

# WEF EMS Committee

## Summer 2009 Update

News from the  
Water Environment Federation  
Environmental Management System Committee  
[www.wef.org](http://www.wef.org)  
Issue 2.3



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**WELCOME!** The committee's goal is to encourage water environment professionals to adopt environmental management systems (EMSs). This newsletter aims to keep committee members and colleagues informed of EMS developments, and of opportunities to get involved in activities. Please send news and information to Caroline G. Hemenway at [chemenway@hemenwayinc.com](mailto:chemenway@hemenwayinc.com). **Contact information for people cited are at the end of this issue.**

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### **ADMINISTRATIVE MATTERS**

**WEF EMS Committee website page input sought.** Please visit the updated EMS committee webpages and let Rob Schweinfurth know if you have any suggested additions to the pages.  
<http://www.wef.org/MembershipCareers/MembershipInformation/CommitteeList/EnvironmentalManagementSystem.ms.htm>.

**The EMS SharePoint** site for work tasks is <http://sharepoint.wef.org/ems>; contact Rob Schweinfurth for access.

**Next WEF EMS Committee meeting:** During WEFTEC'09 in Orlando; see Calendar below.

**To join WEF,** go to: [https://www.e-wef.org/timssnet/memberships/tnt\\_membership.cfm](https://www.e-wef.org/timssnet/memberships/tnt_membership.cfm).

**For an application to join our committee,** go to:

<http://www.wefnet.org/onlineform/CommitteeMembership/CommitteeMembershipApplication.asp>.

### **CALENDAR**

**ALERT: The Environmental Management System Committee meeting at WEFTEC'09** will be held on Tuesday, October 13 from 3:00 to 5:00 p.m. at the Orlando County Convention Center, 207A, Level 2. Tom Pedersen and committee leaders are developing the agenda for the meeting. Please go to the SharePoint site to review the task progress report. **If you have agenda items or 2010 tasks to be considered for the meeting, please forward them to Rob Schweinfurth by Tuesday, September 22.** Dial-in ability for October 13 is uncertain at this time; committee members please check email through the morning of the meeting for details.

**All are welcome to attend** to hear of EMS activities and opportunities. We'll review progress on the WEF EMS Technical Practice Update, discuss Member Association activities, and make plan for workshops, webinars, and technical sessions for 2010. If you're intrigued by all the discussion about sustainability and the 10 attributes of effective utilities, then please join us and hear about the way EMSs are being used to address these critical issues.

**WEFTEC'09 EMS-Related Sessions – Your One-Stop-Shop.** Please leave room in your WEFTEC schedule in Orlando to participate in or drop by some of these events. <http://www.weftec.org/home.htm>

**TS011 GIS Enhances Environmental Monitoring**

Track: GIS & Computer Applications, Instrumentation & Automation  
 When: Monday, October 12, 2009, 10:30am - 12:00pm  
 Where: Orange County Convention Center, Room 306, Level 3  
 Moderator: Bob Hill Session Assistant Moderators: Yazdan Emrani, Peter Wilt  
 11:30 AM Developing Long Term Sustainable Management Systems; G. Miles, C. Williams, S. Dorner, S. Firmin, J.F. Byrne, C. Long, B. Irvin

**TS025 Biosolids Management Using EMS**

Track: Residuals & Biosolids Management  
 When: Monday, October 12, 2009, 1:30pm - 5:00pm  
 Where: Orange County Convention Center, Room 304F, Level 3  
 Session Moderator: Michael Moore; Session Assistant Moderators: Trudy Johnston

**TS032 What is Your Strategy?: Effective Strategic Planning for Utilities**

Track: Utility Management  
 When: Monday, October 12, 2009, 1:30pm - 5:00pm  
 Where: OCC West, Room 308C  
 Moderator: Jacqueline Jarrell Session; Assistant Moderators: Brent Reuss, Kasey Monroe  
 2:30 PM Strategic Planning: Key To Effectively Managing Your Utility; L. Blankenship, B. Wheeler

**TS036 International Perspective on Sustainability in Infrastructure Design**

Track: Sustainability/Energy Conservation/International Issues  
 When: Monday, October 12, 2009, 1:30pm - 5:00pm  
 Where: OCC West, Room 304G  
 Session Moderator: Brian Evans; Session Assistant Moderators: Greg Welch  
 3:30 PM Incorporated Sustainability Into the Design of the Tri-City WPCP; R.D. Richwine, R. Rosane, M. Trent, J. McGraw  
 4:30 PM Embedding Sustainability Into Water Infrastructure Projects: The Top 10 Insights; G. Linke

**TS056 Environmental Management Systems: A Key to Effective Utility Management**

Track: Utility Management  
 When: Tuesday, October 13, 2009, 8:30am - 12:00pm  
 Where: OCC West, Room 308C  
 Session Moderator: Tom Pedersen ; Session Assistant Moderators: Wendy Brockbank, Gabriele Miles  
 8:30 AM GO GREEN: Green Sustainability for the Water and Wastewater Industry: 10 Years of EMS Experience; R.E. Bickerstaff, Jr.  
 9:00 AM Strategic Management and Cost Savings Through an ISO 14001:2004 Certified Environmental Management System; J. Yarborough, D. Roberts, K. Fought  
 9:30 AM Promoting Environmental Justice As an Essential Best Management Practice for Utilities in Economically Distressed Communities; A. Kricun  
 10:30 AM Strategic Plan, Performance Measures, Environmental Management Systems: Toho Water Authority - Putting the Pieces Together; R. Nipper, V. Jensen

11:00 AM City of Tallahassee Water Utility Wastewater Treatment Division Becomes State Forerunner With Environmental Management Certification; D. Dean, J. Cheatham, K. Taylor, N. Lauw  
 11:30 AM Five Bridges To Utility Sustainability; C.G. Hemenway, L.E. Stone, J. Horne  
 Alternates: Sustainability Performance Improvement Management System in Engineering Consulting, T. Pedersen; A Pathway To Effective Utility Management at Small and Medium-Sized Utilities, P. Maynard, C.M. Richardson

**TS108 Energy Optimization and Management**

Track: Facility Operations  
 When: Wednesday, October 14, 2009, 1:30pm - 5:00pm  
 Where: OCC West, Room 311C  
 Session Moderator: Jon Meyer; Session Assistant Moderators: Joshua Boltz, Charles Corley  
 3:30 PM ISO 14001 Environmental Management Systems - An Operations Perspective; C. Beckett

**TS110 Health, Safety, and Security at Wastewater Facilities**

Track: Facility Operations  
 When: Wednesday, October 14, 2009, 1:30pm - 5:00pm  
 Where: OCC West, Room 309  
 Session Moderator: Alan Callier  
 1:30 PM What Management Needs To Know About Health, Safety and Risk Management; J. Bannen

**TS115 Asset Management: How Does It Apply to Me?**

Track: Utility Management  
 When: Wednesday, October 14, 2009, 1:30pm - 5:00pm  
 Where: OCC West, Room 308A  
 Session Moderator: David DePratter; Session Assistant Moderators: Todd Swingle  
 1:30 PM An Executive View of Asset Management: What Is it, Why Should We Do it, and How?; K. Pallansch, A. Manning  
 3:30 PM A Seven-Step Action Plan for Sustaining Infrastructure; S.H. Geribo

**TS116 Workforce Issues**

Track: Utility Management  
 When: Wednesday, October 14, 2009, 1:30pm - 5:00pm  
 Where: OCC West, Room 308C  
 Session Moderator: William Edgar; Session Assistant Moderators: Laura Watson, Steven Swanback  
 2:30 PM Successfully Managing Change Within Your Organization; D. O'Berry, E. Matthews

**Important Committee Meetings:**

Utility Management Committee  
 Sunday October 11, 2009, 12:30pm - 4:00pm, Orange County Convention Center, 203A, Level 2  
 Sustainability Community of Practice  
 Tuesday, October 13, 2009, 12:30pm - 1:30pm, OCC, Room 104, Level 1  
 Environmental Management Systems Committee  
 Tuesday, October 13, 3:00pm - 5:00pm, OCC, 207A, Level 2  
 Residuals and Biosolids Committee  
 Wednesday, October 14, 2009, 7:00 - 9:00 am, OCC, West - Room 104AB, Level 1

**Through 2010: EMS webinars in Virginia.** The Virginia Department of Environmental Quality, EPA, Virginia Tech, and the Virginia EMS Association (VEMSA) are planning to hold a series of EMS webinars over the next year, in lieu of their annual EMS conference, which will occur next in 2010. Specific webinar topics are under discussion by the sponsors and an announcement about the webinars will come later this summer.  
<http://www.deq.state.va.us/veep/association.html>

**February 3-6, 2010, Hilton Head New Orleans Riverside: WEF midyear meeting.** The midyear meeting primarily provides an opportunity for the committees responsible for developing the WEFTEC technical program to meet and determine the workshop and technical session schedule, as well as other programming, for WEFTEC. Several committees, including this one, meet at midyear to discuss non-WEFTEC-related projects and programs. More detailed information regarding the 2010 Midyear Meeting will be available in early November 2009.  
<http://www.wef.org/ConferencesTraining/WEFTEC/MidyearMeeting.htm>

**March 7-10, 2010, Boston, MA: Cities of the Future conference.** Population growth, social inequity, economic turmoil, climate change, water shortages, and environmental degradation are placing unprecedented stress on infrastructure and ecosystems while technological advances, volunteerism, and sustainability movements offer promise for solutions. Bringing together engineers, scientists, urban planners, sociologists, urban ecologists, architects, landscape architects, developers, transportation engineers, economists, political scientists, city managers, and public officials, Cities of the Future will connect energy-efficient engineered infrastructure with green, water-centric landscapes to protect and conserve water resources, reduce energy intensity and associated carbon footprints, and improve economic vitality and quality of life. The conference is organized jointly by the Water Environment Federation and the International Water Association in cooperation with the New England Water Environment Association and the Water Environment Research Foundation. Tom Pedersen, conference chair, reported that this will be an ongoing conference held in the US and overseas in alternating years. The 2010 conference will be co-located with the WEF Urban River Restoration conference.  
<http://www.wef.org/ConferencesTraining/ConferencesEvents/CitiesoftheFuture/>

**May 23-26, 2010, Savannah, GA: Specialty Conference on Residuals and Biosolids Management.** The Water Environment Federation's Residuals and Biosolids Committee in cooperation with the Georgia Association of Water Professionals and the International Water Association is sponsoring a specialty conference on residuals and biosolids management at the Savannah International Trade and Convention Center. This conference is the 24th annual WEF specialty conference on this subject and the theme of the conference is "Leveraging Biosolids in the Energy-Climate Era." One of the topics is EMSs; The EMS Committee sponsored a workshop at the last meeting in May in Oregon.

**October 2-6, 2010, New Orleans: WEFTEC'10.** It's never too early to plan! The call for abstracts for WEFTEC'10 will include a session entitled "EMS: A Key to Effective Utility Management" and our committee is working on an EMS workshop proposal. Help is needed. Contact Andy Kricun for information or to volunteer.

## VOLUNTEERS NEEDED

If you are interested in helping with EMS Committee activities, or know someone who is, please contact Andy Kricun. Volunteers are particularly needed for the following:

- ◆ **Reporting for this newsletter.** We greatly need help gathering print-ready items so this can get out on time. Contact Caroline Hemenway at [chemenway@hemenwayinc.com](mailto:chemenway@hemenwayinc.com).
- ◆ Developing materials for an **information packet**.
- ◆ Serving as **liaison** to a WEF Member Associations (MA) (See list of current MA liaisons below.)
- ◆ Developing and implementing ideas for a **committee membership campaign**. We think we've got a good thing going here, and we'd like to spread the word. Will you help?
- ◆ **Coordinating website content** – We have a good opportunity to disseminate information to the public and within the committee but need one or two people to work with WEF to develop and keep this site populated.

Thanks to:

- ◆ Our volunteer **Member Association** liaisons!

## DID YOU HEAR...? (Latest and greatest news)

**The American Academy of Environmental Engineers (AAEE) is offering a new certification: Environmental Sustainability.** This certification emphasizes the application of sustainability principals to the everyday practice of

environmental engineering. It covers general principles, and applications to water/wastewater, solid and hazardous waste, air, energy, and development. Apply between now and March 31, 2010 and be in the first examination cycle. As part of this program, AAEE developing a specialty test to cover a sustainability specialization that will address EMSs and similar programs. EMS Committee member Jim Newton, environmental program manager at Kent County Regional Wastewater Treatment Facility, is a subcommittee chairman for developing test questions for the general section of the multiple choice test and is a reviewer for the oral test questions. <http://www.aaee.net/Website/News.htm>.

**Palm Bay, FL, Utilities Department bond rating raised; attributed to EMS.** Standard and Poor's, the world's foremost source of credit ratings, announced in June 2009 that Palm Bay's Water and Sewer Improvement bond rating was raised from 'A-' to "A." The higher credit rating means the utility can borrow at a lower interest rate. Jason Yarborough, utilities director, said the credit rating can be attributed to the organization's ISO 14001 environmental management system certification and commitment to continual improvement. The Palm Bay Utilities Department operates three water treatment facilities, a wastewater facility, and a water reclamation facility, serving 30,000 customers.

[http://www.palmbayflorida.org/utilities/environment/documents/iso\\_ems\\_info\\_paper.pdf](http://www.palmbayflorida.org/utilities/environment/documents/iso_ems_info_paper.pdf)

The utility states that a structured EMS has produced efficiencies in sustainability in at least two ways.

First, a documented lifecycle EMS fosters proactive management of environmental issues by identifying, preventing, and correcting or mitigating negative environmental impacts that can reduce risk and operational cost, and help preserve the environment.

Second, the EMS plays an integral role in better resource management and performance, which has had a noticeable impact on the department's bottom line. The utility's credit rating was raised within one year of becoming certified to ISO 14001.

The EMS also has helped the Utilities Department attain and maintain compliance with environmental requirements and accomplish its mission and strategic planning objectives.

**The Kent County Regional Wastewater Treatment Facility used The Natural Step framework model** to amended its environmental health and safety management system policy statement to specifically address sustainability. According to The Natural Step website (this <http://www.naturalstep.org/>) "The Network seeks to align business and government practices with natural cycles that support the web of life."

**Virginia is requiring EMSs in state agencies and institutions.** On June 10, 2009, Virginia Governor Tim Kaine issued Executive Order 82 directing state agencies and institutions to adopt or have plans for adopting an EMS, with the aim of increasing sustainability practices. They are allowed to adopt policies in lieu of EMSs that must commit to reducing energy and water use, reducing waste, and adopting savings in travel and transportation. The policy also requires that certain buildings conform to LEED silver or Green Globes standards. The executive order also addresses procurement standards, energy efficiency issues, government services, commuting, and voluntary practices. [http://www.governor.virginia.gov/Initiatives/ExecutiveOrders/2009/EO\\_82.cfm](http://www.governor.virginia.gov/Initiatives/ExecutiveOrders/2009/EO_82.cfm)

**WEF's Environmental Management Systems Committee is developing a technical practice update (TPU)** for utility managers, operators, consultants, regulators, and environmental organizations. The goal of this TPU is to outline current information on management systems, environmental management systems, in particular, and sustainability issues. It will discuss sustainability issues and EMS efforts and provide a means of integrating the various management system efforts and incorporating sustainability to them. For more information, contact Lorna Ernst.

**City of Santa Rosa joins NBP EMS-certified agencies.** The National Biosolids Partnership has recognized the City of Santa Rosa Utilities Department in Santa Rosa, CA as the 25th wastewater agency in the nation to be certified and admitted to the partnership's EMS biosolids program. The Santa Rosa Utilities Department is one of 100 organizations participating in the program. This agency was audited on July 29, 2009 by NSF-International Strategic Registrations and is planning an EMS celebration in fall 2009. <http://ci.santa-rosa.ca.us/departments/utilities/Pages/default.aspx>

## EMS COMMITTEE WORKPLAN UPDATES

**EMS Committee 2009 Workplan Update.** The WEF EMS Committee workplan activities are ON TARGET for 2009. See below for updates. The workplan establishes the following mission, guiding principles, and goals for the committee:

**Mission:** To advance the understanding of environmental management systems (EMS) and promote their adoption by water environment professionals.

**Guiding Principles:** In all committee activities: Use management system principles. Apply Plan-Do-Check-Act (P-D-C-A) philosophy. Work towards continual improvement. Focus on the needs of water environment professionals.

**Goals:**

- ◆ Increase the understanding of the value and relevance of EMS and related management systems by water and wastewater utilities.
- ◆ Demonstrate how the basic P-D-C-A management system philosophy embodied in an EMS can help utilities address operational and organizational challenges including asset management, compliance workforce management, risk reduction, energy efficiency and performance measurement.
- ◆ Collaborate with other WEF Committees and Communities of Practices.
- ◆ Support EPA, and other organizations representing water environment professionals in advancing EMS application.
- ◆ Increase the number of active EMS Committee members.

Priority projects are listed below, with task leaders, goals, and task status. For more information contact Andy Kricun.

- 1) *EMS Committee Work Plan* – Andy Kricun – Ensure goals are developed, distributed, and reviewed for progress, and complete a revised schedule by November of each year. **Status:** Goals have been developed and distributed. Veronica Jensen of Toho Water Authority in FL is tracking progress of EMS task items in a spreadsheet on SharePoint. **ON TARGET.**
- 2) *WEFTEC 2009 EMS Workshop* – Grady Coomes – Develop and deliver an excellent workshop to large audience; schedule for WEFTEC’09. **Status:** A workshop titled “Using EMS as a Tool to Reach Utility Goals” is being developed for WEFTEC’10. **MODIFIED.**
- 3) *WEFTEC 2009 EMS Sessions* – Tom Pedersen – EMS papers to be presented in Technical Session 25 - Biosolids Management Using EMS on Monday, October 12, 2009, 1:30pm - 5:00pm in Orange County Convention Center, Room 304F, Level 3 and in Technical Session 56 - Environmental Management Systems: A Key to Effective Utility Management on Tuesday, October 13, 2009, from 8:30am - 12:00pm in Room 308C, Level 3. **COMPLETE.**
- 4) *2009 Utility Management Conference EMS Panel* – Peter Maynard. **Status:** A panel session at the AWWA/WEF Joint Utility Conference entitled “Recipe for Effective Utility Management” was held Feb 19, 2009. **COMPLETE.**
- 5) *EMS Webinar* – Jim Horne – Develop and deliver EMS webinar series. Task members: Betsy Delaney, Jeanette Klamm (City of Lawrence), Andy Kricun, Caroline Hemenway, and Jim Newton (Kent County, DE). **Status:** Proposal has been developed for submittal to WEF to implement as scheduling and budget allows, but probably not until 2010. **ON TARGET.**
- 6) *Sustainability 2010 Conference* – Jim Horne – Identify the most effective role for the EMS Committee, working with WEF and conference leadership. **Status:** This conference has morphed into the Cities of the Future conference (see calendar item above) and abstracts are being accepted. Volunteers are needed. Contact Jim Horne. **MODIFIED.**
- 7) *Marketing* – Lisa Douglas, Jim Horne, Andy Kricun, and Rob Schweinfurth – Develop a concise and persuasive information packet to advance EMS application and distribute to WEF members, member associations, municipalities, and utilities. **Status:** A factsheet and other material are being developed. **ON TARGET.**
- 8) *Professional Association Liaison* – Jim Horne and Jeanette Klamm – Identify opportunities and approaches to liaise with organizations like NACWA, APWA and others. **Status:** The committee now has 15 liaisons. See below. **ON TARGET.**
- 9) *Technical Publications* – Jim Newton – Provide the EMS Committee members with the information for publication in WEF media. **Status:** A technical practice update is being drafted and is expected to be submitted to WEF this summer. Other material, such as presentations, are being discussed. **ON TARGET.**
- 10) *National Biosolids Partnership Collaboration* – Jeanette Klamm – Participate in NBP EMS workshops. Collaborate on training and speaking opportunities. Keep NBP staff apprised of EMS committee activities and opportunities. **Status:** The WEF EMS Committee liaison continues to seek opportunities for working with NBP and is exchanging information of interest to both groups. **ON TARGET.**
- 11) *Promote USEPA Peer Center* – Jim Horne and Andy Kricun – Implement activities to maximize the use of, and benefits realized from, the PEER Center website. Specifically, make sure that EMS Committee members know about the benefits of this website and how they can contribute to the site and the quarterly PEER

newsletter. Contribute to website's list of case studies, mentors, etc. Help increase interest in, and use of, this valuable resource. **Status:** EMS Committee information is being posted to the PEER website and a procedure has been developed. **ON TARGET.**

**Member association liaison report.** The EMS Committee now has the following MA liaisons. They have been brainstorming the most effective and persuasive ways to provide EMS information to their MAs and constituent utilities. An action plan for disseminating EMS-related information was developed during a conference call in June 2009 among all of the MA liaisons. Lisa Douglas, Jim Horne and Andy Kricun are charged with working on the plan. If you want to join this effort or get in touch with someone below, contact Andy Kricun.

Rick Bickerstaff – South Carolina  
Wendy Brockbank – Canadian Water and Wastewater Association  
Lisa Douglas – Missouri  
Nadine Dower – Georgia  
Ramesh Goel – Utah  
James Horne – Washington D.C.  
David James – Texas

Trudy Johnston – Pennsylvania  
Jeanette Klamm – Kansas  
Andy Kricun – New Jersey  
Peter Maynard – New England  
Jim Newton – Chesapeake WEA  
Koren Taylor – Florida  
Cynthia Walters – North Carolina  
Amy Wyks – Virginia

### CONNECTIONS (Cooperative efforts with other committees and organizations)

**National Biosolids Partnership** <http://www.biosolids.org> – Liaison Jeanette Klamm – No updates.

**WEF Residuals and Biosolids Committee** – Liaison Jim Newton – No updates.

**WEF Sustainability Community of Practice** – Report from liaison Jim Horne – The EMS committee's main link to this effort is through the Sustainable Utilities Task Force, which is moving ahead under new leadership. Peter Ruffier with the city of Eugene, Oregon has agreed to chair the Task Force and Andy Kricun from the Camden County Municipal Utility Authority has agreed to serve as vice-chair. The task force remains committed to producing a compendium of practices to help utilities move toward sustainability and is considering organizing the compendium around the 10 Attributes of Effectively Managed Utilities endorsed by WEF, US EPA, and five other national water sector associations. The task force will hold at least one more conference call before WEFTEC'10 and will meet during WEFTEC (see Calendar).

**WEF Utility Management Committee** – Liaison Peter Maynard – The EMS and Utility Management Committees are co-sponsoring a full day workshop at WEFTEC'09. W 114 on Saturday October 10 is titled Strategic Planning, Asset Management and Performance Management: Achieving the Ten Attributes, with eight presenters including Jim Horne providing an overview of the EUM Initiative and Rick Nipper providing a case study on EMS Implementation at Toho Water Authority. We hope to see many of you there. The WEF Utility Management committee has an active discussion forum on its website. Access the forum by clicking this link: <http://www.wef.org/TechnicalDiscussions/Forum19-1.aspx>.

### RESOURCES (Latest tools available, good websites, and other keepers)

**US EPA Energy and water management activities.** Over the last year, EPA's Office of Water, with WEF associations, sponsored a highly successful series of energy management workshops whose focus was on explaining how the Plan-Do-Check-Act methodology embodied in environmental management systems can be used to help utilities identify and manage their energy challenges, using the *Energy Management Guidebook for Wastewater and Water Utilities* developed by EPA with significant input from members of the WEF EMS Committee and other utilities. An additional four workshops will take place in 2009. Information about these workshops can be found at <http://www.peercenter.net/ewebeditpro/items/O73F21714.pdf>. The *Guidebook*, and many other EPA activities and resources in this area, can be found at [http://www.epa.gov/waterinfrastructure/bettermanagement\\_energy.html](http://www.epa.gov/waterinfrastructure/bettermanagement_energy.html)

**The WEF Utility Management Committee has posted numerous EMS resources on its website**, including presentations from webcasts, the EPA handbook on sustainability, an EMS and asset management pamphlet, case studies, and other tools.

<http://www.wef.org/ScienceTechnologyResources/AccessWaterKnowledge/UtilityManagement/UM-EMSResources.htm>

**Water Associations, US EPA release case studies for effective utility management practices.** Six associations representing the US water and wastewater sector, in collaboration with the US EPA, have released *Effective Water and Wastewater Utility Management Case Studies*, a companion document to last year's *Effective Utility Management: A Primer for Water and Wastewater Utilities*. This companion piece provides concrete

examples and “how to” assistance for utility managers through profiles of four utilities that successfully applied the Primer concepts and tools to advance effective management practices and achieve long-term sustainability.

The Effective Utility Management (EUM) collaborating associations – the American Public Works Association (APWA), American Water Works Association (AWWA), Association of Metropolitan Water Agencies (AMWA), National Association of Clean Water Agencies (NACWA), National Association of Water Companies (NAWC), the Water Environment Federation (WEF), and EPA – have been working together over the past two years to promote effective utility management across the water sector based on a series of Ten Attributes of

In addition to the primer (available in PDF and as a new interactive tool) and the case studies document, the EUM has an online resource toolbox that contains links to key resources and tools. These resources can be downloaded at no charge from <http://www.watereum.org>.

For more information about the partnering organizations, visit: AMWA at [www.amwa.net](http://www.amwa.net); APWA at [www.apwa.net](http://www.apwa.net); AWWA at [www.awwa.org](http://www.awwa.org); NACWA at [www.nacwa.org](http://www.nacwa.org); NAWC at [www.nawc.org](http://www.nawc.org); WEF at [www.wef.org](http://www.wef.org); and EPA at [www.epa.gov](http://www.epa.gov).

**EMS case studies from Virginia utilities.** The Center for Organizational and Technological Advancement at Virginia Tech (COTA) hosted a series of four ISO 14001 EMS implementation workshops in 2007-2008 at which representatives from utilities throughout Virginia participated to develop their EMSs. Case studies were compiled from the workshop participants and focused on the following topics: Core team members; key drivers for adopting an EMS; significant aspects, objectives and targets; benefits of adopting an EMS; and next steps.

Each case study gives an account of the organization’s unique experiences and commonly shared lessons learned and provides insight into EMS implementation for anyone developing an EMS for the first time. These case studies can also be found at <http://www.peercenter.net> (scroll down on the right).

Virginia Tech is one of 11 EMS Local resource centers (PEER Centers) designated by EPA to provide EMS assistance to local government entities around the country. More information about these centers can be found at <http://www.peercenter.net/whocanhelp/index.cfm>

**USEPA PEER Local Resource Centers (LRCs)** – The Public Entity Environmental Management Systems Resource (PEER) Initiative is a joint effort between USEPA’s Office of Water and the Global Environment and Technology Foundation (GETF). PEER is a one-stop shop for information and tools to help public entities (primarily local government) understand and adopt EMSs for their operations. There are 10 LRCs:

- ◆ Georgia Tech Enterprise Innovation Institute (<http://innovate.gatech.edu/>)
- ◆ Kansas State University Pollution Prevention Institute (<http://www.sbeap.org>)
- ◆ Sustainable Earth Initiative, designated by the USEPA to serve as the local resource center (LRC) for California, Arizona, Nevada, Hawaii, and the Pacific Islands. (<http://www.sustainableearthinitiative.org>)
- ◆ Texas Commission on Environmental Quality, Small Business and Environmental Assistance Division (<http://www.tceq.state.tx.us/>)
- ◆ The Zero Waste Alliance, Oregon (<http://www.zerowaste.org>)
- ◆ University of Colorado Connected Organizations for a Responsible Economy (CORE), Advance Colorado Center (<http://www.corecolorado.org>)
- ◆ University of Florida Center for Training, Research, and Education for Environmental Occupations (TREEO) (<http://www.treeo.ufl.edu>)
- ◆ University of Massachusetts-Lowell, EMS Service Center (<http://www.uml.edu/ems>)
- ◆ Virginia Tech Center for Organizational and Technological Advancement (COTA) (<http://www.cota.vt.edu/content/program-areas.html>)

**National Biosolids Partnership Resource Clearinghouse** – NBP is a goldmine of management resources for agencies that generate biosolids or otherwise are engaged in biosolids management. <http://www.biosolids.org>.

The National Biosolids Partnership (NBP) is a not-for-profit alliance formed in 1997 with the National Association of Clean Water Agencies (NACWA) (formerly Association of Metropolitan Sewerage Agencies), Water Environment Federation (WEF), and US Environmental Protection Agency (EPA). Its goal is to advance environmentally sound and accepted biosolids management practices. Biosolids producers, service contractors, and users – together with stakeholders from regulatory agencies, universities, the farming community, and environmental organizations – have input into shaping NBP priorities through scientific and technical support and communications linkages relating to biosolids issues.

NBP's mission is to:

- ◆ Advance environmentally sound and accepted biosolids management practices
- ◆ Develop a comprehensive environmental management system (EMS) for biosolids that will serve as a model for the wastewater profession
- ◆ Help EMS program participants demonstrate to their communities that they are committed to performing above and beyond mandatory regulatory requirements and to explain how they are working to improve their environmental performance
- ◆ Help EMS program participants involve their communities in defining improved performance or areas that still require attention
- ◆ Develop and administer a centralized clearinghouse for biosolids information

**On-Line EMS Tutorial** – The USEPA has completed an *On-line EMS Tutorial or Wastewater Utilities* based on its earlier *EMS Implementation Guide for Wastewater Utilities*. The on-line tutorial takes a utility through all the steps necessary to put an EMS in place for its operations, including a large number of examples and other tips from utilities that have successfully implemented EMSs. The on-line tool can be found at <http://www.peercenter.net/index.cfm> under the “Featured Tool” section.

**Effective Utility Management Initiative Primer** – WEF, USEPA, and five other national associations (AWWA, APWA, AMWA, NACWA, and NAWC) representing the US water and wastewater sector have released two products designed to help water and wastewater utilities manage their operations to help ensure long-term sustainability. The primer provides a step-by-step approach for assessing operations based on the ten attributes of effectively managed utilities and five keys to management success first identified in a report released by the group in May 2007. This tool is designed to help water and wastewater utility managers assess their operations based on the attributes, set priorities, establish performance measures, and make practical, systematic changes to achieve excellence in utility performance. The primer is available at: <http://www.epa.gov/waterinfrastructure/bettermanagement.html>.

The group has also released the *Effective Utility Management Toolbox*, which contains online links to key resources and tools. This can be accessed at no charge from each of the associations’ websites or at <http://www.watereum.org>. USEPA and the associations are now developing a workplan identifying additional steps that can be taken to communicate and promote these new products.

The primer was distributed and discussed at the WEF Sustainability 2008 Conference on June 23. The group and the EMS committee suggested that a webcast or workshop should be considered based on the new primer. In addition, a series of case histories using the attributes outlined in the primer is being discussed.

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