



***PEGASUS***  
**CREW TRAINING MANUAL  
AND PROCEDURES**

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## WELCOME TO THE PEGASUS PROJECT

The Pegasus Project has taken thousands of kids sailing on San Francisco Bay for marine environmental education aboard *Pegasus*. The Pegasus Project is funded by foundation grants, in-kind contributions, private donations, and charter revenues. Contributions are tax deductible.

From 1994 through 2004, the Pegasus Project was operated by the Nautilus Institute. In 2006, Pegasus Voyages was established to continue the Pegasus Project and to enable people to experience the marine wilderness in new and inspiring ways.

Our mission is to enable youth to become productive members of a sustainable society through positive outdoor environmental education and by reinforcing life skills. Our objectives are:

- To conduct life skills sails aboard *Pegasus* for youth including youth at risk. Through the encouragement of a mentoring relationship between crew members and youth, life skills sails build confidence, focus on teamwork, and empower youth to become active members of a sustainable community.
- To provide youth participants and adult crew with a basic environmental understanding and appreciation of the San Francisco Bay, especially the marine environment, while sailing aboard *Pegasus*.
- To provide a multi-year track for underprivileged youth that enables them to experience their “Backyard Bay” through on-the-water activities.
- To work with partners to develop scholarship options, integrated and multi-level programs, special-needs training and voyages, and in-depth and multi-year programs.

### **Major Accomplishments, 1994-2012:**

1. Sailed with approximately 12,000 youth over the past 18 years; most (about 80 percent) of Pegasus youth voyagers are low-income and from minority communities in the East Bay and beyond.
2. Created and nurtured a volunteer network of upwards of 100 volunteers, and a Pegasus community and e-mail list of more than 300.
3. Provided a safe on-the-water experience for youth in the San Francisco Bay Area, with specialized crew training and equipment.

## CREW TRAINING MANUAL

This document provides captains and crew with training materials and information needed to become effective members of the Pegasus crew. It is available online at: <http://www.pegasusvoyages.org>.

For more information, please contact Peter Hayes,  
Pegasus Project, at [info@pegasusvoyages.org](mailto:info@pegasusvoyages.org) or call 510-7174439.



## THE PEGASUS PLEDGE

***The mission of the Pegasus Project is;***

- *to teach the public about marine environments,*
- *to impart a love of the ocean and joy of sailing to Bay Area youth,*
- *to maintain a safe, clean, environmentally responsible, and technically excellent boat that will serve as a role-model,*
- *to provide a team-oriented environment in which participants feel respected, and*
- *to improve the project's effectiveness at every opportunity.*

**I promise to:**

- Commit myself to pursuing the mission of the Pegasus Project;
- Serve, respect, invite, accept, and keep safe all participants and volunteers without discrimination based on race, age, creed, religion, national origin, gender, sexual orientation, marital status, and physical ability;
- Not bring alcohol or illegal drugs on board *Pegasus* nor serve as crew on *Pegasus* while under the influence of alcohol or drugs;
- Study the Pegasus Crew Training Manual along with any supplementary materials, all of which are critical to the safe operation of *Pegasus*, and at all times, to follow the direction of the designated Captain;
- Contribute at least as much time to sailing with youth and to developing the Pegasus Project as I spend sailing in training and recreational activities on *Pegasus*. (Such development could include participation in maintenance activities, or off-boat activities such as curriculum development, fundraising, inventory, special events, outreach, coordination, administration, etc.);
- Promote participation in the Pegasus Project by other potential volunteers and supporters.

**Violations of the Pegasus Pledge are subject to disciplinary action up to and including termination of participation in the Pegasus Project.**

Sign below if you understand your obligations under the pledge and promise to adhere to it at all times:

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_

## PEGASUS PROJECT VOLUNTEER APPLICATION

Thank you for your interest in volunteering for the Pegasus Project.  
Please fill out this form.

**Name:** \_\_\_\_\_ **Gender:** \_\_\_\_\_

**Date of Birth:** \_\_\_\_\_ **Profession:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_

**Home Phone:** \_\_\_\_\_ **Office Phone:** \_\_\_\_\_

**Cell Phone:** \_\_\_\_\_ **Email:** \_\_\_\_\_

**Health problems we should know about:** \_\_\_\_\_

**Sailing Experience:** (check all that apply):

captain    crew    navigator

sailing school certification level: \_\_\_\_\_

other: \_\_\_\_\_

**Years of sailing experience:** \_\_\_\_\_

**Vessel Type(s):** \_\_\_\_\_

**Supervisory Experience:** (check all that apply):

adults, explain: \_\_\_\_\_

children, explain: \_\_\_\_\_

**Availability:** (check all that apply):

weekends    weekdays    weekdays after 3 pm    evenings

other, explain: \_\_\_\_\_

**CPR Card?** \_\_\_ **Date:** \_\_\_\_\_ **First Aid Card?** \_\_\_ **Date:** \_\_\_\_\_

**Have you ever been convicted of a felony?** \_\_\_\_\_ If so, please explain:

**Two Professional or Sailing References:**

**Name:** \_\_\_\_\_ **Name:** \_\_\_\_\_

**Profession:** \_\_\_\_\_ **Profession:** \_\_\_\_\_

**Phone:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

**Email:** \_\_\_\_\_ **Email:** \_\_\_\_\_

**Relationship:** \_\_\_\_\_ **Relationship:** \_\_\_\_\_

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**EMERGENCY CONTACT INFORMATION**

Name: \_\_\_\_\_  
Date of Birth: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone (home): \_\_\_\_\_  
Phone (work): \_\_\_\_\_  
Phone (cell): \_\_\_\_\_

**EMERGENCY CONTACT PERSON:**

Name: \_\_\_\_\_  
Relationship: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone (home): \_\_\_\_\_  
Phone (work): \_\_\_\_\_  
Phone (cell): \_\_\_\_\_

**ALTERNATE CONTACT PERSON:**

Name: \_\_\_\_\_  
Relationship: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone (home): \_\_\_\_\_  
Phone (work): \_\_\_\_\_  
Phone (cell): \_\_\_\_\_

Name of Physician: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Medical Insurance: \_\_\_\_\_  
Allergies: \_\_\_\_\_

Date: \_\_\_\_\_

**ADULT CREW**

**PEGASUS PROJECT**  
**ASSUMPTION OF RISK AND LIABILITY RELEASE AGREEMENT**

As a prerequisite for being permitted to be aboard the vessel PEGASUS (whether underway or not), I agree to the following assumption of risk and release of liability. In this agreement Pegasus Project" means its affiliated partner organizations, the vessel PEGASUS and all persons acting as officers or crew of the PEGASUS. In entering into this agreement, I do so on behalf of myself and my heirs, estate, personal representatives, and assignees.

1. **ACKNOWLEDGMENT AND ASSUMPTION OF RISK.**

I am aware that being aboard the PEGASUS – whether as a crew member, visitor, participant in a field trip, business invitee, or passenger – involves activities on a boat that are hazardous in nature. I am voluntarily boarding the PEGASUS with full knowledge of the risks and dangers involved, and I agree to accept any and all such risks and dangers.

2. **PHYSICAL CONDITION.**

I confirm that I do not have any medical, physical, or psychological condition that will expose me or others on the PEGASUS to risk of illness or injury. I understand that the Pegasus Project will not make any special arrangements for any such conditions that I may have. Furthermore, I agree to notify the Pegasus Project Manager and Training Captain immediately if such a condition should occur. Failure to do so may result in the termination of participation in the project.

3. **RELEASE AND AGREEMENT NOT TO SUE.**

I hereby give my consent in the event of injury or illness while aboard the PEGASUS to receive first aid treatment including cardiopulmonary resuscitation. I voluntarily release and discharge the Pegasus Project, its agents, and its insurers from any and all liabilities, claims, and causes of action that arise out of or in connection with my being aboard the PEGASUS, including but not limited to: (a) those for illness, injury, death, and property damage; (b) those resulting in whole or in part from the negligent (including solely negligent) acts or omissions of the Pegasus Project or from any defect or unseaworthiness of the PEGASUS. I further agree not to sue or assert any claim against the Pegasus Project for any illness, injury, death, or property damage that arises out of or in connection with my being aboard the PEGASUS. I also agree to allow the Pegasus Project and its partners to gather and to publish visual images of myself from video or cameras for use in public education about the Pegasus Project and its activities.

4. **LEGAL FEES.**

Should any party sue to enforce this agreement, or to recover for breach of any provision of this agreement, the successful party in that litigation shall be entitled to all attorney fees and costs of the litigation, whether otherwise awardable or not.

I have carefully read this agreement, understand its contents and agree to be bound by its terms.

Signature: \_\_\_\_\_, Dated: \_\_\_\_\_

Printed Name: \_\_\_\_\_

## CREW LEVELS

Welcome to the *Pegasus* crew qualification process. *Pegasus* has four crew levels. By identifying the skill level of crewmembers we can better mix and assign crew, sail safely and effectively, and fulfill our duty to care for our passengers and each other.

**Crew I:** Volunteers who are qualified at this level have demonstrated the basic skills necessary to be a contributing, effective crewmember on *Pegasus*. Crew I volunteers may be designated as crew for our scheduled sails with youth aboard. Skills and knowledge as defined in the Crew I Skills Checklist must be demonstrated and documented.

**Crew II:** Volunteers who are qualified at this level have demonstrated their ability to effectively serve as senior crew at all positions, except helm and Captain. Candidates must first qualify as Crew I. Skills and knowledge as defined in the Crew II Skills Checklist must be demonstrated and documented.

**Mate:** Volunteers who are qualified at this level have demonstrated advanced practical sailing skills and knowledge, including ability to take the helm. They have demonstrated competency on use of all *Pegasus* safety equipment and procedures including MOB (Man Overboard). They have also demonstrated the ability to assume the Captain's responsibilities in the event that the Captain becomes incapacitated. Candidates must first qualify as Crew I and Crew II. Skills and knowledge as defined in the Mate Skills Checklist must be demonstrated and documented.

**Captain:** Captains have demonstrated the ability to safely and effectively lead and direct crew and passengers on *Pegasus* voyages. Candidates must first qualify as Mate. Skills and knowledge as defined in the Captain Certification Procedures must be demonstrated and documented.

### How to complete Crew Level Skills Checklists

A waterproof folder will be provided for you to store your skills checklists aboard *Pegasus*. Let the Captain know at the crew briefing if you want to be signed off on certain items that day. The Captain will sign you off after the voyage if you have successfully demonstrated the skills. For difficult skill requirements the Training Captain may work with you on an individual basis in addition to scheduled crew training sails. **Don't be shy – ask!**



The procedure for getting skills signed off is to successfully perform the required skill without help in the presence of the Captain. If you have difficulty and need help, that's all right, but you can't be signed off that day. You must successfully perform the task, without help, on another day. Do not expect to complete an entire checklist in one outing. It will take time. There are no time limits on the qualification process. Just keep working at it.

Training may take place during sails with youth, but passenger and boat safety take precedence over training while youth are aboard. Candidates training and certifying at all levels may sail with youth as part of their training and certification.

The Pegasus Project does not have the capacity to teach sailing to a non-sailor. It is recommended that you take classes at least through the intermediate level at a sailing school such as OCSC or Tradewinds Sailing School (see Training Captain about discounts given to *Pegasus* crew).

There are many organizations that teach sailing classes. We also highly recommend taking a Safe Boating course given by the United States Power Squadron or United States Coast Guard Auxiliary. These classes are offered to the public at a nominal cost.



## CREW I - SKILLS CHECKLIST

**Crew I Candidate:** \_\_\_\_\_

**Date Completed:** \_\_\_\_\_ **Captain:** \_\_\_\_\_

**Prerequisite:** Basic sailing experience.

### A. Terminology

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

1. Identify the following parts of *Pegasus*:

- hull   mast   keel   boom   bow   bow pulpit   gooseneck   deck  
lifeline   stern pulpit   cabintop   spreader   shroud   headstay  
backstay   bowsprit   jib furler   Samson post   whisker pole  
lazarette   backstay adjustors   gilguys

2. Describe the functions of the following items on *Pegasus*:

- mainsheet   rudder   winch   boomvang   halyard   topping lift  
jib sheet   fairlead   outhaul   shackle   telltale   cleat   clutch  
fender   spring line   lazy jack   furling line

3. Define the following terms:

- port   starboard   captain   helmsman   crew   forward   aft  
abeam   astern   ahead   jibe ho   tacking   jibing   windward  
leeward   beam   heading up   bearing away   heel   helms a lee  
running rigging   standing rigging   easing sheets   sheeting in  
luffing   trimming to course   lazy sheet

4. Identify the following sails and parts of sails:

- mainsail   jib   staysail   mizzen   head   tack   clew   luff  
leach   foot   batten   reefing line

5. Explain the following points of sail:

- irons   close hauled   close reach   beam reach   deep broad reach  
dead run   by the lee

Crew I - Page 2 **Candidate:** \_\_\_\_\_

**B. Safety Equipment and Use**

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

1. Locate fire extinguishers on this boat and describe how to use them.
2. Locate the following safety equipment on *Pegasus* and describe when and how to use each:
  - throw rings (Type IV PFD)  throw bags  strobes  first aid kit
  - Lifesling  MOB poles  emergency knife  horn  boarding ladder
  - EPIRB  flares  boat hooks  MOB halyards  snatch blocks
  - 3-to-1 block & tackle  jacklines
3. Select, explain, and demonstrate the proper use of a PFD (personal floatation device), harness, and tether.

**C. Line and Winch Handling**

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

1. Demonstrate cleat hitch on the dock.
2. Demonstrate coiling and hanging of halyards and other lines.
3. Demonstrate the following winch techniques:
  - wrapping  grinding  choking a loaded line  easing  sheet removal
  - sheet lock on self-tailing winch  safe handling of winch handle

**D. Knots**

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Tie the following knots:

- bowline  reef/square knot  stopper  coil hitch
- (you may refer to a knot-tying website such as:  
<http://www.animatedknots.com/indexboating.php>)

**E. Safety Briefing**

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Describe the main points of the *Pegasus* safety briefing.

**F. Echo-Back**

What is “echo-back” communication and why is it important to safety?

**Congratulations for qualifying at level Crew I aboard *Pegasus*.**

## CREW II - SKILLS CHECKLIST

**Crew II Candidate:** \_\_\_\_\_

**Date Completed:** \_\_\_\_\_ **Captain:** \_\_\_\_\_

**Prerequisite:** Certification as Crew I.

### A. Competency at Deck Positions

Demonstrate ability, knowledge, and experience to independently handle the *Pegasus* sails, lines, and equipment as well as to assist youth and adult passengers in the sailing conditions common to San Francisco Bay at the following deck positions (this will generally require multiple voyages at each position to fully master):

- |                    |  |
|--------------------|--|
| 1. Aft Deck        | <b>Captain:</b> _____ <b>Date:</b> _____ |
| 2. Starboard Winch | <b>Captain:</b> _____ <b>Date:</b> _____ |
| 3. Port Winch      | <b>Captain:</b> _____ <b>Date:</b> _____ |
| 4. ForeDeck        | <b>Captain:</b> _____ <b>Date:</b> _____ |

### B. MOB Training

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Participated in at least one MOB training session.

**Congratulations for qualifying at level Crew II aboard *Pegasus*.**

## MATE – SKILLS CHECKLIST

**Mate Candidate:** \_\_\_\_\_

**Date Completed:** \_\_\_\_\_ **Captain:** \_\_\_\_\_

**Prerequisite:** Certification as Crew II and Basic Cruising/Basic Coastal Cruising certificate, or equivalent sailing experience (approved by Training Captain).

**A. Rules of the Road** **Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

1. Demonstrate and explain "Right of Way" in the following situations:
  - vessel under power
  - vessel under sail
  - starboard tack
  - port tack
  - downwind vessel
  - overtaking vessel
  - give-way vessel
  - stand-on vessel
2. Explain "Danger Zone".
3. Describe how to determine whether a crossing vessel is on a collision course or will safely pass ahead or astern.
4. Identify location, color, and proper use of lights while:
  - sailing
  - motoring
  - power sailing
  - at anchor
5. On a chart and on the water, point out the location of:
  - shipping lanes
  - channel markers
  - range markers
6. Explain the correct horn signals in the following situations:
  - fog
  - meeting
  - overtaking
  - danger

**B. Radio Operation** **Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

1. Explain VHF channel usage in the following situations:
  - hailing and conversing with the U.S. Coast Guard
  - hailing and conversing with another boat
  - contacting a commercial vessel, bridge-to-bridge
  - checking that your radio works (radio check not on channel 16)
  - checking the weather
  - monitoring VTS (Vessel Traffic Service)
2. Explain procedure for conversing with the U.S. Coast Guard in an emergency situation.
3. Explain meaning and use of Mayday, Pan-Pan, and Sécurité radio codes.
4. Explain use and activation of the EPIRB (Emergency Position Indicating Radio Beacon).

Mate - Page 2 **Candidate:** \_\_\_\_\_

**C. Boat Handling Under Sail**

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

1. Set and sail a compass course.
2. Sail a windward/leeward course while performing successful tacks and controlled jibes.
3. Sail each of the major points of sail in turn.
4. Sail wing on wing, and rig a preventer.
5. Explain and demonstrate heading up, bearing away, and methods of luffing.

**D. Setting and Dousing Sails**

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

1. Direct crew in:
  - setting all sails
  - reefing all sails while under sail
  - dousing all sails
2. Explain how to drop and raise the jib without use of the furler.

**E. Sailing Conditions**

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

1. Read wind direction and estimate strength. Look for and identify wind patches.
2. Determine tide and current from tide book.
3. Make course recommendation according to tide, current, and wind conditions and explain why.

**F. Anchoring**

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Demonstrate and explain proper *Pegasus* anchoring technique for:

- overnight  an emergency

**G. Knots**

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Tie the following knots and explain their proper application:

- bowline  figure eight  cleat hitch  clove hitch  rolling hitch  
 reef/square knot  round turn and two half hitches  coil hitch   
 bollard hitch (used for our spring line at dock, around the winch)



Mate - Page 3 **Candidate:** \_\_\_\_\_

### **H. Person Overboard**

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

1. Demonstrate ability to maneuver boat back to MOB and to stabilize the boat for MOB recovery – both under sail and under power.
2. Describe how to assess the MOB's ability to help themselves.
3. Describe when external assistance should be summoned.
4. Demonstrate deployment of the boarding ladder and when to use it.
5. Assemble and use MOB lifting gear and direct crew in its use.
6. Demonstrate use of the Lifesling.
7. Explain, describe, and demonstrate the actions to be taken by helm and Captain from the time a person falls overboard until the person is safely recovered.

### **I. Navigation and Chart Reading**

**Captain:** \_\_\_\_\_ **Date:** \_\_\_\_\_

1. Take a fix using visual bearings; locate your position on the chart; determine your latitude and longitude from the chart.
2. Locate a given position's latitude and longitude on the chart.
3. Plot a course between two points on a chart and give true and magnetic compass courses and distance.
4. Demonstrate use of GPS device to:
  - determine your latitude and longitude
  - determine bearing and distance to a waypoint
  - determine VMG (Velocity Made Good)
  - determine DMG (Distance Made Good)
5. Demonstrate use of the radar to determine bearing and distance to a target.
6. Describe the use of range markers or natural ranges to determine LOP (Line of Position) or to maintain a course.



## MATE CERTIFICATION PROCEDURES

1. Notify the Training Captain of your desire to serve on *Pegasus* as a Mate and get approval.
2. Serve as crew on at least six sails with youth in the previous twelve months.
3. Complete the skills checklist for Mate.
4. Complete Mate's Review – an on-the-water boat handling review that will include at least one Mate and the Training Captain aboard. During the Mate's Review the candidate will be required to demonstrate satisfactory knowledge and skills of all of the following:
  - A. Boat set up
  - B. Crew assignments
  - C. Safety briefing
  - D. Departure at helm
  - E. Motoring procedures
  - F. Underway procedures at helm
  - G. Person overboard recovery
  - H. Arrival and docking procedure at helm
  - I. At least one emergency situation (to be selected by Training Captain); a) taking on water b) fire, or c) hypothermia
5. After successful completion of the Mate's Review, complete at least two sails as "Mate-in-training" on sails with youth (Training Captain aboard).
6. Complete at least one sail as "Captain-in-training" with youth (Training Captain aboard) to demonstrate ability to take command if necessary.
7. Because the Pegasus Project works with children, and to satisfy the requirements of certain partner organizations, candidates for Mate may be subject to a fingerprint-based criminal background check.
8. When the Training Captain decides that you are ready, they will certify you as qualified at the level of Mate. Mates are listed as approved operators of *Pegasus* on the insurance policy.

**All Mates are subject to re-certification every two years.**

**Certified Mate:** \_\_\_\_\_

**Date Certified:** \_\_\_\_\_ **Training Captain:** \_\_\_\_\_

## CAPTAIN CERTIFICATION PROCEDURES

Notify the Training Captain of your desire to serve on *Pegasus* as a Captain and get approval.

1. Be certified as Mate.
2. Serve as Mate on at least twelve sails with youth in the previous twelve months. At least six of these must be at helm position and at least three must be as Captain-in-training.
3. Current First Aid and CPR certification.
4. Evaluation by Training Captain, which will include:
  - A. Evaluation in actual sailing conditions as Captain-in-training with youth aboard.
  - B. Evaluation of candidate's knowledge of *Pegasus* equipment, capabilities, and procedures.
  - C. Evaluation of candidate's 'situational awareness', meaning the ability to consistently make prudent and appropriate operational decisions that take into account a comprehensive set of conditions and factors, including weather, sea state, traffic, crew capabilities, boat capabilities, passenger age and condition, and other factors.
5. Because the Pegasus Project works with children, and to satisfy the requirements of certain partner organizations, candidates for Captain may be subject to a fingerprint-based criminal background check.
6. When both the Training Captain and the Program Director decide that you are ready, they will certify you as qualified at the level of Captain. Captains are listed as approved operators of *Pegasus* on the insurance policy.

**All Captains are subject to re-certification every two years.**

**Certified Captain:** \_\_\_\_\_

**Date Certified:** \_\_\_\_\_ **Training Captain:** \_\_\_\_\_

## RE-CERTIFICATION PROCEDURES

### **Crew I & II:**

Must have completed at least one *Pegasus* sail in the last twelve months with youth aboard and have completed at least one MOB training in the last twelve months with the Training Captain.

### **Mate:**

Must have completed at least four *Pegasus* sails in the previous twelve months with youth on board, with at least two sails at helm position and one as Captain-in-training. Also, must have completed at least one MOB training in the last twelve months with the Training Captain.

### **Captain:**

Must have completed at least six *Pegasus* sails in the previous twelve months with youth aboard, with at least two sails at helm position and two as Captain. Also, must have completed at least one MOB training in the last twelve months with the Training Captain. All Captains must have up-to-date First Aid and CPR training.

The Training Captain will observe and review each candidate's performance on the water, with passengers, and in emergency procedures and will determine if there are any areas that need to be reviewed or improved before signing off on re-certification.

### **Training Captain:**

The Training Captain will be reviewed by an independent maritime professional.

## CREW POSITIONS

**CAPTAIN** – During sails the Captain in command has ultimate authority and responsibility. The Crew Training Manual and Procedures exist to establish “best practices” and identify options for a variety of conditions. However, ultimate responsibility for directing the operation of the vessel rests with the Captain at all times. The Captain will use his/her best judgment under actual conditions when making decisions.

Prior to the sail the Captain assigns positions and briefs the crew on safety issues. The Captain also gives the safety briefing to the passengers and while underway maintains traffic watch and oversees the operation of the vessel and passenger activities.

For a particular voyage, a crewmember who has not been certified as a Captain may be designated as a Captain-in-training and perform the Captain duties. However, a certified Captain must still be aboard and still has ultimate authority and responsibility.

**HELM** – The helmsperson steers the boat and directs the crew during departure and docking and sail handling. Helm consults with the Captain to determine what sails to deploy and what course to sail. During a MOB emergency, helm returns the boat back to the MOB for retrieval using a method decided with the Captain. When a passenger or crewmember is permitted to steer the boat, helm instructs and monitors them and is still responsible for the safe handling of the boat and must be prepared to retake the helm at any time.

Generally, helm is assigned to a crewmember who has been certified as a Mate. However, for a particular voyage a crewmember who has not been certified as a Mate may be designated as a Mate-in-training and perform the duties of helm. However, for youth voyages a certified Mate must still be aboard and must be prepared to take over the helm if necessary. During a voyage, the Mate acts as a second pair of eyes for the Captain, monitoring the overall operation and advising the Captain of any potential problems.

**FOREDECK** – During departure and docking the crew assigned to foredeck handles the bow line. While underway, foredeck maintains forward watch, handles the main halyard, coordinates other crew in raising and dropping the mainsail, and makes adjustments as necessary to the lazy jacks, boomvang, luff tension, and out haul. The foredeck also handles the anchor and rode, with

assistance, while anchoring and weighing anchor. Finally, the foredeck is responsible for the safe handling of passengers forward, including on the bowsprit. This position requires experienced crew because of the sail handling required, the passenger handling in a pitching part of the vessel, and the distance away from the assistance of the rest of the crew.

**PORT WINCH** – During departure, the crew assigned to port winch delivers the port bow line to the crew on foredeck, delivers the port stern line to the crew on aft deck, stows the boarding steps at the end of the finger, and is the last person to board. After departure, the crewmembers on the port and starboard winches close the gate and stow the fenders. During docking, the port winch handles the stern line and returns the boarding steps to the gate. While underway, the port winch handles the port jib sheet and main sheet, handles the jib furling line while deploying and furling, and assists in raising and dropping the mainsail by helping with sail ties. The crewmembers on port and starboard winch together are responsible for handling passengers transiting the cockpit area.

**STARBOARD WINCH** – During departure and docking, the crew assigned to starboard winch tends the walking fender to keep the boat off of any piling or other obstruction, if necessary. While underway, the starboard winch handles the starboard jib sheet and mizzen sheet, assists in raising the mainsail by tending the reefing lines, and assists in deploying and furling the jib by tending the working jib sheet. The crewmembers on port and starboard winch together are responsible for handling passengers transiting the cockpit area. Starboard winch is also assigned the boat camera and photographic duties between operational duties.

**AFT DECK** – During departure, the crew assigned to aft deck handles the port stern line. During docking the aft deck passes the port stern line to the crewmember on port winch and stands by on the aft deck in case assistance is needed. While underway, the aft deck maintains aft watch and handles raising and dropping of the mizzen sail. Whenever the engine is started, the crew on aft deck checks whether water is being discharged from the exhaust and reports to the helm. The aft deck is responsible for monitoring and controlling the passengers on the aft cabintop and for safely moving passengers from the starboard side to the port side as passengers are escorted forward.

## CREW PLACARDS

To reinforce crew training and help ensure safety, printed placards are hung at each crew position.

The front side of the placard lists the preparations that should be confirmed or checked by the crewmember at that position prior to departure.

The flip side of each placard is an overview of the responsibilities for the crewmember at that position. The responsibilities should be reviewed prior to departure.

The placards are mounted at the following locations on *Pegasus*, so as to be readily available to each crewmember prior to departure:

- **Captain** – Port side of galleys.
- **Helm** – Steering pedestal.
- **Foredeck** – Port side of bow pulpit near port bow line.
- **Port Winch** – Upper lifeline, forward of the port gate.
- **Starboard Winch** – Upper lifeline, forward of the starboard gate.
- **Aft Deck** – Port side of aft pulpit.

Copies of both sides of all the placards are presented on the following pages.



### **CAPTAIN OVERVIEW**

#### **DEPARTURE:**

- **GIVE SAFETY BRIEFING TO PASSENGERS**
- **REVIEW READINESS FOR DEPARTURE**
- **CALL FOR QUIET & MAINTAIN FAIRWAY WATCH**

#### **UNDERWAY:**

- **CONSULT WITH HELM ON SAIL SELECTION**
- **CONSULT WITH HELM ON DESTINATION & PLANS**
- **MAINTAIN TRAFFIC & RADIO WATCH**
- **OVERSEE OPERATION & PASSENGER ACTIVITIES**

#### **DOCKING:**

- **CALL FOR QUIET & MAINTAIN FAIRWAY WATCH**

#### **EMERGENCY:**

- **ASSESS SITUATION**
- **ISSUE EXPLICIT INSTRUCTIONS TO CREW**
- **MAINTAIN CALM**

### **CAPTAIN PRE-DEPARTURE CHECKLIST**

- ✓ **LOG BOOK FILLED OUT**
- ✓ **WEATHER AND TIDES CHECKED AND NOTED**
- ✓ **BATTERY CHARGED**
- ✓ **ENGINE CHECKED AND READY**
- ✓ **RADAR ON STANDBY**
- ✓ **MAIN VHF RADIO ON AND TESTED**
- ✓ **NAVIGATION & STEAMING LIGHTS WORKING**
- ✓ **BACKSTAYS TENSIONED**
- ✓ **SIGNED LIABILITY FORMS FOR EVERYONE**
- ✓ **MASTER CHECKLIST COMPLETED, W/HEADCOUNT**
- ✓ **EVERYONE WEARING HARNESSSES AND PFD's**
- ✓ **PASSENGERS SEATED AND SECURE**
- ✓ **CREW IN POSITION AND READY FOR DEPARTURE**

### **HELM OVERVIEW**

#### **DEPARTURE:**

- **PREPARE CREW FOR DEPARTURE**
- **WHEN READY, DIRECT CREW TO CAST OFF**
- **MANEUVER BOAT OUT OF SLIP**

#### **UNDERWAY:**

- **CONSULT WITH CAPTAIN ON SAIL SELECTION**
- **DIRECT CREW ON SAIL HANDLING**
- **CONSULT WITH CAPTAIN ON COURSE CHANGES**
- **MAINTAIN RESPONSIBILITY FOR HELM**

#### **DOCKING:**

- **PREPARE CREW FOR DOCKING**
- **MANEUVER BOAT INTO SLIP, SLOW AS SHE GOES**

#### **EMERGENCY:**

- **CONSULT WITH CAPTAIN RE. MANEUVERS**
- **ASSIST WITH CONTROL OF CREW & PASSENGERS**

### **HELM PRE-DEPARTURE CHECKLIST**

- ✓ **ENGINE RAW WATER AND FUEL VALVES ON**
- ✓ **ENGINE DOORS CLOSED**
- ✓ **ENGINE KEY IN COCKPIT**
- ✓ **ENGINE STARTED AND MAKING WATER**
- ✓ **FORWARD AND REVERSE GEARS TESTED**
- ✓ **INSTRUMENTS ON AND COVERS OFF**
- ✓ **VHF RADIO IN PEDESTAL HOLDER AND TURNED ON**
- ✓ **GPS MOUNTED ON PEDESTAL AND WORKING**
- ✓ **WHISTLE AND BINOCULARS ON PEDESTAL**
- ✓ **WHEEL UNLOCKED AND CENTERED**
- ✓ **CREW IN POSITION AND READY FOR DEPARTURE**



## **FOREDECK OVERVIEW**

### **DEPARTURE:**

- **CAST OFF PORT BOW LINE ON COMMAND**
- **CALL OUT WHEN BOW IS CLEAR OF PILING**
- **COIL AND SECURE BOW LINE**

### **UNDERWAY:**

- **HANDLE MAIN HALYARD AND OTHER LINES**
- **COORDINATE RAISE/REEF/DROP OF MAINSAIL**
- **MAINTAIN FORWARD WATCH**

### **DOCKING:**

- **HANDLE PORT BOW LINE ON DOCK**

### **EMERGENCY:**

- **SECURE NEARBY PASSENGERS**
- **STANDBY AT POSITION FOR INSTRUCTIONS**

## **FOREDECK PRE-DEPARTURE CHECKLIST**

- ✓ **STARBOARD BOW LINE SECURE ON LIFELINE**
- ✓ **POWER CORD ON DOCK**
- ✓ **THROW BAG CLIPPED TO SAMSON POST**
- ✓ **ANCHORS SECURE AND READY FOR DEPLOYMENT**
- ✓ **JACKLINES PROPERLY SECURED TO BOW PULPIT**
- ✓ **WHISKER POLE SECURE ON DECK**
- ✓ **MAIN MAST WINCH HANDLE IN POCKET**
- ✓ **MAINSAIL COVER REMOVED**
- ✓ **MAIN MAST GILGUYS REMOVED**
- ✓ **MAIN HALYARD TRAPPED AND READY**
- ✓ **LAZY JACKS STOWED**

### **PORT WINCH OVERVIEW**

#### **DEPARTURE:**

- **DELIVER PORT STERN LINE TO AFT DECK CREW**
- **DELIVER PORT BOW LINE TO FOREDECK CREW**
- **STOW BOARDING STEPS**
- **ON COMMAND, CLOSE GATE & STOW FENDERS**

#### **UNDERWAY:**

- **HANDLE PORT JIB SHEET**
- **HANDLE MAIN SHEET**
- **HANDLE JIB FURLING LINE**

#### **DOCKING:**

- **HANDLE PORT STERN LINE ON DOCK**
- **RETURN BOARDING STEPS TO GATE**

#### **EMERGENCY:**

- **SECURE NEARBY PASSENGERS**
- **STANDBY AT POSITION FOR INSTRUCTIONS**

### **PORT WINCH PRE-DEPARTURE CHECKLIST**

- ✓ **SPRING LINE ON DOCK**
- ✓ **BIRD DETERRENT(S) STOWED**
- ✓ **PORT JACKLINE RUN & CLIPPED TO STANCHION**
- ✓ **PORT BOAT HOOK SECURE ON LIFELINE**
- ✓ **EMERGENCY GEAR AVAILABLE IN LAZARETTE**
- ✓ **EMERGENCY KNIFE HUNG ON PEDESTAL**
- ✓ **SNATCH BLOCKS (2) STOWED ON GALLOWS**
- ✓ **PORT WINCH HANDLE IN POCKET**
- ✓ **JIB SHEET READY**
- ✓ **MAIN SHEET READY**
- ✓ **JIB FURLING LINE SECURE AND READY**

### **STARBOARD WINCH OVERVIEW**

#### **DEPARTURE:**

- **HANDLE WALKING FENDER**

#### **UNDERWAY:**

- **HANDLE STARBOARD JIB SHEET**
- **HANDLE MIZZEN SHEET**
- **HAUL WORKING JIB SHEET WHILE UNFURLING**
- **EASE LOADED JIB SHEET WHILE FURLING**

#### **DOCKING:**

- **HANDLE WALKING FENDER**

#### **EMERGENCY:**

- **SECURE NEARBY PASSENGERS**
- **STANDBY AT POSITION FOR INSTRUCTIONS**

### **STARBOARD WINCH PRE-DEPARTURE CHECKLIST**

- ✓ **DEPLOYS SIX POSITION CREW PLACARDS**
- ✓ **STBD JACKLINE RUN & CLIPPED TO STANCHION**
- ✓ **STARBOARD BOAT HOOK SECURE ON LIFELINE**
- ✓ **STROBE HUNG ON LIFELINE**
- ✓ **EPIRB IN COCKPIT**
- ✓ **EMERGENCY EQUIPMENT BAG IN COCKPIT**
- ✓ **HORN PUMPED UP AND AVAILABLE**
- ✓ **WALKING FENDER ON DECK**
- ✓ **PORTHOLES SECURED**
- ✓ **STARBOARD WINCH HANDLE IN POCKET**
- ✓ **JIB SHEET READY**
- ✓ **MIZZEN SHEET SECURE AND READY**

### **AFT DECK OVERVIEW**

#### **DEPARTURE:**

- **CAST OFF PORT STERN LINE ON COMMAND**
- **CALL DISTANCE FROM STERN TO OTHER SIDE**
- **COIL AND SECURE STERN LINE**

#### **UNDERWAY:**

- **RAISE/DROP MIZZEN SAIL**
- **MAINTAIN AFT WATCH**

#### **DOCKING:**

- **PASS STERN LINE TO PORT WINCH CREW**
- **STANDBY TO ASSIST AS NEEDED**

#### **EMERGENCY:**

- **IF MOB, THROW ORANGE RING IMMEDIATELY**
- **MAINTAIN EYES ON MOB UNTIL RELIEVED**
- **SECURE NEARBY PASSENGERS**
- **STANDBY AT POSITION FOR INSTRUCTIONS**

### **AFT DECK PRE-DEPARTURE CHECKLIST**

- ✓ **STARBOARD STERN LINE SECURE ON PULPIT**
- ✓ **ORANGE THROWABLES (2) HUNG ON LIFELINES**
- ✓ **STROBE HUNG ON PORT LIFELINE**
- ✓ **MOB POLES (2) READY TO DEPLOY**
- ✓ **AFT LAZARETTE UNLOCKED**
- ✓ **EMERGENCY TILLER AVAILABLE**
- ✓ **LPG TANK VALVES CLOSED**
- ✓ **THROW BAG CLIPPED TO AFT PULPIT**
- ✓ **JACKLINES PROPERLY TENSIONED AND CLEATED**
- ✓ **MIZZEN MAST WINCH HANDLE IN POCKET**
- ✓ **MIZZEN SAIL COVER REMOVED**
- ✓ **MIZZEN MAST GILGUYS REMOVED**
- ✓ **MIZZEN HALYARD TRAPPED BUT READY**

## PEGASUS PRE-DEPARTURE CHECKLIST (WITH TRAINING COMMENTS)

Here are the tasks that must be completed before departing on a *Pegasus* youth voyage. Following this section is a compact, printable one page version of this list that is convenient on deck for checking off tasks prior to a voyage.

### Engine:

- Open fuel lines (4 valves) – valve handles all inline with fuel lines
- Open water intake thru-hull valve – handle up, inline with hose
- Check oil level – add oil if more than ½ quart low
- Check belt tension – normal is about ½ inch deflection when firmly pressed
- Check fuel filter – should look clean and full with no water in bottom
- Check water strainer – should appear unobstructed
- Check transmission plug – on top of transmission on port side; make sure not loose or missing
- Check pan under engine – look for oil, fuel, or excessive water
- Close engine room doors – and turn out engine room light
- Start engine and note water discharge – make sure water is continuous, not just one spurt
- Test forward and reverse gears – warn crew since boat will surge against dock lines

### Boat systems:

- Check battery charge – voltage should be over 12 volts with shore power and engine off
- Check navigation and steaming lights – turn breaker off afterwards, unless lights are needed
- Check bilge pumps – briefly turn each bilge pump on manually to confirm that they are working; switch them back to automatic
- Turn on and check main VHF radio – use channel 9
- Turn on radar – leave on standby
- Remove instrument covers
- Turn on instruments
- Put power cord on dock – shore power breaker should be turned off first in case cord drops into water
- Turn off LPG – at tank, galley, and breaker
- Pressurize water, if needed – turn breaker on long enough for pump to pressurize tank

**Below decks, forward:**

- Stow companionway boards – stowed under desk in captain’s cabin, next to boarding ladder
- Close all port holes – dog down tightly since ports may be under water when heeled
- Unlock deck hatches (2) – make sure they are completely closed but unlocked in case they need to be accessed from above in an emergency
- Ensure anchor locker accessible – must be easy access to anchor chain and rope rode in case it’s needed in an emergency
- Ensure boarding ladder accessible – nothing should be in front or on top of the ladder in case it is needed in an emergency
- Check fire extinguishers (4) – make sure they are available, secured, and reading green
- Secure all doors and loose gear – anticipate boat heeled over 20-30 degrees

**Below decks, aft:**

- Stow companionway boards – under the galley stove, not stacked
- Close side port holes – leave one port open fore and another aft
- Unlock deck hatch – make sure it is completely closed but unlocked in case it needs to be accessed from above in an emergency
- Open head thru-hull valve – under ladder; handle up, inline with hose
- Check high-water alarm – under ladder; raise white float by hand and listen for alarm
- Note level of water in bilge
- Check head holding tank level – green light means OK; yellow means should be pumped; red means, ‘oh s---!’, tell captain and don’t volunteer for anything
- Close head intake valve – valve forward of head on bulkhead should be closed when not in use; handle straight down
- Pump head empty; check toilet paper – pump head dry and check that toilet paper is available and toilet paper disposal box is empty
- Check fire extinguishers (2) – make sure they are available, secured, and reading green
- Check LPG switch off – switch next to stove should be off, and valves on stove should be off
- Secure all doors and loose gear – anticipate boat heeled over 20-30 degrees

**Dock lines:**

- Remove spring line – stow line on dock, running back and forth such that it is not a tripping hazard
- Remove starboard bow line – coil and hang from lanyard on lifeline next to bow pulpit
- Remove starboard stern line – coil and hang from lanyard on stern pulpit
- Bring boat tight to dock – stow midship fender on deck so that boat can be brought as close to dock as possible to minimize distance that passengers must step to get on board

**Sails, rigging, and deck gear:**

- Remove mainsail cover – roll up from the clew to the tack and stow in captain's cabin
- Remove mizzen sail cover – roll up from the clew to the tack and stow in captain's cabin
- Remove steering pedestal cover – roll up and stow in captain's cabin
- Remove winch covers (4) – stow in captain's cabin
- Remove gilguys, main and mizzen – stow in lazarette (gilguys are short lines – e.g., sail ties – that hold the halyards off the mast to prevent them from slapping against the mast in the wind)
- Remove bird deterrents (e.g., owl) – stow in lazarette
- Put out winch handles (4) – one on each mast and one next to each primary winch; blue one goes on mizzen mast
- Tighten backstays 5 clockwise turns – make sure nobody else has already done it, and then report to Captain when done
- Check all running rigging is ready – halyards attached and trapped, sheets correctly run, stopped, and ready for use, lazy jacks secured, furling line cleated and bagged, boomvang and reefing lines ready
- Check anchors are secure – anchors lashed but ready for quick deployment if necessary
- Unlock and center wheel – centered is about one and one half turns from either stop

**Safety gear:**

- Run jacklines – clip jackline back to itself after leading around forward bowsprit stanchion, straighten and run through carabiner near the gate, and cleat on aft deck on top of dock lines; make tight but not so tight that it lifts off the deck to create a tripping hazard
- Hang boat hooks – one on each side
- Hang throwable flotation devices – orange rings, one on each side
- Hang strobes – one aft and one midship; confirm that they work by holding upright to activate
- Check MOB poles – ready to deploy if needed
- Strap EPIRB in cockpit – bracket starboard of companionway
- Stow emergency bag in cockpit – emergency equipment bag out, starboard of companionway
- Pump up warning horn – should be pumped hard; leave out in easy reach of helm
- Hang emergency knife on pedestal – port side, out of easy reach of kids
- Hang binoculars on pedestal
- Hang whistle on pedestal
- Put handheld VHF radio on pedestal – confirm that battery is charged
- Check emergency gear in lazarette – check that lazarette contains: fire extinguisher, flare kit, manual bilge pump handle, extra dock line, axe
- Check whisker pole – secured to deck on starboard foredeck
- Clip throw bag on Samson post – clip both the bag and the line to the top of the post
- Clip throw bag on aft pulpit – clip the bag low on the aft pulpit such that it can't slide; clip the line to the padeye for the mizzen sheet on the aft deck
- Unlock aft lazarette – stow the lock in a propane locker
- Check emergency tiller – make sure that it is inside the aft locker, ready for use
- Hang snatch blocks on gallows pulpit – one block on each side of gallows
- Stow walking fender on deck – next to life raft
- Hang crew placards – appropriate placard at each position
- Prepare passenger PFDs & harnesses – distribute appropriate number and sizes, arranged small to large, on dock in front of *Pegasus*



**Pegasus Pre-Departure Checklist - Date:** \_\_\_\_\_**Engine:**

- Open fuel lines (4 valves)
- Open water intake thru-hull valve
- Check oil level
- Check belt tension
- Check fuel filter
- Check water strainer
- Check transmission plug
- Check pan under engine
- Close engine room doors
- Start engine and note water discharge
- Test forward and reverse gears

**Boat systems:**

- Check battery charge
- Check navigation and steaming lights
- Check bilge pumps
- Turn on and check main VHF radio
- Turn on radar
- Remove instrument covers
- Turn on instruments
- Put power cord on dock
- Turn off LPG
- Pressurize water, if needed

**Below decks, forward:**

- Stow companionway boards
- Close all port holes
- Unlock deck hatches (2)
- Ensure anchor locker accessible
- Ensure boarding ladder accessible
- Check fire extinguishers (4)
- Secure all doors and loose gear

**Below decks, aft:**

- Stow companionway boards
- Close side port holes
- Unlock deck hatch
- Open head thru-hull valve
- Check high-water alarm
- Note level of water in bilge
- Check head holding tank level
- Close head intake valve
- Pump head empty; check toilet paper
- Check fire extinguishers (2)
- Check LPG switch off
- Secure all doors and loose gear

**Dock lines:**

- Remove spring line
- Remove starboard bow line
- Remove starboard stern line
- Bring boat tight to dock

**Sails, rigging, and deck gear:**

- Remove mainsail cover
- Remove mizzen sail cover
- Remove steering pedestal cover
- Remove winch covers (4)
- Remove gilguys, main and mizzen
- Remove bird deterrents (e.g., owl)
- Put out winch handles (4)
- Tighten backstays 5 clockwise turns
- Check all running rigging is ready
- Check anchors are secure
- Unlock and center wheel

**Safety gear:**

- Run jacklines
- Hang boat hooks
- Hang throwable flotation devices
- Hang strobes
- Check MOB poles
- Strap EPIRB in cockpit
- Stow emergency bag in cockpit
- Pump up warning horn
- Hang emergency knife on pedestal
- Hang binoculars on pedestal
- Hang whistle on pedestal
- Put handheld VHF radio on pedestal
- Check emergency gear in lazarette
- Check whisker pole
- Clip throw bag on Samson post
- Clip throw bag on aft pulpit
- Unlock aft lazarette
- Check emergency tiller
- Hang snatch blocks on galleys pulpit
- Stow walking fender on deck
- Hang crew placards
- Prepare passenger PFD's & harnesses

**Number of Crew:** \_\_\_\_ **Passengers:** \_\_\_\_

## **PEGASUS MAN OVERBOARD (MOB) PROCEDURES**

In general, when a person falls overboard from a vessel that is underway there are five steps involved in recovering them:

1. **React** – Make everyone aboard aware of the emergency.
2. **Return** – Maneuver the boat back to the MOB. Not necessary if the MOB is still tethered to the boat.
3. **Re-attach** – Bring the MOB back to the boat and re-attach them. Not necessary if the MOB is still tethered to the boat.
4. **Retrieve** – Get the MOB back on board.
5. **Revive** – Provide whatever medical attention may be required.

Not all steps will always be required. Crew will focus on completing each step, in order, without getting ahead of themselves.

### **During MOB procedures the crew should, in general:**

- a) Stay in their assigned positions unless assigned specific tasks by the Captain. There is a natural tendency to want to crowd around and help with, or at least observe, recovery efforts.
- b) Remain calm and alert at all times during the MOB situation. When the crew is calm and methodical the passengers will be more calm and reassured. If time permits, explain to the passengers what is happening. Ensure that the passengers stay quiet so that the crew can communicate with each other and the MOB.
- c) Make sure all passengers are safe and attended to at all times.
- d) Echo back all commands. This is especially important during emergency procedures.
- e) Talk to the MOB to assure them and calm them and let them know that they are seen and that we will recover them.
- f) Stay alert to what is happening away from the boat, including traffic, weather, and sea conditions.
- g) Control flogging lines and sails to minimize the chance of injury.
- h) Make sure that all actions taken are safe and are not going to add to the emergency or create another victim.

The Captain in command has ultimate authority and responsibility. The emergency procedures exist to establish “best practices” and identify options for a variety of conditions. However, ultimate responsibility for directing the operation of the vessel rests with the Captain at all times. The Captain will use his/her best judgment under actual conditions when making decisions.

## WHEN A PERSON HAS GONE OVERBOARD - UNTETHERED

### React:

- a) If a crewmember sees an untethered person fall overboard they will immediately and loudly yell “Man Overboard, NOT Tethered” so as to alert the Captain and other crewmembers.
- b) The initial spotter will continue to watch the MOB while pointing at their location. It is crucial to point to avoid losing track of exactly where the MOB is in chop, waves, and reflected sun light and to help others on the boat know where the MOB is. This will be the initial spotter’s only responsibility unless someone else is assigned and the initial spotter is relieved of this responsibility by the Captain.
- c) Helm will immediately blow the emergency whistle to alert the entire crew. All crew, other than the spotter, will return to their assigned positions as soon as possible.
- d) Aft deck crew will immediately throw an orange life ring as close to the MOB as possible to give them additional floatation and to aid in spotting them. In fog, low visibility, or at night aft deck will also deploy a strobe light.
- e) Helm will activate the GPS MOB button as soon as possible to record the MOB’s exact position at that time.
- f) Helm will start the engine in neutral gear in case it is needed to return to the MOB.
- g) Crew will make sure that all passengers are seated, secure, and safe.

### Return:

- a) The Captain will direct crew on what to do with passengers depending on the situation, their location on the boat, deployed sails, and conditions. There may be passengers on the bow sprit, in the cockpit, below, or traversing the deck. The priority is to get all passengers under control and in a safe place.
- b) Consulting with helm, the Captain will decide on an appropriate procedure for return. As usual, helm will direct the crew on sail handling during the return. The return options may include, but are not limited to, one of the following methods:
  - **Heave to** – Helm will slowly tack while letting the jib back-wind and directing the main and mizzen sails to be eased. Being hove to is an ideal time to move passengers to safe locations. If the boat stops or drifts down close enough to the MOB then a throw line or Lifesling can be thrown to the MOB if they are conscious and able to grab the line. If the boat is not close enough the sails will be

dropped and the boat will motor back to the MOB. When quickly dropping the mainsail it is not necessary to deploy the lazy jacks.

- **Figure Eight** – Helm will steer a beam reach for approximately 2 to 3 boat lengths, head up and tack (back-winding the jib), fall off to a deep broad reach, and finally head up to approach the MOB on a close reach while easing sails to slow down. Helm will bring the boat to a stop, all sails completely eased, with the MOB on the leeward side.
  - **Quick Stop** – Helm will tack the boat soon after the MOB goes in the water, letting the jib back-wind, and slowly fall off to circle the MOB at a distance of 2 to 3 boat lengths, eventually jibing and heading back up to approach the MOB on a close reach as in the Figure Eight.
  - **Deep Reach** – If the MOB emergency occurs while the vessel is sailing downwind then helm can simply head up and tack back to approach the MOB on a close reach as in the Figure Eight.
  - **Motoring** – Helm will head into the wind and drop all sails before motoring back to the MOB.
  - **Lifesling Recovery, Motoring** – Helm will head into the wind and drop all sails. Then, while motoring forward the Lifesling will be deployed from the stern while helm steers an elliptical course around the MOB until the Lifesling line comes within their reach, at which point helm will stop the boat. MOB will put the Lifesling over their head and under their arms, which permits them to be pulled alongside the boat. MOB will need to face away from the boat while being hauled to the boat to prevent being pulled face down into the water.
  - **Lifesling Recovery, Under Sail (Buttonhook)** – Helm will sail a close reach while the Lifesling is deployed from the stern. Helm will then tack and fall off on a deep broad reach, being careful to avoid sailing over the Lifesling line. As the boat approaches the MOB on the windward side, helm will head up on a close reach so that the Lifesling line will pass within reach of the MOB, at which point all sails will be completely eased to stop the boat.
- c) If the boat does not stop at the MOB, the Captain may have the aft deck crew deploy a MOB pole as close to the MOB as possible and will direct helm to make another attempt.

### **Re-Attach:**

- a) Once the boat has returned to the MOB, the Captain will direct efforts to re-attach, retrieve, and revive the MOB while helm keeps the boat under control, maintains lookout, and directs the crew in handling the boat and passengers.
- b) As soon as the MOB is near the beam of the boat, helm will make sure that the engine is turned off – not just idling.
- c) The Captain will assess the condition of the MOB.
- d) The Captain will direct the crew in re-attaching the MOB to the boat by one of several methods before they drift out of reach:
  - Throw or lower a line (heaving bag) and have the MOB attach it to their harness or PFD while crew attaches the other end to a cleat on the boat.
  - Throw the Lifesling to the MOB and have them put it over their head and under their arms and then secure the line to the boat. Make sure they lock their hands under the Lifesling to prevent it from coming off as they are lifted.
  - Tie a large bowline into one end of a dock line and have the MOB put this under their arms and secure the other end to the boat.
  - If the MOB is unconscious or unable to help, then deploy the boarding ladder and attach a safety tether to a crewmember who will go down the ladder to attach a line to the MOB in the water.

**Retrieve:**

- a) The Captain may direct the crew to deploy the boarding ladder to the appropriate side of the boat. The MOB may be able to climb the ladder, perhaps with assistance.
- b) The Captain may direct the crew to employ the 3-to-1 block and tackle (also known as a ‘handy billy’) to hoist the MOB onto the deck. That procedure is as follows:
  1. Locate the block and tackle in the emergency bag and attach the upper block, marked with red, to the appropriate MOB halyard that is stowed attached to a mizzen shroud (green and white line on the port side or red and white line on the starboard side). Raise the top block about 10 feet off the deck (about the level of the “Y” on the main backstay) and cleat the halyard.
  2. Attach the lower block to the MOB, clipping the snap hook into the lifting loop that attaches to the Lifesling.
  3. Attach a snatch block to the padeye on deck near the aft companionway hatch and lead the block and tackle line through it, making sure that the snatch block is securely locked. Lead the line

to either the mizzen (starboard side) or mainsheet (port side) winch. Make sure all lines are lead correctly.

4. While two crewmembers steady the MOB, winch them up and over the lifelines and lower them to the cabin top or deck. Take care to keep the MOB from bouncing off the hull or getting anything caught in the lifelines or rigging. Detach the hoisting line and then remove the Lifesling.
- c) The Captain may direct the crew to employ the whisker pole as a lifting boom attached to the mizzen mast.
- d) The Captain may direct the crew to employ a sheet or dock line as an “elevator” line that the MOB can stand on as it is raised.

**Revive:**

- a) The Captain or a crewmember with medical training will assess the condition of the MOB. They will consider why and how the MOB went overboard. If the MOB was hit by a boom or struck the hull while going overboard then they will especially check for neck or head injuries, as well as broken bones, cuts, etc.
- b) If the MOB is in need of immediate medical help then the Captain will call the U.S.C.G. for medical assistance.
- c) If the MOB is conscious then they will be taken below, gotten out of their wet clothing, dried off, and placed into the MOB sleeping bag on the starboard bunk.
- d) If the MOB is showing signs of hypothermia, see PEGASUS HYPOTHERMIA PROCEDURE.
- e) If the MOB is unconscious:
  1. Extreme care must be taken. The MOB may have a severe head or neck injury that could become worse if they are moved incorrectly. An unconscious MOB should not be retrieved from the water unless they are not breathing.
  2. The U.S.C.G. will be contacted on channel 16 with a Mayday. They can then advise the Captain and send a boat that is equipped with a board or cage to retrieve the MOB safely.
  3. Make sure that the MOB is securely attached to the boat and that anyone who goes into the water to help them is also safely attached to the boat.
  4. If an unconscious MOB is retrieved and brought aboard then they must not be taken below, since it would be very difficult to do it safely. Instead, they should be laid on the long cockpit seat behind the wheel for treatment.

## **WHEN A PERSON HAS GONE OVERBOARD - TETHERED**

### **React:**

- a) If a crewmember sees a tethered person fall overboard they will immediately and loudly yell “Man Overboard, Still Tethered” so as to alert the Captain and other crewmembers
- b) Helm will immediately blow the emergency whistle to alert the entire crew. All crew will return to their assigned positions as soon as possible.
- c) Helm will immediately stop the forward motion of the boat by heading into irons, or heaving to.
- d) If the MOB is forward then helm will start the engine in case it is needed.
- e) Crew will make sure that all passengers are seated, secure, and safe.

### **Retrieve:**

- a) If it is safe to do so then helm will direct the crew to furl the jib.
- b) The Captain will assess the MOB’s condition:
  1. Are they floating in the water next to the boat?
  2. Are they pounding against the hull?
  3. Is their tether safely lead and not wrapped around them?
  4. Are they conscious?
- c) Once the MOB has been assessed, and provided that it is safe to do so, the Captain will direct a crewmember to take the throw line from forward or aft, depending on the location of the MOB, and secure the snap hook to the sewn loop on the tether that holds the tether’s clip on the upper end. The other end of the throw line will be cleated on the aft deck or the Sampson post.
- d) A crewmember, possibly with help, will be directed to unclip the tether from the jack line. They will use the throw line to control the MOB in the water and to keep them attached to the boat.
- e) The Captain will direct the crew to deploy the boarding ladder to the appropriate side of the boat.
- f) Using the throw line, a crewmember will guide the MOB in the water to the boarding ladder and assist them up the ladder to the deck.
- g) If the MOB is unable to board the ladder, crew will employ the Lifesling and block and tackle (as described above).
- h) If at any time in the retrieval the Captain feels that it is no longer safe for the MOB to be tethered to the boat, then the Captain will direct that the MOB’s tether be cut and procedures will proceed as for an untethered MOB.

### **Revive the MOB as described above.**

## MAN OVERBOARD VICTIM TIPS

If you fall overboard, remember these tips:

- Know ahead of time how to use all of the equipment in and on your PFD such as light, strobe, whistle, mirror, flares, laser, shark repellent, inflation tube, etc. Shout and attract attention as you fall overboard.
- Don't swim after the boat. Instead, swim to any floatation that is thrown over, provided that it is not too far away.
- Try to make yourself visible. Put hood up on foul weather gear, splash water around you, and/or wave one or both arms.
- Keep clothing on, trapping air inside if possible. Remove heavy non-buoyant items such as boots that fill with water. Tighten your PFD and crotch strap, if they are loose.
- Don't shout needlessly. A whistle is more likely to be heard aboard the rescue vessel.
- If you have to wait to be rescued assume the Heat Escape Lessening Posture (HELP) as much as possible. Keep a hat on, your head out of the water, arms against your sides and across your chest and PFD, and your lower legs crossed, knees together and raised as the seas permit.
- At night, activate your personal strobe, if you have one, and leave it on until the rescue boat makes its approach to pick you up. At that point turn the strobe off and an incandescent light on, if you have one, so that the flashes do not disorient the helmsman.
- Wait for the boat to circle you and look for the Lifesling and its yellow retrieval/trailing line.
- Let the Lifesling retrieval/trailing line slide through your hands until you reach the knots and bowline loop.
- Put the Lifesling over your head and under your armpits.
- Clasp your hands together under the floatation ring to ensure that it does not come off over your head.
- If the boat starts to pull you through the water before it stops, TURN AROUND so that you will be towed backwards, keeping the wake out of your face. ***This can be the most dangerous part of the whole procedure and must be avoided.***
- Help the remaining crew get you aboard if you can but don't take the Lifesling off until you are on deck.
- If the boat misses you, or can't immediately find you, try to get to a MOB pole, strobe, or other floating object if you see one.



## **PEGASUS HYPOTHERMIA PROCEDURE**

**Definition:** Hypothermia is when a body's core temperature drops because it is losing more heat than it can produce.

**Causes:** Inadequate clothing, wet clothing, falling overboard.

**Prevention:** The best way to handle hypothermia is to prevent it:

- Crew should anticipate weather conditions outside of the breakwater and dress passengers appropriately. If passengers are not too warm on the dock they will probably be too cold on the bay.
- Harnesses and PFD's are to be worn outside of foul weather gear.
- 30% of heat loss is through a person's head, so hoods and wool caps are encouraged.
- Passengers and crew are encouraged to wear foul weather gear to stay dry, especially on windy days. Heat loss increases by 15% when clothing is wet.
- Adequate nutrition and hydration are important to preventing hypothermia.

### **Mild Hypothermia:**

#### **Symptoms:**

- |                               |                       |
|-------------------------------|-----------------------|
| 1. Shivering                  | 3. Vague, slow speech |
| 2. Skin that is cold to touch | 4. Drowsiness         |

#### **Treatment:**

- |                            |                        |
|----------------------------|------------------------|
| 1. Add additional clothing | 3. Remove wet clothing |
| 2. Get below, out of wind  | 4. Dry off             |

Warm drinks are NOT a substitute for decreasing heat loss.

### **Severe Hypothermia (Usually induced by falling overboard):**

#### **Symptoms:**

1. Uncontrolled shivering
2. Lack of shivering!
3. Poor judgment
4. Staggering, may appear drunk
5. Unconsciousness

**Treatment:**

1. Treat the victim gently. A person suffering severe hypothermia can easily be injured.
2. If conscious, take victim below, out of wind.
3. Remove all wet clothing; if patient is female have female crewmember or passenger assist.
4. Place in sleeping bag on starboard bunk with head covered.
5. Call U.S.C.G. for advice and assistance.
6. If unconscious, place in sleeping bag behind helm.
7. Apply CPR, if required, by trained crew member.
8. Proceed to nearest marina or Coast Guard rendezvous and have ambulance standing by.

**Remember the goal is to prevent further heat loss. Trying to re-warm a severely hypothermic patient may cause them to go into cold shock.**

## PEGASUS 'TAKING ON WATER' PROCEDURE

### **If the boat is taking on water:**

1. Whoever discovers that water has entered the boat will immediately inform the Captain.
2. Helm will blow the emergency whistle to alert the entire crew. All crew will return to their assigned positions as soon as possible.
3. Crew will make sure that all passengers are seated, secure, and safe.
4. The Captain will assess the situation.
5. The Captain may contact the U.S.C.G. on channel 16 with a Pan-Pan or Mayday message, depending on the severity of the situation, boat's position, etc.
6. The Captain may direct a crewmember to start the electric bilge pump and to verify/monitor its operation.
7. The Captain may direct one or more crewmembers to man the manual bilge pump, handheld pump, and/or buckets to remove water from below.
8. The Captain may assign one or more crewmembers to identify the source of the water. They will inspect at least the following:
  - a. Thru hull fittings, clamps, and attached hoses
  - b. Speed transducer
  - c. Depth transducer
  - d. Prop shaft stuffing box
  - e. Rudder post stuffing box
  - f. Engine exhaust hoses
  - g. Engine cooling system
  - h. Head
  - i. In heavy seas or sharp heeling; port holes, dorade vents, and deck hatches
  - j. Fresh water tanks
  - k. Hull below the waterline
9. If crew is unable to determine where water is coming from, the Captain may direct helm to tack or sail a different point of sail, to see if that eliminates or mitigates water intake.
10. Captain may direct one or more crewmembers to stem the flow of water by:
  - a. If leaking thru hull;
    - i. close valve
    - ii. insert tapered wooden bung/plug
    - iii. stuff with rag, etc.
    - iv. tighten or replace clamps
  - b. If engine exhaust or cooling leak; stop engine and close thru hull

- c. If damaged hull;
  - i. stuff hole from inside with pillow, cushion, etc. and brace with boat hook, whisker pole, etc.
  - ii. cover hole from outside with sail, tarp, or sail cover; screw or nail plywood or hatch cover over hole
- 11. If the crew is unable to stem the flow of water, then the Captain may call the U.S.C.G. on channel 16 with a Mayday message. If the boat is in danger of sinking, the Captain may order that she be run aground to prevent total loss of boat. In the Berkeley Flats the upper cabin trunk, masts, and booms should be above water after keel hits bottom.
- 12. The crew and passengers will stay with the boat unless it is obviously going down and the Captain has issued the command to abandon ship. See Abandon Ship Procedures.

**PEGASUS HIGH BILGE WATER ALARM:** The white bilge water alarm float switch is located on the cross timber under and forward of the aft companionway ladder. It is tested and observed by removing the sole (floor) at this location. When the float is lifted, a loud alarm sounds. This may be the first indicator of a problem.

## PEGASUS FIRE PROCEDURE

### **If fire is detected:**

1. Whoever discovers a fire on the boat will immediately inform the Captain.
2. Helm will blow the emergency whistle to alert the entire crew. All crew will return to their assigned positions as soon as possible.
3. Crew will make sure that all passengers are seated and secure in a safe location. This may require moving the passengers.
4. The Captain will assess the situation to determine the location, source, and extent of the fire.
5. The Captain may contact the U.S.C.G. on channel 16 with a Pan-Pan or Mayday message, depending on the severity of the situation, boat's position, etc.
6. The Captain will assign crew to deal with the emergency.
7. If the fire is out of control the Captain may give the order to abandon ship. See the Abandon Ship Procedures.

### **If the fire is an LPG (propane) fire:**

1. Turn off LPG switch in the galley and/or the LPG breaker switch.
2. Turn off valve on LPG tank (aft storage locker).
3. Turn off stove valves, if possible.
4. Extinguish flames with extinguisher; red ABC or white halon.
5. Never use water on a grease or galley fire.
6. Monitor fire area for re-ignition.

### **If the fire is an engine fire:**

1. Stop the engine. Helm will use the red engine shutoff button in the cockpit.
2. Confirm that the bilge blower is off at the breaker panel.
3. Check for automatic engine halon discharge visually at aft engine room door space at top. If necessary, discharge red ABC extinguisher into engine room from access port behind forward companionway.
4. Do not open engine room doors for at least 15 minutes and not until doors are no longer hot to the touch.
5. Monitor area for re-ignition.

**Fighting fires on board a vessel:**

Detection and a proper, rapid response are key elements to successful firefighting.

Fire needs fuel, heat or ignition source, oxygen (air), and the ability to maintain a continuous chemical reaction. Remove fuel, heat, or oxygen and the fire goes out.

The basic steps in successful fire fighting are:

1. Locate fire and give alarm
2. Confine and contain – get fire under control
3. Extinguish fire

After sounding the alarm, the crew must quickly determine the following:

1. Where is the fire?
2. What is burning?
3. What is the extent of the fire?
4. What combustibles are in the immediate vicinity of the fire area?
5. What vents and other channels are present that would facilitate the spread of fire?
6. What method of extinguishment is indicated?
7. What is the best technique to prevent the spread of the fire and to extinguish fire?

**Fire prevention on *Pegasus*:**

- Two LPG sniffers
- Bilge blower
- Engine room doors closed while engine running
- Cabins, galley and bilge kept clean

**Types of Fire Extinguishers on *Pegasus*:**

- Letters indicate classes of fires for which an extinguisher may be used (A, B, or C, see below). Numbers indicate the relative size of fire of each class that the extinguisher can be used for.
- The halon extinguisher in the white canister is ideal for class C (electrical equipment) fires because halon is nonconductive and it does not leave a residue that can damage electrical equipment. However, it can be toxic and exposure should be limited. Halon gas is heavier than air. It can also be used on class B (fuel) fires. There is one halon extinguisher in the forward cabin next to the mast step, and the automatically-triggered extinguisher in the engine compartment is halon.
- The dry chemical ABC extinguishers in the red canisters can be used on class A, B, and C fires. These extinguishers are distributed throughout *Pegasus* in the aft and forward cabins as well as the lazarette.
- Fire extinguishers must be properly stowed, regularly checked, and annually serviced.

**Use of fire extinguisher:**

- Make sure to never get trapped by the fire. Always have an escape route planned. Never pass a fire to get to an extinguisher, since you may become trapped.
- Remember **PASS** –
  1. **P**ull (pin),
  2. **A**im (at base of fire from about 6 feet away),
  3. **S**queeze (trigger),
  4. **S**weep (back and forth)
- If you enter an area or compartment and you fail to completely extinguish the fire, get out immediately and close the door or hatch behind you to confine the fire.

## Types of fires and possible responses:

### Class A - Ordinary Combustibles (wood, paper, cloth, plastic)



- Best extinguished with water. Can use pots of fresh water or buckets (in anchor well) of sea water.
- ABC (red) extinguishers can be used if needed.

### Class B - Flammable and Combustible Liquids and Gases



- This could include gasoline, diesel fuel, paint, oil, or galley grease.
- Use halon (white) or ABC (red) extinguishers. Do not use water as it may spread the liquid and fire.

### Class C - Electrical Equipment



- Depower 12 volt system by turning battery switches (located on aft bulkhead in Captain's cabin) to off position and turn AC off at panel and/or at shore breaker.
- Use halon (white) extinguisher if possible on electrical equipment, but an ABC (red) extinguisher may also be used. Do not use water as it may cause electrical shorts or shocks.



## PEGASUS ABANDON SHIP PROCEDURE

The Captain will determine if it is necessary to abandon ship and will give the order to do so if necessary and will assign crew to specific tasks.

### **Deployment of life raft:**

- Issue Mayday call on VHF channel 16.
- Activate the EPIRB if necessary.
- Remove cover and release straps from the life raft container.
- Crew will lift the life raft container over the lifelines (lifelines may be cut to facilitate deployment) making sure that the painter is still connected to *Pegasus*.
- Deploy the life raft on the leeward side EXCEPT in case of fire when it shall be deployed on the windward side - upwind of the fire and smoke.
- Jerk on the painter to inflate the life raft.
- Secure the life raft next to the boat and load passengers, making sure that they have on PFD's and that their tether has been removed from the jackline.
- Life raft capacity is 8 people - place children (as many as safe) and 2 adults inside to supervise.
- Attach all others to the life raft using tethers.
- Make sure several VHF handheld radios, GPS, and EPIRB are in life raft.
- Do a head count, making sure everyone is accounted for.
- Stay attached to the boat until it is actually sinking. Then cut the painter and deploy the sea anchor/drogue.
- Keep everyone as warm and calm as possible.
- Ignite flares if necessary and monitor radio.

### **Handling passengers:**

- Crew will keep passengers calm and orderly.
- Crew will be firm and clear while giving directions.
- While in the water, crew will make sure passengers get in a warmth-keeping posture and do not panic.

## PEGASUS SAFETY BRIEFING

The safety briefing is usually given by the Captain when the passengers have their PFD's on and are ready to board. Passengers line up on the dock, half on each side of the boarding steps.

**Welcome to Pegasus.** My name is \_\_\_\_\_. I am your Captain today. I will give you our safety briefing now.

We have **5 rules** aboard Pegasus.

1. The **first rule is don't be a squishy banana**. That means don't get between the boat and something else, ever. *Pegasus* weights 44,000 pounds and will always win and you could end up squashed like a banana; see the fenders between the hull and the dock [point to a fender].
2. The **second rule is you must always wear your lifejacket**. Only the Captain can tell you to take it off and the Captain never does. You will have your tether attached to the jackline; ignore it and it will simply follow you; you do not need to hold it [crewmember demonstrates].
3. The **third rule is one hand for yourself, one hand for the boat**. Always hold onto something solid, even while sitting. Good things to hold onto are; shrouds, pulpits, coaming, and handrails [point to examples]. The lifelines are OK; they are the fence that says do not go any further or you will fall into the water, so use them to guide you, not to swing from. Bad things to hold onto are winches [point at one] and lines (called 'ropes' on land) because they can move suddenly and pull your fingers into winches or blocks. When you walk about the deck, always hold onto something and bend your knees slightly to lower your center of gravity and to allow your knees to absorb deck motions [crewmember demonstrates].
4. The **fourth rule is do not stand up** unless you have a crewmember's permission, as the booms and sails can move suddenly from one side of the boat to the other side [point to a boom].
5. The **fifth rule is "Belay it" means be quiet**. When the Captain says "Belay it", that means to stop what you are doing, be quiet, and pay attention so that the crewmembers can talk to each other and passengers during critical maneuvers.

**If you fall over the side**, you should still be attached to the boat by your tether. We will lead you by your tether to mid-ships and bring you back on board. If you are not tethered and are overboard then we may have to turn around to get back to you, perhaps going as far away as [point to about 5 boat lengths away,

e.g. trees on west side of marina]. Your job is to stay calm and wait for us to come back. When we get back to you we will throw you a Lifesling [crewmember displays the Lifesling that is stored in the cockpit lazarette]. Grab the Lifesling when we toss it to you, put it over your head, snug it under your arms, and clasp your hands together under it [crewmember demonstrates]. Remember, we will come back. But if someone else comes along first and offers to take you out of the water, we won't be offended if you accept their offer!

I will now **introduce the crew**. [Call each position. Crewmember should say their name and, in a sentence, what they do for a living when they aren't sailing.]

### **Welcome aboard.**

First half of passengers go to starboard, second half go to port.  
All passengers are clipped to jackline.

Prepare to depart.

