



# California Commercial Fishing Apprenticeship Program

## Manual

A manual for commercial fishermen  
sponsors and apprentices participating in  
the apprenticeship program



1<sup>st</sup> Edition, 20 December 2019

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The program was developed through a partnership between California Sea Grant and commercial fishing partners in San Diego and Santa Barbara, California, with input and contributions from other fishing groups, academic institutions and Sea Grant programs. The guidelines outlined herein do not all necessarily reflect the views of any of those organizations.

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9500 Gilman Drive, Dept. 0232  
La Jolla, CA 92093-0232  
(858) 534-4600  
[www.caseagrants.ucsd.edu](http://www.caseagrants.ucsd.edu)  
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# California Commercial Fishing Apprenticeship Program Manual

## Program Coordinator

California Sea Grant  
Scripps Institution of Oceanography, UC San Diego  
9500 Gilman Dr. 0232  
La Jolla, CA 92093-0232  
web: <http://caseagrants.ucsd.edu/apprentice>

### *San Diego*

Contact: Theresa Sinicrope Talley, [tstalley@ucsd.edu](mailto:tstalley@ucsd.edu), 858-200-6975

### *Santa Barbara*

Contact:Carolynn Culver, [c\\_culver@lifesci.ucsb.edu](mailto:c_culver@lifesci.ucsb.edu), 805-893-4530

## Commercial Fishing Partners

### *San Diego*

San Diego Fishermen's Working Group  
8021 Lemon Ave.  
La Mesa, CA 91941  
web: [www.facebook.com/San-Diego-Fishermens-Working-Group](http://www.facebook.com/San-Diego-Fishermens-Working-Group)

Contact: Peter Halmay, [peterhalmay@gmail.com](mailto:peterhalmay@gmail.com), 619-957-7121

### *Santa Barbara*

Commercial Fishermen of Santa Barbara, Inc.  
6 Harbor Way #155  
Santa Barbara, CA 93109  
web: <http://www.cfsb.info>

Contact: Kim Selkoe, [kim@cfsb.info](mailto:kim@cfsb.info), 805-965-3023 ext. 109

## Welcome

Welcome to the California Commercial Fishing Apprenticeship Program! This program was developed to help address a growing need for qualified people to fill the jobs of commercial fishermen. Nearly 60 percent of California's commercial fishermen are expected to retire in the next 5 to 10 years. Also, regulations, marketing, and management have become increasingly complex, requiring well-trained entrants who can contribute to resource management while also maintaining and developing markets for their catch. The Commercial Fishing Apprenticeship Program is designed to make California commercial fisheries more resilient by training fishermen as they enter fisheries thereby supporting economically, ecologically and socially sustainable fisheries.

This program is coarsely modeled after other apprenticeship programs (e.g., plumbers, construction workers, automotive technicians, aerospace engineers) and incorporates many of the state standards for such programs. The manual and associated program was designed by California Sea Grant Extension Specialists and members of the San Diego Fishermen's Working Group



and Commercial Fishermen of Santa Barbara, with input and support from many other groups including: Alaska Longline Fisherman's Association; Alaska Marine Safety Education Association (AMSEA); Alaska Sea Grant; California Division of Apprenticeship Standards; Maine Center for Coastal Fisheries; Marine Science Institute, UC Santa Barbara; Miramar Community College; Santa Barbara City College; Scripps Institution of Oceanography, University of California San Diego; University of California San Diego Extension; and U.S. Coast Guard Auxillary. Financial support for development of the program was provided by the National Fisheries and Wildlife Foundation (NFWF) and the California Sea Grant Program.

This manual introduces commercial fishermen sponsors and apprentices to the program, including roles, responsibilities and benefits of being a host and a student. It describes requirements for entering, advancing and completing the program, with checklists that can be used along the way. We have developed the program with the intention of adapting it to fishing regions throughout the state and elsewhere. It also may serve as a foundation for training programs for other ocean-based careers, such as recreational charter boat operations and aquaculture.

We welcome your input on ways to improve and/or expand the program to benefit communities throughout the nation. Thank you for your interest in the California Commercial Fishing Apprenticeship Program!

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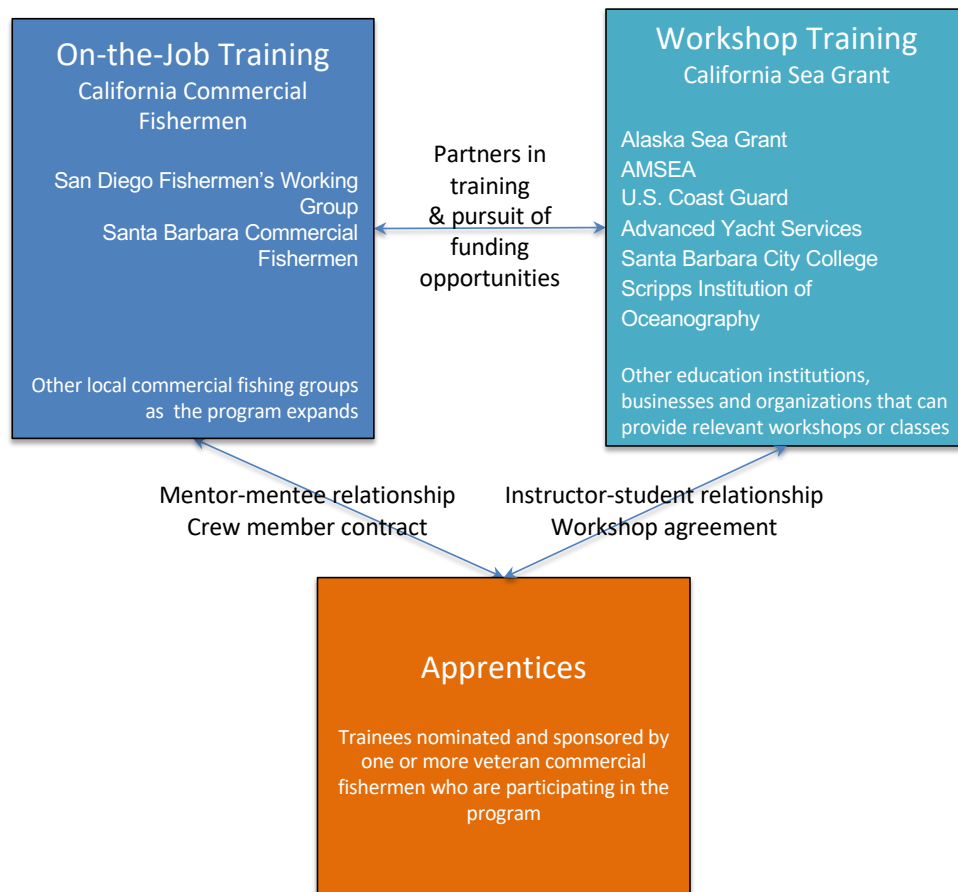
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## The California Commercial Fishing Apprenticeship Program

The California Commercial Fishing Apprenticeship Program is provided through a partnership with commercial fishermen, educators, and California Sea Grant Specialists in San Diego and Santa Barbara counties (Fig. 1). The standards for entry, wages, hours, working conditions, and the specific knowledge and skills one must master for program certification (Table 1) were set by commercial fishermen with assistance of the partners. The apprenticeship includes two training components: workshop training and on-the-job training.



**Figure 1.** California Commercial Fishing Apprenticeship Program organizational structure.

**Table 1. Entrance, advancement and completion criteria for the Commercial Fishing Apprenticeship Program**

<b>ENTRANCE CRITERIA</b>	
<b>Minimum age</b>	18 years
<b>Required education</b>	High School Graduation, GED or Equivalent Must be able to read, write and understand English
<b>Entry requirements</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Completed application form and requested information about you and your sponsor(s)</li> <li><input type="checkbox"/> Registration payment</li> <li><input type="checkbox"/> Swim test certificate. To be provided by a certified lifeguard confirming completion of a standard swim test (swim 100 meters and tread water for three minutes)</li> <li><input type="checkbox"/> Confirmation of at-sea fitness (ability to function on a boat while at sea) through participation in at least one commercial fishing trip as an <u>observer</u> (e.g., a photo of you on the vessel or note from the captain)</li> <li><input type="checkbox"/> Physician’s health certificate. Confirmation that you are physically fit to work as a fisherman on a commercial fishing vessel. The physician must understand the physical conditions and demands of commercial fishing and provide an assessment,, including but not limited to: <ul style="list-style-type: none"> <li>○ Susceptibility to chronic motion sickness</li> <li>○ Ability to live in confined quarters</li> <li>○ Ability to tolerate stress</li> <li>○ Ability to lift and carry heavy objects up to 50 pounds</li> <li>○ Ability to drag heavy objects up to 200 pounds</li> <li>○ Ability to climb a ladder</li> </ul> </li> <li><input type="checkbox"/> Drug test report</li> </ul>
<b>ADVANCEMENT CRITERIA</b>	
<b>Requirements to complete before on-the-job training begins</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Attend, satisfactorily participate in, and pass the program’s workshop training component, including AMSEA Drill Conductor Training for Commercial Fishermen test</li> <li><input type="checkbox"/> Apply for and receive a California Commercial Fishing License</li> <li><input type="checkbox"/> Apply for and receive a California Boater Card (using the UCSG Boater Skills Certificate earned in this program)</li> <li><input type="checkbox"/> Participate in at least one fishing trip <u>as a licensed commercial fisherman</u> on a fishing vessel (provide copy of fish ticket)</li> </ul>
<b>Starting wage</b>	Variable. Wage is calculated as a percentage of catch earnings, which will vary with boat/crew size, fishery, season, catch amount and selling price.
<b>COMPLETION CRITERIA</b>	
<b>Completion requirements</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Meet all advancement criteria</li> <li><input type="checkbox"/> Complete 1,000 hours of hands-on training with veteran fishermen (activity log required) <ul style="list-style-type: none"> <li>○ ~150 hours on safety, seamanship, and navigation</li> <li>○ ~600 hours on boat and gear operations and maintenance</li> <li>○ ~125 hours on fisheries science, conservation, and management</li> <li>○ ~125 hours on business</li> </ul> </li> </ul>
<b>Time commitment:</b>	6 months to 1 year



## Workshop Training

The workshop training component entails about 90-100 hours of interactive and on-line training activities (Table 2) provided over a two- to three-week period. It introduces the apprentices to the concepts underlying key aspects of the occupation, including (1) Fisheries Science, Conservation and Practice, (2) Boat Safety, Seamanship and Navigation, and (3) Business and Marketing. Upon completion of this program component, apprentices will have had the opportunity to obtain a first aid, CPR and AED training card, a California Boater Card, and the Alaska Marine Safety Education Association (AMSEA) Drill Conductor training certificate (required for commercial fishing).

**Table 2.** Workshop trainings needed to fulfill the requirements of the Commercial Fishing Apprenticeship Program. AMSEA= Alaska Marine Safety Education Association, USCG Aux= U.S. Coast Guard Auxiliary.

Topic	#hours	Workshop (W) or Online Training (OnL)
Fisheries Science, Conservation & Practice	24	Introduction to Fisheries Science, Policy and Practice (W)
Boating Safety, Seamanship & Navigation	16	USCG Auxillary Boating Skills and Seamanship (W)
	12	AMSEA USCG Accepted Drill Conductor Training: Survival Equipment, Procedures and Onboard Drills (W)
	7	Mariner's CPR, AED, first aid combo (W)
	2	<a href="http://www.boatus.org/clean-course/">Boat US Foundation Clean Boating (www.boatus.org/clean-course/)</a> (OnL)
Business and Marketing	24	Introduction to Seafood Business and Marketing (W)
	5	LinkedIn Learning: Quickbooks Training (OnL)
<b>Total Hours</b>	<b>90</b>	

## On-the-Job Training

The On-the-Job training component entails 1,000 hours of work experience over a 6 to 12month period. This training includes hands-on experience before, during and after fishing trips in order to prepare, operate, maintain, repair and stow boats and gear. It also covers sale of the catch. Suggested on-the-job training hours for each category are listed in Table 3, with specific tasks listed in Appendix 1. These are recommended minimum hours within each category, but the number of hours can be redistributed across categories as needed, as long as at least 1,000 hours are completed with some training obtained for each category.



**Table 3. Training categories** and approximate number of hours of on-the-job training per 6-12 month commercial fishing apprenticeship.

Suggested Hours	Training Categories
125	Fisheries Science, Conservation and Management (e.g., data collections, record keeping, regulations, attend one or more commission or council meetings)
150	Safety, seamanship and navigation (e.g., use and maintenance of safety and navigation equipment; boat handling; vessel stability and emergency response)
600	Boat and gear operations and maintenance (performing common tasks related to watch keeping, being a deckhand, galley duty, prep and operation of fishing gear, monitoring and repair of internal and external vessel features of vessels and fishing gear))
125	Business and marketing (e.g., seafood handling, storage and safety; marketing, sales and book keeping)
<b>1,000</b>	<b>Minimum On-the-Job Training Hours</b>

**Program Partner Roles**

For this program to be successful, program partners must fulfill specific responsibilities California Sea Grant also serves as a coordinator for the program’s Workshop Training component. The associated activities are provided by California Sea Grant in cooperation with a variety of partnering

**California Sea Grant & Education Partners**

The Program Coordinator, California Sea Grant, coordinates and administers the program, including communicating with fishermen to identify needed classes, coordinating class offerings with the education partners, compiling apprentice achievement records, managing program fees, and seeking funding for apprentice scholarships.

California Sea Grant also serves as a coordinator for the program’s Workshop Training component. The associated activities are provided by California Sea Grant in cooperation with a variety of partnering education and training groups including, U.S. Coast Guard, community colleges, adult education institutions, independent training programs, or university extension programs, with some courses offered online via these institutions. Each apprentice is required to enter into a workshop training agreement outlining expectations for completion of this program component (Appendix 2 Workshop Agreement).

**Fishermen Sponsors**

Veteran fishermen are responsible for nominating apprentice candidates for admittance into the program, and then providing confirmation of at-sea fitness (ability to function on a boat while at sea) by taking the candidate on at least one commercial fishing trip as an observer (e.g., take a photo of the apprentice on the vessel or provide a note). Program partners will help with candidate recruitment within their normal operations (e.g., posts on organization websites and social media), and will increase recruitment efforts if the fishermen request additional help. Each apprentice may be sponsored by one or more fishermen, but a single fisherman will serve as the main contact and

ensure that records of completed training skills and time (hours) are kept and submitted to the Workshop Training Coordinator.

Fishermen sponsors must hire the apprentice using the same arrangement as crew members, usually as a contractor. This employment arrangement helps to maintain flexibility for the fishermen sponsors, each of who represents his or her own, often small, independent business; and for the apprentices, who may fish for different vessels (businesses) across seasons. Each veteran fisherman (captain) is required by the Jones Act to provide worker's compensation insurance to crew members, including apprentices, to cover injury obtained on the job and any lost wages due to an injury.

### ***Apprentices***

Apprentice candidates must be at least 18 years old, be nominated for the program by a participating licensed commercial fisherman, and meet the program entrance criteria to start the program, and then fulfill the advancement and completion criteria to earn a program certificate.

Apprentices enter into a Workshop Training Agreement with the Workshop Training Coordinator, which outlines expectations for that program component. Apprentices work with the Workshop Training Coordinator to ensure advancement criteria are met, and that records of workshop and on-the-job training hours and completed training categories are filed in order to receive the completion certificate at the end of the program. Apprentices will coordinate directly with partnering organizations to obtain external certificates and cards.

Apprentices enter into a crew member contract with each fisherman providing training; each contract outlines the terms and conditions of employment (and termination, if applicable), payment rate and schedule, and rules of the vessel (Sample Crewmember Contract, Appendix 3). Apprentices are usually required to furnish their own hand tools and gear, but arrangements can vary and should be agreed upon between each apprentice-sponsor pair before a crew member contract is signed.



## Benefits to and Responsibilities of Program Participants

### Fishermen Sponsors

#### Benefits:

- Stable supply of diverse, well-screened, well-trained, new crew.
- Enhanced relationship with apprentice(s) supporting high crew retention.
- A structured achievable training program that motivates apprentices, making them highly productive and proud of their work.
- A higher percent return on investment in apprentice crew versus crew that has not been trained<sup>2</sup>.
- Reduced worker compensation costs as a result of structured safety training.
- Recognition as a supporter of state and local efforts to train young people in skills necessary to become contributing members of society and their communities.
- Part of a program that contributes to the continuation of economically, ecologically and socially sustainable fisheries in California.
- Part of a team that seeks funds for sponsorships to provide apprentice education scholarships, to help offset training costs
- Improved connections with educators that develop program activities to address industry needs.

#### Responsibilities:

- Provide diversified work training under competent trainers, including but not limited to topics outlined in this manual.
- Recruit (and ask for help with recruitment, when needed) candidates for entry into the program.
- Review apprentices on the basis of qualifications alone, through fair and impartial procedures applied uniformly to all applicants (California Code of Regulations, Title 8, Chapter 2).
- Maintain records of apprentice's on-the-job training hours and training category achievements, and submit monthly records to the Workshop Training Coordinator.
- Pay apprentice's wages and consider helping with workshop training fees if scholarships are not available, and if the training directly helps with the business.
- Provide reasonably continuous employment to all apprentices sponsored, which may include cooperating with other fishermen to co-sponsor an apprentice.
- Provide training to maintain a work environment free of discrimination and sexual harassment.
- Ensure that on-the-job training represents the best interests of the apprentice as well as the sponsor.
- Ensure compliance with all current Maritime regulations (e.g., Worker's Compensation Insurance as per the Jones Act), Federal and State Labor Laws, U.S. Coast Guard regulations (e.g., safety, citizenship), and International, Federal and/or State fishing regulations.

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<sup>2</sup> A 2009 study showed that an apprentice brings in an average of \$1.40 in revenue for every dollar invested in the apprentice — a 40% return on investment; the cost of not training individuals was much higher. Citation: Canadian Apprenticeship Forum. 2009. *It pays to hire an apprentice: Calculating the return on training investment for skilled trades employers in Canada. A study of 16 trades, Phase II: Final Report.* <http://caf-fca.org/wp-content/uploads/2014/08/It-pays-to-hire-an-apprentice.pdf>



## Apprentices

### Benefits:

- Earn wages while training for a career
- Increased wages as skills improve
- Obtain a foundation for a career in commercial fishing through engaging workshop activities that supplement and complement on-the-job training
- Obtain a variety of useful skills while working under the supervision of a knowledgeable, experienced fishermen
- Improved sense of accomplishment and pride in work

### Responsibility:

- Make arrangements for and successfully complete all program entry criteria to be considered for program
- Demonstrate a commitment to the program, including successful completion of all training activities
- Provide records showing successful completion of required workshop training activities to the Workshop Training Coordinator
- Pay workshop training fees if scholarships or other funds are not available
- Establish an on-the-job training work schedule with your sponsor(s) and be on time and committed to safely, efficiently and competently completing tasks



## Resources

### Business and Marketing Resources

- California Commercial Fish Business License Guide
- <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=40729&inline>
- International Labor Organization, Vocational Training (Fishermen) Recommendation, 1966 (No. 126) [http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100\\_ILO\\_CODE:R126](http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R126)
- Market Your Catch: <http://marketyourcatch.msi.ucsb.edu/>
- Sea Grant Fishermen's Direct Marketing Manual: <https://wsg.washington.edu/wordpress/wp-content/uploads/Fishermens-Direct-Marketing-Manual.pdf>

### Fisheries Resources

- California Department of Fish and Wildlife Commercial Fishing Webpage with resources <https://www.wildlife.ca.gov/fishing/commercial>
- California Commercial Fishing Digest <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=162327&inline>
- California Seafood Profiles, California Sea Grant <https://caseagrants.ucsd.edu/seafood-profiles/>
- NOAA FishWatch, [www.fishwatch.gov](http://www.fishwatch.gov)
- NOAA Office of Science and Technology, National Marine Fisheries Service <https://www.st.nmfs.noaa.gov/index> (note relevant tabs in the left menu column)

### Safety resources

- **Generate a safety checklist for your vessel**, and use it for safety training of new crew members, and annual refresher trainings for all crew. USCG Website for Commercial Fishing Vessel Owners, Operators and Crew: [www.uscg.mil/d13/cfvs/default.asp](http://www.uscg.mil/d13/cfvs/default.asp)
- **Consider downloading the USCG Boating Safety Mobile Application**  
Available at: <http://www.uscg.mil/mobile/>  
If within cell-phone range, this app will help you:
  - Find the latest safety regulations
  - Request a vessel safety check
  - Check your safety equipment
  - File a float plan
  - Refer to Navigation Rules
  - Find the nearest NOAA buoy
  - Report a hazard
  - Report pollution
  - Report suspicious activity
  - Request emergency assistance

### Training Resources

- Alaska Longline Fishermen's Association Crew Apprentice Program <http://www.alfafish.org/apprenticeship>
- Gulf of Maine Research Institute, Marine Resource Education Program, West Coast classes in fisheries management and science <https://gmri.org/fisheries-convening/mrep-west>
- Introductory Fisheries Science and Management for Fishermen, North Carolina Sea Grant <https://ncseagrants.ncsu.edu/news/2019/01/nc-sea-grant-launches-fisheries-science-class-for-fishermen/>
- Louisiana Fisheries Forward Commercial Crab Gear Program <http://www.wlf.louisiana.gov/crabtraining>
- Maine Lobster Apprenticeship Program <https://www.maine.gov/dmr/science-research/species/lobster/limitedentry.html>
- Rhode Island Commercial Fisherman Apprenticeship Program <https://www.cfcra.org/apprenticeship.html>
- Young Fishermen's Development Act <http://fishingcommunitiescoalition.org/yfda/>

### Veteran Benefits

- Information on qualifications: [www.calvet.ca.gov/VetServices/Pages/Apprenticeship--On-The-Job-Training-Programs.aspx](http://www.calvet.ca.gov/VetServices/Pages/Apprenticeship--On-The-Job-Training-Programs.aspx)
- Information on Montgomery GI Bill and eligibility: <http://benefits.va.gov/gibill/>



## Appendix 1: Checklist of Apprentice On-the-Job Required Training and Skills

Each of the four work topics with associated tasks serve as a list of competencies that each apprentice must pass to complete the apprenticeship. The list should also serve as a guide for sponsors to follow to ensure comprehensive training. The list occurs in checklist format to be used during on-the-job training; as competency of each task and, ultimately, topic is mastered, the sponsor will complete the checklist for submission to the Workshop Coordinator. While the chronological order of completion of these tasks may vary, it is strongly recommended that higher priority tasks (i.e., basic and necessary), such as safety, seamanship and navigation, should be achieved very early in the program.

### Work Topic 1: Safety, Seamanship and Navigation Competency Checklist

#### 1. Safety Gear.

**Minimum safety requirements for all commercial fishing industry vessels<sup>3</sup>** as found in the *Federal Requirements for Commercial Fishing Industry Vessels* are included in this checklist. See: [www.fishsafe.info/FederalRequirementsCFV2009.pdf](http://www.fishsafe.info/FederalRequirementsCFV2009.pdf)

- Required safety items: familiarity with item, location and proper use.
  - Personal Flotation Devices (PFDs) suitable for each person on board, readily accessible, in good condition.
  - Immersion or Exposure Suits
  - Visual distress signals with current expiration dates.
  - Emergency Position Indicating Radio Beacon (EPIRB)- for vessels 36 feet long or beyond 3 miles from coast
  - Fire extinguishers conveniently placed, fully charged, in good condition.
  
- Other recommended safety items: familiarity with item, location and proper use
  - Personal papers; operator's certificate or license (if required) onboard, current.
  - Ship's papers; registration or documentation certificate.
  - Throwable floatation aid immediately available.
  - Horn working.
  - Bell (if required) onboard.
  - Anchor and anchor line appropriate to area, depth, conditions.
  - Compass properly adjusted.
  - Charts for the area, up to date.
  - Navigation tools.
  - Boat hook.
  - Mooring lines and fenders in good condition.
  - Paddles or oars.
  - Tool kit and spare parts (including light bulbs, fuses).
  - Bilge free of fuel vapors and excess water.
  - Fuel supply full and the fuel system free of leaks.
  - Engine oil and transmission fluid levels correct.
  - Battery fully charged, fluid level full.
  - Electronic gear in good condition.
  - Engine drive belts tight, in good condition.

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<sup>3</sup> Additional items apply depending upon the vessel size and type, number of passengers, and location of trips so it is best to generate a checklist for your own circumstances ([www.uscg.mil/d13/cfvs/default.asp](http://www.uscg.mil/d13/cfvs/default.asp))

- All navigation lights working.
- Steering and shift mechanisms in good condition.
- Outboard motor mountings tight (if appropriate).
- Grab rails, life-lines in good condition.

## **2. Skills to Prevent, Minimize and/or Respond to Accidents and Emergencies**

- Personal Health and Safety
  - General Safety Precautions
  - Working on Decks including handling fishing gear, understanding hazards
  - Seasickness
  - Fatigue
  
- Illnesses and Accidents
  - Communicate using equipment and visual means
  - Sea survival including cold water survival skills
  - Social Responsibility
  - Mariner's First Aid and CPR
  - Embarking, Disembarking and Transferring Between Vessels
  
- Emergencies Onboard
  - Man Overboard
  - Donning immersion suits
  - Cold-Water Near Drowning
  - Fire
  - Vessel Flooding and Stabilization
  - Enacting Radio and Visual Distress Signals
  - Abandon Ship
  
- Ergonomics
  - Download and review the *AMSEA Pocket Guide to Ergonomics*  
([http://media.wix.com/ugd/b66831\\_767973a33a3a4b6ab30e92afdfc12609.pdf](http://media.wix.com/ugd/b66831_767973a33a3a4b6ab30e92afdfc12609.pdf))
    - Forces on the body leading to musculoskeletal injuries (e.g., carpal tunnel syndrome, vibration white finger, low back pain)
    - Risk factors and prevention
    - Exercises and stretches

## **3. Vessel Stability and Emergency Response**

- Requirements & Responsibilities
- Stability Terminology
- Stability Principles & the Stability Curve
- Flooding control & prevention

## **4. Seamanship and Navigation**

- Practice of handling a ship or boat at sea. Navigation, seamanship and shiphandling appropriate to the sea area and to the type of fishing, including a proper knowledge of the international Regulations for Preventing Collisions at Sea.
  - Pre-Cruise Check
  - Electronic Chart Display & Information System (ECDIS)

- Watch keeping
- Courtesy On-The-Water
- GMDSS (The Global Maritime Distress and Safety System)
- Electronic Navigation Systems (Fishing)
- Chart work & Pilotage
- Meteorology
- USCG Requirements for commercial fishermen
- Short range VHF radio Operator Certificate
- Navigation Aids & Equipment Simulator Training (NAEST) - Operational
- Securing a vessel for passage
- Assist with a vessel's navigational watch
- Radio/Communications/ Onboard Technology
  - Short range VHF radio
  - MDSS General Radio
  - GMDSS
- Rules of the Road
- Electronic Chart Display & Information System (ECDIS)
- Safety precautions to be observed during a watch
- Operating Your Boat
- Docking, Anchoring and Mooring
- Controls, Steering or Propulsion System Failure
- Collision
- Grounding, Towing and Rendering Assistance
- Flooding or Capsizing
- Trailering Your Boat
- Securing a vessel for passage

## **Work Topic 2: Boat and Gear Operations and Maintenance Competency Checklist**

### **1. Common Features and Procedures**

- Anatomy of fishing vessel (including terminology)
  - Exterior Equipment (e.g., deck, hull, cockpit)
  - Interior Equipment (e.g., head, galley, berths)
- Common procedures
  - Watch keeping
  - Boat handling
  - Handling of fishing gear
  - Anchoring and mooring
  - Galley Duties
  - Housekeeping
- Tools and Skills of the trade
  - Knives and other useful tools
  - Ropes, knots & splicing

### **2. Operation, Maintenance and Repair**

The best guide for this topic is the owner's manual for your engine. Follow the topics outlined in the manual and use the maintenance table as a check list of topics (and features) to review.

- Engines, engine room equipment (mechanics, electrical, hydraulics)
  - Engine
  - Electrical system
  - Hydraulic system
  - Fuel system
  - Waste oil storage and disposal
- Propulsion system
- Bilge and Drainage Systems
- Waste storage and disposal
- Recycling storage and disposal
- Plumbing system
- Helm control system
- Navigation system
- Exterior features and gear
  - Hull
  - Deck
  - Lines
  - Winches and cleats
- Interior features and gear
  - Plumbing fixtures
  - Electrical
  - Refrigeration/Freezer
  - Furniture and built-ins, upholstery
- Fishing gear
  - Hydraulics
  - Electrical
  - Mechanics
  - Refrigeration, Coolers, Freezer
  - Bait
  - Nets, Traps, Poles, other Gear (Prep and use)
  - Fish finding devices
- Emergency gear
  - See Safety Section
- Seasonal maintenance items
  - Lay-Up and Storage
  - Winterizing
  - Re-commissioning

### **Work Topic 3: Fisheries Science, Policy and Practice Competency Checklist**

- General Fisheries Information**
  - Overview of the major fisheries in California
  - Gear types / Harvest methods
  - Fishing grounds

- Prohibited species and areas
- Biology, Ecology and Conservation**
  - Natural history, Biology and Ecology (physiological requirements, habitat types and quality, individual and group behaviors, co-occurring species, natural enemies including diseases and pathogens, environmental threats including HABs, pollution/toxins)
  - Distributions of catch: geographic and locally (in water column, in relation to currents/coasts, etc)
  - Collection and application of scientific data for fishing decisions and management, including knowing quality habitat, ensuring sustainable population sizes, determining reproductive potential and setting catch limits
  - Fisheries Biology principles: MSY, OSY
- General policies and regulations surrounding fishing operations**
  - General Regulations and management
    - Individual Fishing Quota (IFQ)
    - Total Allowable Catch (TAC)
    - Possession and Length Limits- How to measure fish
    - Recording Fishery Data - Methods and Rationale
  - Overview of global, national and local fisheries: status and issues
    - State, Federal and International Borders in the Ocean
    - Overview of state and federal statutes governing legal harvest of major seafood commodities, including but not limited to, licensing and permitting, harvest regulations, reporting requirements, and responsible and safe fishing
  - International laws
    - Marpol Treaty
    - Marine Mammal Protection Act
  - Federal laws
    - The Magnuson-Stevens Act
    - Endangered Species Act
    - FMPs
    - Ecosystem Plans
    - Marine mammal fishery interaction regulations
    - Marine mammals, sea turtles and seabirds
      - Seabird avoidance gear
      - Bycatch reduction strategies
  - State Laws
    - licensing and permitting
    - harvest regulations,
    - reporting requirements
    - responsible and safe fishing
  - Local Laws (Ports, Harbors)
    - Marine pollution regulations and fines
  - Fisheries Management
    - Importance of science and data collection in fisheries management
    - Engagement of fishermen: attend at least one Commission workshop or hearing
    - Time-area closures
    - Limited access privilege programs

- Best management practices
  - Water pollution and waste disposal
- License requirements for California commercial fishermen**
  - Commercial Fishing licenses, Restricted and Not Restricted (licenses required, reporting or record keeping obligations, marking of gear)
  - Recreational License Requirements for Commercial Fishermen (?Shrimp, Crab, Finfish and Oyster License Management)
  - General Licenses
  - Bait Dealer's' Licenses
  - Other Business Licenses and Permits
  - Boat Licenses and obligations (e.g., marking of vehicles)
  - Harvester/Shell Recovery Tags

#### **Work Topic 4: Business and Marketing Competency Checklist**

- Fishing Business**
  - Review of a business plan
  - Which fish is the right fish? Selecting species for successful commercial distribution
  - Maintaining catch quality (handling, cleaning, storing)
  - Running a tight ship: budgeting, cash flow, paying bills, taxes, insurance, loans, grants
- Seafood Marketing**
  - Who gets the fish? The seafood supply chain
  - Review of a marketing plans, including pricing and labeling product; preparing and portioning fish for your various buyers (direct sales, retail, or food service).
  - Marketing options- Alternative and direct market types and what is needed
- Seafood Handling and Safety**
  - Fish and invertebrate health and safety considerations
  - Biosecurity
  - Product health and safety considerations
    - Temperature control; icing, chilling or freezing
    - Visual and olfactory cues
    - Stowage, cleaning and processing of fish on board
    - Effective cleaning and disinfection
- Shipping regulations**
  - Marine Product Transportation Invoices
  - Interstate Transportation Containers
  - Licenses



## Appendix 2: Workshop Agreement

# California Commercial Fishing Apprenticeship Program

## WORKSHOP TRAINING AGREEMENT

Students participating in the two weeks of workshops associated with the California Commercial Fishing Apprenticeship Program are expected to complete each course in compliance with the instructors' standards and these policies:

**Academic integrity.** Integrity of scholarship is essential for a productive, collaborative learning (and teaching) environment. In particular, all assigned work will be completed by the individual(s) to whom it is assigned, without unauthorized aid of any kind.

**Attendance.** You are expected to **attend every workshop session** and **be on time**. Since the workshop activities are largely interactive (short field trips, discussions), there is no way to make up most of the lessons. If you must miss part of a workshop **because of an emergency**, inform the instructor **ahead** of time and we can discuss whether a make-up of some sort is feasible (not guaranteed depending upon what you miss).

**Participation.** Active participation is crucial for understanding and retaining the material. We will evaluate how readily you jump in, whether you ask thoughtful questions and contribute insightful comments (demonstrating preparation and a desire to understand), and whether you display good citizenship (e.g., work with classmates, respect the environment, respect the instructor, classmates and other guests).

**Preparedness.** Being prepared means that you have completed any homework assignments, including reviewing the syllabus for the next day, and that you have what personal items you need to participate in the day's activities, including checking and preparing accordingly for weather if an outdoor activity is planned. Suggestions include:

### 1. Food

1. Lunch and snacks. Bring as much food you will need to get you through the 8 hr day, or money if stores or restaurants are nearby and accessible during a break. Lunch and/or refreshments may be included if there is funding available, but they are not guaranteed.
2. Drinking water (enough for ~1-2 hrs outside if an outing is planned).

### 2. Weather proofing! Check weather & activities, then dress and pack accordingly

1. Sun: sunscreen, hat, sunglasses, long-sleeved shirt
2. Cold, wind, and/or rain
  - a. Layered shirts, fleece, sweatshirt: Best is material that dries quickly (wool, polypro).
  - b. Wind breaker / rain jacket (and rain pants, if rain is predicted)

Any student violating these policies **may not receive credit for completion of the workshop**.

By signing this form, I understand and will abide by the above policies and by the spirit of the above policies. I will seek assistance when I need help. I will keep a copy of this agreement for future reference.

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Printed name

---

Signature

---

Date

## Appendix 3: Sample Crewmember Contract

### Name of business

#### CREW MEMBER EMPLOYMENT AGREEMENT

This document represents, in its entirety, an agreement for employment as a self-employed subcontracting commercial fishing Crew Member aboard the Motor Vessel (M/V) (*Boat name*), USCG Official Number (#####), operated by (*Business Name*), a California (*business type - e.g., corporation*). This Employment Agreement is between (*Business name*) and the undersigned Crew Member (*crew member full name*). It is agreed by the parties that this Crew Member Employment Agreement begins on (*date*) at the (*Port name and location*).

#### RECITALS

##### 1. Terms of Employment

- a. The length of employment is unlimited based on the mutual desire of the Undersigned to continue this contract, and shall begin and end at the (*Port name and location*). The undersigned Crew Member(s) warrants that he or she is legally entitled to be employed on the vessel and has met the terms, conditions and requirements of the US Departments of Justice, Homeland Security and State for employment aboard a US flag commercial fishing vessel.
- b. It is clearly understood by all parties to this document that the purpose of employment aboard the M/V (*Boat name*) is for commercial fishing, an occupation requiring long periods of time at sea and containing the potential for danger and/or injury to members of the crew from fishing operations, including working in low temperature freezer storage holds. The undersigned Crew Member clearly understands these conditions and further agrees that he/she will and is able to perform the assigned duties aboard the vessel M/V (*Boat name*) a professional and safe manner as established by the Vessel Master.
- c. Further, the undersigned Crew Member understands and agrees that he/she has truthfully represented that they are experienced in commercial fishing and ocean seamanship as declared to the Vessel Master prior to departure from the above referenced port. In the event of mis-representation of commercial fishing or seamanship experience the Vessel Master shall determine if Involuntary Termination (Discharge) is warranted, and if so the undersigned Crew Member is hereby Discharged from this Employment Agreement subject to the conditions listed below.

##### 2. Payment for Services (Wages)

Payment for services as Crewman shall constitute (*1.0%-enter rate*) of the net gross income from each fishing trip plus a bonus of \$20 for each ton of fish sold, payable in US dollars within five (5) days of unloading each trip.

##### 3. Pre-existing Conditions

The undersigned Crew Member warrants and represents as true and factually correct that they do not now have, nor have in the past had, any physical, mental or emotional condition, including injuries of any nature or kind, drug addiction(s), personality disorders or the like, that they have not fully disclosed to the Vessel Master, and that might in any way affect their ability to carry out the full range of duties associated with the commercial fishing operations of the vessel. Non-disclosure of Pre-existing Conditions which might cause further injury or make it difficult or impossible for a Crew Member to successfully complete their assigned duties aboard the vessel shall be grounds for immediate Involuntary Discharge. The undersigned Crew Member further agrees to indemnify and hold harmless (*Business name*) its officers and stockholders, the Vessel Master and any insurance underwriters for any injuries that might possibly occur as a result of non-disclosure of Pre-existing Conditions by the undersigned Crew Member.

#### **4. Voluntary Termination**

The undersigned Crew Member warrants and represents as true and factually correct that they are prepared to complete the entire trip for which they have been contracted. Said Crew Member further understands and agrees that notification of termination of services as Crew Member aboard the vessel in no way reduces their responsibility for proper conduct for the duration of the trip. This responsibility includes, but is not limited to, non-fishing duties aboard the vessel as determined by the Vessel Master and following regulations and standards for the professional and safe operation of the vessel.

In the event of voluntary termination of services as contracted aboard the M/V (*Boat name*), the terminated Crew Member understands and agrees that payment of crew share ends on the date of termination and that no further payment by (*Business name*) is due or shall be made beyond the wages due on the date of termination, less any room and board charges, advances or other crew expenses.

In the event that the undersigned Crew Member voluntarily terminates their services to the vessel before a trip has been completed, the terminated Crew Member shall be responsible for whatever travel costs are necessary for the Crew Member to return to the port of embarkation and/or their home.

#### **5. Involuntary Termination (Discharge)**

In the event that it is determined that the undersigned Crew Member is unable or unwilling to fulfill completely 100% of the duties assigned by the Master of the Vessel, and the Vessel Master further determines that the undersigned Crew Member is thereby discharged, it is understood and agreed by all parties to this Crew Member Employment Agreement that the discharged Crew Member will be issued a one-way, prepaid travel ticket for airfare from the port of disembarkation to the original port of embarkation at the completion of the fishing trip.

Further, in the event of involuntary termination of the undersigned Crew Member, it is understood and agreed to by all parties that from the date of termination of services as Crew Member until arrival of the vessel at the unloading port at the end of the fishing trip, the undersigned Crew Member will continue to be responsible for the proper, professional and safe conduct of assigned non-fishing duties on the vessel for the duration of the trip.

Examples of termination for cause include, but are not limited to, the following:

1. Use of illegal drugs or substance abuse
2. Alcohol abuse while under contract
3. Insubordination
4. Harassment; verbal, sexual or physical
5. Failure to capably perform the duties assigned by the Vessel Master
6. Actions which endanger others or the vessel
7. Absent without leave in port or failure to meet vessel departure schedules
8. Misrepresentation by the Crew Member of previously acquired skills, experience or abilities to induce the Vessel Master to hire the Crew Member
9. Failure to live and work in harmony with other Crew Members and the Vessel Master
10. Theft of property of others or from the vessel
11. Failure to disclose a prior (pre-existing) medical or health condition

#### **6. Use of Illegal Drugs or Alcohol Aboard The Vessel**

Use or possession of illegal drugs or any alcoholic beverages aboard the vessel will be grounds for immediate dismissal. Civil as well as criminal penalties may be assessed to offending crew members by authorities in the disembarkation port.

#### **7. Possession of weapons aboard the vessel**

Crew members are notified that possession of any and all rim and centerfire handguns, shotguns and/or rifles of any caliber, gauge or action aboard the vessel is prohibited. Possession of any firearm by any crew member will be considered grounds for immediate discharge.

## **8. Crew Member Obligations**

1. Crew Member will comply with all fishing, customs and other laws while serving as a crew member. Any fines, fees, penalties or attorney fees incurred as a result of crew member actions will be deducted from Crew Member share at the time such fees are incurred.
2. Crew Member is to inspect the vessel prior to departure and during the conduct of any trip and immediately report any safety concerns to the Vessel Master.
3. Crew Member acknowledges that he or she is familiar with the location and proper use of all safety equipment aboard the vessel.
4. Crew Member acknowledges that a minimum of four (4) days of work on the vessel (Boat Work) will be completed before each trip.
5. Crew Member acknowledges that he or she will be personally responsible for all acts of pollution attributed to his or her actions and/or negligence.
6. Crew Member is not to shoot, injure, kill or harass marine mammals, sea turtles or other protected species. Any accidental interaction with marine mammals or sea turtles is to be reported to the Vessel Master immediately.
7. Crew members are solely responsible for personal property including boots, foul weather gear and all other clothing. Crew members are expected to provide the personal property he or she thinks necessary for their personal comfort, entertainment or performance as crew member. Crew members agree to remove all personal property at the end of each fishing season or when they terminate employment. Any personal items left aboard after the crew member departs the vessel will be discarded.
8. Crew members are advised to seek whatever medical assistance (including physician, dentist or optometrist) might be necessary before joining the vessel prior to departing. In addition, crew members are responsible for personal medications, vitamins and any equipment sufficient to last 6 months or the duration of a trip, whichever is longer.

## **9. Reporting Injuries or Illness**

Crew members are instructed, as per 46 USC 6103, to report any and all injuries, disabilities or illnesses incurred by the crew member to the Vessel Master or Owner's Representative within seven (7) days after the date of the injury, disability or illness. Failure to report within the required time period may preclude crew member from collecting compensation for wages and/or health care.

## **10. Medical, Disability and Life Insurance**

Owners are liable only for medical compensation payments and/or loss of wages to the extent mandated by law and the courts of the State of California. This does not provide for compensation or payment for medical expenses at all times and for all reasons. The Vessel Owner recommends that crew members obtain, at their own expense, individual life, health and disability insurance.

## **11. Dispute Resolution**

Any dispute(s) that might arise out of any terms or conditions relating to or contained in this Crew Member Employment Agreement shall be settled by binding arbitration under the Commercial Mediation Rules of the American Arbitration Association. The prevailing party in any arbitration hereunder shall be awarded reasonable counsel fees, expert and non-expert witness costs and expenses and all other costs and expenses incurred directly or indirectly in connection with said arbitration unless the arbitrator for good cause determines otherwise in his order, in which event the prevailing party shall pay all of its own costs, expenses and fees. The undersigned parties understand and agree that any such dispute shall be arbitrated in Contra Costa County, California under the laws and rules of arbitration of the State of California, including the provisions of Title 9 of Part 3 of the California Code of Civil Procedure, including Section 1283.05 thereof permitting expanded discovery proceedings.

**12. Entire Agreement and Amendment**

It is understood and agreed to by the undersigned parties that this Crew Member Employment Agreement represents the full and complete agreement between (*Business name*), and the undersigned crew member(s). Any modification or amendment to this Agreement shall be effective only if in writing signed by all parties hereto.

Crew Member agrees that they have read, understand and agree to the terms and conditions of this Employment Agreement, and if there are terms they do not understand they have the right to review this Agreement with an attorney of their choice. If the undersigned Crew Member does not speak or read English as their first language they have the right to have this contract translated into their native language before signing.

By signing this Agreement I waive all claims against the Owner, his/her family, heirs, assigns, other crew members, Vessel Master and the vessel based on any alleged failure to understand the terms and conditions of my employment as stated herein.

This agreement supersedes any and all previous agreements that the undersigned Crew Member might have signed previously with (*Business name*).

\_\_\_\_\_  
Crew Member Signature

\_\_\_\_\_  
Owner's Representative

\_\_\_\_\_  
Crew Member Printed Name

\_\_\_\_\_  
Owner's Representative Printed Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date