



Innovative and Sustainable Wastewater Treatment Technologies From Austria: *Alexandria Renew's Successful Transfer and Adoption of the DEMON Nitrogen Removal System*

When: **Tuesday, May 24, 2016**
12:00pm to 2:00pm

Where: Northern Virginia Regional Commission
3040 Williams Drive, 2nd Floor Conference Room, Fairfax, Virginia 22031

Since 1990's, wastewater treatment operations in the Washington DC region have struggled to comply with US federal regulations to reduce nutrient pollution and to mitigate the degrading effects of oxygen depletion. The challenges for many of the region's wastewater treatment plants are compounded by the need to reduce costs and energy consumption associated with sludge volume and nitrogen due to the application of blowers in the aeration processes and methanol.

However, for over ten years, Alexandria Renew has engaged in a unique effort leading to the transfer and application of the DEMON (DEamMONnification) system, – a patented biological process for removing nitrogen from wastewaters containing high ammonia concentrations (>200 mg/L), developed by Bernhard Wett from the University of Innsbruck (Austria). Unlike the conventional and costly denitrification methods for removing nitrogen which require large amounts of energy and methanol, DEMON uses anaerobic ammonium oxidizing bacteria (anammox) to efficiently and reliably remove ammonia from wastewater. In Alexandria, the DEMON process deammonification system required 60 percent less energy, reduced dependence on methanol and cut sludge residues by 90 percent. In 2011, the US National Association of Clean Water Agencies (NACWA), recognized the Alexandria Sanitation Authority (ASA) in the "Research & Technology" category of its annual *National Environmental Achievements Program* for "enhancing nitrogen removal and increasing sustainability with innovative sidestream treatment" through the use of the Demon process.

On Tuesday, May 24, 2016, the NVRC, in partnership with the Alexandria Renew and the Embassy of Austria, invites you and the other regional directors overseeing wastewater treatment operations, for a 1.5 hour brown-bag lunch to hear Karen Pallansch (Chief Executive Officer, Alexandria Renew) discuss Alexandria's successful adoption of the DEMON system and to assist in a discussion about its potential applications across the region. The lunch will also explore potential cooperation with Austrian and European counterparts on equivalent technology transfer efforts.

Please RSVP to Dale Medearis, at dmedearis@novaregion.org, no later than May 10, 2016. We look forward to seeing you!

A light lunch will be provided with the compliments of the Austrian Embassy.

Draft Agenda

12:00 Welcome

Dale Medearis, Senior Environmental Planner, NVRC

Clemens Mantl, Director of OSTA at the Austrian Embassy in Washington DC

12:10 Presentation

Karen Pallansch, Chief Executive Officer, Alexandria Renew

12:45 Roundtable Discussion

2:00 Conclusion