Abigail E. Noble, Ph.D.

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DATA SCIENCE / ENVIRONMENTAL CHEMISTRY / REGULATORY RESEARCH

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

- Data science
- Excellence in writing and publication
- Stakeholder engagement and communication
- Industry consulting and regulatory compliance
- Data management
- Analytical chemistry and field science
- Project management and collaboration
- Government policy and regulations

Ph.D., Chemical Oceanography, Massachusetts Institute of Technology, 2012
B.S., Chemistry, Haverford College, 2004

CAREER HIGHLIGHTS

- 10+ years data management experience across academic, consulting, and government sectors
- Build databases and dashboards, clean, analyze, and visualize complex, messy data using a variety of tools (R, MySQL, MSSMS, MSAccess, Tableau, Sigmaplot, Excel, and Ocean Data View)
- Competency with over a dozen traditional and highly-specialized chemical analysis techniques
- Dedicated and empathetic project manager who prioritizes a culture of teamwork and shared responsibility to drive project success
- Collaborated on >10 field expeditions with international research teams, totaling > 7 months at sea
- Authored >20 peer-reviewed publications with over 1000 citations.
- Presented original research at >15 national and international research conferences
- 10+ years experience as an expert analyst of trace level constituents in complex aqueous matrices
- Experience with HTML, CSS, and Air Table

PROFESSIONAL EXPERIENCE

California Environmental Protection Agency, Department of Toxic Substances Control
Senior Environmental Scientist 2019 – 2022

- Implemented California's Safer Consumer Products regulations *via* researching emerging chemicals of concern and analytical methodologies, collaborating with other agencies and external stakeholders, outreach via public workshops, data analytics, and data visualization.
- Managed the Candidate Chemicals List database, the Program's informational list of >10,000 chemical-hazard trait combinations named by designated authoritative bodies. The database is publicly available on the Program's CalSAFER platform at https://calsafer.dtsc.ca.gov/.
- Built databases, created visualizations and dashboards, cleaned and analyzed complex, messy data using R, MySQL, MSSMS, MSAccess, and Tableau
- Scoped new data tools and evaluated them for value added to the Program
- Advised management on data related strategies for programatic growth
- Created the Program's Diversity, Inclusion, and Anti-racism Team. Under rotating leadership, the team focused on environmental justice issues under SCP's purview, establishing trust and safe spaces for difficult conversations about race, and tackling areas for improvement in the inclusivity of hiring practices.
- Collaborated with external stakeholders from industry, NGOs, and other government agencies to meet programatic needs and co-author research in peer reviewed literature.
- Scoped, pitched, and managed contracts with external contractors
- Presented at inter-agency and public workshops on research and policy efforts within the Program.
- Participated in inter-agency, state-wide, and global committees on various topics (plastic pollution, emerging contaminants, sustainable chemistry)

Independent Contractor
Environmental Scientist, Researcher, Writer 2014 – present

- Collaborate with scientists, analyze data, write and edit for publication, draft proposals and budgets.

Gradient Corporation, Cambridge, MA
Associate Consultant, Environmental Chemist 2014 – 2017

- >3 years experience managing fast turnaround and multi-year environmental consulting projects.
- Collaborated with outside consultants, chemists, and toxicologists to develop a categorization framework for a >2,000-chemical portfolio to accommodate scaling and optimization for hazard assessments.
- Evaluated and reviewed regulatory and government sampling methods for data quality assessments.
- Drafted proposals, scopes and budgets, and managed project progress and client communications.
- Engaged 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)
- Contributed as a team member on projects involving data quality assessment, international chemical registration, regulatory research, green chemistry initiatives, and environmental sampling methods.

Massachusetts Institute of Technology, Cambridge, MA
Postdoctoral Associate 2012 – 2014

- Investigated dissolved lead and lead isotopes at trace concentrations in the Atlantic Ocean.
- Participated in interdisciplinary research expeditions in the Pacific Ocean.

Woods Hole Oceanographic Institution, Woods Hole, MA
Multiple roles: Postdoctoral Investigator, Graduate Research Scientist, Research Assistant 2004 – 2012

- Investigated dissolved metals in the North Atlantic as part of a $300M international collaboration.
- Developed expertise measuring a variety of trace metals in complex aqueous media.
- Designed, developed, and optimized experiments and analytical methods.
- Investigated metal nutrient cycling in the Antarctic, Arctic, Equatorial Pacific, and South Atlantic.

SELECTED PUBLICATIONS

- Balan, S; Bruton, T; Harris, K; Hayes, L; Leonetti, C; Mathrani, V; **Noble, AE**; Phelps, D. *In review.* "Cosmetics Contribute to the PFAS Loading at Wastewater Treatment Plants in California." Environm. Sci. & Technol. Letters.
- Doherty, AC; Lee, C-S; Meng, Q; Sakano, Y; **Noble, AE**; Grant, KA; Esposito, A; Gabler, CJ; Venkatesan, AK. 2022. "Contribution of household and personal care products to 1,4-dioxane contamination of drinking water." Current Opinion in Environ Sci & Health. doi: 10.1021/acs.est.1c06996
- Dawson, D; Fisher, H; **Noble, AE**; Meng, Q; Doherty, AC; Sakano, Y; Vallero, D; Tornero-Velez, R; Cohen Hubal, EA. 2022 "Assessment of Non-Occupational 1,4-Dioxane Exposure Pathways from Drinking Water and Product Use." Environ. Sci. Technol. 56,8, 5266-5275 doi: 10.1021/acs.est.1c06996
- **Noble** et al. 2020, "A Review of Marine Water Sampling Methods for Trace Metals", *Environmental Forensics*. 21:3-4(267-290).
- **Noble** et al. 2017, "Coastal sources, sinks and strong organic complexation of dissolved cobalt within the US North Atlantic GEOTRACES transect GA03." *Biogeosciences* 14:2715-2739.
- **Noble** et al. 2015, "Dynamic variability of dissolved Pb and Pb isotope composition from the U.S. North Atlantic GEOTRACES Transect." *Deep-Sea Res. II.* 116(208–225).
- **Noble** et al. 2012. "Basin-scale inputs of cobalt, iron, and manganese from the Benguela-Angola front to the South Atlantic Ocean." *Limnol. and Oceanogr.* 57(4):989-1010.
- **Full publication and presentations list**

EDUCATION

Data Analytics Core Bootcamp - Level, by Northeastern University, Virtual 2019
PhD in Chemical Oceanography - MIT-WHOI Joint Program, Cambridge, MA 2012
BS in Chemistry - Haverford College, Haverford, PA 2004