ABSTRACT
Understanding and reducing public health threats resulting from exposure to opportunistic pathogens (OPs) is an important public health challenge in building water systems. In addition to the need to better understand the technical complexity of this problem in buildings, there are apparent trade-offs with societal goals and maintaining OP control that must be considered. For instance, water conservation can trigger a cascade of water quality changes due to elevated water retention times that must be overcome to preserve our precious natural resources while prioritizing public health. There is also a diverse group of stakeholders responsible for preventing, diagnosing, and remediating problems that arise surrounding OPs, and education, communication, and assigning responsibilities (legal and otherwise) among stakeholders remains difficult.

In this seminar, Dr. Rhoads will present his past and ongoing work regarding OP growth, where he has conducted bench-, pilot-, and field-scale research to gain a fundamental and applied understanding of OP growth in building plumbing systems. He will provide a broad overview of the factors at play contributing to OP growth and exposure in building plumbing, including how water chemistry, building design and operation, and policy can all play a role.

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BIO: Dr. William Rhoads is a postdoctoral researcher at Virginia Tech. His research explores applied environmental microbiology and chemistry in building drinking water systems. William earned his PhD in Civil and Environmental Engineering at Virginia Tech, where he was supported by the Charles E. Via Doctoral Fellowship, the AWWA Larson Aquatic Research Doctoral Scholarship, and the Alfred P. Sloan Foundation Microbiology of the Built Environment Program. His research has been recognized with honors, including the 2017 Outstanding Doctoral Student Award in the College of Engineering at Virginia Tech and the 2017 CH2M/AEESP Outstanding Doctoral Dissertation Award.