



Harvest Moon Regatta 2009

# At-Sea Safety

By



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**HSH Yachts**



## Four sections:

1. **Potential Hazards**
2. **Watch Systems and Crew assignments**
3. **Crew Training and Practice**
4. **Coping with Emergencies**



# 1. Potential Hazards

- **Galveston Bay**
- **Along the coast**
- **Coming back in the ICW**



# Hazards in Galveston Bay

- **Redfish Island**
- **Commercial traffic in the HSC**
- **Security zones**
  - Port areas such as Bayport, Texas City
- **Cruise liners**
  - Within 500 yards: operate at minimum speed
  - No closer than 100 yards unless authorized

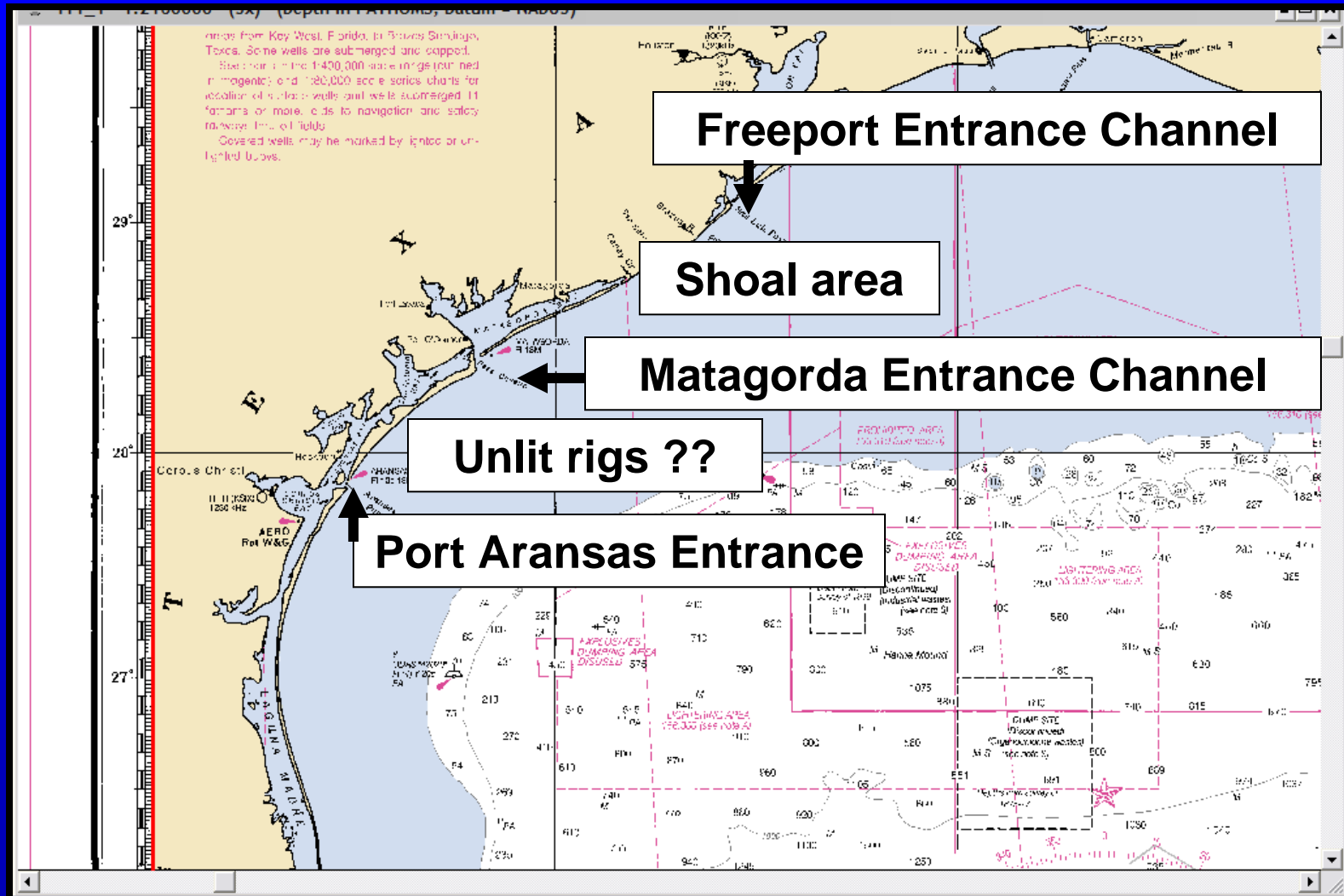


# Hazards along the coast

- Shoal areas
- Oil rigs
- Fishing boats (trawling)
- Crew boats
- Seismic survey vessels
- Tows
- Freighters and other commercial traffic
  - AIS (Automatic Identification System)



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# Hazards along the coast

- Shoal areas
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- Seismic survey vessels
- Tows
- Freighters and other commercial traffic
  - AIS (Automatic Identification System)



## Hazards on the ICW

- **Commercial tows**
  - Use of AIS (Automatic Identification System)
- **Brazos River lock**
- **Going aground**



## 2. Watch Systems and Crew Assignments

- **Watch systems considerations**
- **Chain of command**
- **Skippers rules**
- **Abandon Ship responsibilities**



## Watch systems considerations

- **Number of crew**
- **Experience of crew**
- **Weather conditions**
- **Fatigue and/or seasickness**



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# Watch systems

*Just a few possible watch systems of many:*

<b># of crew</b>	<b># of crew on watch</b>	<b>Watch length</b>	<b>Off-watch time</b>	<b>Notes</b>
<b>3</b>	<b>2</b>	<b>4 hrs</b>	<b>2 hrs</b>	<b>Minimal rest</b>
<b>4</b>	<b>2</b>	<b>4 hrs</b>	<b>4 hrs</b>	<b>Rotate crew every 2 hrs</b>
<b>5</b>	<b>2</b>	<b>2 hrs</b>	<b>3 hrs</b>	<b>Rotate crew every 1 hr</b>



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### Crew experience

- **Not all crew should be novices**
- **Try and keep at least one experienced person on watch at all time:**
  - Watching for and dealing with shipping
  - Recognizing weather changes
  - Avoiding dangerous sailing practice



# Weather Conditions

- **In heavy weather helm changes need to be more frequent**
- **In rain or cold, watch lengths may need to be shorter**
- **In changing conditions may need extra crew on deck**



# Avoid Fatigue

- **Younger crew are often stronger but not as ready to take rest**
- **Inexperience increases chance of fatigue**
- **Weather conditions can precipitate seasickness**
- **Fatigue is often an early indicator of seasickness**



## Chain of Command

- **Choose a 1<sup>st</sup> Mate and let the crew know**
- **If neither skipper or 1<sup>st</sup> mate will be on watch, choose a watch leader**
- **Let 1<sup>st</sup> Mate and watch leader know in what circumstances skipper has to be called**



# Skippers Rules

- **The skipper should instruct the crew on:**
  - When to use safety harness and/or lifevests
  - What to do in the event of a manoverboard
  - What their responsibilities will be in other emergencies



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# Abandon Ship Responsibilities

*Some of the abandon ship tasks to be assigned:*

<b>Name</b>	<b>Task</b>
<b>Skipper</b>	<b>Activate EPIRB, Activate DSC Emergency call</b>
<b>1<sup>st</sup> Mate</b>	<b>Launch Liferaft</b>
<b>Crew A</b>	<b>Get Emergency Grab BAG</b>
<b>Crew B</b>	<b>Get hand-held VHF and GPS</b>
<b>Crew C</b>	<b>Get flares and knife</b>



## 3. Crew Training and Practice

- **Harvest Moon Regatta  
Seamanship and Safety Skills**
- **Suggested one-day on-the-water  
crew training**



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# Crew training day

- **Items to be practiced:**
  - Lifevests and harnesses
  - Mainsail and headsail reefing
  - Heaving-to
  - Anchoring
  - Non-GPS navigation (3 bearing fix, running fix)
  - VHF radio
  - MOB recovery
  - Emergency steering
  - Bilge pumps and through-hull fittings



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# Possible crew training program

8:00am	Dockside	Crew briefing: location of safety gear, through hulls, operation of bilge pumps. Test fit emergency tiller. Have crew practice putting on lifevests and safety harnesses. Adjust harness to fit each crew member
9:30am	Leave dock, head to bay	Set mainsail. While using engine to maintain steerage way, practice reefing mainsail. Engine off. Set headsail and do same
11:30am		Heave-to or anchor. Have lunch. Practice 3 bearing fix. Listen to VHF channel 16. Discuss radio protocol
1:00pm	Get under way	Practice Manoverboard with MOB pole using quick stop method to return to the MOB pole. Deploy lifesling and circle pole
3:00pm		Fit emergency steering and practice MOB recovery
4:00pm	Return to dock	
4:30pm		While at dock, practice hoisting crew member aboard from water
5:00pm	Review	Decide on follow-up practices as necessary



## 4. Coping with Emergencies

- **Minimizing emergencies**
- **Critical situations**
  - Manoverboard
  - Vessel sinking or on fire
  - Medical emergencies
- **Other emergencies**
  - Loss of steering
  - Heavy weather
  - Loss of engine



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## ORC Category 3: Quiz

- What do the regulations say about the responsibility of the person in charge (the skipper)?



## ORC Category 3: Quiz

- What do the regulations say about the responsibility of the person in charge (the skipper)?
  1. **The safety of a yacht and her crew is the sole and inescapable responsibility of the person in charge who must do his best to ensure that the yacht is fully found, thoroughly seaworthy and manned by an experienced crew who have undergone appropriate training and are physically fit to face bad weather.**



## ORC Category 3: Quiz

- What do the regulations say about the responsibility of the person in charge (the skipper)?
- 2. He must be satisfied as to the soundness of hull, spars, rigging, sails and all gear.**



# ORC Category 3: Quiz

- What do the regulations say about the responsibility of the person in charge (the skipper)?
- 3. He must ensure that all safety equipment is properly maintained and stowed and that the crew know where it is kept and how it is to be used.**



## Obtaining assistance

- **VHF or SSB radio**
- **Automatic emergency equipment (EPIRB, DSC)**
- **Flares**
- **Cell phones ???**



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# DSC

- **Digital Selective Calling**
- **Using DSC in an emergency requires:**
  - DSC capable radio
  - MMSI number (from BoatUS)
  - Interfaced to GPS (to show position)
- **Contacting the USCG**
  - USCG are now able to respond to DSC emergency calls in the Houston/ Galveston area but the service (called Rescue 21) is still not fully implemented in the Corpus Christi area





## *Coping with:* **CREW OVERBOARD**

- **Instructions to crew**
- **Necessary equipment aboard**
- **Practiced skills**
- **Realization of how dangerous this can be!**



## *Coping with: Crew overboard*

- ***Instructions to my crew:***
  - *Throw flotation*
  - *Launch MOB pole*
  - *Shout “Manoverboard”*
  - *Set GPS manoverboard feature*
  - *Visually contact victim and point*
- ***Practice and experience needed***



## *Coping with:* **Fire or Sinking**

- **Necessary equipment aboard**
- **Abandon ship instructions**  
**Emergency bag ready**
- **Realization of how dangerous this can be!**



# Abandon ship

- **Tasks to assign my crew:**
  - *Send MAYDAY; Activate DSC Emergency call*
  - *Launch raft or dinghy*
  - *Get grab bag (Emergency bag)*
  - *Get hand-held VHF (if necessary)*
  - *Get additional supplies*
  - *Get crew aboard raft or dinghy*



### *Coping with:* **MEDICAL EMERGENCY**

- **First-Aid kit**
- **Basic skill and info aboard**
- **Communication equipment**
- **Awareness of what medical emergencies are most likely to occur**



*Other emergencies:* ***Loss of Steering***

- **Emergency tiller**
- **Cable, clamps and sheaves**
- **Loss of rudder**
- **How to sail with no rudder**



## *Other emergencies: **Bad weather***

- **Reefing ability**
- **Experience**
- **Avoiding hypothermia**
- **Avoiding fatigue**



## *Other emergencies: **No Engine***

- **Engine repair parts**
- **Engine repair knowledge**
- **Sailing skill**
- **Battery charging?**



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# Experience

**It's only by getting *real experience* offshore that you can become competent and confident in your abilities**



# More information

- **Copies of these notes on our website: [www.hshyachts.com](http://www.hshyachts.com)**
- **We offer classes in navigation and more: see our website: [www.hshyachts.com](http://www.hshyachts.com)**