

## **THE SUCCESSFUL EVOLUTION OF A VOLUNTARY VESSEL SAFETY PROGRAM IN THE USA**

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### **ABSTRACT**

The North Pacific Fishing Vessel Owners' Association (NPFVOA) is a non-profit association dedicated to safety education and training for commercial fishermen and other mariners. Funding is provided primarily through member contributions and also through tuition fees and sales of materials. Members are primarily fishing vessel owners and fishing-related companies, from small salmon boats with single operators to large processing ships with crews of 150 or more. The Association also works together with insurance underwriters and brokers, maritime attorneys and fishing industry support businesses. It works closely with the United States Coast Guard, the Occupational Safety and Health Administration (OSHA) of the United States Department of Labor, the National Institute for Occupational Safety and Health (NIOSH), and many state agencies.

There are three primary components of the NPFVOA Vessel Safety Program – a comprehensive safety manual, a series of safety and survival at sea videotapes, and a

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crew training program. The vessel safety manual includes 300 pages of text and illustrations covering subjects ranging from vessel familiarity for deckhands to stability for the owner and skipper. It is based on the experience of those who have fished the Bering Sea and the North Pacific. The manual calls for vessel owners and skippers to adopt safety practices specific to the vessel's characteristics and service, the waters fished, the season fished and the experience of the crew. The safety and survival videotape series is designed to complement hands-on training classes. The crew training program uses hands-on practice to dramatize and enliven the information presented in the manual and on the videotapes. Courses are designed to be portable and conducted in numerous ports and states.

The NPFVOA also publishes a quarterly newsletter covering its safety program, other relevant safety information and reports of lessons learned from serious fishing vessel accidents.

**Key Words:** Hands-on safety training for commercial fishermen; industry safety initiatives; voluntary safety program

## INTRODUCTION

The 21st anniversary of the North Pacific Fishing Vessel Owners' Association (NPFVOA) Vessel Safety Program, a non-profit organization totally dedicated to safety education and training, is a tribute to the commercial fishermen of the North Pacific who developed the voluntary program in cooperation with the U. S. Coast Guard in 1985. Twenty-one years later, NPFVOA's Program is internationally recognized. The membership base has expanded to include coastal freighters, small passenger vessels, tugboats, recreational boats and marine spill response vessels. The organization's mission has also expanded to address environmental compliance issues as they relate to public safety. The program, regarded as the model safety training program for the U. S. commercial fishing industry, addresses Coast Guard regulations and a multitude of other safety concerns for both the fishing industry and other maritime operators. NPFVOA continues to evolve and serve the dynamic needs of the men and women engaged in what is regarded as the most hazardous occupation in the United States.

The story of how this grassroots effort has evolved over a 21-year period is one of great success arising from an industry and government partnership. Attendance in NPFVOA's numerous U. S. Coast Guard-approved safety-training classes has exceeded 32,000. Since 1985, NPFVOA has provided training all along the West Coast of the United States and the East Coast, including training at the Coast Guard Reserve

Training Center. NPFVOA's Program is a clear example of an industry sector initiating a common-sense approach to solving its safety problems.

NPFVOA's Vessel Safety Program is unique because it is entirely self-supporting through member dues, course tuitions and sales of educational materials. It is governed by a Board of Directors, and an executive director and staff plan and manage day-to-day operations. Vital to NPFVOA's success is its membership base which spans the full range of the industry – from the single-operator fishing boats to the largest processing ships with crews of 150 or more – as well as support businesses and individuals. Training courses and educational materials are available to members and non-members alike; however, members enjoy reduced training rates and discounted educational materials. A diverse membership base provides a means for direct communication with industry. This facilitates early identification of safety issues and concerns, as well as a means for broad and rapid dissemination of safety information.

The organizational structure of the association allows tremendous adaptability in setting attendance levels and flexibility of course offerings, as well as customizing training for operators of different gear types. This is often achieved by holding seminars or workshops on topics the industry needs to address, i.e. new government regulations or health issues for workers.

The success of the Vessel Safety Program is based on several critical elements, including:

1. full involvement and cooperation with the United States Coast Guard and other regulatory agencies;
2. a training system stressing realistic, hands-on experience;
3. professional instructors who are knowledgeable in their respective subjects and about the practical aspects of operating fishing vessels in remote areas under adverse weather conditions;
4. affordable courses that target causes of casualties, along with flexible training schedules and the ability to adapt to the changing needs and increasing sophistication of the North Pacific fishing fleet; and
5. being an organization by fishermen for fishermen, thus fostering credence for the program.

NPFVOA's central location has made it easily accessible to all who seek safety information. The Puget Sound fleet, which is headquartered on the West Coast in Seattle, Washington, accounts for approximately eighty percent of the Alaska landings. Located in Fishermen's Terminal in Seattle, NPFVOA is surrounded by more than 700 commercial fishing vessels moored in this working homeport.

## BACKGROUND

The commercial fishing industry was in a crisis in 1984, when the North Pacific Fishing Vessel Owners' Association (NPFVOA) began to address safety concerns. A rash of North Pacific fishing vessels capsized and sank – with substantial loss of life – which had everyone from government officials to insurance company executives wondering aloud about the future of the fishing industry. Faced with the prospect of controls developed and enforced by the government, which might “not fit” or be weakened or stalled by the government regulatory process, as well as concerns about the cost and availability of insurance, the NPFVOA developed a voluntary safety training program, the Vessel Safety Program.

Recognizing the importance of vessel safety standards and crew safety awareness and training, but lacking the authority to regulate the commercial fishing industry, the Coast Guard was also beginning to develop a unique voluntary safety program in 1984.

When the Coast Guard learned that the NPFVOA had already embarked upon a safety program for its fishermen, it joined efforts. This union produced a set of comprehensive “voluntary” standards aimed at vessel safety and personnel/operational safety awareness and education. Neither organization wanted to wait any longer to establish acceptable safety practices to improve the poor safety record and favorably impact the availability of insurance. Both NPFVOA and the U.S. Coast Guard shared the philosophy that legislating safety in the fishing industry took the responsibility away from the fishermen. Both organizations believed it takes commitment from the skipper and crew to keep things operating in a safe condition. Both also desired a program that would appeal to the sensibilities of fishermen, who were waking up to the senselessness of many of the tragic losses.

## VESSEL SAFETY PROGRAM

There are three primary components to the NPFVOA Vessel Safety Program: the Vessel Safety Manual, the Safety and Survival at Sea videotape/DVD series in English and Spanish, and the Crew Training Program. The educational materials provide the backbone, and the practical instruction provides the heart of the program.

## VESSEL SAFETY MANUAL

The Vessel Safety Manual, originally prepared in conjunction with the United States Coast Guard, was first published in 1986 and has been updated by NPFVOA five times since then, with significant revisions following the Fishing Industry Vessel Safety Act of 1988. Most significantly, the latest edition, published in 2004, is available in text and CD-Rom formats, and allowed for the incorporation of numerous Coast Guard interpretations of the safety regulations as they had evolved over a number of years.

Regarded as the operational standard for the U. S. commercial fishing industry, the manual provides useful and practical measures which address a wide range of problems facing the mariner under normal and emergency situations. It covers a variety of subjects ranging from vessel familiarity for the new hand to stability for the owner and skipper, and serves as a reference guide to help captains and crews establish the safety practices to be used aboard their vessel.

## SAFETY AND SURVIVAL VIDEOTAPE/DVD SERIES

The Safety and Survival at Sea videotapes/DVDs are designed to complement hands-on training classes for the following subjects: Safety Equipment and Survival Procedures; Medical Emergencies at Sea; Fire Prevention and Control; and Fishing Vessel Stability. The videos were translated into Spanish in 2002, after a tragic fire occurred aboard a North Pacific fishing vessel with a large contingency of Hispanic crewmembers.

## CREW TRAINING PROGRAM

Using hands-on practice to dramatize and enliven the information presented in the manual and videotapes, the Crew Training Program offers both shipboard and classroom exercises. All courses are designed to be portable and are conducted in numerous ports and states.

The program consists of 20 Coast Guard-approved courses taught by instructors who are professionals in their specific fields. All classes include as many hands-on practical exercises as possible, in addition to lectures, videos, course literature, and equipment displays. Equipment deployed is supplied by the vessel or the NPFVOA, or a combination thereof.

The primary philosophy behind the training program is “Be prepared. Commercial fishing is inherently dangerous.” There are no ways to remove all the hazards of the sea, nor can human error be entirely eliminated. While the dangers inherent in working at sea cannot be avoided, they are magnified or minimized by the actions of a vessel’s captain and/or crew. No one is ever 100 percent ready, but it is the captain’s responsibility to ensure that the vessel and crew are as prepared as possible for the ever-present possibility of an accident or emergency.

Feedback from individuals who have taken the courses over 21 years attests to the value of the training program. The instruction often provides the first in-water experiences wearing immersion suits, and deploying/boarding/righting life rafts for many mariners. This training has taught them the critical need to fully don their immersion suits before entering the frigid waters of the North Pacific. Many of these owners and operators have so highly valued this training that they require refresher training for returning crew, or require it for new hires before taking their first trip. Participants are encouraged to practice using their own equipment whenever possible. And when they do, it is common for them to discover defects, such as faulty zippers on immersion suits – certainly a more welcome revelation in a pool than in the ocean. During training sessions aboard vessels, it is common for crews to reevaluate where their immersion suits are stowed so as to be “readily accessible” in the event of a fire or sinking. As a result, many have stopped stowing immersion suits in the pilothouse or staterooms, and instead have built special watertight lockers for them on deck.

As a result of training over the past 21 years, NPFVOA has witnessed major cultural changes in safety practices. Crews have upgraded their lifesaving equipment, and relocated lifesaving equipment to make it more accessible, improved access and egress capabilities, and adopted Occupational Safety and Health Administration (OSHA) standards. In 2004 NPFVOA and OSHA formalized their 16-year professional relationship by signing an Alliance. Many companies now require safety training as a condition of employment and have personnel specifically assigned to oversee the safety training of their crews

The Crew Training Program provides limited sea service time and includes the following Coast Guard-approved courses:

- STCW Basic Safety Training
  - Personal Survival Training
  - Personal Safety and Social Responsibilities
  - Fire Fighting
  - First Aid/Cardiopulmonary Resuscitation (CPR)
  
- Safety Equipment and Survival Procedures

Survival theory using vivid visual aids, followed by in-the-water exercises with immersion suits and personal flotation devices (PFDs), inflatable liferafts, and an array of other survival gear. Instruction includes survival at sea, search and rescue procedures, and treatment of hypothermia. Hands-on training covers signaling devices, man-overboard and abandon-ship emergencies, and cold water survival techniques.

- Medical Emergencies at Sea

USCG approved for First Aid and CPR licensing requirements, 46 CFR 28.210 and STCW Elementary First Aid

This specialized class focuses on the unique problems encountered in performing first aid at sea, where the victim has only his crewmates to depend on. Training by medical professionals includes hands-on practice at patient assessment, CPR, wound management, transporting the injured, emergency medical evacuations and other emergency medical procedures. Course concludes with practical scenarios.

- Advanced Emergency Medical Training

USCG approved for First Aid and CPR licensing requirements and 46 CFR 28.210

Taught by the George Washington University's Maritime Medical Access Program, this medical class covers instruction in basic and advanced life saving techniques, including secondary surveys, suturing, intravenous/drug administration, patient packaging for medevac and much more.

- Fire Prevention and Control

Hands-on practice at fighting fires under very realistic circumstances using a 147-foot vessel simulator and a variety of other props at the Washington State Fire Training Academy. Participants learn fire control theory and gain experience at using portable fire extinguishers, SCBAs, fixed fire suppression systems and handling hoses.

- Emergency Drill Instructor Workshop

USCG approved for 46 CFR 28.270

Intended for personnel responsible for the vessel's emergency preparedness, topics covered include procedures for conducting and evaluating USCG required emergency drills, how to run effective safety orientations, realistic drill scenarios, and proper documentation.

- Onboard Drill Orientation

USCG approved for 46 CFR 28.270

This full-day course is conducted on board a vessel and is designed to help crews develop effective emergency response plans and practice realistic drills based on the vessel's own safety equipment and mode of operations. To make this hands-on training as realistic as possible, crews use a variety of lifesaving equipment provided by NPFVOA and their vessel, such as "smoke" to simulate an onboard fire. More than

2300 individuals have participated in Onboard Drill Orientations in Alaska, California, Hawaii and Washington.

- Navigation: Collision Avoidance

Watchkeeping standards; overview of the Rules of the Road and related casualties as a result of violations; and how to plan a voyage, including chart problems. Recommended for the beginner and as a refresher for the experienced seaman.

- Vessel Stability

Understanding the stability booklet; load lines; load limitations; effects of icing, free surface, following seas and other conditions affecting stability. Students learn how to calculate and evaluate various vessel conditions and practice various effects of loading with a stability model.

- Five-part “Industrial” Safety Program

Consisting of five courses, this program was originally developed for use by crews of factory trawling vessels but is really designed to address gear-related injuries on any size vessels and therefore is easily adaptable to be used by other fleets, as well as shoreside processing plants. The Coast Guard and OSHA contributed their expertise in developing these NPFVOA programs, with the goal of expanding emphasis to injury prevention.

- Ergonomics and Injury Prevention
- Crane Operations and Maintenance
- Cargo Handling
- Trawl Deck
- Safety in the Processing Factory
- Occupational Safety and Health Administration (OSHA) Compliance Reviews
- Miscellaneous workshops and seminars, such as Damage Control Training; Onboard Fire Team Training; Crew Endurance Management

## **FUTURE DIRECTION**

The future role for the NPFVOA Vessel Safety Program will be to remain a catalyst for change and continue to assist vessel owners and crews to keep the momentum that has been generated over 21 years. A quote from an NPFVOA member fisherman who has fished in the Bering Sea for years attests to the value of the program:

*“We fishermen used to have a more fatalistic attitude toward our profession: we knew it was dangerous, and we knew lives were often lost. But we accepted this, thinking that this was simply the way of fishing and not much could be done about it. But we were wrong...”*



*NPFVOA helped us focus our attention on the many things which could be changed on a fishing boat — from the small physical items (like placards that point out safety concerns) to the larger changes in attitude and training that are a result of taking safety courses through NPFVOA. We learned how to think SAFETY FIRST.  
NPFVOA has made a difference: lives are being saved.”*