Drills

Once all newcomers have been oriented to your vessel and know their emergency assignments, you need to do monthly drills whenever the vessel is in service. Sure, drills are only required on documented commercial fishing vessels operating beyond the boundary line or documented commercial fishing vessels with more than 16 people on board, but drills save lives on all vessels.

The crew onboard the 56-foot Angela Marie was anxiously waiting for the water to clear from the back deck. When it didn’t, the crew knew it was time to don immersion suits. That’s not easy in 60- to 80-knot winds when your vessel is lying on its side and its surface is icy.

There were more problems. The Mayday had to be rebroadcast as the vessel sank because people hadn’t clearly understood their position, one man went in the water without his suit, and the skipper struggled to untangle himself from lines in the water.

Then good things began to happen: The life raft surfaced next to the crewman with no suit and he was able to climb in. The Coast Guard arrived on scene and hoisted all five men to safety.

What did the skipper have to say afterward? The crew “all did what they were supposed to do. Thank God for their experience and their levelheadedness. With any panic at all, it could have been a different situation. The best advice I can give anybody is to do your drills.” (Alaska Fisherman’s Journal, April 1994)

How to Conduct Effective Drills

Drills don’t have to be boring, and they shouldn’t be exactly the same each month because emergencies vary. Here are some clues to make your vessel’s drills more effective:

Be Realistic

- Realism will help make the drills more interesting. Instead of saying, “Okay, let’s have a drill on abandoning ship,” think of a place, time of day, weather and sea conditions that you might find yourself in when you have to abandon ship. Then describe that to the crew and position them where they would likely be. Or, ask the crew to describe a circumstance they think they might encounter. Make the scenarios as realistic as possible.
• Some actions, such as inflating the life raft during the abandon
ship drill, should be simulated. Drills will be more effective if
crew members say what they would do if it were a real emer-
gency. It will be hard for some crew to pretend, but a realistic
scenario will help.

• Crews should feel some pressure; pressure is normal. But all
crew members must understand that their personal responsi-
bility is to be safe. It is part of the job.

Be Spontaneous

• Don’t always announce drills ahead of time, but always an-
nounce a drill as a drill.

• Conduct drills at different times and places. Try them at the
dock, underway, at night, in the rain. Be creative!

Make drill scenarios as realistic as possible.
• Use a piece of cardboard labeled “fire” or “flooding” and place it in a critical spot. Tell crew that when they find the sign on their rounds they should shout “cardboard fire drill!” and let that begin the drill.

Do Hands-on Drills

• Retention for hands-on learning is 90 percent, much higher than just talking about or watching a videotape of a drill.
• Be sure the crew is familiar with the vessel’s emergency instructions, signals, and assignments (station bill) as well as the location and use of survival equipment.
• Have crew members touch the equipment as much as is practical. Have them put on their immersion suits, actually back each other up in a fire scenario, say a Mayday (without the radio on), etc.
• Disconnect the radio’s microphone or make other provisions to prevent a false Mayday.
• Stress familiarity with equipment during both day and night.
• Avoid damaging actual emergency equipment.

Make Drills Progressive

• Start with simple walk-throughs and build skill and speed.
• Progress to more complicated scenarios.
• Throw in “curves” to make scenarios more interesting. For example, you might want to have one crew member simulate being nearly debilitated by seasickness or injury to determine whether people will help him, and to ensure that others assume his duties.

Build Teamwork

• Teamwork increases efficiency and saves lives. Forget the “every man for himself” philosophy. It has sabotaged the saving of lives and ships at sea.
• Build on the team that you already have for fishing.
• Cross-train crew members to cover each others’ responsibilities in the event of an injury or other circumstance. If the skipper is injured, is the crew prepared?
• Be sure all hands participate in the drills.
Each crew member should talk about what was learned and how the drill could be done better.

**Be Safe**

- Crew should not endanger themselves during a drill.
- Secure open hatches and other dangerous areas.
- Crew should **never run during a drill.**

**Be Positive**

- Drills can be fun—a chance to feel good about those you must count on in an emergency.
- Drills should **not** be used to punish, harass, intimidate, or frustrate your crew.

**Debrief All Drills**

- **A drill is not over until it is debriefed.**
- Each crew member should talk about what was learned and how the drill could be done better. Everyone should feel that it is okay to make constructive comments on the vessel’s and
crew’s performance. Drills should be a positive experience for everyone.

- Copies of the vessel’s Emergency Assignments and Signals (page 195) and Emergency Instructions (page 190) will help keep the discussion on track, as will a list of each drill’s critical points (see pages 208–215 for four suggested drills).

- Consider changes to Emergency Assignments and vessel’s emergency equipment. Remember, the largest room in the world is the room for improvement.

- Inspect and return all gear to its proper location after each drill so it is ready and available for a real emergency.

**Log the Drill**

- Complete written log entry describing date and location of the drill, and evaluation of crew and individual responses. There’s a log sheet for drills on page 216 and one for testing your EPIRB on page 217. The monthly drill is a good time to test your EPIRB.

**Ready-made Drills**

The following four drills, which contain all the items required by law (page 186), have been devised to help fishermen and other mariners conduct their own emergency drills. Running time for each is about 20 minutes. Both novice and experienced drill leaders may discover ideas and critical points to look for while conducting and evaluating drills. Conduct these drills once a month and you will be in compliance with the federal onboard drill regulations.

Skippers will find it convenient to use these prepared drills. If you choose to develop your own drills be sure they cover all 11 drill items on page 186 and 187.
**Person Overboard**

*Scenario:* While hauling gear during sloppy weather, a deck hand is washed overboard by a large wave or falls overboard while dipping a 5-gallon bucket over the side. The crew member is wearing a flotation suit equipped with a light and whistle. Other boats are visible in the area.

*Before drill:* Be sure the crew is familiar with the vessel’s person overboard recovery plan, including:

___ How the skipper plans to pull a person back onboard.
___ What equipment is required.
___ Skipper’s requirements for wearing flotation while on deck.
___ Rules for being on deck in rough weather or at night.
___ Setting up the drill

This drill is best run while underway with no gear in the water, and with the person overboard represented by an inflated buoy with a personal marker light attached.

*Initiating the drill:* The drill leader chooses a “victim” and informs that crew member about the overboard incident. The drill leader then throws a buoy overboard and advises another crew member of the person overboard. The “victim” does not participate in the drill directly, but observes the crew’s reactions to the scenario and helps keep track of the following critical points. This non-participant can also be your safety backup.

*Critical points to look for during drill:*

**Alarms/Communication**

___ Does person discovering the emergency initiate the alarm?
___ Does person discovering the emergency tell the wheelhouse which side of the vessel the victim fell off?
___ Does person on watch alert all crew members? How?
___ Are Coast Guard and other vessels made aware of the problem?
___ Does entire crew recognize the Man Overboard signal?
___ How soon is entire crew aware of the emergency?
___ Are any crew members unaware of the emergency due to an inoperative signal or lack of communication?
___ Is communication to the wheelhouse sufficient to bring the vessel to the victim?
___ Does crew communicate with each other?
___ Is simulated distress signal called off after the victim is rescued?

**Response**

___ Do crew members react in accordance with their Emergency Assignments?
___ Do crew members readily do unassigned but needed jobs (cross-trained)?
___ Does crew work together as a team?
___ Do crew members anticipate or react to events?
___ Does person discovering the emergency throw a marker?
___ Does person discovering the emergency continually keep the victim in sight and point?
___ Does person on watch use electronic position fixing devices to mark the position of the person overboard?
___ Does person on watch initiate a proper maneuver?
___ How long does it take to rig the recovery device?
___ Is crew in place, including a rescue swimmer in an immersion suit with a safety line, by the time the vessel is back alongside the victim?
___ Is recovery device and vessel’s hauling equipment used effectively?
___ Do any crew members endanger themselves by leaning perilously over the side to recover the victim?
___ Does crew recognize hypothermia and know appropriate treatment for the victim?
___ Is medical help sought for treatment of hypothermia, if needed?
___ Is crew aware of considerations in recovering survival craft?
**Fire On Board**

*Scenario:* Fire is caused by a faulty diesel stove, clothing placed too close to an electrical heater, frayed insulation on electrical wiring against a bulkhead, an oversized light bulb in a bunk light, or other appropriate cause.

*Setting up the drill:* This drill is best run while underway, at the beginning of a trip, and with no gear in the water. Fire can be simulated by strobe lights or a red rag. Tape can be used to block off passages due to “smoke.” This drill can easily evolve into an abandon ship drill.

*Initiating the drill:* Tell a crew member that there is smoke and/or flames coming out of the stove/state room/bulkhead. When the crew member is clear on how to correctly report the fire, the drill begins. Keep the drill moving by telling the crew how effectively they are controlling the fire as the drill proceeds. The fire can spread or be extinguished, depending on their efforts.

**Critical points to look for during drill:**

*Alarms/Communication*

___ Does person discovering the fire immediately sound the alarm?
___ Does person on watch alert all crew members? How?
___ Are Coast Guard and other vessels made aware of the problem?
___ Does entire crew recognize the Fire signal?
___ How soon is entire crew aware of the emergency?
___ Are any crew members unaware of the emergency due to an inoperative signal or lack of communication?
___ Does crew report information such as source and size of fire, and number of persons involved?
___ Is communication to the wheelhouse sufficient to allow operator to maneuver vessel to minimize the effect of wind on the fire?
___ Does crew communicate with each other?
___ Do crew members account for others?
___ Is simulated distress signal called off once fire is under control?

*Response*

___ Do crew members react in accordance with their Emergency Assignments?
___ Do crew members do unassigned but needed jobs (cross-trained)?
___ Does crew work together as a team?
___ Do crew members anticipate or react to events?
___ Does operator maneuver the vessel to minimize effect of wind on the fire?
___ Is operator safely able to leave the wheel, if necessary, to inspect the affected area?
___ If help is not available, does operator close doors and seal openings to isolate the fire?
___ Are areas near the fire that are vented or have operating machinery or fans closed or secured?
___ Are electricity and fuel sources to the affected space secured?
___ Do crew members go around, rather than pass through, smoke-filled spaces when evacuating the affected area?
___ When evacuating affected areas, do crew members remove portable extinguishers, immersion suits and other survival equipment, and hazardous items?
___ If an installed fire suppression system is used, is it only activated on word from the skipper, and only after vents, doors, and hatches are secured and all persons evacuated?
___ Do firefighters don Self-Contained Breathing Apparatus (if equipped) or fight fire by staying low?
___ Are firefighters always backed up?
___ Is an appropriate extinguishing agent used?
___ Do crew members act as if they are familiar with extinguisher advantages, disadvantages, and range?
___ Is fire or deck hose brought to the scene and pumps placed in line?
___ Do crew members act as if they are aware of the hazards of toxic smoke and gases?
___ Are fire boundaries checked periodically to prevent the fire from spreading?
___ If the fire is not controlled, are initial preparations made to abandon ship?
___ If water is used to control the fire, are provisions made to dewater the vessel?
___ How is it determined that the fire has been extinguished?
___ Once the fire is out, is a reflash watch set and the affected areas overhauled?
___ Could fire-fighting equipment and alarms be more effectively located?
___ Were fire hazards noted that could be eliminated?

**Flooding**

*Scenario:* The vessel is running from the fishing grounds with a deck load of fish and gear. Wind and seas are rising and are off your quarter.

*Before drill:* Make sure the crew is familiar with the vessel’s plumbing system, through-hull fittings, pumps, and equipment available for damage control.

*Setting up the drill:* This drill can be run any time and can evolve into an abandon ship drill. The drill leader will inform the crew of the location of the “flooding” and the level of the water.

*Initiating the drill:* The drill leader tells crew members that the vessel seems to be getting sluggish, and asks them to check lazarettes, holds, and the engine room. The drill leader then informs the crew of the location and extent of the problem. Keep the drill moving by telling the crew the level of flooding. Let them know how effectively they are controlling the problem as the drill proceeds.

**Critical points to look for during drill:**

*Alarms/Communication*

___ Does the person discovering the emergency initiate the alarm?
___ Does crew report information such as location, extent, and cause of flooding?
___ Does person on watch alert all crew members? How?
___ Are Coast Guard and other vessels made aware of the problem?
___ Does entire crew recognize the General and High Water alarms?
___ How soon is the entire crew aware of the emergency?
___ Are any crew members unaware of the emergency due to an inoperative signal or lack of communication?
___ Is communication to the wheelhouse sufficient to maneuver the vessel to lessen risk of capsizing?
___ Does crew communicate with each other?
___ Do crew members account for others?
___ Is simulated distress signal called off once the flooding is under control?
Response
___ Do crew members react in accordance with their Emergency Assignments?
___ Do crew members readily do unassigned but needed jobs (cross-trained)?
___ Does crew work together as a team?
___ Do crew members anticipate or react to events?
___ Does person on watch initiate appropriate maneuvers to lessen risk of capsizing: Reduce speed? Head into seas? Minimize roll?
___ Is person on watch safely able to leave the wheel, if necessary, to inspect the flooded area?
___ What actions are taken to improve stability?
   ___ Fish/gear tossed?
   ___ Freeing ports cleared?
   ___ Free surface effect minimized?
   ___ Blocks lowered?
   ___ Cross-flooding minimized?
   ___ Stability plan used?
___ Is watertight integrity maintained by closing all watertight doors, hatches, etc.?
___ Are through-hull fittings, shaft housings, and other penetrations checked for leakage?
___ Is everyone familiar with operation of the vessel’s pumps?
___ Are tarps, plugs, blankets, etc. used to slow leaks?
___ Are extra pumps (hand and power) and buckets used to dewater?
___ If gas pumps are used below decks, are CO/CO₂ problems considered?
___ Are there problems with the vessel’s pumps?
___ Do crew members prepare survival equipment (life rafts, immersion suits, EPIRBs, extra clothing, water, food, flares, log, first aid kit, etc.) in case of sudden loss?
___ Is a damage control kit available with many of the tools and patching equipment you would want in one spot?
Abandon Ship

Scenario: Despite the crew’s best efforts to control the fire or the flooding, the situation gets out of control and the drill leader gives the order to abandon ship.

Setting up the drill: This drill can be added to the end of a fire or flooding drill to save time and make the drills more challenging. To prevent the fire or flooding drill from being cut short, the drill leader should tell the crew not to abandon ship until the order is given. The crew will only simulate launching life rafts, activating EPIRBs, and abandoning the vessel. However, immersion suits should be donned and appropriate survival equipment brought to the abandon ship station.

Initiating the drill: When the fire or flooding drill has been concluded, the abandon ship signal will be sounded over the ship’s alarm system.

Critical points to look for during drill:

Alarms/Communication
___ Does person on watch alert all crew members? How?
___ Are Coast Guard and other vessels made aware of the problem?
___ Does entire crew recognize the Abandon Ship signal?
___ How soon is entire crew aware of the emergency?
___ Are any crew members unaware of the emergency due to an inoperative signal or lack of communication?
___ Does the crew communicate with each other?
___ Are all crew members accounted for?
___ Are signals used or simulated before abandoning ship to attract nearby assistance?
___ Are all crew members able to make an adequate Mayday call and find the vessel’s position?

Response
___ Do crew members react in accordance with their Emergency Assignments?
___ Do crew members readily do unassigned but needed jobs (cross-trained)?
___ Does crew work together as a team?
___ Do crew members anticipate or react to events?
___ Do crew members know their abandon ship station?
___ Do obstructions block escape routes or access to survival equipment?
___ Is life raft painter always secured (simulated) once life raft is released?
___ Do all hands have an immersion suit of a size that fits appropriately even with deck clothing on?
___ Do all crew members completely don their immersion suits in 60 seconds?
___ Does crew use a buddy system in donning suits and launching rafts?
___ Does crew simulate tossing throwable flotation (buoys, etc.) overboard?
___ Does crew gather an EPIRB, extra clothing, water, food, flares, log, and any other survival equipment, and are these items protected from washing overboard?
___ Are watertight doors and hatches closed, if there is time, before abandoning vessel?
___ Do crew members simulate entering the water properly wearing immersion suits?
___ Can all crew members describe how and when to launch a life raft and entry procedures?
___ Is crew aware of procedures for recovering a life raft?
___ Are all crew members aware of immersion suit features, proper care and stowage?
___ Can all crew members describe how to operate and test EPIRBs?
___ Is the EPIRB tested and logged at the end of the drill?
___ If flares are lit, is a Security given on channel 16?