Conference Announcement & Call for Abstracts

WEF/IWA Nutrient Removal and Recovery 2013:
Trends in Resource Recovery and Use

July 28 - 31, 2013
Sheraton Vancouver Wall Centre Hotel
Vancouver, British Columbia, Canada

ABSTRACT SUBMITTAL DEADLINE: December 12, 2012

This conference is organized jointly by the Water Environment Federation and the International Water Association and is held in cooperation with the British Columbia Water & Waste Association and the Water Environment Research Foundation.

The Water Environment Federation and the International Water Association, in cooperation with the British Columbia Water & Waste Association and the Water Environment Research Foundation are pleased to announce a Specialty Conference covering the latest research and experience in all management aspects of nutrient removal.

Although nutrient removal systems have been operated in many parts of the world for decades, recent developments have focused attention on total nutrient management practices and a direct link with energy recovery. On one hand more stringent effluent standards are set not only due to watershed nutrient guidelines but also due to an increased focus on water reuse. At the same time nutrient and resource recovery are becoming important extra factors for wastewater treatment practise. Finally, an emphasis on overall environmental impacts, emissions of greenhouse gasses and minimisation of energy use (or energy production) also set boundary conditions on wastewater treatment practise.

This conference will bring together environmental professionals from around the world to discuss and debate the current state of the art for nutrient recovery, removal and management and the parameters that influence technology boundaries. It will examine research, design, operations and nutrient resource management and also provide a forum for the discussion of policy approaches to nutrient control. It will provide valuable information for researchers, regulators, designers, technology developers, municipal agencies, industrial dischargers, and others seeking to understand the full picture of the latest developments and practical experiences on this important topic.

An important focus of this conference includes issues related to integrated nutrient management approaches for the beneficial and sustainable operation of wastewater facilities worldwide; the sustainable design, construction, and operation of sophisticated nutrient removal processes: including greenhouse gas emissions and carbon footprints; energy efficiency, recovery, and reuse; sidestream treatment; nutrient recovery; chemical usage; and the development and application of sustainability metrics.

The conference program will include the following:

- Oral presentations (followed by discussion)
- Poster presentations
- Moderated roundtable discussions
- Preconference workshops

Abstracts are being solicited based on the categories on the following page. The program committee recognizes there may be some overlap between categories, and it is requested that the abstract be submitted to the category that best represents the main focus of the proposed paper.

1. **Biological Nitrogen Removal Processes**
    - Advances in suspended growth nitrogen removal processes, granular processes and combined nitrogen and phosphorus removal processes
2. **Deammonification, Anammox, and Nitritation/Denitritation Processes**
    - Advances in mechanistic understanding, technology application, and optimization of both sidestream and mainstream wastewater treatment.
3. **Biofilm Processes for Nutrient Removal**
    - Advances in fixed film and hybrid fixed film/suspended growth processes for nutrient removal
4. **Phosphorus Removal Processes**
    - Biological and chemical phosphorus removal processes, synergies between combined operation for biological and chemical phosphorus removal
5. **Strategies for Meeting Ultra-low Nutrient Effluent Quality Standards**
    - Advances in understanding of the practical limits of technology, boundary conditions, application of effluent polishing processes including membranes and other tertiary treatment technologies
6. **Carbon Sources for Biological Nitrogen and Phosphorus Removal Processes**
    - Use of alternative carbon sources, importation of carbon, and internal generation of carbon for nutrient removal processes
7. **Treatment of High Strength Wastewaters**
    - Nutrient removal from industrial wastewaters, including inhibition and nutrient deficiency considerations
8. **Algae Based Processes**
9. **Nutrient Recovery Processes**
    - Chemical and biological processes for nitrogen and phosphorus recovery from mainstream wastewater, solids handling liquors and residuals (such as incinerator ash)
10. **Nutrient Recovery from Source Separated Urine and Agricultural Effluents**
    - Nutrient recovery from sources including onsite, decentralized systems, and agricultural effluents
11. **Nutrient Management of Biosolids**
    - Biosolids land application considerations, and integration of nutrient recovery with other biosolids disposal methods
12. **Nutrient Removal Plant Optimization and Troubleshooting**
    - Energy optimization and recovery
    - Optimization of preliminary and primary treatment for nutrient removal
    - Nitrogen and phosphorus removal process optimization and troubleshooting
    - Real-time process control using instrumentation
    - Process startups and commissioning including maintaining nutrient removal operations during construction of new facilities
13. **Microbial Ecology**
    - Microbial structure, function and metabolic pathways associated with nutrient removal and recovery
14. **Process Modeling, Kinetic Rate and Stoichiometric Analyses, and Wastewater Characterization**
    - Advances in modeling/simulation methods and calibration, stoichiometric and kinetic measurements targeting simulation model optimization, process inhibition and stimulation, and wastewater characterization considerations including refractory dissolved organic nitrogen and phosphorus
15. **Nitrous Oxide and Greenhouse Gas Emissions**
    - Mechanistic understanding of N2O emissions, quantification, assessment and minimization of GHG emissions and net carbon footprint. Development of sustainable operating practices
16. **Sustainable Planning**
    - Quantifying environmental impacts (i.e., calculation of GHG emissions and net carbon footprints, life cycle assessments (LCA))
    - Sustainable decision making strategies
    - Nutrient sustainability within cities of the future
    - Integrated and total water management

Each category above (#1-16) also contains four subcategories as noted below.

A. **Research and Development**
    - Abstracts focusing on fundamental research to advance mechanistic understanding of nutrient removal processes and apply new technologies to practice
B. **Design and Technology Evaluations**
    - Abstracts focusing on process and facility design practices, assessments and evaluations, application of new flow sheets and research developments to full scale
C. **Operation of Nutrient Removal and Recovery Facilities**
    - Abstracts focusing on plant operational considerations, process control, reliability, optimization and sustainable operating practices
D. **Utility Management, Master Planning, and Regulations**
    - Abstracts focusing on master planning, facility planning, regulatory, and watershed considerations

Several criteria will be used to evaluate the abstracts, including originality, project status, technical merit, significance, and overall quality. Abstracts should be a maximum of two pages single spaced. Abstracts must be a maximum of 1,000 words along with an additional page for figures and tables. Abstract authors are encouraged to submit tables and figures along with abstract text. **Abstracts must be received no later than midnight Eastern Time on December 12, 2012.** Selected abstract authors will be notified in early March 2013 and will need to complete a final manuscript. Manuscripts will be subject to revision or rejection if lacking in quality. In accordance with Federation policy, accepted authors who do not submit a manuscript by the required deadline will be removed from the program.

Presenters are expected to register for the Conference and pay the appropriate registration fee. No travel or assistance funds are available for speakers. **Abstracts must be submitted online at www.Nutrient-WEFIWA.org**

Conference Proceedings and Publications

The working language of the conference is English. Authors will be required to choose one of three options at the time their manuscript is submitted.

- *Water Science & Technology (WST)*: Authors will submit manuscripts to WEF preformatted according to WST requirements. WEF will retain license but no copyright. Manuscripts will be submitted automatically to WST by WEF through the IWA manager for WST, Michelle Herbert, for normal peer review prior to the conference. Manuscript will be made available to conference participants only in the proceedings.
- *Water Environment Research (WER)* or any other journal: Authors will submit manuscripts to WEF preformatted according to WEF conference proceedings requirements. WEF will retain license but no copyright. Authors may at their discretion submit their manuscripts to WER or any other journal of their choosing at any time (reformatting as necessary). Manuscript will be made available to conference participants only in the proceedings.
- WEF Conference Proceedings: Authors will submit manuscripts to WEF preformatted according to WEF conference proceedings requirements. WEF will retain copyright of the publication. Manuscript will be made available to conference participants only in the proceedings. Manuscript will also be uploaded for abstracting on IngentaConnect after the conference.

Authors can submit their manuscripts to these journals at any time before or after the conference for independent peer review.

For Questions or Additional Information Contact: Water Environment Federation, Education and Training - Nutrient Removal and Recovery 2013, Email: Nutrient2013@wef.org or Phone: 703-684-2400, ext. 7450.