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Science and Technology

NOAA Fisheries Observer Safety 04-110

NOAA FISHERIES OBSERVER SAFETY TRAINING STANDARDS

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Author name: Dennis C. Hansford
Office: Science and Technology

Certified by: David Detlor
Office: Science and Technology

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SUMMARY OF REVISIONS: This procedure specifies that curriculum complies with applicable regulations in 46 CFR 28 (pg. 1); specifies that training on first aid be completed prior to observer deployment (pg. 2 of appended document); revises observer safety trainers' maintenance requirements of teaching a marine safety topic from two years to three years (pg. 16 of appended document); and identifies topics to be covered within three years of initial safety training for observer refresher safety trainings (pgs. 17 and 25 of appended document).

Signed _____
David Detlor
Director (Acting), Office of Science and Technology

_____ Date

I. Introduction

The National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA NMFS) observer programs train and oversee hundreds of fisheries observers annually. These observers are deployed on commercial fishing vessels under the authority of the Magnuson Stevens Fishery Conservation and Management Reauthorization Act of 2006, the Marine Mammal Protection Act (MMPA), the Endangered Species Act (ESA), and other marine resource laws. It is critical that consistent safety training is provided to all fisheries observers, and that this training adheres to minimum national standards that NOAA Fisheries Service has determined are appropriate for preparing observers for the hazards associated with commercial fishing operations.

II. Objective

This procedural directive establishes national safety training standards for what NOAA NMFS considers to be the core curriculum topics for observer safety training. NOAA NMFS regional observer trainers, in coordination with the NOAA NMFS National Observer Program and the Alaska Marine Safety Education Association, developed these training standards. The standards also include competency in safety skills by observer candidates, minimum qualifications for NOAA NMFS observer safety trainers, requirements for ongoing professional development and maintenance, and frequency of refresher safety training for active observers and observer safety trainers. This directive further establishes standards for the use of checklists that trainers should follow when teaching skills that may pose a safety risk to trainees or trainers, as well as minimum safety equipment that observers must have before deployment.

III. Guidance

The following document “NOAA Fisheries Observer Safety Training Standards” provides minimum national safety training standards to prepare observers for the hazards associated with commercial fishing operations.

NMFS

Observer Safety

Training Standards



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
National Observer Program

November 2017 (revised)



NMFS Observer Safety Training Standards



November 2017 (revised)

U.S. DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

National Marine Fisheries Service

National Observer Program

Copies of this document may be obtained by contacting:

National Observer Program, F/ST4
National Marine Fisheries Service,
NOAA 1315 East West Highway
Silver Spring, MD 20910

An online version is available at <http://www.st.nmfs.noaa.gov/st4/nop/index.html>

NMFS would like to acknowledge the considerable contribution of the Alaska Marine Safety Education Association and, especially, Jerry Dzugan, to the development of this document and to the advancement of observer safety training throughout the agency.

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Overview

The NOAA's National Marine Fisheries Service, (NMFS) trains and oversees the training of hundreds of fisheries observers annually. These observers are deployed on fishing vessels under the authority of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act, the Marine Mammal Protection Act, the Endangered Species Act, and other marine resource laws.

NMFS ensures that safety training is provided to all fisheries observers, and that this training adheres to minimum national standards that NMFS has determined are critical for preparing observers for the hazards associated with commercial fishing operations. This includes, but is not limited to, training in risk awareness, conflict resolution, first aid, crisis prevention, emergency response, and survival at sea.

NMFS regional observer trainers developed these training standards in coordination with the NMFS National Observer Program and the Alaska Marine Safety Education Association and in compliance with applicable United States Coast Guard regulations in 46 CFR 28. The standards include what NMFS considers to be the *core curriculum topics* for observer safety training, recognizing that in some programs, additional safety topics are taught that further enhance risk awareness and safety skills that may be more specific to certain regions or fisheries.

In addition to identifying core curriculum topics, and the goals and objectives for each core topic, this document establishes standards regarding:

- Minimum qualifications for NMFS observer safety trainers and requirements for ongoing professional development and maintenance,
- Frequency of refresher safety training for active observer safety trainers,
- Checklists that trainers should follow when teaching skills that may pose a safety risk to students and trainers, and
- Minimum safety equipment that observers must have before deployment on a fishing vessel.

Safety Training Curriculum

The safety training topics presented in this section represent what NMFS considers to be the *core curriculum* for observer safety training, recognizing that in some programs, additional safety topics are taught that further enhance risk awareness and safety skills that may be more specific to certain regions or fisheries.

Each core curriculum topic includes the goals and objectives for training. For certain safety topics, competency in completing safety skills must be demonstrated by the trainee in order to pass the safety training. These safety skills are highlighted in **bold** and are identified separately in a sample “Skills Checklist” (Appendix A).

The order of topics presented is not intended to represent guidance in what sequence these topics should be taught, as many of these topics may be better taught in a different sequence or may be integrated as appropriate into other areas of observer training. NMFS estimates that the *minimum* time needed to cover these topics is approximately 19 hours (not including assessment time, breaks, lunch, and travel time), equating to 2½ to 3 days of safety training.

General Health and Safety

First Aid

Note: The National Observer Program Advisory Team (NOPAT) recommends that observers to be deployed in fisheries or on vessels that would likely not have medically trained personnel on board include the following first aid modules in training and that this training be completed prior to the observer’s deployment on a vessel.

Goal: Provide observers with an understanding of how to self-treat minor injuries and what should not be done in treating personal injuries.

Objectives: By the end of this presentation, the trainee will be able to:

- Describe and demonstrate the proper method for applying pressure bandages and identify pressure points (upper and lower torso) to stop bleeding.
- List five items that should be purchased during training for the observer’s personal first aid kit (not typically included in Red Cross or American Heart Association (AHA) training).
- Describe three methods for treatment of strains and sprains.
- Describe and demonstrate the proper method for making a simple sling.
- Describe and demonstrate methods for proper cleaning and treatment of cuts and burns.
- Recognize when cardiopulmonary resuscitation (CPR) should be given to cold-water (<70° F) drowning victims.
- Identify the role of first responder (reference additional objectives, as appropriate, from Red Cross or AHA first aid training).

- Describe the program’s reporting requirements for injuries.

Suggested time: 60 minutes.

Harassment

Note: This training can be provided by professionals other than observer safety trainers, such as NMFS Enforcement.

Goal: Be able to recognize harassment, minimize its effects, and know what actions should be taken.

Objectives: By the end of this presentation, the trainee will be able to:

- Define harassment.
- Define sexual harassment as a specific type of harassment.
- Describe actions that can be taken to minimize the effects of harassment.
- Describe the actions that should be taken in the event of harassment.
- Describe the observer program’s requirements for reporting harassment.

Suggested time: 45 minutes.

Conflict Resolution

Note: This training can be provided by professionals other than observer safety trainers, such as NMFS Enforcement.

Goal: Be able to recognize the potential of conflicts, the impacts they may have on performing assigned tasks, and describe ways to minimize them.

Objectives: By the end of this presentation, the trainee will be able to:

- Describe techniques for resolving conflicts.
- Identify major personality types and the conflict resolution approaches that work best with each.
- **Demonstrate at least one conflict resolution technique.**

Suggested time: 60 minutes.

Infections

Goal: Be able to identify fisheries or human-related situations that may result in infections, and ways to prevent and treat infections.

Objectives: By the end of this presentation, the trainee will be able to:

- List the causes of fisheries or human-related infections.
- Identify ways to prevent contact that could result in infections.
- Identify the types of treatment to prevent infection.
- List the indications of an infection.
- List the methods for treating an infection.

Suggested time: 15 minutes.

Survival Training

Seven Steps to Survival

Goal: Introduce trainees to the Seven Steps to Survival.

Objective: By the end of this presentation, the trainee will be able to:

- Name and discuss the seven steps to survival.

Suggested time: 15 minutes.

Survival Kit

Goal: Introduce trainees to personal survival kits.

Objective: By the end of this presentation, the trainee will be able to:

- List the general requirements for the contents of a survival kit and discuss appropriate storage.

Suggested time: 15 minutes.

Safety Concerns on Commercial Fishing Vessels

Scope of Duties

Goal: Understand an observer's scope of duties.

Objectives: By the end of this presentation, the trainee will be able to:

- List tasks that are routinely performed by observers.
- List the tasks that should not be performed (except in an emergency).

- Identify potential safety hazards involved in performing assigned tasks (may be used as a lead-in to biological hazards or other topics).
- Identify safety concerns on a vessel that does not have an operational Marine Sanitation Device (MSD), e.g. toilet, head, and latrine.

Suggested time: 30 minutes.

Seasickness

Definition: Disturbance of the inner-ear balance system that leads to nausea.

Goal: Understand the symptoms, prevention of, and remedies for seasickness; to be aware of program's reporting requirements regarding prolonged seasickness.

Objectives: By the end of this presentation, the trainee will be able to:

- List the symptoms of seasickness.
- List actions observers can take to minimize the likelihood of becoming seasick.
- Identify the most important things to do in the event of seasickness.
- Identify the advanced stages of seasickness.
- State the program's reporting requirements regarding prolonged seasickness.

Suggested time: 15 minutes.

Fatigue/Sleep Deprivation

Definitions: Sleep deprivation: The disturbance of an individual's circadian sleep cycle.

Fatigue: Physical or mental exhaustion due to prolonged exertion.

Goal: Understand the effects of sleep deprivation and fatigue and understand how to mitigate the impacts on safety, data collection tasks, and data quality.

Objectives: By the end of this presentation, the trainee will be able to:

- Define sleep deprivation.
- Define fatigue.
- List symptoms of sleep deprivation and fatigue.
- List possible effects of sleep deprivation and fatigue.
- List strategies or remedies to mitigate sleep deprivation and fatigue.

Suggested time: 15 minutes.

Drug/Alcohol Issues

Goal: Recognize the risks associated with alcohol and drug use by the crew and/or captain.

Objectives: By the end of this presentation, the trainee will be able to:

- Describe how an observer's safety might be compromised by onboard use of alcohol or drugs.
- List the effects of alcohol and drugs on performance.
- State the legal blood alcohol limit for commercial vessel operators.
- Describe options the observer has when the crew and/or captain are using or are under the influence of alcohol or drugs.
- Describe the program's reporting requirements regarding onboard use of drugs or alcohol.

Suggested time: 15 minutes.

Appropriate Clothing

Goal: Recognize what is appropriate clothing for fisheries observers and its benefits.

Objectives: By the end of this presentation, the trainee will be able to:

- Identify regionally appropriate clothing for deployment.
- Identify three pieces of inappropriate clothing for deployment.

Suggested time: 15 minutes.

Hypothermia

Goal: Understand the causes and dangers of hypothermia and be able to prevent, recognize, and treat it.

Objectives: By the end of this presentation, the trainee will be able to:

- Define hypothermia.
- List the body's main areas of heat loss.
- Identify the body area of primary importance for heat loss and explain why.
- List procedures to prevent hypothermia.
- Describe signs and symptoms of hypothermia.
- Describe the hypothermia treatment guidelines for the first responder.
- Describe the effects of conduction on a body out of water versus in the water.

Suggested time: 30 minutes.

Cold-Water Survival Skills

Goal: Understand the effects of immersion in cold water and the general principles of surviving a cold-water emergency.

Objectives: By the end of this presentation, the trainee will be able to:

- List the general factors necessary to survive a cold-water emergency.
- List the “stay rules,” for surviving a cold-water emergency.
- Describe the techniques that increase survival time in cold water and explain how they work.
- Describe the equipment necessary to maintain the HELP position.

Suggested time: 15 minutes.

Embark/Disembark

Goal: Recognize and minimize the effects of inherent dockside and at-sea transfer hazards during embarking or disembarking a commercial fishing vessel.

Objectives: By the end of this presentation, the trainee will be able to:

- List dockside and at-sea transfer boarding and disembarking hazards.
- List ways to reduce dockside and at-sea transfer risks during embarking and disembarking a commercial fishing vessel.

Suggested time: 15 minutes.

Sampling Safety

Goal: Understand and mitigate hazards associated with sampling.

Objectives: By the end of this presentation, the trainee will be able to:

- Identify hazards to avoid when setting up a sampling station.
- List criteria for selecting and creating a safe workspace.
- List on-deck hazards related to working on a commercial fishing vessel.
- Identify situations when assistance may be needed with sampling.
- **Demonstrate proper lifting techniques.**
- Describe how weather and other factors may affect sampling safety.
- Describe conditions or situations that might require abandoning sampling.

Suggested time: 30 minutes.

Hazardous Marine Organisms

Goal: Be prepared to deal with hazardous marine organisms.

Objectives: By the end of this presentation, the trainee will be able to:

- Identify dangerous marine organisms.
- List practical procedures for handling or avoiding dangerous marine organisms.
- List pain relieving remedies for stings and bites from marine organisms.

Suggested time: 15 minutes.

Vessel and Rigging Hazards

Goal: Be able to identify and respond appropriately to potential vessel and rigging hazards and risks.

Objectives: By the end of this presentation, the trainee will be able to:

- Identify potential hazards to watertight/weather integrity.
- List signs of inadequate maintenance and upkeep.
- Identify hazardous chemicals and/or gases that may be present on commercial fishing vessels.
- Identify the signs of deteriorating vessel stability.
- List situations that can decrease the stability of a vessel.
- Identify the appropriate responses to vessel hazards.
- State the program's reporting requirements for vessel hazards.
- Identify areas on a vessel to avoid entering alone.
- Identify subjective and objective risks on a vessel.

Suggested time: 45 minutes.

Gear Hazards

Goal: Be able to identify potential gear hazards and ways to avoid or minimize injuries caused by them.

Objectives: By the end of this presentation, the trainee will be able to:

- Identify the potential hazards associated with gear deployment, operation, and retrieval.
- Identify the safe locations during gear deployment, operation, and retrieval.
- Discuss how those locations may change during periods of inclement weather.

Suggested time: 15 minutes.

Falls and Slips

Need to know: *Falls and slips are major causes of injuries onboard fishing vessels.*

Goal: Minimize accidents resulting from falls and slips.

Objectives: By the end of this presentation, the trainee will be able to:

- Discuss what is meant by “one hand for the boat and one hand for yourself.”
- Identify factors that increase the likelihood of slips and falls.
- List ways to minimize slips and falls.

Suggested time: 15 minutes.

Man Overboard (MOB)

Goal: Understand how to properly respond to potential and real MOB situations.

Objectives: By the end of this presentation, the trainee will be able to:

- List practices that will reduce the risk of going overboard.
- List the steps in MOB recovery.
- Discuss the importance of a Personal Floatation Device (PFD) in surviving a MOB situation.

Suggested time: 15 minutes.

Abandon Ship

Goal: Understand when it is time to abandon ship and how to do so safely.

Objectives: By the end of this presentation, the trainee will be able to:

- Identify the abandon ship signal.
- Discuss the risks of abandoning ship.
- Identify when to abandon ship.

- List the steps to safely abandon ship.

Suggested time: 15 minutes.

Safety Regulations and USCG Procedures

USCG Boardings

Note: This training can also apply to other boarding entities such as NMFS and State Enforcement agencies.

Goal: Recognize the observer's role during a USCG boarding, including program requirements for providing information to the USCG.

Objectives: By the end of this presentation, the trainee will be able to:

- Know how to respond to questions the USCG boarding party might ask the observer.
- Describe the observer program's requirements for surrendering data or relaying other information to the USCG.

Suggested time: 15 minutes.

Commercial Fishing Vessel Safety Regulations (see also specific Safety Equipment topics)

Goal: Understand the importance of commercial fishing vessel safety regulations.

Objectives: By the end of this presentation, the trainee will be able to:

- List the resources for obtaining commercial fishing vessel safety regulations.
- List the USCG's safety equipment requirements that, when missing or out of service, will lead to the termination of the fishing trip and a documented offense. (These requirements are usually referred to as the Big Five, and may vary depending on the size of the vessel, water temperature, area of operation, number of people on vessel, fishery, or region).
- Reference the NMFS requirements regarding safety.
- State the observer program's requirements for a USCG Safety Examination Decal and the procedures to follow in the event that a vessel does not have a current and valid Safety Examination Decal.

Suggested time: 30 minutes.

USCG Helicopter Evacuations

Goal: Understand the hazards and procedures during a USCG helicopter evacuation.

Objectives: By the end of this presentation, the trainee will be able to:

- Describe the inherent dangers of a USCG helicopter evacuation.
- List the procedures involved in preparing a vessel for a helicopter evacuation.
- List the procedures in preparing a patient for a helicopter evacuation.

Teaching Resource: AMSEA DVD on helicopter evacuations (12

min) Suggested time: 20 minutes.

Safety Orientation

Pre-trip Vessel Safety Checklist

Goal: Understand what a Pre-trip Vessel Safety Checklist is, its function within the observer program, the observer's requirement for checking safety items, and how to complete the checklist correctly.

Objectives: By the end of this presentation, the trainee will be able to:

- Explain the difference between a USCG vessel examination/inspection and a Pre-trip Vessel Safety Checklist.
- Describe the observer program's requirements regarding the function of a Pre-trip Vessel Safety Checklist.
- Describe the procedures completing a Pre-trip Vessel Safety Checklist.
- Understand the observer's role versus the USCG and the NMFS Office of Enforcement regarding the Pre-trip Vessel Safety Checklist.
- Describe some of the problems or obstacles in completing the Pre-trip Vessel Safety Checklist, and explain steps to overcome them.
- **Complete a Pre-trip Vessel Safety Checklist onboard a commercial fishing vessel (or simulate completion of a checklist if a vessel is not available).**

Suggested time: 30 minutes.

Simulated Orientation or Dockside Tour

Goal: Be familiar with safety/survival items and procedures when boarding a vessel or when on the docks. Recognize the risk of entrapment and the importance of knowing escape routes from all areas of the vessel.

Objectives: By the end of this presentation, the trainee will be able to:

- List the points to be covered during a vessel safety orientation.
- State the observer's role and duties in vessel emergencies.
- Identify the location of the onboard safety instructions or station billet.
- **Perform and/or participate in a vessel (or simulated) orientation.**
- List possible occurrences that indicate an escape plan is needed.
- Identify primary and secondary escape routes.
- Identify the potential hazards or obstructions to an escape route.
- Increase situational awareness when boarding a vessel to prepare for an escape.

Suggested time: 90 minutes.

Safety Equipment

Personal Flotation Devices

Goal: Understand the function, correct use, and maintenance of Personal Flotation Devices (PFDs) and immersion suits.

Objectives: By the end of this presentation, the trainee will be able to:

- Discuss the various USCG types of PFDs.
- Given the type of PFD used by your observer program, state one advantage and one limitation.
- List the signaling devices available for PFDs.
- **Demonstrate the correct use and adjustment of a PFD.**
- Describe procedures for inspecting and properly maintaining PFDs.
- If your program issues Type II, III, or V PFD, state the importance of the inflation collar or bladder.
- **If your program issues Type II, III, or V PFD, demonstrate how to inflate the PFD.**
- Discuss your observer program's policy for wearing a PFD while on deck.
- **Demonstrate the HELP position with a PFD on in the water.**
- **Demonstrate the HUDDLE position with a PFD on in the water.**

Immersion Suits

- State the functions and features of an immersion suit.
- **Demonstrate proper donning of an immersion suit within 60 seconds.**
- **Demonstrate how to inspect, maintain, and stow an immersion suit while underway.**
- **Demonstrate oral inflation of floatation collar or bladder.**
- **Demonstrate proper water entry techniques wearing an immersion suit.**
- **Demonstrate swimming on your back while wearing an immersion suit.**

- Discuss the complications involved in donning an immersion suit in the water. If conditions allow, it is recommended that this skill be practiced in the water.
- **Demonstrate tandem and chain swimming while wearing an immersion suit in the water.**
- **Demonstrate “rafting” an injured person while wearing an immersion suit in the water.**
- Discuss safety equipment that should be considered for attachment to an immersion suit (whistle, light, strobe, mirror, Personal Emergency Position Indicating Radio Beacon (PEPIRB), cylume, etc.).

Suggested time: 4 hours

Life Raft/Hydrostatic Release

Goal: Understand the correct mounting, release, launch, and boarding of a life raft.

Objectives: By the end of this presentation, the trainee will be able to:

- List the steps to properly release and launch a life raft.
- **Demonstrate the proper securing and release of the hammer type hydrostatic release and identify last service date.**
- Recognize situations that may affect the safe launching of a life raft.
- **Board a life raft from the water (with or without assistance).**
- **Demonstrate righting a capsized life raft.**

Suggested time: 20 minutes.

SOLAS Kits (Safety Of Life At Sea)

Goal: Recognize where SOLAS kits are located, what they contain, and how the items contained in them work.

Objectives: By the end of this presentation, the trainee will be able to:

- Locate the inspection date, capacity, and type of SOLAS kit.
- **Demonstrate the function of equipment in a SOLAS A kit.**
- List the items found in a SOLAS A kit that are not found in a SOLAS B kit.
- Identify a TPA (Thermal Protective Aid).

Suggested time: 40 minutes.

EPIRB (Emergency Position Indicating Radio Beacons)

Goal: Understand the function and correct use of an EPIRB SAR (Search and Rescue) system.

Objectives: By the end of this presentation, the trainee will be able to:

- List the advantages of the 406 EPIRB SAR system.
- Identify the difference between a Category I and II 406 EPIRB.
- Identify the components of an EPIRB SAR system.
- Describe the important aspects of the proper use of an EPIRB.
- **Demonstrate the proper technique for activating and testing an EPIRB.**

Suggested time: 30 minutes.

Fires and Fire Extinguishers

Goal: Understand fire hazards and basic fire fighting techniques.

Objectives: By the end of this presentation, the trainee will be able to:

- List the critical elements of a fire.
- List the fire hazards aboard a fishing vessel.
- List the classifications of fire and acceptable extinguishing agents for each class.
- **Describe (or if possible, demonstrate) the steps in the proper use of a fire extinguisher.**
- List the safety considerations in fighting a fire.
- Identify the observer program's recommendations regarding the role of the observer in fighting fires.
- Discuss how to identify fire extinguishers that are properly maintained, mounted, and in serviceable condition.

Suggested time: 60 minutes.

Communication Equipment and Mayday Calls

Goal: Understand how to locate and use communication equipment, the steps in making a proper Mayday call, and to read and understand an electronic positioning system onboard a fishing vessel.

Objectives: By the end of this presentation, the trainee will be able to:

- **Demonstrate a proper MAYDAY call.**
- List the types of communication equipment and the proper distress channel.
- Identify the types of emergency broadcasts.

- Determine a fishing vessel's location by using an electronic positioning device or by dead-reckoning.

Suggested time: 30 minutes.

Flares

Goal: Understand the safe and proper procedure for handling, firing, and disposing of pyrotechnic devices and when to use each type.

Objectives: By the end of this presentation, the trainee will be able to:

- Describe the safe and proper steps for firing the parachute type flare.
- Describe the safe and proper steps for firing handheld flares and smoke pyrotechnic devices.
- Describe the safe and proper steps for disposing pyrotechnic devices.
- Identify the conditions for using different types of flares.

Suggested time: 30 minutes.

Signaling Devices

Goal: Understand the general principles for signaling for help in an emergency.

Objectives: By the end of this presentation, the trainee will be able to:

- Describe the difference between active and passive signals.
- Discuss the importance of using both during emergencies.
- List the elements of an effective signal.

Suggested time: 15 minutes.

Observer Safety Trainers' Professional Development and Maintenance Requirements

NMFS has determined that, *at a minimum*, observer safety trainers shall be required to meet the following criteria:

- Completion of a USCG approved Marine Safety Instructor Training course.
- Experience at sea.

To further develop and maintain teaching skills, observer safety trainers shall be required to meet the following criteria:

- Teach or co-teach at least one marine safety topic every year.
- Attend 24 hours of refresher training on relevant topics every three years.

In addition, at least one trainer from each observer program should co-teach at least one marine safety topic with a different program once every 3 years.

Topics to be covered during instructor refresher training shall be at the discretion of the program, and may include (but are not limited to):

- Enhancing methods of instruction.
- Techniques of adventure education and/or experiential education.
- Accident prevention and risk management.
- Learning to lead: learning to manage risk for beginners.
- Marine safety and survival skills (advanced topics).
- Enhancing methods of assessment and testing.

Requirements for assistants or guest instructors are left to the discretion of the lead safety trainer; however, lead trainers are encouraged to select assistants and guest instructors for their experience and expertise. In addition, goals and objectives of safety topics taught by assistants or guest instructors shall, at a minimum, include those identified in the standard safety training curriculum.

Frequency and Content of Observer Refresher Safety Training

Refresher training for observers is critical for reinforcing safety concepts and skills taught during initial marine safety training. Therefore, the NMFS has included requirements for observer refresher training as a key component of its safety training standards. Refresher training may be taken as part of a NMFS or NMFS-contracted marine safety training, or in the form of a commercially available marine safety course taught by an instructor that has completed USCG-certified marine safety instructor training.

At a minimum, active observers shall be required to attend a hands-on marine safety training course within three years of initial marine safety training. Topics to be covered in the observer refresher safety training are listed in Appendix B. Minimum Observer Safety Refresher Topics.

Safety Checklists for Practicals Training

Marine safety training includes training in skills that trainees must not only practice, but also demonstrate competency in, as part of the training. This type of training, also referred to as *practicals* training, poses inherent risks to the instructors and trainees. Therefore, NMFS has developed checklists to ensure that adequate safeguards are taken by the instructors and students to minimize risks during practicals training. NMFS requires that safety trainers use the checklists to ensure that proper procedures are followed and that safety equipment is on hand to minimize training risks. Checklists should also be used by instructors as a tool for raising the awareness of students regarding the risks associated with safety training.

Transportation Checklist

NMFS requires that trainers ensure that all NMFS policies and procedures outlined in NOAA Administrative Order 217-106 (Transportation of Non-Government Personnel as Passengers on NOAA Vessels, Aircraft, and Motor Vehicles) be followed regarding use of government vehicles, if and when these vehicles are used to transport trainees, assistants, and/or guest instructors. Use of 15-person vans is prohibited.

If the policy does not address the following items, the observer program should verify, at a minimum, that:

- The driver is a NMFS employee (or an employee of the contractor, if authorized by the contract and if the contractor is made aware of observer program van use policy).
- The driver has a valid driver's license.
- All passengers use seat belts at all times.
- The driver obeys all traffic laws.
- There are no outstanding traffic warrants against the driver.
- The driver does not have an excessive number of recent moving violations (e.g. more than three in the past year).
- The driver is not under the influence of alcohol or drugs.

Water Skills Checklists

Pool Checklist

- Identify pool hazards as a group exercise upon arrival.
- Trainer-to-trainee monitor ratio does not exceed 1:6 (not including lifeguard).
- Identify individuals who cannot swim, are confined-space or water phobic, have respiratory impairments, or other medical conditions that may require additional attention.
- Lifeguard or trained rescue swimmer must be present at all times.

- At least one person on-site shall have training in rescue breathing and first aid.
- Throwable rescue device is on-hand.
- First aid kit is on hand.
- Shelter must be provided (can include vehicles).
- Indemnity agreement with pool is in place.
- Trainees are paired off, and each individual is aware of medical or physical needs or conditions of their partner.
- Trainees know who their monitor is.
- Pool rules are covered.
- All pool activities must have an educational purpose.
- Trainees and trainee monitors must wear PFDs at all times while in the water, unless donning an immersion suit while in the water.
- Communications equipment is on hand that can request emergency assistance.
- Checklist is reviewed with trainees.

In addition, safety trainers should encourage trainees to bring medical or other concerns regarding the pool practical to their attention well in advance of the pool time so that additional teaching assistance can be sought if required.

Open-water Checklist

Same as above, with the following modifications:

- Identify open-water hazards as a group exercise upon arrival (e.g. lightning, animals, piers, boats, underwater obstructions).
- Instructor verifies in advance that area has been checked for hazards.
- Instructor notifies relevant authorities that training will be conducted.
- Indemnity agreement may not be applicable.
- Trainer-to-trainee monitor ratio does not exceed 1:5.
- Instructor identifies self-rescue areas.
- Instructor identifies off-limits areas.
- Open-water rules are covered.
- All open-water activities must have an educational purpose.
- Trainees do not enter cold water (<70°F) without immersion suit unless there is an additional educational component that warrants this activity and additional safety procedures are in place.

Flares Checklist

- Secure a safe site in advance.
- Notify relevant authorities that training will be conducted.
- Identify hazards as a group exercise upon arrival.
- Flares used must be no more than three years out of date.
- No parachute flares unless done in conjunction with USCG.
- Trainees made aware that they can opt out of the exercise.

- All participants must wear closed-toed shoes.
- Flammability of different types of clothing should be considered (i.e. fleece, wool, cotton).
- 1:1 instructor-to-trainee ratio.
- Second instructor or monitor is present (crowd control is critical).
- Safe disposal for used flares.
- Fire extinguisher is present.
- Goggles are provided for each user.
- Heavy gloves are worn.
- Communications equipment (e.g. VHF) is available for marine users.
- Security plans are available pre- and post-drill.
- First aid kit is available.
- Lights are provided for reading (if at night).

Fires and Fire Extinguishers Checklist

- Secure a safe site in advance.
- Notify relevant authorities that training will be conducted.
- Identify hazards as a group exercise upon arrival.
- Trainees made aware that they can opt out of exercise.
- All participants must wear closed-toed shoes.
- Flammability of different types of clothing should be considered (i.e., fleece, wool, cotton).
- 1:1 instructor-to-trainee ratio.
- Second instructor or monitor is present with backup fire extinguisher (crowd control).
- Fight fire in pairs with instructor nearby.
- Rest of class must stay well back and upwind.
- Ensure cars are away from site.
- Metal burn container is available.
- Float Class B flammables on water.
- Pole, duct tape, and flare are available to ignite fire.
- Pole attachment available for adding fuel.
- Goggles are available for each trainee.
- Heavy gloves are available.
- Water hose if available.
- Communications equipment (e.g. cell phone) available.
- Security plans are available pre- and post-drill.
- First aid kit is available.
- Absorbent pads are available.

Personal Safety Equipment

Safety equipment is critical to surviving an emergency. The following is a list of equipment that each observer must have prior to deployment, whether furnished by NMFS, the observer's employer, or self-purchased. Safety trainers are required to instruct observers on the proper use and maintenance of personal safety equipment as part of the safety training curriculum.

Required equipment

- Working Personal Flotation Device (PFD) with whistle.
- Immersion suit with strobe and whistle.
- Personal EPIRBs (with the current exception of the North Pacific Groundfish Observer Program and the At-Sea Hake Observer Program).
- Weather jacket and pants.
- Boots.
- Gloves.
- Batteries for strobe.

The following is a list of optional equipment that each observer is strongly suggested to have (where appropriate), whether furnished by NMFS, the observer's employer, or self-purchased.

- Personal survival kit.
- Ear plugs.
- Safety goggles.
- Back support belt.
- Wrist brace.
- First aid kits.
- Hard hats.

Additional Considerations

While not part of the standards for observer safety training, NMFS regional observer programs should also consider the following when training fisheries observers in marine safety.

- Compiling regionally based case studies of fishing vessel incidents for “need to know” statements.
- Developing brochures or placards that summarize common sources of injuries onboard fishing vessels.
- Inviting fishing industry representatives to participate in training.
- Requiring wilderness first aid courses as an alternative to Red Cross, AHA, or other first aid training requirements.
- Making observers aware of the inherent risks of safety training and observing (this should occur during recruitment of observers).
- Having observers sign “Assumption of Risk” forms prior to participating in safety training, preferably at the start of the observer training course or even before training (during recruitment).
- Having observers’ employers explain the status of observers during training and what type of insurance (if any) may cover them.
- Developing a database and procedures for tracking of injuries and close calls during training as well as observer deployments.
- Preparing a regional Emergency Action Plan in the event of an emergency during training.

Appendix A: Sample Skills Checklist

A sample safety skills checklist is provided (see following page), that includes all of the skills that each observer must demonstrate competency in as part of observer safety training. The checklist is a tool for safety trainers to use during training to document that competency in each identified skill has been demonstrated for each trainee.

NMFS Observer Safety Skills Checklist

Safety Skill	Trainee's Name												
Participate in the role that demonstrates at least one conflict resolution technique													
Demonstrate proper lifting techniques													
Complete a pre-trip safety checklist onboard a vessel (or simulate completion of a checklist if vessel is not available)													
Perform and/ or participate in a vessel (or simulated) safety orientation													
Demonstrate the correct use and adjust the fit of a PFD													
Demonstrate the HELP position with a PFD on and in the water													
Demonstrate proper donning of an immersion suit within 60 seconds													
Demonstrate how to inspect, maintain, and stow an immersion suit while underway													
Demonstrate oral inflation of floatation collar or bladder													
Demonstrate proper techniques for entry into the water wearing an immersion suit													
Demonstrate chain and tandem swimming while wearing an immersion suit in the water													
Demonstrate the proper securing and release of the hammer type hydrostatic release on a life raft													
Identify the service due date for the hydrostatic release													
Board a life raft from the water (with or without assistance)													
Demonstrate the function of at least one piece of equipment in a SOLAS A kit													
Demonstrate the proper technique for activating an EPIRB													
Describe (or if possible, demonstrate) the steps in the proper use of a fire extinguisher													
Demonstrate the components of a proper MAYDAY call													

APPENDIX B: Minimum Observer Safety Refresher Training Curriculum

Observer Safety Refresher Topics	Trainee's Name							
EPIRB								
Personal floatation devices								
Immersion suits								
Life raft/hydrostatic release								
Hypothermia								
Water practical (Chain swim, star, HELP, Huddle)								
Fires and Fire Extinguishers								
Flares								
Signaling devices								
Communication Equipment and Mayday calls								
Station Bills								
7 Steps to Survival								
Cold water survival skills								
USCG Helicopter Evacuations.								
Simulated Orientation or dock side tour								
Pre-trip vessel safety checklists (completion and review)								
Sampling Safety								
Vessel and Rigging hazards								
Gear Hazards								
Hazardous Marine Organisms								