Remain Upright by Fully Understanding Vessel Stability

This Safety Alert addresses concerns related to vessel stability and watertight integrity. Recently, a marine casualty involving a fishing vessel in the Bering Sea resulted in multiple fatalities and complete loss of the vessel. A Marine Board of Investigation is currently analyzing the various circumstances surrounding the casualty. Although the investigation is not complete, testimony and fact finding indicate that vessel owners, operators, and crews should give special consideration to vessel stability concerns.

The need for operators to understand their vessel’s Stability Instructions (SI) cannot be overstated. It is important to understand the document. Operators and crew should seek out opportunities to further their knowledge of stability via courses, training, workshops, and visits from Naval Architects. They should also take advantage of other various initiatives, both mandatory and voluntary, to discuss and compare a vessel’s current SI to the actual loaded condition prior to departing port. An independent review of a vessel’s loaded condition, equipment, and operations can often provide important insights.

continued on next page

Moving loads to and from the vessel with a crane provides an opportunity for accidents. Many things can contribute to an accident, one of which is an unbalanced load. Every load has a center of gravity (CG), that is, a single point in the load around which the load is perfectly in balance. An example of this is a teeter-totter. When the two individuals on each end of the board are in balance, their combined CG is where the board rests on the seesaw. The importance of determining the center of gravity in making a safe lift is that the load will shift until its CG is directly under the hook. To prevent this shifting effect, either the load needs to be assembled so that its CG is physically in the center of the load or the sling lengths adjusted to keep the hook over its CG. When stacking goods on a pallet, evenly distribute the weight. Avoid placing heavy items on one side and light items on the other. Not doing so could cause the load to shift when lifted and the items to fall from the pallet. By paying attention to keeping the load in balance and assuring through our rigging the load will remain in balance while being lifted, many accidents can be avoided.
Operators can significantly reduce the risk of capsizing by performing the following actions:

- Routinely review and update vessel SI
- Stay below the limits for vessel and cargo detailed in SI
- Ensure SI reflect the vessel’s current arrangement, equipment, and operations (lightship and loaded cargo/fishing gear conditions)
- Follow good marine practice by re-assessing the SI every five years

Operators should confirm the accuracy of their SI whenever a vessel undergoes any of the following actions:

- Major conversions or substantial alterations (See 46 CFR 28.50 and 28.501, respectively)
- Changes to a vessel’s rigging, deck, or fishing equipment (including pots)
- Changes in principal dimensions, cargo hold, or tank capacities
- Circumstances of weight creep (i.e., the accumulation of extra gear, equipment, and parts carried aboard the vessel)
- Any other weight change variations which may occur

Carry pots?

- Pay special attention to pot weights
- Annually weigh a percentage of them to verify if the actual weight (including shots of line and buoys) matches that recorded in the SI
- Weigh them wet – soaked lines can add as much as 15 pounds per shot
- Consult a Naval Architect for loading recommendations and amendments if pots are heavier than what is listed in the SI

Icing makes a vessel dangerously unstable:

- Regulations for SI assume only 1.3 inches of accumulation on horizontal surfaces
- Real life conditions easily and often exceed 1.3 inches of icing
- Unless tested for a value over 1.3 inches a vessel’s capsizing and sinking risk increases when that value is exceeded on horizontal surfaces
- A vessel’s center of gravity can rapidly rise when freezing spray accumulates high above the main deck
- Operators should use all available resources to determine if icing and freezing spray is forecasted in their operational location for the next 48-72 hour time window
- If icing conditions are forecasted or present, operators should seek shelter, reduce speed, change course, and manually remove ice
- If forecasted prior to departure, operators should consider reducing the amount of bait, gear, and pots

Operators should perform the following actions to maintain watertight integrity:

- Follow SI associated with watertight doors (WTDs) and hatches
- Frequently train and inform crew to habitually close watertight doors and hatches at sea
- Label WTDs to be closed
- Keep hatches closed to the greatest extent possible
- Practice closing WTDs that are routinely permitted to be open during emergency drills

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational, or material requirements. Developed by a Coast Guard Marine Board of Investigation in conjunction with Coast Guard District 13 and 17 Prevention Divisions. Questions may be sent to HQS-PF-fldr-CG-INV@uscg.mil.

CAPTAIN OF CAPSIZED VESSEL RECOUNTS DRAMATIC RESCUE OF CREW MEMBER

By Daniella Rivera, July 31, 2017

He’s been hailed as a hero after risking his life to save a crew member from a capsized fishing vessel, but if you ask him, Captain Christian Trosvig will tell you he’s just a captain who did what a captain is supposed to do when his boat goes down.

Trosvig realized there was a problem on board the Grayling on Monday, July 24, while salmon fishing off the coast of Kodiak, when his crew members told him the boat was taking on water. The four men on board started pumping water out of the boat and trying to head for shore. Skiff man Fred Simeonoff jumped in the skiff and detached it from the boat. Looking back, he says he’s glad he didn’t bother with grabbing the survival suits on board because minutes later the boat tipped over.

“I saw a wave come and I kind of screamed, and I told Chris and everyone else to get out of the house and they ran out on deck and they tried to jump in the skiff,” said Simeonoff, but it was too late. “The boat literally rolled on top of them and they all fell in the water.”

Trosvig was able to get into the skiff with Simeonoff, and another crew member was picked up by another nearby skiff, but the fourth crew member, identified as Brandon, still hadn’t made it out of the boat.

“When it went over, Brandon got his foot stuck, got stuck and the water pushed him back inside the vessel,” explained Trosvig, saying when the boat overturned, Brandon became trapped in an air pocket.

He says roughly 20 minutes later, Brandon emerged looking lifeless and he instinctively dove back in to save him.

“It was something I didn’t think about, it was something I just did. It was like, I’m the captain, captain goes down with the ship, the captain saves the crew,” said Trosvig.

“He was very rigid when we pulled him into the skiff. He was a corpse. He was gone,” said Trosvig, who immediately pulled off Brandon’s sweatshirt and started performing CPR.

Trosvig administered compressions, while Simeonoff gave the breaths. After several rounds of CPR, the men say Brandon’s eyelashes started fluttering and his fingertips started to move. “The very first words that came out of his mouth was, ‘Am I alive?’ And I hugged him and kissed his forehead and just started weeping and said, ‘Yes, you are alive, Brandon, you are alive,’” said Trosvig.
AFTER FALLING TO HISTORIC LOWS, ALASKA COMMERCIAL FISHING DEATHS ON THE RISE

By Annie Zak, August 3, 2017

After a recent historic year of no recorded deaths in Alaska’s commercial fishing industry, fatalities in the sector known for its dangers have once again spiked.

There have been 10 commercial fishing deaths in Alaska so far in 2017. A large portion of this year’s deaths were from the fishing vessel Destination. The six men on the boat were later legally declared dead. The other deaths were a man overboard on the fishing vessel Dances with Clams in the Copper River Delta in May, the June capsizing of the boat Miss Destination in Marmot Bay off Kodiak Island which killed two, and a person overboard from the Lady Colleen in July in Ugashik Bay.

Since the 1990s, commercial fishing fatalities in Alaska generally have been on a downward trend. But year-to-year, the figure can vary dramatically. It’s hard to sort out a specific reason why the number of deaths rises or falls over short periods of time, experts in the industry say. “Whenever you’re dealing with numbers that are relatively small, there’s cycles of high and low,” said Jerry Dzugan, “It’s hard stuff to study because of all these compounding variables that affect it.”

Some of those factors, he said, include weather, how many fish come in during a given season, and the price of fuel (which could affect how far from the shore fishermen want to travel). “This year, a new theory of mine — we had a lot of fish coming in in the salmon industry. When you’re in that much abundance of fish, there’s a tendency to overload because you’ve got so many fish,” Dzugan said. “Overloading obviously is a risk, sleep deprivation is a risk … and when there’s money coming in — ca-ching, ca-ching, ca-ching, ca-ching — who wants to stop?”

The Coast Guard and the Centers for Disease Control and Prevention’s National Institute for Occupational Safety and Health both track deaths in the industry, but they do so slightly differently. The Coast Guard goes by federal fiscal year — October through September — and only counts operational fatalities while vessels are out at sea. NIOSH goes by a calendar year and is a bit more inclusive, also tallying deaths that happen on shore in conjunction with fishing work, as well as those like work-related suicides, homicides and drug overdoses.

So far this year, both agencies have recorded 10 fatalities. “For 2017, so far it seems like a tragic year for fishing vessel fatalities and we’re just a little more than halfway through the year,” said Devin Lucas, an occupational safety scientist for NIOSH in Anchorage. “Hopefully there aren’t any more. It does seem to be the wrong direction to keep the decreasing trend going.”

Scott Wilwert, fishing vessel safety coordinator with the Coast Guard in Alaska, said there’s no specific answer for why deaths went up this year. “There’s no one place to hang your hat and say, ‘Oh, I know what will fix all this,’” he said. He added that the death of six people at one time on the crabbing boat Destination is “huge.”

continued next column

from previous column

“We’re still moving in the right direction compared to where we were (in the ’90s),” he said, “but this year is much different from the last two years, when we had zero and two.”

Declines of such deaths in Alaska in the 1990s had a lot to do with the increase in safety equipment on vessels, such as life rafts, immersion suits and radio systems to send out distress signals, Lucas said. That was shortly after the federal Commercial Fishing Industry Vessel Safety Act of 1988. Marine safety training has also improved over the years. Death from falling overboard can usually be prevented by wearing flotation devices, Lucas said. It isn’t required for commercial fishermen to wear life jackets when they are aboard their boats, though Lucas said his agency has recommended for years that it be mandatory. Between 2000 and 2014, NIOSH found that there were 210 fatal falls overboard in the commercial fishing industry nationwide, and none of those people were wearing a flotation device when they drowned.

In its July report, NIOSH included a list of recommendations to improve safety in the industry. Those include safety training for fishermen, monthly emergency drills, fatigue management policies, use of a “man-overboard” alarm system, and installation of safety devices on deck machinery.

This course covers recognition of hazards and risks associated with a pandemic influenza event, and developing strategies to assist businesses and communities with realistic preparation for a pandemic event.

STUDENTS WILL LEARN...

- Potential impact of a pandemic influenza event on businesses and communities
- Critical elements of a preparedness plan and realistic strategies for supporting continuity of business
- Strategies for controlling the spread of the virus and minimizing exposure to employees and family

Resources available from OSHA and other government agencies

OSHA INJURY AND ILLNESS RECORDKEEPING

Form for electronically submitting injury and illness data available August 1, 2017

On Aug. 1, OSHA launched a web-based form that will allow employers to electronically submit required injury and illness data from their completed 2016 OSHA Form 300A. The webpage will offer three options for submitting data, and includes information on reporting requirements, a list of frequently asked questions, and a link to request assistance with completing the form.

OSHA published a notice of proposed rulemaking in June to extend the deadline for electronically submitting the data to Dec. 1, 2017. The proposed extension gives those affected sufficient time to familiarize themselves with the electronic reporting system, and provides the new administration an opportunity to review the new electronic reporting requirements prior to their implementation. For more information: https://www.osha.gov/news/newsreleases/trade/07142017
FUEL SAFE

WHAT’S SO BAD ABOUT A FEW DROPS OF OIL IN THE WATER?
By Sara Thompson, August 2017

You just finished fueling your boat when two drops of oil drip into the water. You think what’s the big deal? There is a lot of water in the ocean, how can two drops of oil make any difference?

Those two drops, when combined with the other small leaks, drips, and spills, can have a big impact on the health of areas like the Puget Sound. A single quart of oil has the potential to foul more than 100,000 gallons of water. Oil is toxic to the environment and the damage starts as soon as the oil hits water. A 2011 Puget Sound Toxics Assessment estimated that 230 tons of petroleum products are spilled annually in the 12 counties bordering Puget Sound.*

Spilled oil can have a particularly negative impact on fish stocks. Scientists investigating why herring stocks failed to recover after the 2008 spill showed that even very low concentrations of oil can cause embryonic fish to be born with a mild heart defect, significantly lowering their chance for survival.

When you consider that approximately 4.4 million people currently live on or around Puget Sound, and more are moving to the area at a historic rate, it is easy to imagine the pressure this puts on the health of the entire Puget Sound ecosystem. To have a healthy environment, everyone can do their part to avoid oil spills to water because every drop counts.

* More information about this Toxics Assessment as well as an interactive map of oil spills in Washington is available at https://fortress.wa.gov/ecy/coastalatlas/storymaps/spills/spills_sm.html

OTHER NEWS

EPIRBs ALONE DO NOT SAVE LIVES
Mario Vittone, August 10, 2017

I love EPIRBs. When asked what one thing I would take with me offshore, I always answer: an EPIRB. There is simply no valid argument against these devices. I recommend them to friends, insist on them for family and think anyone who goes to sea without one is just plain stupid.

Now that we’ve cleared that up, here is another thing I believe: EPIRBs cannot save your life. All they can do is tell the rescuers where the EPIRB is — not you, not your boat, not your life raft. If I could remember the number of searches I have been on following an EPIRB activation — where we never found a thing and no one came home — that number would hollow out your soul.

Though they are attributed with saving the lives of over 1,500 mariners per year, in my career I have seen more risky decisions made — many of which ended in tragedy — because an EPIRB was used as a sort of “Easy Button” to reset the game if things went wrong. They can’t. EPIRBs are dangerous when boaters think that having them (alone) is enough.

EPIRBs won’t help you stay warm. You can’t use them to stay afloat. They will not keep you out of trouble. And if you don’t feel safe making the trip without them, then you have no business making the trip at all.

from previous column

Proper Registration
Just like your VHF radio, your EPIRB needs to be registered. It’s the information in that registration that gives the search and rescue teams some pretty vital information about what they are looking for. And it can include more than just who to call and your vessel’s particulars. In fact, if used correctly, your EPIRB registration data can send rescuers your entire float plan.

While the registration allows you to list two emergency contacts, with up to four phone numbers each, the most unused field in EPIRB registrations is the “Additional Data” field. It’s a 500-character space where you can write whatever you want.

Your EPIRB registration can be updated as often as you like with information such as “Leaving 08-12-17—0800 from Apollo Beach, Heading for Dry Tortugas. 4 POB. “ (I wish.) Or you can act as your own best emergency contact and provide a link to your float plan.

I use the “Additional Data” field to link to my online float plan. If I keep that link updated, it becomes all I really need in my additional data field, and provides searchers the best possible chance of finding me.

You don’t need to have your own website to link to your float plan. You can use Dropbox or Google Drive to simply link to your Word or PDF float plan document and provide everything that might possibly be helpful to searchers.

Proper Use
You might hate hearing this (sorry), but Category I EPIRBs – the kind that automatically release and “float free” from your vessel — do not always automatically release or float free from your vessel. They have to be mounted correctly. What “correctly” is can be a very nuanced thing that depends on vessel type.

When the sailing vessel Cheeki Rafiki went missing in May 2014, the vessel EPIRB was not activated. From the official report: “No alert was received from Cheeki Rafiki’s EPIRB, possibly because it could not be retrieved from inside the vessel following the rapid capsize and consequent inversion after the keel detached from the hull.”

Sailboats tend to capsize and take a long time to sink. The hydrostatic releases that allow EPIRBs to release from their mount will not release until submerged at a certain depth. If mounted inside the cockpit of a sailing vessel (a common thing), hydrostatically released EPIRB may not get to release depth — ever — and floating free is not possible from the midline of a capsized vessel. I suggest sailors find a way to mount their EPIRB on the outside of the rail.

Practice Makes Perfect
At sea, in an emergency at night, is no time to be reading the directions. If you haven’t practiced activating your EPIRB, then you will not be good at using it during an emergency. Though you should not actually activate the EPIRB to “test it,” you should inspect and follow testing guidelines for your EPIRB monthly. If you are not removing the EPIRB from its mount every month, completely, then you are not inspecting your EPIRB. Get on it.

Remember, an EPIRB won’t save your life — it will only make it much easier for someone else to do that. And let me emphasize, I am not saying EPIRBs are bad. I’m suggesting that perhaps, some of us may be using them incorrectly, with a false sense of confidence. EPIRBs are a tool of true last resort. Their activation often follows chance, after chance to call in for help that might have avoided the dire emergency you’re now facing. Don’t rely on them as the only gear you need to be safe, but do have them aboard and treat them as the vitally important tools they are by updating your registration and checking the condition of your EPIRB, often.

These electronic devices are last-ditch wonder-flares for distressed mariners lost at sea, and for that purpose they are my favorite must-have things aboard any vessel. But they should never be used as a planning tool. They are not to be taken into account when making ANY decisions about what is safe and what isn’t, or about what you can handle and what you can’t. They will not keep you out of trouble. And if you don’t feel safe making the trip without them, then you have no business making the trip at all.
FIVE THINGS YOU SHOULD KNOW ABOUT FLARES
Mario Vittone, August 31, 2017

Only once in my career as a USCG helicopter rescue swimmer did I ever launch on a flare sighting that turned into an actual rescue. Three commercial fishermen were at anchor, sleeping, when their shrimp boat caught fire. By the time they got on deck, the wheelhouse was ablaze, and the only thing on the boat not on fire was these three guys, the Type 2 PFDs they were wearing and the one flare they grabbed out of the flare locker. Let’s face it: if you ever find yourself lighting off a flare to signal distress, things have gone very, very, wrong for you. But you have to have them, and given that they are tools for very desperate times, you should know a little about them before then. Here are five things you may not have considered (but should) about the flares you are required to carry.

1. Flares never really expire:
Federal regulations require that all pyrotechnic devices must be labeled and marked. One stipulation involves the expiration date. Specifically, it states, “The expiration date must be not more than 42 months from the date of manufacture.” This rule exists to make it harder for you to have bad flares aboard — not because they can’t last more than 42 months, but because the Coast Guard knows many boaters can’t be trusted to inspect them regularly. They can go bad, they can rust or be damaged, but they don’t really expire. (Highway flares — made of the same stuff as signal flares — have no expiration date.) From experience, I can tell you that flares that expired a decade ago have a very high probability of going off. If the casing is cracked or deteriorated in any way, the flares are bad. But all things being equal, flares far outlive their expiration date. That doesn’t mean you can count them as your required flares aboard (rules are rules) but nothing says you can’t keep them for use in an emergency. If you have space, keep undamaged expired flares in a box marked “expired flares.” If your three handheld day/night flares don’t get you rescued, you’ll have backup options for years to come.

2. The day end can be better at night than the night end:
If you’ve burned through the night ends of your day/night flares, don’t give up. The “day” end works great at night. That’s because the “day” flare does not just put out orange smoke; it puts out very, very hot orange smoke. Search aircraft have FLIR (Forward Looking Infrared — a misnomer because most lenses now pan 360 degrees) and crews flying at night are equipped with NVGs (Night Vision Goggles). The long trail of hot smoke will create an ever-widening wedge that points directly to you and

3. Flares can deflate life rafts:
Pyrotechnic flares can drip. Flares are a form of phosphorous, on fire, and can produce a liquid-hot drip of molten pain when misused. If you let that stuff fall onto your life raft, you’ve got yourself a hole and rapidly escaping air. So, if you find yourself using a handheld flare, try your best to point the thing downwind and hang it out over the side of life rafts and inflatable craft as far as possible.

4. Storage matters:
Boats are terrible places to keep things, especially things affected by temperature and humidity (like flares). I often see flares stored in Ziploc bags. Personally, I dislike that method. Though it offers some protection from moisture, it does nothing to reduce impact damage if they get knocked around in a drawer or on the shelf behind the navigation table. What do the pros do? They keep flares in a plastic box. Watertight storage is great, but I go a little further and drop in a desiccant packet to make sure that the flares (and any strikers) stay very dry.

5. If you don’t practice, then you don’t know what you are doing:
Remember: by the time you need to light these things off, things have gone very wrong. It will not be the best time to read instructions. If you have never lit off the type of flare you have, you are not ready. Practicing legally and safely is not hard at all; you just need to inform your local Coast Guard district where you intend to light off some practice flares. They will add your drills to their LMS (Local Notice to Mariners) and you will be free to fire away. This keeps them from launching a rescue when someone reports seeing your flares (and they will). Ideally, you should do this offshore; I suggest a solid half-mile (or downwind) from other vessel traffic. The smoke and fumes from flares are hazardous. Use your expired flares to practice, but make sure they are the same make and model as the ones you have aboard. If you don’t have any expired flares, buy a fresh set just to burn. It’s worth it. Read the directions and do everything the manufacturer suggests; you’ll be fine. And you will leave that exercise with the confidence and ability to use the devices we all hope you will never need to use in an emergency.

continued next column

SAFETY IN NUMBERS

The NMTA Health Trust provides greater stability, lower rates and better benefits for you and your employees.

Call or click today to learn how we can help you, your employees and your bottom line.
425.641.8093 • www.npfvoahealthtrust.com

NPFVOA Vessel Safety Program

Fall 2017, Issue 98
OCTOBER 2017 - FEBRUARY 2018 CLASS SCHEDULE

**STCW 5-DAY Basic Training (BT)**
$1,100 Members / $1,175 Non-members
Nov. 6-10, Dec. 4-8, Jan. 15-19, Feb. 5-9

**STCW Basic Training Refresher**
$875 Members / $900 Non-members
Nov. 7-9, Dec. 4/7/8, Jan. 16/18/19, Feb. 5/7/8

**STCW Basic Training Revalidation**
$725 Members / $775 Non-members
Nov. 7&8, Dec. 4&7, Jan. 16&18, Feb. 7&8

**Medical Emergencies at Sea**
$120 Members / $135 Non-members
Nov. 8, Dec. 8, Jan. 19, Feb. 5

**2-Day Basic Fire Fighting**
$575 Members / $600 Non-members
Nov. 6-7, Dec. 6-7, Jan. 17-18, Feb. 6-7

**Drill Instructor Workshop**
$110 Members / $135 Non-members
Nov. 2, Dec. 1, Jan. 4, Feb. 1

**Shipyard Competent Person**
$575 Members / $599 Non-members

**Shipyard Competent Person Refresher**
$200 Members / $225 Non-members
Oct. 20, Nov. 17, Dec. 15, Jan. 19, Feb. 16

**STCW Medical Care Provider**
$1,150 Members / $1,250 Non-members
Dec 5-8, Jan. 8-11

**24-Hour HAZWOPER Technician**
$400 Members / $425 Non-members

**8-Hour HAZWOPER Refresher**
$175 Members / $200 Non-members
ON FIRST OR LAST DAY OF 24-HOUR CLASS

**Specimen Collection Certification**
$100 Members / $125 Non-members

**Stability**
Oct. 30

**8-Hour Shipboard Damage Control**
$350 Members / $375 Non-members
Dec. 7

Please call us to schedule the following classes:

**Navigation: Collision Avoidance**
$150 Members / $200 Non-members

**Safety Equipment & Survival Procedures**
$250 Members / $280 Non-members

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**SAFETY BITES & MEMBER NEWS**

**FREE DRILL INSTRUCTOR WORKSHOP 12/1/2017**

In memory of Tim Cosgrove, NPFVOA will be holding a free Drill course on December 1, 2017. Tim worked in the fishing industry for over 40 years and will be missed. To sign up for the course, contact Cait at 206-285-3383 or cait@npfvoa.org.

**SPECIMEN COLLECTION CERTIFICATES – YES, THEY EXPIRE!**

Anyone who has been certified to perform drug testing collections should check the date on their certificate. They are only good for five years. NPFVOA holds a class monthly – call us to sign up!

**NPFVOA ADDS NEW COURSE, BASIC TRAINING REVALIDATION!**

The Basic Training Revalidation course (NPFVOA-718) is a 10-hour course designed to provide a refresher of the STCW basic maritime personal survival and fire prevention/firefighting skills. This course fulfills the 2010 Amendments to STCW Code, as amended, training requirements as listed in CG-CVC Policy Letter No. 12-07.

Any attendee who has successfully completed this course will satisfy the minimum standard of competence in personal survival techniques and fire prevention and firefighting. In order to take the course, you must present evidence of 1 year of service within the past 5 years to the USCG.

**NPFVOA’S NEW FIRE PREVENTION AND CONTROL DVD NOW AVAILABLE**

A fire at sea is every seafarer’s nightmare. With no escape, your only option is to face the fire head on. Preventing a fire from starting is the goal, but when that fails, your life depends on your knowledge of fire. Understand the nature of fire, how fires are started and spread, and how to fight them in a speedy and safe manner. In this training DVD, you and your crew will learn about firefighting techniques and tools that could save the ship in its most dire time.

Topics covered:
- Nature of Fire
- Classification of Fire
- Fire Prevention & Preparation
- Portable Fire Extinguishers
- Water Fire Main System
- Fixed Fire Extinguisher System
- Fighting the Fire

Cost: $125 for members / $140 for non-members
Call 206-285-3383 or email info@npfvoa.org to purchase!

**COME SEE US IN NOVEMBER!**

**PACIFIC MARINE EXPO—VISIT NPFVOA IN BOOTH 1212**

Pacific Marine Expo welcomes members of the NPFVOA Vessel Safety Program to this year’s Expo Nov. 16-18 in Seattle. Pacific Marine Expo is the largest commercial marine trade show on the West Coast, serving commercial mariners from Alaska to California. At Pacific Marine Expo you can do it all; with daily events including live demonstrations, the always popular Fisherman of the Year Contest, end of day happy hours, education sessions, featured products and much more, this show is THE place where you can get your business done and have a great time.

Come be a part of the experience!
Visit www.pacificmarineexpo.com for all show information, including online registration, Education & Events schedule, speaker descriptions, the 2017 Exhibitor List, parking information, travel information and more!
NPFVOA Vessel Safety Program

Courses Include:

- STCW Basic Training
- STCW Basic Training Refresher
- STCW 2-Day Basic Firefighting
- STCW Medical Emergencies at Sea
- STCW Personal Survival Techniques
- STCW Personal Safety & Social Responsibility
- STCW Medical Care Provider
- STCW Basic Training Revalidation *NEW*
- Drill Instructor Workshop
- 24-Hour HAZWOPER Technician
- 8-Hour HAZWOPER Refresher
- Specimen Collection Certification
- Shipyard Competent Person
- Shipyard Competent Person Refresher
- 8-Hour Shipboard Damage Control
- OSHA Marine 10-Hour
- OSHA Compliance at the Dock or Shipyard
- Onboard Drill Instructor Workshop
- In-the-Water Survival Training
- Pedestal Crane Operator Safety Training
- Navigation: Collision Avoidance
- Stability
- O/B Fire Team Training

Additional Custom Courses to fit all your safety training needs!
The NPFVOA Vessel Safety Program is a non-profit association dedicated to education and training in marine safety. Because safety is a concern for everyone in our industry, NPFVOA seeks membership from an expanded industry sector—commercial fishing, workboats, passenger and recreational vessels, and the businesses that support them.

NPFVOA VESSEL SAFETY PROGRAM
MEMBERSHIP APPLICATION

Company Name: ________________________________
Vessel Name: ________________________________
Primary Contact Name & Title: ________________________________
Address: ________________________________
City, State, Zip: ________________________________
Phone: ________________________________
Fax: ________________________________
Email: ________________________________

Would you like to receive information & updates via email? Yes  No

Web Site: ________________________________

Would you like us to link to you from our web site? Yes  No

Please describe the services your company provides: ________________________________

<table>
<thead>
<tr>
<th>Vessel Information</th>
<th>Vessel/Gear Type(s)</th>
<th>Target Fisheries</th>
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<tbody>
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<td>Length (feet):</td>
<td>$600 Benefits apply to all current crew members and management company.</td>
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<tr>
<td>Tonnage (GRT):</td>
<td>$300 Benefits apply to all current crew members and management company.</td>
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<tr>
<td>Crew Size:</td>
<td>$125 Benefits apply to all current crew members and management company.</td>
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<tr>
<td>Associate</td>
<td>$400 Benefits apply to business personnel only; vessel crew ineligible at this level.</td>
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</tr>
<tr>
<td>Individual</td>
<td>$75 Benefits are limited to named individual and are non-transferable</td>
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</table>

(Appropriate for marine support industry, e.g., law firms, ship yards, fuel suppliers, etc.)