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# **Biological Nitrogen Removal in Water Resource Recovery Facilities: Past, Present, and Future**

**Wednesday, January 14, 2015, 4:30 – 5:30 PM**  
**1670 Beyster Building (North Campus), University of Michigan**

**Abstract:** While it is now recognized that the control of nitrogen discharges to the environment is essential to preserve water quality, this has not always been the case. This presentation will describe the evolution of understanding of the need for and approaches to control nitrogen discharges to the environment. A perspective on the need for and importance of controlling discharges will be presented. The evolution of control technology from the three-sludge system conceptualized in the 1960's, to single-sludge systems of the 1970's to present day, to the discovery and evolution of Anammox-based technologies in recent times will be discussed. Thoughts on how technology will continue to evolve and how biological nitrogen removal technology will broaden its impact will also be presented.

Partial Nitrification/Anammox System in Alexandria, VA

