

## Non-Academic Career Opportunities for MS and PhD Ocean Scientists

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Prepared by J. Yoder, Woods Hole Oceanographic Institution

There are many career opportunities other than an academic position for those with an MS or PhD degree in the ocean sciences. Many of these positions are not too different from an academic position at a research university. Important differences include research directions are often prescribed by the mission of the organization, and generally the positions do not require teaching. In some cases, permission from the upper management is required to publish results.

Below is a list of possibilities covering a very broad range of opportunities.

1. Societies that focus on marine technology, engineering, applied science and industry. Both of those listed here sponsor conferences, annual meetings and publications. MTS is U.S.-based whereas IMarEST is based in the UK. Their meetings and publications are a good source to learn about private sector opportunities for ocean-related careers in both small and large, national and international, companies.

Marine Technology Society <https://www.mtsociety.org/home.aspx>

Institute of Marine Engineering, Science and Technology  
<http://www.imarest.org>

2. Conservation Organizations. Some include research, most advocate for conservation and sustainable marine policies. Two examples:

Ocean Conservancy <http://www.oceanconservancy.org>

Nature Conservancy <http://www.nature.org/?intc=nature.tnav>

3. Some foundations support marine research and hire scientists as program managers: Two examples:

Gordon and Betty Moore Foundation <https://www.moore.org>

Pew Charitable Trusts <http://www.pewtrusts.org/en>

Also see Schmidt Ocean Institute which is different and does hire ocean scientists/engineers to work at sea. See: <http://www.schmidtocean.org/story/show/2184>

4. Federally Funded Research and Development Centers (FFRDC). As per the title, these are federally supported laboratories that support the missions of federal agencies. There are a lot of them employing 1000s of PhD level scientists in all fields supporting Navy, NASA, NOAA, DOE and other federal agencies. You have probably heard of NASA's Jet Propulsion Laboratory (JPL) and NSF's National Center for Atmospheric

Research (NCAR). Both employ ocean scientists. See Wikipedia or <http://www.nsf.gov/statistics/ffrdclist/> for a complete list of the many FFRDCs.

5. NOAA has many laboratories supporting its mission. Two major NOAA ocean research laboratories are:

Pacific Marine Environmental Lab (HQ in Seattle): <http://www.pmel.noaa.gov>

Atlantic Oceanographic and Meteorological Laboratory (HQ in Miami)  
<http://www.aoml.noaa.gov>

6. NOAA also supports research on fish stocks and their environment (including changes owing to a changing climate) in U.S. waters. Each has a main center (the HQ) and then each also has several field stations at different locales within their region. NOAA's Fisheries Science Research Centers HQs are in:

Alaska Region (HQ located in Seattle): <http://www.afsc.noaa.gov>

Northwest Region (HQ located in Seattle): <http://www.nwfsc.noaa.gov>

Southwest Region (HQ located in LaJolla): <https://swfsc.noaa.gov>

Northeast Region (HQ located in Woods Hole): <http://www.nefsc.noaa.gov>

Southeast Region (HQ located in Miami): <http://www.sefsc.noaa.gov>

Pacific Islands Region (HQ located in Honolulu): <http://www.pifsc.noaa.gov>

7. NOAA also employs many thousands of personnel, including Ph.D.-level scientists, in the D.C. area most of which work in 4 buildings in Silver Spring, Maryland. Many of the scientific staff in Silver Spring oversee the funding of NOAA research, operational and policy programs. NOAA employees can also be co-located at university research centers. For information on NOAA careers: <http://www.careers.noaa.gov> A good strategy for obtaining a job with NOAA, particularly in the ocean policy area, is to first become a Knauss Fellow (<http://seagrant.noaa.gov/fundingfellowships/knaussfellowship/prospectivefellows.aspx>)

8. The U.S. Environmental Protection Agency has a number of laboratories hosting scientists working on water quality (including in estuarine waters – eg at the Narragansett, RI lab), toxicology and the fate of pollutants. See: <http://www.epa.gov/aboutepa/why-are-our-regional-offices-and-labs-located-where-they-are-historical-perspective-siting>

9. Naval Research Laboratory (main lab in D.C. area): <http://www.nrl.navy.mil>  
NRL supports applied research directly related to the Navy mission.

10. NASA Laboratories. See <http://nasajobs.nasa.gov/jobs/occupations.htm>  
In addition to engineers, NASA hires Earth and Space scientists (<http://science.nasa.gov/earth-science/>), including ocean scientists, either as Federal employees or as contractors. Most work on data from NASA space missions, although NASA also supports Earth System modeling and field programs. The largest laboratories for Earth Scientists are Goddard Space Flight Center (Greenbelt, MD), Jet Propulsion Laboratory (Pasadena, CA) and Stennis Space Center (Mississippi).
11. U.S. Geological Survey of the U.S. Department of Interior. See <http://water.usgs.gov/nrp/index.php> and <http://www.usgs.gov/>  
USGS is known for very high quality research programs in the Earth Sciences, including ocean sciences, with laboratories located around the country, including co-located at WHOI.
12. Ocean consulting firms. There are many such firms that employ scientists, engineers, and ocean policy experts. Google “ocean consulting” to get a sense of the variety. An example is Continental Shelf Associates, Inc. which is a corporation that services the offshore oil & gas, submarine telecom and scientific markets, as well as Federal, State and local governments.
13. Corporations involved in offshore oil and gas operations (e.g. Exxon-Mobil, Shell, BP) hire scientists in their Exploration (Upstream operations) – mostly geologists/engineers, as well as their Health, Safety, Security and Environment Divisions (Downstream operations) – the latter tend to be biologists and chemists: See: <http://www.bp.com/en/global/bp-careers/professionals/career-areas/hsse.html>
14. Biotechnology Industry. See for example: <http://www.ihirebiotechnology.com>  
An increasing number of ocean science graduates have the molecular biology skills to be attractive to the research and development activities of biotechnology companies.
15. State Health and Environment Agencies. See <http://www.epa.gov/home/health-and-environmental-agencies-us-states-and-territories> Probably more opportunities for MS; Limited opportunities for positions requiring a PhD.