



WATER SUSTAINABILITY
in the Pulp & Paper Industry

Co-Produced by

AICHE 

The Providence Biltmore Hotel

Providence, RI

November 10-11, 2011

Website:

<http://water.aidhe.org/conferences>

Workshop Overview

Industry Background:

The pulp and paper industry is among one the largest manufacturing sectors in 48 states. It is also one of the largest water users. However, nearly 88% of this water is treated and returned to the environment, greatly reducing the amount of consumed water. Nevertheless, there are expanding efforts to overcome water use challenges. These efforts include reducing the use of fresh water in the pulping and papermaking processes, developing technologies that treat and reuse process water, and developing closed-loop systems.

This initial event begins to address some of these challenges to help provide a better understanding of water issues in the pulp and paper sector as well as define water sustainability initiatives in the industry.

Workshop Goal:

This is a 2 day intensive workshop features invited presentations focusing on water sustainability issues in the pulp and paper industry. The objective is to develop a more detailed best practices effort as the pulp and paper industry moves forward in reducing their water footprint and investing in expanding their water sustainability initiatives.

This Program Features 4 Topical Sessions:

- External Pressures and Drivers
 - Global Competitiveness – countries with more lax environmental regulations
 - GHG Footprint – pressures from buyers like Walmart to reduce environmental footprint
 - Regulations on water use, contaminant levels
- Water Use Challenges
 - Reduce use of fresh water in the pulping and papermaking processes
 - Develop technologies that treat and reuse process water
 - Develop closed-loop systems
- New Technology Needs
 - Separation processes – membrane technologies, fast-acting systems, process modeling
 - Contaminant removal – trace metals in process waters, pulp fibers
 - Low-grade heat recovery from process water – separation out of contaminants, new technologies
 - Waste water treatment – technological advances
- Barriers to Development
 - Funding for R&D, pilot plant studies
 - Collaboration with membrane community
 - Greater understanding of process chemical transport and other phenomena

Workshop Agenda

Thursday, November 10, 2011

8:00 – 8:30am	Continental Breakfast
8:30 – 10:00am	Session I – External Pressures and Drivers, Panel Discussion Welcome (20-30min) <ul style="list-style-type: none"> ➤ Introductions of Organizing Committee and Panel Members ➤ Workshop Goals and Overview ➤ Panel Discussion with: <p>Jerry Schwartz, <i>Senior Director of Environmental Policy, AF&PA</i></p> <p>Nicole Tanner, <i>Assistant Global Water Roundtable Coordinator, AWS</i></p> <p>Laura Thompson, <i>Dir. of Tech. Mktg & Sustain Development, SAPPI</i></p>
10:00 – 10:30am	Break
10:30 – 12:00pm	Continue Session I's Q&A
12:00 – 1:30pm	Lunch
1:30 – 3:00pm	Session II – Water Use Challenges <ul style="list-style-type: none"> ➤ Presentations by: <p>Barry Malmberg, <i>Sr. Research Engineer, NCASI</i></p> <p>Ron Brown, <i>Executive Director, Agenda2020 Technology Alliance</i></p>
3:00 – 3:30pm	Break
3:30 – 5:00pm	Wrap up Session II
5:00 – 7:00pm	Reception (Optional)

Friday, November 11, 2011

8:00 – 8:30am	Continental Breakfast
8:30 – 10:00am	Session III – New Technology Needs <ul style="list-style-type: none"> ➤ Presentations by: <p>Steven Hatch, <i>Global Technology Leader, Nalco Company</i></p> <p>Vincent Caprio, <i>Chief Operating Officer, Water Innovations Alliance</i></p> <p>Dr. Mrinal Mahapatro, <i>Staff Scientist, Pall Corporation</i></p>
10:00 – 10:30am	Break
10:30 – 12:00pm	Session IV – Barriers to Development
12:00 – 1:30pm	Lunch
1:30 – 3:00pm	Wrap-up & closing comments

Featured Speakers

G. Ronald (Ron) Brown, PhD

Executive Director, Agenda 2020 Technology Alliance

Ron Brown is Executive Director of the Agenda 2020 Technology Alliance, an industry-led partnership with government and academia that identifies technology needs of the forest products industry and facilitates collaborative R&D programs to address these needs. Agenda 2020 is housed within the American Forest & Paper Association, in Washington, DC. Ron held leadership positions in industrial research, engineering, and manufacturing with MeadWestvaco Corporation spanning more than 30 years. Since joining Agenda 2020 in 2008, he has concentrated on transformational technologies for the forest products industry, with emphasis on reducing energy intensity, greenhouse gas emissions, and water intake in mills.

Vincent Caprio

Chief Operating Officer, Water Innovations Alliance

Mr. Caprio is one of the foremost advocates for government funding of emerging technologies at both the State and Federal levels. Mr. Caprio has testified before the state legislatures of New York and Connecticut, and has participated in the [NNI Workshop](#). Mr. Caprio is the founder of the Water Innovations Alliance Conferences and has successfully produced 3 Water Innovations Alliance Conferences. He is the Event Director of the [2nd Annual Water Innovations Alliance Conference](#), September 27-29, 2010 in Chicago, IL. In addition, Mr. Caprio has appeared on numerous Connecticut TV and radio stations discussing the impact of Water and Nanotechnology.

Steve Hatch, PhD

Global Technology Leader, Nalco Company

Steven Hatch received a B.S. in Chemistry from Brigham Young University in 1985 and a Ph. D. in Physical Chemistry from University of Texas at Austin in 1990 where he studied surface photochemistry and the Surface Raman effect with Professor Alan Campion. In 1990 he received a Post-Doctoral Fellowship with Exxon Corporate Research and Engineering to investigate interfacial chemistry, in-situ, utilizing nonlinear spectroscopies. Steve began work at Nalco Chemical Co. in 1992 in the Research Analytical labs and later managed the Cooling Water Research department. He currently serves as a Global Technology Leader for the Wastewater, Membranes and Process Solutions; Oil Sands and Produced Water; and Research Analytical areas. Steve has been closely involved in development of Nalco's 3DTRASAR technology and was part of the team recognized with the United States EPA Presidential Green Chemistry Award for this advancement in 2008. Steve has authored 18 publications and holds 6 US patents.

Dr. Mrinal Mahapatro

Staff Scientist, Pall Corporation

Dr. Mrinal Mahapatro is a Staff Scientist in the Scientific & Laboratory Services (SLS) Group at Pall Corporation. He has been at this position for the past three years. Prior to Pall, Dr. Mahapatro was a Senior Chemist in the Aerospace division of PPG Industries in California developing coatings for aircraft transparencies. In addition, he carried out several Post-Doctoral fellowships in the general area of Surface Chemistry / Nanotechnology. Dr. Mahapatro holds a Doctorate Degree in Chemistry.

Barry Malmberg, PhD

Sr. Research Engineer, NCASI

Barry Malmberg is a Senior Research Engineer at the National Council for Air and Stream Improvement. He has been at NCASI for six years working in the areas of water and energy sustainability for the pulp and paper industry. Barry has a Ph.D. in Chemical Engineering from the University of Idaho.

Jerry Schwartz

Senior Director of Energy and Environmental Policy, AF&PA

Jerry Schwartz is the Senior Director of Energy and Environmental Policy at the American Forest & Paper Association. In that position, he helps establish and implement AF&PA's energy and environmental policy and advocacy. Jerry also is the Sustainability Team Leader, directing AF&PA's work on various sustainability initiatives, including the *Better Practices, Better Planet 2020* sustainability goals program. Before joining AF&PA, he owned a litigation support consulting firm; traveled around the world for a year with his wife; and worked in the Environmental Enforcement Section of the Department of Justice and at EPA.

Nicole Tanner

Assistant Global Water Roundtable Coordinator, AWS



Nicole Tanner has been working with WWF-US's Market Transformation Unit on commodity and freshwater issues since 2008. In 2009, she also began work with the Alliance for Water Stewardship (AWS), on behalf of WWF, as the Assistant Global Coordinator of the Water Roundtable process. Nicole has degrees in Political Science and International Relations from Elmira College (NY) and a Masters in International Development from the University of Denver's Korbel School of International Studies. Originally from upstate New York, she currently lives in Washington, DC and is learning to balance city life with a love of all things outdoors. Through her work with WWF and AWS, Nicole continues to advocate for sustainable development and freshwater stewardship globally.

Laura M. Thompson, PhD

Director of Technical Marketing and Sustainable Development, SAPPI



Laura Thompson is a recognized leader and fact-based voice in the world of paper and sustainability, building her expertise over the past 15 years in the paper industry. Dr. Thompson has a wide breadth of experience in the industry, including R&D, mill environmental, product development for specialties and coated fine paper, and most recently, sustainability.

Dr. Thompson joined Sappi Fine Paper North America in 2006 and serves as Director of Sustainable Development, providing thought leadership and setting strategy for the company's sustainability goals and the corporate governance around those efforts. In addition, Dr. Thompson is at the helm of Sappi's eQ brand which includes the eQ Journal, eQ Microsite (including informative videos, white papers, and Sappi's original eQ Tool which shows paper buyers the environmental impact of their purchases), and is the author of The Environmental Quotient blog which is hosted by Sappi. The Environmental Quotient is a platform for the entire industry to participate in an online discussion around a myriad of topics related to sustainability. Dr. Thompson is dedicated to offering immediacy, transparency,

and candidness -- all supported by a solid foundation in fact and science. The Environmental Quotient blog can be accessed by visiting www.eq.tumblr.com.

Dr. Thompson earned a B.S. in Chemical Engineering from the University of New Hampshire and an M.S. and PhD in Paper Science from the Institute of Paper Science and Technology. She is active with several industry associations, including The Association for Magazine Media Environmental Working Committee; Green Blue's Advisory Board for The Paper Life Cycle and Forest Products Working Group; TwoSides US Sustainability Committee; TAPPI Sustainability Forum 2012 Program Committee; and, Dr. Thompson served as a Judge for Net Impact Sustainability Challenge on Scorecard Development.