

Appendix B
Field Observation Report



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FIELD OBSERVATION REPORT

COMM: 320000 **DATE:** August 5, 2013

INSPECTOR: Mr. Robert Baron, Coastal Systems International, Inc. (Coastal Systems)
Mr. Daniel Moretz, Coastal Systems
Mr. Aaron Boehning, Coastal Systems

RE: **FIELD OBSERVATION REPORT FOR THE MOORING FIELD SITE VISITS
RELATIVE TO THE MONROE COUNTY PUBLIC/PRIVATE MOORING FIELD
PROJECT IN THE FLORIDA KEYS, MONROE COUNTY, FLORIDA**

1. INTRODUCTION

On May 6-8, 2013 Coastal Systems International, Inc. (Coastal Systems) performed site visits at the three proposed anchorage sites: Jewfish Creek, Buttonwood Sound, and Boca Chica basin, to evaluate relative current need, potential, and permitability for mooring field implementation. Hydrographic and marine resource data was collected to evaluate physical access to the sites, extent of marine resource colonization, and regulatory permitting feasibility. Data collected during the marine resource survey will be used to determine the best site for mooring field implementation, as well as conceptual design and initial regulatory permitting feasibility evaluation purposes. Additionally, an assessment of existing/potential upland support facilities was completed during the site visits.

2. METHODOLOGY

Coastal Systems mobilized a survey team to collect data within the three potential managed mooring field sites to document water depths and submerged aquatic resources at each of the three sites. No existing structures (docks, pilings, derelict vessels, etc.) were mapped. The data was collected with a vessel-based automated hydrographic survey system. A survey grade echo sounder (fathometer) was used to obtain depths and DGPS equipment was used to obtain horizontal positioning. The depths were logged with horizontal positioning in real-time utilizing an on-board field laptop computer operating Hypack software, which was used for navigation.

In addition to the water depth data, Coastal Systems conducted qualitative biological assessments to document the substrate characteristics and marine resources present within the three priority sites for potential mooring fields to confirm the presence and general distribution of seagrass, hardbottom, macroalgae, and other ecologically important marine/estuarine resources. The survey methodology was limited to qualitative assessments of submerged aquatic resources and did not include surveys of coastal wetlands above mean low water or detailed/quantitative assessments.

During the site visits Coastal Systems also conducted a one time inventory of existing vessels at the three priority sites for potential mooring fields. This inventory documented the number of vessels observed and the general type of vessels at anchor. Coastal Systems interviewed representative boaters to understand vessel migration patterns and average length of stay in the anchorage. In addition, potential shore support facilities were evaluated for suitability. Representative photographs were also obtained.

3. RESULTS

3.1 Buttonwood Sound

The dominant benthic functional group in the immediate nearshore area of Buttonwood Sound consisted of dense seagrass (Attachment A, Figure 1). Turtle grass (*Thalassia testudinum*) was the dominant species observed in the nearshore area (Photograph 1) and water depths ranged from 2.1 ft to 5.2 ft. The offshore area primarily consisted of patchy seagrass, macroalgae, and sponge. Sparse turtle grass (*T. testudinum*) was the dominant seagrass species observed in the offshore area and water depths ranged from 4.1 ft to 6.5 ft.

On May 7, 2013, 22 vessels were moored in Buttonwood Sound including 20 sailboats (Photograph 2), one powerboat, one houseboat (Photograph 3), and zero derelict vessels. The sailboats were clustered in the area adjacent to the Upper Keys Sailing Club. The Upper Keys Sailing Club was founded in 1973 and supports the competitive, educational, and social aspects of sailing. A member of the club provided the following information:

- County recently removed derelict vessels.
- County provides a free weekly pump out service for moored vessels.
- Club members and public are concerned that a managed mooring field will result in the Sound filling up with boats.

In addition to the Upper Keys Sailing Club, nearby facilities/access includes the following:

- Gas station (land based)
- Public transportation
- Bay access
- Point of View Key Largo RV Resort (possible upland support facility)
 - Wi-Fi
 - Laundry Facilities
 - Boat ramp

- Marina
- Motel
- Restaurants, fast food & cafes
- Grocery stores
- Weekly pump out service (provided by Mobile Vessel Pump out USA)
- Highway access
- ASAP Urgent Care Medical Center (8 miles south)
- Dive shops (Diver's Direct and Scuba Fun)
- Barber shop and hair salon
- Banks
- Liquor store
- Drug stores
- Public Transportation
- Animal Hospital
- Bait & Tackle Shop
- Baptist Church



Photograph 1: Turtle grass (*Thalassia testudinum*) was the dominant species observed at the Buttonwood Sound site.



Photograph 2: Sailboat observed at the Buttonwood Sound site on May 7, 2013.



Photograph 3: Houseboat observed at the Buttonwood Sound site on May 7, 2013.

3.2 Jewfish Creek

The dominant benthic functional group in the immediate area adjacent to Jewfish Creek, on both the east and west banks of the channel, consisted of dense seagrass (Attachment A, Figure 2). Turtle grass (*T. testudinum*) was the dominant species observed intermixed with shoal grass (*Halodule beaudettei*). Water depths ranged from 2.8 ft to 7.7 ft. The area west of the Creek consisted of patchy seagrass (*T. testudinum*) and sand.

On May 8, 2013, 16 vessels were moored in Jewfish Creek including 10 sailboats, three powerboats, one houseboat, and two derelict vessels. The moored vessels were primarily clustered in the area adjacent to the eastern edge of the channel, south of the Anchorage Resort (Photograph 4). Vessels were also moored under the Overseas Highway Bridge, north of the Anchorage Resort (Photograph 5).

Nearby facilities/access included the following:

- Anchorage Resort
 - Laundry Facilities
 - Gas station/Fuel Dock
 - Marina with water, electric, and cable
 - Boat Rentals
 - Parking
 - Motel
 - Timeshare Resales
 - Onsite BBQ Grills
 - Heated Swimming Pool
 - Wi-Fi
 - Tennis Courts, Shuffleboard, and Basketball
- Gilbert's Resort (potential upland facility)
 - Boat Ramp
 - Restaurant/Tiki Bar
 - Parking
 - Marina
 - Motel
- Bay access
- Highway access



Photograph 4: Vessels observed at the Jewfish Creek site on May 8, 2013.



Photograph 5: Vessels moored under the Overseas Highway Bridge, north of the Anchorage Resort on May 8, 2013.

3.3 Boca Chica

The dominant benthic functional group in the northernmost area of the Boca Chica Site consisted of dense seagrass (Attachment A, Figure 3). Turtle grass (*T. testudinum*) was the dominant species observed in this area (Photograph 6) and water depths ranged from 1.2 ft to 8.9 ft (excluding the channel where depths were up to 18.6 ft). The middle of the site adjacent to the Boca Chica Marina consisted of dense seagrass and hardbottom directly offshore, with sparse seagrass and macroalgae further offshore intermixed among the mangroves. Turtle grass (*T. testudinum*) was the dominant seagrass species observed in these two areas and water depths ranged from 1.4 ft to 8.5 ft.

On May 6, 2013, 62 vessels were moored in Boca Chica including 19 sailboats (Photograph 7), 25 powerboats, five houseboats (Photograph 8), and 13 derelict vessels (Photograph 9). The moored vessels were primarily located in the northern portion of the site. An individual who resides on a sailboat in the Boca Chica site provided the following information:

- County provides a free weekly pump out service for moored vessels.
- Trash is a big problem; some users do not take responsibility for their trash, some trash comes from the fishing company located adjacent to the site, and some originates from Boyd's Campground.
- Locals refer to the area as Key Haven Boat Ramp Area.
- Users don't have a problem paying to moor as long as it is feasible since it is currently free.
- There are free dumpsters on shore.
- There is no public shower or laundry service available for use.
- Marinas do not cooperate with moored boaters.
- Boyd's Campground complains about trash problem.
- Users do not want more government oversight; they say it does not work.
- Police have not helped with crimes including stolen gear.
- Things could get better if they solved a few problems.
- Recent strong winds in excess of 70 knots caused a few of the boats to run aground and/or hit other boats.

Nearby facilities/access included the following:

- Gas station (land based)
- Bay access
- Robbie's Full Service Marina
- Oceanside Marina
- Hyatt Beach House Resort
- Days Inn Key West
- Restaurants/grocery stores

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- Boat ramp
- Highway access
- Ocean access
- Boyd's Campground
 - 50 amp and 30 amp electricity
 - Heated Swimming Pool
 - Lounging Beach
 - 24 hour security
 - Free Wi-Fi
 - Modem data port
 - Marina
 - Four Bathhouses
 - City Bus Service
 - Coin Laundry
 - Picnic Pavilion with BBQ Grill
 - ATM
 - Dump Station and pump-out service
 - LP gas
 - Dishwashing Station
- Waste disposal/trash bins
- West Marine
- Weekly pump out service (provided by Mobile Vessel Pump out USA)
- M & M Small Engine
- Boat repair maintenance yard
- Waters Edge Colony Mobil Home
- Key West Baptist Temple
- Covenant Word Church
- Oily's Auto Repair
- Stock Island Lobster Co.
- Blue Planet Kayak Eco-Tours
- Coconut Mobil Home Park
- El Mar RV Resort
- Fishbusterz Retail Seafood Market
- Key West Engine Services Inc.





Photograph 6: Turtle grass (*Thalassia testudinum*) was the dominant species observed at the Boca Chica site.



Photograph 7: Sailboat observed at the Boca Chica site on May 6, 2013.



Photograph 8: Houseboat observed at the Boca Chica site on May 6, 2013



Photograph 9: Overturned derelict vessel observed at the Boca Chica site on May 6, 2013.

ATTACHMENT A
Figures

NOTES

1. WATER DEPTHS & SEAGRASS DATA COLLECTED BY COASTAL SYSTEMS INTERNATIONAL ON MAY 7TH & 8TH 2013.
2. HORIZONTAL POSITIONING WAS OBTAINED USING A WAAS ENABLED GARMIN HANDHELD GPS.
3. WATER DEPTHS COLLECTED USING A HANDHELD DIGITAL SONAR.
4. MLW TIDE CORRECTIONS WERE REFERENCED TO NOAA PREDICTED TIDE STATIONS IN VICINITY OF SURVEY LOCATIONS.
5. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF THE SURVEY ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS AN INDICATION OF THE GENERAL CONDITIONS EXISTING AT THAT TIME.

LEGEND

- 6.1 WATER DEPTH REFERENCE TO MEAN LOW WATER
- + DENSE SEAGRASS
- PATCHY SEAGRASS, MACROALGAE & SPONGE



0 500 1000
SCALE IN FEET
1" = 1,000'

LIMIT OF SEAGRASS SURVEY

BUTTONWOOD SOUND

OVERSEAS HWY.

FIGURE 1
BUTTONWOOD SOUND
EXISTING CONDITIONS SURVEY
MAY, 2013





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LEGEND

- 3.5 WATER DEPTHS REFERENCED TO MEAN LOW WATER
- + + DENSE SEAGRASS
- □ □ PATCHY SEAGRASS

FIGURE 2
 JEWFISH CREEK
 EXISTING CONDITIONS SURVEY
 MAY, 2013



F:\Project\320000\MAPPING\WORKING\JEWFISH_CREEK_2013_MRES.dwg



F:\Project\320000\MAPPING\WORKING\Boca_Chica_Marina_2013_MRES.dwg

FIGURE 3
BOCA CHICA
EXISTING CONDITIONS SURVEY
MAY, 2013

