

# BLUE ECONOMY

## Career Pathways in the Redwood Region

If you love working with your hands, protecting natural resources, solving technical problems, or building things that move across water -there's a place for you in the Blue Economy. This guide introduces various careers driving the Redwood Region's maritime future, outlining the certifications, training programs, hands-on experiences, and regional innovations that connect these pathways and open doors to entrepreneurship along the coast.

There are many different Blue Economy careers in the Redwood Region that may interest you and align with your skills and interests. From working on the water to supporting ports, fisheries, and marine science on land, these careers offer hands-on opportunities to earn a living while sustaining our coastal ecosystems. With major harbor revitalization underway in Noyo, Humboldt, and Del Norte, the region is preparing for a projected 25% growth in tourism and commercial fishing—creating new jobs and expanding career opportunities across the Blue Economy sector.



**COMMERICAL FISHING**



**GEOLOGY & EARTH SCIENCE TECH**



**SEAFOOD LOGISTICS**

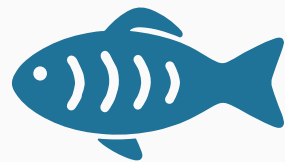
## FUN FACT!

The Redwood Region's Blue Economy is anchored by Dungeness crab fishing (\$37.4M annually) and oyster aquaculture (\$17.4M annually, 12% of CA state production).

To learn more, [click here!](#)

# CHOOSING A BLUE ECONOMY CAREER PATH

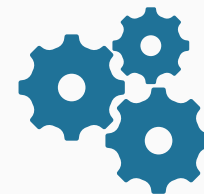
If you like being on the water and working with your hands...Explore careers on page 3



If you like logistics, coordination and how things move... Explore careers on page 4



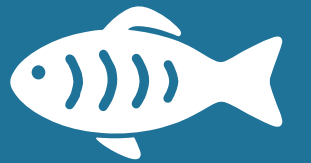
If you like building, fixing and advanced technical work... Explore careers on page 5



If you like science, nature and protecting the environment...Explore careers on page 6



# On-Water & Marine Operations Positions in the Redwood Region



This table highlights common Blue Economy careers in the region, specific to work on the water, operating vessels, and keeping marine activity moving. The document includes key occupations, major employers, typical wage ranges, and associated education or training requirements. It spans entry-level through advanced roles, serving as a practical reference for career exploration, pathway planning, and workforce development aligned with regional maritime and coastal industry needs.

Typical Job	Typical Wage	Education	Local Education Program	Typical Employers
Deckhands/Fishing Crew	\$18-20/hour	<a href="#">On the job training + commercial fishing/maritime coursework</a>	College of the Redwoods	Noyo Harbor commercial fishing fleet, independent fishing vessel owners/operators, & Tribal fisheries
Marine & Diesel Mechanics	\$58,000-66,000/yearly	<a href="#">Diesel Technology Programs (Associate of Science)</a>	College of the Redwoods or Mendocino College	Commercial fishing vessel owners and fleets, boatyards/marine repair shops, & seafood processors
Plant & Systems Operators	\$42,000-52,000/ yearly	<a href="#">On the job training+ coursework in industrial technology.</a>	College of the Redwoods or Mendocino College	Port of Humboldt Bay Harbor, Seafood processing companies, Noyo Harbor facilities, & Crescent City Harbor
Captains/Mates	\$60,000-75,000+/yearly	<a href="#">U.S. Coast Guard licensing + coursework + sea time</a>	Maritime Institute	Tribal fisheries programs, Charter fleets, & commercial fishing operations
Commercial Divers	\$60,000-80,000+/ yearly	<a href="#">Completion of an accredited commercial diving program</a>	Commerical Divers International	Humboldt Bay and Crescent City Harbors, & marine construction contractors



**DECK HANDS & FISHING CREW**



**MARINE & DIESEL MECHANICS**



**PLANT & SYSTEM OPERATORS**

## Growth Opportunities

- Deckhand/Fishing Crew → Senior Deckhand/Owner: Gain sea time, safety certs, and vessel skills to move up or run your own boat.
- Marine & Diesel Mechanic → Specialist/Owner: Specialize (engines, electrical), earn certs, and work independently or start a shop.
- Plant & Systems Operator → Supervisor: Get licensed, learn complex systems, and advance to senior or supervisor roles.
- Captain/Mate → Vessel Captain: Build sea time, upgrade U.S. Coast Guard licenses, and lead larger vessels.
- Diver → Commercial Dive Specialist/Owner: Earn advanced certs, specialize (welding/inspection), and work independently or start a business.

## Gain Hands-On Experience

- [California Commercial Fishing Apprenticeship Program \(CCFAP\)](#)
- Many local boatyards/marine repair shops hire entry mechanics as apprentices
- On-the-job mentorship with licensed commercial divers
- Harbor and marine construction projects
- [Tribal fisheries and subsistence fishing cooperatives](#)
- charter boat operations as relief crew or mate

## Training Providers

- [Sea Grant Fishing First Aid & Safety Training \(FFAST\)](#)
- [AMSEA \(Alaska Marine Safety Education Association\)](#) with [Regional Courses in Eureka/ Humboldt Bay](#)
- [Harbor districts & municipal utilities \(water/wastewater operator trainee roles\)](#)
- Harbor partner workshops on equipment operations
- [Humboldt Bay Fire District – CPR/First Aid](#)

# Ports, Harbors & Maritime Logistics Positions in the Redwood Region



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Typical Job	Typical Wage	Education	Local Education Program	Typical Employers
Laborers & Freight, Stock, and Material Movers	\$37,871 yearly	<a href="#">Coursework in Logistics &amp; Supply Chain</a>	College of the Redwoods	Port of Humboldt Bay, shipping terminals, harbor warehouses
First-Line Supervisors of Production & Operating Workers	\$71,162 yearly	<a href="#">Coursework in Business/Operations Management</a>	College of the Redwoods	Port authorities, seafood processors, marine logistics companies
Sales Representatives, Wholesale & Manufacturing	\$63,882 yearly	<a href="#">Business &amp; Supply Chain Programs</a>	Mendocino College	Marine equipment suppliers, seafood distribution companies
Industrial Production Managers	\$91,225 yearly	<a href="#">Bachelor's Degree in Business/Operations Programs</a>	Cal Poly Humboldt	Seafood processing plants, marine manufacturing, port logistics firms
Packers & Packagers (Hand)	\$36,062 yearly	<a href="#">No formal credential needed- Career Technical Education courses</a>	College of the Redwoods	Seafood processing companies, marine distribution warehouses



**CRANE, HOIST & PORT EQUIPMENT OPERATORS**



**MILLWRIGHTS**



**WATER & WASTEWATER TREATMENT PLANT OPERATORS**

### Growth Opportunities

- Laborer/Freight Mover → Lead: Get forklift/logistics certs to move into dock or warehouse lead roles.
- Production Supervisor → Manager: Build leadership and ops skills to advance into plant/logistics management.
- Sales Rep (Wholesale/Manufacturing) → Regional Manager: Grow maritime supply and client expertise to lead regional sales.
- Industrial Production Manager → Senior Ops Lead: Gain advanced ops/supply chain training to oversee larger facilities.
- Packer/Packager → Logistics Tech: Learn equipment and inventory systems to move into shipping or warehouse roles.

### Gain Hands-On Experience

- [Humboldt Bay Harbor Recreation & Conservation District opportunities](#)
- [Humboldt County Workforce Development Board paid internships](#)
- [Blue Lake Rancheria workforce programs](#)
- [North Coast Resource Partnership opportunities](#)
- Commercial fishing fleets & seafood processors (Eureka, Crescent City, Fort Bragg)
- California Trout for fisheries restoration and watershed projects
- Tribal natural resource departments (Yurok, Hoopa, Tolowa, Dee-ni')

### Training Providers

- [Humboldt Bay Workforce Development Board trainings](#)
- [International Organization of Masters, Mates & Pilots for maritime navigation and vessel operations training programs](#)
- [Inlandboatmen's Union of the Pacific for apprenticeships & maritime deckhand training](#)
- [Marine Trades Skills Training Program](#)
- [America's Job Center of California \(AJCC\) for workforce training](#)

# Marine Construction, Repair & Advanced Manufacturing Positions in the Redwood Region



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Typical Job	Typical Wage	Education	Local Education Program	Typical Employers
Welders, Cutters, Solderers & Brazers	\$48,772 yearly	<a href="#">High School Diploma + Technical Training in Welding</a>	College of the Redwoods	Shipyards, marine fabrication shops, harbor infrastructure contractors
Machinists	\$53,447 yearly	<a href="#">High School Diploma + Apprenticeship or Certificate in Manufacturing Technology</a>	Santa Rosa Junior College	Marine engine repair shops, metal fabrication companies
Cabinetmakers & Bench Carpenters	\$47,524 yearly	<a href="#">High School Diploma + Technical Training in Construction Technology</a>	College of the Redwoods	Boat builders, marine interior fabrication shops
Carpenters	\$75,218 yearly	<a href="#">High School Diploma + Apprenticeship</a>	Redwood Empire Carpenters Training Center	Marine construction contractors, dock and harbor infrastructure builders
Industrial Production Managers	\$91,225 yearly	<a href="#">Bachelor's Degree in Business</a>	Cal Poly Humboldt	Marine manufacturing firms, seafood processing plants, marine equipment manufacturers



**WELDERS, CUTTERS & FABRICATORS**



**MARINE ELECTRICIAN**



**CONTROL AND VALVE INSTALLERS AND REPAIRERS**

### Growth Opportunities

- Welder → Marine Specialist: Earn advanced certs (structural/underwater) and work on vessel fabrication/repair.
- Machinist → CNC Specialist: Learn CNC programming and specialize in precision marine parts.
- Cabinetmaker/Bench Carpenter → Marine Interiors: Build skills in custom boat interiors and construction.
- Carpenter → Marine Construction Specialist: Complete apprenticeship and focus on docks/piers/harbors.
- Industrial Production Manager → Senior Ops Lead: Get advanced ops/supply chain training to run larger facilities.

### Gain Hands-On Experience

- [Redwood Empire Carpenters Training Center / Local 751](#)
- [Ironworkers Local 378 Apprenticeship](#)
- [Sheet Metal Workers Local 104 JATC](#)
- [Operating Engineers Local 3 Apprenticeship](#)

### Training Providers

- [Humboldt County Workforce Development Board training programs](#)
- [America's Job Center of California \(North Coast\) workforce training](#)
- [North Coast Small Business Development Center \(SBDC\) manufacturing and fabrication business training](#)
- [Blue Lake Rancheria Workforce Development Programs](#)
- [Humboldt Bay Harbor, Recreation and Conservation District workforce initiatives](#)

# Marine Science, Natural Resources & Environmental Positions in the Redwood Region



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Typical Job	Typical Wage	Education	Local Education Program	Typical Employers
Environmental Scientists & Specialists	\$91,225 yearly	<a href="#">Bachelor's Degree, Environmental Science</a>	Cal Poly Humboldt	Environmental consulting firms, state natural resource agencies
Environmental Science & Protection Technicians	\$54,271 yearly	<a href="#">Associates Degree, Environmental Science and Natural Resources</a>	College of the Redwoods	Environmental consulting firms, water quality programs
Conservation Scientists	\$77,832 yearly	<a href="#">Bachelor's Degree, Forestry, Wildlife of Natural Resources</a>	Cal Poly Humboldt	Federal land agencies, tribal natural resource departments
Biological Technicians	\$44,721 yearly	<a href="#">Bachelor's Degree, Biology or Marine Biology</a>	Cal Poly Humboldt	Fisheries monitoring programs, marine research organizations
Zoologists & Wildlife Biologists	\$86,888 yearly	<a href="#">Bachelor's Degree + Graduate Studies, Wildlife or Marine Biology Programs</a>	Cal Poly Humboldt	Fisheries agencies, conservation organizations, research institutions



**HAZARDOUS MATERIALS TECHNICIANS**



**GEOLOGY & EARTH SCIENCE TECHNICIANS**



**CONSERVATION & RESOURCE MANAGEMENT ROLES**

### Growth Opportunities

- Environmental Scientist → Coastal Specialist: Gain expertise in permitting, restoration, or marine resource management.
- Environmental Technician → Compliance/Monitoring Lead: Build field experience and train in water quality or compliance.
- Conservation Scientist → Project Lead: Specialize in restoration and lead watershed/coastal projects.
- Biological Technician → Fisheries Specialist: Gain fisheries experience and advance training in marine/wildlife biology.
- Wildlife Biologist → Marine Researcher: Focus on marine species and pursue graduate study in marine biology/ecology.

### Gain Hands-On Experience

- [California Conservation Corps \(CCC\)](#)
- [AmeriCorps Environmental Programs \(North Coast\)](#)
- [Yurok Tribe Fisheries Department](#)
- [Mid-Klamath Watershed Council](#)
- [Salmonid Restoration Federation](#)

### Training Providers

- [Humboldt County Workforce Development Board training programs](#)
- [America's Job Center of California \(North Coast\) training programs](#)
- [Blue Lake Rancheria Workforce Development Programs](#)
- [North Coast Resource Partnership workforce programs](#)
- [North Coast Small Business Development Center \(SBDC\) workforce programs](#)