

Abigail E. Noble, Ph.D.

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Dedicated professional applying management and problem-solving skills to new projects and programs. Expert analytical chemist with a strong track record of collaborative success on multidisciplinary projects with teams from diverse backgrounds.

PROFESSIONAL EXPERIENCE

Independent Contractor, Boston, MA

Environmental Scientist, Researcher, Writer

2014 – present

- Data analysis and workup, writing for publication, draft proposals, scopes and budgets.

Gradient, Cambridge, MA

Associate Consultant, Environmental Chemist

2014 – 2017

- Managed fast turnaround and multi-year projects in environmental compliance and litigation.
- Drafted proposals, scopes and budgets, and managed project progress and client communications.
- Provided technical support and chemistry expertise for environmental consulting projects.
- Experience with federal and state regulations and criteria (*e.g.*, TSCA, EPA Safer Choice, CARB, Natl. Primary and Secondary Drinking Water, State level DEP/DEQ water quality, NPDES permitting, National Recommended Aquatic Life Criteria, NOAA SMART protocol for oil spills)
- Expertise: chemistry (analytical, organic, inorganic), data quality assessment, international chemical registration, regulatory research, green chemistry initiatives, environmental sampling methods.

Massachusetts Institute of Technology, Cambridge, MA

Postdoctoral Associate

2012 – 2014

- Investigated the evolution of lead and lead isotopes in the Atlantic Ocean, fingerprinting fossil fuel sources and studying the impact of emissions from fossil fuel burning on the ocean.
- Participated in interdisciplinary research expeditions in the Pacific Ocean.
- Mentored graduate and undergraduate students, meeting regularly to discuss research progress.

Teaching Assistant, Graduate-level Aquatic Chemistry course

2010

- Ran weekly recitation session, graded problem sets, met with students privately and in groups.

Woods Hole Oceanographic Institution, Woods Hole, MA

Postdoctoral Investigator

2011 – 2012

- Investigated the cycling of metal micronutrients and binding to organic ligands across the North Atlantic Ocean as part of the International GEOTRACES program.

Graduate Research Scientist, Research Assistant

2006 – 2011

- Investigated metal micronutrient cycling in ocean waters of the Antarctic, Arctic, Equatorial Pacific, and South Atlantic to understand the impact of oxygen minimum zones and ligand binding on micronutrient availability to phytoplankton and to identify sources and sinks within these basins.
- Developed expertise in the analysis of metals (Co, Fe, Mn, Cu, Cd, Zn, Ni) at trace (ppt) concentrations in complex aqueous media by inductively coupled plasma mass spectrometry and electrochemistry.
- Accomplished complex tasks as a part of multidisciplinary teams on international research expeditions.
- Executed a successful and challenging Antarctic sea ice field expedition as a part of a small team.
- Designed, organized, and executed experiments in a timeframe determined externally.

Research Assistant

2004 – 2006

- Coordinated packing, ordering, shipping for, and participated in five research expeditions.
- Measured concentrations of dissolved metal micronutrients in environmental samples.
- Performed lab maintenance and inventoried supplies.

EDUCATION

Massachusetts Institute of Technology/Woods Hole Oceanographic Institution,

Cambridge & Woods Hole, MA

Ph.D., Chemical Oceanography, 2012

Haverford College, Haverford, PA

B.S., Organic Chemistry, 2004

RELATED SKILLS AND CONTRIBUTIONS

Leadership and Teamwork

- >10 years experience working 60+ hour weeks in isolated environments with researchers and ship's crew.
- >3 years experience managing environmental consulting projects for compliance and litigation
- Participated in >10 field expeditions, totaling > 7 months at sea. 2004 – present
- Composed three successful proposals for research grants and two consulting projects.
- Completed Project Management bootcamp training with PSMJ Resources, Inc. 2015
- Tutored General Chemistry and Organic Chemistry 2002 – 2004
- Resident Assistant and mentor for college freshmen 2001 – 2002
- Musical director, college a cappella group 2002 – 2003
- Captained NCAA Varsity Cross Country Team, member of three varsity athletic teams 2000 – 2004

General and Technical

- >10 years experience as an expert analyst of trace level constituents in complex aqueous matrices
- Authored >20 peer-reviewed publications with over 650 citations. Example journals: *Nature Geoscience*, *Frontiers in Chemistry*, *Marine Chemistry*, *Limnology and Oceanography*, *Deep-Sea Research II*
- Designed and constructed specialized lab spaces for contamination-sensitive analyses. 2004 – present
- Experience with ICP-MS, electrochemical analyses, spectroscopy techniques (UV-Vis, FT-IR, gamma ray detection, NMR), spectrophotometry, column chromatography, reagent purification and distillation, electronics soldering, and safe deployment of research equipment at sea
- Proficient at Excel, Word, PowerPoint, MacOS, iOS, and Windows
- Basic mastery of HTML and CSS

Professional Activities

- Member, American Chemical Society 2004-present
- Member, Association for the Sciences of Limnology and Oceanography
- Invited manuscript reviewer for peer reviewed scientific journals: *Marine Chemistry*, *Biogeosciences*, *Global Biogeochemical Cycles*, *Chemical Geology*, *Deep-Sea Research II*, and *Earth and Planetary and Science Letters*.
- Invited grant proposal reviewer for the *National Science Foundation*.
- WHOI/MIT Joint Program Treasurer 2008 – 2009

Community Service

- Volunteer Boston Cyclists Union 2018 – present
- Fundraiser and rider: Bikes not Bombs Bike-A-Thon 2016 – present
- Fundraiser and rider: 175 mile National Multiple Sclerosis Society, Cape Cod Getaway 2014 – present
- Fundraiser and rider: Vermont Foodbank Harpoon Point to Point ride 2014