

July CEMS Webinar

Topic: Satellite Observations of NO₂ and Methane over U.S. Oil and Gas Production Areas

Speaker: Barbara Dix, Research Scientist, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, CO, USA

Time: Tuesday, July 14, noon-1pm

Location: Webinar

CEMS has applied for one (1) General CLE for this presentation

The development of horizontal drilling and hydraulic fracturing has led to a steep increase in the U.S. production of natural gas and crude oil from shale formations since the mid-2000s. Associated with this industrial activity are emissions of nitrogen oxides, NO_x (= NO and NO₂), and methane. NO_x is a precursor for ground-level ozone formation, and methane is a greenhouse gas. NO₂ and methane can be monitored from space. This talk presents an analysis of NO₂ and methane observed by the OMI and TROPOMI satellite instruments over U.S. oil and natural gas production areas, including the Denver Julesberg and San Juan basins in Colorado and New Mexico. We use satellite data in combination with oil and natural gas industrial activity data to establish correlations in space and over time and derive source attributions. We are working on quantifying basin-wide emissions, pushing spatial scales to sub-basin levels and we are developing metrics to continuously observe methane emissions and flag anomalies that could be used to assess compliance with methane emission regulations.

Barbara Dix was born and raised in Germany in a small town, surrounded by vineyards, near the French border. In 1999, she finished a master degree in physics and theology and then taught high school for 3 years. Then she went back to graduate school. In 2007, Barbara graduated with a PhD in physics from the Institute of Environmental Physics at the University of Heidelberg, Germany. Since 2008, she has worked at the University of Colorado in Boulder, as a postdoctoral researcher and then as a research scientist. Her scientific background is in instrument development, remote sensing of trace gases and satellite data analysis.

LOCATION: WEBINAR: Please register by following this [link](#), and follow the directions to register. If you misplace the webinar link, please email admin@coems.org, and we will email it to you.

2020 CEMS Scholarship and Charity Golf Tournament

The CEMS Scholarship and Charity Golf Tournament would like to thank these generous individuals and companies who donated their golf sponsorship and registration fees to the Scholarship fund.

Scott Clark

Brian Kindsvatter

Todd Bragdon and Steve Fundingsland



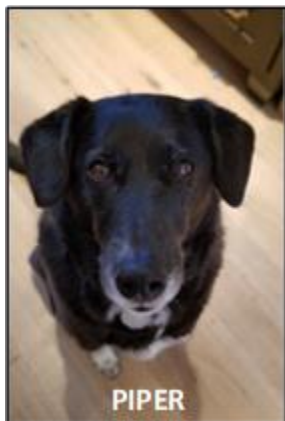
BURNS
FIGA &
WILL



From the Board...by Maggie Mandell, Environmental Works, Inc.

Depending on who you are talking to, to say the past 3 months have been a challenge may either be spot on or a huge understatement. Challenges related to working from home, childcare needs, getting groceries and basic necessities, maintaining socially distant connections, postponed or cancelled events and trips, to name a few. There is not a single CEMS member who has not be impacted by COVID-19 in one way or another. This is something we all have in common.

A few weeks ago, when the realities of coronavirus in Colorado were starting to sink in and stay-at-home orders were brand new, CEMS President Brian LaFlamme sent out a note of comfort and hope to the CEMS Board Members that included a photo of his pup. What ensued brought smiles to our faces, as each pet-owning Board Member shared a photo of their furry companion(s). We all agreed that it would be appropriate to share these photos with you, our CEMS members, to bring a smile to your face during these challenging times. Enjoy!



PIPER



LUA



BRUNO & LUCY



MILLIE

(Continued on Page 6)

2020 CEMS Officers:

President: Brian LaFlamme, Ensero Solutions
(303)570-7703, BLaFlamme@Ensero.com

Vice-President: Erik Gessert, PE, Terracon
Consultants, Inc. (303)454-5277,
erik.gessert@terracon.com

Secretary: Noreen Okubo, noreen.okubo@gmail.com

Treasurer: John Fontana, Vista GeoScience,
(303)277-1694, jfontana@vistageoscience.com

Past President: Steve Brauner, PhD, PE,
Environmental Works, Inc., (303)328-7982,
sbrauner@environmentalworks.com

CDPHE Liaison: Fonda Apostolopoulos, CDPHE,
(303)692-3411, fonda.apostolopoulos@state.co.us

Alternate CDPHE Liason: Rachel Blomberg,
CDPHE, (303)691-4024, rachel.blomberg@state.co.us

US EPA Liaison: Stephen Dymont, US EPA Region
8, (303)312-7044, dymont.stephen@epa.gov

OPS Liaison: Rob Herbert, CDLE; Division of Oil
and Public Safety, (303)318-8543,
robert.herbert@state.co.us

Board Members:

Fonda Apostolopoulos, CDPHE, (303)692-3411,
fonda.apostolopoulos@state.co.us

Suzanne Gabriele, Geosyntec Consultants, (303)790-
1340, SGabriele@Geosyntec.com

Andy Horn, Westwater Hydrology LLC, (303)456-
1981, Andy@WestwaterHydro.com

Mike Jahn, Tasman Geosciences, Inc., (303)487-1228,
mjahn@tasman-geo.com

Maggie Mandell, PE, Environmental Works, Inc.,
(301)943-2830, mmandell@environmentalworks.com

Evan Singleton, Gablehouse Granberg, LLC,
(303)572-0050, esingleton@gcgllc.com

Committee Chairpersons:

Monthly Programs:

Andy Horn, Westwater Hydrology LLC, (303)456-
1981, Andy@WestwaterHydro.com

Spring Movie Event:

Monica Genadio, Environmental Science Partners,
LLC, (720)936-1694, mgenadio@gmail.com

Fall Conference Co-Chairs:

Suzanne Gabriele, Geosyntec Consultants, (303)790-
1340, SGabriele@Geosyntec.com

Michael Whelan, Anchor QEA, LLC, (303)952-4850,
mwhelan@anchorqea.com

Golf:

Mike Jahn, Tasman Geosciences, Inc., (303)487-1228,
mjahn@tasman-geo.com

Scholarship – Co-Chairs:

Fonda Apostolopoulos, CDPHE, (303)692-3411,
fonda.apostolopoulos@state.co.us

Rachel Blomberg, CDPHE, (303)691-4024,
rachel.blomberg@state.co.us

Website: Juliana Reid, CEMS, admin@coems.org

MEMBERSHIP – RENEWALS AND NEW MEMBERS

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

New – Individual

Kevin Baugh, Rockpaw Inspections and Assessments, LLC

Renew – Individual

Leah Meyer, SCS Engineers

Kevin Wolfe, Stantec Consulting

Renew – Corporate

ACZ Laboratories

Brett Dalke

Charlotte Eaton

Sam LaMotte

Michael McDonald

Tim VanWyngarden

Presentation Opportunities for Upcoming CEMS Meetings

The CEMS Program Committee is currently searching for "interesting, topical and informative" presentations for our meetings in 2020 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 Chairperson, Andy Horn at Andy@WestwaterHydro.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.

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.

Are you a lawyer, looking for CLE's? Is someone at your office in need of CLE's? CEMS offers a very inexpensive way to earn those needed CLE's.

Just RSVP to admin@coems.org, bring your box lunch, and attend for free.

Products and Services



COLORADO ENVIRONMENTAL
MANAGEMENT SOCIETY

ENGINEERING, SCIENTIFIC, & LEGAL PROFESSIONALS

Advertise Your Business Here!

Please contact admin@coems.org
[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.

Members on the Move

To be included in this section, submit your previous information along with your new information via email to Juliana Reid at admin@coems.org. Changes must have occurred within the last three months, and your membership must be current.

RECRUIT AND PROFIT!!

Recruit a **NEW** member for CEMS and get a **box lunch** credit voucher! For each person 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 REGULATORY UPDATE
FEDERAL AND STATE ACTIONS IMPACTING COLORADO

By April D. Hendricks
Burns, Figa & Will, P.C.
June 2020

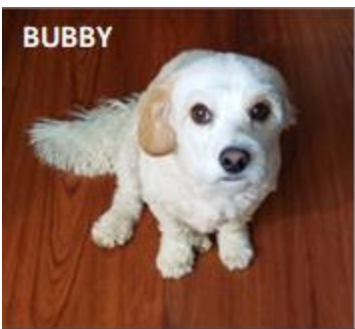
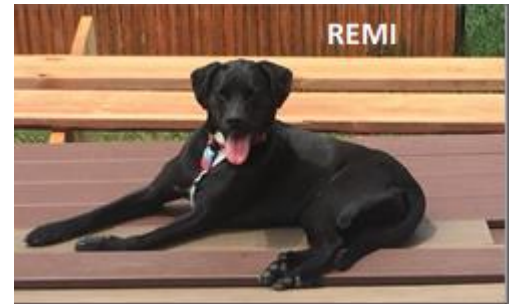
On June 8, 2020, the EPA published its [proposed determination](#) that no further measures are necessary under Section 211(v) of the Clean Air Act (CAA) to mitigate the adverse air quality impacts of renewable fuel volumes. Under Section 211(v), the EPA must complete an anti-backsliding study to determine whether the CAA's renewable fuel volumes will adversely impact air quality due to changes of vehicle and engine emissions. This study includes consideration of different fuel blends, different types of renewable fuels, and available vehicle technology, in addition to appropriate national, regional and local air quality control measures. Section 211(v) then mandates that EPA either adopt fuel regulations to implement any measures necessary to mitigate adverse air quality impacts, or make a determination that no such measures are necessary. Following its completion of the required anti-backsliding study, the EPA has concluded that no such measures are needed at this time. The EPA is soliciting comments on this proposed determination through July 8, 2020.

On June 5, 2020, the Environmental Protection Agency (EPA) [published](#) its proposed rule approving revisions to Colorado's State Implementation Plan (SIP). On May 8, 2019, the State of Colorado submitted a SIP revision reflecting updates to the annual emissions fees and permit processing fees. These changes were adopted by the Air Quality Control Commission on October 18, 2018, and became effective on November 30, 2018. The revised fee schedule includes an increase in annual emissions fees for regulated pollutants from \$22.90 per ton to \$28.83 per ton, and for hazardous air pollutants, from \$152.90 per ton to \$191.13 per ton, which are the maximum fees provided for by statute. The air pollution notice filing fee has been increased to \$191.13, and a permit processing fee of \$95.56 per hour was added to the fee schedule. The increased fees are intended to ensure that the State of Colorado has adequate funding to carry out its SIP. The EPA proposes to accept Colorado's amendments to its SIP and is accepting written comments on this proposed rule through July 6, 2020.

On May 27, 2020, the State of Colorado and the City and County of Denver joined a coalition of 22 other states and three other cities in filing a [lawsuit](#) against the EPA and the National Highway Traffic Safety Administration (NHTSA), which recently issued a [final rule](#) (the SAFE Vehicles Rule) reversing the Obama-era standards to strengthen emissions standards and raise fuel economy for passenger vehicles from 37 miles per gallon in 2020 to 50 miles per gallon in 2025. The SAFE Vehicles Rule mandates that fuel efficiency standards will remain at 37 miles per gallon through at least 2026 and eases carbon dioxide emissions standards nationwide. The lawsuit, filed in federal district court in Washington D.C., requests that the court review the final rule adopted by the agencies.

On May 22, 2020, the State of Colorado filed a [lawsuit](#) against the EPA and the United States Army Corps of Engineers (Corps) in federal district court in Denver, challenging the agencies' proposed new definition of "waters of the United States" that was adopted in April 2020 and seeking an injunction against its enforcement. The new Navigable Waters Protection Rule (NWPR) limits the scope of waters that were previously subject to the regulatory requirements of the Clean Water Act (CWA). The NWPR, among other things, excludes certain, previously regulated, waters from federal jurisdiction under the Clean Water Act (CWA), such as ephemeral streams and certain wetlands. "Adjacent wetlands," in particular, are now subject to the CWA's requirements under the NWPR only if they are shown to have a meaningful connection to other jurisdictional waters, either by directly abutting or having a surficial connection with such waters. Colorado's lawsuit alleges that the narrowed definition of jurisdictional waters under the NWPR eliminates federal jurisdiction over many of Colorado's streams and wetland areas and renders these previously-regulated waters vulnerable to pollution, which in turn will have an adverse impact on the state's recreation industry and overall economy.

From the Board *(continued from page 2)*



Pets and their humble companions:

Piper – Maggie Mandell

Millie – John Fontana

Lua – Erik Gessert

Bruno & Lucy – Evan Singleton

Darla & Floyd – Suzanne Gabriele

Fum – Noreen Okubo

Remi – Steve Brauner

Bubby – Mike Jahn

Sushi – Brian LaFlamme

Wilbur – Rachel Blomberg

Maggie Mandell, PE has 17 years of experience in environmental engineering and consulting. She joined Environmental Works, Inc. in October 2019 as an Environmental Engineer/Project Manager and works on a variety of compliance, remediation, and Superfund