

**Mark W. LeChevallier, Ph.D.**

Principal

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Dr. Mark LeChevallier is the principal and manager of Dr. Water Consulting, a part-time consulting business, after retiring from American Water at the beginning of 2018. Dr. LeChevallier received his Bachelor of Science and Master’s degrees in Microbiology from Oregon State University, and his Ph.D. in Microbiology from Montana State University. Dr. LeChevallier’s expertise is in water quality, treatment, and innovation for potable water, reclaimed water, and desalination.

As Vice President and Chief Environmental Officer for American Water, Dr. LeChevallier was responsible for all environmental compliance (e.g., drinking water, wastewater, air emissions, solid waste), environmental stewardship (e.g., wetlands protection, greenhouse gas reduction, beneficial reuse of water and treatment residuals), research and innovation. During his tenure, American Water was repeatedly recognized for its environmental excellence by the Dow Jones Sustainability Index, the Environmental Business Journal, the Climate Change Business Journal, and the US Water Alliance.

Research areas have included bacterial regrowth, disinfection of biofilms, corrosion, bacterial nutrients, AOC measurement techniques, biological treatment, *Legionella*, *Mycobacterium*, microbial recovery and identification, modeling and impact of pressure transients on water quality, and detection, treatment and survival of *Giardia* and *Cryptosporidium*. He has authored or coauthored over 300 research papers, book chapters, or reports; most in peer-reviewed journals. Several of his papers have received awards from the American Water Works Association for outstanding contributions to the science of water treatment. He was the recipient of the George Warren Fuller award in 1997 from the New Jersey section of the American Water Works Association, the Abel Wolman Award from the American Water Works Association in 2012, and the A.P. Black award for research from the American Water Works Association in 2015. He is a fellow of the American Academy of Microbiology and the National Academy of Engineering. Dr. LeChevallier has been the principal investigator, co-investigator or participant on over 100 research grants totaling over $43 million from the US Environmental Protection Agency, American Water Works Association, the Water Research Foundation, WateReuse Research Foundation, WERF, and various State agencies. Dr. LeChevallier was named by *Public Works* magazine as a 2005 Trendsetter to “recognize leaders in the public works community who have defined policy, brought their community or an issue into the spotlight, or set the standard within the industry.”

Dr. LeChevallier was appointed in 2019 to the Drinking Water Subcommittee and in 2021 as a charter member of the USEPA Science Advisory Board. He was a past member of the Water Science Technology Board of the National Academy of Science and a member of the National Academy of Science workgroup on *Legionella*. He is a past member of the *Journal of the American Water Works Association* editorial advisory board. He was a negotiator representing the National Association of Water Companies on the USEPA Federal Advisory Committee for revisions to the Total Coliform Rule and served on the Research and Information Collection Partnership panel for research to develop the Distribution System Rule. He was a member of the Distribution System Committee for the National Academy of Science, National Research Council. Dr. LeChevallier has served on a variety of professional committees and was the past-chair of the AWWA Water Science and Research Division, past-chair of Division Q of the American Society for Microbiology, past chair of the Peer Review Editorial Board for the *Journal of the American Water Works Association*, past chair of the AWWA Total Coliform Rule Technical Action Workgroup (TCR TAW), past member of the *Applied and Environmental Microbiology* editorial board, and past chair of the Unsolicited Proposal Review Committee for the Water Research Foundation. He has served several terms as a member and subgroup chair of the AWWA Research Foundation Research Advisory Committee and as a member of the Strategic Initiative group that directed a $5 million, 5-year program on distribution system research. He was a member of the Water Environment & Reuse Foundation (WE&RF) Research Advisory Council. He has been an active participant in several USEPA committees: the Disinfection By-Product Council Technical Advisory Group, the STAR peer review panel, SBIR review panels, and the Drinking Water Advisory Committee. He is a member of the American Water Works Association, the American Society for Microbiology.

**Relevant Recent Publications:**

**Jjemba, P.K., W. Johnson, Z. Bukhari and M. W. LeChevallier.** 2015. Occurrence and Control of *Legionella* in Recycled Water Systems. *Pathogens* 4: 470-502; doi:10.3390/pathogens4030470.

**Hamilton, K.A., M.T. Hamilton, W. Johnson, P. Jjemba, Z. Bukhari, M. LeChevallier, C.N. Haas.** 2018. Health risks from exposure to Legionella in reclaimed water aerosols: Toilet flushing, spray irrigation, and cooling towers. *Water Research*. 134: 261-279. <https://doi.org/10.1016/j.watres.2017.12.022>

**Johnson, W.J., P.K. Jjemba, Z. Bukhari, LeChevallier, M.W**. 2018. Occurrence of *Legionella* in Non-Potable Reclaimed Water. *JAWWA* 110(3): 15-27. <https://www.awwa.org/publications/journal-awwa/abstract/articleid/68666658.aspx>

**Bukhari, Z., M.W. LeChevallier, P.K. Jjemba, W, Johnson, C.N. Haas, and K. Hamilton**. 2018. Development of a Risk Management Strategy for *Legionella* in Recycled Water Systems, WRF12-05. WateReuse Research Foundation, Alexandria, VA.

**Ling, F., R. Whitaker, M.W. LeChevallier, W.T Liu.** 2018. Drinking water microbiome assembly induced by water stagnation. ISME Journal. <https://doi.org/10.1038/s41396-018-0101-5>

**Masters, S., J.L. Clancy, S. Villegas, M. LeChevallier, and Z. Bukhari**. 2018. Customer Messaging on Opportunistic Pathogens in Plumbing Systems. WRF-4664. The Water Research Foundation, Denver, CO.

**Hamilton, K.A., M.T. Hamilton, W. Johnson, P. Jjemba, Z. Bukhari, M. LeChevallier, C.N. Haas, P.L. Gurian**. 2018. Risk-based critical levels of *Legionella pneumophila* for 2 indoor water uses. *Environmental Science & Technology*. 2019 53 (8), 4528-4541. <https://doi.org/10.1021/acs.est.8b03000>

**LeChevallier MW. 2019.** Monitoring distribution systems for *Legionella pneumophila* using Legiolert. AWWA Wat Sci. 2019;e1122.<https://doi.org/10.1002/aws2.1122>.

**Cotruvo, JA, D. Purkiss, Stan Hazan, F.P. S. Iii, P. DeMarco, M. LeChevallier.** 2019. Managing *Legionella* and Other Pathogenic Microorganisms in Building Water Systems.  *JAWWA*. 111(2): 54-59.

**LeChevallier MW. 2019.** Occurrence of culturable *Legionella pneumophila* in drinking water distribution systems. AWWA Wat Sci. 2019;e1139. <http://dx.doi.org/10.1002/aws2.1139>

**National Academies of Sciences, Engineering, and Medicine**. 2019. Management of *Legionella* in Water Systems. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25474>.

**LeChevallier, M.W.** 2020. Managing *Legionella pneumophila* in Water Systems. *JAWWA*. 112(2): 11-23. <https://doi.org/10.1002/awwa.1444>.

**LeChevallier, M.W**. 2021. Guidance on Developing a Legionella pneumophila Monitoring Program for Utility Distribution Systems. Health Education and Public Health. 4(1): 369 - doi: 10.31488 /HEPH.158

**LeChevallier, M.** 2023. Examining the efficacy of copper-silver ionization for management of Legionella: Recommendations for optimal use. AWWA Water Science, e1327. <https://doi.org/10.1002/aws2.1327>.

**Bartrand, T. A., LeChevallier, M. W., Clancy, J. L., & Burlingame, G. A.** 2024. Protocol for responding to the detection of *Legionella pneumophila* in drinking water distribution systems. AWWA Water Science, 6(2), e1370. <https://doi.org/10.1002/aws2.1370>.

**LeChevallier, M.W**. 2024. Developing a *Legionella pneumophila* Monitoring Program for Utility Distribution Systems. Opflow. 50(4): 22-26. <https://doi.org/10.1002/opfl.1954>.

**LeChevallier, M.W., T. Prosser, M. Stevens.** 2024. Opportunistic Pathogens in Drinking Water

 Distribution Systems—A Review. Microorganisms. 12, 916. <https://doi.org/10.3390/microorganisms12050916>.

**Bartrand, T.A., M. LeChevallier, J.L. Clancy, G. Burlingame, R. McCuin**. 2024. Occurrence of Legionella pneumophila in Drinking Water Distribution Systems. The Water Research Foundation, Denver, CO. <https://www.waterrf.org/research/projects/occurrence-legionella-pneumophila-drinking-water-distribution-systems>