

MASIH BARI, PHD, PE

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EXPERT WITNESS | WATER RESOURCES & ENVIRONMENTAL SYSTEMS

Expert in surface water and groundwater systems, hydrology, and water quality modeling with experience providing defensible analyses, expert reports, and testimony in water resources litigation. Civil and Environmental Engineer (PhD, PE) with 20+ years of experience in technical evaluation, regulatory compliance, and infrastructure-related impacts. Skilled in evaluating modeling assumptions, reviewing opposing expert work, and translating complex analyses into clear, supportable conclusions for legal and regulatory settings.

EXPERT WITNESS & LITIGATION SUPPORT

- Expert reports, rebuttals, and technical memoranda
- Technical evaluation of opposing expert analyses and modeling
- Groundwater and surface water modeling analysis
- Regulatory interpretation (e.g. NPDES, SGMA, Title 22)
- Deposition, testimony, and trial preparation
- Attorney–client privileged technical analysis

EXPERT WITNESS EXPERIENCE

Independent Consultant (Retained Expert), Kansas

Jan 2019 – Mar 2020

Provided expert testimony and defensible technical analysis in a high-stakes water resources litigation case. Closely collaborated with attorneys, delivering defensible findings, risk assessments, and detailed technical reports by synthesizing complex data into clear, legally defensible insights that informed case strategy and regulatory decisions.

- Retained as expert in groundwater litigation involving aquifer management and regulatory compliance
- Evaluated groundwater simulation models for technical validity, assumptions, and regulatory implications
- Analyzed Aquifer Storage and Recovery (ASR) permit modification in context of model outputs and legal standards
- Authored expert report and rebuttal addressing opposing expert opinions
- Provided sworn testimony before the Kansas Division of Water Resources
- Supported legal counsel in developing technically defensible case strategy

PROFESSIONAL SUMMARY

Civil and Environmental Engineer (PhD, PE) with over 20 years of experience in water resources, hydrology, and environmental compliance. Background includes hydrologic and hydraulic modeling, groundwater system evaluation, and regulatory analysis across municipal and infrastructure projects. Experienced in reviewing technical work products, identifying key assumptions and risks, and supporting decision-making in both engineering and legal contexts. Combines technical depth with the ability to communicate complex findings clearly to non-technical audiences, including attorneys, regulators, and stakeholders.

CORE EXPERTISE

Expert Witness & Technical Analysis:

Model & technical document evaluation | Defensibility assessment | Expert reports & rebuttals | Regulatory interpretation

Water Resources & Modeling

Hydrologic & hydraulic modeling | Groundwater systems | Water quality analysis | Mixing zone & dilution modeling

Regulatory & Compliance

NPDES | SGMA | Title 22 | Basin Plans | Water quality objectives

PROFESSIONAL EXPERIENCE

The Bari Consulting Inc., Founder & Principal, Santa Monica, CA

Jun 2025 – Present

Founded a specialized consulting practice providing technical advisory and expert support in water resources, regulatory compliance, and infrastructure-related evaluations.

- Provide technical advisory services on hydrologic and water quality modeling, including review of model assumptions, inputs, and outputs.
- Conduct technical evaluations of infrastructure and water management projects, focusing on regulatory compliance and defensibility.
- Advise agencies and consulting teams on modeling approaches, risk considerations, and regulatory interpretation.

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AtkinsRéalis, Senior Engineer II, Los Angeles, CA

Jul 2022 – Aug 2025

Served as Project Manager and Deputy Program Manager on water infrastructure and environmental compliance initiatives, with a focus on technical oversight, regulatory alignment, and multidisciplinary coordination.

- Supported technical oversight of infrastructure programs, including review of modeling outputs, design assumptions, and regulatory compliance considerations
- Evaluated hydrologic and hydraulic modeling results (flow distribution, velocities, flood extents, water surface elevations) to ensure technical consistency and defensibility
- Reviewed and interpreted technical analyses to support defensibility of engineering approaches and regulatory compliance decisions
- Contributed to management of multiple concurrent projects, aligning technical teams, client priorities, and delivery schedules
- Coordinated with subconsultants and served as a client-facing point of contact to support project delivery and integration
- Supported proposal development and qualification packages securing multiple contracts totaling over \$10M
- Delivered technical findings at national industry conferences (CASQA, WEFTech, StormCon)

Cordoba Corporation, Hydrology and Hydraulics Engineer, Los Angeles, CA

June 2021 – July 2022

Served in a hybrid technical and project management role, supporting client-facing water infrastructure and stormwater projects while contributing to business development. Partnered with clients, subconsultants, and internal teams to deliver high-quality technical work and keep projects on schedule, within budget, and compliant with regulatory standards.

- Contributed to the Business Development and Marketing Steering Committee, shaping strategic direction and future growth opportunities.
- Contributed to development of proposals and qualification statements aligned with client requirements.
- Supported client relationship management efforts, contributing to repeat work and long-term partnerships.
- Partnered with peer consultants to develop teaming strategies that enhanced competitive positioning.
- Served as the Assistant Project Manager for the MacArthur Lake Stormwater Capture Project, including labor-hour estimates, scheduling, capital budget planning, coordinating preliminary design documentation, and engineering deliverables.
- Provided project management support for Valley Water's Purified Water Program, a recycled water initiative, including Title 22 Engineering Report analyses, a Monitoring and Reporting Program, and an Enhanced Source Control Program.
- Evaluated compliance alternatives for an oil company site closure, aligning technical work with regulatory risk management under attorney-client privilege.

PROJECT ENGINEER II, Larry Walker Associates, Santa Monica, CA

July 2018 – June 2021

Played a key role in interdisciplinary water resources projects with a strong focus on wastewater and drinking water utilities through technical analysis, regulatory support, and report development. Work included NPDES permit compliance and reissuance support using near-field mixing zone/dilution modeling and preparation of technical memoranda for Regional Water Board consideration, as well as AWIA risk and resiliency assessments for community water systems. Also assisted in SGMA Groundwater Sustainability Plans through development of analysis roadmaps, hydrologic/statistical evaluations, groundwater quality mapping, and report preparation.

- Wastewater / Recycled Water / Advanced Treatment: Developed mixing zone simulation models for wastewater discharge compliance, producing dilution credit analyses for multiple Bay Area utilities.
- Drinking Water: Prepared Risk and Resiliency Assessment reports for the Cities of Turlock and Calistoga in accordance with America's Water Infrastructure Act (AWIA)
- Water Supply Planning: Led technical evaluation of municipal water supply alternatives, including regulatory and feasibility considerations
- SGMA / GSPs: Contributed to development of five Groundwater Sustainability Plans under SGMA, providing 50-year implementation roadmaps.
- Groundwater / Wastewater Impacts: Developed a scope of work to evaluate potential impacts of wastewater percolation ponds to groundwater (monitoring approach, proposed well locations, evaluation methods, and schedule)

SENIOR WATER RESOURCES ENGINEER, RTI International, Fort Collins, CO

June 2015 – April 2018

Senior engineer contributing technical leadership and project management support on domestic and international water resources projects. Collaborated with clients and multidisciplinary teams to deliver modeling, risk management, and planning solutions. Contributed to proposal development, stakeholder engagement, and project execution across multiple high-profile initiatives.

- Assisted with planning, scoping, and subcontractor coordination for the World Bank's Brahmaputra River Basin Sustainability Project and developed risk identification and management plans to anticipate and mitigate project challenges.
- Co-authored a successful proposal for the NASA-funded Colorado River Basin Forecast Project, including budget planning and development of the project management framework.
- Produced various rule-based reservoir operation simulation models for Idaho Power and Tennessee Valley Authority to enhance forecasting and support financial and resource planning decisions.

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- Streamlined large-scale data processing by automating workflows with Python scripts, improving efficiency and reducing costs.

RESEARCH & ACADEMIC EXPERIENCE

- **Visiting Scholar**, Colorado Water Institute, Colorado State University, Fort Collins, Colorado, Jul 2015 – Mar 2017
- **Postdoctoral Researcher**, Colorado Water Institute, Colorado State University, Fort Collins, Colorado, Feb 2014 – Jun 2015
- **Individual Consultant**, Factor(E) Ventures, Fort Collins, Colorado, May 2014 – Jul 2014
- **Postdoctoral Scholar**, Center for Watershed Sciences, University of California, Davis, CA, Aug 2012 – Sep 2013
- **Graduate Research Assistant**, Dep. of Civil and Environmental Eng., Colorado State University, Fort Collins, CO, Sep 2008 – Jul 2012

EDUCATION

Colorado State University, Ph.D. in Civil and Environmental Engineering, Fort Collins, CO – Aug. 2012

Specializing in Hydrology and Water Resources Management (Distinguished International Presidential Fellow)

Amirkabir University of Technology (Tehran Polytechnic), M.S. in Civil and Environmental Engineering, Tehran, Iran – Nov. 2005

Islamic Azad University, B.S. in Civil Engineering, Nadjaf Abad, Iran – Feb. 2002

PUBLICATIONS & PRESENTATIONS

- Co-authored two editions of an internationally adopted textbook on groundwater management
- Author of numerous peer-reviewed journal articles and white papers on water resources management.
- Session chair, speaker, and panelist at national and international conferences.