



# New Waves of Marine Career Opportunities



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Do you have a passion for the ocean? Would you like a fun job that allows you to be near the ocean and its animal life? Then a career in the diverse marine field may be right up your alley!

There are many jobs in the marine field. Opportunities are not limited to marine biology and marine mammal training. Careers in the marine field draw on a huge variety of skills and experiences. If you are interested in working in the marine world and want to know what kinds of jobs there are, read on!



## If you like boats and ships.

You can be part of a shipbuilding team! Many skilled people are needed for building ships.

<b>Naval architects</b>	design ships, docks, oil-drilling rigs, and other ocean-bound vessels.
<b>Marine engineers</b>	work with naval architects to design and maintain ships, oil rigs, and docks.
<b>Welders and Metal Workers</b>	shape and attach pieces of metal for ship construction.
<b>Boilermakers</b>	construct the boilers and related facilities on a ship.
<b>Machinists and Engineers</b>	install the large machines and equipment needed for ship propulsion.
<b>Painters</b>	paint the ships and all its parts.
<b>Electricians</b>	wire the ship for electricity.
<b>Shipfitters</b>	oversee all construction and make sure all parts of a ship are in the correct spot and are properly attached.

**Crane Operators** use cranes to lift huge, pre-made parts of a ship into place for assembly.

There are many different ships that need crews and captains including research vessels, tour boats, ferries, and shipping boats and barges. Some of the positions on a ship are:

**Able Seamen** maintain a ship by cleaning, removing rust, painting, and taking care of the rigging and machinery. They must know almost everything about sailing and the ship itself. Able Seamen may work on the deck or may have special training to work on engines or electricity for example.

**Quartermasters** steer the ship.

**Captains** command the ship.

**Carpenters** repair any wooden parts of a ship as well as non-wooden equipment such as broken portholes, locks, or anchors.

**Cooks** oversee and prepare the meals for all people on board a ship.

**Electricians** repair any problems in the generators, motors, lights, fuses or anything else electrical on the ship.

**Ship Restorers** have extensive training in wooden boat building so they can restore old ships that are prized pieces of history. Often, they may work for a maritime museum that displays restored ships.

- [http://www.oceancareers.com/available\\_careers.php?action=view\\_all](http://www.oceancareers.com/available_careers.php?action=view_all) (See the category on “Ship Construction and Maintenance” as well as “Transportation and Commerce.”)
- <http://www.marinetech.org/careers/scenarios.php?phase=2&page=Chief+Mate> (See the description of the “Chief Mate” position.)
- <http://www.marinecareers.net/profiles/oeindex.htm> (See the profiles of “naval architect” and “marine architect.”)

The United States Navy and Coast Guard provide many opportunities for training and working on ships and other marine crafts.

- <http://www.navy.com/careers/>
- <http://www.gocoastguard.com/jobs.html>



### If you like research...

**Research Scientist** work for universities and state and federal agencies or private and non-profit organizations. They determine the research projects, apply for grant money, and conduct the research. Some examples of marine-related research scientists are geological and biological oceanographers.

**Research Coordinator** work under a research scientist and organize all the equipment, supplies, and technicians needed for the scientist's project.

**Research Technicians** assist a research scientist with their research by collecting data, maintaining research equipment and computer systems, and operating boats and other ocean-going vessels.

- <http://www.marinecareers.net/profiles/oceanindex.htm> (This website includes profiles of many different types of oceanographers.)
- <http://www.marinetech.org/careers/scenarios.php?phase=2&page=Oceanographic+Research+Technician> (This website has a profile of an oceanographic research technician.)
- [http://www.onr.navy.mil/careers/ocean\\_marine/](http://www.onr.navy.mil/careers/ocean_marine/) (This website has descriptions and profiles of marine-related scientists. The website also has helpful university and organization links.)
- <http://www.marsci.uga.edu/index.html> (This is the website for University of Georgia's Marine Sciences Department.)



## **If you like politics and law...**

<b>Marine or Maritime Lawyers</b>	focus on maritime and environmental law. They work to ensure companies follow federal and state regulations regarding the ocean and coastal environment as well as help with legislation for protection of the marine environment.
<b>Marine Policy Advisors</b>	advise companies or the government on decisions that affect the ocean and its animals.
<b>Ocean Advocates</b>	typically work for nonprofit organizations that support conservation of the ocean and its animals. Their work primarily entails communicating marine conservation issues to the public. They organize rallies, events, informational packets, and websites that benefit and support conservation efforts.

- [http://www.law.yale.edu/outside/html/career\\_development/cdo-enviroguide.htm#chap1](http://www.law.yale.edu/outside/html/career_development/cdo-enviroguide.htm#chap1) (Read Jane Davenport's personal narrative about working in marine wildlife conservation for a nonprofit organization.)
- <http://www.marinecareers.net/profiles/relatedindex.htm> (On this website, see the profiles of "marine lawyer," "ocean advocate," "marine policy advisor," and "marine policy specialist.")
- <http://aslo.org/policy/policycareer.html> (The section on "Careers in Public Policy" has information on important skills that are necessary in the marine policy field.)



## **If you like to fish...**

<b>Commercial Fishermen</b>	catch fish or shellfish to sell. There are all kinds of fishermen: some catch fish for restaurants, some catch fish for bait shops, and some catch fish for food manufacturing industries. Fishermen may fish inshore or in deep ocean waters depending on the type of fish they are trying to catch.
<b>Aquaculturists</b>	raise fish or shellfish in their own fish farms. Raising fish includes lots of cleaning, feeding, and water sampling.

**Fish Hatchery Managers** oversee the employees and all events of a fish hatchery as well as collect data on the animals being raised and sold.

**Fishery Observers** monitor the species of fish and number caught by commercial fishermen. They are employed by the government to preserve our natural fish populations and environmental balance.

- [http://www.oceancareers.com/available\\_careers.php?action=view\\_all#8](http://www.oceancareers.com/available_careers.php?action=view_all#8) (See the careers in the categories “Food, Fisheries, Aquaculture and Husbandry” and “Government Assessment and Regulation.”)
- <http://www.marinetech.org/careers/scenarios.php?phase=2&page=Shellfish+Field+Nursery+Manager> (This has a profile of a Shellfish Field Nursery Manager.)



### **If you like to teach...**

**Marine Education Specialists** work for aquariums and science centers. Instead of teaching in classrooms, they teach in labs, aquariums, boats, and outdoors. Their students range in age from elementary school to college. They may also participate in festivals, outreach events, summer camps, and other special programs for their organization.

**Environmental Educators** specialize in teaching the public about human impact on the environment. They may have interesting games and activities to demonstrate these principles and help students of all ages understand how to conserve their environment.

**Elementary, Junior High, and High School Teachers** incorporate marine concepts into their science classes. Some junior high or high school teachers may teach specific classes on marine topics.

**University Professors** teach in colleges and universities. The marine biology professors will instruct classes on marine biology and related topics as well as conduct research in their special areas of interest.

- [http://www.mbayaq.org/lc/kids\\_place/kidseq\\_careers.asp](http://www.mbayaq.org/lc/kids_place/kidseq_careers.asp) (This is Monterey Bay Aquarium's information on educators.)
- <http://www.marinecareers.net/fields.htm> (Click on "Related Fields" and "Marine Biology" to find profiles of education specialists and environmental educators.)
- <http://www.seaworld.org/> (Click on "Career Resources." Under "Info Books," go to "Zoological Park Careers." It will give you a description of different careers and some interviews with current employees.)
- <http://www.coe.uga.edu/mse/> (This is the website for the University of Georgia's Department of Mathematics and Science Education.)



### **If you like aquariums...**

<b>Aquarists</b>	take care of the fish in an aquarium. They prepare the fish food, repair broken tanks and filtration systems, control the water quality, and clean the tanks.
<b>Herpetologists</b>	specialize in reptiles that may be on display in an aquarium. If they work at an aquarium, they are usually required to care for them and may even participate in education programs.
<b>Aviculturists</b>	specialize and care for any marine birds that are on display at an aquarium. They also may be involved in education at the aquarium.
<b>Maintenance Workers</b>	are heavily relied upon for keeping an aquarium beautiful, clean, and properly functioning for the many staff members and visitors that work and visit the facilities.
<b>Gift Shop Workers</b>	run the gift shops at an aquarium. They may order merchandise to be sold in the shop. They help many aquarium visitors throughout the day with their gift shop purchases.
<b>Security Personnel</b>	are usually hired by large aquariums and zoos for the safety of the animals as well as the safety of the visitors. They are the first to be called if a human or animal emergency arises.
<b>Veterinarians</b>	are in charge of taking care of the animals. They routinely check all the animals and their environments to make sure they are well taken care of. They are usually employed at very large aquariums that have many animals.

**Veterinary Technicians** assist the veterinarians who care for animals at a facility. They may take samples, administer medicine, and keep medical data on all the animals. If surgery is needed, the veterinary technicians may assist the veterinarian.

- <http://www.seaworld.org/> (Click on “Career Resources.” Under “Info Books,” go to “Zoological Park Careers.” It will give you a description of different careers and some interviews with current employees.)
- [http://www.oceancareers.com/available\\_careers.php?action=view\\_all#8](http://www.oceancareers.com/available_careers.php?action=view_all#8) (Look for career descriptions under the category “Food, Fisheries, Aquaculture and Husbandry.”)



### **If you are an artist or a writer...**

**Exhibit Designers** are one of the many people needed to create a new exhibit for an aquarium. Together with much creativity and research, they design new exhibits for the aquarium. An exhibit designer works closely with the exhibit coordinator.

**Exhibit Coordinators** help with the process of developing a new exhibit. The exhibit coordinator determines which marine animals, filtration systems, and tank set-ups are needed for an attractive aquarium display.

**Science Writers** take complicated scientific research and simplify it in a fun and understandable way for the public. They create signs on aquarium exhibits, posters, videos, pamphlets, and brochures to be viewed by the public.

- <http://www.seaworld.org/career-resources/info-books/zoo-careers/education.htm> (See the description of the science writer position and related positions.)
- [http://www.mbayag.org/lc/kids\\_place/kidseg\\_careers.asp](http://www.mbayag.org/lc/kids_place/kidseg_careers.asp) (This website has descriptions of the exhibit designer, exhibit coordinator, and science writer positions.)

This is just an introduction to the different marine areas in which ocean-lovers work. There are more careers out there and the field is changing every day! With hard work, you can have a fun marine career too!

If you are considering a marine career, there are some things you can do now to prepare yourself:

- Research a career of interest online and at the library
- Talk with professionals who are working in that field
- Pursue a related degree at a college, university, or technical school
- Get experience in the field by volunteering, interning, or working part time
- Make friends with people working in the field—this is called “networking”

### General Informative Links:

- [www.marinecareers.net](http://www.marinecareers.net) (This website gives valuable marine career profiles and information. The introduction on the following website is very helpful as well: <http://www.marinecareers.net/related.htm>.)
- <http://www.oceancareers.com> (This is an awesome website that includes the above careers and more with descriptions of typical duties and required education. Some parts of the website were still being developed as of January 2006.)
- <http://www.marinetech.org/careers/scenarios.php> (This website has a few profiles on different positions in the marine field.)
- [http://www.sanctuaries.nos.noaa.gov/news/features/ocean\\_careers.html](http://www.sanctuaries.nos.noaa.gov/news/features/ocean_careers.html) (This website includes profiles of seven different marine careers.)
- <http://www-marine.stanford.edu/HMSweb/careers.html> (This website has a huge number of links for careers in marine biology and oceanography.)

### Acknowledgements

The information used in this report was found in the websites listed above as well as in the book *Opportunities in Marine and Maritime Careers* by Wm. Ray Heitzmann (VGM Career Horizons, 1997).