	<b>City</b>	<b>Site Type</b>
Oceanside Marine Services, Inc.	Marathon	O
Pancha	Marathon	M
Pat & Kelly's Marina	Marathon	M
Pinellas Marina	Marathon	M
Reef at Marathon Resort Club	Marathon	O
Seahorse Motel	Marathon	O
Seven Mile Marina	Marathon	M
Sisters Creek Marina	Marathon	M
Sombrero Beach County Park	Marathon	O
Sombrero Resort & Lighthouse	Marathon	MO
The Boat House, Inc.	Marathon	MA
Vaca Cut Motel	Marathon	O
Wayside	Marathon	O
Banks (Indian Key)	Matecumbe Key	O
Harry Harris County Park	NE Tavernier	AO
Card Sound Causeway(East)	North Monroe County	O
Seabreeze Trailer Park	Plantation Key	O
Looe Key Reef Resort	Ramrod Key	O
Shark Key Boat Ramp	Shark Key	AP
Sugarloaf Marina	Sugarloaf Key	MA
Cudjoe Gardens Marina & Dive	Sugarloaf Shores	M
Sugar Shack Marina	Sugarloaf Shores	M
Kemp Channel Fishing Pier	Summerland Key	O
Koa Sugarloaf Key Campground	Summerland Key	BA
Sea Boots Charter Fishing	Summerland Key	O
Blue Waters Marina	Tavernier	M
Campbell's Marina	Tavernier	M
Curtis Marine	Tavernier	M
Futura Yacht Club	Tavernier	O
Plantation Boat Mart & Marina	Tavernier	MO
Summer Sea Condo	Tavernier	O
Tavernier Creek Marina	Tavernier	M
Seven Mile Bridge Wayside Park (East)	West Marathon	O
Spanish Harbor Wayside Park	West Marathon	A
Bogie Channel Bridge		O
Bow Channel Bridge		O
Card Sound Bridge		O
Key Largo Bay Beach Resort		O
Lower Sugarloaf Channel Bridge		O
Middle Torch Key Ramp		A
Niles Channel Bridge Old Bridge		O
Ohio-Missouri Bridge		O
Shark Channel Bridge		O
South Pine Channel Bridge (East End)		O
Spanish Harbor Bridge (West End)		O
Spanish Harbor Key NE Side (Quarry)		O
Wayside/Ramp		AO

A = boat ramp; M = marina; O = resort/hotel; J = jetty.

**FIGURE 1A**  
**DISTRIBUTION OF MARINAS AND BOAT RAMPS IN THE FLORIDA KEYS – UPPER KEYS (SOURCE: FMRI)**



**FIGURE 1B**  
**DISTRIBUTION OF MARINAS AND BOAT RAMPS IN THE FLORIDA KEYS – MIDDLE KEYS (SOURCE: FMRI)**



**FIGURE 1C**  
**DISTRIBUTION OF MARINAS AND BOAT RAMPS IN THE FLORIDA KEYS – LOWER KEYS (SOURCE: FMRI)**

