

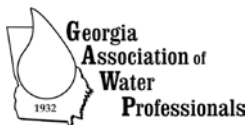
Membrane Technology 2008

Conference: January 27 – 30, 2008

Exhibition: January 28 – 29, 2008

Omni Hotel at CNN Center

Atlanta, Georgia



This conference is conducted by the Water Environment Federation (WEF) with the cooperation of the Georgia Association of Water Professionals (GAWP) and the American Membrane Technology Association (AMTA).



Membrane Technology 2008 is the preeminent conference on membranes for reclamation, reuse, water quality, sourcewater, replenishment, and reverse osmosis applications in wastewater treatment. It will include technical sessions, workshops, and an exhibition highlighting the latest developments and practical experiences in this important area of wastewater treatment.

Specifically Designed For:

The conference will provide valuable information for domestic and international attendees including:

- Engineers and Designers
- Industrial Professionals
- Municipalities including Administration, Operators, and Superintendents
- Researchers
- Regulators
- Technology Developers

...and others seeking the latest developments and practical experiences on this important topic.

Conference Learning Objective:

The conference will cover the latest research and experience in the design and operation of membrane treatment systems for municipal and industrial wastewater treatment plants.

Opening General Session

Monday, January 28 | 8:30am – 12:00pm

Please join us for the opening of the inaugural Membrane Technology Specialty Conference. The session will explore global wastewater issues, provide engaging discussion on the need for increased infrastructure funding in the U.S. and debate the current and emerging issues for membrane technology in the U.S. and worldwide markets.

Invited speakers include:

The Honorable Shirley Franklin, Mayor of Atlanta
Andrew Benedek, Founder of Zenon Environmental

Conference Topics Will Include:

Research Issues:

- Limits of technology
- Process interference / inhibitions
- Flux enhancing chemicals
- Microbial issues contributing to biofouling
- New membrane materials and configurations
- Compounds of emerging concern / EDCs
- Pathogens and virus rejection
- New MBR applications

Operational Issues:

- Start-up and acceptance testing
- Fouling
- Cleaning requirements and procedures
- Process control and optimization
- Maintenance programs
- Residuals management and disposal

Design Issues:

- Process modeling
- Scaling-up lab and pilot testing to full-scale
- Reliability and redundancy
- Material, configuration, and equipment selection
- Dual-stage systems
- Hybrid systems
- Pretreatment
- Upgrade considerations
- Innovative retrofits
- Selection and procurement
- Cost / benefit considerations
- Energy demand

Conference-at-a-Glance

Sunday, January 27	
7:30 am – 5:00 pm	Registration
8:30 am – 5:00 pm	Workshop A: Application of Membrane Technology to Treatment of Secondary Effluents
	Workshop B: Membrane Bioreactor Design and Operations – Breaking Down the Energy Barrier Relative to Conventional Treatment
	Workshop C: Membranes in Small Wastewater Treatment Applications – Everything from Planning to Lessons Learned
Monday, January 28	
7:30 am – 5:00 pm	Registration
8:30 am – 12:00 pm	Opening General Session
10:00 am – 6:30 pm	Exhibition and Posters
Afternoon Technical Sessions	
1:30 pm – 5:00 pm	Tour: F. Wayne Hill Water Resources Center
1:30 pm – 4:45 pm	Session 1: Beyond the Municipality and Within Industry
	Session 2: Managing Peak Flows – Operational and Design Strategies
	Session 3: The In's and Out's of Process Control and Operations in Today's Membrane Facilities
Tuesday, January 29	
7:30 am – 5:00 pm	Registration
Morning Technical Sessions	
8:30 am – 11:45 am	Session 4: Leading Applications of Tertiary UF/MF – Testing, Design, and Optimization
	Session 5: Learning from MBR Installations: Controls, Phosphorus Removal, Retrofits, and Small Systems
	Session 6: What's New on the Horizon – Membrane and MBR Research and Product Innovation
10:00 am – 3:45 pm	Exhibition and Posters
Afternoon Technical Sessions	
1:30 pm – 5:00 pm	Tour: Fowler and James Creek Water Reclamation Facilities
1:30 pm – 4:45 pm	Session 7: Reverse Osmosis Advancements
	Session 8: Energy Optimization in MBRs: Conventional and Unconventional Thinking
	Session 9: Lessons Learned from Environmentally Friendly Membrane Design, Operation and Retrofit
Wednesday, January 30	
8:00 am – 12:15 pm	Registration
Morning Technical Sessions	
8:30 am – 10:00 am	Session 10: Biohydraulics – Linking Sludge Properties and Membrane Performance
10:45 am – 11:45 am	Session 11: Microconstituents – Removing Submicron Pollutants
8:30 am – 11:45 am	Session 12: State of the Art Modelling for Membrane Applications
	Session 13: System Selection, Specifications, and Procurement – What Engineers, Owners and Operators Need to Know

What's Included With Your Registration

	Full Conference	Student	One-Day	Exhibition Only
Technical Sessions	Yes	Yes	Registered Day Only	No
Exhibition	Yes	Yes	Registered Day Only	Yes
Receptions	Yes	Yes	Yes	Yes
Luncheons	Yes	No	No	No
Proceedings	Yes	Yes	Yes	No
Workshops	No	No	No	No
Tours	No	No	No	No

Workshops

Workshop A

Application of Membrane Technology to Treatment of Secondary Effluent

Sunday, January 27 | 8:30am – 5:00pm

This workshop is configured as a one day program of lectures and exercises. Workshop topics include practical information about configuration, performance, and operating conditions of membrane technology applied to the reclamation of municipal wastewater. The program includes descriptions of technical aspects of membrane filtration technology as applied to treatment of secondary effluent utilizing integrated MF/UF + RO systems. Design considerations, operating parameters, and performance of RO units in these types of applications will be discussed. Configuration and operation of MF/UF + RO systems will be compared with emerging system configurations of direct treatment of wastewater using MBR technology followed by RO. The economics of various configuration alternatives of commercial wastewater reclamation systems will be evaluated. The workshop will also include active involvement of workshop participants in exercises on configuration and approaches to projecting system performance.

Designed for:

Planners | Engineers | Consultants | Plant Operators

Learning Objective:

Participants will be presented with information on the current state of the art of commercial membrane technology applied to municipal wastewater reclamation. The information provided through presentations and exercises can be utilized for evaluation of operating conditions of existing facilities and estimation of technical and economic feasibility of future wastewater reclamation projects.

The Exhibition

Attendees at WEF specialty conferences make contact with exhibitors who complement the technical offerings of the conference, and provide relevant products and/or services. The exhibit hall hosts refreshment breaks, conference luncheons, and a networking reception.

If you are interested in exhibiting at this conference, please contact:

Stefanie Walter
Exhibitions Coordinator
Phone: 703-684-2443
E-mail: expoinfo@wef.org

Workshop B

Membrane Bioreactor Design and Operation – Breaking Down the Energy Barrier Relative to Conventional Treatment

Sunday, January 27 | 8:30am – 5:00pm

This workshop will help you develop design and operating strategies for membrane systems. The goal is to achieve energy inputs for MBRs that are comparable to conventional activated sludge systems (CAS) with effluent filtration. The design standard is to generate water suitable for indirect reuse.

Speakers will discuss features of membrane bioreactor systems that are different from CAS, including alpha factors and oxygenation by the membrane air scour system. Attendees will interactively design MBRs and optimize process performance, energy consumption, and chemical use. The class will use open source process models to evaluate changes such as reducing DO and methanol dose, and intermittent aeration, while benchmarking the impact of changes against a CAS operated at 40,000 m³/d (10 MGD) average daily flow. The results will be reviewed and compared to observations from facilities that have begun to optimize MBRs. Recommendations for future design and operating strategies will be developed.

All attendees should bring their laptop to run process design simulations.

Designed for:

Designers | Operators | Equipment Manufacturers | Decision Makers Evaluating Alternatives for Water Reuse

Learning Objectives:

- Learn design and operating techniques – energy, chemical and sludge minimization – to bring the total costs for Membrane Bioreactors (MBRs) to the same level as conventional activated sludge (CAS).
- Review advances in membrane technology application for water reuse.
- Explore key differences between MBRs, IFAS, MBBRs and Conventional Activated Sludge (CAS).
- Use advanced open source modeling techniques to design, operate, and optimize the MBR process.

Tours

Workshop C

Membranes in Small Wastewater Treatment Applications – Everything from Planning to Lessons Learned

Sunday, January 27 | 8:30am – 5:00pm

Planning for a small membrane wastewater treatment system requires flow and loading projections, and permitting and operating considerations. The workshop will cover planning, basic design concepts, a review of commercially available systems, the advantages of operating a small membrane wastewater treatment system, unique case studies which include reuse, and lessons learned.

The workshop will be setup classroom style to facilitate discussion, note taking, and interaction with the speakers. Equipment manufacturers will be available during networking breaks and lunch with displays to answer questions and demonstrate the recent advancements in small membrane systems and equipment.

Designed for:

Consultants and design engineers | Owners | Operators

Learning Objective:

Learn about the key planning, design and operating considerations, commercially available systems, and lessons learned from owning and operating existing small membrane wastewater treatment systems.

Educational Credits

Membrane Technology 2008 Educational Credits are awarded for attendance at Workshops, the Opening General Session, Technical Sessions and Tours. Earn up to a maximum total of 0.65 Continuing Education Units (CEUs), 12 Professional Development Hours (PDHs) as well as 8 Contact Hours. CEUs are earned by participating in workshops. PDHs are earned by attending technical sessions. Contact Hours are earned by participating in the tour. Please note: Conference participants are responsible for exploring requirements to have their Educational Credits approved for credit by the appropriate authority.

F. Wayne Hill Water Resources Center

Monday, January 28 | 1:30pm – 5:00pm

This tour will showcase Gwinnett County's F. Wayne Hill Water Resources Center, the most advanced water reclamation facility in the Southeast.

This 60 MGD water reclamation facility built in 2 phases (20 MGD expanded to 60 MGD) is designed to produce an effluent suitable for indirect reuse. Wastewater from throughout the County is conveyed from regional pump stations to the "Hill Plant". Treatment begins with preliminary and primary treatment followed by a biological nutrient removal (BNR) activated sludge system. Tertiary treatment includes chemical addition for phosphorus removal followed by clarification and filtration. This is followed by pre-ozonation, granular activated carbon filtration, and ozone disinfection. Five egg-shaped anaerobic digesters stabilize waste solids prior to centrifuge dewatering for disposal at a municipal solid waste landfill.

Fowler and James Creek Water Reclamation Facilities

Tuesday, January 29 | 1:30pm – 5:00pm

This tour includes two innovative membrane bioreactor facilities: Fowler Water Reclamation facility designed with the hollow-fiber type membranes and James Creek Water Reclamation Facility designed with flat sheet type membranes. Attendees can compare design and operation of these two types of MBR facilities. Tours at each facility will start with a short presentation by the facility's design engineer followed by comments from the plant operations staff on lessons learned and how the facility is operated.

The tour will start at the Fowler Water Reclamation Facility, which currently treats an average daily flow of 0.75 MGD. The facility includes 2-mm influent band screens, vortex grit removal, BNR, and an in-line UV disinfection system. The facility uses a dedicated rotary drum screen to screen the mixed liquor recycle from the MBR tanks. Waste solids are aerobically digested before dewatering and disposal.

The tour then proceeds to the nearby James Creek Water Reclamation Facility, a 1-MGD flat sheet type membrane based treatment facility that currently treats less than 0.5 MGD. The facility includes an influent drum screen, grit removal, BNR, and open-channel type UV disinfection system. The facility is designed to fit in a small footprint with operational flexibility to remove any biological reactor from service without impacting treatment.

Registration Information

Registration Information

Register EARLY and SAVE \$\$ — All registration forms received by December 7, 2007 will qualify for the advance registration rate. All registrations received after December 7, 2007 will be charged the onsite rate. All registrations received by January 9, 2008 will receive confirmation notice by e-mail, fax, or mail within seven business days. Registrations received after January 9, 2008 will not be processed — please register onsite at the WEF conference registration desk in the Omni Hotel at CNN Center. Badges and conference materials may be picked up at the WEF conference registration desk in the Omni Hotel at CNN Center.

Registration Instructions

- Use one form per person. Please photocopy if more than one form is needed.
- Registration cannot be accepted without full payment (check or credit card) or government purchase order.
- Online, telephone and faxed registrations will be accepted with credit card payment only. To avoid duplicate charges, DO NOT mail the original.
- Make checks payable to the Water Environment Federation in US funds.
- Purchase orders are accepted from US Government agencies only and must be approved with all authorized signatures and the purchase order number referenced in the payment section of the registration form. You must include a copy of the purchase order with the registration form. Government purchase orders will not be accepted onsite.
- Wire transfers are accepted. For more information, contact WEF Registration at 1-800-666-0206, select menu option #2.
- WEF charges a \$25 non-refundable processing fee per registrant for Purchase Orders and Wire Transfers.

Online

www.wef.org, go to "Conferences and Training"
Online registration requires credit card payment.

Fax

1-708-344-4444 (No cover page)
Faxed registration requires credit card payment. Due to registration volume, we cannot confirm fax receipts by phone.

Mail (Please do not FAX and Mail)

WEF: Membrane Technology 2008 Conference
c/o CSI
P.O. Box 591
Brookfield, IL 60513-0591
USA

Call

1-800-666-0206, Select menu option 2

All registrations received by January 9, 2008 will receive confirmation notice by e-mail, fax or mail within 7 business days of receipt.

Cancellation Policy

All cancellations for refunds must be submitted in writing on company letterhead with a detailed explanation by January 9, 2008. A 25% administrative fee will be deducted from all refunds. Registrants who fail to notify WEF of cancellation by January 9, 2008 are liable for the full registration fee.

FAX or MAIL cancellations or substitution requests on company letterhead to:

WEF: Membrane Technology 2008 Conference
Attn: Registration Department
601 Wythe Street, Alexandria, VA 22314
Fax: 1-703-684-2471

Faxed entries cannot be confirmed

Transportation Information

Airport: Hartsfield-Jackson Atlanta International

Taxi Fare: Approximately \$30 one-way

Shuttle Service: Atlanta Link - \$17 one way, \$29 roundtrip

Reservations: Call 404-524-3400 or visit www.theatlantalink.com for information and airport location detail

Rapid Rail System: MARTA - \$1.75 one way trip downtown

Station is located between baggage claim areas
Call 404-848-4711 or visit www.itsmarta.com for details

Hotel Information

Omni Hotel at CNN Center
100 CNN Center
Atlanta, GA 30303

For hotel reservations, please call 1-800-524-0500

Hotel Phone: 1-404-659-0000

Hotel Fax: 1-404-525-5050

Conference Room Rate: \$176, single/\$196 double

Government Rate: \$139

Please make your hotel reservations as early as possible. The cut-off date for these discounted rates is January 4, 2008. WEF cannot guarantee the conference rate after this date.

Hotel Parking: Valet only: \$20 for 8 hours; \$25 maximum; \$25 for overnight guests

Registration Form

Membrane Technology 2008

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 Omni Hotel at CNN Center | Atlanta, Georgia

MT08

WEF Membership # _____

Cosponsor Membership # _____

First Name (as it should appear on badge) _____

M.I. _____

Last Name _____

Company or Organization _____

Mailing Address _____

City _____

State/Province _____

Zip/Postal Code _____

Country _____

Telephone Number _____

FAX Number _____

E-mail address (in order to receive confirmation by e-mail) _____

Conference Registration Fees		Advance Rate (by 12/07/07)		On-site Rate (after 12/07/07)		Total
		Member	Nonmember	Member	Nonmember	
<input type="checkbox"/> A	Full Conference & Exhibition	\$525	\$725	\$640	\$845	
<input type="checkbox"/> B	One-Day Conference & Exhibition	\$310	\$385	\$360	\$435	
	<input type="checkbox"/> Monday <input type="checkbox"/> Tuesday					
<input type="checkbox"/> C	Student (<i>valid student ID required</i>)	FREE	\$100	FREE	\$100	
<input type="checkbox"/> D	Exhibition only	\$105	\$130	\$105	\$130	
Optional Events						
<input type="checkbox"/> WA	Workshop A: Application of Membrane Technology to Treatment of Secondary Effluent	\$140	\$160	\$155	\$180	
<input type="checkbox"/> WB	Workshop B: MBR Design and Operations — Breaking Down the Energy Barrier Relative to Conventional Treatment	\$140	\$160	\$155	\$180	
<input type="checkbox"/> WC	Workshop C: Membranes in Small Wastewater Treatment Applications — Everything from Planning to Lessons Learned	\$140	\$160	\$155	\$180	
<input type="checkbox"/> TA	Tour A: F. Wayne Hill Water Resources Center	\$25	\$25	\$25	\$25	
<input type="checkbox"/> TB	Tour B: Fowler and James Creek Water Reclamation Facilities	\$25	\$25	\$25	\$25	
					Subtotal	
If using a Government P.O. or paying by Wire Transfer, please add a \$25 non-refundable processing fee to your total.						
Conference Speaker: <input type="checkbox"/> Workshop / <input type="checkbox"/> Technical Session / <input type="checkbox"/> Poster					Total Due	

Payment Instructions

Tax ID# 53-0225129

Registration cannot be accepted without payment. Government purchase orders are not accepted onsite.

- Government Purchase Order (O) (*P.O. must accompany registration form*)
- Wire Transfer (WT)
- Personal Check (P) | Company Check (C) (*Payable in U.S. funds to WEF*)
- MasterCard (M) | VISA (V) | American Express (A)

P.O. No. _____
 Transfer No. _____
 Check No. _____

Card Number _____ Exp. Date _____

Signature _____

I authorize WEF to charge my credit card for the amount indicated above.

Important Notes:

- * Cancellations received after January 9, 2008 and registrants who fail to attend are liable for the full registration fee.
- * Your registration form must be received via telephone, fax, or mail no later than January 9, 2008, or you will have to register onsite at the Omni Hotel at CNN Center, Atlanta, Georgia

Fax form to 1-708-344-4444 (no cover page)



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