

Florida Department of Environmental Protection



Office of Sustainable Initiatives

Clean and Resilient Marinas

**Governors' South Atlantic Alliance
4th Annual Meeting – Ponte Vedra Beach, FL
September 4, 2014**

Brenda Leonard, Clean Marina Program Administrator





Florida DEP

The Florida Department of Environmental Protection (DEP) is the lead state agency for protecting our air, water and land. DEP is divided into three primary areas: Regulatory Programs, Land and Recreation, and Water Policy and Ecosystem Restoration.

Priorities include:

- *Developing a consistent and effective regulatory process.*
- *Ensuring the quality and quantity of our state's water resources.*
- *Increasing access to our award-winning state parks.*



Florida Clean Marina Program

The Clean Marina Program is a voluntary designation program for Marinas, Retailers and Boatyards that exhibit a proactive approach to environmental stewardship.



Clean and Resilient Marina





What is a Clean Marina?

“Clean” marinas are those that have taken a proactive, voluntary approach to environmental protection and resource conservation and have been designated with this distinction as a Clean Marina.

Includes:

- *Protection of sensitive habitats*
- *Reduction of hazardous waste*
- *Compliance with all rules and regulations*
- *Stormwater prevention techniques*



What is Resiliency?

What is “resiliency” and what does it have to do with my marina?

“Resilience is the capacity of human and natural / physical systems to adapt to and recover from change.”

- Gulf of Mexico Alliance’s Coastal Community Resiliency Team



Clean Marina Program Stats

Program Totals:

- Designated Clean Marinas: 284
- Designated Clean Boatyards: 43
- Designated Clean Retailers: 19
- Designated Clean & Resilient: 1

To become designated, facilities must implement a set of criteria designed to protect Florida's waterways. Issues include:

- *Protection of sensitive habitats*
- *Waste management*
- *Spill prevention and emergency preparedness*
- *Stormwater control*



Gulf of Mexico Alliance (GOMA)

GOMA is a multi-state partnership of Florida, Alabama, Mississippi, Louisiana and Texas...that strives to enhance the ecological and economic health of the Gulf of Mexico.

Priorities Issues:

- **Coastal Community Resiliency**
- *Water Quality*
- *Habitat Conservation and Restoration*
- *Ecosystem Integration and Assessment*
- *Nutrient and Nutrient Impact*
- *Environmental Education*

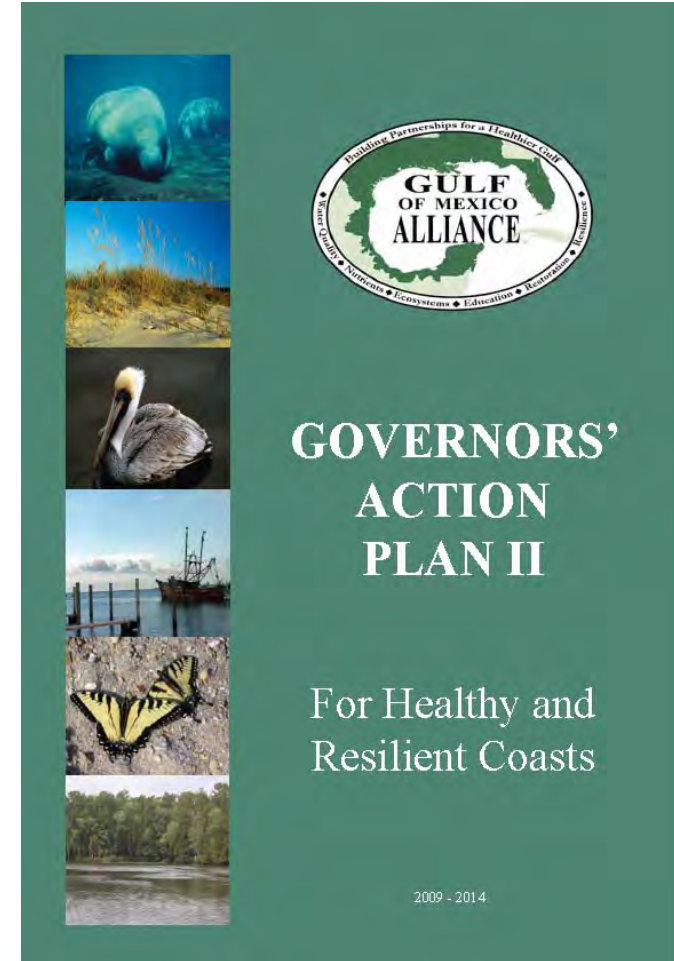
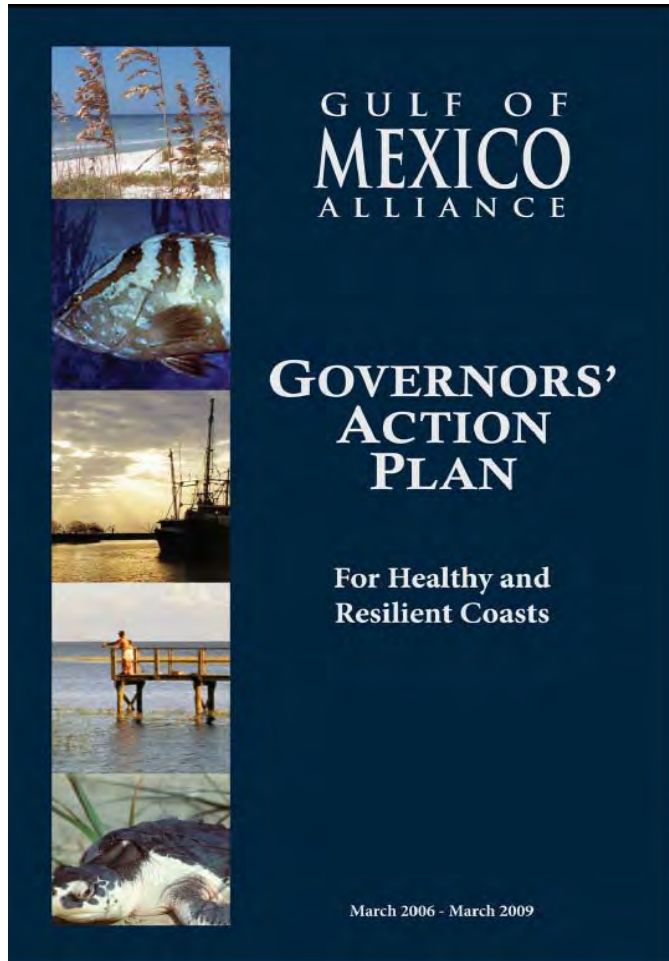


Represented State Agencies

- Mississippi Department of Marine Resources
- Mississippi/Alabama Sea Grant Program
- Florida Department of Environmental Protection
- Florida Sea Grant/University of Florida
- Louisiana Department of Natural Resources
- Louisiana Sea Grant Law and Policy Program
- Texas Sea Grant Program



Governors' Action Plan



http://www.gulfofmexicoalliance.org/actionplan/actionplan_II.html



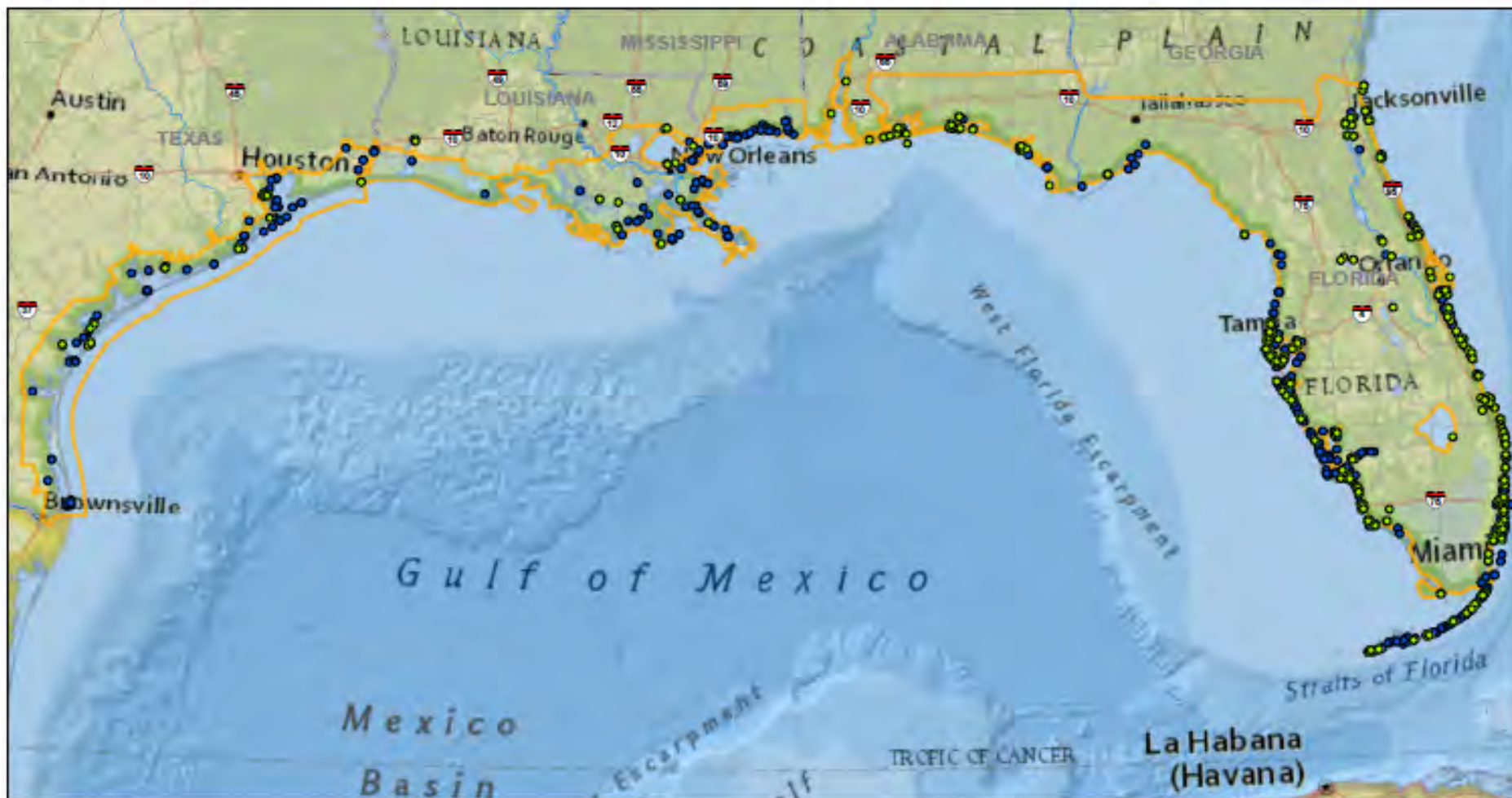
GOMA Clean and Resilient

- Part of Coastal Community Resilience Priority Issue Team
- From GOMA Governor's Action Plan, Sub action 5
- *"Promote and expand resilient and environmentally responsible operations and best management practices at marinas."*

Clean and Resilient Initiative Goals

- *Standardize practices across states.*
- *Increased participation by coastal marinas to implement environmental and operational BMPs.*
- *Increase participation in Clean Marina Programs.*

Coastal and Clean Coastal Marinas for TX, LA, MS, AL, and FL



Legend

- County boundaries
- Coastal Zone Boundary
- Coastal Marinas
- Clean Marinas
- Lakes
- State Boundaries
- Interstate Highways
- Rivers

* Redesignated depicts certain topographic features

0 348,000 696,000 Feet

RESILIENT MARINAS
DEPARTMENT OF MARINE RESOURCES

Eco-Systems, Inc. 
Consultants, Engineers, and Scientists

SCALE: DRAWN BY: PML DATE: 03-08-2012

1"=696,000' CHECKED BY: MPF DATE: 03-08-2012

PROJECT NO. FILE 11193 11193 030812 FIG01 R00 D Multi State CM

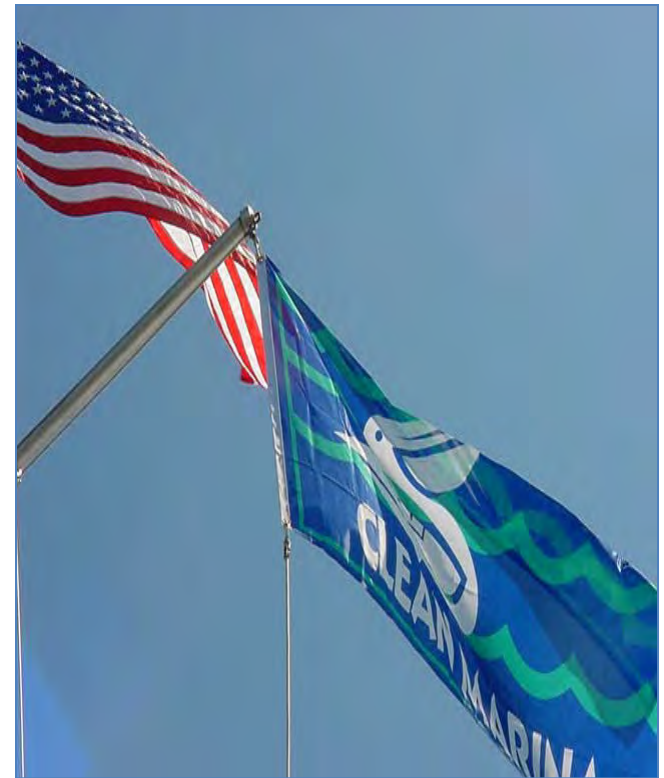
MULTI-STATE COASTAL MARINAS

FIGURE 1



Categories of FL CMP Criteria

- The requirements for designation into each of the Florida Clean Marina Programs (CMP) can be divided into three separate categories.
- ***Environmental Management***
- ***Environmental Quality***
- ***Environmental Services***





Environmental Management

- Current compliance with all required regulations
- Available onsite resource person
- Waste management
- Posted environmental policies





Environmental Quality

- Clean with no signs of oil, sewage or litter.
- Encourage no discharge through the use of pumpout equipment.
- Discharge of raw sewage prohibited within the marina basin.





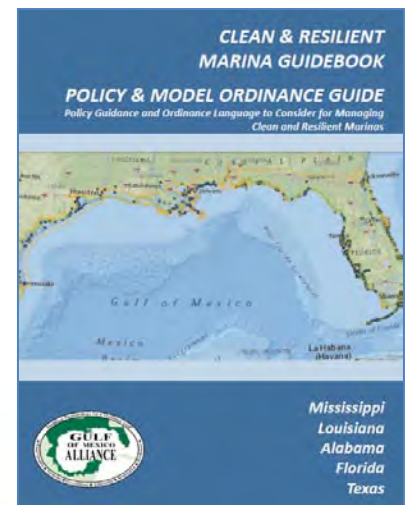
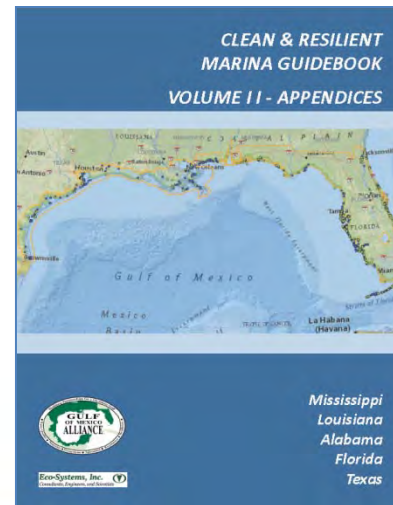
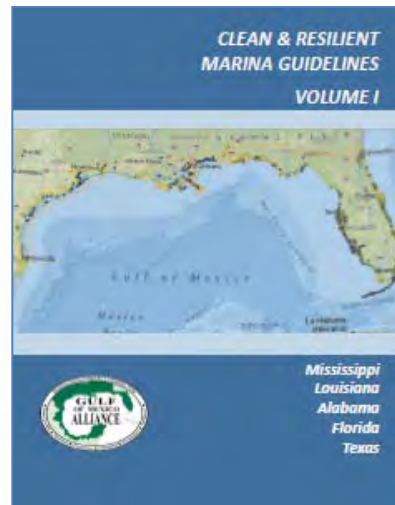
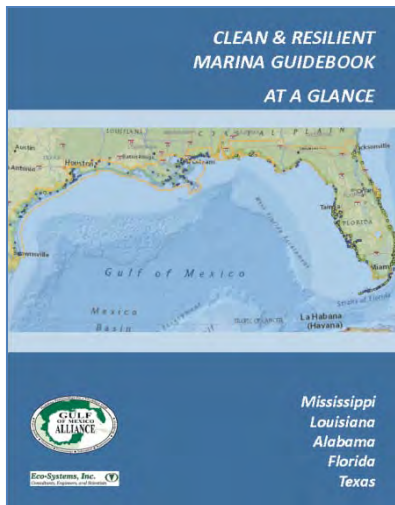
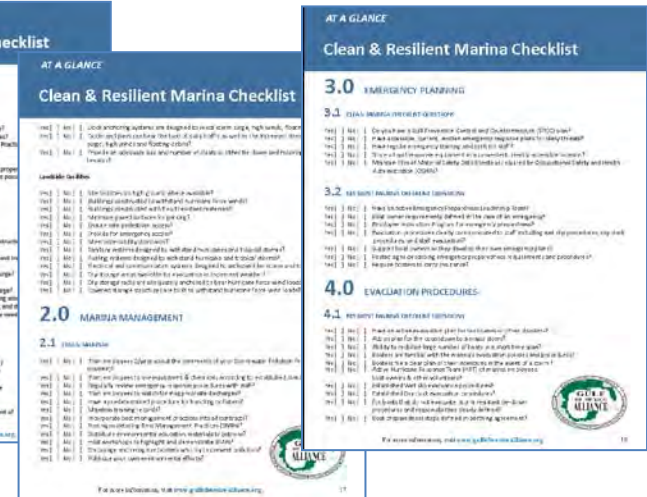
Environmental Services

- Clean restrooms
- Docks and grounds well maintained
- Trained facility personnel
- Provide boater information



Clean & Resilient Resources

- Guidebook at a Glance
- Guidebook Vol I
- Guidebook Vol II Appendices
- Policy Guide





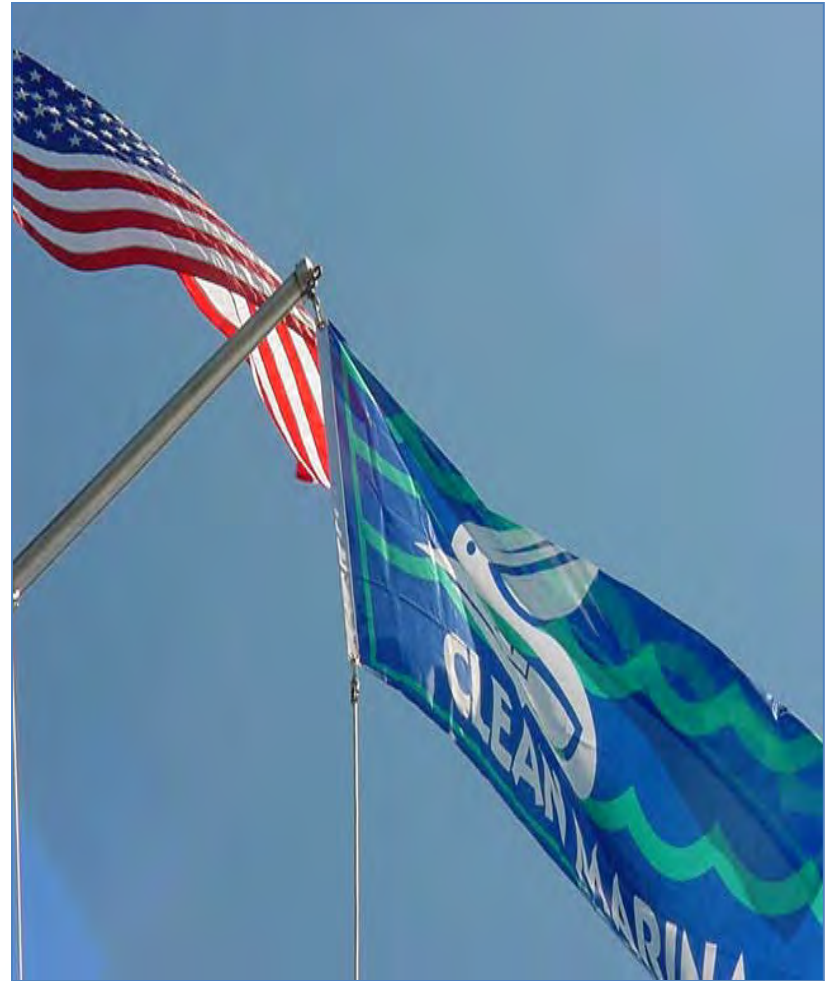
Clean & Resilient Checklist

- Marina Design & Siting
- Marina Management
- Emergency Planning
- Evacuation Procedures
- Petroleum Control
- Sewage Handling
- Waste Containment/Disposal
- Vessel Maintenance & Repair
- Stormwater Management
- Outreach and Education



Clean & Resilient Marinas

- Floating docks
- Concrete docks
- Removable docks
- Reinforced dry stack
- Natural shorelines
- Removable equipment
- Underground fuel tanks
- Underground utilities
- Trained dedicated staff





Design and Siting

Design and siting may be the most important place to start. It allows you to eliminate problems before they become routine and part of operations.

Clean Marina BMPs

- Practice water conservation.
- Use environmentally-neutral materials.
- Plant waterside landscaping.
- Use of conservation easements.



Design and Siting

Resilient Marina BMPs - Siting

- Preconstruction soil stability testing is conducted.
- Determination of maximum wind speeds, currents and wave heights.
- Location naturally provides shelter.
- Water-calming measures are used.
- Minimum amount of excavating, filling and dredging for construction and operation.



Design and Siting

Resilient Marina BMPs – Waterside Facilities

- Piers and docks extend into naturally deep waters.
- Dockage systems are designed to resist surge, winds and floating debris.
- Docks allow for free exchange of water between harbor and surrounding environment.
- High volume ramps and facilities in event of evacuation.
- Adequately wide channels used to promote safe vessel traffic.



Design and Siting

- Marina built into the environment
- Shielded by natural barriers
- Natural shoreline



Bluewater Bay Marina Complex, Niceville, FL

Design and Siting

- Marina is shielded by barrier island along the intercoastal waterway.



Loggerhead Club & Marina, Jupiter, FL



Emergency Planning

It's not a matter of if, it's a matter of when...and planning will help determine your success.

Clean Marina BMPs

- Emergency response plans
- Spill Prevention Control and Countermeasure (SPCC) Plan
- Store oil spill and emergency equipment in a readily accessible location.
- Conduct regular emergency training and drills for staff.





Emergency Planning

Resilient Marina BMPs

- Encourage patrons to develop personal emergency plans.
- Emergency signage is posted throughout facility.
- Boaters are required to have current insurance.
- Evacuation procedures are clearly communicated to staff.





Evacuation Procedures

Evacuation plans are important to the successful execution of your resiliency plans. They save you, and your patrons, valuable time and money.

Resilient Marina BMPs

- Active facility evacuation plan – wet slips and dry stack
- Regular emergency training and drills for staff are conducted.
- Preparedness steps are defined in slip lease agreements.
- Notification of storm resistant tie-down procedures and responsibilities.



Evacuation Procedures





Petroleum Control

One drop of petroleum pollution prevention is worth more than a pound of pollution cure.

Clean Marina BMPs

- In compliance with all regulations for petroleum storage.
- Regularly inspect and repair fuel equipment.
- Signage is in place for proper fueling procedures.
- Staff supervise customer fueling.
- Oil absorbent material are in place.



Sewage Handling

Clean Marina BMPs

- Installation of pumpout system and / or pumpout vessel.
- No dockside discharge.
- Upland restrooms and laundry facilities are available.
- Log use and maintenance of pumpout system.
- Provide patron education on effluent impacts to waterway.
- Sewage pumpout systems are regularly maintained.



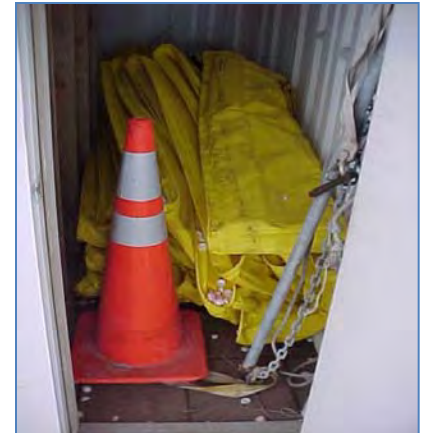


Waste Containment & Disposal

Pollution prevention should be your first consideration...

Clean Marina BMPs

- Maintain constant compliance with all rules and regulations.
- Reduce use of hazardous chemicals.
- Properly dispose of fish scraps.
- Promote solid and liquid waste recycling.
- Provide convenient trash and recycling containers that are emptied regularly.





Stormwater Management

Stormwater should be a primary concern. Water quality directly impacts your business.

Clean Marina BMPs

- Stormwater Pollution Prevention Plan
- National Pollution Discharge Elimination System permit
- Inspect and test stormwater regularly.
- Mark storm drains.
- Limit paved surfaces and wash areas.



Stormwater Management

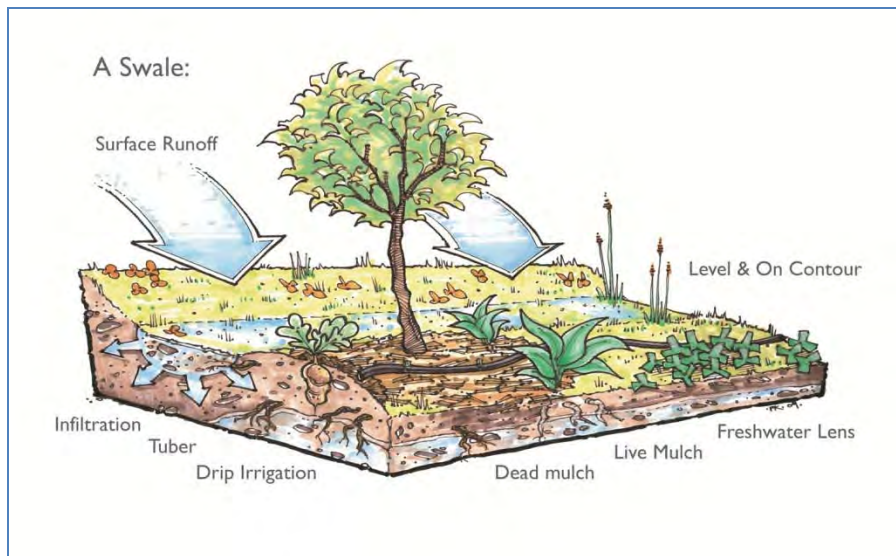
Resilient Marina BMPs

- Stormwater is treated for pollutant removal.
- Proper use of natural erosion control.
- Erosion and sediment control plans are required for construction and landscaping projects.
- ID areas for potential stormwater pollution.



Stormwater Management

- Channeled stormwater
- 4.5 – 5.0 ft V-shaped trough
- Native vegetation



Bluepoints Marina, Cape Canaveral, FL



Stormwater & Erosion Control



Hamilton Harbor Yacht Club, Naples, FL

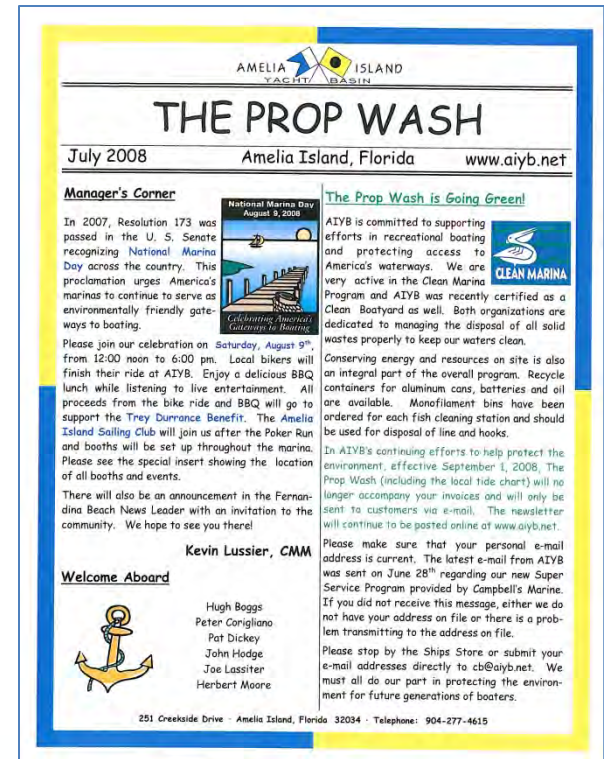


Outreach and Education

You have a great story and need to tell it as much as you can. Patrons, neighbors, other businesses all need to hear about your experiences.

Clean Marina BMPs

- Environmental information is placed in contracts and leases.
- Provide clean boating materials to boaters.
- Recognize patrons for their “clean” activities.
- Post facility BMPs.





Outreach and Education

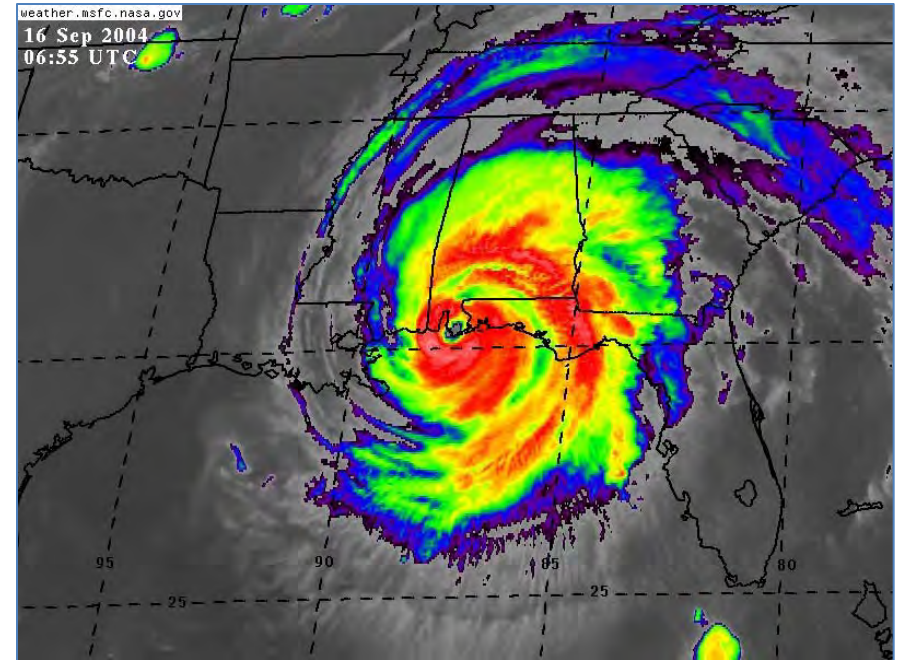
Resilient Marina BMPs

- Post emergency information for boaters.
- Include emergency and evacuation policies in berthing agreements.
- Constant training of employees on BMPs.
- Clearly mark evacuation and emergency routes.
- No-wake zones are clearly defined and included in agreements.



Hurricane Preparedness

- Hurricane plan
- Evacuation procedures
- Trained personnel
- Practice procedures



Hurricane Ivan 2004



Hurricane Preparedness

2012 HURRICANE PREPAREDNESS GUIDELINES FOR BLUEPOINTS MARINA

A. Introductory Comments

The order of priority when preparing Bluepoints Marina for a hurricane is:

1. Protect Human Life
2. Seek to prevent or minimize personal injury
3. Reduce the exposure of property to damage
4. Minimize damage to property that cannot be relocated
5. Seek to restore normal operations as quickly as possible



Hurricane Resilient Dry Stack

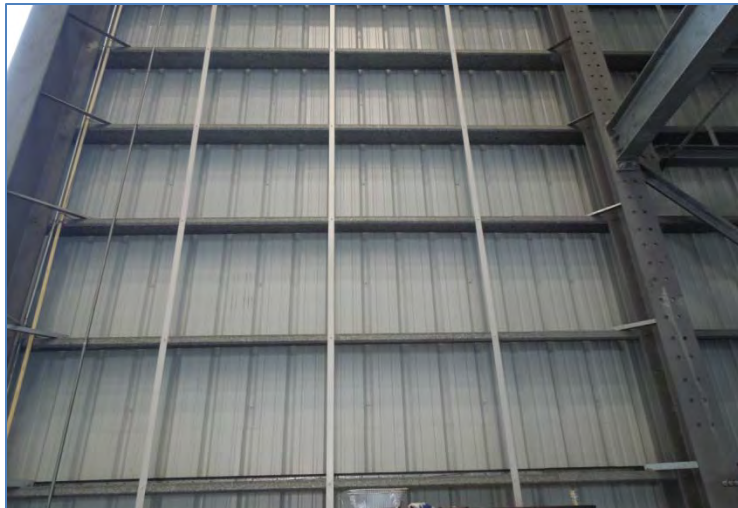
- Dry stack resilient to 150 mph winds.
- Reinforced to prevent twisting.
- Vented at bottom.
- Boats are moved inside in storm threat.



Bluepoints Marina
Cape Canaveral, FL



Hurricane Resilient Dry Stack



- Reinforced by over and under strapping.
- All ties in together and is strapped to the foundation.

Bluepoints Marina, Cape Canaveral, FL



Hurricane Resilient Dry Stack

- Dry stack is vented at bottom to help equalize pressure and release water from storm surge.



Bluepoints Marina
Cape Canaveral, FL



Hurricane Resilient Dry Stack

- One of the most advanced boat storage facilities in FL.
- Constructed of steel reinforced concrete.



Hamilton Harbor Yacht Club, Naples, FL



Hurricane Resilient Dry Stack

- Dry stack is resilient to 150 mph winds.
- Concrete walls separate each boat.
- Protects each boat bay from the spread of fire.



Hamilton Harbor Yacht Club, Naples, FL



Hurricane Resilient Storage



River Forest Yachting Center, LaBelle, FL



Hurricane Resilient Storage

- Climate controlled indoor storage constructed to withstand 140 mph winds.
- Sprinkler system and 24 hour security system are used.
- Hurricane protected dockage with internal crosstie cleats for tie-down.
- Outdoor storage lots are available for long term or hurricane season storage.
- Airline grade tie down cleats are set in concrete for hurricane protection.



Restoring Operations

- Marina is built in a half-moon cove protected by land behind it which is 20' above sea level.
- Marina is shielded by an island 300' from the docks.
- Was fully operational with electricity, water, and fuel after hurricane Ivan in 2004.
- Supplied the Coast Guard and other emergency vessels fuel and dockage when no other marinas were left operational.



Island Cove Marina
Pensacola, FL



Restoring Operations

- Bluepoints Marina seeks to restore operations as quickly as possible after a hurricane.
- Floating docks are removed before a storm then reassembled afterwards.
- Water recycling system





Hurricane Club

- Some marinas offer a hurricane club to its members for a yearly fee.
- Guaranteed a reserved space for their boat in the event of a wind storm.
- Meets insurance requirements for hurricane plan.



Sebastian Inlet Marina, Micco, FL

River Forest Yachting Center, LaBelle, FL



Florida Clean Marina Program

Questions?

Florida Clean Marina Program

<http://www.dep.state.fl.us/cleanmarina/>

Florida Clean Vessel Program

<http://www.dep.state.fl.us/cleanmarina/CVA/>

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Gulf of Mexico Alliance

For Additional Information on the
Gulf of Mexico Alliance Clean & Resilient Program,

Please visit: www.gulfofmexicoalliance.org

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