Protecting our Marine Resources at Virgin Islands National Park and Virgin Islands Coral Reef National Monument

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Virgin Islands National Park/Coral Reef National Monument

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St. John: A Small Tropical Island
ST. JOHN

50 km²

3500 residents

1 million visitors/year
HELP!!!!

WE ARE BEING “LOVED” (and developed) TO DEATH.
Coral Reefs – Habitat for fish and invertebrates
Coral Reefs – visitor attraction
Impact to reefs – small anchors
Cruise ship anchors
Boat groundings
Careless actions
Seagrass Beds
Seagrasses - Turtle habitat
Seagrasses – Other’s habitat

- Stingray
- Urchin
- Conch
Seagrass anchoring
Impacts to seagrass beds – anchor “blowouts”
Mangroves
Mangroves - Nursery Value
Impacts to mangroves
V.I. National Park and Coral Reef National Monument

VI NP - 5,650 acres SL
VI CRNM - 12,708 acres SL
On the water!!

The park finally makes the decision to install mooring buoys in one of its bays.
Types of Visitors
(Coral/Seagrass/Mangrove Impacts)

• Boaters (recreational - power/sail)
• Boaters (storm refuge)
• Divers/snorkelers
• Fishermen

How do we mitigate impacts?
Coral Reef/Seagrass/Mangrove Protection (VI NP/VI CR)

- **Mooring Program**
  - Overnight/day use – 223 (11 VI CR)
  - Diving – 8 (2 VI CR)
  - Fishing – 6 (VI CR)

- **Regulatory Buoys** – approx. 150

- **Special Protection Buoys**
  - Boundary - 3
  - Johnson’s Reef – 5

- **Storm Refuge** – Approx. 100 (45 present)
Moorings – in lieu of an anchor
Moorings/Regulatory Buoys

LIND POINT to HAWKSNEST BAY

- Lind Point to Caneel Bay: 21
- Caneel Bay Commercial: 8
- Caneel Bay to Scott Bay: 22
- Hawksnest Bay: 13
- Henley Cay: 2
Moorings limited to 60’ boats
Hard substrate attachment

(A) HALAS SYSTEM SINGLE PIN INTO DRILLED CORE WITH PORTLAND HYDRAULIC CEMENT

(B) U BOLT SECURED WITH EITHER THE HALAS SYSTEM OR DRILLED AND GLUED WITH TWO PART SPECIAL UNDERWATER EPOXY.
Mooring installation in sand

18" dia. Buoy
Max 60' boats

Surface

NPS

Pickup line with float and nylon thimble

Subsurface Float

All rope 1" three-strand nylon

Bottom

1.5: sq. shaft Helix anchor at least 12' in substrate (11,000 lb load tested)
Seagrass Recovery
Maho Bay Mooring #129 (2000-04). Avg. # short shoots/20 cm² quadrat (N = 40)
Regulatory Buoys - channels
Regulatory Buoys – no boats
Boundary/Special Purpose
Dinghy Tether
Traditional Storm Refuge – Tied to the Mangroves
Storm Refuge System in Place
Hurricane Mooring Schematic

KEY - DRAWING NOT TO SCALE

(A) MARKER BUOY
(B) 1" DIAMETER NYLON LINE
(C) CONNECTING GROUND CHAIN ATTACHMENT POINT
(D) HELICAL EMBEDMENT ANCHOR HYDRAULICALLY INSTALLED

Project: Hurricane Moorings  Date: 01/14/02
Location: Virgin Islands Coral Reef National Monument
Island: St. John
Applicant: National Park Service
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Storm Mooring Details
Storm Mooring Installed
Mangrove Protection: Hurricane Mooring System (2005)
Day Use Moorings
At VIIS/VICR our goal is for our visitors to enjoy themselves while doing no damage to our resources.

The use of moorings and regulatory buoys to protect marine resources is proven to be effective at enabling this.
Thank you