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Fishing Vessel Safety

Stability

**Watertight
Integrity**

Seaworthiness

Survivability

**Safety
Training**

EPIRB

Also inside:

**New Requirements:
Commercial Fishing Industry Vessels**

Lessons Learned from Casualty Reports

Commercial FISHING VESSEL



SAFETY

Fishing Vessel Safety

Where we've been, where we're headed.

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It has been more than 20 years since the Commercial Fishing Industry Vessel Safety Act of 1988 was passed, and almost that long since the 1991 Requirements for Commercial Fishing Industry Vessels were promulgated in regulation under 46 CFR Part 28. The act and implementing regulations were designed to give fishermen safety equipment, emergency systems, and a minimum level of instruction to help them survive a vessel casualty at sea until help could arrive.

After the Safety Act and Regulations

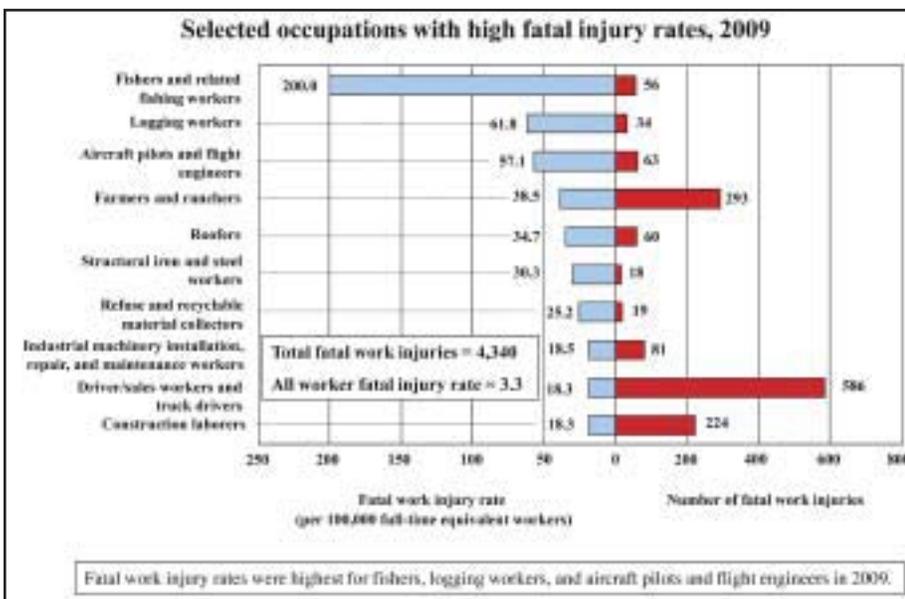
Over the years since the 1988 act and 1991 regulations, the Coast Guard has made many attempts to improve

safety in the commercial fishing industry—some yielding success, and some not. Subsequent to the requirements and standards becoming effective, data shows a significant reduction in the number of vessels and fishermen's lives lost each year.^{1,2}

To put this in perspective, during the 10-year period prior to the act and regulations, an average of well over 200 vessels and more than 100 fishermen were lost annually. For the 10-year period after the safety regulations were implemented, the average number of vessel losses decreased to approximately 140 per year, while the annual fatality average dropped to approximately 70. In the past 10 years, the annual vessel loss average has dropped to under 90, and the fatality average has declined to approximately 45 per year.

The Coast Guard submitted a report and recommendations in 1992 for both the licensing of operators on commercial fishing vessels and a plan to require the inspection of fishing vessels. Neither the licensing plan nor the inspection plan received congressional action. Follow-on rulemaking projects after the 1991 regulations were initiated in 1992, 1995, and 1998 regarding immersion suits and stability requirements; however, they were later withdrawn.

To carry out the Commercial Fishing Vessel Safety (CFVS) Program, the Coast Guard established 61 positions assigned to head-



Over the past several years, fishermen have topped the list of “most dangerous occupations” in the United States. Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2010.

quarters, district offices, and marine safety offices (now sectors) in the mid-1990s. With the absence of authority to regulate commercial fishing industry vessels as inspected vessels, the Coast Guard embarked on an outreach and education campaign.



- conducting research and development,
- informing fishermen on safety issues.

Subsequent to the task force report and recommendations, the Commercial Fishing Industry Vessel Safety Advisory Committee and district CFVS coordinators met

Voluntary dockside safety examinations remain the hallmark of the campaign. During a voluntary examination, a Coast Guard examiner works with owners, operators, and crew to explain requirements, check compliance with federal regulations, and assist the crew in correcting deficiencies, when possible. Discrepancies are brought to the attention of the vessel operator, but no penalty action is initiated. If the vessel is found to be in compliance with all requirements, a safety decal is issued to the vessel that may be valid for up to two years.

A Task Force on Casualties

In the first few years of implementing the CFVS Program, less than 10 percent of fishing vessels were completing voluntary dockside safety examinations. Soon after, a series of incidents spurred new interest in safety and intervention. During a three-week period between the end of December 1998 and the middle of January 1999, four vessels were lost and 11 fishermen died off the East Coast.

The Coast Guard responded by chartering a Fishing Vessel Casualty Task Force comprised of representatives from various Coast Guard offices, the National Transportation Safety Board, the National Oceanic and Atmospheric Administration, the National Marine Fisheries Service, the Occupational Safety and Health Administration, and several advisors from the fishing industry. The task force evaluated the casualties and recommended measures to reduce the loss of life and vessels. Its report "Living to Fish, Dying to Fish" was released in April 1999 with 59 recommendations to improve safety, including:

- coordinating fishery management with safety,
- establishing operator and crew standards,
- ensuring vessels comply with standards,
- establishing safety and stability standards,
- improving [CFVS] program management,

to review the report and develop a long-term action plan for the CFVS Program. Because several items in the developed action plan were not well-supported in the past, the Coast Guard held regional listening sessions to receive public comments on the action items identified in the plan. Surveys were also distributed to obtain feedback and information from fishermen on actions to enhance safety.

To further promote safety and improve outreach in the industry, and following a recommendation of the task force, the Coast Guard established more than 40 additional positions in the CFVS program. These new assignments at field units added personnel who could conduct vessel safety examinations, assist in training fishing crews, and train boarding officers, who could check for vessel compliance.

At about this same time, CFVS coordinators and examiners began focusing on identifying fishing vessels that could be considered high-risk based upon their condition, area of operation, or the fishery in which they were involved. Examiners increased outreach to these targets to gain access and conduct dockside safety examinations. To further focus on high-risk fisheries, such as the Alaska/Bering Sea crab fishery, the Coast Guard began deploying personnel to key port areas prior to a season opening to conduct safety compliance checks. These checks did not constitute a full safety examination; they focused on safety and survival equipment being in serviceable condition, stability conditions, and other conditions of the vessel that could lead to downflooding. These pulse operations were adopted for vessels in other areas of the country with high-risk fisheries and operating environments with positive, casualty-reducing results.

Training Promoted

Numerous organizations such as the North Pacific Fishing Vessel Owners Association, the Alaska Marine Safety Education Association, and state sea grant pro-



grams have been providing safety and awareness training programs for over 25 years. To provide training and encourage fishermen's participation in the CFVS Program, the Coast Guard staged damage control training trailers, damage stability trainers, intact stability trainers, and emergency position-indicating radio beacon (EPIRB) test kits around the country in the 1990s. The Coast Guard also offered safety and awareness training programs in various port areas, in fishing communities, and to industry groups. Many other programs exist that train fishermen and individuals to serve as drill conductors on fishing vessels.

There have been various recommendations on enhancing safety for and competencies of fishermen through training. In a 1987 study, "Uninspected Commercial Fishing Vessel Safety," and marine accident reports, the National Transportation Safety Board recommended that minimum safety training standards be established for fishermen. In 1991, the National Research Council report "Fishing Vessel Safety, Blueprint for a National Program" recommended requiring education and training with certification. And in 1997, the National Institute for Occupational Safety and Health recom-

casualty investigations over the years. Common themes in the investigation reports include enhancing and expanding safety orientations, emergency instructions, and survival training requirements. Additional training topics and areas recommended for fishermen include:

- fire prevention and firefighting,
- damage control,
- stability,
- navigation safety,
- survival awareness.

Increased awareness and greater emphasis on safety after the casualty task force report coupled with continued vessel losses and crew fatalities off New England sparked fishing industry groups, local communities, and government agencies to partner in developing and conducting safety and survival training workshops and programs. This was first implemented in New Bedford in October 2005. It was so well received that the training program was expanded and has become a model for programs in other parts of the country. Still, it was not mandatory.

New Authorities Sought—and Gained

In response to numerous safety studies and reports and a renewed awareness and interest in training for crews and safety of vessels, the Coast Guard began requesting additional regulatory authority in 2005 through legislative change proposals. Specifically, we proposed a pilot project for mandatory safety examinations in areas of the country where casualty rates were the highest. We also began seeking requirements for crew training and new or upgraded types of safety equipment.

Re-enforced by a number of casualties with multiple fatalities in 2006 and 2007, there developed a new congressional interest in fishing vessel safety. As a result, the House passed H.R. 2830 in 2008. The bill would have made some significant changes in requirements for the industry and authorities for the Coast Guard, including:

- treating documented and state-registered vessels the same for requirements;
- establishing three nautical miles (NM) from the baseline as the operating boundary for equipment;
- making dockside safety examinations mandatory (vessels operating beyond 3NM of the baseline);
- adding new equipment and training requirements;

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mended that basic fishing safety training be completed by fishermen. Also, the 1999 casualty task force recommended required refresher training for drill conductors and crew competency requirements be instituted.

Many safety recommendations having to do with training resulted from commercial fishing industry vessel

Recent Fishing Vessel Casualties

Even with a re-invigorated interest in and action on fishing vessel safety, serious casualties have continued.

In April 2001, the *Arctic Rose*, a 92-foot steel-hulled trawler/processor, was lost off St. Paul, Alaska with 15 crewmembers dead or missing. In October 2002, the *Galaxy*, a 171-foot steel-hulled long-liner/processor, suffered a fire and explosion in the Bering Sea, leaving three crewmembers dead or missing. Then in 2003, the *Atlanta* capsized and sank off Chatham, Mass., leaving three crewmembers dead, and the *Candy B II* sank off Nantucket, leaving four dead.

Every year since then, at least one significant vessel casualty occurred leaving multiple crewmembers dead or missing, including:¹

- 2004 – *Northern Edge* capsizes and sinks off Nantucket, five fatalities;
- 2005 – *Big Valley* sinks in the Bering Sea, five fatalities;
- 2006 – *Ocean Challenger*, *Catherine M*, and *Ash* capsize and sink off Alaska and the Oregon coast; three, three, and four fatalities, respectively;
- 2007 – *Lady Luck* and *Lady of Grace* sink off New England, two and four fatalities;
- 2008 – *Katmai* and *Alaska Ranger* sink in the Bering Sea, seven and five fatalities;
- 2009 – *Patriot* and *Lady Mary* sink off Mass. and N.J., two and six fatalities;
- 2010 – *Majestic Blue* sinks in the central Pacific, two fatalities.

Endnote:

¹ Marine Information for Safety and Law Enforcement database.



Majestic Blue



Lady Mary



Ocean Challenger



Lady Luck



Lady of Grace



Galaxy

U.S. Coast Guard photos.

Safety Statistics

Vessel losses have been the leading cause of fatalities over the years.

Falls overboard account for the second-highest cause of fatalities in the industry. Between 2000 and 2009, falls overboard led to 155 deaths.¹

Significant in this statistic: Not one of the dead was wearing a personal flotation device.

Endnote:

¹ "Commercial Fishing Deaths-United States, 2000-2009," Morbidity and Mortality Weekly Report (MMWR), July 16, 2010.

- expanding stability, classification, and load line requirements for fishing vessels;
- establishing grant programs for training and research;
- reauthorizing and expanding the advisory committee.

In 2009, the same provisions were included in H.R. 2652, but again the bill did not become law. However, in September 2010, H.R. 3619 was passed by Congress and the president signed the Coast Guard Authorization Act of 2010 on 15 October 2010. The provisions noted above are key portions of the act that will impact safety on commercial fishing vessels and give the Coast Guard additional authorities. When implemented, we fully expect these new requirements will help reduce vessel losses and crew fatalities, so that commercial fishing is no longer the most hazardous occupation in the United States.

Others Embrace Safety Requirements

The National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) requires fishery observers aboard vessels fishing under certain permits. In an effort to monitor by-catch and ensure these vessels were safe for carriage of the observers, NMFS proposed a rule in 2006 clarifying the requirement for a Coast Guard safety examination that had already been in effect since 1998. This rule became final in 2007, so now any vessel subject to observer carriage must successfully complete a Coast Guard dockside safety examination and be issued a safety decal. The observers also complete a vessel safety checklist to ensure all critical safety and survival equipment has been checked and tested in accordance with the regulations. Further, they complete a safety orientation, review safety instructions, or participate in a drill on the vessel.

Regional fishery management councils develop fishery management plans. Under the Magnuson-Stevens Fisheries and Conservation Management Act, the councils are required to ensure that their conservation and management measures also promote the safety of human life

at sea. The Coast Guard is a non-voting member on each of eight regional councils. Our representatives aid fisheries managers in addressing various management alternatives by providing them with expert advice on the operational realities of at-sea law enforcement, as well as vessel and crew safety. We will continue to champion safety in fisheries management regimes and provide information and recommendations from our Commercial Fishing Industry Vessel Safety Advisory Committee.

Additionally, several states are partnering with the Coast Guard to promote fishing industry safety. Initiatives such as requiring crew training and safety checks on vessels with state permits are examples of programs that are already in effect or being considered. Tribal nations on the Great Lakes have instituted fishery management and enforcement programs. The Coast Guard has memorandums of agreement with several tribes to provide enforcement officer and examiner support and training and to promote safety programs for tribal fishermen.

The Way Forward

While the Coast Guard and industry have made significant strides in improving safety and survival of fishing vessels and crews, the Department of Labor's Bureau of Labor Statistics has listed "fishers and related fishing workers" as the occupation with the highest fatality rate for the past five years in a row. The latest report on fatal occupational injuries indicates that the fatality rate in the fishing industry is much higher than the average rate for all workers (see chart on first page of article).

With all the efforts to improve safety in the commercial fishing industry, there remains much that can still be accomplished to reduce the loss of life and vessels, even with the additional authority and new requirements in the 2010 Authorization Act. As long as commercial fishing is the most hazardous occupation in the country, the goal of the Fishing Vessel Safety Program will be to increase the level of safety so that it is no more dangerous than any other segment of the maritime community. We can go a long way in effecting this by:

- Increasing the rate of safety compliance with existing standards and requirements through additional education and outreach programs. Promoting, supporting, and helping facilitate existing safety awareness and crew competency training programs will raise the knowl-

edge and skills of all fishers. We need to encourage new and expanded programs, whether community-based or offered by industry organizations.

- Expanding and developing better lines of communication with the industry. Established websites such as the Coast Guard's www.fishsafe.info and <http://homeport.uscg.mil> and numerous industry sites can be made more visible and marketed to fishermen to make them more aware of available resources.
- Expanding awareness and distribution of safety information fliers, alerts, and references to fishermen during dockside contacts and promoting their availability on the above websites and in trade publications.
- Expanding the dockside examination program to the fullest extent resources permit. As mentioned previously, less than 10 percent of fishing vessels were completing voluntary dockside safety examinations shortly after the CFVS Program began, and unfortunately, this is still the case today. Increasing the number of qualified examiners in the Coast Guard Reserve and Auxiliary ranks will provide additional capacity and capability. Over the past five years we have been averaging more than 7,000 dockside exams and we will strive to increase that level by 10 percent per year until the mandatory exam requirement can be implemented. Mandatory exams are estimated to be applicable on about half the fleet, or approximately 35,000 vessels. We will also seek to increase compliance on vessels not required to complete an exam.
- Increasing compliance with and enforcement of safety regulations through risk-based "safe catch"-type operations and targeting high-risk/high-casualty fisheries. Vessels found with especially hazardous conditions should be required to correct deficiencies before getting underway, or their voyages terminated if at sea. Compliance boardings at sea have been averaging over 7,000 per year. Again, we should seek to increase this number as resources and operational tempos allow.

- Improving industry risk management practices and promoting a heightened safety culture with fishermen. Outreach and education programs will help facilitate this effort.
- Partnering with fisheries resource managers to reduce risk by embracing safety considerations in all fishery management plans and policies. Increasing our visi-

New Requirements Considered

After the rulemaking projects regarding immersion suits and stability requirements were initiated and then withdrawn in the 1990s, a new regulatory project began in 2003. Work progressed slowly and it became evident that the Coast Guard needed additional information and feedback from the industry and public on requirements that might be considered in the rulemaking project, based on recent studies and safety recommendations.

An advanced notice of proposed rulemaking (ANPRM) was published on March 31, 2008 and the comment period closed on July 29, 2008, but was reopened on August 13, 2008 until December 15, 2008. Two public hearings were held in Seattle, Wash., on November 21 and 22, 2008.

The ANPRM discussed the history of Coast Guard rulemaking under the Commercial Fishing Industry Vessel Safety Act of 1988 and the need for further rulemaking. Thirty questions were posed for public comment that could be grouped into the following general topic areas:

- stability and watertight integrity,
- causes of vessel loss other than stability and watertight integrity,
- risk awareness,
- training and drills,
- safety and survival equipment,
- regulatory costs and benefits.

Comments received in response to the ANPRM and the public hearings, information from recent studies and reports, and safety recommendations from fishing vessel casualties are all being considered as we move forward with the rulemaking project. At the time of this writing, and in response to the passage of the Coast Guard Authorization Act of 2010, the rulemaking is being internally reviewed and may be revised before administrative review.

bility and participation at regional management council meetings are an integral part of this effort.

Authors' note:

Discussions on several of the topics in this article were not extensive, as there are other articles in this edition that provide more detail.

About the authors:

CAPT Christensen's earliest exposure to commercial fishing vessel safety was as the first Commercial Fishing Vessel Safety Coordinator at Marine Safety Office Portland, Ore., from 1992 to 1994. A 1987 graduate of the California Maritime Academy, he has spent his career dedicated to marine safety, culminating in his assignment as Office of Vessel Activities Chief at Coast Guard headquarters.

Mr. Kemerer served as the 1996-1997 Fishing Vessel Safety program manager prior to retiring from active duty with the U.S. Coast Guard. After employment in the private sector, he returned to the Coast Guard as a Commercial Vessel Safety Specialist in the Office of Vessel Activities, Fishing Vessel Safety Division at Coast Guard headquarters, and later was appointed as the division chief.

Endnotes:

¹ "Living to Fish, Dying to Fish," Fishing Vessel Casualty Task Force Report, March 1999.

² "Analysis of Fishing Vessel Casualties," U.S. Coast Guard, October 2008.

