

Dr. Byran Fuhrmann

PhD, MBA • Environmental Chemist

Owner & Principal Scientist, ENV Water Chemistry Solutions

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PROFESSIONAL SUMMARY

Environmental chemist with a decade-long career bridging applied science, university teaching, and international water-quality practice. Currently Executive Director of **Clean Water Help** (US-based international NGO; 12 active projects in 6 countries) and Principal Scientist at LakeTech in California. Lead inventor of **6 U.S. patents (2 granted)**, co-author of 10+ peer-reviewed publications, and co-advisor to a current Chemistry M.Sc. candidate at UP Diliman. University-level instructor of record with student evaluation averages significantly above departmental norms across both semesters taught.

HEADLINE ACCOMPLISHMENTS

- Ph.D. Environmental Systems • MBA
- M.S. Environmental Engineering
- B.S. Chemistry
- 8+ peer-reviewed publications
- 7 U.S. patents (2 granted), 4 commercial products
- President, California Lake Management Society
- Founder & Executive Director, international water nonprofit

CURRENT ROLES

ENV Water Chemistry Solutions, LLC — Owner & Principal

2025 – Present

A small aquatic environmental chemistry consulting firm that provides technical expertise to clients who manage environmental restoration and protection projects. We provide specialized water chemistry analysis and advisory services to private clients on a project basis

Clean Water Help — Founder & Executive Director

2024 – Present

U.S. 501(c)(3) public charity providing safe drinking water and water-quality restoration to impoverished communities. Leading 12 active projects across Cambodia, Philippines, DR Congo, Guatemala, Papua New Guinea, and Ghana. Direct a global volunteer corps of 40+ water resource professionals (25+ PhDs); manage all field operations, partner engagements, and donor relations.

EDUCATION

Ph.D., Environmental Systems

University of California, Merced

2020

M.S., Environmental Engineering Sciences

University of Florida

2016

Master of Business Administration (MBA)

Cal Poly Humboldt

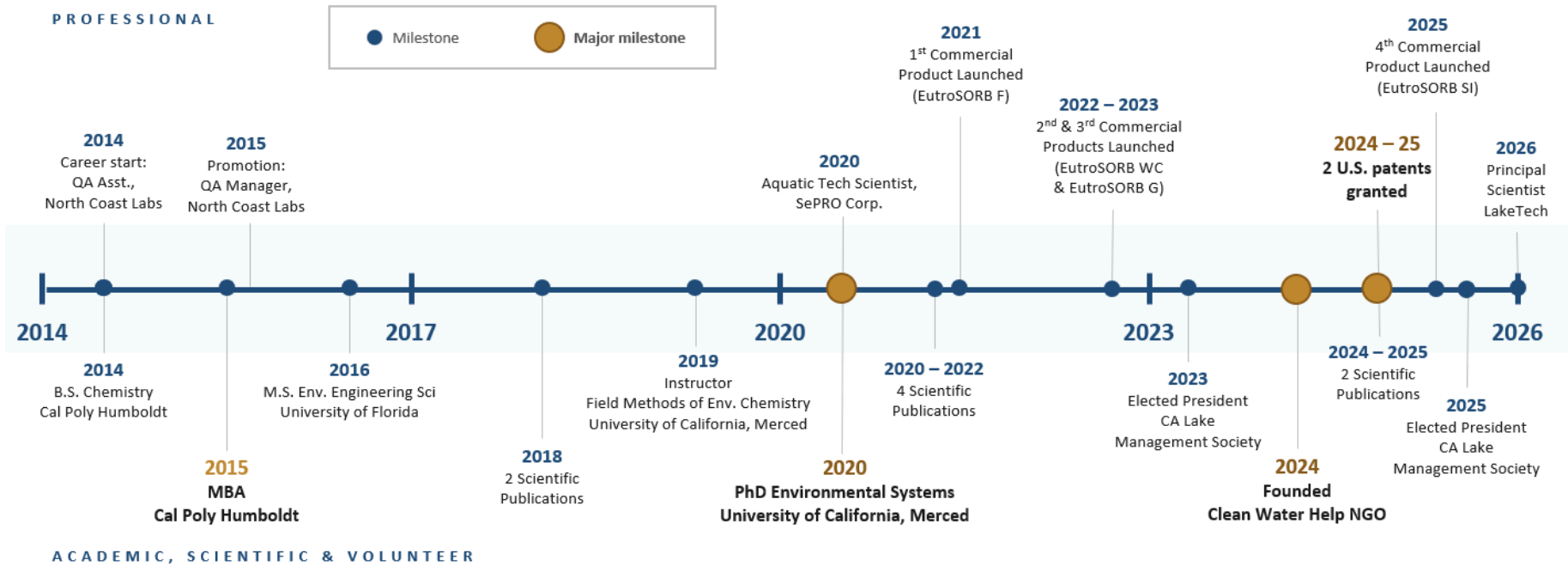
2015

B.S., Chemistry

Cal Poly Humboldt

2014

CAREER TIMELINE (2014 – PRESENT)



Gold milestones indicate major career inflection points. Full detail available throughout this CV.

BY THE NUMBERS

4	7	8+	6
Advanced Degrees	U.S. Patents (2 granted)	Peer-Reviewed Publications	Countries Served by Clean Water Help

SELECTED PROJECT LEADERSHIP

Technical Project Lead on eight water-quality projects totaling \$6.5M+ for federal, state, county, and tribal clients across California, Florida, Washington, and Michigan.

North Moses Lake Sediment Phosphorus Mitigation 2024

Columbia Basin Conservation District, WA. \$3,000,000 USD.

Control of Harmful Algal Blooms & Phosphorus Mitigation, C-44 Canal 2023 – 2025

U.S. Army Corps of Engineers, FL. \$1,700,000 USD.

Phosphorus Remediation, Ocklawaha Prairie Restoration Area 2024 – 2025

St. Johns River Water Management District, FL. \$1,000,000 USD.

Lake Deeson Phosphorus Remediation Project 2024

Polk County Natural Resources / FL DEP Innovative Technology Grant. \$500,000 USD.

Investigation of Sediment Phosphorus Dynamics, Clear Lake 2025

Robinson Rancheria of Pomo Indians, CA. \$150,000 USD.

Bear Branch Creek Phosphorus Remediation Project 2024

Polk County Natural Resources / FL DEP Innovative Technology Grant. \$120,000 USD.

Rainbow Lake Sediment Phosphorus Management 2024

Rainbow Lake Association. \$35,000 USD.

Permitting & Compliance Monitoring — Rule 97 Approval (EutroSORB WC) 2022 – 2023

Michigan EGLE, Water Resources Division — secured state regulatory approval.

PROFESSIONAL CERTIFICATIONS

Certified Lake Manager 2023

North American Lake Management Society (NALMS)

Engineering Entrepreneurship Certificate 2016

University of Florida

PROFESSIONAL SERVICE & AFFILIATIONS

California Lake Management Society (CALMS) 2017 – Present

- President: 2023; 2025 – Present
- President-Elect: 2022; 2024
- Northern California Director: 2017 – 2021

North American Lake Management Society (NALMS) 2023 – Present

- Conference Program Committee Member

American Water Works Association (AWWA) 2020 – Present

- Source Water Protection Committee Member

PREVIOUS PROFESSIONAL EXPERIENCE

SePRO Corporation — Aquatic Technology Development Scientist 2020 – 2025

EutroPHIX Division Technical Project Lead. Lead principal investigator and water quality scientist for phosphorus management projects across the United States, Europe, and Australia.

Principal scientist and lead inventor of the EutroSORB commercial product line:

- EutroSORB SI: Iron-coated Lanthanum (2023–2025) — U.S. Application 18/884,019
- EutroSORB G (2022–2023)

- EutroSORB WC (2021–2022)
- EutroSORB F (2020–2021) — Granted Patent US12134083B2

North Coast Laboratories — Quality Assurance Manager

2014 – 2016

Promoted from Quality Assurance Assistant to Quality Assurance Manager within first year; led lab quality operations while concurrently completing MBA and M.S. in Environmental Engineering Sciences.

PATENTS (LEAD INVENTOR)

- **Methods of production and use of rare earth enhanced coagulants** (2025). U.S. App. 63/639,677; US20250333346A1.
- **Aquatic dye and coagulant combination product to improve the longevity of water quality enhancements** (2025). U.S. App. 19/055,470; US20250270122A1.
- **Methods and compositions of an iron-coated lanthanum compound for remediation of contaminated sediments** (2024). U.S. App. 18/884,019.
- **Methods and systems of analysis of phosphorus release and management in a body of water** (2024). U.S. App. 18/764,671; US20250012774A1.
- **Use of trivalent metals to enhance aquatic pesticide efficacy** (2023). U.S. App. 18/304,032; US20230339787A1. **Granted Feb 17, 2025.**
- **Compositions and systems for binding nutrients from moving bodies of water** (2022). US12134083B2. **Granted Nov 5, 2024.** Cited 2x (CN118851427B, US20210130251A1).

PEER-REVIEWED PUBLICATIONS

In Preparation (selected)

- **Fuhrmann, B.**, Willis, B., Barkley, C., Shuler, S., Scott, J., Van Goethem, R., Lurling, M. (*In Prep*). The seasonality of lake sediment phosphorus highlights opportunities for improved water resource management.

In Review

- Easley, R., **Fuhrmann, B.**, Price, K., Long, S., Swan, K. (In Review). Water Quality and Source Water Protection. In *M50 Water Resources Planning, 4th Ed.* American Water Works Association.

Published

- Hohn, R.A., Abusaba, K.P., Bray, E.N., Hauswirth, S.C., **Fuhrmann, B.C.**, Beutel, M.W., Lamborg, C.H., Mason, R.P., Flegal, A.R., Ganguli, P.M. (2025). Ongoing mercury contamination downstream from the former New Idria Mercury Mine. *PLOS Water*, 4(6): e0000328.
- Rodal-Morales, N.D., Beutel, M., **Fuhrmann, B.**, Defeo, S., Hansen, A., Brower, S., Pasek, J. (2024). Hydrology and oxygen addition drive nutrient, metals, and methylmercury cycling in a hypereutrophic water supply reservoir. *Frontiers in Water*.
- Seelos, M., Rivas Meraz, E., Beutel, M., Traina, S., **Fuhrmann, B.**, Burmistrova, J., Vlassopoulos, D., O'Day, P. (2022). Evaluation of manganese oxide amendments for mercury remediation in contaminated aquatic sediments. *ACS*, 1(12): 1688–1697.
- **Fuhrmann, B.**, Beutel, M., Ganguli, P., Zhao, L., Brower, S., Funk, A., Pasek, J. (2021). Seasonal patterns of methylmercury production, release, and degradation in profundal sediment of a hyper-eutrophic reservoir. *Lake and Reservoir Management*, 37(4): 360–377.
- **Fuhrmann, B.**, Beutel, M., O'Day, P., Tran, C., Funk, A., Brower, S., Pasek, J., Seelos, M. (2021). Effects of mercury, organic carbon, and microbial inhibition on methylmercury cycling. *Environmental Pollution*.
- Beutel, M., **Fuhrmann, B.**, Herbon, H., Chow, C., Brower, S., Pasek, J. (2020). Cycling of methylmercury and other redox-sensitive compounds in the profundal zone of a hypereutrophic water supply reservoir. *Hydrobiologia*, 847: 4425–4446.
- Duvil, R., Beutel, M., **Fuhrmann, B.**, Seelos, M. (2018). Effect of oxygen, nitrate and aluminum addition on methylmercury efflux from mine-impacted reservoir sediment. *Water Research*, 144: 740–751.
- Beutel, M., Garcia-Gallardo, T., Falcon-Rojas, A., **Fuhrmann, B.**, Hansen, A. (2018). Use of oxygenation to repress release of redox-sensitive compounds from profundal sediment in the Valle de Bravo Reservoir, Mexico. *Int. J. Environmental Pollution*, 34(6): 17–20.

SELECTED CONFERENCE PRESENTATIONS (2023 – PRESENT)

2026

- Volunteer scientists and engineers: Solving water problems worldwide. Karuna Children Cambodia Organization (KCCO). Kampot, Cambodia.
- An approach for urban river restoration. Surabaya City Council. Surabaya, Indonesia.
- Lake and Watershed Management in the Philippines. Colby College, Waterville, Maine.

2025

- Advances in Sediment Phosphorus Geochemistry. North American Lake Management Society (NALMS). Myrtle Beach, SC.
- Lake Chemistry Data Do's and Don'ts. NALMS. Myrtle Beach, SC.
- Regional & International Lake Management Differences from a Nomad's Perspective. NALMS. Myrtle Beach.
- Iron-coated Lanthanum: A new material for sediment phosphorus management. NALMS. Myrtle Beach, SC.
- Sediment Phosphorus Analysis for Improved Lake Management. California Lake Management Society (CALMS). San Diego, CA.
- Management of Taste and Odor Compounds and Cyanotoxins in Lakes and Reservoirs. CALMS. San Diego.
- Avoiding Analysis Paralysis: Adaptive Lake Management for Highest ROI. 20th World Lake Conference. Brisbane, Australia.

40+ additional invited talks delivered 2017–2024; full list available upon request.

TEACHING & MENTORSHIP

Graduate Student Advising

- **James Silao** — M.Sc. Chemistry, **University of the Philippines, Diliman** (Co-advisor, 2024 – Present)
- **Gregory Jesmok** — M.Sc. Geology, California State University, Northridge (2021 – Present)
- **Johan van Snippenberg** — M.Sc. Earth & Environment, Wageningen University, Netherlands (2023 – 2024)

University Teaching — Instructor of Record

2019 – 2020

University of California, Merced • School of Engineering

- **ENVE 184: Field Methods in Environmental Chemistry** — Spring 2020 (instructor of record; 8 student)
- **ENVE 184: Field Methods in Environmental Chemistry** — Fall 2019 (instructor of record; 8 students)
- Lab Instructor, Environmental Chemistry — 2019 (lead instructor of record)

AWARDS & HONORS

- Scientists Promoting Policy, Access, Research, and Knowledge (SP2ARK) Fellow (2025)
- Southern California Edison Fellow (2019)
- Science Translators Representative — California Council on Science and Technology, Sacramento (2019)
- Eagle Scout — Boy Scouts of America
- Black Belt — World Taekwondo Federation