

## VICTOR F. MEDINA, PH.D., P.E.

204 Catherine Corner

Brandon, MS 39047

[Victor@medinaenvironmental.com](mailto:Victor@medinaenvironmental.com)

[drvictorfmedina@gmail.com](mailto:drvictorfmedina@gmail.com)

(601) 218-0696

Professional Engineer. State of Mississippi. No. 16562

**LinkedIn:** [www.linkedin.com/in/victor-medina-envengineer](http://www.linkedin.com/in/victor-medina-envengineer)

**ResearchGate:** [www.researchgate.net/profile/Victor-Medina-5](http://www.researchgate.net/profile/Victor-Medina-5)

---

### CURRENT POSITIONS

- Owner/Environmental Engineer. Medina Environmental Consulting & Solutions.
  - Founding and organizing sole proprietorship LLC.
  - Aggressive proposal activities.
    - Led two ESTCP Proposals.
    - Proposal to Yokota Air Force Base.
    - Currently developing USEPA SBIR Activity.
  - Small Business Training
    - Current participant in Jackson State University/National Science Foundation Innovation Corps. Summer Cohort.
    - Invited participant in MCITY DAWG Tank Pitch Competition
  - White Paper Development
    - White paper on Mobile Water Treatment
    - White paper on the PFAS Effluent Treatment System (PETS)
- Majority Owner/Managing Member. Medina Doyle Technologies
  - Organized LLC
  - Prepared and submitted patent license agreement for PFAS Effluent Treatment System.

### RELEVANT SKILLS

- **Water & Environmental Treatment:** Currently, as the owner of *Medina Environmental Consulting and Solutions*, I have led *ESTCP proposals* focused on smart water meters for military bases and on basalt fiber runoff control filters for PFAS and 6-PPD-Q contaminated sites. These projects included teams with Spill Bully (Oceanside, CA) Broadway Ventures (Vicksburg, MS), and Limnotech (Ann Arbor, MI) I applied and was accepted into the *Jackson State University/National Science Foundation Innovation-Corps* Summer Cohort with a focus on **business development of water/wastewater treatment products and services**. This includes **customer discovery** and business refinement. I participated in the *MCITY Dawg Tank Competition*, presenting a concept called the **Basalt Air Carbon Capture System (BACCS)** and the *MCITY Small Business Small Business Showcase*, I presented progress on business development **for Point of Entry Treatment (POET)** for homes, military housing, and businesses to treat PFAS, lead, microorganisms and other issues using granular media and ultraviolet disinfection. I also prepared proposal for mobile PFAS treatment for application in Japan. and I am currently in the process of preparing a proposal for the *USEPA Small Business Innovative Research (SBIR) program*, which will focus on the development of a **residential filter for cyanobacteria** and their toxins using

graphene/graphene oxide materials, which is based on studies I started while at the Army Corps of Engineers and will team with Jackson State University (Jackson, MS). I teamed with We Think Global, Inc (Los Angeles, CA), on a *CalSeed preproposal* focused on **mineral recovery from mine runoff water**, and the it was selected for a phase 2 proposal. I just founded a new company, *Medina Doyle Technologies*, which focuses on manufacturing water/wastewater treatment systems and environmental technologies. I have prepared and submitted documents to license the PFAS Effluent Treatment System (PETS), a mobile PFAS treatment system that I developed while at Army Corps of Engineers. I have a part-time position with *Broadway Ventures* and am starting a project as a Senior Scientist reviewing a **pipe nodal analysis**. I have a contract with Athena Engineering and Environmental (Nashville, TN) to provide engineering services and was a part of a successful proposal to conduct **PFAS studies for the State of Kentucky**. We are currently preparing a proposal to provide engineering services for the St. Louis District.

At the *Army Engineer Research and Development Center (ERDC) (Vicksburg, MS)*, I was a *Senior Research Engineer (DB5/GS15)* and led the **Water & Environmental Security Engineering Team (WESET)**, which secured projects in research involving water treatment, wastewater treatment, and the remediation of challenging contaminants. At *TRC Environmental Corporation (Ft. Collins, CO)*, I was the *Technical Director, Water/Wastewater*, serving as the **Senior Expert** in water & wastewater to a 6,500-person organization. I led TRC's **Emerging Contaminants** technical group, and was the co-lead of the **Water, Wastewater Treatment, and Remediation Design** group. My expertise includes diverse areas such as addressing PFAS (per & polyfluoroalkyl substances), harmful algal blooms, water recycling/reuse, treatment of grey and blackwater, treatment of industrial wastewater, and treatment of toxic industrial chemicals and warfare agents.

- **Water Stewardship & Resiliency:** I have 20 years of experience in water stewardship activities, including protection of water supplies from contamination, treatment of water, and water conservation. I led the water team of the ERDC the **Installation Energy and Water Program** team at the ERDC, which is an ongoing program to insure water and energy resiliency for U.S. Army and National Guard installations and facilities. I led the water sub-team lead, providing **training** in the resiliency assessment process, **oversight** to the water portions of the projects, and **developed novel solutions** to meet the project goals. I also led water resiliency evaluations for multiple installations including White Sands Missile Range, Fort Huachuca, U.S. Army Garrison Wiesbaden, Camp Smith and other New York National Guard facilities, and National Guard facilities for the District of Columbia.
- **Project Management:** I have considerable project management experience, including management of **budget, schedule, and customer communications**. I have identified emerging water and environmental challenges and developed training, materials, and staff to position to address these issues.
- **Innovation:** I developed **innovative solutions** for water and environmental challenges for the U.S. Military and for industrial entities. These include mobile water treatment for water contaminated with PFAS, the use of grasses to retard contaminant migration in

soil, novel membranes made of graphene oxide, and the use of ammonia gas to stimulate alkaline hydrolysis in the subsurface to degrade various contaminants. In 2020, I was named the ERDC-Environmental Laboratories Researcher of the Year, and I also received a Federal Laboratory Consortium award for **Technology Transfer** for the development of mobile treatment of PFAS.

- **Communication:** I am highly skilled in both verbal and written communication. . I have made more than **100 technical presentations** to conferences and symposiums and made numerous presentations to universities, Federal agencies, and companies. I have authored over **130 technical papers and reports**, including over **30 journal** articles. I was a co-author of a paper titled “Installation Energy and Water Resiliency Planning” that received a Top **Technical Paper Award** from ASHRAE.

## EXPERIENCE

- 12/2023 to Present. Environmental Engineer & Business Owner. Medina Environmental Consulting & Solutions. Brandon, MS.
- 6/2024 to Present. Majority Owner/Managing Member. Medina Doyle Technologies. Brandon, MS.
- 6/2024 to Present. Senior Scientist. Broadway Ventures. Vicksburg, MS.
- 4/2024 to Present. Contract Engineer. Athena Engineering & Environmental. Nashville, TN
- 04/2022 to 11/2023. Technical Director - Water/Wastewater. TRC Environmental Corporation. Remote.
- 2003 to 2022. Senior Level Research Engineer & Research Team Leader (DB-5/ GS-15). United States Army Engineer Research and Development Center. (ERDC) Vicksburg, MS.
- 1997 to 2003. Assistant Professor. Department of Civil & Environmental Engineering. Washington State University, Tri-Cities. Richland, WA.
- 2001 to 2003. Staff Scientist. Field Hydrology & Chemistry Group. Battelle Pacific Northwest National Laboratory. Richland, WA. (Appointment Concurrent with Faculty Post).

## EDUCATION

- 1994. Doctor of Philosophy Degree in Environmental Engineering. University of Southern California.
- 1990. Master of Science Degree in Environmental Engineering. University of Southern California.
- 1987. Bachelor of Science Degree in Geology. University of California, Los Angeles.

## RECENT PROJECT PORTFOLIO

- Conceptualization, Development and Evaluation of mobile water treatment systems for PFAS and other concentrated contaminants.
- Assess and design solutions for industrial processes including cyanide and metals removal.
- Evaluation of treatment options of high salt concentrations in groundwater to promote beneficial use options, including potential for ecological habitat creation.
- Water treatment technologies for small communities.

- Development and evaluation of mobile water treatment for water contaminated with Chemical, Biological, and Radiological Warfare Contaminants.
- Water/Wastewater assessments to provide potable water resources in highly stressed conditions. This includes water conservation, the development of new water treatment approaches, and studies on maximizing existing water resources.
- Developing novel approaches to improve water quality at reservoirs and rivers, including addressing lubrication at dams and navigation structures, migration of aquatic invasive species, and addressing hazardous algal blooms.

## **PUBLICATIONS**

- More than 130 professional publications of all kinds, including Journal Articles, Peer-Reviewed, Archivable Government Reports, and Book Chapters.
- 5 Patents Filed/Awarded on novel environmental technologies.
- Most articles can be downloaded on my ResearchGate site (see link in address section).
- Sample Articles
  - Smith, C.B., D. Acevedo, E. Martinez-Guerra, V.F. Medina, M.P. Duczynski, S.R. Wolters, N. Garfinkle, L. Melendez, and L. Feliciano. 2022. Developing Water Solutions at Military Installations. *Climate Risk Management*. 37:100451.
  - Medina, V.F., S.A. Waisner, J. Mattei-Sosa, J. Lalley, J. Brasher, and C.S. Griggs. The PFAS Effluent Treatment System. Patent Filed in April 2020.
  - Thomas, C., A. Butler, C. Griggs, V.F. Medina, and A. Katzenmeyer. 2019. Physicochemical treatment of cyanobacteria and microcystin by hydrodynamic cavitation and advanced oxidation. ERDC/EL TR-19-02.

## **RECENT PRESENTATIONS & WORKSHOPS**

- 03/2023. Workshop: PFAS Challenges and Treatment. Presentation: PFAS Treatment in Water and Remediation. Presentation: Treatment and Remediation of PFAS in Water, Groundwater, Soils, and Sediments. AEHS (Organization formerly known as Association for the Environmental Health of Soils) West Coast Meeting. San Diego, CA.
- 03/2023. Workshop: What you need to know about Microplastics. Presentations: (1) Assessment of Risks and Toxicity of Microplastics. (2) Treatment and Remediation of Microplastics. AEHS West Coast Meeting. San Diego, CA.
- 03/2023. Workshop: Microplastics in Sediments. Presentation. Treatment and Remediation of Microplastics in Sediments. Battelle Contaminated Sediments Conference.
- 12/2022. Presentation. Adapting Military AFFF Decontamination to Civilian Applications. SERDP/ESTCP (combined funding organizations for environmental research for the Department of Defense) Symposium. Washington, D.C.

## **RECENT PROFESSIONAL AWARDS**

- 2023. ASHRAE (Technical Organization focused on Energy and Ventilation). Technical Paper Award. "Installation Energy and Water Resilience Planning, Approach and Results."

- 2021. Southeast Federal Laboratory Consortium, Excellence in Technology Transfer. For development of mobile treatment technologies for PFAS impacted water. Award encompassing all Federal Laboratories in the Southeast Region.
- 2021. ERDC International Research Project of the Year. Mobile Water Treatment Projects in Japan (Misawa AB and Futenma MCAS).
- 2020. ERDC-EL Researcher of the Year. I was chosen as the researcher of the year within the Environmental Laboratory, an organization of more than 200 highly skilled professionals.
- 2020. ERDC. Outstanding Team Effort. ERDC Installation Energy and Water Planning Team. I served as the Water Lead for a series of projects for Army and National Guard Installations.
- 2019. ERDC-EL Project Lead of the Year. I was chosen as project lead of the year for my leadership in developing and evaluating mobile water treatment technologies.