

NOW ENTERING
**THE
TWILIGHT
ZONE**
OF WASTE CONTROL



Where
to
next?

MWCC Environmental Conference
July 11- 13, 2021

Dear Conference Attendees,

Welcome back! To say the last 16 months has been crazy and challenging for all of us is an understatement. It is great to see everyone again and thank you for joining us for the 48th Annual Missouri Waste Control Coalition Conference. We are excited to see so many returning attendees, speakers, and exhibitors, and the new faces this year too. We hope you meet the wonderful vendors who sponsor this event, learn from the experienced speakers, meet potential customers, and reconnect with old or make new friends. As an organization, our goal is always to provide a conference event that provides ample opportunity to connect, socialize, and learn.



Our theme for this year's conference is "Now Entering the Twilight Zone of Waste Control." It is important that we move forward with new ideas and innovations to protect the environment. As professionals in the environmental field, it is up to us to meet the day to day challenges using our past experiences.

Our annual conference is intended to serve as a platform to keep industry, government officials, and private citizens informed of the latest developments in the environmental field and serve as a forum where opinions can be openly voiced. This is also a great opportunity for young professionals to connect with many stakeholders in the environmental field. We welcome your participation and input throughout the conference.

Many volunteers spend countless hours preparing for the annual conference, all the while coordinating and executing other organization activities and meeting the demands of their day jobs. The conference committee has been working since September 2020 to put together this year's conference. Special thanks to Anna Custer, with Pace Analytical, this year's President Elect and Conference Chair, and also to the Board of Directors, the conference committee, and the advisory board. We couldn't do what we do without our Executive Director, Sandra Sabanske, conference sponsors, exhibitors, partners and Coalition members. Thank you all!

Next year's conference will be at Tan-Tar-A, a Margaritaville Lake Resort, from July 10 – 12, 2022. If you have any suggestions or would like to be a part of the Conference Committee, please contact Ken Ewers with GREDELL Engineering Resources, Inc., the upcoming President Elect and Conference Chair for the 2022 Annual Conference.

Enjoy the conference and have a great summer,

Larry Lehman
MWCC President, 2019-2021

Missouri Waste Control Coalition

Celebrates its 48th Annual Conference and its 39th Anniversary as a Nonprofit Association

Many of us come every summer for the annual Environmental Conference to showcase our products and services, to reconnect with old and new friends, and to gather cutting edge information on environmental issues. But have you ever wondered how all of this was started?

From 1972-1981, the Missouri Department of Natural Resources sponsored an annual “Missouri Solid Waste Conference” in Jefferson City. The purpose of the conference was to bring together citizens, government, business and industry to discuss the rapidly changing field of waste management. From these early conferences, the Missouri Waste Control Coalition (MWCC) was born, formed in 1981 through the efforts of the Missouri Department of Natural Resources, the University of Missouri-Columbia, and the Associated Industries of Missouri. The MWCC became the coordinating body for the annual conference. Over the years the conference has expanded beyond solid waste issues to encompass Brownfields, Tanks, CCR, Land Development, Legal and other environmental issues.

In 1989 the MWCC added a teacher mini-grant program to recognize the importance of education and to increase student interest in environmental issues, and sponsored an Environmental Greeting Card Program. The Coalition replaced those programs in 2009 and now provides college students with cash scholarships that total \$74,000 through 2021 as well as scholarships to the conference.

It has offered regional seminars from time to time and, through a grant from MoDNR, it offered special Appliance Demanufacturing Training Workshops. From 2013 to 2017 it partnered with the U.S. Environmental Protection Agency and presented seminars in Kansas City and St. Louis. In 2018 it developed a partnership with the Interstate Technology Regulatory Council (ITRC) and presented seminars across the state. In 2020 due to the COVID-19 pandemic, MWCC offered 7 webinars on solid waste issues rather than in-person seminars. Since 2014 it has offered the 40-Hour HAZWOPER Training, and has plans to continue this offering.

Through the hard work of its members and the leadership provided by its board, the MWCC has broadened its scope from a small gathering of individuals into an established and effective organization. You are a part of that organization, and this conference is part of a tradition that reflects more than 48 years of providing information and a forum for discussion!

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**The Solid Waste Track program has been
developed in partnership with SWANA Missouri**



CONTINUING EDUCATION NOTICE

Recertification as a Missouri “Certified Solid Waste Technician”

For each session of the breakout sessions specially marked, attendance counts towards education requirements for recertification as a Missouri Certified Solid Waste Technician.

**PDH, SWANA and Missouri CLE credits are available
Forms will be available at the Registration Desk.**



This program is printed on paper made of recycled fibers.



*\$10 per raffle ticket - Drawing during lunch on July 13
Need not be present to win*

Buy a Raffle Ticket

Contribute to the MWCC Educational Scholarship Fund

This year the MWCC is awarding scholarships to students at

- Lincoln University
- Missouri State University
- Missouri University of Science & Technology
- Southeastern Missouri University
- University of Missouri - Columbia

**GRAND PRIZE
\$1,000**

**FIRST PRIZE
\$400 CASH**

**SECOND PRIZE
\$200 CASH**

Our thanks to our sponsor:

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Jefferson City, MO 65102
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Sabanske & Co., Inc.
8826 Santa Fe Drive, Suite 208
Overland Park, KS 66212
(913) 381-4458
admin@mowastecoalition.org

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MoDNR Tanks Section
P.O. Box 176
Jefferson City, MO 65102
(573) 751-3176

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P.O. Box 250
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MWCC Past Presidents

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Robert Schreiber Schreiber, Grana and Yonley 1984-85	Dolores Vermont Monsanto Company 1993-94	Dale Behnen Peerless Landfill & Resource Recovery 2003-04	Steve Meyer City of Springfield 2012-13
Jan Dillow Heritage Environmental Services, 1985-86	Carla McDowell Allied Waste 1994-95	Cliff Metcalf Tri-Rinse, Inc. 2004-05	Larry "Boot" Pierce MoDNR Div of Geology and Land Survey 2013-14
Jim Garvin Confidential Mobile Paper Shredders 1986-87	Kenneth Seeney Mo EIERA 1995-96	Kristin Allan Tipton EIERA Market Dev. Program 2005-06	John Haasis St. Louis Dept. of Public Health 2014-16
Judy Gibbs Avila College 1987-88	Ron Darling City of St. Peters 1996-97	Erick Roberts City of Springfield 2006-07	Lisa McDaniel Mid-America Regional Council 2016-17
David Bedan Mo Dept. of Natural Resources 1988-89	Keith Connor SCS Engineers 1997-98	Michael Sieczkowski JRW Bioremediation 2007-08	Anastasia Welch SCS Engineers 2017-18
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	Jim Hull MoDNR Solid Waste Mgt 1999-2000		



For nearly 50 years, the Solid Waste Association of North America has been the leading professional association in the solid waste field. SWANA's mission is to advance the practice of environmentally and economically sound management of municipal solid waste. Becoming a national SWANA member from Missouri automatically makes you a member of our local chapter. SWANA serves more than 10,000 solid waste professionals throughout North America with:

- ✓ *Industry-leading conferences*
- ✓ *Certifications*
- ✓ *Publications*
- ✓ *Technical training courses*

I am personally inviting you to be more involved in our local chapter. If you are not a member, I encourage you to join. This year, SWANA is providing a

\$100 membership fee for Young Professionals (YPs). Please check out the Scholarship tab for more info and how to apply. Our local chapter is providing a \$100 scholarship to the first five YPs that apply so you will have a first-year free membership.

Whether you work for a public or private organization, are in management or operations, have an interest in all aspects of solid waste or just one - you'll benefit in many ways by being a SWANA member.

Scott A. Martin, P.E.
Past President, SWANA Missouri Chapter
<https://www.moswana.org/>

CONFERENCE SCHEDULE

SUNDAY, JULY 11

10:00 AM	GOLF TOURNAMENT Shotgun Start	The Oaks Golf Course
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2:00 PM	Exhibit Set Up Opens	Paradise Ballrooms A, B
4:00 PM	Registration Opens	Foyer, Paradise Ballrooms

6:00 PM	WELCOME RECEPTION <i>SPONSORED BY</i> <i>ST. LOUIS COUNTY PUBLIC HEALTH AND</i> <i>JETT ENVIRONMENTAL CONSULTING</i>	Paradise Ballrooms A, B
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8:00 PM	Young Professionals Social Event (New to the industry - less than 5 years) <i>SPONSORED BY MWCC BOARD OF DIRECTORS</i>	Windgate 60 - 61
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MONDAY, JULY 12

7:30 AM	Registration and Exhibits Open Coffee and "Meet and Greet"	Paradise Ballrooms A, B
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8:30 AM	BREAKFAST AND PLENARY SESSION <i>SPONSORED BY</i> <i>MoDNR BROWNFIELDS/VOLUNTARY CLEANUP PROGRAM</i> <i>AND REPUBLIC SERVICES</i>	Paradise Ballroom C
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CORY DAVIS

Chief Executive Officer, CTEH, LLC and Executive Vice President,
Montrose Environmental Group, Inc.

10:00 AM	Break with Exhibits <i>SPONSORED BY</i> <i>PACE ANALYTICAL SERVICES AND</i> <i>BURNS & MCDONNELL</i>	Paradise Ballrooms A, B
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**The Solid Waste Track program has been developed
in partnership with SWANA Missouri**



SOLID WASTE TRACK



Nautical Wheeler Room

Moderator: Mike Parris, MoDNR Waste Management Program

- **Demolition Waste Program**

Kathrina Donegan, St. Louis County Department of Public Health

Green Issues: St. Louis County's demolition waste program and new demo inspections initiative, studies on dust fall and lead from demolition activities, and how improvements in environmental justice and health equity are being realized by performing demo waste application inspections.

- **Using the Landfill as a Learning Lab - Engaging the Community in Talking Trash!**

Laurie Davis, City of Springfield Department of Environmental Services

A landfill is perfect for engaging all ages of the community with a wealth of knowledge related to operations, environmental impact and topics for future generations to consider in relation to solid waste. From career options, to science content, to building community awareness, this session will share strategies and ideas that staff in the Solid Waste division of City of Springfield's Dept. of Environmental Services are utilizing to make the landfill a learning lab!

- **The Renewable Natural Gas "Gold Rush"**

Robert W. Craggs and Scott Martin, P.E., Burns & McDonnell

This presentation will provide an overview of the quickly growing market for renewable natural gas, including the various end markets, various feedstock, financial incentives, and regulatory drivers. Several project examples (e.g. organics, manures) will be described along with key financial, technical, and environmental considerations. Lastly, the presenters will discuss the critical factors associated with a successful RNG project.

ENVIRONMENTAL ISSUES TRACK



Parasol I

Moderator: Ken Ewers, R.G., GREDELL Engineering Resources, Inc.

- **Meeting the Challenge of Aqueous PFAs Wastewater Management**

Frank Marine, Texas Molecular

If ever there was an environmental issue in the "Twilight Zone," it is the management of PFAS. To borrow from Rod Serling, PFAS is in "another dimension"... "You are moving into a land of both shadow and substance, of things and ideas. You've just crossed over intothe Twilight Zone." PFAS is in the "middle ground..... between science and superstition". Shadows (uncertainties), ideas, substance, science, and superstition (perception) are all a part of the questions surrounding PFAS. In an effort to bring some direction, the EPA published Interim Guidelines for managing PFAS materials in December 2020. Although no standards were suggested, the guidelines provide a look at the current state of treatment options. We may not be leaving the PFAS "Twilight Zone" yet, but we are able to get a glimpse of how to manage PFAS when regulations become more clear.

10:30 AM - 12:00 Noon**CONCURRENT BREAKOUT SESSIONS (continued)**

- **In Situ and Ex Situ Thermal Remediation of PFAS**

Mark Kluger, TRS Group

Recent bench testing evaluated the effects of PFAS treatment by volatilization at elevated temperatures. The boiling point temperature of most PFAS substances is less than 300 degrees Celsius. The testing drove temperatures of the PFAS to levels where they exhibited elevated vapor pressures; however, removal efficiencies were disappointing. Subsequent testing at higher temperatures and extended duration allowed virtually complete removal from the soil by volatilization. A vapor collection system collected the volatilized PFAS for subsequent treatment, which could include condensing the PFAS and storing it on activated carbon for off-site disposal or treatment or thermally oxidizing the compounds for on-site destruction. The DOD has funded two pilot studies through its Environmental Security Technology Certification Program (ESTCP) for the removal of PFAS from soils: one for the removal of PFAS from the vadose zone and the other for soil stockpiles. This presentation will discuss the PFAS volatilization process, related challenges, and results.

BROWNFIELDS TRACK**Windgate 62-64**

Moderator: Scott Huckstep, MoDNR Brownfields/Voluntary Cleanup Section

- **Brownfields 101 - A Beginners Guide to Brownfield Redevelopment**

*Scott Huckstep and Bobbie Pennington, MoDNR Brownfields/Voluntary Cleanup Section, and
Maggie Egbart Belanger, KSU TAB*

This session will introduce the participant to the world of brownfield redevelopment. We will walk you through the terms, processes, partners, resources, and how to help your community members get involved in brownfield cleanup and redevelopment.

TANKS TRACK**Parasol II**

Moderator: Ken Koon, MoDNR Tanks Section

- **UST Cleanups in MO - What Can We Do to Make the Process Faster?**

Jason Smith, Environmental Works, Inc.

It is one of the most common questions an environmental consultant faces when working for a new client – How long will this take? The answer can vary by many years. All too often, the optimistic consultant over-promises and leaves their client frustrated when, ten years later, they still do not have a No Further Action letter. So, why is it that some sites with large releases can be finished in just a few years while others, with what appears to be less risk, drag on for over a decade? This case study compares multiple scenarios where the time frame to NFA varied from just a few years to nearly two decades. Scenarios evaluated include: release discovery mechanism, the extent of impact caused by the release, complete exposure pathways associated with the sites, and methods used for characterizing the site. By evaluating what we have done right and wrong in the past, this session focuses on what we (as consultants) can do to tweak our methods to shorten the time to NFA while still ensuring the standards set in the risk-based corrective action guidance are met.

- **Stream Sampling - Expectations Regarding Stream and Sediment Samples for Tanks Sites**

Ken Hannon and Porter Henze, Mo Department of Natural Resources

Streams, ponds, and springs are among several surface water features that a consultant may encounter during site investigation. Under the Missouri Risk-Based Corrective Action (MRBCA) process for Petroleum Storage Tank Sites, potential impacts to streams and other surface water bodies from a release must be evaluated and surface water quality protected. This session will address when a stream or other surface water body needs to be sampled, best water and sediment sampling practices, and possible remediation techniques.

MONDAY, JULY 12

12:00 Noon **LUNCH AND AWARD PRESENTATIONS** **Paradise Ballroom C**
Speaker: **RICH THOMPSON, TEC, LLC**

SPONSORED BY
SCS ENGINEERS AND
ARMOR EQUIPMENT

1:30 - 3:00 PM CONCURRENT BREAKOUT SESSIONS

SOLID WASTE TRACK



Moderator: *Keith Connor, P.E., Terracon*

Nautical Wheeler Room

- **An Uncommon Approach to Landfill Emissions Control**

Ben Tucker, Champ Landfill, and Doug Doerr, P.E., SCS Engineers

Waste Connections and SCS Engineers would like to show how a little outside the box thinking, a drone, and a laser falcon could change the way landfills monitor fugitive emissions at landfills. Since 2016 Champ Landfill has continuously searched for alternate ways to manage odors and surface emissions, and although progress was made, we have recently found a technology that opens up possibilities we didn't know existed. In 2021, Champ Landfill and SCS Engineers teamed up to explore a technology that allows methane detection from 30 meters above the earth's surface. Initial results have been unexpected and have provided an enhanced view of the landfill surface to reduce odors and site emissions.

- **More's Lake CCR Impoundment - Historic Lake Takes on New Life**

Brian Weis, Burns & McDonnell

More's Lake was originally constructed by the More family of Columbia, Missouri in the late 1800s for farm and recreational purposes. In the early 1900s, More's Lake became an ash pond for the Columbia Municipal Power Plant. By 2015, when the Federal Coal Combustion Residuals (CCR) Rule was promulgated and after 100 years of operation, the lake was filled with over 90,000 cubic yards of coal ash. The rule prompted the City of Columbia to begin the More's Lake CCR Impoundment Closure and Restoration Project. Join us to learn how this comprehensive project mitigated an environmental liability, beneficially utilized waste coal ash, and set the stage for the development of Power Plant Park. This project was honored with an ACEC Grand Award for engineering excellence in February 2021.

ENVIRONMENTAL ISSUES TRACK



Moderator: *Molly Starkey, R.G., Mo Department of Natural Resources*

Parasol I

- **High-Resolution Tools and 3D Visualization: Science Fiction, Silver Bullet or Something In-Between**

James Depa, Terracon

The introduction will provide a brief overview about the operation of several different high-resolution tools – including the Membrane Interface Probe (MIP), Laser-Induced Fluorescence (LIF) tools, and Hydraulic Profiling Tool (HPT) and will include methods of operation and the types of data generated. The presentation will focus on the 3D visualization of the resulting data and will highlight how specific visualization software can be used to statistically interpolate data and efficiently create highly-matured Conceptual Site Models (CSMs). The presentation will also explore how the models give confidence that subsurface contamination issues are fully delineated and understood in order to realize a successful investigation and/or redevelopment. The presentation will conclude with two case studies where high-resolution tools and 3D visualization technology were used successfully: a former gasoline service station in the Midwestern US, and an active state brownfield project at a former Manufactured Gas Plant (MGP) in Columbia, South Carolina.

• **Fault Migration Potential in Southwest Missouri: A GIS Approach**

Bobbi Koepke, Environmental Works, Inc. and Kelly Frank, Missouri State University

Southwest Missouri is a concentration of complex geology which can seem deceptively simple at first glance, given the generally horizontal formations. However, karst conditions, heterogeneity within units, and faulting has within recent years brought this area's complexities into the spotlight, as it relates to the potential for vertical migration of contaminants in groundwater through the Ozark Confining Unit. General consensus among experts in the regional geology of this area note that as long as the Northview Shale, as part of the Ozark Confining Unit, is not offset or punctured, it functions well as an aquitard between the two aquifers present in the area, which leads to the question of "how much offset is present around faults in the area". Recently, Missouri State University and Environmental Works, Inc. collaborated to create a GIS model which seeks to answer this question. The GIS model utilizes publicly available Missouri Geological Survey data to evaluate a) the thickness of the Northview shale formation across the study area, and b) the amount of vertical offset along either side of faults in the area, and then compare the two datasets. The layer can be used as a decision-making tool on a site-by-site basis to evaluate the potential for vertical migration via faults. This session will focus on the development of this tool, where stakeholders can find it for use, and give examples of implementation at sites in the area.

• **Geophysics - A Cost Effective and Non-intrusive View into the Subsurface**

Eric Carlson, EI, and Patrick Lehrmann, PG, PGp(CA), RG(OR), Atlas Technical Consultants

Both today and into the future, we are continually looking for ways to better image and characterize the subsurface conditions. A long standing, cost effective, and non-intrusive method to achieve this is geophysics. Whether it is locating buried pipes or obstacles, delineating limits of waste, locating faults, or characterizing groundwater conditions, geophysics can help us reduce the uncertainty and, in doing so, help us create safer working environments now and for years to come. Topics of discussion will include electromagnetics, seismics, ground penetrating radar (GPR), magnetics, electrical resistivity, and gravity and how these methods can provide the answers we are looking for. Numerous informative case studies will be presented.

BROWNFIELDS TRACK

Windgate 62-64

Moderator: Scott Huckstep, MoDNR Brownfields/Voluntary Cleanup Program

• **Brownfield Assessments and Available Resources**

Brian McCurren, P.E., and Christine O'Keefe, MoDNR Brownfields/Voluntary Cleanup Program, and Maggie Egbert Belanger, KSU TAB

Phase I and Phase II assessment – What does it mean and why would I want one? How much will it cost to remediate my brownfield site? How can I find money to clean up my brownfield site? These questions and more will be answered in this session.

TANKS TRACK

Parasol II

Moderator: Ken Koon, MoDNR Tanks Section

• **Domestic Use of Groundwater in Greene County**

Brenna McDonald, R.G., Mo Department of Natural Resources

The domestic use evaluation in Greene County is complicated. This presentation will discuss the needed geological evaluation and verification of domestic wells within the Greene County area to evaluate the domestic use pathway. This topic will focus on the changes to previous assumptions in the Greene County area based on current geological knowledge of the Ozark Aquifer.

MONDAY, JULY 12

3:00 PM Break with Exhibits **Paradise Ballrooms A, B**
SPONSORED BY
GREDELL ENGINEERING RESOURCES, INC. AND
ENVIRONMENTAL RESTORATION LLC

3:30 - 5:00 PM CONCURRENT BREAKOUT SESSIONS

SOLID WASTE TRACK



Nautical Wheeler Room

Moderator: Laura Drescher, P.E., Burns & McDonnell

- **Control of Micromillimeter Dry Aerosol Compounds from Leachate Ponding**

Robert Ballantyne, Resource West, Inc.

The speaker shares results from his three year study on droplet controls to prevent pollution plume in the form of dry aerosols.

- **Solid Waste Industry Perspective on Management and Treatment of PFAs**

Brian Hoye, Burns & McDonnell

This presentation will review the current areas of per- and polyfluoroalkyl substances (PFAS) treatment research and development, provide a regulatory review and status update, and present general approaches to consider for managing compliance moving forward.

- **Proper Installation Considerations for Leachate**

Tim Hasslen, EPG Companies, Inc.

The purpose of this presentation is to discuss proper installation considerations for leachate pumping systems. We cover best management practices for safe and efficient installations. We cover some overlooked components that can help you determine the health and efficiency of your pumps and controls. It covers the most often causes of early pump and control problems and provides preventative maintenance considerations to keep your systems safe, efficient and extends the life of your investment.

ENVIRONMENTAL ISSUES TRACK**Parasol I***Moderator: Jeremiah Jackson, R.G., Missouri Geological Survey*

- **Evaluation and Remediation of a Large Commingled Dilute VOC Plume in Western Ohio - A Case Study**

Craig Cox, Cox-Colvin & Associates, Inc.

In 1998, the detection of chlorinated volatile organic compounds (CVOCs) in a public well field led Ohio EPA to begin a search for potential sources. By 2002, as many as four different consultants, representing local industries, had identified a commingled plume extending a distance of four miles. The highly permeable, well oxygenated, federally-designated sole source aquifer has a hydraulic conductivity on the order of 1200 feet/day and a horizontal flow velocity estimated at 10 feet/day. By chance, most of the industries lay along a common groundwater flow path and had tended to use similar CVOCs. This situation complicated the issue of source identification and potential responsibility. The objective soon became source area identification and dissection of the commingled plume to assign ownership. Following plume delineation, the sources of CVOCs were addressed through a variety of source area remedial actions (some of which are still proceeding). A GAC Treatment system was added to the public water system and affected domestic well owners were provided permanent connections to public water. The current objective is to monitor the return of groundwater quality to drinking water standards throughout the length of the plume.

- **Successful Closure of a DNAPL Site - lessons Learned**

Craig Cox, Cox-Colvin & Associates, Inc.

In 1985, a catastrophic release of 500 gallons of TCE occurred within a process room at an industrial site in central Ohio. Initial remedial efforts conducted by an environmental consulting firm were able to reduce a small portion of the contaminant mass located in the immediate vicinity of the building. However, it was suspected that the majority of the mass remained trapped beneath the building slab and foundation. The site was assessed and a long-term groundwater monitoring program ensued under a consent order. A proposed remedy for the site would have required demolition of the facility, which was unacceptable to the site owner. At the end of the proposed groundwater monitoring period, site remediation would be required. The site owner's objective was to successfully obtain RCRA close without the need to demolish the site and abandon its operations.

- **Innovative and Proven Method to Accurately Access Location and VI Potential to Better Define Your CSM Model**

Laurie Chilcote and Craig Cox, Cox-Colvin & Associates, Inc.

The ability to accurately assess the location, and vapor intrusion (VI) potential of VOC sources beneath buildings is vital in developing an effective conceptual site model (CSM). An innovative and proven method has significantly streamlined and improved the assessment process. Through these new advances, the professional can complete a thorough and accurate assessment of sub-slab vapor conditions in less time and at a lower cost. Information generated by an accurate assessment can then be leveraged using GIS to increase the understanding of a VOC source's age and the potential release mechanism and better define your CSM.

MONDAY, JULY 12

3:30 - 5:00 PM

CONCURRENT BREAKOUT SESSIONS (continued)

BROWNFIELDS TRACK

Windgate 62-64

Moderator: Scott Huckstep, MoDNR Brownfields/Voluntary Cleanup Program

- **BVCP Technical Panel -
Ask the Brownfields/Voluntary Cleanup Program Project Managers**

*Wes March, Chris Cady, Ph.D., Bobbie Pennington, and Christine O'Keefe,
MoDNR Brownfields/Voluntary Cleanup Program*

This session brings together a technical panel of the Missouri DNR Brownfields/Voluntary Cleanup Program's project managers. It will be your opportunity to ask questions about the various activities in the Brownfield Assessment Program, the Voluntary Cleanup Program, and more.

TANKS TRACK

Parasol II

Moderator: Ken Koon, MoDNR Tanks Section

- **LCSM Process and Data Interpretation**

Steve Lang, P.E., MoDNR Tanks Section

The LNAPL Conceptual Site Model is the process used by the Department to determine when free product at a UST site has been recovered to the extent practicable. This session will cover the regulatory requirements, how to ingrate site-specific data into the standard models and common misinterpretations, identification of data gaps, and quantitative model verification.

- **Tank Issues - Helpful Information on Various Topics Related to Tanks**

Laura Luther, MoDNR Tanks Section

5:00 PM

RECEPTION

Paradise Ballrooms A, B

Food, drink and games for the entire family.

SPONSORED BY GFL AND

GLOBAL CONTAINMENT SOLUTIONS

**Please turn in your
BALLOTS and
COMMITTEE PREFERENCES
before lunch on Tuesday**

TUESDAY, JULY 13

7:30 AM Registration and Exhibits Open **Paradise Ballrooms A, B**
 Breakfast and "Meet and Greet" **Paradise Ballrooms A, B**
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GEOSYNTEC AND WSP USA

7:30 AM SWANA Meeting (look for the reserved tables) **Paradise Ballrooms A, B**

8:30 - 10:00 AM CONCURRENT BREAKOUT SESSIONS

SOLID WASTE TRACK**Nautical Wheeler Room**

Moderator: Larry Lehman, MoDNR Land Reclamation Program

- **Bringing GIS Technology to the Solid Waste World**

Keith Connor, P.E., and Justin Reynolds, P.E., Terracon

GIS platforms have been advanced to manage and access proprietary and publicly available data. Our projects have long been registered and tied together through a GIS platform. In recent years the firm has begun to access this internal platform which stores project geotechnical and environmental data for the benefit of our clients through our Stage 1 Reports. This session will begin with a demonstration of this GIS platform and associated Stage 1 Reports.

- **Who, What, When, Where, Why - Solving the Mystery of Changing Air Regulations**

Julie Hall, Weaver Consultants Group

Over the past 10 years the EPA has reached out to the solid waste industry and other interested parties in preparation for several rounds of revisions to the New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs). As rules were finalized in the 1990s, landfills have been complying with these regulations for over 20 years. In August 2016, the NSPS Subpart XXX regulations and the EG Subpart Cf were finalized. In March 2020, the NESHAP Subpart AAAA regulations were revised. In May 2021, the Federal Plan implementing the EG Subpart Cf was issued and will become effective. As the waves of new regulations began rolling out, landfills are left scrambling to not only understand how the new and revised regulations would impact site operations, but also just to understand what rules apply and what actions would be needed. This presentation will examine several case-studies of actual landfills across the country and how they navigated the evolving regulatory network.

- **Leak Location Survey Services**

Shawn Struckhoff, Weaver Consultants Group

Leak location surveying is a means used for locating potential leak paths in installed geomembrane through the use of electrical methods. This presentation will discuss various methods in which surveying may be performed, useful application areas, and how leaks are located in geomembrane systems.

ENVIRONMENTAL ISSUES TRACK**Parasol I***Moderator: Gil Kauffmann, Heritage Environmental***• Funnel and Gate as a Groundwater Protection Element for a CAMU***Emily P. Forthaus, P.E., Golder Associates, a member of WSP*

At a former battery recycling plant, lead, cadmium and other metals contamination in on-site soils and groundwater and in on-site and off-site sediment in the adjacent creek are being addressed in order to facilitate Site closure. Golder designed (and is permitting) a Corrective Action Management Unit (CAMU) to consolidate and cap soils and sediment atop of the existing concrete foundation of the former plant. In order to meet the CAMU design standards for placement of waste in an unlined unit, a groundwater protection element was incorporated into the design. Golder opted for a funnel and gate system that would be protective of the creek, allow the annual groundwater flux to flow beneath the unit, and prevent the saturation of the excavated soils and sediments placed in the CAMU. Golder performed hydraulic conductivity and aquifer testing, groundwater modeling, and column tests simulating various mixtures of zero-valent iron (ZVI) with the Site water. The design was modified by adding a "reactor sump" in an area of buried stream channels where the highest hydraulic conductivities were reported. The anticipated groundwater mounding in the area will allow for gravity driven flow from the sump to the reactive gate some 500 feet away. The reactor sump doubles as a pretreatment system as the sump is proposed to contain a similar makeup (ZVI/sand) as the gate. Golder proposed secant walls (large diameter borehole filled with cement/bentonite grout and intervals of permeable materials) to help guide the treated groundwater to the creek. Overall the funnel and gate system allows the use of a groundwater remedy to be incorporated into the CAMU design, working together with other design components, to prevent contaminant migration from the unit and achieve long-term remedial goals.

• Synthesize Zero-Cement Concrete Using Waste Material from Coal-Fired Electric Power Plants*Mohamed ElGawady, Ph.D., Missouri University of Science and Technology*

This study has investigated the feasibility of using locally available fly ashes (FAs) to synthesize zero-cement concrete (ZCC) for different structural and repair applications. The mixing procedure, water/FA, Alk/FA, SS/SH, curing regime, fresh properties, mechanical properties, durability, repair applicability, and cost analysis of the ZCC were investigated in this study. Approximately 300 mortar and concrete mixtures were tested. A 5000 psi MoDOT conventional concrete (CC) mixture was prepared and tested for comparison purposes. Three curing regimes (oven, ambient, and moist) were applied to the ZCC. This study revealed that ZCC can be used as a replacement for conventional concrete. ZCC showed good workability and adequate compressive strength for structural applications ranging from 3,660 psi to 7,465 psi based on the curing regime and source of FA.

• Using Crumb Rubber in Civil Engineering Applications*Mohamed ElGawady, Ph.D., Missouri University of Science and Technology*

Chip seal is a widespread type of pavement that is used either for maintenance or as the main pavement. This study presents an investigation on an eco-friendly chip seal, where the mineral aggregate was replaced by crumb rubber obtained from scrap tires. Replacing mineral aggregates with crumb rubber aggregate can address several issues linked to using mineral aggregates in chip seal. Crumb rubber aggregate potentially can address all these issues. The ambient crumb rubber was found to have about 20% higher surface area compared to cryogenic crumb rubber and hence was used throughout this study. The aggregate retention was measured using five tests included the standard sweep test, modified sweep test, Vialit test, modified Vialit test, and Pennsylvania test. The performance of the new chip seal was also compared with that of conventional chip seal manufactured using two different types of mineral aggregate. The examined tests specimens were manufactured using two types of emulsions and two types of asphalt cement binders. This study concluded that the crumb rubber can be used in the chip seal as partial or full replacement of mineral aggregates. The crumb rubber showed a remarkable performance in aggregate retention.

8:30 - 10:00 AM

CONCURRENT BREAKOUT SESSIONS (continued)

TANKS TRACK

Parasol II

Moderator: Ken Koon, MoDNR Tanks Section

- **Overview of Training Document for Plume Stability Evaluations at Petroleum Release Sites**

Joe A. Ricker, P.E., EarthCon Consultants, Inc., a member of WSP

Demonstrating plume stability is a requirement of the Missouri Risk-Based Corrective Action (MRBCA) process for Petroleum Storage Tank sites and must be performed at all remediation sites with groundwater impacts above default target levels before a 'No Further Action' letter can be issued. This session will focus on the recently published MDNR Staff Training Document which discusses the types of plume stability evaluation methods and how to evaluate plume stability using methods commonly used by environmental professionals. The training document is intended to help project managers work through the methods that are acceptable to the Missouri DNR Tanks Section (the Department) and are commonly used to evaluate plume stability at petroleum storage tank sites. This session includes discussion of various ground water plume stability evaluation methods, plume stability evaluation method application, and examples of how to perform plume stability evaluations using well-by-well techniques and whole plume evaluations using the Ricker Method®.

10:00 AM

Break with Exhibits

Paradise Ballrooms A, B

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WASTE CONNECTIONS

SOLID WASTE TRACK**Nautical Wheeler Room**

Moderator: Michele Clark, Weaver Consultants Group

- **Mo Uncommon Designs**

Brady Stewart, Waste Connections

After the 2018 presentation at MWCC, Champ personnel are ready and eager to talk about what did and didn't work on our Road to Premier. We'd love to share lessons learned from one uncommon landfill design. Since our discussion in 2018, Champ has strayed from the common approach to leachate pretreatment with the help of few fundamental design concepts we believe can and should be part of any design. As our leadership style dictates, Champ personnel want to share what did and didn't work in our journey towards the safe handling of leachate pretreatment. The process wasn't always smooth and pretty, but our leachate pretreatment process is already being used at several other Waste Connection landfills throughout the Midwest.

- **When Recycling Doesn't Make Cents**

Laura Drescher, P.E., Burns & McDonnell Engineering

Many local communities are currently evaluating the viability of recycling programs due to high processing fees and low revenue from recyclables. This presentation will review the financials of a community recycling program, their place in the waste management hierarchy, considerations for decision-making on stopping programs, and provide their recommendations to optimize recycling processing contracts, recycling programs, and educational outreach.

- **Know They Emissions Before Others Do**

Arthur Mohr, Sniffer Robotics, LLC

Increased scrutiny of emissions monitoring has arrived. Penetration inspection and more stringent localization and reporting of emissions are now required through new regulations. Advanced technologies are identifying low-level and 'super emitters' of methane and other greenhouse gases from offsite, and much of this data is becoming public. Are your operations ready for this new normal?

ENVIRONMENTAL ISSUES TRACK**Parasol I**

Moderator: Kirsten Schaefer, Missouri Geological Survey

- **Kansas PFAS Inventory Project**

Robert J. Loudon, Professional Environmental Engineers, Inc.

In April 2019, PE was awarded a statewide PFAS inventory and mapping project for the Kansas Department of Health and Environment (KDHE). The purpose of the project was to develop a statewide list and GIS map of all facilities that potentially used, stored, and/or produced PFAS compounds within the state of Kansas, including, perfluorooctanoic acid (PFOA), perfluorooctane sulfonate (PFOS), and related chemicals. The inventory focused on facilities using/storing/producing known PFAS-containing substances. A list of nearly 9,300 Kansas entities was compiled to develop a comprehensive list of current facilities where PFAS compounds may have potentially been produced/used/stored. Internet sources and state/Federal databases were searched to identify discharged or spilled AFFF locations (including fire/crash sites and training areas, airports with FAA CFR Part 139 permits, military bases, railroads and other transportation sites), oil and gas extraction sites, POTWs, and landfills. The list was entered into a ESRI ArcGIS master database. The database was used to produce county maps of potential PFAS facilities for all 105 counties in Kansas; blowup maps of congested urban areas were also produced. The list of sites, GIS maps, and descriptions of work completed were included in a final report (along with the ESRI ArcGIS database) and delivered to KDHE in late June 2019.

- **An Evaluation of Several On-Site Analytical Methods for the Determination of PFAs Impacts to Soil and Groundwater**

Mike Rossi, Pace Analytical



Performance evaluations for the analytical methods were established based precision/accuracy, throughput and cost. The results will be presented along with an overall assessment of how these methods can be combined and optimized to allow for maximum efficiency while satisfying project's data quality objectives.

- **Missouri Biogas - A Sustainable Energy Source**

Ian Smith, Trinity Consultants, and Brandon Butler, Roeslein Alternative Energy



Lagoons containing organic wastes from animal production have long been a source of concern. Many communities in rural Missouri have struggled with these issues and siting new animal production facilities is now a hot topic. In order to mitigate some of these issues, Roeslein Alternative Energy (RAE) has developed a process to convert animal lagoons into anaerobic digesters. The process involves covering the lagoons, converting the organic wastes into biogas, cleaning the biogas and constructing short pipelines to carry the biogas to a gas distribution pipeline near the site. RAE and Trinity have worked closely with the Missouri Department of Natural Resources (MDNR) to ensure that all of the facilities are properly permitted, minimizing the risks to the environment and meeting or regulated emission limits for criteria pollutants. The pipelines are routed to minimize the impacts to any wetlands, endangered species and archeological or historic sites.

TANKS TRACK

Parasol II

Moderator: Ken Koon, MoDNR Tanks Section

- **Q&A for Joe Ricker**

- **Dissolved Phase Plume Stability Evaluation: Question and Answer**

Todd Birky and Porter Henze, MoDNR Tanks Section

Plume stability is often the last step for a site in order to be considered for a 'No Further Action' Letter under the Missouri Risk-Based Corrective Action (MRBCA) process for Petroleum Storage Tank sites. Methods used to determine plume stability include well-by-well techniques such as the Mann-Kendall and Mann-Whitney statistical tests, as well as whole plume evaluations such as the Ricker Method®. Recently, the Missouri Department of Natural Resources (MoDNR) published a Staff Training Document on Plume Stability to assist Department project managers to accurately and consistently evaluate Plume Stability models. Although the document is not considered a Technical Guidance, the document can be helpful to consultants who are attempting to evaluate dissolved phase plumes to Department standards, and is available upon request. This session will be an opportunity for Consultants and Regulators to ask questions about the Plume Stability Evaluation process and the new Plume Stability Staff Training Document. The session will be held in a Question and Answer format.

12 Noon

NETWORKING LUNCH

Paradise Ballroom C

Drawings, prizes and election results

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SOLID WASTE TRACK



Nautical Wheeler Room

Moderator: Scott Martin, P.E., Burns & McDonnell

- **Passive No-Purge Samplers - Cheaper Solution?**

Jenny Holt and Andy Limmer, R.G., Weaver Consultants Group

Weaver Consultants Group has deployed passive samplers in place of standard bailers and low-flow sampling pumps at several solid waste facilities in settings of low volume, high volume greater than 100 feet, and in difficult monitoring environments. In addition, Weaver has performed a direct comparison of sampling results from the passive samplers and standard low-flow pumps. This session will describe the benefits and drawbacks of using passive samplers based on our experience over the past two years of using passive samplers..

- **The Role of Solid Waste Management in Protecting Missouri's White-Tailed Deer**

Jasmine Batten, Missouri Department of Conservation

Solid Waste management is crucial to protecting Missouri's white-tailed deer herd. Chronic wasting disease (CWD) is an emerging disease that threatens the long-term sustainability and health of this important resource. This talk will explore the known science regarding the disease itself as well as what is known about prion migration in the solid waste stream. Risk concerns from the solid waste perspective will be examined as well as the broader context of why white-tailed deer matter. First detected in confined deer in Northeast Missouri in 2010 and wild deer in 2012, the disease has now been found in sixteen counties throughout the state. Wildlife managers believe addressing carcass disposal concerns is critical to slowing the spread of CWD in Missouri and beyond.

- **Can Missouri Afford A Waste Management Program?**

Kevin Perry, REGFORM

This is the story of how Missouri stakeholders stepped up in the face of a fiscal cliff that threatened to cripple Waste Management Program and the Environmental Remediation Program key functions. A plan was proposed and vetted. The Commission approved the plan and it became a regulation. But the new fee structure did not survive the 60-day review process in the General Assembly. How will Missouri pay to maintain these programs?

1:00 PM - 2:30 PM

CONCURRENT BREAKOUT SESSIONS (continued)

ENVIRONMENTAL ISSUES TRACK



Parasol I

Moderator: Jeremiah Jackson, R.G., Missouri Geological Survey

- **Update on Environmental Law in Missouri**

Steve Jeffery, J.D., Jeffery Law Group, LLC

This session will update the audience on recent environmental law cases and issues in Missouri.

- **Effective Community and Media Relations**

Gary Pendergrass, P.E., R.G., GREDELL Engineering Resources, Inc.

Communicating clearly and effectively has never been more important than in today's world. Cameras are everywhere, and social media is instantaneous. The wrong word or awkward phrase can go viral at the speed of light; sometimes with profound impacts on your project, your company, or your family. This presentation will teach you the skills necessary to successfully navigate the pitfalls of community and media interaction. Effective communication is not about being slick or evasive – it is all about being clear and direct, and communicating the message you intend. The “dos and don'ts” of effective communication will be illustrated using real world examples in slides and videos. “There are weapons that are simply thoughts, attitudes, prejudices, to be found only in the minds of men.” The Twilight Zone, Season 1, Episode 22.

TANKS TRACK

Parasol II

Moderator: Ken Koon, MoDNR Tanks Section

- **Tanks Section Q & A Panel**

Laura Luther, Matthew Stone, Brenna McDonald, R.G., Todd Birky, Steve Lang, P.E., and Ken Hannon, MoDNR Tanks Section

2:30 PM

Conference adjourns

KEYNOTE SPEAKERS

**Plenary Speaker
Monday, July 12**

CORY DAVIS

**Chief Executive Officer, CTEH, LLC
Executive Vice President, Montrose Environmental Group, Inc.**



Cory Davis is executive vice president of Montrose Environmental Group, Inc. and chief executive officer of the Center for Toxicology and Environmental Health (CTEH, LLC), a Montrose subsidiary specializing in environmental emergency preparedness, response, and recovery. Mr. Davis has experience in leadership, business management, crisis management and the comprehensive practice of industrial hygiene to include environmental, health, and safety. Mr. Davis specializes in strategy, team development and corporate development for CTEH.

Mr. Davis has worked with various safety issues related to chemical exposure, aerosol/dust exposure, asbestos exposure, industrial ventilation, and indoor air quality for the transportation, mining, exploration, oil refining, and chemical manufacturing industries. Mr. Davis is a member of the American Industrial Hygiene Association. Mr. Davis has a bachelor's degree in environmental health science from University of Arkansas and is a graduate of the Owner and Presidents Management Program (OPM) at Harvard Business School.

**Luncheon Speaker
Monday, July 12**

RICH THOMPSON

Managing Partner, TEC, LLC

Rich Thompson is Managing Partner at TEC, LLC based in Scottsdale, Arizona. In this role, he provides consulting services focusing on complex environmental compliance issues for a range of clients. He is prepared to provide these solutions after working over 30 years in corporate environmental engineering and compliance roles with Waste Management and Republic Services, the two largest publicly traded firms in the U.S.

In addition to advising clients on these issues, Rich provides expert witness services on legal matters relating to environmental regulations and the operation of waste management facilities. He is also a contributing author for Waste Dive, a waste and recycling publication, providing a recurring column on trends in regulatory compliance and the management of hazardous, nonhazardous and special waste. Rich has written about the developments of cannabis regulations in the U.S. and Canada and provides consulting support for several cannabis operators.



SPEAKERS and MODERATORS

Robert Ballantyne

Bob served as a U.S. Marine. He is an electrical engineer with the focus of his follow-on studies concentrating on molecular and atomic spectroscopy. His body of science research focuses on environmental monitoring, mitigation, and remediation systems design, with an emphasis on reuse and waste stream reduction. His current role as Senior Vice President for RWI Enhanced Evaporation has allowed him to pursue the raw scientific research into ways to fundamentally change environmental mitigation markets, methodologies, and lead the design team to produce state of the art equipment.
engineering@resourcewest.net

Jasmine Batten

Jasmine is a wildlife disease ecologist with over 12 years of experience in the field of wildlife health. She has been with the MO Department of Conservation (MDC) for 8 years, where she serves as the Wildlife Health Program Supervisor. In her role at MDC, she has also led chronic wasting disease (CWD) surveillance and management efforts throughout the state. Jasmine has a Bachelor's degree in wildlife ecology from the University of Wisconsin Madison and is nearing completion of a Master of Public Health degree from the University of Missouri.
jasmine.batten@mdc.mo.gov

Maggie Egbarts Belanger

Maggie Egbarts Belanger is a KSU Technical Assistance to Brownfields (TAB) Regional Coordinator; assisting communities, tribes, and local governments address environmental concerns associated with reuse or redevelopment of brownfields properties. Maggie has a Bachelor's in Environmental Studies and 18 years of experience in environmental assessment, cleanup, regulatory compliance and property revitalization; encompassing, public speaking, community engagement, project management, technical guidance and policy development, and applying for and managing federal grants.
maggiejessie@ksu.edu

Todd Birky

Todd is an Environmental Specialist in the Environmental Remediation Program at MoDNR since 2017. Todd attended the Missouri University of Science and Technology where he obtained a Bachelor of Science in Geology and Geophysics. Post degree work history includes a short stint on a seismic survey crew in southern Oklahoma and west Texas before being introduced to the environmental consulting field. Todd has over 15 years of experience both in the private sector and with the State, working with underground storage tank sites, performing site characterization, risk assessment, corrective action, and general project oversight.
todd.birky@dnr.mo.gov

Brandon Butler

Brandon serves as Director of Communications for Roeslein Alternative Energy (RAE). He handles public relations, marketing and government affairs. Previously, Butler served as the Executive Director of the Conservation Federation of Missouri. His syndicated outdoor column, Driftwood Outdoors, appears weekly in over 30 newspapers and he is the co-host of the Driftwood Outdoors Podcast. He is a past president of three outdoor media organizations, the treasurer of Mid-Missouri Trout Unlimited and is on the board of directors of the Missouri Energy Initiative. He holds a B.S. from Purdue University, M.A from Gonzaga University and an Executive M.B.A. from the University of Missouri.
bbutler@roesleinae.com

Chris Cady, Ph.D.

Dr. Cady has been with the Voluntary Cleanup Section of MoDNR since 1997. He oversees risk-based cleanup of brownfield and voluntary cleanup sites as a Project Manager. As Environmental Scientist, Dr. Cady also works on special projects including the development of program policies and the Missouri Risk-Based Corrective Action Guidance. Dr. Cady received a Bachelor's degree in chemistry from the New Mexico Institute of Mining and Technology, and Masters and Doctorate degrees in Environmental Chemistry from the University of Missouri – Columbia.
chris.cady@dnr.mo.gov

Eric Carlson, EI

Eric is the Project Geophysicist responsible for managing and conducting geophysical investigations out of the St. Louis, Missouri office for Atlas Technical Consultants. He received a B.S degree in Petroleum Engineering from Montana Tech with a minor in Mathematics. He has over 7 years of experience in oil and gas, geotechnical, geological, and geophysical projects. Projects have included oil and gas well stimulation, oil and gas seismic evaluations, fault investigations, landslide and slope stability studies, geologic reconnaissance evaluations, mineral resource studies, waste and contaminant delineation, groundwater assessments, forensic evaluations, and archaeological studies. Areas of expertise include electromagnetics, magnetics, ground penetrating radar (GPR), seismic, and electrical resistivity.
eric.carlson@oneatlas.com

SPEAKERS/MODERATORS

Laurie Chilcote

Laurie currently serves as Office Manager and Director of Sales & Marketing for Cox-Colvin & Associates, Inc, and is a Director and Vice President of Vapor Pin Enterprises, Inc. At Cox-Colvin, she is responsible for management and presentation of analytical data including the transfer of electronic analytical results from various resources. In addition, she is a Managing Director and Vice President of Vapor Pin Enterprises and Vapor Pin Brazil, where she provides managerial and technical oversight on all marketing and sales for the Vapor Pin® both within the USA and Internationally. Laurie is also responsible for website development, webinar training, product development, distributor management, and most importantly, customer relations. She began her environmental consulting career in 1987 with Geraghty & Miller, Inc, where she became the firm's Regional Business Development Manager.
laurie_chilcote@coxcolvin.com

Michele Clark

Michele is a Principal with Weaver Consultants Group out of the Columbia, MO office. She has over 26 years of regulatory and consulting experience focusing in waste management and remediation. She began her career with MoDNR and then moved into environmental consulting. Michele has provided engineering services to the solid waste, hazardous waste, water, and air sectors.
mclark@wcgrp.com

Keith Connor, P.E.

Keith is a Senior Environmental Engineer at Terracon. He is a Civil Engineering graduate of the University of Notre Dame with an MBA from the University of Kansas. He has designed, permitted and overseen construction of numerous solid waste facilities in Missouri, the US and overseas. He is a (very) past president of MWCC, currently on its Advisory Board and serves on SWANA's National Advisory Board.
keith.connor@terracon.com

Craig Cox

Craig serves as President and Principal Scientist for Cox-Colvin & Associates, Inc, and is responsible for providing managerial and technical oversight on major environmental projects conducted by the firm. He provides lectures and poster presentations at numerous regional and international conferences on the topics of groundwater contaminant migration and remediation, source area evaluations, and the assessment of vapor intrusion migration pathways. Craig is the inventor of the Vapor Pin®, a sub-slab soil gas sampling device used worldwide, and is the primary architect of a variety of environmental database applications, including Data Inspector™. He is a founding member and serves on the board of the Association of Vapor Intrusion Professionals (AVIP).
craig_cox@coxcolvin.com

Robert W. Craggs

Robert serves as the Environmental Services State and Local Government Market Sector Leader for Burns & McDonnell. He has worked in the environmental consulting field for nearly 30 years providing assistance to public and private clients throughout North America in the areas of waste management, recycling, water resources, and renewable energy. Robert has a Master's in Urban and Regional Planning and a J.D. of Law from the University of Iowa. He is currently an Advisory Board Member for the International Solid Waste Association of North America and serves on his local City Council.
rwcraggs@burnsmcd.com

Laurie Davis

Laurie is the Education Outreach Coordinator for the Environmental Services/Sustainability Division in the city of Springfield. She has been in the field of both formal and informal education for over 30 years. She believes every day is an adventure and an opportunity to learn something new! Laurie lives in Nixa, MO with two very spoiled cats. Walking, kayaking, fishing and sitting on the front porch swing are a few favorite activities.
ldavis@springfieldmo.gov

James Depa

Jim is a geologist and senior project manager at Terracon. He graduated from the University of Illinois with a BS in Geology, including advanced course work in Geographic Information Sciences (GIS). He has more than 15 years of experience in the environmental consulting field and specializes in creating 3D conceptual site models to assess complex sites and design cost-effective remediation solutions. He has modeled high-resolution data on over 120 environmental investigation projects, including several which have been published in the peer-reviewed textbook, "Urban Watersheds – Geology, Contamination, and Sustainable Development". Jim has also created exhibits for four separate environmental litigations and provided testimony for his role in creating an animation used as a trial exhibit in a multi-million-dollar litigation.
jimd@st-ma.com

SPEAKERS/MODERATORS

Doug Doerr, P.E.

Doug is a Senior Vice President of SCS Engineers at its Overland Park, KS office and is responsible for directing operations in the Central region of the United States. He has been involved in a wide variety of environmental projects with particular emphasis on waste management. His project experience includes landfill permitting and design, environmental compliance; economic and feasibility studies, and various types of material management facility planning, permitting and design. Doug has also been instrumental in developing client strategies to address various regulatory and other complex environmental issues including facility feasibility/siting and response plans to new legislative and regulatory directives. He directs projects involving various facets of environmental engineering and consulting including air permitting and compliance, traditional civil engineering, alternative energy planning and implementation, and environmental investigation and remediation. He has a Bachelor's degree in Civil Engineering and a Master's degree in Business Administration. He is a licensed Professional Engineer in Colorado, Kansas, Illinois, Missouri, Nebraska, and New Mexico.
ddoerr@scsengineers.com

Kathrina Donegan

Kathrina Donegan graduated from the University of Missouri – Columbia with a BS degree in Civil Engineering and from the University of Fontbonne with a Masters in Business Administration. Kathrina is a long-term employee with St. Louis County Department of Public Health, her current position is Environmental Manager of Waste Management and Air Pollution Control. She started her long career in the waste management consulting field as a landfill project manager. She joined the Saint Louis County Department of Health as a Solid Waste Specialist. She transferred to the County's Air Pollution Control Program as an Air Emission Specialist. Her main roles were Title V Permitting and MACT compliance. In 2005 she was promoted to Supervisor of the Air Pollution Control Program and in 2016 she became the Environmental Manager bringing her back to her roots in waste management.
kdonegan@stlouisco.com

Laura Drescher, P.E.

Laura has served as project manager, project engineer, and consultant for various projects in the fields of remediation, sustainability, and solid waste planning, permitting, design, and construction for Burns and McDonnell Engineering Co. She is a Professional Engineer and a certified Envision Sustainability Professional. She has served multiple leadership roles for the Missouri Chapter of the Solid Waste Association of North America, the Missouri Waste Control Coalition, and is a member of the 2018 class of the Chamber of Commerce Leadership Missouri.
Irdrescher@burnsmcd.com

Mohamed A. Elgawady, Ph.D.

Mohamed is a Professor and Benavides Faculty Scholar at Missouri University of Science and Technology with 20 years experience in extreme loading and sustainability. He has held positions at Washington State University, University of Auckland, University of South Australia, and Tokyo Institute of Technology. He worked also as a structural engineer for three years. He is heavily involved in different design and construction codes such as The Masonry Society building code, American Concrete Institute Code, and Transportation Research Board. He is the Chair of ACI/ASCE Committee 441 on reinforced concrete columns. He also chairs the ACI 341A on the seismic behavior of bridge columns. He is the secretary for the Prestressed Masonry Committee, and Vice-Chair the Masonry Research Committee. He co-authored 100 referred papers published in tier one journals and 120 conference papers published in top national and international venues. Mohamed received funding from different agencies including Missouri DNR, DOT, Federal Highway Administration, University Transportation Center, Mid-America Transportation Center, Transportation Northwest, MoDOT, and WSDOT. His work has been recognized by Missouri S&T through the inaugural Benavides Endowment Award, Joseph H. Senne, Jr. Academy of Civil Engineers Faculty Achievement Award, Missouri University of Science and Technology Faculty Excellence Award, and Missouri University of Science and Technology Faculty Research Award.
elgawadym@mst.edu

Ken Ewers, R.G.

Ken is a Registered Geologist with GREDELL Engineering Resources, Inc. He has a B.S. in Geology from Missouri University of Science and Technology and an M.S. in Geology from Michigan State University. Ken has 10 years of consulting experience in the areas of groundwater modeling and subsurface investigations (i.e., geological and environmental). He also has 15 years of business and operations management experience.
kene@ger-inc.biz

Emily P. Forthaus, P.E.

Emily is a Project Geological Engineer in the St. Louis office of Golder Associates, a member of WSP. She holds a BS and a graduate certificate in Geological Engineering from Missouri University of Science and Technology. She is a registered Professional Engineer in the state of Missouri and has been with Golder for over 6 years. Project work has been focused on due diligence, site investigation and remediation activities at industrial and commercial facilities. Project experience has included project management, assessment of soil, groundwater, surface water, sediment, soil vapor, indoor air and permitting.
emily_forthaus@golder.com

SPEAKERS/MODERATORS

Julie Hall

Julie is a Senior Project Manager with Weaver Consultants Group. She has 20 years of experience, primarily focused on air compliance and permitting for the solid waste industry. She has been tracking the ongoing changes in the NSPS and NESHAP regulations over the past few years and has helped her clients understand the ever-changing world of air regulations that apply to landfills.

jhall@wcgrp.com

Ken Hannon

Ken is an Environmental Scientist with the Tanks Section of MoDNR. He has a Bachelors of Science degree in Forest Biology from the State University of New York: College of Environmental Science and Forestry. Ken has a Masters in Environmental Science from the Florida Institute of Technology. He has experience as a zoo keeper at the Melbourne Zoo and as an Environmental Stack Tester. Ken has 22 years of experience with the MoDNR Environmental Emergency Response Section.

kenhannon@dnr.mo.gov

Tim Hasslen

Tim was educated at the University of Wisconsin, Superior WI and the University of Minnesota, Duluth, MN. Tim joined E.H. Renner and Sons Well Drillers in 1987 doing pump and remediation equipment installation. In 1988 he took a position with Twin City Testing in field services and subcontractor management, installing remediation equipment and monitoring wells throughout the five-state area. Tim has doubled as a fire fighter for forest and wild land fires and retired from the Department of Forestry about two years ago after fighting fires for over 20 years. Tim started with EPG in 1990 working in the remediation area and soon added his expertise to our landfill business. He currently is EPG'S liaison to the network of sales reps as the National Accounts Manager. In addition to that, Tim is heavily involved in onsite start-ups. He is one of our main on-site trouble shooters, and also serves as an in-house and on-site training instructor.

thasslen@epgco.com

Porter Henze

Porter is an Environmental Program Analyst for MoDNR. He is an aspiring geologist and has experience in geology, data analysis and project management. He graduated from Brigham Young University in 2020 with a Masters in Geology.

porter.henze@dnr.mo.gov

Jenny Holt

Jenny is a System Specialist with Weaver Consultants Group in Columbia, MO. She has over 8 years of experience in groundwater, leachate, and storm water compliance monitoring. She has also collected flare gas, gas well and soil samples in Missouri and Illinois. These tasks include collecting samples in accordance with

state and site regulations, organization of samples, and understanding sample requirements.

jholt@wcgrp.com

Brian Hoyer

Brian is a project manager and geologist with in-depth experience in the remediation and geology fields. He currently serves as Burns & McDonnell's subject matter expert for emerging contaminants and provides clients from multiple industries advice on overcoming challenges associated with the investigation and remediation of PFAS.

bhoyer@burnsmcd.com

Scott Huckstep

Scott is a Section Chief with the MoDNR. He has a Bachelor of Science degree in Biological Sciences from Quincy University (IL) and a Master's of Science degree in Fisheries & Wildlife Science from the University of Missouri-Columbia. Scott has been with the MoDNR since 1997 and is currently the Section Chief of the Brownfields/Voluntary Cleanup Program.

scott.huckstep@dnr.mo.gov

Jeremiah Jackson, R.G.

Jeremiah is a Registered Geologist in the State of Missouri. He is currently with the Missouri Geological Survey as the Environmental Assistance Unit Chief.

Jeremiah.jackson@dnr.mo.gov

Steve Jeffery

Steve is the owner of Jeffery Law Group, LLC. Named as the Best Lawyers in America® 2014 St. Louis Environmental Law «Lawyer of the Year,» he has over 30 years of experience in environmental law and litigation matters. His practice includes litigation, regulatory compliance and transactional matters, as well as representation before State and Federal regulatory agencies. He is a frequent speaker on environmental topics. He is listed in ChambersUSA®, Best Lawyers in America® and Missouri/Kansas Superlawyers®. From 1987 to 1993, Steve served as the General Counsel for MoDNR, where he was responsible for legal review of policy, enforcement, legislative and regulatory issues. At MoDNR, Steve was involved in several major matters including the Times Beach Superfund site, the development of the 200-mile KATY Trail State Park, and the Gasconade River Oil Spill cleanup. From 2004 to 2008, Steve served on the Board of Directors for the St. Louis Regional Chamber and Growth Association where he was Vice-Chair for Environment. In 2003-2004, Steve was the Chair of the St. Louis Regional Chamber and Growth Association's Environmental Council. From 1997 to 2000, he was Chair of the Environmental and Energy Law Committee for the Missouri Bar.

sjeffery@jefferylawgroup.com

SPEAKERS/MODERATORS

Gil Kauffmann

Gil is employed with Heritage Environmental. Prior to that, he was an Account Manager for 1st Ayr and then Environmental Energy, and Field Services Account manager for Clean Harbors Environmental Services covering Missouri and Southern Illinois. He has a degree in Biology with a background in Chemistry from the University of Missouri – St Louis. He has 27 years of experience in the field of hazardous waste clean up and disposal. Gil started out as a field analyst performing lab packs, drum disposal, tank cleaning, and small remediation projects. The past 20 years Gil has been in sales/marketing positions.

gkauffmann@heritage-enviro.com

Mark Kluger

A graduate of Johns Hopkins University, Mark Kluger has extensive experience in subsurface characterization and remediation technologies. Mark manages TRS Group's business development efforts and works closely with the research and development team, investigating the application of thermal remediation technologies for emerging contaminants, including PFAS and energetic compounds. Mark is a long-standing member of ITRC, mainly involved with the DNAPL and PFAS teams.

mkluger@thermalrs.com

Bobbilyne Koepke, R.G.

Bobbilyne is a Missouri native with 15 years of experience in the environmental field. She has been with Environmental Works, Inc. for the past 11 years and is a licensed geologist in Missouri & Arkansas. She graduated from Missouri State University with her bachelor's in 2003 and obtained her master's from University of New Orleans in 2006. Her areas of expertise include investigation & remediation of petroleum, chlorinated hydrocarbon, and lead impacted sites; vapor intrusion mitigation; ecological assessments; and karst environments.

bkoepke@environmentalworks.com

Ken Koon

Ken began with the MoDNR in 1999 as a Remediation Project Manager in the Tanks Section. He then worked in the department's Brownfields Voluntary Cleanup Program (BVCP). He became the Tanks Section Chief in 2005. He received his B.S. and M.S. in Biology from Pittsburg State University. Ken is former Vice-Chair of the UST Task Force for the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) and has participated on the National Tanks Conference Planning Team. He also participates on the Advisory Boards for the Petroleum Storage Tank Insurance Fund and is Treasurer of the Missouri Waste Control Coalition.

ken.koon@dnr.mo.gov

Steve Lang, P.E.

Steve is a licensed Professional Engineer and earned his Bachelor's Degree in Chemical Engineering from the University of Missouri-Rolla. He has been with the MoDNR for almost 17 years and has worked in both the Hazardous Waste and Water Pollution Programs. Currently he is serving as the remediation expert within the Hazardous Waste Program's Tanks Section.

Steve.Lang@dnr.mo.gov

Larry Lehman

Larry Lehman is the Program Director of the MoDNR Land Reclamation Program and Staff Director of the Missouri Mining Commission. He also serves as the state's delegate with the Interstate Mining Compact Commission. He has been with the department since 1993 and has served in a variety of positions in the department's Solid Waste Management Program Compliance/Enforcement Section; Environmental Services Program Environmental Emergency Response and Water Quality Monitoring Sections; and the Hazardous Waste Program Compliance/Enforcement Section. Larry graduated with a Bachelor's of Science degree in Fisheries and Wildlife from the University of Missouri-Columbia.

larry.lehman@dnr.mo.gov

Patrick Lehrmann, PG, PGp (CA), RG (OR)

Patrick is a Principal Geophysicist, Division Manager, for Atlas Technical Consultants. He has over 25 years of professional experience. He is a registered Geologist and Geophysicist in the state of California and Registered Geologist in the state of Oregon, with a B.S. degree in Geology from the University of Wisconsin. In 2004, he formed Southwest Geophysics, which was acquired by Atlas Technical Consultants in 2018. As Division Manager, he is responsible for the growth and oversight of the geophysical departments in San Diego, CA; Tempe, AZ; Portland, OR; and St. Louis, MO. As a Principal Geophysicist, he manages geophysical field evaluations, and provides technical review of reports. His field of expertise include but is not limited to electromagnetics, magnetics, ground penetrating radar, seismic, vibration monitoring, and electrical resistivity geophysical methodology. His experience includes using these geophysical methods to perform fault hazard studies, landslide and slope stability studies, geologic reconnaissance evaluations, mineral resource studies, waste and contaminant delineation, groundwater studies, forensic evaluations, archaeological studies, and construction testing and inspection support.

patrick.lehrmann@oneatlas.com

SPEAKERS/MODERATORS

Andy Limmer, R.G.

Andy is a Senior Project Manager with Weaver Consultants Group in Collinsville, IL. He has over 30 years of experience in geoenvironmental consulting related to the environmental and waste management industry. Andy is Licensed/Registered Professional Geologist in 8 states, including Missouri, and provided professional groundwater consulting services in more than 11 Midwestern states, and is a qualified groundwater scientist. He has extensive experience in preparing geologic and hydrogeologic investigation plans for solid waste facilities and remediation sites throughout the Midwest.

alimmer@wcgrp.com

Robert J. Loudon

Bob is a Vice President at Professional Environmental Engineers, Inc. (PE). He has a bachelor's and master's degree in Geology/Earth Sciences, and over 25 years of experience in environmental consulting. He manages the KC operations for PE, and is the program manager for their KDHE Environmental Services Contract.

louden@pe-engrs.com

Laura Luther

Laura began with the MoDNR in 2004 as a Remediation Project Manager in the Tanks Section overseeing tank cleanup projects. In 2007 she accepted the position of Tanks RBCA Unit Chief. Prior to working for the Department, Laura was a Laboratory Manager at an environmental lab for 6 years. Laura received her Bachelors of Science Degree from the University of Missouri - Rolla and a Masters in Adult Education and Distance Learning from the University of Phoenix.

Laura.Luther@dnr.mo.gov

Wes March

Wes March is an Environmental Program Analyst for the Brownfields/Voluntary Cleanup Program of MoDNR. He has a background in lead-based paint risk assessment and lead-poisoning prevention. Wes has a Bachelor of Science in Biology and joined the department in 2012.

wes.march@dnr.mo.gov

Frank Marine

Frank is the past President of Texas Molecular. He has been with Texas Molecular for 16 years. He has a B.S. degree in Chemical Engineering. He has been in the hazardous waste business for 34 years. Frank currently leads the marketing efforts of Texas Molecular regarding the safe and effective management of hazardous and non-hazardous PFAS waters by use of Texas Molecular's Class 1 Hazardous Waste Underground Injection wells. Texas Molecular has managed over 70 million gallons of various PFAS aqueous waste. He has presented papers on PFAS treatment options to industry, state, and citizen groups.

fmarine@texasmolecular.com

Scott Martin, P.E.

Scott works as a design engineer and project manager in the Environmental Engineering Group at Burns & McDonnell. He provides a multi-disciplined approach to solid waste engineering, with experience performing civil and mechanical design work. His specialties include: solid waste facility permitting, design and construction; solid waste and resource recovery planning; coal combustion residuals management; air and greenhouse gas regulatory compliance; special waste facility design and management; landfill gas power plant design; landfill gas collection system design; landfill gas beneficial utilization; and greenhouse gas compliance. Scott is Past President of the Missouri Waste Control Coalition.

samartin@burnsmcd.com

Brian McCurren, P.E.

Brian is an Environmental Engineer with the MoDNR. He has a Bachelor of Science in Geological Engineering from Missouri University of Science and Technology and is a Professional Engineer. Brian has been with the MoDNR since 1995 and the Brownfields/Voluntary Cleanup Program from 2006 to the present where he serves as Unit Chief.

Brian.mccurren@dnr.mo.gov

Brenna McDonald, R.G.

Brenna is a Missouri Registered Geologist with a B.S. in Geology. She has worked in the environmental field for approximately 20 years and currently works for the Missouri Geological Survey as Chief of the Subsurface Investigations and Waste Management Unit.

brenna.mcdonald@dnr.mo.gov

Arthur Mohr

Arthur is the founder and CEO of Sniffer Robotics – the developer of the industry's first drone-based solution for automating surface emissions monitoring. Arthur has over 30 years of business experience having worked in the solid waste, solar photovoltaic, and automotive industries.

amohr@snifferrobotics.com

Christine O'Keefe

Christine is an Environmental Program Analyst with the MoDNR. She graduated from Stephen F. Austin State University with a Bachelor of Science in Biology. She has worked in the Brownfields/Voluntary Cleanup Program of MoDNR since 1999 as a project manager.

christine.okeefe@dnr.mo.gov

SPEAKERS/MODERATORS

Mike Parris

Mike is the Compliance/ Enforcement Chief for MoDNR's Waste Management Program. He began in the MoDNR's Hazardous Waste Program providing oversight of underground storage tank closures, and then transitioned to a project manager coordinating Superfund cleanups. As a native Missourian, Mike enjoys being part of an agency that helps instill values and practices that protect our State's natural resources.
michael.parris@dnr.mo.gov

Gary Pendergrass, P.E., R.G.

Gary Pendergrass is a registered professional engineer and registered geologist with 40 years of experience in management of high-profile engineering and environmental projects, including the Times Beach Superfund Cleanup, the Missouri Carbon Sequestration Project, and a number of catastrophic geohazard events. Over the course of his career, he has been interviewed by all major media outlets, managed large community relations campaigns, and participated in a number of public meetings and public availability sessions.
garyp@ger-inc.biz

Bobbie Pennington

Bobbie is an Environmental Program Analyst for the MoDNR Brownfields/Voluntary Cleanup Program. She has worked for the MoDNR since 2011 and the Brownfields/Voluntary Cleanup Program since 2012. She has a bachelor's degree in Geosciences from the University of Texas at Dallas. She is a certified inspector for asbestos and is licensed for lead inspections and risk assessments and is certified as a Missouri Restricted Monitoring Well Installation Contractor.
bobbie.pennington@dnr.mo.gov

Kevin Perry

Kevin is Assistant Director at REGFORM, a Missouri business association focused entirely on State environmental regulations & policies. He is a registered lobbyist & holds a BS degree in biology. He has over 23 years of experience, including work as a biologist at US EPA Office of Water. He sings in the choir at church.
kperry@regform.org

Justin Reynolds, P.E.

Justin is a Civil Engineering graduate of the University of Missouri. He has been a field engineer, materials project manager and now is a member of Terracon's GIS development platform team. He will be co-presenting remotely for this seminar.
justin.reynolds@terracon.com

Joe A. Ricker, P.E

For more than 24 years, Joe has helped clients optimize a wide range of remediation solutions associated with past and present environmental liabilities under various regulatory programs in more than 30 states, as well as multiple remediation sites in Canada and Brazil. He brings a unique perspective to complex interdisciplinary projects and has managed remedial investigation and design projects involving a wide range of chemicals including petroleum hydrocarbons, pesticides, herbicides, wood-treating chemicals, solvents, and PCBs in soils, sediment, groundwater and air. Joe is a licensed Professional Engineer in 25 states including Missouri. He received a B.S. in Civil Engineering from Rose-Hulman Institute of Technology and a M.S. in Civil Engineering from the University of Memphis.
joe.ricker@earthcon.com

Michael Rossi

Mike is the program manager for Pace Analytical's mobile lab services. Mike has over 25 years of experience in the fields of analytical chemistry and environmental consulting. Mike holds a B.S. in Chemistry from Manhattan College and an M.S. in Environmental Engineering from the University of Vermont. Since 1996, Mike has been building and improving various analytical chemistry and hydrogeologic testing tools that have become key components in the area of high resolution site characterization. Mike continues to support the environmental consulting community by bringing his extensive experience and knowledge to project teams during the planning and execution phases of national and international field services projects.
mike.rossi@pacelabs.com

Kirsten Schaefer

Kirsten is a geologist within the Environmental Assistance Unit of the Missouri Geological Survey, where she performs geohydrologic evaluations for liquid waste sites, technical review of documents pertaining to landfills, power plants, and various industries, as well as stream classifications and sinkhole evaluations. She is currently completing her M.S. in Geospatial Science from Missouri State University modeling best management practices to mitigate surface erosion.
Kirsten.schaefer@dnr.mo.gov

Ian Smith

Ian is a Senior Consultant for Trinity Consultants and has been with Trinity Consultants for over seven years. Ian's primary work areas are performing multi-media permitting, reporting, and compliance reviews in Missouri, Iowa, and Illinois. He has been working closely with RAE for the past two years permitting and assisting with annual environmental reporting of the renewable natural gas systems. Ian earned a Bachelor of Science degree in Chemical Engineering with a minor in Chemistry from the University of Iowa.
ismith@trinityconsultants.com

SPEAKERS/MODERATORS

Jason Smith

Jason is a Geologist with 21 years of experience in environmental consulting, all with Environmental Works. He has been the President of EWI since the passing of the Company's founder in 2012. Jason has managed the cleanup of hundreds of tank sites in Missouri over the past 20 years.

jason.smith@dnr.mo.gov

Molly Starkey, R.G.

Molly is a Registered Geologist and has been with the MoDNR for eight years. She has a B.S. in Geology and an M.S. in Geospatial Sciences in Geography and Geology from Missouri State University in Springfield, MO. Molly has previously worked in well construction, metallic mineral resources, and geologic mapping for MoDNR. She currently focuses on hydrogeology as part of the Environmental Assistance Unit. Her primary research interests are contaminant transport in karst systems and groundwater remediation.

molly.starkey@dnr.mo.gov

Brady Stewart

Brady has 14 years of experience in the solid waste industry, split between consulting and working for the industry. He is currently employed with Waste Connections and provides support for landfill managers and divisions in Missouri, New Mexico, Illinois, and Iowa.

brady.stewart@wasteconnections.com

Matthew W. Stone, R.G.

Matthew is the Unit Chief of the Advanced Cleanup Unit within the MoDNR Environmental Remediation Program, Tanks Section. He holds a Master of Science in Environmental and Urban Geology and a Bachelor of Science in Geology. For the past decade he has worked for a variety of clients and industries providing exploration, mining, environmental services, and investigating geotechnical problems.

matthew.stone@dnr.mo.gov

Shawn Struckhoff

Shawn is a Project Engineer with Weaver Consultants Group in Collinsville, IL. He has 5 years of experience in landfill design and permitting, with significant experience in construction quality assurance. He holds a bachelor's degrees in Environmental Engineering from Missouri S&T.

sstruckhoff@wcgrp.com

Benjamin Tucker

Ben Tucker has been the Landfill Manager at Champ since mid-2020. Prior to that, Ben was the LF Manager at Waste Connections flagships sites in Wichita, KS, and Denver, CO.

benjamin.tucker@wasteconnections.com

Brian Weis

Brian is an associate civil engineer and project manager at Burns & McDonnell in Kansas City, MO. Brian attended the University of Missouri-Kansas City while working for the City of Kansas City Public Works Department. Upon graduating with a B.S. in Civil Engineering, he began working in the private sector as a civil engineer. Over the years Brian has provided engineering services in a variety of fields including land development, railroads, public works infrastructure, water treatment, stormwater quality, solid waste, and site remediation. He continued college coursework and received his master's degree in Business Administration (MBA) from UMKC's Bloch School of Business. For the last 11 years, Brian has worked in the environmental group at Burns & McDonnell and has developed technical strengths in stormwater management, water quality/treatment, and solid waste engineering.

bweis@burnsmcd.com

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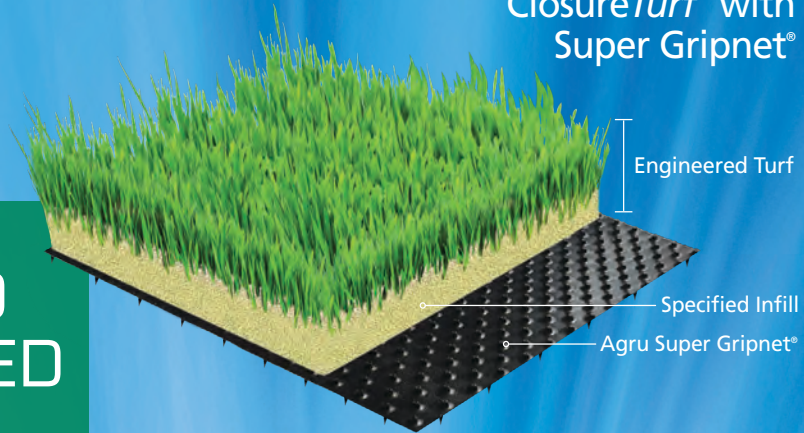
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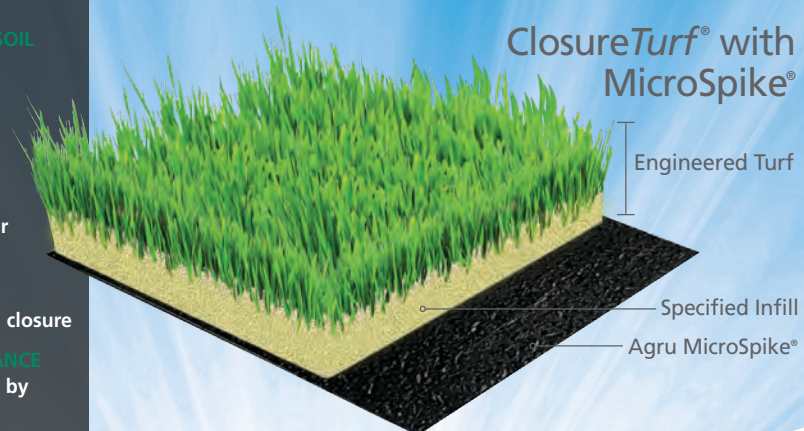
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Burns & McDonnell Engineering Co. 9400 Ward Parkway Kansas City MO 64114-3319 (816) 333-9400	31 years	Geotechnics 13 Industrial Park Blvd., Suite 500 Hendersonville TN 37075 (615) 339-4284	1 year
Cady Aquastore, Inc. 920 W. Prairie Drive, Suite G Sycamore IL 60178 (815) 899-5681	4 years	GFL 1150 East 700 Avenue Arcadia KS 66711 (620) 230-0976	1 year
City of Springfield 830 Boonville Avenue Springfield MO 65802 (417) 864-2007	1 year	Global Containment Solutions 405 E. Forest Street, Suite 110 Oconomowoc WI 53066 (614) 594-1309	3 years
Dakota Technologies 1625 SE Decker Street Lee's Summit MO 64081 (816) 525-7483	5 years	GREDELL Engineering Resources 1505 E. High Street Jefferson City MO 65101 (573) 659-9078	18 years
Elliott Equipment Company 14001 Botts Road Grandview MO 64030 (816) 761-4840	8 years	GSI, a Babcock Power company 170 Tucapau Road Duncan SC 29334 (864) 949-2917	1 year

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Heritage Environmental Services 251 N. Old St. Louis Road Wood River IL 62095 (618) 578-4410	23 years	QED/A Better Earth LLC 11261 - 238th Street Lawrence KS 66044 (785) 764-1674	12 years
IngenAE, LLC 502 Earth City Expressway, Suite 120 St. Louis MO 63045 (573) 257-1273	1 year	Rain for Rent 3711 Horseshoe Lake Road Pontoon Beach IL 62040 (618) 931-0901	3 years
Intertek - PSI 1211 W. Cambridge Circle Drive Kansas City KS 66103 (913) 310-1600	2 years	Reich Landfill Equipment 8714 Kinzie Joe Way Manhattan KS 66502 (480) 703-1250	3 years
Jett Environmental Consulting 1002 Morgan Meadow Drive Wentzville MO 63385 (314) 496-4654	1 year	Republic Services 12976 St. Charles Rock Road Bridgeton MO 63044 (314) 568-8857	11 years
Midwest Environmental Consultants 2009 E. McCarty Street, Suite 2 Jefferson City MO 65101 (573) 636-9454	16 years	SCS Engineers 8575 W. 110th Street, Suite 100 Overland Park KS 66210 (913) 749-0703	30 years
MoDNR/Brownfields Voluntary Cleanup Program P.O. Box 176 Jefferson City MO 65101 (573) 522-8139	12 years	Solmax Geosynthetics 19103 Gundle Road Houston, TX 77073 (800) 435-2008	13 years
Missouri Dept. of Health & Senior Services 930 Wildwood Jefferson City MO 65109 (573) 751-6102	5 years	Southwestern Sales 3221 N. 2nd Street Rogers AR 72756 (479) 636-6943	1 year
Nanova Environmental, Inc. 3338 Brown Station Road Columbia MO 65202 (314) 369-5755	1 year	St. Louis County Public Health 6121 N. Hanley Berkeley MO 63134 (314) 615-8936	10 years
PACE Analytical Services, Inc. 9608 Loiret Blvd. Lenexa KS 66219 (913) 599-5665	19 years	SWANA - Missouri Chapter www.moswana.org	10 years
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United Rentals Fluid Solutions 2335 Kearbey Lane South Roxana IL 62087 (314) 347-8607	1 year	Weaver Consultants Group 6301 East Highway AB Columbia MO 65201 (888) 660-0346	12 years
Valicor Environmental Services 5450 Brown Road St. Louis MO 62120 (314) 410-0838	7 years	WSP USA 300 Wyandotte Street, Suite 200 Kansas City MO 64105 (816) 702-4253	1 year

OUTSTANDING ACHIEVEMENT AWARDS

This year the Missouri Waste Control Coalition (MWCC) received numerous nominations for the OUTSTANDING ACHIEVEMENT AWARDS. After a thorough review of the nominations, the following awards are being presented:

ENVIRONMENTAL EXCELLENCE

This award recognizes projects or organizations which have achieved environmental excellence through innovative technology and methodologies or significant community stewardship. Applications should include specific information on individuals/organizations involved and impact of work performed. Organizations or projects should enhance performance both environmentally and economically, be sustainable and show documented results both before and after implementation.

Missouri Product Stewardship Council

The Missouri Product Stewardship Council recognized that unwanted pharmaceuticals pose a clear threat to human health and the environment. They built a public-private collaborative effort that is reaching out to all Missourians to promote safer and better stewardship of unwanted household pharmaceuticals. They have been doing this educational campaign with a mixture of local contact/promotion, on-line access, and social marketing.

The members of this voluntary collaborative of solid waste district, regulatory, and healthcare personnel are using personal contacts to advance marketing messages and share developed resources. One key resource set is a webpage, which includes a state-wide map of pharmaceutical take-back locations, a reproducible fact sheet that local communities can tailor and use to encourage proper management of old meds, and some diverse, inclusive social media images & video to market themes that include “no flushing” and “protecting the family.” They provide the City of Springfield’s guidance as a model on safe management of used sharps and unwanted meds so others can develop their own materials.

This voluntary collaborative has synergized and built upon resources to provide enhanced, responsible, and actionable environmental protection for all of Missouri.

*Address: c/o Mid-America Regional Council,
600 Broadway Street, Suite 200, Kansas City, MO 64105
816.701.8225, lmcdaniel@marc.org*

OUTSTANDING ACHIEVEMENT AWARDS

LIFETIME ACHIEVEMENT

This award recognizes an individual whom the MWCC Board of Directors identifies as having served the Missouri Waste Control Coalition, the environmental industry, a community, a government agency or state of Missouri in a significant way.

J. SCOTT FOWLER

Mr. Fowler began his 37-year career in the Landfill Gas industry in 1983 with Waste Management of North America. He was a pioneer in the LFG industry, compiling and analyzing pump test data that led to the eventual development and calibration of landfill gas production curves. His work was part of what became the industry standard. His role evolved into performing GCCS wellfield assessments to evaluate the potential for numerous landfill gas recovery projects. During this time and for the rest of his career, Scott was a teacher and mentor to many. He continued to teach and mentor Wellfield Technicians, Waste Management Engineers in Training and Operations Managers throughout the Midwest. He had also set up a classroom in a doublewide trailer where he conducted formal Landfill Gas Management classes. In the late 1990's, Scott left WM and joined Waste Energy Technologies. Next was the Fred Weber landfill, where he spent the balance of his career at the Champ Landfill. Despite his different career moves, his role as a teacher and mentor never diminished. While at Champ, he gained the respect and admiration of the local and state regulatory agencies, surrounding businesses, and even special interest groups. Most recently, he was actively training a new generation of engineers, managers, and technicians in what he deemed "applied common sense."

Scott was an inquisitive tinkerer, who always found the time to pass his knowledge of wellfield tuning onto others. His teaching and mentoring endures through hundreds of his former students that he taught to properly manage and tune wellfields. A large number of these "students of Fowler" are still in the landfill and landfill gas industry and can attribute their success to what they learned from Scott, using that knowledge to teach and mentor their own "students." Scott's influence and legacy within the LFG industry will remain long after his unexpected passing.

JEAN PONZI

Jean Ponzi has been a strong environmental education resource for the St. Louis region for nearly 30 years. As Green Resources Manager for the EarthWays Center of Missouri Botanical Garden, she currently promotes integration of sustainable thinking, planning and action into business practices as co-manager of the St. Louis Green Business Challenge. She has also worked in schools and with homeowners. She operates the Garden's Green Resources Answer Service, an email and phone sustainability hotline. She applies her background in media communications as a frequent environmental spokesperson for St. Louis activities and issues to local and national media. As a volunteer community service, she has produced and hosted the weekly environmental interview show, Earthworms, on FM-88 KDHX since 1988. She also hosts Growing Green St. Louis on the Big 550-KTRS AM, a weekly showcase for local sustainability achievements produced for the Garden, on the Big 550-KTRS AM. She has contributed articles to GreenBiz.com, Home Energy, Grist and Missouri Resources magazines, and many local and regional publications. Her column "Earthworms Castings" has been a regular feature of The Healthy Planet Magazine in St. Louis since 1997. She is innovative, creative, and extraordinarily engaging. She facilitates and catalyzes environmental stewardship success and growth. Her energy is infectious.

*Address: Missouri Botanical Garden, 4651 Shaw Blvd, Saint Louis, MO 63310
314.577.0220, jean.ponzi@mobot.org*

OUTSTANDING ACHIEVEMENT AWARDS

JAN DILLOW COALITION CONTRIBUTION

This special award recognizes an individual whose efforts have contributed significantly to the development and growth of the Missouri Waste Control Coalition. The award honors former president, Jan Dillow, one of the founders and key leader in the development and success of the Coalition.

Lisa McDaniel



Lisa served as President in 2016-2017 and was the Conference Chair in 2015. She has long been involved in the Coalition and environmental activities and demonstrated a high interest in education, recycling and nonprofit activities which is also evident in her other activities. She designed changes to the Coalition's web site to reflect its overall environmental interests. She is currently the Solid Waste Program Manager at Mid-America Regional Council in Kansas City.

*Address: Mid-America Regional Council, 600 Broadway, Kansas City, MO 64105
816.701.8225, lmcdaniel@marc.org*

In Memory of Jan Dillow

It is my sincere privilege to reflect on memories of our dear friend and coalition partner, Jan Dillow. My first encounter with Jan happened while in my "formative" early years with Missouri DNR, at the beginning of the Coalition coming together as an organization and hosting the annual Waste Management Conference. As I recall, I had been nominated for award in my DNR capacity for involvement in the dioxin episode. This attractive, personable, dedicated and energetic lady named Jan congratulated me. She encouraged my further involvement in this newly emerging group. I remember being intrigued and flattered by this episode and became involved with MWCC ever since.

As I soon discovered, Jan was a cornerstone of the organization and a central part of the fabric of MWCC. She embodied an enthusiastic and wholehearted interest in the business of progressive waste management. She also had a commitment to engaging constructive dialogue with all interests, which was the core and essence of the Coalition. I was also privileged to work for a period in the same corporation with Jan in the early days of the Heritage organization. I found Jan to be the same dedicated professional as the company, the industry and the cause of progressive environmental movement was at large.

Jan was an integral fixture at all the conferences until her illness took her from us. My memories include her actual delivery of the Kansas City strip steaks procured and hauled to the legendary picnic events. She even attended to those of us 'pit slaves' in the early years of hand grilling by cooling us down with wet towels. That was Jan—involved with all aspects from big picture to the details—and always putting people first.

It is with sincere fondness and respect that I am proud to call Jan now what I proclaimed her then, the "Godmother" of the MWCC. I believe she is smiling now on us as she did then upon hearing this term of endearment. Thank you again, Jan for everything.

Your friends at the Missouri Waste Control Coalition
Submitted by Mike Duvall - June 20, 2001

NOTES