

MATTHEW P. RIES, Ph.D., P.E.
Director, Sustainability and Watershed Management at DC Water

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SUMMARY

Senior water professional with 25 years in municipal water, wastewater, and stormwater sectors, as well as a public wastewater utility Director for five years. Almost a decade in consulting, followed by twelve years as Chief Technical Officer at the world's largest water quality organization, and a sustainability-focused leadership position at DC Water. Recent doctoral work generated an Urban Water Sustainability Index to assess top practices and key attributes of sustainable, U.S. urban water utilities.

WORK EXPERIENCE

2017 to present **DC Water**

Washington, DC

Director, Sustainability and Watershed Management: Responsible for providing strategic direction, technical information, and stakeholder engagement to develop DC Water's sustainability program and catalyze related improvements to the watersheds serving the District of Columbia. Duties include the creation, implementation, and coordination of work plans and strategies to enhance DC Water's sustainability efforts and restore and protect watersheds via external partnerships with governmental and non-governmental entities. Member of DC Water's Strategy and Performance Management team, working to improve, track, and report on strategic planning and performance throughout the enterprise. Developing quantitative assessment of DC Water's Reliability, Resilience, and Sustainability for strategic-level executive and Board reporting. Leading the scoping and development of the second iteration of DC Water's innovation program.

2005 to 2017

Water Environment Federation (WEF)

Alexandria, VA

Chief Technical Officer: Managed cross-functional teams in WEF's Water Science & Engineering Center and Education & Training programs, with budgets over \$4 million and 20 staff. Supervised development and delivery of WEF's educational programming, including the WEFTEC, the world's largest annual water conference and exposition.

- Oversaw the development and launch of WEF's Innovation Program in 2011, which included the WEFTEC Innovation Pavilion, the Leaders Innovation Forum for Technology (LIFT) program with WERF, and the multi-partner Utility of the Future Today Recognition program
- Working with select Board members and staff, developed and launched WEF's Stormwater Institute in 2015, including development and release of seminal *Rainfall to Results: The Future of Stormwater*
- Leader in WEF's development of the National Green Infrastructure Certification Program, in partnership with DC Water and 14 other founding jurisdictions
- Oversaw WEF's Specialty Conference program, which included technical supervision of conferences including: Nutrient Removal and Recovery, Impaired Waters, Cities of the Future / Urban River Restoration, Utility Management, Smart Water/Big Data for Stormwater Management, Innovation, and Sustainability

2002 to 2005

Earth Tech, Inc. (now AECOM)

Alexandria, VA

- **Design Manager:** U.S. National Arboretum's Hickey Run Stormwater Pollution Abatement Project for Hickey Run and Anacostia River TMDL compliance
- **Project Coordinator and Deputy Design Manager:** Fixed-base/incentive fee program management for Arlington Water Pollution Control Plant upgrade and expansion
- **Project Engineer:** Construction management for disinfection and centrifuge projects at DC Water; design of Baltimore's Patapsco Wastewater Treatment Plant expansion

- 1999 to 2002 **Ecology and Environment, Inc.** Arlington, VA
- Project Engineer: Design and management of constructed treatment wetlands for stormwater treatment; environmental sampling program at Anacostia River facilities
 - Environmental Compliance Inspector: National Park Service, National Capitol Region facilities, including Anacostia Park, Kenilworth Park, and Anacostia River yacht clubs
- 1997 to 1999 **Hazen and Sawyer** Fairfax, VA
- Resident Engineer: Design, construction, and start-up of solids treatment facilities, including construction inspection and administration; development of standard operating procedures; and operator training for all trades and shifts at Arlington WPCP
 - Project Engineer: Design of upgrade to influent screening facilities at DC Water and Sewer Authority's Blue Plains Advanced Wastewater Treatment Plant; Aeration system design for Fairfax Water's Occoquan Reservoir

EDUCATION AND LICENSURE

- 2012 to 2016 **University of South Florida** Tampa, FL
 PhD in *CIVIL ENGINEERING*
 Dissertation: "Sustainability at U.S. Urban Water Utilities: A Framework to Assess Key Attributes" produced a concise sustainability index of eight practices and 14 indicators to quantify and correlate key organizational attributes to sustainable practices. Senior Research Fellow at the Patel College of Global Sustainability.
- 1995 to 1997 **University of Notre Dame** Notre Dame, IN
 MS in *ENVIRONMENTAL ENGINEERING*
 Thesis: "A Study of Alternating Water Levels in Subsurface Constructed Wetlands for Enhanced Nutrient Removal"
- 1990 to 1995 **Valparaiso University** Valparaiso, IN
 BS in *CIVIL ENGINEERING*, cum laude. Minors: *Business, Spanish*
 International Study Semester: Universidad de las Americas, Puebla, Mexico
- 2000 to present **Registered Professional Engineer**
 Commonwealth of Virginia

NATIONAL CONVENINGS, REPORT DEVELOPMENT, AND COLLABORATIONS

- 2020 to present Project Advisory Committee: Water Research Foundation's (WRF) "New Approaches for Improved Nutrient Management: Phase 1, Project #4974"
- 2018 to present Project Advisory Group: Pacific Institute's "Moving Toward a Multi-Benefit Approach for Water Management"
- 2018 to 2019 Roundtable Participant and Contributor: Resources for the Future's "Facing The Nation's Water Challenges: Results from Resources for the Future's Roundtable Series"
- 2018 Forum Participant: Aspen Institute's "Reaching Watershed Scale Through Cooperation and Integration: A Report from the 2018 Aspen-Nicholas Water Forum"
- 2017 to present Utility Coordinator, Panelist, and Contributor: WRF "Leading Water and Wastewater Utility Innovation, Project #4907"
- 2016 Technical Reviewer: Arcadis' "Sustainable Cities Water Index"
- 2015 to 2017 Technical Advisory Panel: WRF "Fostering Innovation Within Water Utilities, Project #4642"

2013 to 2014	<u>Organizing Partner:</u> WEF, The Johnson Foundation (TJF), WRF, and the Environmental Defense Fund's "Smarter Nutrient Management and WEF Nutrient Roadmap Primer"
2012	<u>Participant:</u> WEF's "WEF Energy Roadmap: Driving Water and Wastewater Utilities to More Sustainable Energy Management"
2006 to 2007	<u>Continuity Team:</u> TJF's "National Leadership Summits for a Sustainable America" summits on <i>Natural Resources and Climate Change</i> , <i>Sustainable Communities and Climate Change</i> , and <i>Building an Action Plan</i>

SELECT PRESENTATIONS, PUBLICATIONS, AND CONTRIBUTIONS

- "On the Front Lines of Flooding: Local Perspectives on Adaptation and Resilience," (2019). Invited panelist at the American Flood Coalition's Congressional Briefing, Washington, DC.
- "The Digital Anacostia: A Watershed Approach Building on Partnerships and Technology," (2018). Presenter at the AWRA Annual Conference, Baltimore, MD.
- Ries, M., Fong, T., George, B., Lovett, B. (2018). Creating a Digital Twin for the Anacostia Watershed, *WEFTEC 2018 Proceedings*. New Orleans, LA, 3226-3231.
- "Sustainability at U.S. Urban Water Utilities: Leadership & the (External) View from the Top" (2017). Invited plenary presentation at the NACWA Winter Conference, Next Generation Compliance...Where Affordability & Innovation Intersect, Tampa, FL.
- "Sustainability at U.S. Urban Water Utilities: Top Practices & Key Organizational Attributes" (2016). Invited presentation at the Global Water Resiliency Exchange, Los Angeles, CA.
- "Water for Sustainable and Inclusive Cities: How to Induce Change" (2016). Invited panelist at Stockholm World Water Week, Stockholm, Sweden.
- Ries, M., Trotz, M., & Vairavamoorthy, K. (2016). "'Fit-for-Purpose' Sustainability Index: A Simplified Approach for U.S. Water Utility Sustainability Assessment." *Water Practice & Technology*, 11(1), 35-47.
- "WEF and the Pathway to the Utility of the Future," (2015). Invited keynote presentation at the Nevada WEA's Annual Conference: The Value of Water. Las Vegas, NV.
- Contributor to NPR Marketplace series: Water: The High Price of Cheap (2015). "How to Turn Sewage into a Product People Want" and "Under D.C., A New Tunnel Almost No One Will See."
- Ries, M., Murthy, S. (2014). Water Utility R&D: Establishing Metrics to Justify the Investment, *Proceedings of the 2014 AWWA/WEF Utility Management Conference*. Savannah, OH.
- Zhou, J., DiGiovanni, K., Ries, M., & McCreanor, P. (2013). Sustainability. *Water Environment Research*, 85, 1354-1376. [annual literature review]

SELECT COMMUNITY AND PROFESSIONAL ACTIVITIES

2019 to present	City of Falls Church, Virginia , Member, Stormwater Task Force
2019 to present	Anacostia Watershed Society , Director
2019 to present	Dentons Smart Cities/Communities Think Tank , Co-chair, Water & Wastewater Pillar
2009 to 2017	Alliance for Water Stewardship , Director
2011 to 2016	Alexandria Renew Enterprises , Director
1999 to 2015	Alice Ferguson Foundation, National Park Service, City of Alexandria, and Alexandria Seaport Foundation , Volunteer for restoration and river cleanup programs
1998 to 2008	American Water Works Association , Member
1997 to present	Water Environment Federation , Member <ul style="list-style-type: none"> • Committee member: Government Affairs and Utility Management • Co-chair: AWWA/WEF Utility Management Conference (2020-2022)
1992 to present	American Society of Civil Engineers , Member