

# CLEAN & RESILIENT MARINA GUIDEBOOK

## POLICY GUIDE

*State and Local Policy Guidance to Promote a Cleaner and  
More Resilient Coastal Marina*



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

*Mississippi  
Louisiana  
Alabama  
Florida  
Texas*

## TABLE OF CONTENTS

1.0 INTRODUCTION TO COASTAL POLICY . . . . .	3
2.0 STORMWATER MANAGEMENT . . . . .	7
3.0 FLOOD HAZARD PREVENTION . . . . .	9
4.0 MARINA LOCATION, SITING, DESIGN, AND CONSTRUCTION STANDARDS	11
5.0 HURRICANE PREPAREDNESS PLANS . . . . .	13
6.0 SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN (SPCC) .	14
7.0 WATER/WASTEWATER CROSS CONNECTION REGULATIONS . . . . .	15
8.0 VESSEL PUMP-OUT PROCEDURES . . . . .	16
9.0 ABANDONED VESSELS . . . . .	17
10.0 PET WASTE . . . . .	19
11.0 CLEAN AND RESILIENT INCENTIVES . . . . .	20
12.0 SUMMARY . . . . .	21



## 1.0 INTRODUCTION TO COASTAL POLICY

The Gulf of Mexico States are home to approximately 1,100 coastal marinas, ports and harbors across Texas, Louisiana, Mississippi, Alabama and Florida. The Gulf of Mexico Alliance (GOMA), a partnership between Alabama, Florida, Louisiana, Mississippi, and Texas, helped produce this *Clean and Resilient Marina Guidebook Policy Guide: State and Local Policy Guidance to Promote a Cleaner and More Resilient Coastal Marina* for state, county, parish and municipal policy makers. GOMA was formed to increase collaboration on the Gulf of Mexico’s ecological and economic health. While many Gulf States’ marinas already participate in Clean Marina Certification Programs, GOMA charged its Coastal Community Resilience Team to develop a coast-wide status for a Resilient Marina Certification. Greater resilience, or the capacity of marinas’ natural and built environments to adapt to and recover from the changes brought by natural and man-made disasters, will reduce marina damages and minimize business interruption after a disaster.

The Clean and Resilient Marina Program builds on the states’ existing Clean Marina Programs and complements practices currently in place while recommending additional strategies to improve resiliency at local marinas. Marina owners and operators who wish to participate in the Clean and Resilient Marina Certification Program may consult the checklist and guidance in the *Clean and Resilient Marina Program Guidebook*.

This Policy Guide identifies strategies local and state officials can take to promote cleaner and more resilient marinas. Smarter policy can protect the environment and vital businesses from the impact of natural and man-made disasters.

### 1.1 LEGAL FRAMEWORK GOVERNING MARINAS

This is a brief introduction to the national laws governing marinas and the opportunities for state and local governments to plan for their needs. For a full summary of the state and national laws affecting coastal lands, please consult GOMA’s Coastal Community Resilience Team’s full *Summary of Laws Impacting Coastal Land Use in the Gulf of Mexico*. This document is included as an appendix to the *Clean and Resilient Marina Program Guidebook*.

**TABLE 1: COASTAL LAND USE LAW**

LEGISLATION	IMPLEMENTING AGENCY
<b>Coastal Zone Management Act (CZMA)</b>	National Oceanic & Atmospheric Administration (NOAA)
<b>National Flood Insurance Act</b>	Federal Emergency Management Agency (FEMA)
<b>Stafford Disaster Relief and Emergency Assistance Act</b>	FEMA
<b>Coastal Barrier Resources Act</b>	U.S. Fish and Wildlife Service
<b>Clean Water Act § 401 Water Quality Certification; § 404-Wetlands</b>	Environmental Protection Agency (EPA), United States Army Corp of Engineers (USACE), State Agencies



## 1.1.1 COASTAL ZONE MANAGEMENT ACT

The Coastal Zone Management Act (CZMA) of 1972 encourages U.S. coastal states to develop management programs to guide the wise use of land and water resources along their coasts. It provides federal funding to help states develop and administer these programs, which are required to give “full consideration to ecological, cultural, historic, and aesthetic values as well as the needs for compatible economic development.”<sup>(1)</sup>

State CZMA plans are powerful tools for setting policy priorities. CZMA’s federal consistency provisions require federal activities affecting land or water uses or natural resources in a state’s coastal zone be “consistent to the maximum extent practicable with the enforceable policies of approved state management programs.” (16 U.S.C. § 1456(c)(1). Financial resources are also available for states through Coastal Zone Enhancement Grant Programs to provide funding to states interested in enhancing their management programs regarding: wetlands, coastal hazards, public access, marine debris, cumulative and secondary impacts, special area management planning, ocean resources, energy and government facility siting, and aquaculture. (16 U.S.C. § 1456b).

## 1.1.2 NATIONAL FLOOD INSURANCE ACT

The National Flood Insurance Act established the National Flood Insurance Program (NFIP). Many marinas are located in FEMA’s highest risk V-zones (defined as areas subject to three-foot waves during the 100-year flood); therefore, they are subject to the tightest restrictions.<sup>(2)</sup> This federal insurance program:

- Identifies, studies, and maps flood-prone communities,
- Provides an insurance alternative to federal disaster assistance,
- Enables residents in participating communities to purchase flood insurance in exchange for floodplain management regulations,
- Prohibits federal agencies from financing acquisition or construction of buildings in floodplains in non-participating communities, and
- Requires flood insurance for federally backed mortgages in special flood hazard areas.

The *Summary of Laws Impacting Coastal Land Use in the Gulf of Mexico* reports that all but 15 of over 740 communities in the Gulf States’ Coastal Management Zones have elected to participate in the NFIP for the insurance benefits provided to their citizens and businesses. Communities participating in the NFIP are required to adopt a locally determined Floodplain Management Ordinance and tighter regulations for new construction and redevelopment related to location, drainage, anchorage, building materials, methods, elevation and floodproofing, placement of utilities, and use of space below FEMA’s base flood elevation.<sup>(3)</sup>

1 “16 USC Â§ 1452 - Congressional Declaration of Policy.” 16 USC Â§ 1452. N.p., n.d. Web. Accessed on June 1, 2012.

2 Pace, Nikki. Mississippi Alabama Sea Grant Law Program (MASGLP). “A Review of State Coastal Development Laws in Gulf of Mexico.” MASGLP Advisory Service. (May 2011). <<http://masglp.olemiss.edu/>> (June 1, 2012)

3 Pace, 2011.

## 1.1.3 STAFFORD DISASTER RELIEF AND EMERGENCY ASSISTANCE ACT

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) provides the statutory authority for federal disaster relief. To be eligible for certain FEMA funding, the Stafford Act requires state, Indian, Tribal, and local governments to prepare mitigation plans to reduce risks from natural hazards. State plans must be updated and reapproved every three years, local plans every five years.

State and local hazard mitigation plans often provide an untapped opportunity to improve the resilience of local marinas. The needs of both public and private marinas are often overlooked. Local governments must explain how their mitigation plans will affect policies and regulations regarding comprehensive planning, capital improvements, economic development, transportation, conservation, stormwater, and floodplain management. State emergency management agencies and local governments can ensure marinas' needs are considered in the mitigation planning process, making them eligible for technical and financial assistance to increase their resilience to natural disasters.<sup>(4)</sup>

## 1.1.4 COASTAL BARRIER RESOURCES ACT

The Coastal Barrier Resources Act was enacted to “minimize the loss of human life, wasteful expenditure of federal revenues, and the damage to fish, wildlife, and other natural resources associated with the coastal barriers along the Atlantic and Gulf coasts and along the shore areas of the Great Lakes.” Today approximately 3.1 million acres of land and aquatic habitat are part of the Coastal Barrier Resources System.<sup>(5)</sup> The U.S. Fish and Wildlife Service administers this program, maintaining system maps and advising interested parties as to the kinds of expenditures allowed under the law. This law aims to protect coastal barriers through shifting the risk and costs away from the federal taxpayer and onto those who develop on unpredictable barrier lands. While the law restricts federal financial assistance for construction or purchase of structures, infrastructure and facilities within the system, it does not prohibit private, state and locally funded activities or curtail state power.

## 1.1.5 CLEAN WATER ACT

The Clean Water Act regulates activities relating to both wetlands and water quality management activities at marinas. The Section 404 permitting program through the U.S. Army Corps of Engineers (USACE) or authorized state agency regulates dredge and fill activities in wetlands. Dredged material has been excavated from the waters of the United States for navigational, structural or other purposes, while fill material has been imported into the waters of the United States to create new lands.<sup>(6)</sup> Section 401 requires a water quality certification to ensure water degradation does not occur. The National Pollutant Discharge and Elimination System (NPDES) portion of the Clean Water Act requires marinas or boat yards that conduct boat maintenance activities or have wastewater discharges to apply for coverage under a stormwater permit. This permit authorizes the discharge of boat and equipment washing water, stormwater runoff from boat maintenance areas, noncontact cooling water and condensate discharges. To comply with the permit, marina operators must develop a stormwater pollution

4 Pace, 2011.

5 Pace, 2011.

6 Pace, 2011.



prevention plan (SWPPP) and implement best management practices to ensure wastewater and stormwater leaving the property will not harm the quality of the surrounding waters.<sup>(7)</sup>

## 1.1.6 STATE AND LOCAL COASTAL POLICY

The Coastal Zone Management Program gives each state wide latitude to determine its own policy, regulatory, and resource management system. The Gulf Coast states all maintain active Coastal Zone Management Plans. Implementing agencies for the Coastal Zone Management Act and who also administer their states' Clean Marina Programs are as follows:

STATE	AGENCY	WEBSITE
Alabama	Department of Environmental Management (ADEM)	<a href="http://www.adem.state.al.us/default.cnt">http://www.adem.state.al.us/default.cnt</a>
Florida	Department of Environmental Protection (DEP)	<a href="http://www.dep.state.fl.us/">http://www.dep.state.fl.us/</a>
Louisiana	Department of Natural Resources (DNR)	<a href="http://dnr.louisiana.gov/">http://dnr.louisiana.gov/</a>
Mississippi	Department of Marine Resources (DMR)	<a href="http://www.dmr.state.ms.us/">http://www.dmr.state.ms.us/</a>
Texas	General Land Office (GLO)	<a href="http://www.glo.texas.gov/">http://www.glo.texas.gov/</a>

Clean Water regulations for stormwater management are implemented through statewide NPDES permits that also establish local stormwater management planning requirements. FEMA counts on state agencies to review local hazard mitigation plans and provide immediate assistance in the aftermath of disaster. In short, federal policies offer many opportunities to plan for the needs of their marinas.

Ordinances for the coastal cities below were surveyed to determine their existing policies toward marinas.

**TABLE 2: MUNICIPAL CODES SURVEYED**

TEXAS	LOUISIANA	MISSISSIPPI	ALABAMA	FLORIDA
Corpus Christi	Morgan City	Gulfport	Mobile	Pensacola
Galveston	New Orleans	Biloxi	Gulf Shores	Gulf Breeze
Port Arthur		Pascagoula	Orange Beach	Fort Walton
		Ocean Springs		Destin
		Gautier		Panama City
				St. Petersburg
				Tampa
				Cape Coral

The following sections of this Guide provide state and local officials with examples of policy and practices for clean and resilient marinas. To obtain the greatest benefit from this Guide, readers should review their own policies and examine how the following strategies might improve the long-term safety, environmental impact and economic viability of their coastal marinas.

<sup>7</sup> Texas Sea Grant College Program. "Clean Texas Marina Guidebook." TAMU-SG-01-501, May 2001. <<http://www.cleanmarinas.org/pdfs/guidebook.pdf>>. (January 11, 2013).

## 2.0 STORMWATER MANAGEMENT

Many of the coastal counties and cities containing marina facilities are regulated by the Environmental Protection Agency (EPA) through the National Pollution Discharge Elimination System (NPDES) Phase I or Phase II Stormwater Program. These entities are required to have ordinances in place to regulate construction and post-construction stormwater runoff, illicit discharge elimination and pollution prevention at municipal or publicly-owned marinas. Due to the comprehensive nature of these regulations, it is unnecessary for regulated local governments to establish specific stormwater regulations or ordinances specific to marinas. However, the model ordinance language included as part of this document includes provisions for stormwater management for those jurisdictions not already regulated under the EPA Stormwater Program.

Stormwater ordinances regulate stormwater discharges through permitting construction activities, requiring post-construction stormwater best management practices (BMPs), and allowing inspections of the stormwater controls in place after construction is complete. These stormwater regulations also apply to marinas. Maintenance or access agreements may be used to ensure that the county/parish or city leaders have access to onsite BMPs for inspection, and if necessary, repairs.

### 2.1 STORMWATER MANAGEMENT ORDINANCE LANGUAGE

Below are excerpts from The EPA Stormwater Model Ordinance. To develop a complete ordinance, additional information should be included to address penalties, permitting, variances and responsibilities of the permitting authority. It reads:

#### **Section I: Definitions**

**Best Management Practice (BMP):** *Structural device, measure, facility or activity that helps to achieve stormwater management control objectives at a designated site.*

**Plan:** *A document approved at the site design phase that outlines the measures and practices used to control stormwater runoff at a site.*

#### **Section II: Design**

- *All stormwater BMPs shall be designed in a manner to minimize the need for maintenance and reduce the chances of failure. Design guidelines are outlined in the most recent version of \_\_\_\_\_ (local or state stormwater manual).*
- *Stormwater easements and covenants shall be provided by the property owner for access for facility inspections and maintenance. Easements and covenants shall be recorded with \_\_\_\_\_ (stormwater agency) prior to the issuance of a permit.*
- *Final design shall be approved by \_\_\_\_\_ (stormwater agency).*



### **Section III: Routine Maintenance**

- All stormwater BMPs shall be maintained according to the measures outlined in the most recent version of \_\_\_\_\_ (local or state stormwater manual), and as approved in the permit.
- The person(s) or organization(s) responsible for maintenance shall be designated in the plan. Options include
  - o Property owner,
  - o Homeowner's association, provided that provisions for financing necessary maintenance are included in deed restrictions or other contractual agreements, or
  - o \_\_\_\_\_ (stormwater management agency)
- Maintenance agreements shall specify responsibilities for financing maintenance.

### **Section IV: Non-Routine Maintenance**

Non-routine maintenance includes maintenance activities that are expensive but infrequent, such as pond dredging or major repairs to stormwater structures.

- Non-routine maintenance shall be performed on an as-needed basis based on information gathered during regular inspections.
- If non-routine maintenance activities are not completed in a timely manner or as specified in the approved plan, \_\_\_\_\_ (stormwater agency) may complete the necessary maintenance at the owner's/operator's expense.

### **Section V: Inspections**

- The person(s) or organization(s) responsible for maintenance shall inspect stormwater BMPs on a regular basis, as outlined in the Plan.
- Authorized representatives of \_\_\_\_\_ (stormwater agency) may enter at reasonable times to conduct on-site inspections or routine maintenance.
- For BMPs maintained by the property owner or homeowner's association, inspection and maintenance reports shall be filed with \_\_\_\_\_ (stormwater agency), as provided for in the plan.<sup>(8)</sup>

## **State Perspective – Mississippi Stormwater Management Ordinance**

The Mississippi Department of Environmental Quality (MDEQ) has recently updated their state manual, Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas. The manual includes model ordinance examples for the management of stormwater and prevention of stormwater pollution. The model ordinances address illicit discharges, construction related activities and post-construction stormwater controls. The ordinances are provided on the MDEQ website and available for download at: <http://deq.state.ms.us/MDEQ.nsf/>.

8. United States Environmental Protection Agency. "Stormwater Operation and Maintenance Model Ordinance." (N.d.). <[http://water.epa.gov/polwaste/nps/upload/Storm\\_model\\_ordinance1.pdf](http://water.epa.gov/polwaste/nps/upload/Storm_model_ordinance1.pdf)>. (January 11, 2013).



## 3.0 FLOOD HAZARD PREVENTION

To participate in the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP), communities are required to have an up-to-date Flood Hazard Prevention Ordinance. Most are modeled after their state's model ordinance, but all have common elements including provisions specific to coastal zones, elevation requirements, and construction standards within FEMA's designated flood hazard areas. All marinas are located within an incorporated municipality or a county/parish that is likely subject to the same or similar provisions. The following excerpt provides some common Flood Hazard Prevention Ordinance language.

### 3.1 FLOOD HAZARD PREVENTION ORDINANCE LANGUAGE

A complete ordinance should include: permitting, penalties for failure to comply, responsibilities of the permitting authority and variances. Below are excerpts from a Model Flood Damage Prevention Ordinance. It reads:

- 1) *The flood hazard areas of city/town/county/tribe are subject to periodic inundation which results in loss of life and property, health, and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.*
- 2) *These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately flood-proofed, elevated, or otherwise protected from flood damage also contribute to the flood loss.<sup>(9)</sup>*

### 3.2 BUILDING ELEVATION STANDARDS<sup>(10)</sup> LANGUAGE

Mississippi Model Flood Damage Prevention reads:

***New Construction and Substantial Improvements –Requirements:***

- *Elevation above a set elevation (commonly 1 foot above BFE),*
- *Anchoring to prevent flotation, collapse or lateral movement of structure and*
- *Construction with flood damage resistance materials (see FEMA Technical Bulletin 2: Flood Damage-Resistant Materials Requirements).*

***Utilities – Requirements:***

- *Electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities shall be elevated above a set elevation (X Feet above grade).*

***Water and Sewer Systems – Requirements:***

- *Water and sewer systems shall be designed to minimize or eliminate infiltration of flood waters into*

9. Division of Community and Regional Affairs – Planning and Land Management. State of Alaska. "Model Flood Damage Prevention Ordinance." (N.d.) <[http://www.commerce.state.ak.us/dca/planning/nfip/pub/NFIP\\_FEMA\\_Model\\_Ord.pdf](http://www.commerce.state.ak.us/dca/planning/nfip/pub/NFIP_FEMA_Model_Ord.pdf)>. (January 11, 2013).

10 Mississippi Emergency Management Agency (MEMA). "Mississippi Model Flood Damage Prevention Ordinance for Communities with No Mapped SFHA." (September 2000). <<http://www.msema.org/wp-content/uploads/2012/07/Mississippi-A-Model-Ordinance-Sept.-00.pdf>>. (January 11, 2013).



- the system and*
- *On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.*

## City Perspective – Corpus Christi, Texas Flood Hazard Prevention Code

The City of Corpus Christi, Texas handles Flood Hazard Protection in Chapter 14 Development Services, Article V. Flood Hazard Prevention Code. The code provides regulations similar to the above described and expands to include regulations on enclosures located below the base flood elevation. The code has deemed these areas useable only for parking, building access, or storage. Corpus Christi requires these areas be designed to equalize hydrostatic flood forces by allowing the entry and exit of floodwaters. In addition to the basic requirements that a building is built above base-flood elevation using flood resistant materials, the City addresses areas of shallow flooding, floodways, and coastal high hazard areas.

## 4.0 MARINA LOCATION, SITING, DESIGN, AND CONSTRUCTION STANDARDS

Very few municipal codes reviewed included comprehensive provisions regulating the location, siting, design and construction of marinas. Many did have separate provisions addressing location of marinas (zoning ordinances) and construction standards (building codes). Within the context of sustainability and resiliency, all of these elements are equally important and should be considered comprehensively for marinas and other water-dependent activities and businesses.

### 4.1 SITING CHARACTERISTICS - WETLANDS AND SPECIAL PROTECTION AREAS

Many communities use zoning or other land-use planning techniques to determine the best location for marina sites. These ordinances and plans include consideration of current uses of the regulated area, as well as compatibility with other commercial, industrial or residential uses in the surrounding areas. Another siting consideration is the protection of waterfront and wetland areas. Many of the communities reviewed had language in their codes for wetland protection. For example, the City of Orange Beach, Alabama included in their code of regulations <sup>(11)</sup> a section devoted to wetland mitigation procedures. This wetland protection section includes the right of the municipal council to deny plans for wetland mitigation. The City requires that a mitigation plan be submitted to the Council for review and approval prior to permit authorization. [This program excludes projects subject to the U.S. Army Corps of Engineers Nationwide Permitting process.]

Local codes and regulations can serve to reinforce the State Coastal Zone Management Programs established under the CZMA to support a balance between economic development concerns and coastal resources protection.

#### **Parrish Perspective – Calcasieu Parish, Louisiana Coastal Zone Management Regulations**

Calcasieu Parish Police Jury Code of Ordinances, Chapter 7.5 Coastal Zone Management Regulations was enacted for the purpose of: “(1) ensuring ecologically sound development in order to : (a) preserve and enhance the resources of the coastal zone for the enjoyment of present and future generations; (b) promote public safety, health, and welfare; (c) protect wildlife, fisheries, aquatic life, estuarine, and other water resources; (d) preserve and protect the remaining scenic and historic resources of the coastal zone; (e) to enhance opportunities for the use and enjoyment of the recreational values of the coastal zone; and (f) to develop and implement a coastal resources management program which is based on consideration of our resources, the environment, the needs of the people of the state, the nation, and of state and local government.”

11 City of Orange Beach, Alabama. “Chapter 30: Article V. – Applicable Wetland Mitigation: Division 12 – Provisions.” Orange Beach, Alabama Code of Ordinances. January 18, 2005. <http://www.cityoforangebeach.com/>. (January 11, 2013).

## 4.2 BUILDING CODES

The Insurance Institute for Business & Home Safety (IBHS) did a study in 2011 on building codes in 18 states along the Atlantic and Gulf Coasts to determine the strength of each building regulation. The study revealed Gulf Coast States (Florida, Alabama, Mississippi, Louisiana, and Texas) had an average of 41.6 points out of a total 100 available. The highest ranking states had statewide code adoption and enforcement, code enforcement training and certification, and licensing requirements for contractors. Consistent statewide building codes and the proper enforcement of those codes have been found to increase resiliency in areas prone to natural disasters.<sup>(12)</sup> These codes generally improve structural resiliency. However, in cases where repairs and/or rebuilding measures are necessary, having appropriately trained code enforcement officials and contractors available are the key to faster rebuilding through a comprehensive understanding of building code standards.

**TABLE 3: IBHS RATINGS BY STATE: HIGHEST TO LOWEST**

Scale 0-100\*

State	Total	Adoption of code, universality, and weakening provisions	Enforcement Officials	Contractor Licensing
Florida	95	48	22	25
Virginia	95	48	24	23
New Jersey	93	49	23	21
Massachusetts	87	46	21	20
South Carolina	84	45	18	21
Connecticut	81	40	24	17
North Carolina	81	40	22	19
Rhode Island	78	44	19	15
Louisiana	73	48	15	10
Maryland	73	43	15	15
Georgia	66	31	15	20
Maine	64	33	22	9
New York	60	37	23	0
New Hampshire	49	39	0	10
Alabama	18	0	0	18
Texas	18	18	0	0
Delaware	17	4	0	13
Mississippi	4	0	0	4

IBHS rankings were weighted based on the following variables:

- 50 percent for variables that relate to adoption and enforcement of building codes;
- 25 percent for variables that measure code official certification and training; and
- 25 percent for variables that relate to on-site implementation, as measured by contractor and subcontractor licensing.

\* Table 3 from Insurance Institute for Business & Home Safety. *Rating the States: An Assessment of Residential Building Code and Enforcement Systems for Life Safety and Property Protection in Hurricane-Prone Regions.* December 31, 2011

12 Insurance Institute for Business and Home Safety. "Rating the States: An Assessment of Residential Building Code and Enforcement Systems for Life Safety and Property Protection in Hurricane-Prone Regions." December 31, 2011. <<http://www.cityoforangebeach.com/>>. (January 11, 2013).

## 5.0 HURRICANE PREPAREDNESS PLANS

Each of the Gulf Coast States has an agency that works with FEMA to carry out preparedness and response activities after a natural disaster. Most coastal jurisdictions have their own support network of first responders who are often led by local fire and police departments. Coastal jurisdictions frequently have their own local plans to address natural hazards mitigation, comprehensive emergency response and storm preparedness as well. Marinas can often be a forgotten part of local preparedness and response strategy due to their location at a community's outer edge and officials' unfamiliarity with marina operations. Private facilities may be particularly vulnerable to omission. (Due to the high level of vulnerability of marinas to coastal hazards like tropical storms and hurricanes marinas should be addressed in all local and regional preparedness and response plans.)

All marinas should have a formal Hurricane Preparedness Plan as well. Larger facilities will require a more detailed and complex plan, but all should have a plan of action and operation for response and recovery related to coastal hazards. To ensure all marinas are covered by a plan and to provide for a level of consistency in terms of content, consideration should be made for inclusion in a model ordinance. Please see the *Clean & Resilient Marina Guidebook - Volume 1, Emergency Preparedness* section for a sample Hurricane Preparedness plan and more information on resiliency through preparedness planning.

### State Perspective – Louisiana Clean Marina Guidebook

The Louisiana Clean Marina Initiative, a program of the Louisiana Department of Natural Resources, urges marinas to develop a clear and simple response plan for a hurricane or other emergency. Procedures outlined in the Louisiana Clean Marina Guidebook are as follows:

- Establish a single binder with a recognizable bright cover and spine for all emergency response plans.
- Make sure each employee knows where it is
- Include the following elements in the plan
  - o Marina Site Plan with the location of valves, pipes, tanks, structures, roads, hydrants, docks, power and fuel shutoffs, hazardous material storage, response materials and telephones
  - o Individual Plans showing equipment associated with threats like hurricanes, fuel spills, health emergencies, and fires.
  - o Personnel Plan showing who is responsible for taking what action and designating one person as leader for each potential threat.
  - o Phone Numbers for emergency response agencies and neighboring marinas with emergency response equipment.
  - o Action Plans for specific emergencies and what equipment should be deployed. Include a list of equipment available onsite, as well as how it should be used and disposed.

Louisiana encourages all of its coastal marinas to maintain this type of emergency preparedness plan, to familiarize its employees with the plan's goals and procedures and to update plans frequently as operational changes occur.



## 6.0 SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANS (SPCC)

Under the statutory authority of the Federal Clean Water Act of 1977, the Water Quality Act of 1987, and the Oil Pollution Act of 1990 and outlined in 40 CFR 112.3, “Any small business that maintains a total above-ground oil storage capacity of greater than 1,320 gallons, or a total underground oil storage capacity of greater than 42,000 gallons where there is a reasonable potential for a discharge to reach navigable waters is subject to SPCC regulatory requirements”. This regulation also includes containers in aggregate. In other words, a facility having twenty-four or more 55-gallon drums containing petroleum products would be regulated. Due to the water-dependent nature of coastal marinas, it is recommended that local governments consider adopting ordinances and policies requiring spill prevention plans for all public and private marinas within their jurisdictions.

One option for local governments is to require a spill response plan for marinas and lesser water volume requirements (i.e. 500 gallons threshold). For these smaller storage facilities a Professional Engineer is not required, but recommended. Also, the spill response plans can be incorporated into marina’s stormwater pollution prevention plans. Elements of a spill response plan include, but are not limited to: spill notification guidelines, employee training requirements, secondary containment or equivalent environmental protection requirements, outlining violations and enforcement actions for spills or releases.

### 6.1 SPILL PREVENTION CONTROL AND COUNTERMEASURE REGULATIONS

#### 6.1.1 GENERAL SPILL RESPONSE ELEMENTS

Governments have the option of imposing stricter requirements for marinas storing oil products at capacities less than those defined in 40 CFR 112. For example: A marina with only one 500 gallon diesel storage tank is required to develop a General Spill Response Plan. Elements of such a plan might include the following:

- Narrative Site Description (including materials inventory)
- Secondary Containment or Equivalent Environmental Protection Requirements
- Employee Training
- Notification Procedures in Event of Spill
- Spill Response Procedure (including identification of Lead Spill Response Person)
- Site Layout/Map

#### 6.1.2 SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANS

For marinas required to prepare SPCC plans, 40 CFR 112 should be reviewed carefully to ensure compliance with federal regulations.

**Any petroleum spill on the waters of the U.S. sufficient to cause a sheen on the water is a violation of Section 311 of the Clean Water Act and must be reported to the National Spill Response Hotline: 1-800-424-8802**

## 7.0 WATER/WASTEWATER CROSS CONNECTION REGULATIONS

Water/Wastewater Cross Connection regulations reduce contamination of potable and surface water by preventing cross connections of sewage/wastewater lines with those of the untreated stormwater system. Where they occur, these connections increase the amount of pollutants such as fecal coliform in surface water. To enforce cross connection regulations, local authorities often must resort to disrupting water services to the facility/property until the illegal connection is repaired and lines are properly installed.

The majority of the coastal cities reviewed have cross connection regulations as part of their municipal code. These regulations control the types of connections allowed for water, wastewater, and stormwater. They also require the installation of backflow prevention devices at wastewater connections and prohibit cross connections between stormwater and wastewater systems. Ordinances reviewed applied to all land use types and all areas of the cities including water-dependent land uses such as harbors and marinas.

### 7.1 CROSS CONNECTION REGULATION ORDINANCE LANGUAGE

Alabama provides for cross-connection regulations in the Alabama Department of Environmental Management Water Division - Water Supply Program, (ADEM Admin. Code r. 335-7-x-xx)<sup>(13)</sup>.

**335-7-9-.02 Cross Connections Prohibited.** *A public water system shall be designed, installed, maintained, and operated in such a manner as to prevent contamination from being introduced through any water service connection in the system.*

- (a) The installation or continued use of a water service connection to any premises where cross connections may exist is prohibited unless such cross connections are properly controlled.*
- (b) Any connection with a facility or system whereby unapproved water may enter the public water system must be approved by the Department.*

**335-7-9-.03 Protection Required.** *A suitable backflow prevention device shall be installed on each new water service connection and on each customer water service connection replaced after January 1, 2006. Replacement of a water service connection is defined as the removal and installation of the existing customer meter and service line.*

**335-7-9-.04 Responsibility of the Supplier of Water.**

- (1) Community systems must have a formally adopted written cross connection control policy. This policy must meet the provisions of this chapter and shall be provided to customers on request.*
- (2) This policy shall include an inspection program, with records of health hazards found and corrective action taken kept at the water office for a minimum of five years. These records shall be made available to the Department upon request.*

**335-7-9-.05 Discontinuance of Service.** *The supplier of water shall deny or discontinue water service to a customer if a required backflow prevention device is not installed or properly maintained. Water service shall not be restored to such premises until the deficiencies have been corrected or eliminated to the satisfaction of the supplier and the Department.*

<sup>13</sup> Alabama Department of Environmental Management. Water Division – Water Supply Program. “ADEM Admin. Code r. 335-7-9-.02-.05” May 26, 2009. <<http://www.adem.alabama.gov/alEnviroRegLaws/files/Div7Eff5-26-09.pdf>>. (January 11, 2013).

## 8.0 VESSEL PUMP-OUT PROCEDURES

Very few ordinances reviewed include specific requirements or provisions for pump-out procedures. This issue is very closely related to stormwater, water and wastewater management and spill prevention. Therefore, consideration should be made for establishing specific pump-out procedures, as well as standards determining threshold levels for the size of marinas required to have pump stations in city/county/parish ordinances.

### 8.1 VESSEL PUMP-OUT ORDINANCE LANGUAGE

Below is a brief excerpt from the Clean Vessel Act: Pump-Out Station and Dump Station Technical Guidelines. For a complete ordinance, additional information should be included to address: penalties, permitting, responsibilities of the permitting authority and variances. It reads:

*"Pump-out stations and dump stations should provide an efficient means of removing sewage from boats and a means of disposing of that sewage in a safe and sanitary manner. Pump-out stations should include equipment for rinsing boat holding tanks. Pump-out stations and dump stations should be adequate to meet the peak use demand for such services. Facilities should be operated and maintained to provide adequate service and to be maintained to function as intended. Pump-out stations and dump stations should be reliable, corrosion resistant, easy to use, neat and tidy to clean and use, conveniently located, with low maintenance. Pumps should be specifically designed for handling sewage. Land-based restrooms are not an acceptable option for emptying portable toilets."*<sup>(14)</sup>

#### State Perspective – Florida Vessel Pump-out Regulation

The Clean Vessel Act of 1992 was implemented by Congress to help combat water quality issues arising from overboard raw sewage disposal. The act makes overboard sewage disposal illegal in certain waters and uses federal funding programs to encourage the development of new pump-out locations.

##### Florida Keys National Marine Sanctuary:

In the State of Florida, the Florida Keys National Marine Sanctuary has prohibited the discharge of sewage incidental to vessel use and generated by a marine sanitation device in accordance with the Federal Water Pollution Control Act. This area of the state has been designated as a No Discharge Area to help protect the sensitive marine environment of the Florida Keys.

##### Furthermore, the State of Florida has outlawed discharging raw sewage:

Florida Statute 327.53 (4)(a) "Raw sewage shall not be discharged from any vessel, including houseboats, or any floating structure in Florida waters." This includes all freshwater areas and Florida's Coastal Zone seaward boundary of nine nautical miles in the Gulf of Mexico and three nautical miles in the Atlantic Ocean.

<sup>14</sup> "Clean Vessel Act of 1992." Federal Register Volume 59, Number 47 [FR Doc No: 94-5530] March 10, 1994. <<http://www.gpo.gov/fdsys/pkg/FR-1994-03-10/html/94-5530.htm>>. (January 11, 2013).



## 9.0 ABANDONED VESSELS

Most Gulf States have policies in place outlining the procedures for local entities to begin the removal of abandoned or derelict vessels. After determining applicable requirements and procedures at the state level, many local governments have used ordinances and procedures based on state law to outline protocols for abandoned vessel management, removal and disposal. An Abandoned Vessels Program should include the following steps: (1) defining the program administrator, (2) identifying current and desired legislation, (3) locating funding sources for the program administration and removals, (4) creating an inventory of current derelict vessels, (5) developing procedures for removal and disposal, (6) defining enforcement protocols, and finally (7) preventing the abandonment of vessels through outreach and education.<sup>15</sup>

The legislation ordinance Abandoned Vessels Program should contain the following elements: notification requirements and procedures, removal authority, disposition options and procedures, disposal guidelines, enforcement provisions, and funding mechanisms, all of which are described in greater detail below.

### Notification Requirements and Procedures

- Clearly defining who, when, and how property owners are identified and notified is required in most Abandoned Vessel Programs. These procedures vary from state to state, so notification of the local marine law enforcement authority is a safe first step towards abandoned vessel removal. Notification often includes identifying the owner, posting notices on the vessel, and notification by certified mail and in the newspaper.
- Most states require notification at each step of the removal process including taking custody of abandoned vessels, removal, sale, and/or disposal.

### Removal Authority

- Environmental assessments are recommended prior to removal of abandoned vessels to prevent accidental spillage of fuels, oils, and coolants on the vessel,
- Removal authority may be local law enforcement, state agencies related to natural resources or boating, the land owners, or marinas,
- Local governments may have ordinances addressing removal authority.

### Disposal Options and Procedures

- *Public auction,*
- *Retention by state or local government/agency,*
- *Sale to marine salvage company,*
- *Donation to non-profit organization,*
- *Landfill disposal, or*
- *Use for artificial reef.*

15 Parry, Neal and Kris McElwee (eds.) "Proceedings of the Workshop of State-Level Response to Abandoned and Derelict Vessels." September 15-17, 2009. <<http://marinedebris.noaa.gov/projects/pdfs/09ADVworkshop.pdf>>. (January 11, 2013).



## Other Considerations for Abandoned Vessels Programs<sup>16)</sup>

- Statewide titling of boats to simplify the ownership discovery phase.
- Clear, legal definitions of terms such as “abandoned vessel or boat”, “derelict vessel”, “ownership.”
- Clearly outlined timelines for notification, removal and disposal.

### State Perspective – Florida Abandoned Vessel Regulations

For a statewide example of abandoned vessel regulations, the State of Florida has addressed abandoned vessels in the following ways:

- Sections 376.15 and 376.16 Title XXVIII state in part: “It is unlawful for any person, firm, or corporation to store, leave, or abandon any derelict vessel as defined in S. 823.11(1) in this State.”
- Section 705.101 to 705.19 Title XL outlines local officer duties and reporting procedures for abandoned or lost property.

<sup>16</sup> National Association of State Boating Law Administrators. “Best Management Practices (BMPs) for Abandoned Boats.” 2009. <<http://marinedebris.noaa.gov/projects/pdfs/advbmp09.pdf>>. (January 11, 2013).

## 10.0 PET WASTE

Pet waste is another potentially significant water quality issue and can be addressed as part of a comprehensive model ordinance for marinas. Some jurisdictions include language regulating the handling and disposal of pet waste as part of a comprehensive stormwater ordinance, but it is unlikely this provision is common to many local ordinances. As with pump-out procedures, this issue should be addressed within a section covering water quality issues and concerns.

### City Perspective – Fairhope, Alabama Pet Waste Regulation

The City of Fairhope, Alabama has included in their Animals and Fowl Ordinance a section on Pets Constituting a Nuisance. This regulation addresses pet wastes on private and public property and establishes violation penalties based on the City's general penalty code. [Full ordinance available for review at [http://www.cofairhope.com/gov\\_ordinances.php](http://www.cofairhope.com/gov_ordinances.php).]

## 11.0 CLEAN AND RESILIENT INCENTIVES

State and local governments can provide incentives that encourage businesses to protect the environment and prepare for the impact of severe weather. Participants in existing Clean Marina Programs voluntarily make changes to their fueling, waste and stormwater management operations that yield cost benefits, improve amenities and other advantages in the competitive market. Technical and financial assistance may be linked to Clean Marina Programs to help marina businesses achieve environmental goals.

### State Perspective – Florida Clean Vessel Act (CVA)

The Florida Clean Vessel Act (CVA) Program is a direct incentive that provides grant funding to marina owners and operators for boater pumpout facilities. CVA grant funds can be obtained for the following pumpout related projects:

- Purchase and installation of equipment
- Maintenance and repair of equipment
- Operations and education

Grants made possible by the US Fish and Wildlife Service and the Florida Inland Navigation District will reimburse up to 75% of costs for these projects. Over 450 marinas in Florida have participated. More information is available at [http://www.dep.state.fl.us/cleanmarina/cva/apply\\_grant.htm](http://www.dep.state.fl.us/cleanmarina/cva/apply_grant.htm)

While this incentive is currently limited to homeowners, Florida also requires insurance companies to offer discounts to homeowners who take extra measures proven to protect their homes against damage caused by hurricane winds.<sup>(17)</sup> Securing roofs to prevent wind damage and protecting windows from flying debris are the two most cost effective measures for safeguarding homes. Participants in this incentive may conduct an authorized mitigation inspection of their property to receive discounts to the hurricane-wind portion of all insurance policies issued in the state. The state maintains a single mitigation verification form to be used by all insurers operating in Florida.<sup>(18)</sup> The Uniform Mitigation Verification Inspection Form may be found on line at the State Office of Insurance Regulation at the following website: <http://www.flair.com/siteDocuments/OIR-B1-1802eff02012012.pdf>.

Providing similar insurance incentives to marina owners who take the appropriate protective measures could encourage the development of more hurricane-resilient structures at the water's edge.

17 State of Florida. Florida Statute: 627.711 "Notice of premium discounts for hurricane loss mitigation; uniform mitigation verification inspection form." 2011. <<http://www.flsenate.gov/laws/statutes/2011/627.711>>. (January 11, 2013).

18 Florida's Foundation. "Make Mitigation Happen." February 2010. OIR-B1-1655. FL HO0002 0410. <<http://www.floridadisaster.org/mitigation/Documents/Wind%20Mitigation%20Booklet%20.pdf>>. (January 11, 2013).

## 12.0 SUMMARY

State and local governments can play a significant role in making marinas cleaner and more resilient to natural and man-made hazards. First, when public employees have a greater understanding of federal and state requirements for coastal facilities, they are better equipped to educate business owners and enforce the rules. Secondly, state and local governments can take a more conscious approach to marinas' needs when preparing the long-range plans required by EPA for Stormwater Management and FEMA for Hazard Mitigation. Including marinas in these and other planning efforts for land use and transportation can protect the region's water from pollution and also make marinas eligible for certain financial assistance to achieve environmental and mitigation goals. A third action, applying to new marina construction or expansion, is to involve local building code officials in the design process. Too often, these skilled local practitioners are left out of the process altogether. Their involvement will help ensure that the same codes that apply to other local structures also govern design wind speeds and other building code standards at marinas. Our research indicated that standards for siting, design, and construction; stormwater management; spill prevention; hurricane preparedness; and water quality issues are not applied equally to public and private marinas. Bringing private marinas under the same regulatory umbrella could greatly improve environmental and safety outcomes for all of these waterfront facilities.

For every one dollar spent in preparing for, or mitigating disaster, FEMA has found that four dollars is saved.<sup>(19)</sup> Clean Marinas have proven to yield financial benefits as well. An EPA review of 25 clean marinas reported that all experienced benefits outweighing the cost of improving operations in maintenance, wastewater handling and other common procedures.<sup>(20)</sup> Long-range planning for local development that includes marinas and their infrastructure will keep waterfront businesses eligible for regular maintenance and needed upgrades. Outreach and mentoring of marinas has built flourishing and voluntary state Clean Marina Programs across the Gulf of Mexico. Incentives like Florida's Clean Vessel Grants have promoted the widespread use of clean pump-out stations.

Compare strategies used by your state/county/parish or city to address local goals for marina and waterfront development with those described in this *Clean and Resilient Marina Guidebook Policy Guide*. Develop a plan of action to reach your own goals. Wherever you live and work, achieving cleaner and more resilient marinas is within the reach of your community.

19 Multi Hazard Mitigation Council of the National Institute of Building Sciences. "Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities." December 2005. <[http://www.floods.org/PDF/MMC\\_Volume1\\_FindingsConclusionsRecommendations.pdf](http://www.floods.org/PDF/MMC_Volume1_FindingsConclusionsRecommendations.pdf)>. (January 11, 2013).

20 United States Environmental Protection Agency, Office of Water. "Clean Marinas Clear Value." August 1996. <[http://water.epa.gov/polwaste/nps/marinas/clean\\_marinas.cfm](http://water.epa.gov/polwaste/nps/marinas/clean_marinas.cfm)>. (January 11, 2013).