

CEMS MOVIE NIGHT

Tuesday, April 23rd

Denver Sie FilmCenter 2510 East Colfax, Denver, CO 80206

THE DEVIL WE KNOW

THE CHEMISTRY OF A COVER-UP

When a handful of West Virginia residents discover DuPont has been pumping its poisonous Teflon chemical into the air and public water supply of more than 70,000 people, they file one of the largest class action lawsuits in the history of environmental law. As the citizens of Parkersburg rise up against the forces that polluted their town, the story builds out to dozens of other American cities. In fact, as many as 110 million Americans may be drinking water tainted with PFAS chemicals. Exposure to this class of chemicals has even become a global phenomenon. Parkersburg is ground zero for this story, but this clearly is not about one place or one chemical: because of the power of the chemical lobby, PFOA is one of more than 80,000 untested chemicals that have been approved for use, their dangers unknown.

Film screening is sponsored by CEMS!

\$25/person includes networking event with hors d'oeuvres & a ticket for a \$5 bar drink or popcorn. Student pricing is \$15/person.

\$150 Limited Sponsor Tables

Register at www.coems.org

5:00 - 6:45 pm Networking Event

7:00 - 8:30 pm Film Screening

8:30 - 9:30 pm Panel Discussion

Watch the trailer here:

<https://thediavilweknow.com/>

From the Board... Is the Water Safe to Drink? by Andy Horn, Westwater Hydrology LLC

When new acquaintances learn I'm an environmental consultant they frequently ask if their water is safe to drink. For almost three decades my stock answer has been that if they are on a public water system there is little worry except for miniscule concentrations of disinfection byproducts (DBPs) that we accept as a trade-off rather than losing one in four infants to dysentery or other water-borne diseases. If you don't like the chlorine taste, I'd tell people, get a home water filter or simply fill a pitcher with your drinking water and let it sit overnight so a few tens of parts per billion DBPs and any residual chlorine can off-gas to the air.

I'm no longer so sure of myself. I thought the public water supply was safe, that we'd dealt with toxic chemicals in public distribution systems years ago. I thought situations such as the case of Woburn Massachusetts, portrayed in the 1998 movie *A Civil Action*, had been cleaned up or were the rare exception to the rule. Organic compounds, heavy metals, and a host of other contaminants are tested by our water providers and the results made public. Compliance with the Safe Drinking Water Act (SDWA) is required and utilities face consequences if they exceed the Maximum Contaminant Levels (MCLs) for contaminants in drinking water.

The notion that in 2019, millions of Americans could be served toxic concentrations of chemicals by public water systems was anathema to my world view.

Here in Colorado, we have at least three aquifers that are known to be tainted with per- and polyfluorinated substances (PFAS), a family of synthetic chemicals called "forever chemicals" because they are difficult to treat, don't easily break down in the environment, and stay in our bodies for years. The combination of PFAS toxicity, environmental persistence, and mobility allow PFAS to migrate for miles in groundwater from source to water well. This class of chemicals is also used in a wide variety of products we use daily, ranging from dental floss to non-stick skillet, to raincoats, to fast food wrappers. In particular, large quantities of PFAS have been released to the environment as fire-fighting foams used for petroleum fires. PFAS has also been found in landfill leachate and in wastewater treatment plant effluent discharging to rivers and streams. While many products containing PFAS have been phased out there are still many common items we use daily that expose us to these chemicals.

PFAS compounds mimic the fatty acids in our bodies and bind to proteins. They have been found in polar bear blood, detected in 95% of US schoolchildren, and are likely present in your body and mine.

(Continued on page 8)

2019 CEMS Officers:

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Products and Services



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for pricing details.

For information on listing products and services in the CEMS newsletter, please contact CEMS at (303)674-9752 or admin@coems.org.

Presentation Opportunities for Upcoming CEMS Meetings

The CEMS Program Committee is currently searching for "interesting, topical and informative" presentations for our meetings in 2018 and beyond. This is a great opportunity to network with your peers, share information and technology, and become more involved with the environmental community. CEMS is interested in an assortment and variety of topics relevant to environmental and natural resources professionals. Each monthly presentation is roughly 50 minutes, followed by a question and answer period.

If you or someone you know is interested in presenting at our monthly meetings, or our annual conference, please feel free to contact our Programs Committee, Andy Horn at Andy@WestwaterHydro.com or Steve Truesdale at struesdale@ninyoandmoore.com.

Comments or suggestions from previous meetings, including the Annual Fall Conference, are also welcome. Let us know if we can publish them in the newsletter or website.

Members on the Move

Laura Newman started a new position as the MS4 Construction Program Manager with the Colorado Department of Transportation (CDOT) Headquarters Water Quality Section. Laura has worked as an environmental and natural resources project manager/engineer throughout her career. She has experience in program and project management, storm water and wastewater management, environmental site assessments, characterization and remediation, regulatory permitting and compliance, and site closeout.

Laura has managed and supported complex, million-dollar environmental cleanup projects under state and federal authorities (such as NEPA, CERCLA, RCRA, BRAC, EPCRA, CWA, CAA, etc.). She also served as the construction storm water coordinator, MS4 coordinator, and Team Leader for the Storm Water Group of the South Dakota Department of Environment and Natural Resources.

As the MS4 Construction Program Manager for CDOT, Laura will serve as oversight for the stormwater construction program and will provide technical and regulatory support for CDOT's MS4 Program.

Laura Newman, P.E.
CDOT HQ Water Quality Section
MS4 Construction Program Manager
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Three Days. Endless Networking Opportunities. One Must-Attend Event.

AUGUST 26-28, 2019 » DENVER, CO

5 REASONS TO ATTEND



1

More Networking



2

More Opportunity



3

More Insights



4

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5

More Exclusives

FREE E-NEWSLETTER

Get the latest details including registration incentives, confirmed speakers, networking events, the golf tournament, and much more!



COLORADO
OIL & GAS
ASSOCIATION

CEMS REGULATORY UPDATE
FEDERAL AND STATE ACTIONS IMPACTING COLORADO

By Amanda L. Hemmerich
Burns, Figa & Will, P.C.
March 2019

On February 6, 2019, the EPA promulgated a final [RULE](#) adjusting for inflation of the civil monetary penalty amounts under the statutes EPA administers. The new maximum and minimum penalty levels vary by statute. The new amounts will apply to all civil penalties assessed by EPA on or after February 6, 2019, for violations that occurred after November 2, 2015, which is the date of enactment of the Federal Civil Penalties Inflation Adjustment Act Improvements.

On February 7, 2019, the EPA approved two State Implementation Plan revisions submitted by the State of Colorado. The revisions involve amendments to Colorado's Regulation Number 11, "Motor Vehicle Emissions Inspection Program." The revisions enhance the use of Regulation Number 11's Clean Screen Program, allow self-inspecting vehicle fleets to use the On-Board Diagnostics testing procedure, provide corrections to the Low Emitter Index component of the Clean Screen Program, clarify existing provisions, correct administrative errors, delete obsolete language, establish inspection procedures for when emission control equipment tampering is detected, and make several other minor associated revisions. These actions are being taken under section 110 of the Clean Air Act (CAA). This final [RULE](#) is effective on March 11, 2019.

The EPA finalized minor amendments to its air toxics standards for friction materials manufacturing. This rule finalizes the residual risk and technology review conducted for the Friction Materials Manufacturing Facilities source category regulated under national emission standards for hazardous air pollutants (NESHAP). EPA addressed final actions for periods of startup, shutdown, and malfunction. In this action, the EPA finalized its proposed determination that the risks from the category are acceptable and that the current NESHAP provides an ample margin of safety to protect public health. These final amendments include amendments to revise reporting requirements for deviations. These amendments are made under the authority of the CAA and are environmentally neutral. The final [RULE](#) is effective February 8, 2019.

On February 14, 2019, EPA's Acting Administrator announced EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan. The news release can be found [HERE](#) and the Action Plan can be found [HERE](#). The PFAS Action Plan will:

- Move forward with the Maximum Contaminant Level (MCL) process outlined in the Safe Drinking Water Act for PFOA and PFOS, two of the most well-known and prevalent PFAS chemicals
- Continue EPA's enforcement actions and clarify EPA cleanup strategies
- Expand monitoring of PFAS in the environment
- Enhance research and scientific foundation for addressing PFAS by developing new analytical methods and tools

The EPA published a final rule for Management Standards for Hazardous Waste Pharmaceuticals on February 22, 2019. This final [RULE](#) establishes cost-saving, streamlined standards for handling hazardous waste pharmaceuticals to better fit the operations of the healthcare sector while maintaining protection of human health and the environment. This final rule aims to make drinking and surface water safer and healthier by reducing the amount of hazardous waste pharmaceuticals entering our waterways by 1,644 to 2,300 tons on an annual basis by prohibiting all facilities subject to the rule from sewerage them. Among other things, these new regulations prohibit the disposal of hazardous waste pharmaceuticals down the drain and eliminates the dual regulation of RCRA hazardous waste pharmaceuticals that are also Drug Enforcement Administration controlled substances. The new rules also maintain the household hazardous waste exemption for pharmaceuticals collected during pharmaceutical take-back programs and events, while ensuring their proper disposal.

MEMBERSHIP – RENEWALS AND NEW MEMBERS

A big thank you to all those members who renewed, and welcome to our newest members.

New – Individual

Aaron Smith, Waste Management of CO, Inc.
Levi Todd, Ayuda Companies
Michelle Wittenbrink, Waste Management of CO, Inc.

Renew – Individual

Stephen Bain, Welborn, Sullivan, Meck & Tooley, P.C.
Cecilia Bedard, Antelope Energy Co.
L. Peter Galusky, Jr. TerraPro
Brian E. Johnson, Transportation & Industrial Services, Inc. (TIS)
Olivia Salmon, CO School of Mines
Greg St. Louis, Kleinfelder, Inc.
Tom White, Iron Woman Construction and Environmental Services, LLC

New – Corporate

SWCA Environmental Consultants

Noah Greenberg Mandy Lemig Amanda Thompson

Renew – Corporate

City & County of Denver, Env'l Quality Division

Paul Bedard	Bill Benerman	Brenna Birt	Suzanne Boccia	Christiane Bohn
Janet Burgesser	Zach Clayton	Diane DeLillio	Kara Edewaard	David Erickson
Lisa Farrell	Emily Freeman	Steve Gonzales	Stacy Guillaume	Michele Herman
Tom Herrod	Gene Hook	Peter Kates	Agatha Linger	Rose Maes
Jeanette Maez	Kevin Monaweck	Michael Ogletree	Lori Phillips	Susan Renaud
Andrew Ross	Ben Siller	Justin Sterger	Gregg Thomas	Dave Wilmoth

City & County of Denver, Denver Animal Shelter

Alice Nightengale

City and County of Denver, Denver International Airport

Jeff Arneson	Emanuel Cormos	John Hambright	Janet Kieler	Mark Kunugi
Rick Langlois	Debbie Loya	Scott Morrissey	Kim Ohlson	Keith Pass
Craig Schillinger	Tracy Schilz	Tom Somers	Amanda Sutton	Jerry Williams
Katie Zarachowicz				

Looking for a New Position

CEMS posts many job opportunities on our website.

<http://www.coems.org/jobs>

If you or your company would like to post to our website, please just send over the job description, with contact information to admin@coems.org.

We also will post resumes for our members to help you find new opportunities.

REMINDER – SIGN UP NOW!**ASTM – INTERNATIONAL****ASTM PHASE I ESA COURSE FOR COMMERCIAL REAL ESTATE**

**April 4-5, Sheraton Downtown,
Denver, CO**

[Register now to guarantee your spot!](#)

About the Course

This 2-day course covers the ASTM Environmental Site Assessment Standard Practices for the Phase I Site Assessment Process (E 1527) and the Transaction Screen Process (E1528). You will gain an understanding of how to use the standards and how the standards affect the way you do business.

The instructor will also discuss the "Innocent Landowner Defense" under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and why due diligence is necessary. Coverage includes discussion of the changes to the E1527 standard as well as the Small Business Liability Relief and Brownfields Revitalization Act.

RECRUIT AND PROFIT!!

Recruit a **NEW** member for CEMS and get a **box lunch** credit voucher! For each person or organization you persuade to join CEMS, you will be issued a **box lunch** voucher that you can apply to the CEMS fee of your choice, whether it be a luncheon, workshop or your own membership renewal. Note that you cannot take credit for a member's renewal. However, there is **NO LIMIT** to the number of vouchers you can accumulate. Just have the new member put your name on the referral portion of the Membership Application Form. And keep those new members coming!

CEMS Meeting Sponsorships

Sponsors for a CEMS lunch meeting are provided a table where brochures or other materials can be displayed. The cost to sponsor a CEMS meeting is \$30 for members and \$85 for non-members. The non-member rate includes a one-year CEMS individual membership. Please send your request to sponsor a lunch meeting to admin@coems.org.

From the Board (continued from page 2)

PFAS have been linked to kidney, testicular, bladder, and lung cancer, as well as reproductive, cardiovascular and developmental toxicity, and immune system suppression. Because PFAS compounds become part of our tissue, they stay in our system for years after consumption and can accumulate to more than 100 times the concentration originally consumed. Due to the accumulation in our bodies, the EPA has set a non-enforceable “Health Advisory Limit” (HAL) of 70 *parts-per-trillion* (ppt) for the sum of the two compounds PFOS and PFOA.

In Colorado, over 100,000 residents of the Fountain Valley and South Adams County have been told their municipal drinking water contains PFAS and was distributed untreated at concentrations greater than the EPA HALs. In the Sugarloaf area of Boulder County well owners near a fire station, where fire-fighting foams were used years ago, have also been exposed to PFAS in the groundwater. Nationwide PFAS compounds have been discovered in many water systems, however we have no idea how long these contaminants have been in the drinking water because PFAS sampling only became widespread in about 2015 when the EPA required large water systems to sample for six PFAS compounds. And with thousands of compounds in this class of contaminants, those detected are likely the tip of the iceberg.

As analytical labs have expanded their capabilities and lowered their detection limits, more compounds are being detected. In groundwater sampled from Fountain, Colorado there were 11 PFAS compounds detected out of the 17 compounds analyzed in December 2018. When more extensive suites of PFAS compounds are analyzed, it’s likely that more compounds will be detected in the groundwater there and elsewhere.

Our public health infrastructure and regulatory institutions are struggling to catch up with this emerging family of contaminants. The EPA has yet to set an enforceable MCL for any PFAS compounds and without an enforceable standard, responsible parties have been reluctant to pursue PFAS remediation without clear cleanup goals or a regulatory requirement. In the vacuum of federal leadership, many states are setting their own HALs, MCLs, or other cleanup levels for PFOS, PFOA, and a hodgepodge of other PFAS compounds. However, there is little consensus on “safe” PFAS drinking water concentrations and some states have established regulatory levels that are less than half the EPA’s HALs. This scattershot regulatory environment will create confusion, and likely suspicion, if the EPA eventually sets an MCL at a level higher than many state levels. Add to this a recent study by the Centers for Disease Control that recommended “safe” concentrations about one tenth of the EPA HALs and the picture becomes even more clouded.

There is no coherent national approach to regulating PFAS. The EPA has begun research to establish “reference doses” for PFOS, PFOA, and a handful of other specific compounds, with the stated intent of establishing MCLs for drinking water in the next few years. Meanwhile both of Colorado’s senators have cosponsored legislation that would designate *all* PFAS compounds hazardous substances under CERCLA. The future is uncertain with respect to how these compounds will be regulated and what constitutes a safe concentration in drinking water. It’s as if we’re back in 1980 and are just learning about benzene and TCE.

There are many questions about PFAS, and CEMS hopes to raise the level of discussion on this topic by showing the documentary, *The Devil We Know*, on Tuesday, April 23rd and holding a panel discussion afterward with experts on the topic. We welcome you to bring your questions and help us find our way through the information that’s out there. I hope to see you at the movie!

Andy Horn, PG, of Westwater Hydrology LLC is a consulting hydrogeologist with over 25 years of experience performing groundwater studies for a variety of water resources and environmental assessment and remediation projects. He has studied PFAS since 2015 and coauthored the National Groundwater Association’s 2017 PFAS guidance document, Groundwater & PFAS: State of Knowledge & Practice. Andy has performed hydrogeologic investigations for small- to regional-scale groundwater resource assessments, and for hazardous waste sites across the U.S. He has been a CEMS Board member since 2017. Andy earned his B.S. in Geology from the University of Alabama in 1990, and his M.Sc. in Geology, with an emphasis in contaminant hydrogeology, from the University of Colorado, Boulder, in 1997.