

# WATER EXECUTIVE Forum 2009



**March 30-31, 2009 Philadelphia**  
at the **Center City Marriott Courtyard Hotel**

Trends in International Reuse Projects

Bringing Innovative Solutions to the Current and Future Challenges of Water Treatment

The Water:Energy Nexus...Simultaneous Solutions or Dual Disasters?

Nanocomposite Reverse Osmosis Membranes

Possible Applications of Fullerene Nanomaterials in Water Treatment and Reuse

Financing Water Companies' Growth in these Challenging Economic Times

Nano Alumina Non-Woven Filters – An Alternative to MP/UP Membranes

Water Cultivation: The Paths to Profit in Meeting Water Needs

M&A in the Water Equipment and Technology Sector”

Improvements in Heat Transfer Technologies and their Impact on the Water Business

Panel Discussion: Troubled Waters or Calm Seas: Looking Beyond Current Turbulence

Economic Impact of Water System Infrastructure Improvements

Water Infrastructure in Latin America: Key Challenges and Business Opportunities in 2009

Equity Investing in the Water Industry

Blue Gold

Intake to Outfall - Impacting the Total Life Cycle Costs of Treating Water

Improvements in Heat Transfer Technologies and their Impact on the Water Business

Carbon Nanotubes: A Fundamental Shift in Filtration

Economic Stimulus and EPA Office of Water Priorities

Excerpts from Nanotechnology Applications for Clean Water

Technology Developments in Additives, and their Implications for Treatment Applications and the Water Business

Commercialization of Nanotechnology for Removal of Heavy Metals in Drinking Water and Wastewater

An Overview of the Water Business and Potential Impact by the Stimulus Package

**You need to stay on top of the water treatment market!**

For updates on this conference, please visit:

**[www.waterexec.com](http://www.waterexec.com)**



# WATER EXECUTIVE Forum

March 30-31, 2009  
Marriott Courtyard Hotel in  
Center City  
Philadelphia, Pa.

## Financing Water Companies' Growth in these Challenging Economic Times

David Gray, managing director, *Credit Suisse*



Mr. Gray will examine these questions:

1. What traditional sources of capital remain available to water companies?
2. What alternative pools of capital have emerged to fill the funding gap?
3. How do water companies determine which source of capital is best for their long-term needs?

## Technology Developments in Additives, and their Implications for Treatment Applications and the Water Business

Paul Turgeon, president, *BWA Additives*  
Mr. Turgeon will review technology developments made by BWA



Water Additives since going private in 2006. These technologies conserve water and permit higher operating efficiencies in a number of water applications. The presentation will also examine the potential impact of these improved technologies on the water business.

## Equity Investing in the Water Industry

Ryan M. Connors, senior analyst - industrial services, *Boenning & Scattergood, Inc.*



Mr. Connors' presentation will examine the landscape of publicly traded companies in the broadly-defined "Water Sector", including a look at which areas and companies are best positioned in the current environment.

## Water Cultivation: The Paths to Profit in Meeting Water Needs

Michael LoCascio, senior analyst, *Lux Research*

Over the next several decades, the demand for clean fresh water is set to explode that will serve to power the growth of the already huge industry. The specter of reduced supply opens

the door to new opportunities that address looming water scarcity, decaying infrastructure, and emerging contaminants. The growth potential in these areas will vastly exceed the broader market. This presentation also will review Lux Research's analysis of the hydrocosm, the universe of water related companies, and provide a unique insight into the market size, composition, drivers, and areas of future opportunity.



## M&A in the Water Equipment and Technology Sector"

William Malarkey, managing director - Investment Banking, *Boenning & Scattergood Inc.*

Despite uncertain economic and market forces, the water industry has also witnessed significant M&A activity as active buyers, sellers, and investors have continued to show interest in the sector. Although the market turbulence of 2008 led to reduced M&A transaction volume, overall market trends and investor interest should position the sector for sustained growth and resumed strong M&A activity in the coming years, especially deals involving privately held companies. This presentation will address the current market situation and the impact that it is likely to have on the M&A strategy of both financial investors and privately held companies.



## Economic Impact of Water System Infrastructure Improvements

Tom Curtis, deputy executive director, *American Water Works Association*



Mr. Curtis will describe the economic impact of investments in water infrastructure, and discuss current economic recovery (stimulus) legislation, and what it offers to the water community, and the economic impact of these

investments. He will also discuss longer-term prospects, and AWWA recommendations for water infrastructure finance.

## Blue Gold

G.G. Pique, president and CEO, *Energy Recovery*

As part of his presentation, Mr. Pique will examine Energy Recovery Inc.'s successful 2008 IPO. Mr. Pique will also describe his, and the company's view on investment perspectives as well as market opportunities for the water industry. The presentation will also examine how technology development is helping to make desalination a more viable choice for regions needing additional water supplies.



## Trends in International Reuse Projects

Hu Flemming, global director, *Hatch Water*



Water reuse, both direct and indirect, has gained acceptance globally at a much faster rate than in the U.S. Since the first major water reuse project in Namibia in the late 1960s, and culminating with the most recent

mega-projects in Australia and Singapore, numerous large reuse programs have been developed and implemented. Trends in global reuse will be reviewed, with a focus on business drivers for why such projects succeed or fail.

## The Water:Energy Nexus...Simultaneous Solutions or Dual Disasters?

Jeff Fulgham, chief marketing officer, *GE Water & Process Technologies*

Water and energy are primal ingredients for socio-economic growth. Even in a time of unprecedented economic challenges facing the world, population growth and global productivity are creating an unsustainable demand



on both water and energy. In most regions of the world, these two challenges are addressed independently, with too many people ignoring the fundamental interrelationships. We consume vast amounts of water to produce energy, and we consume vast amounts of energy to produce and distribute water. This presentation will address six specific water:energy challenges and how water technologies are being deployed to provide solutions.

# WATER EXECUTIVE Forum

## Water Infrastructure in Latin America: Key Challenges and Business Opportunities in 2009



Omar Del Valle Colosio, director-new business development, *CG/LA Infrastructure*

In the midst of the economic crisis, Latin America has responded with big infrastructure

spending. The water and wastewater sector seems as though it will benefit as more projects have been announced to expand and modernize basic infrastructure and to create jobs. Yet, there are still key obstacles, institutional or technical, preventing the development of successful water/wastewater projects with private sector participation. The importance of this intervention is 1. to highlight that infrastructure spending in Latin America can be an important policy to recover from the crisis and to increase investments in water/wastewater; and 2. to discuss the fundamental role private sector can play on these initiatives.

## Intake to Outfall - Impacting the Total Life Cycle Costs of Treating Water

Matthew Knight, senior vice president-global sales, *Siemens Water Technology Corp.*



Water is far from free. Aside from the growing pressures on the unit costs of water, and wastewater treatment,

engineers, and utility operators give greater consideration to their treatment choices against the corresponding costs of chemicals, energy, maintenance, manpower, capital, and environmental impact. Mr. Knight will discuss how mechanical, operational, and chemical solutions continue to converge, creating new options for lowering cost and improving water availability.



## Improvements in Heat Transfer Technologies and their Impact on the Water Business

David E. Flitman, executive vice president and president, *Water and Process Services Division, Nalco Co.*

Water is used widely in industrial plants for heat transfer in cooling

systems, and to carry and cleanse manufactured products. Heat transfer technology advances are creating significant energy and water savings, along with other environmental benefits. Mr. Flitman will discuss Nalco's role in technology developments in heat transfer, and their potential economic impact on facility operations and the overall water business.

## Bringing Innovative Solutions to the Current and Future Challenges of Water Treatment

Paul Raymond, president, *Ashland Hercules Water Technologies*

Developing countries, growing populations, and water scarcity in some areas will continue to offer new challenges for the water treatment industry. In some regions, consumers and industry compete



for the same water source, driving the need for water reuse and the desire to ensure its cleanliness on discharge. Across the globe, consumers are stepping up their interest in the environment, sustainability issues, and environmental legacy, increasing the need to continue to discover and develop new innovations for water treatment. Mr. Raymond will discuss how supplier-client partnerships can help to manage water treatment needs. Novel chemical and non-chemical approaches to water treatment will also be highlighted during this discussion.



## Panel Discussion: Troubled Waters or Calm Seas: Looking Beyond Current Turbulence

Moderated by Christoph Lueneburger, consultant, *Egon Zehnder International*

## Economic Stimulus and EPA Office of Water Priorities

Mike Shapiro, Acting Assistant Administrator, Office of Water, *U.S. EPA*



## Emerging Technologies: Nanotechnology and Water Treatment

### Nanocomposite Reverse Osmosis Membranes

Jeff Green, CEO, *NanoH<sub>2</sub>O Inc.*

It is well established that the major cost drivers of desalination are energy consumption and infrastructure expense. Those in the field have recognized that a substantially more



productive membrane would address these cost drivers, however, major advances in membrane technology would be needed. By combining the advantages of inorganic materials with existing reverse osmosis polymer membrane technology, new nanocomposite membrane materials have demonstrated the high permeability, fouling resistance, and salt rejection required to significantly affect these major cost drivers.

### Nano Alumina Non-Woven Filters – An Alternative to MP/UP Membranes



Fred Tepper, president, *Argonide Corp.*

Electropositive nano alumina fibers, only 2 nm in diameter, are retained in a non-woven structure and are assembled into conventionally sized pleated cartridges.

The filters are capable of retaining particles smaller than a virus, and doing so at flowrates one to two orders of magnitude greater than microporous or ultraporous membranes. The cartridges are currently used as prefilters for protecting RO membranes and as virus samplers for municipal water assay. The filter media can also incorporate sorbents such as powdered activated carbon, or nanosized particles such as titanium dioxide, a photocatalyst. This presentation will describe the filter characteristics in more detail, and will describe current uses as well as promising applications such as protecting RO in desalination plants.

### Commercialization of Nanotechnology for Removal of Heavy Metals in Drinking Water and Wastewater

Lisa M. Farnen, P.E., president, *Crystal Clear Technologies*



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The presentation will examine development of ligand-based nano-coatings. When bonded to the surface of high-surface area, low-cost substrates, these coatings can transform those substrates, through surface

functionalization chemistry, into a high-capacity, target-specific adsorptive media capable of sequestering high concentrations of heavy metal contaminants. Once the nanocoated adsorptive media is exhausted, it can be recharged in-situ by pouring a bifunctional, self-assembling ligand over the filter bed. One end of the bifunctional ligand bonds to the metal already bonded to the filter media, leaving the other functional group, on the other end, available to bond the next layer of metal.

class of nano-material. In environmental engineering, fullerenes have been proposed as a basis for developing new technologies for nanomaterial-enabled oxidation and disinfection, improved membrane



processes, absorbents, and biofilm-resistant surfaces. This presentation overviews the current effort to initiate novel water engineering applications with fullerene nanomaterials.

### Excerpts from "Nanotechnology Applications for Clean Water"

Richard Sustich, industrial and governmental

development manager, *CAMPWS at University of Illinois at Urbana-Champaign*



Richard Sustich, one of the editors of the newly released *Nanotechnology Applications for Clean Water* (William Andrew, 2009), will discuss some of the most promising academic research by the book's more than 80 contributors in the areas of nanostructured membranes and nanofiltration processes for drinking water, dendritic and fullerene nanomaterials for wastewater treatment and reuse, catalytic nanoparticles for groundwater remediation, and advanced fluorescent and colorimetric sensor approaches.

### Carbon Nanotubes: A Fundamental Shift in Filtration

Roger S. Miller, president, *Water Filtration, Seldon Technologies Inc.*

Mr. Miller will present a comparative overview of the fundamental shift in filtration that is occurring as a result of nanotechnology, specifically carbon nanotubes. No longer are we limited to the gross filtration paradigm that industry has experienced for the last 40 or so years. New nanotechnologies, such as carbon nanotubes, open a whole new frontier into targeted or selective filtration and purification. In part, the presentation will examine the development of a newly patented media and related products that are based around nanotechnology.



### Possible Applications of Fullerene Nanomaterials in Water Treatment and Reuse

Ernest Matthew Hotze, Ph.D., researcher, *CNRS at Le Centre Européen de Recherche et d'Enseignement des Géosciences de l'Environnement*

Fullerenes, discovered more than 20 years ago, represent a primary example of nanotechnology that has emerged from laboratory benches and into commercial applications. Products such as cosmetics, energy production, semiconductors, and medical treatments are currently being enhanced by the use of this

## HOTEL ACCOMMODATIONS

For your convenience, we recommend that you stay at the Philadelphia Downtown Courtyard by Marriott for the duration of the conference. Please call 215-496-3200 for reservations. **Room Rates—\$189** (All rates subject to additional local taxes.)

All rooms have free wireless internet access. **These rates are good only until March 4.** You can also reserve a room online at: <http://cwp.marriott.com/phldc/WaterExecutiveforum/>. The group code is **WEFWEFA for a king, WEFWEFB for two queens room.**



Marriott Courtyard Hotel

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Philadelphia, Pa. March 30-31

at the Center City Marriott Courtyard Hotel  
organized and sponsored by **ULTRAPURE WATER** journal

Monday, March 30 and Tuesday, March 31

Two-day registration \$595 (\$540 if registered and paid before March 23, 2009)

Single-day (Specify: \_\_\_\_\_) \$360 (\$330 before March 23, 2009)

Registration includes attendance at Monday dinner and Tuesday Lunch functions.

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*Registration confirmations will be made by e-mail only.*

For your convenience, we recommend that you stay at the Philadelphia Downtown Courtyard by Marriott for the duration of the conference. It is located at 21 Juniper Street Philadelphia, PA 19107. Please call 215-496-3200 for reservations.

**Room Rates—\$189 + taxes**

## PAYMENT

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### REGISTRATION INFORMATION

Use this registration form. Please photocopy the form for additional registrations. If registering by phone, please fill out the form before you call, have your credit card number ready, and be ready to provide a hard-copy of your registration. *We cannot charge your credit card without your written permission to do so.*

**Checks:** Payment must be made in U.S. dollars, drawn on a U.S. bank. *Please make checks out to Tall Oaks Publishing, Inc.*

**Credit Cards:** VISA, MASTERCARD, and AMERICAN EXPRESS are accepted. **Note:** Your card will be processed a few days before conference date. **Your statement will show a charge by Tall Oaks Publishing.**

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### LOCAL TRAVEL

The hotel is just off Interstate 676 (Vine Street Expressway) in Center City Philadelphia. It is just 30 minutes from Philadelphia International Airport. A taxi ride is approx. \$35 one way. Commuter train service from the airport is also available and very convenient. If you drive, you can use valet parking at the hotel.

### ON-SITE REGISTRATION

You may register for the Forum at the Conference. However, we encourage you to register in advance to save time and to insure your seat availability. In order to insure registration, we recommend you register early and pay by the due date.

### CONFIRMATION

All registrations will be confirmed by email. You must be registered for admission to any session. Pre-

registered attendees must pick up their badges at the Registration Desk. **Badges will not be mailed.** Please pick up your badges at least 30 minutes before the start of your session.

### FEES

**WATER EXECUTIVE Forum Dinner and Lunch** are only available to those registered for the conference. Meal function-only tickets are NOT available.

### PHOTO RELEASE

We occasionally use photographs of show participants in our promotional material. By virtue of your attendance, you automatically agree to usage of your likeness in such material.

### CANCELLATIONS/REFUNDS

Refunds cannot be granted on cancellations received after **March 26, 2009**. Cancellations prior to this date are allowed without penalty. There will be a \$30 processing fee on all refunds. If you need to change your plans to attend, you may transfer your registration to another person at any time without incurring any penalty.

For the latest information and schedules, please visit: [www.waterexec.com](http://www.waterexec.com)