



 **Colorado Wastewater Utility Council**  
*Serving Colorado's Water Quality and Treatment Needs*

# CONFLUENCE

[www.cwwuc.org](http://www.cwwuc.org)

2nd Quarter - 2008

## Environmental Management Systems

Wastewater utilities and other water quality protection agencies are increasingly focusing on environmental management systems to achieve regulatory compliance and continuous improvement of environmental programs.

An environmental management system (EMS) is a framework that allows an agency to assess, monitor, and reduce its impact on the environment. An EMS is generally based on the “plan-do-check-act” process developed by Dr. W. Edwards Deming for use in quality control settings. In short this process involves:

- Assessing the utility's environmental impacts,
- Putting a system in place (training, procedures, etc.) to meet specified targets or goals,
- Monitoring the efforts' success, including preventive and corrective actions and
- Reviewing the system to provide for continuous improvement.

The EMS approach was first used by private industries but utilities and municipalities are increasingly employing environmental management systems as well. Although goals and measures are clearly spelled out in a facility's NPDES permit, EMSs are being used to help manage regulatory compliance. They can be designed to reduce environmental impacts below permit-required levels and address impacts or concerns not specifically regulated by a permit such as air quality, energy usage, and sanitary sewer overflows.

Environmental management systems are often based on the ISO (International Standards Organization) 14001 Standard. Utilities can choose to have its EMS audited and certified through a third party agency. This

certification can serve to assure the utility that a sound system is in place, promote transparency of operations, and build public support of its practices.

Some local examples of environmental management system utilization include:

- City and County of Denver's EMS which will help manage water quality policy commitments and direct future water quality improvements.
- Metro Wastewater Reclamation District's EMS developed through a program of the National Biosolids Partnership to ensure the management of its biosolids program is efficient and environmentally sound.

The EPA has stated in a 2005 position paper that they are in full support of facilities adopting EMSs. Although unlikely to replace the permit-based compliance systems, environmental management systems can be a useful tool for a utility to continuously improve its environmental stewardship efforts.

Further EMS information can be found on the following websites:

<http://www.epa.gov/ems/>

EPA information on EMSs

<http://www.peercenter.net/toolkit/>

EMS toolkit for wastewater utilities

<http://www.epa.gov/permits/ems/index.htm>

EPA information on EMS in permitting

<http://www.ofee.gov/ems/training/GEMI%20Self%20Assessment%20Checklist.pdf>

ISO 14001 Self-Assessment Checklists



# CWWUC Calendar

Stay Tuned In - Stay Informed

The CWWUC meets the second Wednesday of every month at the Littleton/Englewood WWTP, located at 2900 S. Platte River Drive, Englewood, CO. Please visit our website for a map and driving directions.



**April 9**

**Emerging Contaminants of Concern** is a presentation from three separate speakers concerning the “pharmaceuticals” issues. What we can do about it and how we address it critical. Todd Harris, Metro Wastewater Reclamation District; Bill Battaglin, CREEC (The Consortium for Research and Education on Emerging Contaminants) & Bret Linenfelser, City of Boulder. (See the article on page 4 of the newsletter for more information)



**May 14**

**Nutrient and Selenium Updates** by Steve Canton, GEI Consultants. Steve has completed studies on selenium and nutrients for the Council. He will provide some insight into the findings and compare results and approaches with those of the Water Quality Control Division on these two topics.



**June 11**

**Steve Gunderson, Director of the Water Quality Control Division** will provide a legislative and policy update. The Division has been making many changes in policies and guidance documents. This is the time to come ask Steve the burning questions you may have regarding the regulatory future of water quality.



## Update from the Colorado Water and Wastewater Mentoring Program

The Colorado Water Quality Control Division, Drinking Program and the Colorado Water Utility Council are financially supporting the implementation of the water portion of the Colorado Water and Wastewater Mentoring Program.

The Mentoring Program, Colorado Rural Water Association and Joe Kleffner, a water mentor from Erie sponsored a one-day seminar for level C&D operators. Over 53 operators attended two classes - one in Erie and one in Longmont on the same day. There is enough interest to hold another seminar soon.



# Forum Corner

The Colorado Water Quality Forum workgroups provide an opportunity for an ongoing informal dialogue among diverse parties of stakeholders' interests in water quality management. Participants include water suppliers, industrial and municipal dischargers, environmental groups and federal, state and local agencies.

Each quarter **Forum Corner** provides a brief status of some of the active workgroups. It is not meant to be a detailed update. For more information go to <http://www.cwqf.org> and click on Workgroup Links.

**Agricultural Diversions** – This workgroup originally focused on issues related to salinity of oil and gas exploration water used for agricultural purposes. It took a turn somewhere in the course of the workgroup which then became an issue for POTWs. The Division presented the Guidance document to the Commission during an Informational Hearing. See the Forum website for the full document: **Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops.** Gary Beers, Facilitator CDPH&E, 303.692.3524, [gary.beers@state.co.us](mailto:gary.beers@state.co.us) or the coordinator Landon Gates, Colorado Farm Bureau, 303.749.7516, [lgates@colofb.com](mailto:lgates@colofb.com).

**Spill Reporting** – This workgroup is meeting periodically. To get an update either go to the Forum website for draft documents or contact Dave Akers, Facilitator, 303.692.3591 [Dave.Akers@state.co.us](mailto:Dave.Akers@state.co.us) or the Coordinator Dave Meyers, City of Westminster, 303.430.2400 x2376 [dmeyer@ci.westminster.co.us](mailto:dmeyer@ci.westminster.co.us).

**Aquatic Life** – No new updates. Contact the Facilitator, Christopher Theel CDPH&E, for the latest information on the progress of ***Expected Condition***. Call Chris at 303.692.3558 or email him at [Christopher.Theel@state.co.us](mailto:Christopher.Theel@state.co.us) for updates.

**Nutrient Criteria** – The next meeting is scheduled for April 15 at 1:30 in the Sabin room at CDPH&E. The Division continues to work on developing nutrient criteria with plans to propose numeric criteria for lakes and reservoirs and rivers and streams to the Water Quality Control Commission in June 2010. If you can't attend the meeting be sure to go to the Forum website and read the 2007 **Progress Report and Update to the Colorado Nutrient Criteria Development Plan.** Co-Chairs are: **Rivers and Streams** Blake Beyea, Water Quality Control Division 303.692.3656 [Blake.Beyea@state.co.us](mailto:Blake.Beyea@state.co.us) , **Lakes and Reservoirs**

**Lakes and Reservoirs** Jim Saunders, Water Quality Control Division, [Jim.Saunders@state.co.us](mailto:Jim.Saunders@state.co.us)

**Coordinator**, Mary Fabisiak, City of Westminster, [mfabisiak@ci.westminster.co.us](mailto:mfabisiak@ci.westminster.co.us) 303.430.2400 ext. 2187

**Regulation 61** –The Rulemaking hearing for this regulation was held March 11, 2008. If interested in knowing more about the changes which may affect you and your permit contact Janet Keiler, the facilitator, CDPH&E 303.692.3599 [Janet.kieler@state.co.us](mailto:Janet.kieler@state.co.us) or Carol Webb the Coordinator, City of Fort Collins 970.221.6231 [cwebb@fcgov.com](mailto:cwebb@fcgov.com).

**Membrane Treatment**– This workgroup was on hold for a period of time. A recent meeting was held April 1. For updates on what occurred at the meeting contact either Dave Akers CDPH&E 303.692.3591 [dave.akers@state.co.us](mailto:dave.akers@state.co.us) or Laurie Rink, FRICO, 303.777.0188 [lrink@uos.net](mailto:lrink@uos.net) to find out more about this group and how to join in the discussions.

**Standards Framework**–The next meeting is scheduled for June 23 at 1:30 in the Sabin room at CDPH&E. The group meets to discuss possible issues for the 2010 Basic Standards hearing. Current issues are: temporary modifications, source water, nonylphenol, Biotic Ligand model, possible new EPA recreation criteria and others. Stay ahead of the issues and attend these meetings! Paul Frohardt of the Water Quality Control Commission is the Chair; 303.692.3468 [paul.frohardt@state.co.us](mailto:paul.frohardt@state.co.us) and Amy Woodis of the Metro Wastewater Reclamation District is the Coordinator; 303.286.3240 [awoodis@mwrdd.dst.co.us](mailto:awoodis@mwrdd.dst.co.us). Contact either of them with questions or possible issues for discussion.

**E. Coli**–The E. Coli workgroup has been discussing Bacteria Pellston Workshop, Empact Beach Project, EPA Decision chart, EPA Microbial Source Tracking Document and Research subgroup TMDL Components– to name a few. Contact Becky Anthony, Chair at 303.692.3339 [rebecca.anthony@state.co.us](mailto:rebecca.anthony@state.co.us) or Coordinator James McCarthy at [jim-m@arvada.org](mailto:jim-m@arvada.org)



# What Should you Know and Do About Micro Constituents?

## Metro Wastewater is Responding

During the week of March 9<sup>th</sup>, the Associated Press released the first in a three-part series on pharmaceuticals in source and finished waters. The article indicated that publicly owned treatment works are sources of pharmaceuticals and other micro constituents. Below is a press release from the Metro Wastewater Reclamation District in Denver in response to the article, which contains information that other Council members might find useful in addressing questions from the public or from elected officials:

*The Metro Wastewater Reclamation District is aware of concerns generated by recent media stories about trace amounts of pharmaceuticals and personal care products being found in drinking water. The District is committed to protecting public health and the environment. It has been paying close attention to research being done in this arena for some time and is providing funds to support this research.*

*“Being able to detect a substance does not mean it is harmful,” said Metro District Biological Scientist Dr. Todd L. Harris. “Scientists can now detect trace amounts of substances we could not find just a few short years ago. The next step is to find out whether those substances are harmful.”*

*To date, research throughout the world has not demonstrated an impact on human health from pharmaceuticals and endocrine disrupting compounds in drinking water. Research in this area is both ongoing and a high priority for the Metro District.*

*“Most of these chemicals have undoubtedly been in the water for decades, but we have only recently begun to be able to measure them,” Harris said.*

*“Normal wastewater treatment removes the vast majority of these substances, but we prefer that unused drugs not be flushed down the toilet because doing so introduces the drugs to the environment. Even though the amount from a single pill is small, the accumulation of these small amounts and the yet-unknown effects on*

*aquatic life and the water environment concern us,” he said.*

*“A substantial amount of the pharmaceuticals that can be found in the water comes from human beings. The drugs our bodies don’t absorb are excreted, and that’s how they come to be found in wastewater,” Harris said.*

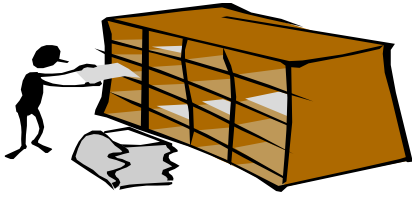
*The Metro District’s preferred option for disposing of unused pharmaceutical products is to take advantage of community pharmaceutical take-back programs that allow unused drugs to be brought to central locations such as pharmacies for proper disposal. Different pharmacies offer different programs. Some will take back drugs they sold, some take back all drugs, some take back none, and others offer solutions somewhere in between. Contact your local pharmacy.*

*The second option, which everyone can use, is to:*

- *Remove the prescription drug or medication from the original container and mix it with an undesirable substance such as used coffee grounds or kitty litter*
- *Put that mixture in a non-descript container that won’t leak such as an empty can or a sealable bag. This ensures the drugs aren’t diverted for non-medical use or are accidentally ingested by children or pets*
- *Dispose of these containers in the trash*

If Council members would like more information on how to respond to questions from the public, they can contact Steve Frank, Public Information Officer at Metro at 303-286-3465 ([sfrank@mwr.dst.co.us](mailto:sfrank@mwr.dst.co.us)).





## What Does the Colorado Wastewater Utility Council Membership do for you?

The Colorado Wastewater Utility Council has a lot to offer you. 2007 is a great example of the interesting speakers, important work products, seminars, letters to the Commission and tours provided. Let's review:

### Speakers and topics:

- Doug Kemper, Colorado Water Congress activities & legislation
- Steve Frank, Metro Wastewater - Public Relations for POTWs
- Dennis Stowe, Littleton/Englewood WWTP - EPA's Rate Fee Funding Proposal
- Max Dodson, US EPA - EPA Activities, Review of 35 Years
- Bruce Schomel, US EPA - EPA Awards
- Steve Canton, GEI Consultants - EPA Draft Mercury Implementation Guidance and Update on Selenium
- Betsy Beaver, Water Quality Control Division - Operator Certification regulations
- Jacob Bornstein and Jim Dorsch, Metro wastewater - Data Sharing Network for Colorado
- Phil Hegeman, Water Quality Control Division - 2008 303(d) Methodology Work
- Tracy Yager - Organic Wastewater Compounds in Biosolids
- Lynette Myers, Water Quality Control Division - Colorado Environmental Leadership Program
- Steve Gunderson, Water Quality Control Division - WQCD Activities (mid year and year end)
- Andrew Neuhart, Water Quality Control Division - Baseline Monitoring Frequency Policy
- Andrew Ross & Dave Akers, Water Quality Control Division - Other Policies Under Review
- Greg Farmer, Littleton/Englewood WWTP - Automated Process Control
- Andrew Ross, Water Quality Control Division - Update of CWQCD Policies Under Review

- Dennis Stowe, Littleton/Englewood WWTP - Antidegradation
- David Akers, Water Quality Control Division - Membrane Treatment - Zero Liquid Discharge Pilot

### Tours:

- J.D. Philips Water Reclamation Facility, Colorado Springs
- Denitification Process, Littleton/Englewood

### Work Products and Financial Support:

- Supported participation by GEI Consultants in the Nutrient Criteria, Aquatic Life, and Temperature Stakeholders Workgroups
- Supported GEI Consultants who provided comments to EPA on draft Tissue-Based Selenium Criteria Document and Mercury Document

### Seminars:

- Permit Negotiations Workshop in May in cooperation with the Water Quality Control Division and RMWEA
- Provided speakers for Colorado Rural Water Association and RMWEA annual conferences

### Letters to Water Quality Control Commission and Others:

- Letter to David Akers, Colorado Water Quality Control Division, regarding Implementing the Narrative Standard for the Protection of Agricultural Uses
- Letter to Steve Gunderson regarding Development of Statewide Nutrient Criteria
- Letter to Paul Frohardt regarding Antidegradation.
- Letter from John Ostrowski of Plum Creek Wastewater Authority to Steve Gunderson regarding Chatfield Control Regulation

This is a partial list of what your Council is doing with your help and support. Tell others so they can become members and be part of this valuable work. In light of the current and future regulatory environment, the Council can be a valuable resource for your Wastewater Utility.

#### Miss a Recent CWWUC Meeting?

You can access the minutes of our current meetings via our website. [www.cwwuc.org](http://www.cwwuc.org)

#### Contact us :

Phone : Paul Ferraro—303.904.2177

Email : Jeannie Bowser, [admin@cwwuc.org](mailto:admin@cwwuc.org)