HERO®

Man Overboard Rescue Procedures

Work Boat Edition

DECATUR MARINE

AUDIT & SURVEY

Type Approval Certificate

Pursuant to good engineering practice, Decatur Marine has assessed the design of the below identified equipment and reviewed the equipment for conformance with Section 2.1

Operational Readiness of IMO Resolution A520(13) ***Code of Practice for the Evaluation, Testing and Acceptance of Prototype Novel Life-Saving Appliances and Arrangements***.

Decatur Marine makes no representations regarding type approval of the product in general or of conformance with any other guidance promulgated by the International Maritime Organization (IMO), provisions of SOLAS or the LSA Code promulgated after the date of this certificate.

Due to a wide variety of specifications, the manufacturer has full responsibility for continued compliance and conformance with any and all standards.

C-Hero
Model: VR-12 Rescue Pole and Rescue Davit

Presented to:

C-Hero
336 Bon Air Center, Suite 115
Greenbrae, CA 94904

Cert No: DM-TA-2018-001 **Date: 27 November 2018**

HERO®

MOB RESCUE SYSTEM

DECATUR MARINE
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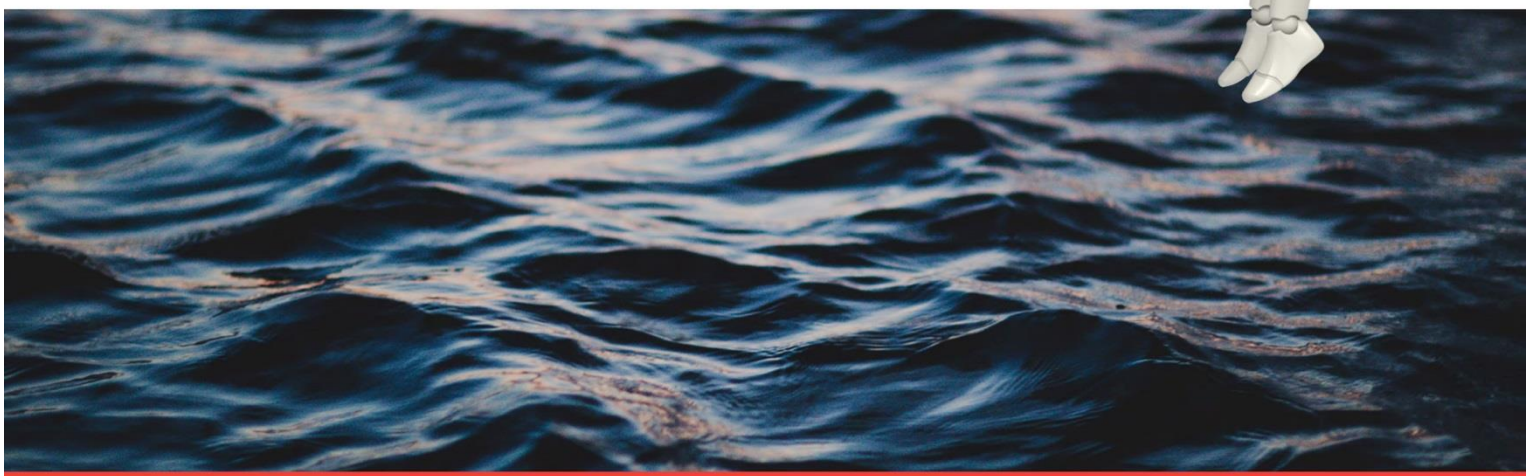
Type Approved



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HERO®

MOB RESCUE SYSTEM

Risk Mitigation: Type Approved Man Overboard Rescue System

The Vertical Rescue Pole allows just 1 person to rescue an unconscious or conscious person. The lift line from the lifting source is pre-connected to the lifting strap on the Rescue Pole. This is the safest way to perform a rescue, while not exposing the crew to more risk.

The strap will lift the person out vertically, and we will be releasing the Horizontal Rescue Pole this spring. The same pole set-up is used and it lifts the person out horizontally.

This minimizes the risk of a cardiac arrest, if they were in the water too long. The pole can be upgraded to this at any time.

The Rescue Davit is portable, with a long enough boom to reach out over the tires and fenders. The winch allows 1 person to accomplish the lift without risking back strain.The rotation gears keep the boom from moving, and when the rescuer is ready, they use the hand crank to move the body close aboard.

The mounting is easy with the straps that go over the bitts of the tug.

Options:

- A versa mount for the davit on ferries or any other flat surface
- A bulkhead mount and cover, so the davit can be stowed close to where the rescue will take place
- A Rescue Pole with Recovery Strap for manual lifting on boats with a lower freeboard (Shown in picture to the right)

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Safety Management Procedure
Workboat Man Overboard Recovery

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1. Overview

Industry-wide efforts to lower workboat man overboard fatalities have successfully focused on man overboard prevention with the result of approximately a 50% reduction in MOB deaths. The summary of these efforts is detailed in the March, 2012 Best Practices Final Report by the Towing Safety Advisory Committee. C-HERO believes that the Harken TR31 Fall Overboard Prevention system is a great addition to fall prevention.

This document will focus on Man Overboard recovery. This has been most successful with the use of ladders attached to the boat and swung down into position or with ladders that hook over the railing and attach securely. These have been effective with persons in the water who can climb the ladder with or without assistance.

However the rescue of an incapacitated or unconscious person has proven to be very difficult or nearly impossible. There has long been a need for an effective and rapidly deployed recovery system for an unconscious person, even if only one person is available to perform the rescue.

This need for an effective recovery system and the publication of Subchapter M, which mandates the demonstrated capability to rescue an unconscious person, are what prompted the invention and production of the C-Hero® MOB Rescue System.

The system has been **Type Approved** by U.S. Coast Guard TPO Decatur Marine Audit & Survey. C-HERO also has their own U.S. Coast Guard certified ring buoy to go with the system. Our partnership with Harken, Inc. provides world class engineering and manufacturing of the C-Hero Rescue Davit and Rescue Pole at ISO 9001 standards. Harken also has the International marketing rights for C-Hero products.

2. The Author and Inventor

Captain Shane Smith learned all aspects of the tugboat business including diving, salvage, bunkering and ocean towing at Smith Maritime in Hawaii, which his late father Jimmy Smith founded in the 1970's.

He wanted to explore other companies outside of the family owned business, so he moved to California. There, he worked for over 30 years as a Tug Captain performing coastwise towing, pushing barges on the rivers, and ship docking on the San Francisco Bay. He has operated push boats, conventional, and tractor tugs.

Shane has spent a good part of his career training Captains and helping companies go through internal and external audits, with a full understanding of the SMS systems. What concerned him most was that the SMS systems used by tug companies were focused on monthly or quarterly MOB drills, while never having a way to retrieve the person from the water. He was worried that if he ever had a crew member go overboard, he would not only lose a friend and have to face his family, but that he would also be liable.

Shane started C-HERO® LLC in a garage with the notion of helping crews with MOB recovery. From these humble beginnings, the company has come a long way, providing a full Man Overboard Rescue System.

3. Introduction and Purpose

This procedure has been created to provide detailed man overboard rescue and recovery instructions for all workboat types and scenarios. It takes into account the crew size and a discussion of the current situation and challenges, as well as how an effective man overboard rescue system, that can be of assistance in saving lives, meeting Subchapter M requirements and mitigating risk for companies and boat masters.

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4. Life Jackets and Survival in the Water

4.1. Life Jackets:

Think of **your** life jacket as a good shipmate, that looks after you. Companies require a life jacket to be worn when on the deck or around the water but should be viewed as **your survival** tool. When the question comes up, "What's the best lifejacket?" The one you **WEAR** is always the right answer. Thinking carefully about your life jacket usage before getting onboard can be a lifesaver. This can also be part of a safety meeting or an MOB drill, which includes talking about and inspecting each other's life-jackets.
The only real chance for survival, is to be wearing your lifejacket, but here are some important considerations:

4.1.1. Don't make the mistake of wearing it just because the company says you must.
4.1.2. You are going to spend many hours with your life jacket on, so pack it right and be comfortable.
4.1.3. Companies usually supply a standard lifejacket with a strobe light. Some companies have rules about not using the auto inflate collars, even though they can be easier to wear and less bulky, so keep your company's policies in mind if you want to buy a particular jacket
4.1.4. Lifejackets that have pockets are easier to store signaling devices.
4.1.5. Secure each item such as a signal device, flashlight, mirror, pocket flares, or a whistle etc. with web straps or light line sewn onto the life jacket.
4.1.6. The strobe light should be a water activated type, because it will signal even if you are knocked unconscious.
4.1.7. Rescue beacons are very helpful, and if you have a MOB alarm all the better.
4.1.8. An MOB alarm like an **ALERT** is water activated and will go off immediately upon hitting the water. This will signal the wheelhouse that someone is in the water.
4.1.9. Pack your lifejacket with the things that can help you. This is something that should be taken seriously, and it's worth getting "right."
4.1.10. Make sure to check all batteries (MOB alarm, and strobe light), and do an annual life jacket inspection.
4.1.11. Practicing with your lifejacket in a pool may sound funny, but it's worth getting acquainted with it and making sure it all works for you. The time and effort you put into this will be worth it, because your life could depend on it.

4.2. MOB Survival Tips

4.2.1. The first minute in the water your body will go through the cold-water effect and start to shiver and adjust to the shock. Don't panic, just keep your head above water and control your breathing.
4.2.2. Signaling is the best (if at night use a flashlight, or a pencil flare, by day use a mirror).
4.2.3. Kicking off your boots will help you to swim, and also help in the recovery process.
4.2.4. Hypothermia can take from 10 minutes to 1 hour for it to take full effect, depending on the water temperature; and consciousness is lost.
4.2.5. Curl your body up in to a ball and try to stay warm.

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5. Procedures for MOB Rescue

A placard similar to the following should be created and posted in the galley.

Here is an example of what a placard would look like when you have C-Hero's MOB rescue gear:

Man Overboard Recovery

Boat Name

Designated Rescue Bitt:

- Forward / Starboard

Rescue Equipment:

- Forward Starboard Bulkhead

Procedure:

- Connect tether line and put Rescue Davit on bitt with top strap, close clamp
- Connect Bottom Strap, put hook in open clamp, pull strap tight, close clamp
- Release Davit, lower with tension line, extend Davit out-board
- Connect lift line hook to Rescue Pole, secure line in "V" cleat
- Deploy Rescue Pole over person, and into the arm pits
- Hold pole against back of person, grab line and push pole to person
- Drop the pole, pull all slack out at the winch, close rope brake
- Clean up the wraps on the winch, put line over tailing arm and into jaws
- Winch up person to stopper ball at the end of davit.
- Use worm gear swing handle to move them to the boat, winch davit tip up if needed

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6. General Man Overboard Responsibilities and Procedures for all Workboats - Exceptions will be boat type and crew size specific

6.1. Master or Captain Responsibilities

Total responsibility for all aspects of a man overboard situation, including:

6.1.1. Rescue Equipment availability and maintenance

6.1.2. Crew familiarization and competence in the rescue equipment's usage

6.1.3. Frequent Drills to maintain competence

6.1.4. Assignment of crew responsibilities for man overboard situations

6.1.5. Availability and maintenance of equipment and supplies needed for the recovered person once onboard, such as blankets, first aid supplies, etc.

6.1.6. When a man overboard situation occurs, the Captain will sound the alarm, press the MOB icon on the chart plotter and turn the boat around.

6.2. Primary Rescue Person Responsibilities

6.2.1. While all crew members need to be trained and drilled on all aspects of a man overboard rescue, a primary and secondary person should be designated to be in charge of on-deck activities during a recovery

6.2.2. In all cases, the crew members will:

6.2.3. Locate the Person in Water (PIW) and keep Captain advised as they get closer to the PIW.

6.2.4. Maintain view of the PIW while getting all rescue devices ready for the rescue

7. Drills/ Exercises - Monthly:

7.1. Drills should be done with an Oscar dummy to prevent a crew man from getting in the water and possibly getting injured. The drills should be done at least every other month in an underway scenario, that way the crew is familiar with rougher water and getting the boat to the body.

7.2. The drills should include a pre-safety meeting, and review of the manual or videos. Crews are encouraged to video their MOB drills so they can see how they are doing, these are good learning tools.

7.3. Drills can be coordinated with other crews from other boats, if planned ahead, when there is some down time.

7.4. The deck crew, or management will be the ones throwing the Oscar dummy overboard.

7.5. Every crew man should take a turn with each part of the rescue, for familiarity. They should talk about it after and log it accordingly.

7.6. When the drill is completed the equipment should be fresh water rinsed and stowed, any deficiencies should be noted, and a call to C-HERO if there are questions or problems.

7.7. Drills could also include throwing something in the water from time to time and doing the recovery of it.

7.8. The Rescue Pole should be drilled with separately at the dock or off the boat, to get the feel for it.

7.9. Each crew member should be proficient with all aspects of the rescue.

7.10. The drills should be done as if it is an emergency, per Subchapter M, and follow the company's safety procedure.

7.11. This will include ringing of the general alarm, or notifying the crew by the PA, crew muster on deck with PPE on and communicate with the VHF on designated channel.

7.12. While the Captain is bringing the boat around back to the PIW, the crew should be setting up the Rescue Davit and Pole.
7.13. Someone on deck, or in the wheelhouse should never lose sight of the PIW, and keep the Captain posted.
7.14. When the boat gets close, the deck crew will call the distances off to the PIW, for the Captain
7.15. The rescue bitts to be used fore or aft, and where the gear is stowed, should be posted in the galley.
7.16. There should be a process for training a new crew man.

7.17. Company Responsibility: Subchapter M - 140.425

7.17.1. The owner or managing operator, must establish procedures to address fall overboard prevention and recovery of persons in the water.

7.17.2. The company needs to have a written MOB plan for the rescue.

7.17.3. A meeting of understanding between the crew and company, so everyone is following the same plan.

7.17.4. Management should from time to time, do random checks on the crews MOB drill, to see that it's working, and that they are proficient, with it.

7.17.5. They should have a placard for the galley, about the rescue bitts and gear.

7.18. Wheelhouse Responsibility: Subchapter M - 140.420 Emergency Drills and Instruction-

7.18.1. Masters responsibility: Each drill must be conducted as if it was an actual Emergency.

7.18.2. The Master/Captain is in charge of letting the crew know, by blowing the horn 3 prolong blasts, general alarm, or the PA.

7.18.3. The MOB icon will get pushed to mark the spot, and a log entry of the time of the MOB.

7.18.4. Depending on the traffic situation, the Captain may have to let other boats know there is an MOB incident, and his intentions.

7.18.5. He may have to call his dispatch to let them know.

7.18.6. On a two-man crewed boat, the Captain will have to leave the wheelhouse to go on deck and set up the Rescue Davit and Pole, once it's safe.

7.18.7. Then get the boat close, clutch out and deploy the pole over the PIW, and lift them on to the boat.

7.18.8. On all other crewed boats the Captain will stay in the wheelhouse and safely get the boat close to the PIW.

7.18.9. The Captain and crew will determine if the person needs immediate medical attention, or not.

7.18.10. The Captain will log the time the person came back aboard, and the person's condition.

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7.18.11. He will then make a call to the company with the information, and decide whether to leave them onboard, or get them ashore.

7.18.12. The MOB drill log will get filled out and have a post event safety meeting with the crew to discuss how it went.

7.18.13. The Captain is also in charge of making sure new crew members are properly trained on the MOB rescue, and equipment use.

7.19. **Deck Crew Responsibility**:

7.19.1. The deck crew will be in charge of getting the Oscar dummy in the water.

7.19.2. They will immediately let the wheelhouse know or, once they are notified, and get someone up if necessary.

7.19.3. If not already on, they will don their PPE and VHF radio tuned to the designated channel.

7.19.4. They will go on deck and put the davit on the rescue bitt to be used, checking with the Captain as to what side for the rescue.

7.19.5. Get the pole ready and snap the rescue hook on the Rescue Davit lift line to the Lifting Strap triangle on the Rescue Pole, while keeping an eye on the PIW the whole time.

7.19.6. Distance off the PIW is important, so the Captain doesn't run over the PIW.

7.19.7. Use the Rescue Pole to bring the person close and deploy the lifting strap on the PIW. Take out the slack and winch them up and swing them into the boat with the Rescue Davit.

7.19.8. **Note**: This is much easier than devices which roll the body up over the tires and fenders and avoids any additional injury to the person in the water and the deckhands that are manually doing the lift.

7.19.9. Once the person is back aboard, the body should be laid flat and covered. Company protocol of how to treat the body needs to be followed and depending on the weather it's best to get them in the house if possible.

7.19.10. When all is settled down, rinse the equipment, check it before stowing, then stow and leave everything ready.

7.19.11. Later note any deficiencies and let the Captain know.

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8. Specific Recovery Procedures for each category of Workboats

8.1. Light tug, Harbor assist – 2-man Crew

Present Practice:

A tug doing ship docking, is usually a tractor tug with two-man crews on them. The Captain will have to perform all functions if the other crew member is in the water.

Rescue: The Captain will then do the following:

8.1.1. The Captain will press the MOB icon on the chart plotter and turn the boat around.

8.1.2. He will Go through all the company-wide safety protocols.

8.1.3. Rig a ladder and use a boat pole as the boat gets close to the PIW.

8.1.4. Go on deck and go outside the bulwarks, to try and get the PIW.

8.1.5. The lifting will have people straining and, if the person is over 250 lbs. there will be no way to do it.

8.1.6. The long-standing practice has been to rig a ladder over the side and send one person into the water, this goes for any size of crew.

8.1.7. Then try and push the person to the ladder and if all crew members are up and on deck, they can leverage the PIW on to deck.

8.1.8. The present way of getting some one back aboard is all assuming the PIW is conscious and can help, maybe they can climb a ladder.

8.1.9. The boat should be ready for any rescue, conscious or not.

8.1.10. The Sub M rule holds companies and Captains accountable for having a system and training the crews, no matter the size of the crew.

8.1.11. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.1.12. The crews are still doing MOB drills without a way of getting the body out of the water. The two-man crew is a cost savings to the company, and they still need to have a system to recover a MOB.

8.1. Light tug, Harbor assist – 2-man Crew (Continued)

C-HERO® System:
The C-HERO® system was designed for tugs with the worst-case scenarios, the two-man crew and the PIW is unconscious. In the case of a two-man crew, and the person on deck goes in the water, the Captain is responsible for the rescue.

Rescue: The Captain will do the following:

8.1.13. He will press the MOB icon on the chart plotter and turn the boat around.

8.1.14. He will Go through all the company-wide safety protocols.

8.1.15. When it's safe and he has an eye on the PIW, take the boat out of gear or clutch out, then go on deck and attach the pre-fit Rescue Davit on the bitt to be used for the rescue.

8.1.16. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.1.17. Go back up to the wheelhouse then slowly creep on the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out again and go on deck.

8.1.18. The Rescue Pole goes over the PIW, and maneuvered under the arms

8.1.19. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.1.27. Pull all the slack out at the radial winch, then use the winch handle to crank them up. The person will come out of the water vertically.

8.1.35. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.1.37. The boom tip can be lifted for more height once PIW is alongside the boat by a few more turns on the winch handle.

8.1.38. The person is then treated as per company protocol.

8.1.39. The whole rescue should take no more than 3 minutes, and with no strains or going outside the bulwarks, and just one person doing it.

8.2. **Light tug, Harbor assist – 3+ man Crew**

Present Practice:

Boat may have a 3-man crew, unless “double crewed” with 4. The double crewed option allows a company to run the boat 24 hours without affecting the 12-hour watch rule. A crew of 3 or 4 allows for the Captain to stay in the wheelhouse and maneuver the boat while 1 person on deck will give a visual sighting, report updates of the MOB via VHF, and perform the rescue.

Alarm: The Captain will do the following:

8.2.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.2.2. Let the crew know which side is better for the rescue

8.2.3. Stay in the wheelhouse while the remaining crew members affect the rescue.

8.2.4. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.2.5. Rig a ladder and use a boat pole as the boat gets close to the PIW.

8.2.6. Go on deck and go outside the bulwarks, to try and get the PIW.

8.2.7. The same will happen when there are more crew as well.

8.2.8. The long-standing practice has been to rig a ladder over the side and send one person into the water, this goes for any size of crew.

8.2.9. Then try and push the person to the ladder and if all crew members are up and on deck, they can leverage the PIW on deck.

8.2.10. The present way of getting some one back aboard is all assuming the PIW is conscious and can help, maybe they can climb a ladder.

8.2.11. The boat should be ready for any rescue, conscious or not.

8.2.12. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.2.13. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.2.14. The crews are still doing MOB drills without a way of getting the body out of the water.

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C-HERO® System:

The C-HERO® system was designed for tugs with the worst-case scenarios, the two-man crew and the PIW is unconscious. In the case of a 3+-man crew, the Captain will stay in the wheelhouse and the remaining crew member(s) will affect the rescue.

Alarm: The Captain will do the following:

8.2.15. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.2.16. Let the crew know which side is better for the rescue

8.2.17. Stay in the wheelhouse while the remaining crew members affects the rescue.

8.2.18. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.2.19. Locate the PIW and keep the Captain continuously up to date

8.2.20. Attach the pre-fit Rescue Davit on the bitt to be used for the rescue.

8.2.21. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.2.22. The Rescue Pole goes over the PIW and is maneuvered under the armpits.

8.2.23. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.2.24. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically.

8.2.25. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.2.26. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.

8.2.27. The person is then treated as per company protocol.

8.2.28. The whole rescue should take no more than 3 minutes, and with no strains or going outside the bulwarks, and just one person doing it.

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8.3. Light Tug While doing Ship Assist:

Present Practice:

Boat may have a 3-man crew, unless “double crewed” with 4. The double crewed option allows a company to run the boat 24 hours without affecting the 12-hour watch rule. A crew of 3 or 4 allows for the Captain to stay in the wheelhouse and maneuver the boat while 1 person on deck will give a visual sighting, report updates of the MOB via VHF, and perform the rescue.

Alarm: The Captain will do the following:

8.3.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.3.2. Let the crew know which side is better for the rescue

8.3.3. Stay in the wheelhouse while the remaining crew members affect the rescue.

8.3.4. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.3.5. Rig a ladder and use a boat pole as the boat gets close to the PIW.

8.3.6. Go on deck and go outside the bulwarks, to try and get the PIW.

8.3.7. The same will happen when there are more crew as well.

8.3.8. The long-standing practice has been to rig a ladder over the side and send one person into the water, this goes for any size of crew.

8.3.9. Then try and push the person to the ladder and if all crew members are up and on deck, they can leverage the PIW on deck.

8.3.10. The present way of getting some one back aboard is all assuming the PIW is conscious and can help, maybe they can climb a ladder.

8.3.11. The boat should be ready for any rescue, conscious or not.

8.3.12. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.3.13. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.3.14. The crews are still doing MOB drills without a way of getting the body out of the water.

C-HERO® System:

The C-HERO® system was designed for tugs with the worst-case scenarios, the two-man crew and the PIW is unconscious. In the case of a 3+-man crew, the Captain will stay in the wheelhouse and the remaining crew member(s) will affect the rescue.

Alarm: The Captain will do the following:

8.3.15. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.3.16. Let the crew know which side is better for the rescue

8.3.17. Stay in the wheelhouse while the remaining crew members affect the rescue.

8.3.18. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.3.19. Locate the PIW and keep the Captain continuously up to date

8.3.20. Attach the pre-fit Rescue Davit on the bitt to be used for the rescue.

8.3.21. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.3.22. The Rescue Pole goes over the PIW and is maneuvered under the armpits.

8.3.23. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.3.24. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically.

8.3.25. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.3.26. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.

8.3.27. The person is then treated as per company protocol.

8.3.28. The whole rescue should take no more than 3 minutes, and with no strains or going outside the bulwarks, and just one person doing it.

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8.4. Towing Alongside an Oil Barge:

Present Practice:

The tug pushing an oil barge will have at least a 3-man crew for manning purposes.

Alarm: The Captain will do the following:

8.4.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.4.2. The type of boat (conventional or tractor) will determine whether the Captain turns around or backs down to the PIW.

8.4.3. Let the crew know which side is better for the rescue

8.4.4. Stay in the wheelhouse while the remaining crew members affect the rescue.

8.4.5. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.4.6. Locate the PIW and keep the Captain continuously up to date.

8.4.7. If close enough, immediately throw out a life ring on a line to keep the PIW from drifting away from the dredge (if he is responsive).

8.4.8. Pull in the life ring line and maneuver the PIW close to the boat.

8.4.9. Rig a ladder and use a boat pole as the boat gets close to the PIW.

8.4.10. Go on deck and go outside the bulwarks, to try and get the PIW.

8.4.11. The same will happen when there are more crew as well.

8.4.12. The long-standing practice has been to rig a ladder over the side and send one person into the water, this goes for any size of crew.

8.4.13. Then try and push the person to the ladder and all crew members, Captain included, will have to be on deck to leverage the ladder and hopefully the other crew man in the water doesn't get hurt and they can leverage the PIW on deck.

8.4.14. The crew will be in harm's way and can easily be injured.

8.4.15. The Coast Guard or other boats in the area will be called to assist.

8.4.16. The present way of getting some one back aboard is all assuming the PIW is conscious and can help, maybe they can climb a ladder.

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8.4.17. The boat should be ready for any rescue, conscious or not.

8.4.18. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.4.19. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.4.20. The crews are still doing MOB drills without a way of getting the body out of the water.

8.4. **Towing Alongside an Oil Barge:** (continued)

C-HERO® System:

The C-HERO® system was designed for tugs with the worst-case scenarios, the two-man crew and the PIW is unconscious. In the case of a 3+-man crew, the Captain will stay in the wheelhouse and the remaining crew member(s) will affect the rescue.

Alarm: The Captain will do the following:

8.4.21. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.4.22. The type of boat (conventional or tractor) will determine whether the Captain turns around or backs down to the PIW.

8.4.23. Let the crew know which side is better for the rescue

8.4.24. Stay in the wheelhouse while the remaining crew members affects the rescue.

8.4.25. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.4.26. Locate the PIW and keep the Captain continuously up to date.

8.4.27. If close enough, immediately throw out a life ring on a line to keep the PIW from drifting away from the boat (if he is responsive).

8.4.28. Pull in the life ring line and maneuver the PIW close to the boat.

8.4.29. Attach the pre-fit Rescue Davit on the bitt to be used for the rescue.

8.4.30. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.4.31. The Rescue Pole goes over the PIW and is maneuvered under the armpits.

8.4.32. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.4.33. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically.

8.4.34. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.4.35. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.

8.4.36. The person is then treated as per company protocol.

8.4.37. The whole rescue should take no more than 3 minutes, and with no strains or going outside the bulwarks, and just one person doing it.

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8.5. Towing Astern in the Ocean:

Present Practice:

The tug Towing Astern in the Ocean will have at least a 3 to 4-man crew for manning purposes. This can be a more dangerous situation depended on the swell and sea state. The tow wire is longer than with an inland tow and will need to be shortened.

Alarm: The Captain will do the following:

8.5.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.5.2. Let the crew know which side is better for the rescue

8.5.3. Stay in the wheelhouse while the remaining crew members affects the rescue.

8.5.4. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

8.5.5. For a non-responsive PIW, the Captain will need more control. He may have to shorten the tow wire for more control.

8.5.6. In safe weather situations it might be an option to make up to the barge, at the Captain's discretion.

8.5.7. It will be the Captain's call if they can go slow to stem the weather with the boat, and get the PIW on to a ladder, and back aboard.

8.5.8. If it's rough, a skiff will be launched if they have it or the Coast Guard will be called.

8.5.9. Launching a skiff takes at least 6 minutes.

Rescue: The crew will do the following:

8.5.10. Locate the PIW and keep the Captain continuously up to date.

8.5.11. If close enough, immediately throw out a life ring on a line to keep the PIW from drifting away from the boat (if he is responsive).

8.5.12. Pull in the life ring line and maneuver the PIW close to the boat.

8.5.13. Rig a ladder on the desired side of approach to the PIW and use a boat pole as the boat gets close to the PIW.

8.5.14. The whole crew will be involved, and the tow wire will have to be shortened up to where the Captain feels good about it depending on the weather at the time.

8.5.15. On approach the crew will assess the situation of the PIW. The non-responsive PIW will present more problems, and the Captain will assert more control

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8.5.16. If they try the ladder method, they will be on deck and send one person into the water to try and get the PIW. This will involve all crew members (Captain included), then they try to push and pull the PIW onto the ladder. This risks injuries and additional persons in the water.

8.5.17. If they have a skiff and decide to use it, the whole crew will be involved as they still have to launch the skiff, and still need to get the POW into the boat and up to the tug.

8.5.18. The Coast Guard or other boats in the area will be called to assist.

8.5.19. The present way of getting some one back aboard is all assuming the PIW is conscious and can help, maybe they can climb a ladder.

8.5.20. The boat should be ready for any rescue, conscious or not.

8.5.21. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.5.22. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.5.23. The crews are still doing MOB drills without a way of getting the body out of the water.

C-HERO® System:

In this case there will be a 3 or 4-man crew, the Captain will stay in the wheelhouse and the remaining crew member(s) will affect the rescue.

Alarm: The Captain will do the following:

8.5.24. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.5.25. Let the crew know which side is better for the rescue

8.5.26. Stay in the wheelhouse while the remaining crew members affect the rescue.

8.5.27. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.5.28. Locate the PIW and keep the Captain continuously up to date.

8.5.29. If close enough, immediately throw out a life ring on a line to keep the PIW from drifting away from the boat (if he is responsive).

8.5.30. Pull in the life ring line and maneuver the PIW close to the boat.

8.5.31. Attach the pre-fit Rescue Davit on the bitt to be used for the rescue.

8.5.32. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.5.33. The Rescue Pole goes over the PIW and is maneuvered under the armpits.

8.5.34. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.5.35. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically.

8.5.36. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.5.37. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.

8.5.38. The person is then treated as per company protocol.

8.5.39. The whole rescue should take no more than 3 to 5 minutes, even in rough seas.

8.5.40. There is no risk of additional crew injuries or other persons going in the water.

8.5.41. While several crew members will probably be involved, just one person could complete the entire rescue.

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8.6. Towing Astern Inland:

Present Practice:

The tug towing astern inland will have at least a 3 to 4-man crew for manning purposes. The tow wire is shorter than with an ocean tow and will not need to be shortened.

Alarm: The Captain will do the following:

8.6.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.6.2. Let the crew know which side is better for the rescue

8.6.3. Stay in the wheelhouse while the remaining crew members affect the rescue.

8.6.4. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

8.6.5. For a non-responsive PIW, the Captain will need more control. He may have to jack knife the tug to the barge and make up to it.

8.6.6. In some weather and current situations making up to the barge is not an option, it's just not safe.

8.6.7. It will be the Captain's call if they can go slow to stem the weather with the boat, and get the PIW on to a ladder, and back aboard.

8.6.8. If it's rough, a skiff will be launched if they have it or the Coast Guard will be called.

8.6.9. Launching a skiff takes at least 6 minutes.

Rescue: The crew will do the following:

8.6.10. Locate the PIW and keep the Captain continuously up to date.

8.6.11. If close enough, immediately throw out a life ring on a line to keep the PIW from drifting away from the boat (if he is responsive).

8.6.12. Pull in the life ring line and maneuver the PIW close to the boat.

8.6.13. Rig a ladder on the desired side of approach to the PIW and use a boat pole as the boat gets close to the PIW.

8.6.14. On approach the crew will assess the situation of the PIW. The non-responsive PIW will present more problems, and the Captain will assert more control

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8.6.15. If they try the ladder method, they will be on deck and send one person into the water to try and get the PIW. This will involve all crew members (Captain included), then they try to push and pull the PIW onto the ladder. This risks injuries and additional persons in the water.

8.6.16. If they have a skiff and decide to use it, the whole crew will be involved as they still have to launch the skiff, and still need to get the PIW into the boat and up to the tug.

8.6.17. The Coast Guard or other boats in the area will be called to assist.

8.6.18. The present way of getting some one back aboard is all assuming the PIW is conscious and can help, maybe they can climb a ladder.

8.6.19. The boat should be ready for any rescue, conscious or not.

8.6.20. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.6.21. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.6.22. The crews are still doing MOB drills without a way of getting the body out of the water.

C-HERO® System:

In this case there will be a 3 or 4-man crew, the Captain will stay in the wheelhouse. The remaining crew member(s) will affect the rescue.

Alarm: The Captain will do the following:

8.6.23. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.
8.6.24. Let the crew know which side is better for the rescue
8.6.25. Stay in the wheelhouse while the remaining crew members affect the rescue.
8.6.26. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.6.27. Locate the PIW and keep the Captain continuously up to date.
8.6.28. If close enough, immediately throw out a life ring on a line to keep the PIW from drifting away from the dredge (if he is responsive).
8.6.29. Pull in the life ring line and maneuver the PIW close to the boat.
8.6.30. Attach the pre-fit Rescue Davit on the bitt to be used for the rescue.
8.6.31. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.
8.6.32. The Rescue Pole goes over the PIW and is maneuvered under the armpits.
8.6.33. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.
8.6.34. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically.
8.6.35. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.
8.6.36. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.
8.6.37. The person is then treated as per company protocol.
8.6.38. The whole rescue should take no more than 3 to 5 minutes, even in rough seas.
8.6.39. There is no risk of additional crew injuries or other persons going in the water.
8.6.40. While several crew members will probably be involved, just one person could complete the entire rescue.

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8.7. Pushing Ahead with Tug, Loaded Barge:

Present Practice:

The tug is made up astern of the barge and pushing the barge. The visibility and maneuverability are much better than if the tug was on the hip pushing ahead. The tug will be able to handle pretty well.

Alarm:

8.7.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.
8.7.2. Let the crew know which side is better for the rescue
8.7.3. Stay in the wheelhouse while the remaining crew members affect the rescue.
8.7.4. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.7.5. Immediately throw out a life ring on a line to keep the PIW from drifting away from the boat (if he is responsive).
8.7.6. Pull in the life ring line and maneuver the PIW close to the boat.
8.7.7. Rig a ladder on the desired side of approach to the PIW and use a boat pole as the boat gets close to the PIW.
8.7.8. On approach the crew will assess the situation of the PIW. The non-responsive PIW will present more problems, and the Captain will assert more control
8.7.9. If they try the ladder method, they will be on deck and send one person outside the bulwarks or into the water to try and get the PIW. This will involve all crew members (Captain included), then they try to push and pull the PIW onto the ladder. This risks injuries and additional persons in the water.
8.7.10. The present way of getting some one back aboard is assuming the PIW is conscious and can help, maybe they can climb a ladder without assistance.
8.7.11. In the rare case that a boat may have a roll-up rescue device they will rig it for use. This may also require that a crew member go outside the bulwarks or into the water to try and get the PIW.
8.7.12. The Coast Guard or other boats in the area will be called to assist, as the likelihood of rescuing the PIW is slim.
8.7.13. The boat should be ready for any rescue, conscious or not.
8.7.14. The Sub M rule holds companies and Captains accountable for having a system and training the crews.
8.7.15. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.
8.7.16. The crews are still doing MOB drills without a way of getting the body out of the water.

8.7. **Pushing Ahead with Tug, Loaded Barge:** (continued)

C-HERO® System: The tug is made up astern of the barge and pushing the barge. The visibility and maneuverability are much better than if the tug was on the hip pushing ahead. The tug will be able to handle pretty well.

Alarm: The Captain will do the following:

8.7.17. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.
8.7.18. Let the crew know which side is better for the rescue
8.7.19. Stay in the wheelhouse while the remaining crew members affect the rescue.
8.7.20. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.7.21. Locate the PIW and keep the Captain continuously up to date
8.7.22. Immediately throw out a life ring on a line to keep the PIW from drifting away from the boat (if he is responsive).
8.7.23. Pull in the life ring line and maneuver the PIW close to the boat.
8.7.24. Attach the pre-fit Rescue Davit on the bitt to be used for the rescue.
8.7.25. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.
8.7.26. The Rescue Pole goes over the PIW and is maneuvered under the armpits.
8.7.27. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.
8.7.28. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically, whether they are responsive or not.
8.7.29. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.
8.7.30. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.
8.7.31. The person is then treated as per company protocol.
8.7.32. The whole rescue should take no more than 3 to 5 minutes, even in rough water
8.7.33. There is no risk of additional crew injuries or other persons going in the water.
8.7.34. While several crew members will probably be involved, just one person could complete the entire rescue.

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8.8. Pushing Ahead with Empty / Light Barge:

Present Practice:
The tug is made up astern of the barge and pushing the barge. The visibility and maneuverability are much better than if the tug was on the hip pushing ahead. The tug will be able to handle pretty well.

Alarm: The Captain will do the following:

8.8.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.
8.8.2. Go through all the company-wide safety protocols.
8.8.3. Let the crew know which side is better for the rescue
8.8.4. Stay in the wheelhouse while the remaining crew members affect the rescue.
8.8.5. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.8.6. Rig a ladder on the desired side of approach to the PIW and use a boat pole as the boat gets close to the PIW.
8.8.7. On approach the crew will assess the situation of the PIW. The non-responsive PIW will present more problems, and the Captain will assert more control.
8.8.8. If they try the ladder method, they will be on deck and send one person outside the bulwarks or into the water to try and get the PIW. This will involve all crew members (Captain included), then they try to push and pull the PIW onto the ladder. This risks injuries and additional persons in the water.
8.8.9. The present way of getting some one back aboard is assuming the PIW is conscious and can help, maybe they can climb a ladder without assistance.
8.8.10. In the rare case that a boat may have a roll-up rescue device they will rig it for use. This may also require that a crew member go outside the bulwarks or into the water to try and get the PIW.
8.8.11. The Coast Guard or other boats in the area will be called to assist, as the likelihood of rescuing the PIW is slim.
8.8.12. The boat should be ready for any rescue, conscious or not.
8.8.13. The Sub M rule holds companies and Captains accountable for having a system and training the crews.
8.8.14. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.
8.8.15. Crews are still doing MOB drills without a way of getting the body out of the water.

8.8. **Pushing Ahead with Empty / Light Barge:** (continued)

C-HERO® System:

The tug is made up astern of the barge and pushing the barge. The visibility and maneuverability are much better than if the tug was on the hip pushing ahead. The tug will be able to handle pretty well.

Alarm: The Captain will do the following:

8.8.16. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.8.17. Go through all the company-wide safety protocols.

8.8.18. Let the crew know which side is better for the rescue

8.8.19. Stay in the wheelhouse while the remaining crew members affect the rescue.

8.8.20. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.8.21. Locate the PIW and keep the Captain continuously up to date.

8.8.22. Attach the pre-fit Rescue Davit on the bitt to be used for the rescue.

8.8.23. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.8.24. The Rescue Pole goes over the PIW and is maneuvered under the armpits.

8.8.25. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.8.26. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically, whether they are responsive or not.

8.8.27. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.8.28. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.

8.8.29. The person is then treated as per company protocol.

8.8.30. The whole rescue should take no more than 3 to 5 minutes, even in rough water.

8.8.31. There is no risk of additional crew injuries or other persons going in the water.

8.8.32. While several crew members will probably be involved, just one person could complete the entire rescue.

8.9. Towboat Light Boat:

Present Practice:

The towboat has good maneuverability with flanking rudders and no barge. The crew will usually be three, unless it is a quick voyage, or they are delivering the boat.

Alarm: The Captain will do the following:

8.9.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around

8.9.2. Go through all the company-wide safety protocols.

8.9.3. Let the crew know which side is better for the rescue

8.9.4. Stay in the wheelhouse while the remaining crew members affect the rescue.

8.9.5. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew member (or the Captain in a two-man crew) will do the following:

8.9.6. Rig a ladder on the desired side of approach to the PIW and use a boat pole as the boat gets close to the PIW.

8.9.7. On approach the crew will assess the situation of the PIW. The non-responsive PIW will present more problems, and the Captain will assert more control.

8.9.8. If they try the ladder method, they will be on deck and send one person outside the bulwarks or into the water to try and get the PIW. This will involve all crew members (Captain included), then they try to push and pull the PIW onto the ladder. This risks injuries and additional persons in the water.

8.9.9. The present way of getting some one back aboard is assuming the PIW is conscious and can help, maybe they can climb a ladder without assistance.

8.9.10. In the rare case that a boat may have a roll-up rescue device they will rig it for use. This may also require that a crew member go outside the bulwarks or into the water to try and get the PIW.

8.9.11. The Coast Guard or other boats in the area will be called to assist, as the likelihood of rescuing the PIW is slim.

8.9.12. The boat should be ready for any rescue, conscious or not.

8.9.13. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.9.14. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.9.15. The crews are still doing MOB drills without a way of getting the body out of the water.

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8.9. **Towboat Light Boat:** (continued)

C-HERO® System:

The towboat has good maneuverability with flanking rudders and no barge. The crew will usually be three, unless it is a quick voyage, or they are delivering the boat.

Alarm: The Captain will do the following:

8.9.16. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system (unless he is now alone), and then turn the boat around safely after determining the traffic in the area.

8.9.17. Go through all the company-wide safety protocols.

8.9.18. Let the crew know which side is better for the rescue

8.9.19. Stay in the wheelhouse, in command of the boat if possible.

8.9.20. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew (or the Captain in the case of a crew of two) will do the following:

8.9.21. Locate the PIW and keep the Captain continuously up to date.

8.9.22. Use the Rescue Pole with Recovery Straps to position the PIW and maneuver the hoop of the pole over the head and under the armpits.

8.9.23. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW. Even if the Rescue Pole was not tethered, it may be dropped and will float as it is foam filled.

8.9.24. The rescue straps are left together as one strap since only one person will be lifting.

8.9.25. Lift the PIW up and onto the deck using the handles on the lifting strap

8.9.26. The lifting should be done mostly with the legs, while keeping the back straight to avoid injury.

8.9.27. The person is then treated as per company protocol.

8.9.28. The whole rescue should take no more than 3 to 5 minutes.

8.9.29. There is no risk of additional crew injuries or other persons going in the water.

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8.10. Towboat Pushing Ahead Light Barge

Present Practice:

The towboat is made up astern of the barge and pushing the barge. The visibility and maneuverability are fine. The towboat will be able to handle pretty well.

Alarm: The Captain will do the following:

8.10.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system (unless he is now alone), and then turn the boat around safely after determining the traffic in the area.

8.10.2. Go through all the company-wide safety protocols.

8.10.3. Let the crew know which side is better for the rescue

8.10.4. Stay in the wheelhouse, in command of the boat if possible.

8.10.5. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.10.6. Rig a ladder on the desired side of approach to the PIW and use a boat pole as the boat gets close to the PIW.

8.10.7. On approach the crew will assess the situation of the PIW. The non-responsive PIW will present more problems, and the Captain will assert more control.

8.10.8. The crew will be on deck with ladder method and send one person outside the bulwarks or into the water to try and get the PIW.

8.10.9. This will involve all crew members (Captain included), then they try to push and pull the PIW onto the ladder. This risks injuries and additional persons in the water.

8.10.10. The present way of getting some one back aboard is assuming the PIW is conscious and can help, maybe they can climb a ladder without assistance.

8.10.11. The Coast Guard or other boats in the area will be called to assist, as the likelihood of rescuing the PIW is slim.

8.10.12. The boat should be ready for any rescue, conscious or not.

8.10.13. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.10.14. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.10.15. The crews are still doing MOB drills without a way of getting the body out of the water.

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C-HERO® System:

The towboat is made up astern of the barge and pushing the barge. The visibility and maneuverability are fine. The towboat will be able to handle pretty well.

Alarm: The Captain will do the following:

8.10.16. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system (unless he is now alone), and then turn the boat around safely after determining the traffic in the area.

8.10.17. Go through all the company-wide safety protocols.

8.10.18. Let the crew know which side is better for the rescue

8.10.19. Stay in the wheelhouse, in command of the boat if possible.

8.10.20. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew (or the Captain in the case of a crew of two) will do the following:

8.10.21. Locate the PIW and keep the Captain continuously up to date.

8.10.22. Use the Rescue Pole with Recovery Straps to position the PIW and maneuver the hoop of the pole over the head and under the armpits.

8.10.23. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW. Even if the Rescue Pole was not tethered, it may be dropped and will float as it is foam filled.

8.10.24. The rescue straps are left together as one strap since only one person will be lifting.

8.10.25. Lift the PIW up and onto the deck using the handles on the lifting strap

8.10.26. The lifting should be done mostly with the legs, while keeping the back straight to avoid injury.

8.10.27. The person is then treated as per company protocol.

8.10.28. The whole rescue should take no more than 3 to 5 minutes.

8.10.29. There is no risk of additional crew injuries or other persons going in the water.

8.10.30. In some cases the boat will have a Rescue Davit and Rescue Pole (with lifting straps). In this case the rescue procedure is the same as **Section 8.8.**

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8.11. Towboat pushing ahead loaded barges on rivers going up into the current:

Present Practice:

The tug is made up astern of the last barge and pushing the barges. The visibility is good, but handling is difficult. There are plenty of crew members available. This is one of the hardest rescues because the PIW will move quickly with the current, and the towboat pushing barges has limited maneuvering ability.

Alarm: The Captain will do the following:

8.11.1. Press the MOB icon on the chart plotter, but with the current that location will change quickly.

8.11.2. Go through all the company-wide safety protocols.

8.11.3. Sound the alarm or alert the crew on the PA system, and do some or all of the following:

8.11.4. Consider the possibilities of turning the barge and towboat around to chase the PIW

8.11.5. Call the Coast Guard for assistance

8.11.6. Call other boats for assistance

8.11.7. He will then stay in the wheelhouse while the remaining crew member(s) affect the rescue if possible.

Rescue: The crew will do the following:

8.11.8. Due to the boat handling challenges and river current, the best situation is to have each deckhand tethered to something on the boat so that he is pulled along with the boat if he falls off.

8.11.9. If they have a skiff and decide to use it, the whole crew will be involved as they still have to launch the skiff, and still need to get the POW into the boat and up to the tug.

8.11.10. If there is no skiff, and the Captain determines that it is not possible to turn the towboat and barges around, and the Coast Guard and other boats are not close by this will be a failed rescue.

8.11.11. If the Captain can turn the towboat and barges around and catch the PIW, the crew try the ladder method, they will be on deck and send one person outside the bulwarks or into the water to try and get the PIW.

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8.11.12. This will involve all crew members, then they will try to push and pull the PIW onto the ladder. This risks injuries and additional persons in the water.

8.11.13. The present way of getting some one back aboard is assuming the PIW is conscious and can help, maybe they can climb a ladder without assistance.

8.11.14. The boat should be ready for any rescue, conscious or not.

8.11.15. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.11.16. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.11.17. The crews are still doing MOB drills without a way of getting the body out of the water.

8.11. **Towboat pushing ahead loaded barges on rivers going up into the current:** (continued)

C-HERO® System:

The tug is made up astern of the last barge and pushing the barges. The visibility is good, but handling is difficult. There are plenty of crew members available. This is one of the hardest rescues because the PIW will move quickly with the current, and the towboat pushing barges has limited maneuvering ability.

Alarm: The Captain will do the following:

8.11.19. Press the MOB icon on the chart plotter, but with the current that location will change quickly.

8.11.20. Go through all the company-wide safety protocols.

8.11.21. Sound the alarm or alert the crew on the PA system, and try some or all of the following:

8.11.22. Consider the possibilities of turning the barge and towboat around to chase the PIW

8.11.23. Call the Coast Guard for assistance

8.11.24. Call other boats for assistance

8.11.25. He will then stay in the wheelhouse while the remaining crew member(s) affect the rescue if possible.

Rescue: The crew will do the following:

8.11.26. Due to the boat handling challenges and river current, the best situation is to have each deckhand tethered to something on the boat so that he is pulled along with the boat if he falls off.

8.11.27. If they have a skiff and decide to use it, the whole crew will be involved as they still have to launch the skiff, and still need to get the PIW into the boat and up to the towboat.

8.11.28. If there is no skiff, and the Captain determines that it is not possible to turn the towboat and barges around, and the Coast Guard and other boats are not close by this will be a failed rescue.

8.11.29. If the Captain can turn the towboat and barges around and catch the PIW, the crew try the ladder method, they will be on deck and send one person outside the bulwarks or into the water to try and get the PIW.

8.11.30. Locate the PIW and keep the Captain continuously up to date.

8.11.31. Use the Rescue Pole with Recovery Straps to position the PIW and maneuver the hoop of the pole over the head and under the armpits.

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8.11.32. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW. Even if the Rescue Pole was not tethered, it may be dropped and will float as it is foam filled.

8.11.33. The rescue straps are left together as one strap since only one person will be lifting.

8.11.34. Lift the PIW up and onto the deck using the handles on the lifting strap

8.11.35. The lifting should be done mostly with the legs, while keeping the back straight to avoid injury.

8.11.36. The person is then treated as per company protocol.

8.11.37. The whole rescue should take no more than 3 to 5 minutes.

8.11.38. There is no risk of additional crew injuries or other persons going in the water.

8.12. Towboat pushing ahead light barges on rivers going with the current:

Present Practice:

The towboat is made up astern of the last barge and pushing the barges. The visibility is good, but handling is difficult. There are plenty of crew members available. This is one of the hardest rescues because the PIW will move quickly with the current, and the towboat pushing barges has limited maneuvering ability.

Alarm: The Captain will do the following:

8.12.1. Press the MOB icon on the chart plotter, but with the current that location will change quickly.

8.12.2. Go through all the company-wide safety protocols.

8.12.3. Sound the alarm or alert the crew on the PA system, and try some or all of the following:

8.12.4. Stop the boat and barges to stay moving with the PIW

8.12.5. Call the Coast Guard for assistance

8.12.6. Call other boats for assistance

8.12.7. He will then stay in the wheelhouse while the remaining crew member(s) affect the rescue.

Rescue: The crew will do the following:

8.12.8. Rig a ladder on the desired side of approach to the PIW and use a boat pole as the boat gets close to the PIW.

8.12.9. On approach the crew will assess the situation of the PIW. The non-responsive PIW will present more problems, and the Captain will assert more control.

8.12.10. The crew will be on deck with ladder method and send one person outside the bulwarks or into the water to try and get the PIW.

8.12.11. This will involve all crew members (Captain included), then they try to push and pull the PIW onto the ladder. This risks injuries and additional persons in the water.

8.12.12. The present way of getting some one back aboard is assuming the PIW is conscious and can help, maybe they can climb a ladder without assistance.

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8.12.13. The Coast Guard or other boats in the area will be called to assist, as the likelihood of rescuing the PIW is slim.

8.12.14. The boat should be ready for any rescue, conscious or not.

8.12.15. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.12.16. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.12.17. The crews are still doing MOB drills without a way of getting the body out of the water.

8.12. **Towboat pushing ahead loaded barges on rivers rivers going with the current:** (continued)

C-HERO® System:

8.12.19. The towboat is made up astern of the last barge and pushing the barges. The visibility is good, but handling is difficult. There are plenty of crew members available. This is one of the hardest rescues because the PIW will move quickly with the current, and the towboat pushing barges has limited maneuvering ability.

Alarm: The Captain will do the following:

8.12.20. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system (unless he is now alone), and then turn the boat around safely after determining the traffic in the area.

8.12.21. Go through all the company-wide safety protocols.

8.12.22. Let the crew know which side is better for the rescue

8.12.23. Stay in the wheelhouse, in command of the boat if possible.

8.12.24. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew (or the Captain in the case of a crew of two) will do the following:

8.12.25. Locate the PIW and keep the Captain continuously up to date.

8.12.26. Use the Rescue Pole with Recovery Straps to position the PIW and maneuver the hoop of the pole over the head and under the armpits.

8.12.27. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW. Even if the Rescue Pole was not tethered, it may be dropped and will float as it is foam filled.

8.12.28. The rescue straps are left together as one strap since only one person will be lifting.

8.12.29. Lift the PIW up and onto the deck using the handles on the lifting strap

8.12.30. The lifting should be done mostly with the legs, while keeping the back straight to avoid injury.

8.12.31. The person is then treated as per company protocol.

8.12.32. The whole rescue should take no more than 3 to 5 minutes.

8.12.33. There is no risk of additional crew injuries or other persons going in the water.

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8.13. **ATB Ocean and Bays:**

Present Practice:

An Articulated Barge is fully maneuverable and will have enough crew for a man overboard rescue. Some have the capability of launching an FRC (Fast Rescue Craft).

Alarm: The Captain will do the following:

8.13.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and then turn the boat around safely after determining the traffic in the area.

8.13.2. Go through all the company-wide safety protocols.

8.13.3. Let the crew know which side is better for the rescue

8.13.4. Stay in the wheelhouse, in command of the boat.

8.13.5. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

8.13.6. It will be the Captain's call if they can go slow to stem the weather with the boat, and get the PIW on to a ladder, and back aboard.

8.13.7. If it's rough, a skiff will be launched if they have it or the Coast Guard will be called.

8.13.8. Launching a skiff takes at least 6 minutes.

Rescue: The crew will do the following if not using an FRC:

8.13.9. Rig a ladder on the desired side of approach to the PIW and use a boat pole as the boat gets close to the PIW.

8.13.10. On approach the crew will assess the situation of the PIW. The non-responsive PIW will present more problems, and the Captain will assert more control

8.13.11. If they try the ladder method, they will be on deck and send one person into the water to try and get the PIW. This will involve several crew members, and they will try to push and pull the PIW onto the ladder.

8.13.12. This is a risky maneuver in rough seas to get the crew and PIW back safely. It risks injuries and additional persons in the water. This is a failed rescue if the person is unconscious or cannot help.

8.13.13. The Coast Guard or other boats in the area will be called to assist.

8.13.14. The present way of getting some one back aboard is all assuming the PIW is conscious and can help, maybe they can climb a ladder.

8.13.15. The boat should be ready for any rescue, conscious or not.

8.13.16. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.13.17. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.13.18. Crews are still doing MOB drills without a way of getting the body out of the water.

8.13.19. If they have an FRC, it will used with extreme caution in rough weather.

C-HERO® System:

An Articulated Barge is fully maneuverable and will have enough crew for a man over-board rescue. Some have the capability of launching an FRC (Fast Rescue Craft).

Alarm: The Captain will do the following:

8.13.20. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and then turn the boat around safely after determining the traffic in the area.

8.13.21. Go through all the company-wide safety protocols.

8.13.22. Let the crew know which side is better for the rescue

8.13.23. Stay in the wheelhouse, in command of the boat.

8.13.24. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following if they do not have an FRC

8.13.25. Locate the PIW and keep the Captain continuously up to date

8.13.26. Attach the pre-fit Rescue Davit on the bitt to be used for the rescue.

8.13.27. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.13.28. The Rescue Pole goes over the PIW and is maneuvered under the armpits.

8.13.29. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.13.30. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically.

8.13.31. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.13.32. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.

8.13.33. The person is then treated as per company protocol.

8.13.34. The whole rescue should take no more than 3 minutes, and with no strains or going outside the bulwarks, and just one person doing it.

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8.14. Passenger vessel / Ferry

Present Practice:

A Passenger Vessel or Ferry is fully maneuverable and will have enough crew for a man overboard rescue.

Alarm: The Captain will do the following:

8.14.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and then turn the boat around safely after determining the traffic in the area.

8.14.2. Go through all the company-wide safety protocols.

8.14.3. Let the crew know which side is better for the rescue

8.14.4. Stay in the wheelhouse, in command of the boat.

8.14.5. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

8.14.6. It will be the Captain's call if they can go slow to stem the weather with the boat, and get the PIW on to a ladder, and back aboard.

8.14.7. He will probably call the Coast Guard and other boats nearby for assistance.

Rescue: The crew will do the following:

8.14.8. Throw a life ring or other floatable device to the PIW as they will not be wearing a life vest.

8.14.9. Rig a ladder on the desired side of approach to the PIW and use a boat pole as the boat gets close to the PIW.

8.14.10. On approach the crew will assess the situation of the PIW. A non-responsive PIW will present more problems, and the Coast Guard and other boats nearby will be called for assistance.

8.14.11. If they try the ladder method, they will be on deck and send one person into the water to try and get the PIW. This will involve several crew members, and they will try to push and pull the PIW onto the ladder.

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8.14.12. This is a risky maneuver in rough seas to get the crew and PIW back safely. It risks injuries and additional persons in the water. This is a failed rescue if the person is unconscious or cannot help.

8.14.13. The present way of getting some one back aboard is all assuming the PIW is conscious and can help, maybe they can climb a ladder.

8.14.14. The boat should be ready for any rescue, conscious or not.

8.14.15. The Sub K rule holds companies and Captains accountable for having a system and training the crews.

8.14.16. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.14.17. Crews are still doing MOB drills without a way of getting the body out of the water.

8.14.18. Some Ferries have tried the roll-up rescue devices with limited success. Their freeboard is high enough that they need a davit to get the PIW up.

8.14. **Passenger vessel / Ferry**: (continued)

C-HERO® System:

A Passenger Vessel or Ferry is fully maneuverable and will have enough crew for a man overboard rescue.

Alarm: The Captain will do the following:

8.14.19. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and then turn the boat around.

8.14.20. Go through all the company-wide safety protocols.

8.14.21. Let the crew know which side is better for the rescue

8.14.22. Stay in the wheelhouse, in command of the boat.

8.14.23. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.14.24. Locate the PIW and keep the Captain continuously up to date.

8.14.25. Attach the Rescue Davit into the flush mount on the side the Captain has indicated for the rescue.

8.14.26. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.14.27. The Rescue Pole goes over the PIW and is maneuvered under the armpits for a conscious or unconscious person.

8.14.28. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.14.29. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically.

8.14.30. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.14.31. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.

8.14.32. The person is then treated as per company protocol.

8.14.33. The whole rescue should take no more than 3 to 5 minutes, even in rough seas.

8.14.34. There is no risk of additional crew injuries or other persons going in the water.

8.14.35. While several crew members will probably be involved, just one person could complete the entire rescue.

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8.15. **Crew Boat**:

Present Practice:

8.15.1. A Crew Boat is fully maneuverable and will have a two-man crew. The Captain will have to perform all functions if the other crew member is in the water.

Rescue: The Captain will then do the following:

8.15.2. The Captain will sound the alarm, press the MOB icon on the chart plotter and turn the boat around.

8.15.3. He will Go through all the company-wide safety protocols.

8.15.4. Rig a ladder and use a boat pole as the boat gets close to the PIW.

8.15.5. Go on deck and lean over the side, to try and get the PIW.

8.15.6. The lifting will have people straining and, if the person is over 250 lbs. there will be no way to do it.

8.15.7. The long-standing practice has been to rig a ladder over the side and send one person into the water, this goes for any size of crew.

8.15.8. Then try and push the person to the ladder and if all crew members are up and on deck, they can leverage the PIW on to deck.

8.15.9. The present way of getting some one back aboard is all assuming the PIW is conscious and can help, maybe they can climb a ladder.

8.15.10. The boat should be ready for any rescue, conscious or not.

8.15.11. The Sub T rule holds companies and Captains accountable for having a system and training the crews, no matter the size of the crew.

8.15.12. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.15.13. The crews are still doing MOB drills without a way of getting the body out of the water. The two-man crew is a cost savings to the company, and they still need to have a system to recover a MOB.

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C-HERO® System:

The C-HERO® system was designed for workboats with the worst-case scenarios, the two-man crew and the PIW is unconscious. In the case of a two-man crew, and the person on deck goes in the water, the Captain is responsible for the rescue.

Rescue: The Captain will do the following:

8.15.14. He will press the MOB icon on the chart plotter and turn the boat around.

8.15.15. He will Go through all the company-wide safety protocols.

8.15.16. When it's safe and he has an eye on the PIW, take the boat out of gear or clutch out, then go on deck and attach the Rescue Davit into the flush mount to be used for the rescue.

8.15.17. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.15.18. Go back up to the wheelhouse then slowly creep on the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out again and go on deck.

8.15.19. The Rescue Pole goes over the PIW, and maneuvered under the arms

8.15.20. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.15.28. Pull all the slack out at the radial winch, then use the winch handle to crank them up. The person will come out of the water vertically.

8.15.36. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.15.38. The boom tip can be lifted for more height once PIW is alongside the boat by a few more turns on the winch handle.

8.15.39. The person is then treated as per company protocol.

8.15.40. The whole rescue should take no more than 3 minutes, and with no strains or going outside the bulwarks, and just one person doing it.

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8.16. **Dredge**:

Present Practice:

The Dredge is a stationary work platform. They may need to perform a rescue by themselves or with the assistance of a Dredge Tender or Dredge Tug that may be close by.

Alarm: The Dredge Master will do the following:

8.16.1. Sound the alarm or alert the crew on the PA system (unless he is now alone).

8.16.2. Alert nearby workboats (Dredge Tender or Dredge Tug) for their assistance

8.16.3. Call the Coast Guard for their assistance

8.16.4. Go through all the company-wide safety protocols.

8.16.5. Rescue: The Dredge crew will do the following:

PIW is Responsive:

8.16.6. Immediately throw out a life ring on a line to keep the PIW from drifting away from the dredge (if he is responsive), and if there are no nearby workboats that can quickly assist.

8.16.7. Pull in the life ring line and maneuver the PIW to a ladder.

8.16.8. Help the PIW climb the ladder with assistance from the water and top of the ladder.

PIW is Non-Responsive:

8.16.9. If the PIW is unresponsive, a crew member (with a life jacket) will need to swim out to the PIW and bring him back to a ladder on the dredge.

8.16.10. The crew will now have to push and pull to get the PIW up the ladder, and this can easily be a failed rescue.

Workboats are Nearby and can Assist:

8.16.11. Locate the PIW and keep workboat Captain continuously up to date.

8.16.12. Communicate to workboat Captain if the PIW is responsive or non-responsive.

8.16.13. Rig a ladder on the desired side of approach to the PIW and use a boat pole as the boat gets close to the PIW.

8.16.14. Go on deck and lean over the side, to try and get the PIW. This will involve several crew members, then they try to push and pull the PIW onto the ladder. This risks injuries and additional persons in the water.

8.16.15. The present way of getting some one back aboard is assuming the PIW is conscious and can help, maybe they can climb a ladder without assistance.

8.16.16. The Coast Guard, if in the area may be able to assist, as the likelihood of rescuing the PIW is slim.

8.16.17. The dredge and dredge tender or dredge tug should be ready for any rescue, conscious or not.

8.16.18. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.16.19. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.16.20. The crews are still doing MOB drills without a way of getting the body out of the water.

8.16. **Dredge**: (continued)

C-HERO® System:

The Dredge is a stationary work platform. They may need to perform a rescue by themselves or with the assistance of a Dredge Tender or Dredge Tug that may be close by.

Alarm: The Dredge Master will do the following: Sound the alarm or alert the crew on the PA system (unless he is now alone) Alert nearby workboats (Dredge Tender or Dredge Tug) for their assistance

8.16.21. Call the Coast Guard for their assistance

8.16.22. Go through all the company-wide safety protocols.

8.16.23. Rescue Assistance: The Captain of nearby workboat that can assist will do the following:

8.16.24. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system (unless he is now alone), and then maneuver the boat to the PIW's location.

8.16.25. Let the crew know which side is better for the rescue

8.16.26. Stay in the wheelhouse, in command of the boat if possible.

8.16.27. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue by Dredge: The Dredge crew will do the following:

PIW is Responsive Non-Responsive:

8.16.28. Immediately throw out a life ring on a line to keep the PIW from drifting away from the dredge (if he is responsive), and if there are no nearby workboats that can quickly assist.

8.16.29. Pull in the life ring line and maneuver the PIW close to a ladder.

8.16.30. Help the PIW climb the ladder with assistance from the water and top of the ladder.

8.16.31. Use the Rescue Pole with Recovery Straps to position the PIW and maneuver the hoop of the pole over the head and under the armpits.

8.16.32. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW. Even if the Rescue Pole was not tethered, it may be dropped and will float as it is foam filled.

8.16.33. The rescue straps are left together as one strap since only one person will be lifting.

8.16.34. Lift the PIW up and onto the deck using the handles on the lifting strap

8.16.35. The lifting should be done mostly with the legs, while keeping the back straight to avoid injury.

8.16.36. The boat should be ready for any rescue, conscious or not.

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8.16.37. The Sub T rule holds companies and Captains accountable for having a system and training the crews, no matter the size of the crew.

8.16.38. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.16.39. The crews are still doing MOB drills without a way of getting the body out of the water. The two-man crew is a cost savings to the company, and they still need to have a system to recover a MOB.

8.16.40. The person is then treated as per company protocol.

8.16.41. The whole rescue should take no more than 3 to 5 minutes.

8.16.42. There is no risk of additional crew injuries or other persons going in the water.

Workboats are Nearby and can Assist:

8.16.43. Locate the PIW and keep workboat Captain continuously up to date.

8.16.44. Communicate to workboat Captain if the PIW is responsive or non-responsive.

Rescue by Workboat: The Crew (or the Captain in the case of a crew of two) will do the following:

8.16.45. Locate the PIW and keep the Captain continuously up to date.

8.16.46. The workboat will have a Rescue Davit and Rescue Pole (without lifting straps). In this case the rescue procedure is the same as on boat situation #8 Pushing Ahead with Empty / Light Barge

8.16.47. Attach the pre-fit Rescue Davit on the bitt to be used for the rescue.

8.16.48. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.16.49. The Rescue Pole goes over the PIW and is maneuvered under the armpits.

8.16.50. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.16.51. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically, whether they are responsive or not.

8.16.52. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.16.53. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.

8.16.54. The person is then treated as per company protocol.

8.16.55. The whole rescue should take no more than 3 to 5 minutes, even in rough water, and there is no risk of additional crew injuries or other persons going in the water.

8.16.56. While several crew members will probably be involved, just one person could complete the entire rescue.

8.17. Dredge Tender or Tug:

Present Practice:

The Dredge Tender or Tug may have a crew of 2 or 3. If only a crew of 2, the Captain will have to perform the entire rescue.

Alarm: The Dredge Master will do the following:

8.17.1. Sound the alarm or alert the crew on the PA system (unless he is now alone).

8.17.2. Alert nearby workboats (Dredge Tender or Dredge Tug) for their assistance

8.17.3. Call the Coast Guard for their assistance

8.17.4. Go through all the company-wide safety protocols.

8.17.5. Rescue: The Dredge crew will do the following:

PIW is Responsive:

8.17.6. Immediately throw out a life ring on a line to keep the PIW from drifting away from the dredge or boat (if he is responsive), and if there are no nearby workboats that can quickly assist.

8.17.7. Pull in the life ring line and maneuver the PIW to a ladder.

8.17.8. Help the PIW climb the ladder with assistance from the water and top of the ladder.

PIW is Non-Responsive:

8.17.9. If the PIW is unresponsive, a crew member (with a life jacket) will need to swim out to the PIW and bring him back to a ladder on the dredge.

8.17.10. The crew will now have to push and pull to get the PIW up the ladder, and this can easily be a failed rescue.

8.17.11. Workboats are Nearby and can Assist: The crew will do the following:

8.17.12. Locate the PIW and keep workboat Captain continuously up to date.

8.17.13. Communicate to workboat Captain if the PIW is responsive or non-responsive.

8.17.14. Rig a ladder on the desired side of approach to the PIW and use a boat pole as the boat gets close to the PIW.

8.17.15. The crew will be on deck with ladder method and send one person into the water to try and get the PIW.

8.17.16. This will involve several crew members, then they try to push and pull the PIW onto the ladder. This risks injuries and additional persons in the water.

8.17.17. The present way of getting some one back aboard is assuming the PIW is conscious and can help, maybe they can climb a ladder without assistance.

8.17.18. The Coast Guard, if in the area may be able to assist, as the likelihood of rescuing the PIW is slim.

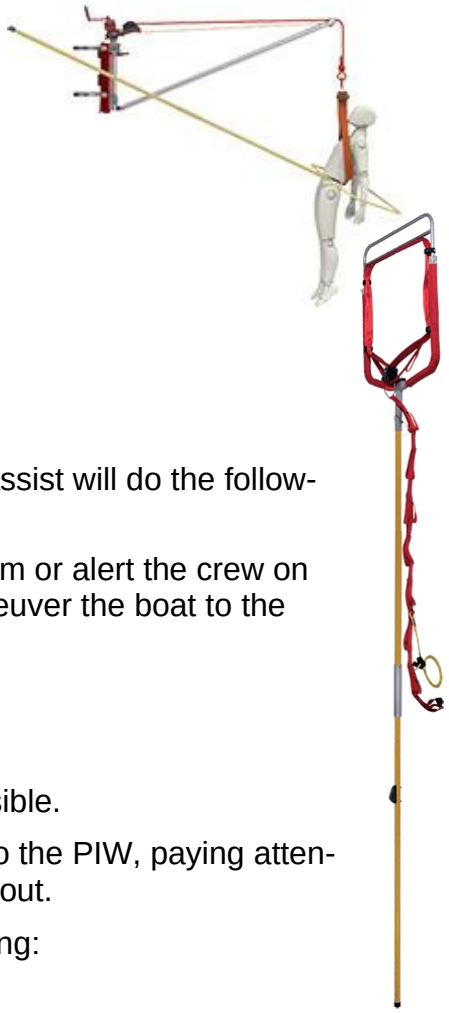
8.17.19. The dredge and dredge tender or dredge tug should be ready for any rescue, conscious or not.

8.17.20. The Sub M rule holds companies and Captains accountable for having a system and training the crews.

8.17.21. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.17.22. The crews are still doing MOB drills without a way of getting the body out of the water.

8.17. **Dredge Tender or Tug**: (continued)



C-HERO® System:

The Dredge Tender or Tug may have a crew of 2 or 3. If only a crew of 2, the Captain will have to perform the entire rescue.

Alarm: The Dredge Master will do the following:

8.17.23. Sound the alarm or alert the crew on the PA system (unless he is now alone).

8.17.24. Alert nearby workboats (Dredge Tender or Dredge Tug) for their assistance

8.17.25. Go through all the company-wide safety protocols.

Rescue Assistance: The Captain of nearby workboat that can assist will do the following:

8.17.26. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system (unless he is now alone), and then maneuver the boat to the PIW's location.

8.17.27. Go through all the company-wide safety protocols.

8.17.28. Let the crew know which side is better for the rescue

8.17.29. Stay in the wheelhouse, in command of the boat if possible.

8.17.30. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

8.17.31. Rescue by Dredge: The Dredge crew will do the following:

PIW is Responsive or Non-Responsive

8.17.32. Immediately throw out a life ring on a line to keep the PIW from drifting away from the dredge (if he is responsive), and if there are no nearby workboats that can quickly assist.

8.17.33. Pull in the life ring line and maneuver the PIW close to a ladder.

8.17.34. Help the PIW climb the ladder with assistance from the water and top of the ladder

8.17.35. Use the Rescue Pole with Recovery Straps to position the PIW and maneuver the hoop of the pole over the head and under the armpits.

8.17.36. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW. Even if the Rescue Pole was not tethered, it may be dropped and will float as it is foam filled.

8.17.37. The rescue straps are left together as one strap since only one person will be lifting.

8.17.38. Lift the PIW up and onto the deck using the handles on the lifting strap

8.17.39. The lifting should be done mostly with the legs, while keeping the back straight to avoid injury.

8.17.40. The person is then treated as per company protocol.

8.17.41. The whole rescue should take no more than 3 to 5 minutes.

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8.17.42. There is no risk of additional crew injuries or other persons going in the water.

Workboats are Nearby and can Assist:

8.17.43. Locate the PIW and keep workboat Captain continuously up to date.

8.17.44. Communicate to workboat Captain if the PIW is responsive or non-responsive.

8.17.45. Rescue by Workboat: The Crew (or the Captain in the case of a crew of two) will do the following:

8.17.46. Locate the PIW and keep the Captain continuously up to date.

8.17.47. The workboat will have a Rescue Davit and Rescue Pole (without lifting straps).

8.17.48. Attach the pre-fit Rescue Davit on the bitt to be used for the rescue.

8.17.49. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.17.50. The Rescue Pole goes over the PIW and is maneuvered under the armpits.

8.17.51. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.17.52. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically, whether they are responsive or not.

8.17.53. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.17.54. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.

8.17.55. The person is then treated as per company protocol.

8.17.56. The whole rescue should take no more than 3 to 5 minutes, even in rough water, and there is no risk of additional crew injuries or other persons going in the water.

8.17.57. While several crew members will probably be involved, just one person could complete the entire rescue.

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8.18. Survey Boat

Present Practice:

A Survey Boat usually has two-man crews. The Captain will have to perform all functions if the other crew member is in the water.

Rescue: The Captain will then do the following:

8.18.1. The Captain will sound the alarm, press the MOB icon on the chart plotter and turn the boat around.

8.18.2. He will Go through all the company-wide safety protocols.

8.18.3. Rig a ladder and use a boat pole as the boat gets close to the PIW.

8.18.4. Go on deck and go outside the railing, to try and get the PIW.

8.18.5. The lifting will have people straining and, if the person is over 250 lbs. there will be no way to do it.

8.18.6. The long-standing practice has been to rig a ladder over the side and send one person into the water, this goes for any size of crew.

8.18.7. Then try and push the person to the ladder and if all crew members are up and on deck, they can leverage the PIW on to deck.

8.18.8. The present way of getting some one back aboard is all assuming the PIW is conscious and can help, maybe they can climb a ladder.

8.18.9. The boat should be ready for any rescue, conscious or not.

8.18.10. The Sub T rule holds companies and Captains accountable for having a system and training the crews, no matter the size of the crew.

8.18.11. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.18.12. The crews are still doing MOB drills without a way of getting the body out of the water. The two-man crew is a cost savings to the company, and they still need to have a system to recover a MOB.

8.18.13. If they have an FRC, it will used with extreme caution in rough weather.

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C-HERO® System:

The C-HERO® system was designed for workboats with the worst-case scenarios, the two-man crew and the PIW is unconscious. In the case of a two-man crew, and the person on deck goes in the water, the Captain is responsible for the rescue.

Rescue: The Captain will do the following:

8.18.14. He will press the MOB icon on the chart plotter and turn the boat around.

8.18.15. He will Go through all the company-wide safety protocols.

8.18.16. When it's safe and he has an eye on the PIW, take the boat out of gear or clutch out, then go on deck and attach the Rescue Davit into the flush mount to be used for the rescue.

8.18.17. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.18.18. Go back up to the wheelhouse then slowly creep on the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out again and go on deck.

8.18.19. The Rescue Pole goes over the PIW, and maneuvered under the arms

8.18.20. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.18.28. Pull all the slack out at the radial winch, then use the winch handle to crank them up. The person will come out of the water vertically.

8.18.36. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.18.38. The boom tip can be lifted for more height once PIW is alongside the boat by a few more turns on the winch handle.

8.18.39. The person is then treated as per company protocol.

8.18.40. The whole rescue should take no more than 3 minutes, and with no strains or going outside the bulwarks, and just one person doing it.

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8.19. **Pilot Boat:**

Present Practice:

Pilots boats don't have a shortage of people on board to help out in an MOB situation. Depending on the boat and the area, they have multiple systems on board. Some have the capability of launching an FRC (Fast Rescue Craft).

Alarm: The Captain will do the following:

8.19.1. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.19.2. Let the crew know which side is better for the rescue

8.19.3. Stay in the wheelhouse while the remaining crew members affects the rescue.

8.19.4. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following if they do not have an FRC

8.19.5. Locate the PIW and keep the Captain continuously up to date.

8.19.6. Rig a ladder and use a boat pole as the boat gets close to the PIW.

8.19.7. Go on deck and go outside the edge of the boat or in the water, to try and get the PIW.

8.19.8. In the rare case that a boat may have a roll-up rescue device they will rig it for use. This may also require that a crew member go outside the bulwarks or into the water to try and get the PIW.

8.19.9. The same will happen when there are more crew as well.

8.19.10. The long-standing practice has been to rig a ladder over the side and send one person into the water, this goes for any size of crew.

8.19.11. Then try and push the person to the ladder and if all crew members are up and on deck, they can leverage the PIW on deck.

8.19.12. The present way of getting some one back aboard is all assuming the PIW is conscious and can help, maybe they can climb a ladder.

8.19.13. The boat should be ready for any rescue, conscious or not.

8.19.14. The Sub T rule holds companies and Captains accountable for having a system and training the crews.

8.19.15. Establishing policies and procedures to actually recover a MOB, and drills that reflect that, is the law.

8.19.16. The crews are still doing MOB drills without a way of getting the body out of the water.

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8.19. **Pilot Boat** (continued):

C-HERO® System:

Pilots boats don't have a shortage of people of board to help out in an MOB situation. Depending on the boat and the area, they have multiple systems on board. Some have the capability of launching an FRC (Fast Rescue Craft).

Alarm: The Captain will do the following:

8.19.17. Press the MOB icon on the chart plotter, sound the alarm or alert the crew on the PA system, and turn the boat around.

8.19.18. Let the crew know which side is better for the rescue.

8.19.19. Stay in the wheelhouse while the remaining crew members affect the rescue.

8.19.20. Slowly creep up on the PIW when the boat gets close to the PIW, paying attention to the wind and current. Get within 7 ft. then clutch out.

Rescue: The crew will do the following:

8.19.21. Locate the PIW and keep the Captain continuously up to date

8.19.22. Attach the Rescue Davit into the flush mount to be used for the rescue.

8.19.23. Then connect the snap hook on the Rescue Davit lift line to the Rescue Pole and have everything ready.

8.19.24. The Rescue Pole goes over the PIW and is maneuvered under the armpits.

8.19.25. Then the lifting strap on the Rescue Pole is cinched up by holding the line and pushing the pole towards the PIW, drop the pole that is foam filled.

8.19.26. Pull all the slack out at the radial winch, then use the winch handle to bring them up. The person will come out of the water vertically.

8.19.27. The davit boom stays put until the worm gear handle is moved to bring them to the side of the boat.

8.19.28. The boom tip can be lifted for more height once the person is alongside the boat with a few more turns on the winch handle.

8.19.29. The person is then treated as per company protocol.

8.19.30. The whole rescue should take no more than 3 minutes, and with no strains or going outside the bulwarks, and just one person doing it

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Man Overboard Drill Inspection Check List

Company: _____ Vessel: _____

Captain: _____ ☐ TPO ☐ CG Inspection

COI Issue Date: _____ Prior USCG 835: ☐ YES ☐ NO

☐ Dockside ☐ Underway Drill Other vessels used: _____

Drill Start: _____ Finish: _____ Inspection Officer: _____

MOB Equipment: The equipment / systems used, in drills and training to recover a person in the water. Needs to have a Visual examination.

1. If a davit Is used, is there a mechanism to stop the swing: ☐ YES ☐ NO
2. What is the overall condition of the equipment: ☐ GOOD ☐ FAIR ☐ POOR
3. Is the equipment: ☐ Company made ☐ Purpose built for MOB recoveries
4. If lines are used in the equipment, are they in good shape: ☐ YES ☐ NO
5. Is the equipment holding up to the elements: ☐ YES ☐ NO
6. Does the equipment have covers to protect it from the sun: ☐ YES ☐ NO
7. Was the crew able to get to, and deploy the equipment quickly: ☐ YES ☐ NO
8. If a winch is used, is it maintained, and lubricated: ☐ YES ☐ NO
9. If a ladder was rigged what is the condition of it: ☐ GOOD ☐ FAIR ☐ POOR
10. If a pike pole is part of the equipment, are the points covered: ☐ YES ☐ NO

On Deck: A Man Overboard Drill must be performed as if it's an emergency.

11. Did the crew give a copy of the company MOB protocol to follow along: ☐ YES ☐ NO
12. Does the vessel have lifting equipment for the recovery of a MOB: ☐ YES ☐ NO
13. Did the crew use a VHF or have comms with the wheelhouse: ☐ YES ☐ NO
14. How long to muster on deck: _____ How long did the drill last: _____
15. Did the company have their own rescue dummy: ☐ YES ☐ NO
16. Was a rescue dummy used: ☐ YES ☐ NO At least 180 lbs.: ☐ YES ☐ NO
17. If the rescue dummy was rolled up, did it appear to be handled safely: ☐ YES ☐ NO
18. If a crewman got in the water, was an immersion suit used: ☐ YES ☐ NO
19. Is there a designated mob rescue / recovery area: ☐ YES ☐ NO
20. Did the crew keep an eye on the person in the water: ☐ YES ☐ NO
21. Did each crew member demonstrate they can do a recovery: ☐ YES ☐ NO
22. Was any kind of an alarm used, to alert the deck crew: ☐ YES ☐ NO
23. Did the crew remain safe on deck throughout the recovery: ☐ YES ☐ NO
24. Was the drill done as if it was an emergency: ☐ YES ☐ NO
25. Did the crew have their PPE on: ☐ YES ☐ NO
26. Was a life ring deployed in the recovery: ☐ YES ☐ NO
27. Was a skiff from the vessel deployed and used: ☐ YES ☐ NO
28. If a ladder was used, did the crew get the rescue dummy aboard: ☐ YES ☐ NO
29. Did the drill and recovery match company protocol: ☐ YES ☐ NO

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Wheelhouse: The master *must* ensure that drills are conducted and recorded.

30. Wheelhouse MOB alarm: ☐ YES ☐ NO Crew notified Wheelhouse: ☐ YES ☐ NO
31. Did the Capt. push the MOB on the chart plotter at the start of drill: ☐ YES ☐ NO
32. Did the Capt. ring the general alarm bell: ☐ YES ☐ NO
33. Did the Capt. alert other boats via VHF: ☐ YES ☐ NO
34. Did the Capt. sound the MOB whistle signal: ☐ YES ☐ NO
35. Was the Capt. able to maneuver the boat to the rescue dummy: ☐ YES ☐ NO
36. Could the wheelhouse crew/ Capt. see the drill: ☐ YES ☐ NO
37. Did the Capt. follow company protocol, calls made etc.: ☐ YES ☐ NO
38. Was the drill log filled out, with and explanation of the drills: ☐ YES ☐ NO
39. Was there a maintenance log for the MOB gear used: ☐ YES ☐ NO
40. Is the maintenance up to date, and been performed: ☐ YES ☐ NO
41. Normal operation for this vessel is: ☐ Pushing ☐ Towing ☐ Ship Assist
42. Is there a MOB recovery plan for when the vessel is working: ☐ YES ☐ NO
43. Did the Capt. do the drill, as if it was an emergency: ☐ YES ☐ NO

Galley: The company *must* establish procedures to address fall overboard prevention and recovery of persons in the water.

44. Are MOB procedures and location of equipment posted: ☐ YES ☐ NO
45. Is there a copy of the company MOB protocol in the folder: ☐ YES ☐ NO
46. Is there a certification in the document folder, for the equipment used: ☐ YES ☐ NO
47. Was each crew member trained, and certified for the equipment used: ☐ YES ☐ NO
48. Is the equipment certified for this vessel: ☐ YES ☐ NO
49. If the equipment came from another boat why: _____
50. Was any equipment used in the drill that is not listed in the doc folder: ☐ YES ☐ NO
51. Is the equipment human suspension rated: ☐ YES ☐ NO
52. Has the crew ever done an underway drill, in a high traffic area: ☐ YES ☐ NO
53. Overall assessment, does it look like the crew is ready: ☐ YES ☐ NO

Observations:

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