



2016 Tennessee Environmental
Conference

Speaker Biographies & Abstracts

Mr. Earl Bandy

Director, Knoxville Field Office
Office of Surface Mining Reclamation and Enforcement
(OSMRE)

EDUCATION:

B.S.-Mining and Reclamation, Lincoln Memorial University

BIOGRAPHY

Mr. Bandy has nearly 40 years of experience in various fields related to surface coal mining and reclamation. He has served as an inspector, investigator, manager and director for Office of Surface Mining Reclamation and Enforcement/Department of Interior (OSMRE). Mr. Bandy is well experienced in implementing enforcement procedures, creating innovative settlement agreements, establishing long term treatment trusts, advising agencies on bankruptcy proceedings, and serving as an expert witness. Mr. Bandy is a member of the CPCRI Steering Committee and is currently working to develop a Clean Streams Pilot Project for Science Technology Engineering and Mathematics (STEM) students. He enjoys his volunteer work with Knox County Master Gardeners, gardening and fishing.

CONTACT INFORMATION

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Session(s)

Environment, **Session**
Two
Wednesday, 3/16/2016
Time: 9:40-10:15
Title: Clinch Powell Clean
Rivers Initiative

ABSTRACT

The panel will summarize the work, partnerships, and results of the Clinch Powell Clean Rivers Initiative (CPCRI). CPCRI is a bi-state effort to protect and restore aquatic species and water quality in the Clinch and Powell Rivers. These two rivers, which begin in Virginia and flow into Tennessee, harbor some of the greatest biodiversity in North America. However, rare freshwater mussels, one of the rivers' leading indicators of environmental health are showing signs of serious decline in some river sections. The reasons for this decline are complex and have historically been a point of contention between Tennessee and Virginia.

In response to this challenge, the CPCRI formed in 2008 as a collaborative bi-state effort including an array of state and federal agencies, scientists, and The Nature Conservancy. CPCRI has developed a coordinated science and monitoring program to diagnose water quality stressors and take informed actions to remediate them. Results are emerging and additional monitoring and scientific analysis is planned. We are beginning to see a pattern of associations between mussel decline and elevated dissolved solids, certain major ions, and certain metals. The results are informing both regulatory and non-regulatory decisions and actions aimed at reducing relevant stressors and improving water quality. CPCRI involves a wide range of partners so emerging results are influencing a variety of strategies related to Clean Water Act implementation, land and water restoration, mussel augmentation, abandoned mined land reclamation, and outreach to local communities.

Ms. Beverly Banister¹

Division Director
U.S. Environmental Protection Agency, Region IV
Air, Pesticides and Toxics Management Division

EDUCATION:

Chemical Engineering, Auburn University

BIOGRAPHY

Ms. Banister is the Director of the Air, Pesticides and Toxics Management Division at the Environmental Protection Agency (EPA) Region IV office in Atlanta, GA. She is responsible for planning, coordinating, and implementing all regional EPA air, pesticides, and toxics programs. Ms. Banister has also provided management and leadership to both the Waste and Water Management Divisions. From January 2009 to September 2010, Ms. Banister served in an acting capacity as the Deputy Regional Administrator for Region IV. In this position, she provided leadership to the implementation and direction of Region IV programs. Ms. Banister has been with EPA for more than 28 years and has extensive experience in many EPA programs and offices including EPA Headquarters.

Ms. Banister has been recognized with many awards for her knowledge, skills, and leadership abilities which produced environmental results. She was the recipient of the 2010 Distinguished Presidential Rank Award, Federal Executive Board EPA All Star Award, the Donald J. Guinyard Pioneer Achievement Award and the Lee M. Thomas Excellence in Management Award. In addition to these career achievements and honors, Ms. Banister has provided leadership to numerous organizations within and outside EPA including serving as Board Chair of the East Lake YMCA. She is a graduate of Auburn University with a degree in Chemical Engineering.

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Session(s)

Environment, **Session**
Four
Tuesday, 3/15/2016
Time: 1:10-1:45
Title: U.S. Environmental
Protection Agency,
Region IV, Quality Update

Panel, **Session** Six
Tuesday, 3/15/2016
Time: 3:05-3:45
Title: Summary
Discussion

¹ Ms. Banister replaced by Carol Kemker (see page 27)

ABSTRACT

Session 4: This presentation will provide an overview of the Environmental Protection Agency's improving air quality priorities - from taking action on climate change to making a visible difference in communities. The discussion will include a comprehensive review of new developments in policies and regulations under the Clean Air Act that govern EPA's work, as well as opportunities for collaboration and partnership to further EPA's mission of protecting public health and the environment.

Session 6: This session is a panel discussion including questions and answers with our distinguished speakers that are available for the day.

Mr. Stan Boyd

Director, Underground Storage Tanks Division
State of Tennessee
Department of Environment and Conservation

EDUCATION:

B.S.-Geology, The University of Tennessee

BIOGRAPHY

Mr. Boyd attended The University of Tennessee in Knoxville, received a bachelor degree in Geology in 1986, and has served in numerous Tennessee Department of Environment and Conservation (TDEC) positions since February 1987. He is currently the Director of the Division of Underground Storage Tanks (UST) and has served in this position since April 2004. His responsibilities as UST Director include implementation of statewide underground storage tank program encompassing Tennessee Petroleum Underground Storage Tank Act, 68-215-101 et seq. and Tennessee Petroleum Underground Storage Tank Rules, Chapter 0400-18-01. Before becoming the UST Director, he was the Environmental Assistance Center Manager in TDEC's Environmental Field Office at Chattanooga from August 1998 to April 2004, and he worked in UST Johnson City Field Office from 1990 until 1998 where he started as an Environmental Specialist 2 and became the Field Office Manager.

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Session(s)

Environment, **Session One**
Tuesday, 3/15/2016
Time: 10:00-10:35
Title: Tennessee Division of Underground Storage Tanks Update

Environment, **Session Six**
Tuesday, 3/15/2016
Time: 3:05-3:45
Title: Summary Panel Discussion

ABSTRACT

Session 1: Update about the Division of Underground Storage Tanks related to EPA measurements with comparisons to other Region IV states and the nation and future rule changes related to the federal Energy Policy Act of 2005.

Session 6: This session is a panel discussion including questions and answers with our distinguished speakers that are available for the day.

Mr. David M. Borowski

Environmental Epidemiologist
Tennessee Department of Health

EDUCATION:

M.S.-Environmental Science, Indiana University, Bloomington IN
B.S.-Marine Science, Eckerd College, St. Petersburg FL

BIOGRAPHY

Mr. Borowski graduated with a degree in Marine Science from Eckerd College in St. Petersburg, Florida, and did his graduate training in Environmental Science at Indiana University in Bloomington, Indiana. In 1999, David started working with TDEC's Division of Community Assistance. After a few years, he moved over to the Department of Health. David is now the Assistant Director of the Environmental Epidemiology Program which is funded by the Federal Agency for Toxic Substances and Disease Registry. David works to keep people safe from harmful chemicals and to help them live in wholesome environments that promote healthy lifestyles.

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Session(s)

Health, **Session Three**
Tuesday, 3/15/2016
Time: 11:20-11:55
Title: Health and Built Environment

ABSTRACT

There is a direct connection between health and the built environment. Chronic diseases related to physical inactivity are major causes of premature death in the United States. Regular physical activity is one of the most important things people can do to improve their health. Physical activity lowers risks from obesity, diabetes, high blood pressure, stress, depression, and cancer.

On September 9, 2015, the Surgeon General made a Call to Action to Promote Walking and Walkable Communities. Walkable communities provide more choices for walking, biking, and transit which increase physical activity and can help people reach their physical activity goals. Walkable communities perform better economically, maintain stability, lower disease risk, and even increase happiness.

The Tennessee Department of Health is encouraging policy, systems, and environmental changes to increase population level physical activity leading to reductions in chronic disease risk and burden. Through multi-disciplinary partnerships the Department of Health supports choices for Tennesseans to increase physical activity in their daily routines.

This session will use photographs from places across Tennessee to discuss how community health and wellness is connected to active transportation, social equity, culture, land use, environmental protection, parks, housing, neighborhoods, and economic development.

Ms. Jeni Lind Brinkman

Director of Grants and Contracts Administration
State of Tennessee
Department of Environment and Conservation

EDUCATION:

M.S.-Public Service Management, Cumberland University
B.S.-Recreation and Tourism Management, The University of Tennessee, Knoxville

BIOGRAPHY

Ms. Brinkman received her undergraduate degree in Recreation and Tourism Management from The University of Tennessee in Knoxville. She completed her Masters of Science in Public Service Administration at Cumberland University. For 8 years, she worked for the City of Murfreesboro in the areas of Marketing and Special Events, expanding the city's outreach efforts to increase visitation to the parks, facilities and programs. In 2009, she joined the Department of Environment and Conservation and currently serves as the Director of Grants and Contracts Administration. In this role, she provides grants outreach to department stakeholders, including local government, other government agencies, the regulated community, public interest groups and citizens.

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Session(s)

Panel, **Session** One
Wednesday, 3/16/2016
Time: 9:00-9:35
Title: TDEC Grants

ABSTRACT

Several elements are key in grant writing that results in a grant award. Join TDEC for a facilitated panel discussion with successful grantees and gain insight into what makes a great project and application. Panelists will include experience in all of the TDEC grant programs.

Ms. Beverly Brown

Environmental Consultant 1
State of Tennessee
Department of Environment and Conservation

EDUCATION:

M.S.-Environmental Health, East Tennessee State University
B.S.-Biology, East Tennessee State University

BIOGRAPHY

Ms. Brown began working with the State of Tennessee in the Division of Air Pollution Control in 1988. She transferred to the Division of Water Pollution Control in 1989, and remained with Water Pollution Control until April of 1998. Ms. Brown worked in the private sector for environmental consulting firms from 1998 - 2004. She returned to state service in 2004 in the Division of Water Pollution Control (now the Division of Water Resources). Her primary focus for the Division of Water Resources in the Johnson City Field Office is biological monitoring of streams in the northeast Tennessee area.

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Session(s)

Panel, **Session** Two
Wednesday, 3/16/2016
Time: 9:40-10:15
Title: Clinch Powell Clean River Initiative

ABSTRACT

The panel will summarize the work, partnerships, and results of the Clinch Powell Clean Rivers Initiative (CPCRI). CPCRI is a bi-state effort to protect and restore aquatic species and water quality in the Clinch and Powell Rivers. These two rivers, which begin in Virginia and flow into Tennessee, harbor some of the greatest biodiversity in North America. However, rare freshwater mussels, one of the rivers' leading indicators of environmental health are showing signs of serious decline in some river sections. The reasons for this decline are complex and have historically been a point of contention between Tennessee and Virginia.

In response to this challenge, the CPCRI formed in 2008 as a collaborative bi-state effort including an array of state and federal agencies, scientists, and The Nature Conservancy. CPCRI has developed a coordinated science and monitoring program to diagnose water quality stressors and take informed actions to remediate them. Results are emerging and additional monitoring and scientific analysis is planned. We are beginning to see a pattern of associations between mussel decline and elevated dissolved solids, certain major ions, and certain metals. The results are informing both regulatory and non-regulatory decisions and actions aimed at reducing relevant stressors and improving water quality. CPCRI involves a wide range of partners so emerging results are influencing a variety of strategies related to Clean Water Act implementation, land and water restoration, mussel augmentation, abandoned mined land reclamation, and outreach to local communities.

Mr. Cody Buell

Environmental Manager
La-Z-Boy

EDUCATION:

Masters-Public Administration, Emphasis- Environmental Health
Masters-Public Health, Emphasis- Industrial Hygiene
BCSP-Associate Safety Professional
Bachelors-Government, Minor-Environmental Studies

BIOGRAPHY

Mr. Buell grew up in a small town in Paint Lick, KY where he derived his passion for environmentalism at a very young age. He soon decided that the largest impact that he could have in terms of environmental stewardship would be by working directly with industry.

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Session(s)

Innovation +
Sustainability, **Session**
2+3
Tuesday, 3/15/2016
Time: 10:40-11:55
Title: Zero Waste

ABSTRACT

This presentation will discuss at length the major hurdles to going Zero-Waste-To-Landfill and what you as an environmental and/or other manager can do to overcome these obstacles.

Mr. Miles Burdine

President & CEO
Kingsport Chamber of Commerce

EDUCATION:

B.S.-Business Administration, The University of Tennessee

BIOGRAPHY

Mr. Burdine, a native of Kingsport, has been with the Kingsport Tennessee Chamber of Commerce since 1994 and was promoted to his present position of President and CEO in 1999. His "other" career is with the United States Marine Corps. After graduating from the University of Tennessee with a degree in Business Administration, he served on active duty for 7 years before resigning his commission and joining the Marine Reserves. Having served over 30 years and now retired at the rank of Colonel, he has extensive training and experience in war fighting, tactics, terrorism, security, civil affairs and the challenges faced in the middle east. He has fought in three wars: Beirut, Lebanon in 1983; Operation Desert Storm in Saudi Arabia in 1991; and Operation Iraqi Freedom in Iraq in 2005/2006.

Mr. Burdine believes:

- That if you ever have to scrub a toilet, you should do so with enthusiasm.
- That adversity is life's greatest teacher.
- In accountability—no excuses.
- That people don't follow titles. They follow courage.

CONTACT INFORMATION

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Session(s)

Plenary Open, **Session**
Keynote I
Tuesday, 3/15/2016
Time: 9:00-9:15
Title: Open / Welcome

ABSTRACT

Open/Welcome

Mr. Jonathan Burr

Deputy Director of Field Office Operations
State of Tennessee
Department of Environment and Conservation

EDUCATION:

M.S.-Biology, Tennessee Tech University
B.S.-Biology, Tennessee Tech University

BIOGRAPHY

Mr. Burr spent the first 20 years of his career with Tennessee Department of Environment and Conservation (TDEC) as the senior water pollution field biologist for a large portion of east TN. After that he served as the manager for TDEC's Mining and Oil and Gas regulatory programs state-wide. His current duties as a Deputy Director of the Division of Water Resources include oversight of all 8 DWR regulatory field offices state-wide, working to ensure productivity, consistency and quality of work in water pollution, water supply, and groundwater issues. Mining, Oil and Gas, and Land Reclamation regulatory activities are also under his purview. He is now in his 27th year of service.

Mr. Burr's personal philosophy includes:

- Every disaster offers an opportunity if you can keep from freaking out
- The internet makes people dumber, not smarter
- Everyone takes themselves too seriously. People with a sense of humor don't become terrorists.
- He can't understand why the people in zombie apocalypse movies don't just find a boat and go to an island.

CONTACT INFORMATION

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Session(s)

Environment, **Session**
Three
Tuesday, 3/15/2016
Time: 11:20-11:55
Title: Tennessee Division
of Water Resources
Update

Panel, **Session** Six
Tuesday, 3/15/2016
Time: 3:05-3:45
Title: Summary
Discussion

ABSTRACT

Session 3: Mr. Burr will provide a water and wastewater regulatory update from the Tennessee Department of Environment and Conservation's Division of Water Resources. Topics include Waters of the United States, Tennessee Nutrient Reduction Framework and implementation of new EPA drinking water rules.

Session 6: This session is a panel discussion including questions and answers with our distinguished speakers that are available for the day.

Ms. Karina Bynum

Environmental Protection Specialist I
State of Tennessee
Department of Environment and Conservation

EDUCATION:

M.S.-Civil and Environmental Engineering, Tennessee Technological University
B.S.-Civil and Environmental Engineering, Tennessee Technological University
Finishing Ph.D. in Landscape Engineering, Czech Technical University, Prague

BIOGRAPHY

Ms. Bynum is an Integrated Water Resource Engineer for the Tennessee Department of Environment and Conservation (TDEC), Division of Water Resources working state wide to resolve complex water quality issues such as nutrient reduction and collaborative watershed projects.

She has worked as a Field Office Engineer for 12 years conducting inspections, providing engineering consultations and reviewing plans. Ms. Bynum has 15 years of experience in municipal and industrial stormwater, wastewater treatment and industrial pretreatment, expanding into watershed restoration and adaptive integrated planning.

CONTACT INFORMATION

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Session(s)

Panel, **Session** 4,5+6
Tuesday, 3/15/2016
Time: 1:10-3:45
Title: TNSA Stormwater
Workshop / Panel
Discussion

CONTACT INFORMATION

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Session(s)

Innovation +
Sustainability, **Session**
Two
Wednesday, 3/16/2016
Time: 9:40-10:15
Title: Tennessee Green
Hospitality

ABSTRACT

Tennessee’s National Pollutant Discharge Elimination System (NPDES) Phase II permit includes a permanent (post-construction) stormwater performance standard, which requires the treatment of a one-inch rainfall using Stormwater Control Measures (SCM’s) prior to discharge.

This workshop will provide an overview of the permit requirements and proposed changes. The presentations will provide insight into the primary approaches being implemented in Tennessee and the key policies and procedures needed to adapt them to an individual community.

Finally, we will have a panel available to field questions or concerns from the audience regarding the draft permit.

ABSTRACT

Tennessee Green Hospitality, developed in cooperation with the Tennessee Department of Tourist Development and offered through the Tennessee Hospitality and Lodging Association, works with hotels, restaurants and attractions in Tennessee (and only Tennessee) to become more sustainable in their operations. When a facility meets the environmental standards established by the program, it receives Tennessee Green Hospitality Certification.

The program focuses on reductions in energy use, water use and material use. Importantly, the facility must have a specific plan for continued improvement. An EPA funded study has determined that significant savings result from incorporating the principles defined in the program.

To date, over 80 facilities have been certified, including 6 state parks and all 14 Tennessee Welcome Centers. TDEC provided invaluable insight and guidance in the certification of the parks and the welcome centers.

Differing from programs in other states, 100% of the facilities that have been certified have undergone an onsite audit.

Mr. Dobbin Callahan

President
Skye Con

EDUCATION:

M.B.A.-The University of Tennessee-Chattanooga
B.A.-Economics, Davidson College
Certificate in Environmental Management, George Washington University

BIOGRAPHY

Dobbin Callahan
President, Skye Con
Auditor and Administrator for TENNESSEE GREEN HOSPITALITY
For Dobbin Callahan, environmental stewardship is more than just a current interest, it is a lifelong passion. He has promoted and practiced environmental responsibility since growing up in rural North Carolina. Prior to forming Skye Con, Mr. Callahan worked in the textile and carpet industry, focusing on government procurement and issues of sustainability. He has traveled throughout the U.S. and abroad speaking on the topics of "Environmental Responsibility," "Environmental Initiatives as Part of the Corporate Culture," and "Product Stewardship." He testified before the U.S. Senate Environment and Public Works Committee on the effectiveness of Federal programs for purchasing of recycled content products.

Mr. Callahan is the administrator and auditor for Tennessee Green Hospitality, a program offered through The Tennessee Hospitality and Tourism Association helping hotels, restaurants and attractions to become more sustainable in their operations. Facilities meeting the standards of the program are then Certified "Tennessee Green Hospitality." To date, over 80 facilities in Tennessee have been certified.

BA, Economics, Davidson College
MBA, The University of Tennessee
Certificate in Environmental Management Systems, George Washington University
Past Chair, National Recycling Coalition
Past President, Buy Recycled Business Alliance
Past Chair, GSA Quality Partnership Council
Chair, GCHA Green Committee

Ms. Margaret C. Campbell

Attorney
Troutman Sanders, LLP

EDUCATION:

J.D.-Georgetown University, cum laude, 1991
A.B.-University of North Carolina, 1987

BIOGRAPHY

Ms. Campbell is a partner at Troutman Sanders, LLP in the firm’s Atlanta office. For over 20 years, her practice has focused primarily on matters arising under the Clean Air Act and state air quality statutes. Ms. Campbell advises companies and trade associations on clean air policy and compliance matters and has successfully defended companies in Clean Air Act enforcement actions and citizen suits.

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Session(s)

Industry + Energy,
Session Four
Tuesday, 3/15/2016
Time: 10:00-10:35
Title: Clean Air Act
Update

ABSTRACT

This presentation will address hot topics of interest to regulated industry, such as status of the Startup, Shutdown, Malfunction SIP Call litigation and implementation at the state level, the Clean Power Plan litigation and implementation, and NAAQS updates.

Mr. Vaughn Cassidy

Environmental Consultant 1

Tennessee Department of Environment and Conservation
Office of Sustainable Practices

EDUCATION:

B.S.-Environmental Biology

BIOGRAPHY

Mr. Cassidy has been with Tennessee industry in the field of pollution prevention since 2002. He has worked to verify P2 metrics and has facilitated many recycling opportunities for industries within the pollution prevention network. Currently Mr. Cassidy is the primary contact for a waste reduction initiative through the Office of Sustainable Practices involving automotive manufacturers and suppliers in Tennessee. He is one of the primary contacts for the Tennessee Waste Mapping Project which seeks to map the locations and types of industrial waste products that may have a recyclable end-use within Tennessee's economy. Mr. Cassidy very recently coordinated a materials reuse webinar with the United States Business Council on Sustainable Development. The webinar focused on the networking of reusable and recyclable materials within Tennessee manufacturers, primarily automotive.

CONTACT INFORMATION

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Session(s)

Special Interest, **Session**
Three
Wednesday, 3/16/2016
Time: 10:45-11:20
Title: Mapping the
Potential - Successes and
Challenges of Waste
Mapping

ABSTRACT

The TDEC Waste Mapping Project was an initiative completed in 2015 by the TDEC Office of Sustainable Practices and the UT Center for Industrial Services. A statistically significant sample of four leading industrial clusters were collected within Tennessee pertaining to recyclable industrial wastes. The nationally recognized project has garnered a great deal of useful information for use by industry, economic development and the recycling community. Google Fusion technology provides a wonderful graphic display of industry concentrations of various recyclable materials in the form of "heat maps" for each category. The use of the "heat maps" has made a strong impression on many industrial and environmental audiences by providing a more intuitive understanding of the information presented. This project has been recognized by the United States Business Council on Sustainable Development as one of only three like it in the United States. This project has been used to support the development of a more interactive and real-time waste exchange in Tennessee than has previously existed.

Ms. Dena Chandler

Environmental Designer
Equinox

EDUCATION:

M.L.A.-Ball State University, IN
B.S.-Natural Resources & Environmental Science,
Purdue University

BIOGRAPHY

Ms. Chandler is a Leadership in Energy and Environmental Design accredited professional (LEED AP). She was the lead designer in development stormwater control measures for the New Belgium Brewery project with the City of Asheville. She has a background in plant selection and design for residential and commercial projects. Dena's background working for a county parks and recreation department also provides her insight and understanding into the processes of both the private and public sectors. Her professional experience has included projects in park and open space design, streetscape design, stormwater control measures, and native planting design.

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Session(s)

Innovation +
Sustainability, **Session**
Four
Wednesday, 3/16/2016
Time: 11:25-12:00
Title: Low Impact
Development at the New
Belgium Brewery

ABSTRACT

A Sustainable Infrastructure Case Study - Low Impact Development at the New Belgium Brewery

New Belgium Brewing Company is currently developing a brewery on a Brownfield site along the French Broad River in Asheville. A focus on low impact development has been a guiding force for the redevelopment of the site. During the planning and design phases, emphasis was placed on creating a Leadership in Energy and Environmental Design (LEED) certified project and providing design solutions to avoid impacts to natural systems. A partnership with the City of Asheville fostered a holistic approach to redeveloping the site with sustainable improvements such as multimodal transportation, including a complete streets design approach and a greenway in the floodplain. After New Belgium completes construction, there will be less impervious surface in the floodplain than before redevelopment.

This presentation will focus on the implementation of stormwater improvements coupled with designing a greenway along the French Broad River. The design and planning process will be discussed in addition to examples of how the design professionals adapted low impact principles to the challenges of the site. Sustainable infrastructure and site improvements include a greenway, low impact parking lots, "green streets" enhancements, stream restoration, and stormwater best management practices such as water quality swales, bioretentions, and a constructed wetland.

Ms. Stacia Christman

Senior Counsel
Eastman Chemical Company

EDUCATION:

Juris Doctorate from Vermont Law School Graduating summa cum laude
B.S.-Environmental Studies, Ohio University

BIOGRAPHY

Ms. Christman is Senior Counsel with Eastman Chemical Company in the Health, Safety, Environmental and Security (HSES) function of the Law Department. Eastman is a specialty chemical company that produces a broad range of advanced materials, additives and functional products, specialty chemicals, and fibers that are found in products people use every day. Within the Eastman Law Department, Ms. Christman has global responsibility for various environmental and regulatory matters for the company and its subsidiaries and functions as an HSES corporate liaison to manufacturing sites around the globe. Ms. Christman also advises the company on the environmental and other regulatory aspects of various mergers and acquisitions.

Prior to joining Eastman in 2013, Ms. Christman was in private practice for over fifteen years in Pittsburgh, Pennsylvania specializing in environmental law and regulatory matters and serving manufacturing and commercial clients around the country and across a variety of industry groups.

She earned her Bachelor of Science degree in Environmental Studies from Ohio University, graduating summa cum laude, and her Juris Doctorate from Vermont Law School.

Ms. Christman is a member of the Association of Corporate Counsel, the Pennsylvania Bar Association, and the Westmoreland County Bar Association, she has written numerous newsletters and articles focusing on state and federal regulatory developments, and has recently prepared and presented seminars about regulatory and compliance issues for the American Bar Association, the Pennsylvania Bar Institute, and the Tennessee Bar Association.

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Session(s)

Industry + Energy,
Session Three
Wednesday, 3/16/2016
Time: 10:45-11:20
Title: Waters of the United States

ABSTRACT

Any good news story answers a few key questions. In this session, we will peruse the many recent headlines about the EPA's 2015 Waters of the U.S. final rule in an effort to determine: Who cares? What's the problem? When will we know? Where are the WOTUS? Why is CLEAN WATER not clear? How does the story end?

Ms. Jaclyn Clendenen²

Family Liaison
Kingsport City Schools

EDUCATION:

M.A.-Early Childhood Education, Milligan College

Ed.S.-Teaching Endorsements: PreK-3rd, English/Language Arts 6-12, ELL, Lincoln Memorial University
B.A.-English, Emory & Henry College

BIOGRAPHY

Ms. Clendenen just celebrated her 20th year as an employee with Kingsport City Schools. She has worked both in and out of the classroom setting, now working as a family liaison at Andrew Jackson Elementary School. As part of her role as family liaison, she has helped facilitate "Rock and Wrap It Up" (RWU) at Andrew Jackson Elementary School. This is the second year for the RWU program.

CONTACT INFORMATION

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Session(s)

Special Interest, **Session** Two
Wednesday, 3/16/2016
Time: 9:40-10:15
Title: Rock and Wrap It Up! Sharing Our Success - Andrew Jackson Elementary School

ABSTRACT

This presentation will briefly outline the start-up of the program, strategies for problem-solving, avenues for overcoming barriers, and ideas for promoting environmental awareness for students and families.

Mr. Rack Cross

Development Services Coordinator
City of Kingsport

EDUCATION:

B.S.-General Studies, East Tennessee State University
Associate Degree-Education, Virginia Highlands Community College
Associate Degree-Science, Northeast State Community College

BIOGRAPHY

Mr. Cross is an amateur ornithologists with local, state, national, and international experience observing, identifying, and banding birds. As Project Manager for the Kingsport Birding Trail he promotes progressive and innovative techniques to connect people with natural heritage resources using creative public and private partnerships and unique events. Recognizing that bird watching is the fastest growing outdoor activity in the nation, he has organized many family friendly and healthy guided bird walks that raise awareness of the importance of healthy environments for our feathered friends.

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Session(s)

Innovation + Sustainability, **Session** Five
Tuesday, 3/15/2016
Time: 1:50-2:25
Title: ATRA and Kingsport's Multimodal Grant

² Ms. Clendenen replaced by Angie Hyche (see page 27)

ABSTRACT

Active Transportation Rest Area (ATRA) presentation abstract:

An Active Transportation Rest Area or ATRA is a creative and collaborative solution offering environmental wins in multiple directions including public health, cleaner air and cleaner water, as well as, healthier, happier, and wealthier individual users. Up-packaging existing infrastructure to encourage active transportation extends the life of roads and reduces maintenance costs and traffic congestion while adding community value and branding opportunities. The City of Kingsport installed the first permanent ATRA in 2015 with the four basic features required for an ATRA, drinking water, shade, seating, and bicycle air pump, as well as, several customizable added features including raised bed gardens, restrooms, Kingsport Greenbelt access, and a Kingsport Birding Trail hot spot. Other popular features used at demonstration sites have been solar powered electronic charging stations and native edible landscaping. ATRA is a Kingsport concept adopted by Tennessee Department of Transportation (TDOT) and funded in the 2015 Multimodal Transportation Grant also to be discussed in this presentation.

Oak Ridge National Laboratory (ORNL) printed utility vehicle (PUV) was created as part of the AMIE. ORNL's Additive Manufacturing Integrated Energy (AMIE) Demonstration Project leverages rapid innovation through additive manufacturing to connect a natural-gas-powered hybrid electric vehicle to a high-performance building designed to produce, consume, and store renewable energy. Components of the building and vehicle will be additively manufactured (3D printed) using the laboratory's advanced manufacturing capabilities. To offset the uncertainty of power, the vehicle's natural gas engine will provide complementary power to the building. When coupled with integrated demand-side controls to enable responsive loads, and then scaled up, this concept can support worldwide electricity needs. The PUV features a hybrid electric powertrain with on-board power generation from natural gas. A single engine extends vehicle range and produces power for both vehicle and building. Energy flows between the two using fast, efficient bi-directional wireless power transfer—a first for level 2 charging. The presentation focuses on the printing of the vehicle, the powertrain integration and the possibilities for vehicles providing power to buildings in different scenarios.

Ms. Nancy Dorman

Program Services Manager
Tennessee State Parks

Dr. Scott Curran

R&D Staff
Oak Ridge National Laboratory

EDUCATION:

Ph.D.-Energy Science and Engineering, The University of Tennessee
M.S.-Mechanical Engineering, The University of Tennessee
B.S.-Mechanical Engineering, The University of Tennessee

BIOGRAPHY

Dr. Scott Curran is a research and development staff member in the Fuels Engines and Emissions Research Center at Oak Ridge National Laboratory. Dr. Curran was the vehicle lead for the ORNL Printed Utility Vehicle portion of the Additive Manufacturing Integrated Energy demonstration project. He is a principal investigator on DOE funded multi-cylinder advanced combustion and emissions controls research as well as fuel effects on advanced combustion research projects. He is also involved in vehicle systems research projects, well-to-wheels analysis for mobile and stationary power sources, and is an active collaborator with DOE Clean Cities for alternative fuels outreach and education and serves on the board of directors for the East Tennessee Clean Fuels Coalition. Dr. Curran is a current member, active author and technical session organizer for SAE International and the American Society of Mechanical Engineers (ASME). He is an adjunct assistant professor in Mechanical Aerospace and Biomedical Engineering Department at The University of Tennessee. Dr. Curran received his BS and MS in mechanical engineering and his Ph.D. in energy science and engineering from The University of Tennessee.

EDUCATION:

M.S. in Recreation Administration, University of Memphis, 1985
Certified Interpretive Trainer
National Association for Interpretation, 2014

BIOGRAPHY

Ms. Dorman is a career parks and recreation professional with over 25 years of experience in a variety of recreation settings from community centers, to aquatics, to therapeutic recreation, and natural resource management.

She has worked for Tennessee State Parks since 1993 and is currently the Program Services Manager with responsibility for the seasonal interpretive ranger program and staff interpretive training. Ms. Dorman is an active board member for a number of organizations including the Friends of Beaman Park, the Tennessee Environmental Education Association, Historic Rugby, Inc. and the Beaman Park to Bells Bend Conservation Corridor. She is a native Tennessean who grew up in Memphis and has lived in the Nashville area since 1989.

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Session(s)

Innovation + Sustainability, **Session Three**
Wednesday, 3/16/2016
Time: 10:45-11:20
Title: Tennessee Environmental Literacy Program

CONTACT INFORMATION

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Session(s)

Innovation + Sustainability, **Session One**
Wednesday, 3/16/2016
Time: 9:00-9:35
Title: 3D Printed Plug-In Hybrid Vehicle Additive Manufacturing in Intergrated Energy Systems

ABSTRACT

The Tennessee Environmental Literacy Plan: Roadmap for Achieving Environmental Literacy in our state. The Tennessee Environmental Literacy Plan was completed July 23, 2012 but has not been adopted by the Tennessee Board of Education. The purpose of this plan is to advance national education goals by creating and implementing plans to enrich the curriculum with environmental education, thus giving teachers and students new opportunities to take learning outside. Part of the No Child Left Inside initiative, the plan identifies steps needed to achieving environmental literacy in our state.

Despite the immense need, integrating environmental education into school curriculum in Tennessee has been challenging. For

ABSTRACT

This presentation summarizes the design and integration of a range extended plug in hybrid vehicle powered by a natural gas which can provide power to house through wireless power transfer. The

example, as a result of the No Child Left Behind Act, teachers have been limited in the amount of time spent on environmental education and science in order to focus more on the testing standards required for math and language arts. Other barriers to integration include the limited amount of professional development opportunities for teachers, and reduced time and resources for field trips and outdoor activities. This session will focus on an overview of the purposes and goals of this plan and implementation steps being taken at the state level.

school's gardening, honeybee, and poultry programs. She is also the East Tennessee chair of the Every Child Outdoors Tennessee Coalition (ECO-TN) and a board member at large for the Tennessee Environmental Education Association. She is dedicated to bring environmental literacy to all students in Tennessee.

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Session(s)

Innovation + Sustainability, **Session**
Three
Wednesday, 3/16/2016
Time: 10:45-11:20
Title: Tennessee Environmental Literacy Program

Mr. Troy Ebbert

MTPO Coordinator
City of Kingsport

Kingsport Metropolitan Transportation Planning Organization

ABSTRACT

The Tennessee Environmental Literacy Plan was completed July 23, 2012 but has not been adopted by the Tennessee Board of Education. The purpose of this plan is to advance national education goals by creating and implementing plans to enrich the curriculum with environmental education, thus giving teachers and students new opportunities to take learning outside. As part of the No Child Left Inside initiative, the plan identifies steps needed to achieving environmental literacy in our state.

Despite the immense need, integrating environmental education into school curriculum in Tennessee has been challenging. For example, as a result of the No Child Left Behind Act, teachers have been limited in the amount of time spent on environmental education and science in order to focus more on the testing standards required for math and language arts. Other barriers to integration include the limited amount of professional development opportunities for teachers, and reduced time and resources for field trips and outdoor activities. This session will focus on an overview of the purposes and goals of this plan and implementation steps being taken at the state level.

EDUCATION:

B.S.-Geography, East Tennessee State University

BIOGRAPHY

Mr. Ebbert is a graduate of East Tennessee State University and a Certified Flood Plain Manager (CFM). He served as a Community Planner for the Tennessee Local Planning Assistance Office until it was eliminated. He went on to serve Washington County, TN as Principle Planner and Special Projects Coordinator, assisting with the successful Qualifying Local Programs (QLP) pilot program while administrating the Planning Program and National Flood Insurance Program (NFIP) for the county. Currently he is the Kingsport Metropolitan Transportation Planning Organization Coordinator working with Tennessee Department of Transportation for long range transportation planning.

CONTACT INFORMATION

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troyebbert@kingsporttn.gov

Session(s)

Innovation + Sustainability, **Session**
Five
Tuesday, 3/15/2016
Time: 1:50-2:25
Title: ATRA and Kingsport's Multimodal Grant

Mr. Patrick "Pat" J Flood

Director, Solid Waste Management Division
State of Tennessee
Department of Environment and Conservation

EDUCATION:

M.S.-Civil Engineering, Purdue University
M.B.A.-Clemson University
B.S.-Civil Engineering, Illinois Institute of Technology

BIOGRAPHY

Mr. Flood is currently the Director of the Tennessee Department of Environment and Conservation's (TDEC's) Division of Solid Waste Management, having started in this position in August of 2012. The Division consists of approximately 140 solid waste professionals located at the central office in Nashville and in eight field offices throughout the state.

Mr. Flood has worked in the solid waste industry since 1991, mainly in the fields of engineering and construction oversight. Immediately prior to his appointment to TDEC, he was the manager for AECOM's Oak Ridge, TN office and was also the Solid Waste Practice Area Leader for AECOM's South Region. In this role, he managed solid waste design and CQA efforts throughout the south and supported projects throughout North America, including the U.S., Canada, and Mexico.

He received a B.S. in Civil Engineering from the Illinois Institute of Technology in 1982, a M.S. in Civil Engineering (specializing in Geotechnical Engineering) from Purdue University in 1986, and received a Master's in Business Administration from Clemson

Ms. Ansley Eichhorn

Environmental Programmer and Admission's Director
Ivy Academy

EDUCATION:

B.A.-English/Creative Writing, University of Tennessee-Chattanooga

BIOGRAPHY

Ms. Eichhorn is an Environmental Programmer and Admission's Director at Ivy Academy, Tennessee's first Environmental Charter School. She teaches AgriScience in the classroom and runs the

University in 2001. He has been a registered engineer in 14 states and also sits on the Professional Engineers Civil Exam Committee for the National Council of Examiners for Engineers and Surveyors. He currently resides outside of Nashville with his wife and the youngest of his three children.

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Session(s)

Environment, **Session**
Two
Tuesday, 3/15/2016
Time: 10:40-11:15
Title: Tennessee Division
of Solid Waste
Management Update

Panel, **Session** Six
Tuesday, 3/15/2016
Time: 3:05-3:45
Title: Summary Panel
Discussion

CONTACT INFORMATION

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Session(s)

Innovation +
Sustainability, **Session**
Four
Tuesday, 3/15/2016
Time: 1:10-1:45
Title: "Go Green With Us"
in Tennessee State Parks

ABSTRACT

Melton Hill Sustainable Recreation Area Findings and Results:

The Tennessee Valley Authority (TVA) utilized the interdisciplinary approach to develop and upgrade facilities at the Melton Hill Recreation Area to demonstrate functional renewable energy and water conservation treatments. Recreation Area includes interpretive signage, web-based self-guided tour and real-time dashboard. Project monitoring and verification is provided by the Electric Power Research Institute (EPRI) for third-party data collection and analysis.

ABSTRACT

Session 2: The presentation will provide an update on the past year's activities of the Division of Solid Waste Management as well as a look-ahead to expected activities over the next year. Topics will include internal changes to the Division (including staffing updates), Divisional initiatives started or planned, and proposed regulatory changes started or planned. Special emphasis will be placed on the status of the 2025 Statewide Solid Waste Plan. Additional updates will be provided on changes to EPA regulations (especially the Definition of Solid Waste and the Coal Combustion Residual Rules) and their impact on TDEC and stakeholders. Finally, although it will be early in the legislative session, if the Division is aware of any proposed legislation that may affect the Division or its stakeholders, this information will be presented.

Session 6: This session is a panel discussion including questions and answers with our distinguished speakers that are available for the day.

Mr. Gary Garfield

CEO & President
Bridgestone Americas, Inc.

EDUCATION:

Law Degree, University of Cincinnati
B.A.-Philosophy and Political Science, Wittenberg University

BIOGRAPHY

Mr. Garfield is Chairman, Chief Executive Officer and President of Bridgestone Americas (BSAM) and Executive Vice President and Executive Officer of Bridgestone Corporation. As CEO of BSAM, a subsidiary of the world's largest tire and rubber company, he oversees all BSAM operations across five continents. BSAM accounts for about 45 percent of the global revenue of Bridgestone operations worldwide, making it the company's largest subsidiary. With more than 55,000 teammates worldwide, BSAM manufactures and markets a wide range of tires for a variety of applications primarily under the Bridgestone and Firestone brands. Among other business units, BSAM also owns and operates the world's largest automotive service and tire retailer, a world's leading commercial roofing and building products company, and the worldwide leader in vehicle and equipment air spring technology. In March 2010, after serving as Vice President and General Counsel for three years, Mr. Garfield assumed the role of CEO and President of Bridgestone Americas, Inc. After being named Senior Vice President of Bridgestone Corporation in September 2014, he was promoted to his current role, Executive Vice President in January 2016.

In 1991, Mr Garfield joined then-Bridgestone/Firestone, Inc. in Nashville, TN, serving as Senior Counsel. In 1995, he was promoted to the position of General Counsel for Bridgestone Firestone Tire Sales Company. In 2002, he was named Vice President and General Counsel of Bridgestone Firestone North American Tire, LLC. In 2007, Mr. Garfield accepted the positions of Vice President, General Counsel, Chief Compliance Officer and Secretary of Bridgestone Americas, Inc., positions in which he had served in an "acting" capacity since 2006.

In addition to his work at Bridgestone, Mr. Garfield serves as a member of the board of several charitable and industry organizations, including the United Way of Middle Tennessee, Meharry Medical College, and the Rubber Manufacturer's Association. He joined the Board of Visitors – Vanderbilt Owen Graduate School of Business in 2011, and in 2012 was named National Chair for the Take Steps Be Heard walk program for the Crohn's and Colitis Foundation of America. He was a 2013 member of the Greater Nashville Executive Leadership Team for the

Mr. Jerry G. Fouse

Recreation Strategy Specialist
Tennessee Valley Authority

EDUCATION:

M.B.A.-University of Richmond, Virginia Tech
B.S.-Forestry and Wildlife

BIOGRAPHY

Mr. Fouse retired as Tourism Development Manager from the Virginia Tourism Authority after 29 years of service. He held positions as Grants Manager with the Virginia Tobacco Commission, Marketing Manager with the Economic Development Partnership, and Regional Manager for the Department of Economic Development's Southwest Regional Office in Abingdon, VA. His staff delivered state economic development services to communities in a 17 county region. He worked in economic and tourism development from 1989-2004. Mr. Fouse served in Richmond as an Assistant Division Chief for the Department of Game and Inland Fisheries and began work for the Commonwealth of Virginia in 1974 as an Outdoor Recreation Planner. He is a native of Smyth County, VA and enjoys church, outdoor sports, gardening and he is married to the former Miss Sue-Anne Shotwell of Fredericksburg, VA. They have three children ages 34, 30, 24 and a grandson.

American Heart Association and served as the 2015 Heart Walk Co-Chairman. In 2015, Mr. Garfield was also elected to the Board of Directors for Piedmont Natural Gas, and the Rubber Manufacturers Association elected him to serve as the organization's Chairman of the Board of Directors.

CONTACT INFORMATION

615-937-1433

Session(s)

Plenary Open, **Session**
Keynote I
Tuesday, 3/15/2016
Time: 9:15-9:40
Title: Keynote

ABSTRACT

Keynote Speaker

Ms. Mary Halley

Associate Consultant
AMEC Foster Wheeler

EDUCATION:

M.S.-Engineering (Water Resources), University of South Florida
B.S.-Physics, University of South Florida

BIOGRAPHY

Ms. Halley is an Associate Consultant working in Amec Foster Wheeler's Knoxville office. Her main area of expertise is environmental regulation consulting for municipal and county governments in the southeast United States. Her work focuses primarily on MS4 permit compliance, water quality program management, and stormwater user fee business planning. Ms. Halley has experience working with numerous local governments in four different Environmental Protection Agency regions and with single jurisdiction and multi-jurisdictional stormwater management initiatives. In Tennessee, her most recent work is focused on the implementation of green infrastructure approaches in local land development regulations.

CONTACT INFORMATION

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Session(s)

Panel, **Session** 4,5+6
Tuesday, 3/15/2016
Time: 1:10-3:45
Title: Importance of Soil
and Vegetation to Water
Quality / Panel
Discussion

ABSTRACT

In the past 5 years, both Environmental Protection Agency and Tennessee Department of Environmental and Conservation have turned their focus to green infrastructure as the preferred approach for permanent stormwater management in new land developments, often invoking requirements for the use of "green" stormwater control measures through permits and consent decrees. Many of these stormwater control measures rely heavily on the natural hydrologic mechanisms of rainfall infiltration and evapotranspiration to manage stormwater, thus removing pollutants from the post-land development hydrologic system. Because of this, the health of soil and vegetation is critically important to how well the stormwater control measures manage water quality. This presentation will educate the audience on: the changes in hydrologic cycle that occur as land develops; the value of infiltration and evapotranspiration to stormwater control; and how proper management of soil and vegetation can increase the effectiveness and operational life of green stormwater control measures.

Mr. Jeff Gowdy

Founder, Lead Consultant
J. Gowdy Consulting

EDUCATION:

M.B.A.-Vanderbilt University, 2006
B.S.-Systems Engineering; University of Virginia, 1997

BIOGRAPHY

Mr. Gowdy is a May 2006 graduate of Vanderbilt University's Owen Graduate School of Management. He is the Founder and Lead Consultant for J. Gowdy Consulting in Nashville, TN, and has consulting experience in the area of environmental sustainability with multiple organizations, including BluSkye Sustainability Consulting, Bridgestone, Cumberland River Compact, GreenOrder Consulting (client: GE), and World Wildlife Fund. Prior to attending Vanderbilt, he has served as a Programmer, Trainer, Team Leader, Project Manager, and Senior Consultant for American Management Systems (AMS) in DC for over 6 years. He led projects in the media and communications division of AMS. Clients included BellSouth, Verizon, E3G (Lisbon, Portugal), and US LEC.

Mr. Gowdy is a 1997 graduate of the University of Virginia with a B.S. in Systems Engineering. As a youth he attained the rank of Eagle Scout and as an adult volunteered on several long-term habitat and disaster relief trips.

CONTACT INFORMATION

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Jeff@JGowdyConsulting.com

Session(s)

Innovation +
Sustainability, **Session**
Two
Tuesday, 3/15/2016
Time: 10:40-11:55
Title: Zero Waste

ABSTRACT

This presentation will discuss at length the major hurdles to going Zero-Waste-To-Landfill and what you as an environmental and/or other manager can do to overcome these obstacles.

Mr. John Hargraves

Regional Manager
PM Environmental, Inc.

EDUCATION:

B.S.-Geology, Tennessee Technological University

BIOGRAPHY

Mr. Hargraves, P.G., is a Regional Manager and Senior Project Manager at PM Environmental, Inc. and has served clients throughout the U.S. for over 25 years. He specializes in Brownfield Redevelopment, Grants/Alternate Funding Sources, Economic Development Incentives, Environmental Due Diligence, Phase II Environmental Site Assessments (ESAs), Remediation, and Leaking Underground Storage Tanks (LUST). Mr. Hargraves had directly managed over \$25 million of municipal, state, and private contracts involving site characterization, initial remediation, remediation design, system maintenance and site monitoring involving impacts from petroleum, solvents, volatile compounds, metals, PCBs, and other materials.

Mr. Hargraves earned his B.S. from Tennessee Technological University and is a certified professional geologist in nine states.

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hargraves@pmenv.com

Session(s)

Special Interest, **Session**
Four
Wednesday, 3/16/2016
Time: 11:25-12:00
Title: Rural Brownfield
Success Stories in Mid
South

ABSTRACT

This presentation will showcase various Brownfield success stories (and on the way to success stories) in rural communities, including the funding mechanisms and incentives that were used during the redevelopment. Also, detailing consistent characteristics of the Brownfield programs that helped with the success. Communities highlighted may include Union City, TN, Salltillo, TN, Upper Cumberland TN region, Campbell County, TN, Golden Triangle Region in MS.

He has extensive experience in utility research and development including generation, technologies, distributed resources, storage, and environmental regulations. Some of his key responsibilities have included environmental policy, R&D strategy, and retail regulation while serving in numerous TVA organizations including River Operations, Customer Relations, and Office of CEO.

Dr. Hoagland has served on boards and committees for several industry related organizations including EPRI, SEPA, Electricity Storage Association, Department of Energy, and CASL.

Dr. Hoagland is currently a member of the Board of Directors for CASL and SEPA. He also serves on EPRI's Executive Resource Advisory Committee and is a Fellow for Energy Policy at the Howard H. Baker, Jr. Center for Public Policy.

CONTACT INFORMATION

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Session(s)

Industry + Energy,
Session Two
Wednesday, 3/16/2016
Time: 9:40-10:15
Title: TVA's Integrated
Resource Plan

ABSTRACT

Dr. Hoagland will present on Tennessee Valley Authority's (TVA's) 2015 Integrated Resource Plan (IRP) which sets a direction for how TVA will meet the long-term energy needs of the Tennessee Valley region economically, while supporting TVA's equally important mandates for environmental stewardship and economic development across the valley.

Mr. Anthony Hogan

Deputy Director
State of Tennessee, Environment and Conservation
Office of Radiological Health

EDUCATION:

M.P.A.-East Tennessee State University
B.S.-Biology, East Tennessee State University

BIOGRAPHY

Mr. Hogan is currently serving as the Deputy Director of the Division of Radiological Health in Tennessee Department of Environment and Conservation. Mr. Hogan has a total of 23 years of Health Physics experience. He served in the private sector as the Corporate RSO for the Siemens Medical Molecular Imaging Solutions for six years. Mr. Hogan has been with the Division for a total of 17 years, during that time he served as a Health Physicist Inspector, Supervisor and Field Office Manager conducting inspection of x-ray and radioactive materials license holders throughout the State the Tennessee. In April 2011, Mr. Hogan was promoted to the Deputy Director position within the Division of Radiological Health with responsibilities for all technical sections of the Division. He actively participates in emergency response activities and has served in all functions within the Division, including Field Team Captain, DRH Coordinator in the RMCC, Information Officer in the JIC, and currently as the alternate RCO in the SEOC.

Mr. Hogan earned a B.S. degree in biology from East Tennessee State University in 1990 and a Master of Public Health degree in 1992 from East Tennessee State University. He currently has certification as a Certified Hazardous Materials Manager from IMHH.

Dr. Joe Hoagland³

Vice President, Stakeholder Relations
Tennessee Valley Authority

EDUCATION:

Ph.D.-Physical Chemistry, Washington State University
M.S.-Physical Chemistry, Washington State University
B.S.-Chemistry, Southern Utah University

BIOGRAPHY

Dr. Joe Hoagland is Vice President of Stakeholder Relations and is Tennessee Valley Authority's (TVA's) Designated Federal Officer for both the Regional Energy Resource Council and the Regional Resource Stewardship Council. He is responsible for strategic engagement of stakeholders around various issues including TVA's energy resources, natural resource stewardship, and other key issues. In addition, Dr. Hoagland directs TVA's strategy on technology innovation research, development, and implementation to improve TVA's power system.

³ Dr. Hoagland replaced by Gary Brinkworth (see page 26)

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Session(s)

Health, **Session** Six
Tuesday, 3/15/2016
Time: 3:05-3:45
Title: Reducing Ionizing
Radiation Exposure for
Patient Medical Imaging

ABSTRACT

This presentation will discuss improving the public health through smart choices and reducing the amount of ionizing radiation exposure in medical imaging to patients. With a brief discussion on the State of Tennessee Division of Radilogical Health's historical efforts throughout the years to reduce ionizing radiation exposure to patients focusing on the dental imaging awareness and exposure reduction initiative and our "Radium Roundup" project. He will focus on and discuss the on-going national awareness campaigns to reduce exposures from medical imaging to pediatric and adult patients. These awareness campaigns to reduce exposure are the "Image Gently" campaign for pediatric imaging and the "Image Wisely" campaign for adult imaging radiation exposure reduction. Maintaining the quality of images while reducing the exposure to patients is a winning strategy for both the patients and the practitioner.

Mr. Berny Ilgner

Principal Scientist
Arcadis

EDUCATION:

B.S.-Geology, Tennessee Tech University

BIOGRAPHY

Management of environmental liability and associated allocation of reserves is important to ensure risks posed by contamination are understood such that they can be adequately managed. Defining these risks can be framed in development of a Conceptual Site Model that integrates geologic, hydraulic, contamination, risk, and land use data. With a robust CSM, a responsible party can make informed decisions on how to move a project through the regulatory process aligned with its business goals. An example will be discussed that utilized innovative investigative methods to define the extent of TCE contamination at a manufacturing site which is situated over a drinking water aquifer. Working closely with both the regulators and responsible party allowed risks to be defined such that liabilities were known and accurate environmental reserves could be allocated.

CONTACT INFORMATION

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Session(s)

Industry + Energy,
Session Four
Wednesday, 3/16/2016
Time: 11:25-12:00
Title: Environmental
Reserves/Liability
Management: Use of
Innovative Methods for
Conceptual Model
Development

ABSTRACT

Mr. Ilgner is a Principal Scientist with ARCADIS in their Knoxville, Tennessee office. He earned a Bachelor of Science degree in geology from Tennessee Tech University in 1978. After 10 years in the mining and petroleum industries, his focus turned to environmental evaluations and site cleanup. With ARCADIS since 1988, he has been managing environmental cleanup, watershed assessment, ecological evaluation, and brownfields redevelopment projects for the public and private sectors throughout the world.

Dr. Roderick Jackson

Building Envelope Systems Research Group
Oak Ridge National Laboratory

EDUCATION:

Ph.D.-Mechanical Engineering, Georgia Institute of Technology
M.S.-Mechanical Engineering, Georgia Institute of Technology
B.S.-Mechanical Engineering, Georgia Institute of Technology

BIOGRAPHY

Dr. Roderick Jackson is the group leader of the Building Envelope Systems Research Group of ORNL's Building Technologies Research and Integration Center. He is also the principle investigator for the Additive Manufacturing Integrated Energy (AMIE) demonstration project, which brings together expertise from multiple research teams across ORNL, partners from industry, and DOE. He is a member of ASHRAE. Dr. Jackson holds a BS, a MS, and a Ph.D. in Mechanical Engineering from Georgia Institute of Technology.

CONTACT INFORMATION

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Session(s)

Innovation +
Sustainability, **Session**
One
Wednesday, 3/16/2016
Time: 9:00-9:35
Title: 3D Printed Plug-In
Hybrid Vehicle Additive
Manufacturing in
Integrated Energy
Systems

ABSTRACT

Oak Ridge National Laboratory's Additive Manufacturing Integrated Energy (AMIE) project (www.ornl.gov/amie) was inspired by asking what if? What if our vehicles could be used to power our buildings and our buildings could be used to power our vehicles? When combined with solar power, energy storage, energy management, and available grid services, could this integrated energy vision provide an affordable, reliable, and connected energy system to answer the energy challenges of today (e.g. electricity outages caused by extreme weather events, energy poverty around the globe, and intermittent renewable generation). ORNL's AMIE leverages rapid innovation through additive manufacturing to connect a natural-gas-powered hybrid electric vehicle to a home designed to produce, consume, and store renewable energy. The building and vehicle components were additively manufactured (3D printed) using the laboratory's advanced manufacturing capabilities. The printed utility vehicle's (PUV) natural gas engine extends vehicle range and produces power for both vehicle and building; energy flows between the two using fast, efficient bi-directional wireless power transfer—a first for level 2 charging. Finally, energy is stored in the home in recycled batteries that were once used to power a Fiat 500e. The story of how this was successfully accomplished in 9 months with over 20 industry partners will be presented.

Mrs. Tyler Jeffrey

External Affairs Director
State of Tennessee
Department of Environment and Conservation

EDUCATION:

M.S.-Geosciences, concentration in Applied Meteorology, Mississippi State University, 2012
B.S.-Psychology, The University of Tennessee at Knoxville, 2006
B.S.-Geosciences, Mississippi State University, 2010

BIOGRAPHY

Mrs. Jeffrey is the Regional Director for External Affairs for the Tennessee Department of Environment and Conservation in the Chattanooga Field Office. Since joining TDEC in January 2013, Mrs. Jeffrey has played an active role in outreach to the local engineering and general contracting communities in Chattanooga and has implemented a roundtable for these professionals to meet, discuss and ask questions to Department staff on a quarterly basis.

Prior to joining TDEC, Mrs. Jeffrey spent the majority of her career in the engineering and general contracting industries. She was the lead Environmental Scientist on two major roadway projects in the area with the consulting engineering firm, Volkert, Inc. and served as a contractor administrator with Morgan Construction Company and Kuebler Builders from 2009-2011.

Mrs. Jeffrey is a life-long Chattanooga, TN resident. She earned a Master of Science in Geosciences from Mississippi State University in 2012 and also holds a B.S. in Operational Meteorology & Climatology from Mississippi State, and a B.A. in Psychology from the University of Tennessee at Knoxville. She is a Certified Professional in Erosion and Sediment Control (CPESC-IT in training status), and is a NOAA Weather-Ready Ambassador for the Department. Mrs. Jeffrey and her husband, Will, live on Signal Mountain and her hobbies include running, hiking, cooking and spending time outdoors with their coonhound, Stormy Weather.

CONTACT INFORMATION

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Session(s)

Environment, **Session**
Three
Wednesday, 3/16/2016
Time: 10:45-11:20
Title: Moving Beyond
Compliance

ABSTRACT

Mrs. Jeffrey began her career at TDEC as the Chattanooga Regional Director of External Affairs in January 2013. Prior to joining the TDEC External Affairs Team, she was an Environmental Scientist with a private consulting engineering firm in Chattanooga, TN and was the lead Environmental Scientist on two major roadway projects in The State of Tennessee.

Specifically within her role at TDEC, Mrs. Jeffrey has focused on expanding her outreach efforts to local engineering and consulting firms as well as general contractors, developers, and home builders associations to build stronger business relationships with the Department and foster an environment of open communication that is shared with them on a consistent and regular basis.

At the 2016 Tennessee Environmental Conference, Mrs. Jeffrey would welcome the opportunity to host a Consultant Roundtable for the consultants and engineers. This would give consultants and engineers from other parts and areas of the state the opportunity to discuss topics together as a group and the ability for the Department to hear how we can better serve these key regulatory communities in the future. It will also be a good time to

brainstorm how to replicate these roundtables across the state and discuss other ways to continue fostering these meaningful partnerships and other ideas for outreach.

Ms. Lauren Johnson

Sustainability Manager
Eastman Chemical Company

EDUCATION:

B.S.-Chemical and Biomolecular, The University of Tennessee, 2011

BIOGRAPHY

Ms. Johnson is a member of the sustainability team and is a vocal advocate for sustainability at Eastman Chemical Company. Previously, she led Eastman's environmental Life Cycle Assessment (LCA) Team for two years and helped develop the LCA program into a high-functioning and highly engaged part of the company. Prior to leading the LCA Team, she worked in the Research Pilot Plant and led a product development and commercialization team.

In her free time, Ms. Johnson is active in volunteer organizations. She is the secretary of the Johnson City Housing and Community Development Advisory Board and is the founder, education coordinator and immediate past president of the Tri-Cities, TN Professional Chapter of Engineers Without Borders-USA. Ms. Johnson has been with Eastman for about 5 years and holds a B.S. in Chemical and Biomolecular Engineering and Chemistry from The University of Tennessee.

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Session(s)

Innovation +
Sustainability, **Session**
Six
Tuesday, 3/15/2016
Time: 3:05-3:45
Title: Life Cycle
Assessments Reducing
the Environmental
Footprint

ABSTRACT

Sustainability has been a part of Eastman since the company's founding in 1920 and is embedded in everything we do. At Eastman, we believe that doing what's good for the planet, our employees, our communities, our customers, and our shareholders is also good for the sustainability of our business. One tool Eastman uses to inform decisions within the company is Life Cycle Assessment (LCA). Eastman began to apply LCA principles in the 1990s, and in 2009 the company embarked on an effort to develop in-house LCA capabilities. Life Cycle Assessment is a holistic approach used to quantify the potential environmental impacts of a product or activity throughout its life cycle—from raw material and resource extraction to manufacture, consumer use, and end of life. Results from LCA studies can be used to inform decisions at many levels, including design considerations, corporate strategy, and policy.

Today, the potential environmental impacts of 3/4 of Eastman's products have been characterized using LCA. The Eastman LCA Team seeks to create long-term value for Eastman, its value chain partners, and its stakeholders by leveraging our expertise to drive environmentally, socially, and economically sustainable choices. Eastman's commitment to reducing its environmental impacts coupled with progress on LCA has enabled successes in the company's business, marketing, procurement, sales, and innovation organizations. Several case studies will be shared in this presentation demonstrating how LCA influences decisions and creates value for both Eastman and its stakeholders.

Dr. David Kirschke

Medical Director
Northeast Regional Health Office
Department of Health

EDUCATION:

M.D.-University of Florida

BIOGRAPHY

Dr. Kirschke attended medical school at the University of Florida and trained in Family Practice at Tallahassee Memorial Hospital. He spent two years as a Commissioned Officer in the Epidemic Intelligence Service with the Centers for Disease Control stationed at the Tennessee Department of Health (2001-2003). During that time he was involved in investigating a case of bioterrorism-related anthrax in Connecticut and SARS transmission on airlines. He spent four years (2003-2007) as Assistant Medical Director of the Northeast Tennessee Regional Health Department and three years (2008-2010) as the Deputy State Epidemiologist at the Tennessee Department of Health in Nashville.

Dr. Kirschke is currently the Medical Director of the Northeast Tennessee Regional Health Department, where he oversees communicable and environmental diseases and emergency preparedness, primary care, and dental services. He is adjunct faculty in the East Tennessee State University School of Public Health.

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Session(s)

Health, **Session** Five
Tuesday, 3/15/2016
Time: 1:50-2:25
Title: Hepatitis C
Surveillance, Control &
Prevention

ABSTRACT

East Tennessee has among the highest rates of hepatitis C infection in the country. It is driven primarily by the epidemic of injection drug use which in turn is driven by the epidemic of prescription drug abuse. We will discuss these co-occurring epidemics, sometimes called a syndemic, and the potential impact on other blood borne diseases like HIV infection. Control and prevention will require increased surveillance and politically sensitive measures such as syringe exchange programs.

Mr. Brad Kreps

Clinch Valley Program Director
The Nature Conservancy

EDUCATION:

M.S.-Geography, Environmental Policy, The University of Tennessee
B.S.-Anthropology, James Madison University

BIOGRAPHY

Mr. Kreps leads The Nature Conservancy's Clinch Valley Program: a bi-state watershed conservation program in southwest Virginia and northeastern Tennessee that has protected more than 35,000 acres of critical natural habitat. This includes a string of nature preserves along the Clinch and Powell Rivers, more than 22,000 acres of working forestlands, several state natural areas, and numerous conservation projects with private landowners. Mr. Kreps also chairs the Clinch Powell Clean Rivers Initiative (CPCRI). Through CPCRI he works a wide variety of agency partners to protect water quality, restore lands, and improve the health of globally rare and endangered freshwater mussels.

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Session(s)

Environment, **Session**
Two
Wednesday, 3/16/2016
Time: 9:40-10:15
Title: Clinch Powell Clean
River Initiative

ABSTRACT

The panel will summarize the work, partnerships, and results of the Clinch Powell Clean Rivers Initiative (CPCRI). CPCRI is a bi-state effort to protect and restore aquatic species and water quality in the Clinch and Powell Rivers. These two rivers, which begin in Virginia and flow into Tennessee, harbor some of the greatest biodiversity in North America. However, rare freshwater mussels, one of the rivers' leading indicators of environmental health are showing signs of serious decline in some river sections. The reasons for this decline are complex and have historically been a point of contention between Tennessee and Virginia.

In response to this challenge, the CPCRI formed in 2008 as a collaborative bi-state effort including an array of state and federal agencies, scientists, and The Nature Conservancy. CPCRI has developed a coordinated science and monitoring program to diagnose water quality stressors and take informed actions to remediate them. Results are emerging and additional monitoring and scientific analysis is planned. We are beginning to see a pattern of associations between mussel decline and elevated dissolved solids, certain major ions, and certain metals. The results are informing both regulatory and non-regulatory decisions and actions aimed at reducing relevant stressors and improving water quality. CPCRI involves a wide range of partners so emerging results are influencing a variety of strategies related to Clean Water Act implementation, land and water restoration, mussel augmentation, abandoned mined land reclamation, and outreach to local communities.

Mr. Andy Likes

Vice President
The Vandiver Group, Inc.

EDUCATION:

The Poynter Institute-St. Petersburg, FL-The Producing
Newscasts,-2005
B.A.-Urban Studies (Political Science, Economics and Sociology)
Rhodes College, Memphis, TN,-1994

BIOGRAPHY

Mr. Likes is a former broadcast journalist with more than 11 years of TV experience. He now leads the media relations, crisis communications and executive training practice area for The Vandiver Group Inc., a St. Louis based strategic communications firm. He has 10+ years of experience in training and strategic communications.

Mr. Likes knows stories. He has a unique look at stories and the media, from both sides of the desk. He has successfully pitched local, regional and national news stories. Mr. Likes has developed presentation skills and storytelling curriculums for Fortune 500 companies and state agencies. He has helped brainstorm and tell the right story to accentuate media relations, grow brands, increase stakeholder involvement and distribute mission critical information in a timely manner.

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Session(s)

Plenary Open, **Session**
Keynote I
Wednesday, 3/16/2016
Time: 8:25-8:45
Title: Open Keynote

BIOGRAPHY

Ms. Manners is an environmental professional with 16 + years of experience. For the past 6 years, Ms. Manners has been involved with waterborne illness and research related activities at the Tennessee Department of Health.

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Session(s)

Health, **Session** One
Tuesday, 3/15/2016
Time: 10:00-10:35
Title: Investigations of
Private Drinking Water
Quality

ABSTRACT

Stories move people! There is a reason you remember school, vacation or family stories from when you were younger. There is a reason you remember exactly where you were when the space shuttle "Challenger" exploded, when the first plane hit the World Trade Center or when your favorite team won a championship. Positive, negative or neutral, the right story can be engaging and most importantly memorable. This session will explore how to find your organization's story. From best practice examples to fine-tuning the words to maximize the potential for success, this session will walk you through the art and science of storytelling.

ABSTRACT

An estimated 650,000 Tennesseans obtain their household water from private wells or springs while only 15% percent of well users treat the water before drinking. To examine private drinking water quality, the Tennessee Department of Health conducted a study of private well water during 2014 and is currently expanding the initial study to include identification and sampling of springs used as private water supply. Study objectives are to identify geographic areas of concern and to provide water treatment and water quality information to people in communities without access to public drinking water. Results from 6 geographic areas in middle and east Tennessee show radon concentrations ranging from 30.2 – 8,878 pCi/L and averaging 844 pCi/L with the eastern regions of the state having the highest concentrations. Coliform bacteria and nitrate/nitrite concentrations were higher in southern middle Tennessee. Metals results varied across the state; however, aluminum, iron, manganese, and zinc were common in concentrations above EPA secondary maximum contaminant levels set for public water supplies. Localized risk maps are being created using these results and preexisting soil and geologic GIS data.

Mr. L Shawn Lindsey

Director of Public Works
City of Athens, TN

EDUCATION:

M.P.M.-East Tennessee State University
B.S.-Political Science, East Tennessee State University

BIOGRAPHY

Mr. Lindsey was the youngest Public Works Director in the State of Tennessee at age 23. He has worked in Public Works for the last 17 years in three different municipalities. He has lead Athens to winning two Governor's Environmental Stewardship Awards and was a former Keynote Speaker to the Tennessee Environmental Show of the South. Mr. Lindsey has won several awards including Tennessee Public Works Young Man of the Year and Tennessee Public Works Leader of the Year. He has been married for 18 years and has three sons. He has won over nine million dollars of grants for Athens in the past 10 years including various environmental grants, transportation grants, and private grants.

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Session(s)

Panel, **Session** One
Wednesday, 3/16/2016
Time: 9:00-9:35
Title: TDEC Grants

Mr. Robert J Martineau, Jr.

Commissioner
State of Tennessee
Department of Environment and Conservation

EDUCATION:

J.D.-University of Cincinnati
B.A.-St. John's University

BIOGRAPHY

Robert "Bob" Martineau was selected seventh Commissioner of the Tennessee Department of Environment and Conservation (TDEC) by Tennessee Governor Bill Haslam in January 2011. Martineau's intellect, drive, commitment and affinity for Tennessee are evident in his work as Commissioner. He leads TDEC with a results-focused approach emphasizing:

- outstanding customer service,
- outreach and proactive education, and
- effective partnerships to strengthen environmental protection in Tennessee.

His environmental leadership at TDEC has been recognized at the national level as he was elected by his peers as President for the Environmental Council of the States (ECOS), the national association of state environmental officers. This is the first time a head of TDEC has been elected to any top leadership post at ECOS. As a respected voice, he has testified before Congress, sharing the states' perspective on emerging environmental issues like modernizing the Clean Air Act, regulation of coal ash, and the balance of responsibilities between states and federal government in environmental management.

Ms. Judy Manners

Environmental Health Specialist
Tennessee Department of Health

EDUCATION:

M.Sc.-Biology, Murray State University
B.S.-Agriculture, Western Kentucky University
B.S.-Biology, Western Kentucky University

Commissioner Martineau has spent more than 30 years as an attorney in the field of environmental law. This includes seven years of service in the Office of General Counsel for the U.S. EPA in Washington, D.C. (1988-1994) and 16 years as a partner in private practice at the Waller Law Firm in Nashville where he was recognized in Best Lawyers in America and Chambers USA for his expertise in environmental law. In private practice, Commissioner Martineau helped clients, including business and local government, anticipate issues proactively, navigate permit processes, solve problems and establish effective environmental management programs. He was co-editor of American Bar Association's The Clean Air Act Handbook and has authored a variety of substantive articles on critical environmental topics. He also co-authored a newly published book "Plain English for Drafting Statutes and Rules." In October 2014, Commissioner Martineau was also recognized by his peers in the environmental law world when he was named a Fellow in the American College of Environmental Lawyers.

Mr. Martineau is a member of the Air and Waste Management Association and a former council member of the Section of Natural Resources, Energy and Environmental Law of the American Bar Association. He is a graduate of Leadership Nashville and also active in the community, currently serving on the Board of the Legal Aid Society of Middle Tennessee and the Cumberlands. He is past president of the Tennessee Chapter of the Cystic Fibrosis Foundation and First Steps. In November 2013, the Women's Political Collaborative of Tennessee honored Commissioner Martineau by officially naming him a recipient of their annual Good Guy Award due his outstanding advocacy of women, women's issues and the community. In October 2014, the Nashville Business Journal named him one of the "Most Admired CEOs" in the region.

Commissioner Martineau earned his law degree at the University of Cincinnati and holds an undergraduate degree from St. John's University (Minnesota). He enjoys an occasional round of golf at any of the Tennessee State Parks' golf courses, sharing his popular "Where to Eat in Nashville" guide and entertaining friends and family with his wife, Pamela Eddy.

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Session(s)

Plenary Lunch, **Session**
Keynote II
Tuesday, 3/15/2016
Time: 12:00-1:05
Title: Luncheon Keynote /
"25 Years of Environment
and Conservation"

ABSTRACT

Keynote Luncheon / "25 Years of Environment and Conservation"

Mr. Tony Melson

Manager, Global HSES, Audit Program
Eastman Chemical Company

EDUCATION:

B.S.-Chemical Engineering, Tennessee Technological University
University Air National Guard, Academy of Military Science
U.S.A.F. Air University, Squadron Officers School
U.S.A.F. Air University, Air Command and Staff College

BIOGRAPHY

Mr. Melson is a native Tennessean and a 20-year employee of Eastman Chemical Company. Previous experience includes Manufacturing, Research & Development, Technical Service, Business Management, Site Management for an international manufacturing facility, HSE leadership, and regional management for Global Environmental Affairs for Eastman Chemical Company. In addition, he retired as a Lieutenant Colonel from the Air National

Guard in 2011 after successive assignments as Intelligence Officer, Security Forces Squadron Commander and Wing Executive Officer for the 134th Air Refueling Wing in Knoxville, TN. In his military career, he has directed the work of safety, environmental, and security personnel and associated activities. At Eastman Chemical Company, Mr. Melson was asked to redesign Eastman's global HSES audit program in May of last year. He lives in Kingsport with wife Angie (also an Eastman employee) and has two sons: Christian (studying Business Analytics at The University of Tennessee) and Austin (a Petroleum Engineering student at Louisiana State University). Mr. Melson is also an active board member and Vice-Chairman for the Boys & Girls Club of Greater Kingsport. Today he wishes to share with you the journey that Eastman Chemical Company has undertaken to create a world-class HSES audit program.

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Session(s)

Special Interest, **Session**
One
Wednesday, 3/16/2016
Time: 9:00-9:35
Title: Effective
Environmental
Compliance Auditing

ABSTRACT

In May of 2015, Eastman Chemical Company made a strategic decision to rebrand its Global HSES Audit Program (GHAP). The company has morphed from a Tennessee-based manufacturing site to a US-centric entity, to now a global enterprise with a presence all over the world. Previous philosophy of audit activities no longer applied, and a major shift in the approach was appropriate. Eastman's GHAP team developed new strategy, tools, and practices to meet the demands of a changing world, the most significant of which was to tie audit activity to a risk-based approach. Implementing such an approach is delivering gains in productivity and effectiveness as the GHAP team continues to Connect, Engage, and Align with its internal clients. This breakout session is intended to share some of the major issues to consider when rebranding your company's audit program.

Dr. Tricia Metts

Associate Professor
East Tennessee State University

EDUCATION:

Ph.D.-Environmental Health, University of Michigan
M.S.-Environmental & Public Health, University of Wisconsin-Eau Claire
B.S.-Chemistry, University of Wisconsin-Eau Claire

BIOGRAPHY

Dr. Tricia Metts is an associate professor in the Environmental Health Department at East Tennessee State University where she has been employed since 2005. She teaches courses in air pollution, food safety, and environmental sampling and analysis. Her primary research interest is indoor air quality in Central Appalachian homes. Dr. Metts obtained a Ph.D. in Environmental Health from the University of Michigan School of Public Health in 2004. Other degrees include a BS degree in chemistry and an MS degree in environmental and public health, both from the University of Wisconsin-Eau Claire. In addition to her duties at ETSU, Dr. Metts is a member of the Tennessee Air Pollution Control Board, appointed by Governor Haslam in 2015.

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Session(s)

Health, **Session** Two
Tuesday, 3/15/2016
Time: 10:40-11:15
Title: Indoor Mold

ABSTRACT

Exposure to moldy environments may cause a variety of adverse health effects, especially in persons who are sensitive to mold, have chronic lung diseases, or are immuno-compromised. Although most mold experts agree that living or working in a building with excessive mold growth is unhealthy, there are no widely accepted federal or international standards for indoor, airborne mold. This presentation, which is geared toward environmental health professionals with limited knowledge of mold sampling techniques, will provide an introduction to mold sampling in the context of indoor air quality investigations. Topics will include how to decide whether sampling is actually necessary, sampling method selection, and data interpretation. It will also discuss results from a study aimed at determining the source of health-related complaints in homes damaged by flash flooding in Washington County, TN.

Ms. Paula Mitchell

Program Manager
State of Tennessee

Department of Environment and Conservation

EDUCATION:

B.S.-Marine Science, Coastal Carolina University

BIOGRAPHY

Ms. Mitchell is a new Environmental Program Manager for the Planning, Reporting, and Waste Reduction Section within the Tennessee Department of Environment and Conservation (TDEC), Division of Solid Waste Management. She has 16 years of experience working with the Solid Waste Assistance Programs. In 1999, she began her career with TDEC as the Used Oil Coordinator then took over responsibilities with the Household Hazardous Waste Program in 2005. She received a Bachelor of Science degree in Marine Science from Coastal Carolina University, Ms. Mitchell is a proud mom to a sweet eight year old daughter, Annabelle, and a future America Ninja Warrior, Andrew, who is five.

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Session(s)

Environment, **Session**
Four
Wednesday, 3/16/2016
Time: 11:25-12:00
Title: 2025 Solid Waste
and Materials
Management Plan

ABSTRACT

The 2025 Solid Waste and Materials Management Plan include objectives and strategies that aim to improve waste reduction and diversion efforts in Tennessee. The Tennessee Department of Environment and Conservation (TDEC) will provide a 2025 Plan implementation update that may include the new Recycling Grants Plan, targeted strategies and tactics for 2016, and opportunities to establish public/private partnerships. This presentation would be customized based on the specific breakout track (industry, environment) audience.

Mr. Gregory Nichols

Program Manager, Nanotechnology Studies
Oak Ridge Associated Universities (ORAU)

EDUCATION:

M.P.H.-Health Planning and Administration, The University of Tennessee

BIOGRAPHY

Mr. Nichols is the Program Manager for Nanotechnology Studies at ORAU where he provides subject matter expertise on nanotechnology, emerging technologies, and related health, environmental, and social policy. Before assuming his current role, Mr. Nichols spent 5 years as a health research associate at Oak Ridge Associated Universities (ORAU). In that role he supported a variety of clients, including the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Department of Energy, Nuclear Regulatory Commission, Tennessee Valley Authority, and multiple law firms. Mr. Nichols joined ORAU as a health research intern in 2009 and provided support to a community health assessment following a major disaster in Roane County, TN. Prior to joining ORAU, he spent 10 years in healthcare including 5 years as a hospital corpsman in the U.S. Navy.

Mr. Nichols is published on a variety of topics, including nanotechnology, in peer-reviewed journals and has co-authored a book chapter on the use of epidemiology in risk assessment. In addition, he has been an invited speaker on multiple occasions regarding nanotechnology. He has a Master of Public Health degree from The University of Tennessee and holds the Certified in Public Health Credential.

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Session(s)

Innovation +
Sustainability, **Session**
One
Tuesday, 3/15/2016
Time: 10:00-10:35
Title: Engineered
Nanomaterials as
Potential Wastewater
Contaminants

ABSTRACT

Evidence shows that engineered nanomaterials can be present in wastewater from household activities, such as washing athletic clothing that contains engineered nanomaterials. They could also be contained in the effluent of facilities that use or manufacture engineered nanomaterials, especially in the electronics industry. Certain types of nanomaterials are used to assist in environmental remediation and wastewater treatment, but their ultimate endpoint is unknown, meaning they could potentially migrate to water sources and affect aquatic organisms. Products that contain engineered nanomaterials have the potential to breakdown over time and nanoparticles could be introduced into the environment during waste management activities. Limited data are available regarding ecological toxicity and exposure potential of nanomaterials since no efficient methods to determine fate and transport of engineered nanomaterials are currently available, nor are there any reliable methods to characterize the presence of engineered nanomaterials in soil or water. Animal in-vitro studies have shown the potential for cytotoxicity and genotoxicity regarding exposure to engineered nanomaterials.

Lack of scientific evidence limits the ability to set standards and develop regulations regarding safe exposure limits for engineered nanomaterials. However, producers and users of engineered nanomaterials should be aware of the potential for environmental exposure during operational activities and the potential for environmental contamination anywhere along the production value-chain. More information is needed to characterize industrial activities that use engineered nanomaterials to ensure that better methods can be developed to safeguard public health, protect water resources, and increase industry awareness. Regulators should be aware of the emergence of engineered nanomaterials, their presence in the environment, and possible methods to mitigate exposure to the public.

Mr. Adetokunbo "Toks" Omishakin

Deputy Commissioner, Chief of Environment and
Planning
State of Tennessee
Department of Transportation

EDUCATION:

M.U.R.P.-Jackson State University
B.S.-Engineering Technology, Mississippi Valley State University

BIOGRAPHY

In October of 2011, Toks Omishakin was appointed Assistant Commissioner and Chief of the Bureau of Environment and Planning at the Tennessee Department of Transportation (TDOT). In this position, he leads TDOT's continued success in establishing environmental and transportation planning, policy, and the performance necessary to make it one of the best DOT's in the country. He is responsible for the bureau's administrative and project budget that exceeds \$250 million annually. He leads the activities of the Divisions of Environment, Long-Range Planning, and Multimodal Transportation Resources. In 2014, he was appointed Deputy Commissioner.

Prior to joining TDOT, Mr. Omishakin served as the Director of Healthy Living Initiatives in the Office of Mayor - Karl Dean in Nashville, Tennessee. There he led efforts to develop a Complete Streets policy for Nashville and helped established a more balanced approach to transportation planning and design for the city. Mr. Omishakin also spearheaded the creation of two bicycle sharing programs (Nashville Bicycle and Nashville Green Bikes) for Metro Nashville. He was the Mayor's liaison to several council's and boards appointed to improve the built environment, transportation and overall livability of the city. Mr. Omishakin has been a speaker and presenter at several national and international conferences and his work has been published in The American Journal of Preventative Medicine and profiled in The Wall Street Journal, HBO Documentaries and Newsweek magazine. Mr. Omishakin serves on the Board of Directors for America Walks and the Tennessee Tombigbee Waterway. He is also an active member of the American Planning Association, Association of Pedestrian & Bicycle Professionals and the Institute of Transportation Engineers.

Mr. Omishakin holds a Master's Degree in Urban and Regional Planning (MURP) with concentrations in transportation planning and urban design from Jackson State University, and a Bachelor of Science degree in Engineering Technology from Mississippi Valley State University.

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Session(s)

Plenary Lunch, **Session**
Keynote II
Wednesday, 3/16/2016
Time: 12:05-1:15
Title: Luncheon Keynote

ABSTRACT

Luncheon Keynote

Ms. Michelle Walker Owenby

Director, Division of Air Pollution Control
State of Tennessee
Department of Environment and Conservation

EDUCATION:

J.D.-Magna Cum Laude, Vermont Law School.
L.L.M.-Environmental Law, summa cum laude, Vermont Law School
B.S.-Georgia Institute of Technology

BIOGRAPHY

Michelle Walker Owenby serves as the Director for the Division of Air Pollution Control for the Tennessee Department of Environment and Conservation. Michelle manages over one hundred employees and operates an 18 million dollar program budget. The Division implements the Tennessee Air Quality Act, working to maintain the purity of Tennessee's air resources consistent with the protection of normal health, general welfare and physical property of the people, maximum employment and the full industrial development of the state. The Division is also delegated authority to implement programs under the Clean Air Act. The Division serves 91 counties within Tennessee and oversees the local air programs in Davidson, Hamilton, Knox and Shelby counties. The Division operates an ambient monitoring network and provides air quality forecasting for the state. The Division also establishes emission standards and procedural requirements to monitor industries in the state through the issuance of construction and operating permits. As Director, Michelle serves as the Technical Secretary for the Tennessee Air Pollution Control Board, which adopts regulations, hold hearings and initiates court actions to enforce regulations.

Prior to becoming Director of the Division of Air Pollution Control, Ms. Owenby served as Assistant Commissioner for TDEC's Office of Policy and Planning, and prior to this, she was Policy and Planning Director after joining the department in April 2012. In these positions, she led Policy Office staff and worked with leaders across TDEC in wide variety of critical activities, including planning and performance reporting under Governor Haslam's Customer Focused Government and implementing numerous strategic environmental initiatives for TDEC. She has served as the Commissioner's designee on the Tennessee Air Pollution Control Board as well as the Tennessee Valley Authority's 2015 Integrated Resource Planning working group.

Prior to coming to TDEC, Michelle practiced environmental law for ten years in private practice and at Vermont Law School's Environmental and Natural Resources Law Clinic, working extensively in the areas of air, water and hazardous waste law as well as on matters involving the National Environmental Policy Act. She has a wealth of experience advising business and industrial clients as well as non-governmental organizations and individual property owners. She also taught environmental and legal curriculum at Vermont Law School and Colby-Sawyer College. Michelle earned a B.S. from the Georgia Institute of Technology as well as a J.D., magna cum laude, and an L.L.M. in Environmental Law, summa cum laude, from Vermont Law School.

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Session(s)

Environment, **Session**
Five
Tuesday, 3/15/2016
Time: 1:50-2:25
Title: Tennessee Division
of Air Pollution Control
Update

Environment, **Session**
Six
Tuesday, 3/15/2016
Time: 3:05-3:45
Title: Summary Panel
Discussion

ABSTRACT

As an environmental professional, it is their duty to ensure that the company they represent has full understanding of their permit requirements for all medias. This can be difficult at times, depending on the experience of the individual and the difficulty of their permits. There are many ways to simplify this process, having a consultant is one, but not all companies have the funding to have a full time consultant assist in this area. Another method is to take the permit and color code statements in the period that make it user friendly for anyone to see the various responsibilities of the permit requirements. The breakdown into seven sections makes a permit easy for all levels from upper management to the primary employees understand how the permit impacts what must be done. With full understanding, anyone can assist in making the environment safe for all.

ABSTRACT

Session 5: In tandem with the new Tennessee Department of Environment and Conservation Air Pollution Control Director, Michelle Owenby, and Mr. Styke will give an update on air quality in Tennessee along with pertinent legislation and policy updates.

Session 6: This session is a panel discussion including questions and answers with our distinguished speakers that are available for the day.

Mr. Brown Patton

Environmental Scientist 2
State of Tennessee
Department of Environment and Conservation

EDUCATION:

B.S.-Environmental Health, East Tennessee State University

BIOGRAPHY

Mr. Patton has been with the Tennessee Division of Water Resources since graduating from East Tennessee State University in 2008 with a Bachelor of Science in Environmental Health. He is primarily involved with regulating and program development of NPDES permits ranging from water treatment plants and industrial facilities to construction stormwater and MS4 permits. He is the MS4 contact person for the Johnson City Environmental Field Office and works closely with the local MS4s, assisting with permit compliance and interpretation, as well as providing guidance and coordinating MS4 efforts with regards to program development and implementation of various program areas such as green infrastructure and other related construction activities and projects.

Ms. Monique Parker

EHS Leader
Owens Corning

EDUCATION:

B.S.-Chemical Engineering, Tennessee Technological University

BIOGRAPHY

Ms. Parker has a Chemical Engineering degree from Tennessee Technological University. She has over 10 years of EHS experience in multiple types of manufacturing companies (chemical, food, tooling, etc.) and also at various levels within organizations from EHS Manager to Regional Manager with Global responsibilities. She has extensive knowledge in all environmental media. This multi-media knowledge has been developed by conducting widespread company audits, regulatory training and communications, and hands on leadership with multiple companies. Her love for the environment has driven her to drive for reductions in emissions, water, and waste production while also maintaining a high level of operations knowledge to ensure productivity is never lost.

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Session(s)

Industry + Energy,
Session Two
Tuesday, 3/15/2016
Time: 10:40-11:15
Title: Becoming One with
Your Permit

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Session(s)

Panel, **Session** 4,5+6
Tuesday, 3/15/2016
Time: 1:10-3:45
Title: TNSA Stormwater
Workshop Panel
Discussion

ABSTRACT

Tennessee's National Pollutant Discharge Elimination System (NPDES) Phase II permit includes a permanent (post-construction) stormwater performance standard, which requires the treatment of a one-inch rainfall using Stormwater Control Measures (SCM's) prior to discharge.

This workshop will provide an overview of the permit requirements and proposed changes. The presentations will provide insight into the primary approaches being implemented in Tennessee and the key policies and procedures needed to adapt them to an individual community.

Finally, we will have a panel available to field questions or concerns from the audience regarding the draft permit.

Ms. Kimberly Pettigrew

Director of Community Health Programs
Tennessee Clean Water Network

EDUCATION:

Bachelor of Nutrition-The University of Tennessee

BIOGRAPHY

Ms. Pettigrew began working as the Director of Community Health Programs for TCWN, in June 2015, after serving as intern under the Bringing Tap Back project. She works with local art communities to host artist-designed water bottle refill station competitions to promote drinking tap water. Ms. Pettigrew also works with partnering schools and municipalities in communities across the state to provide and promote safe, clean drinking water for Tennesseans.

Prior to joining TCWN, Ms. Pettigrew spent the past six years working on numerous local farms, acting as the Communications Director at the Market Square Farmers' Market, and managing Knox Public House. She holds a Bachelor of Nutrition from The University of Tennessee and is also a certified cheese maker. She is the President of Slow Food TN Valley and serves as an associate member of the Knoxville Food Policy Council. Ms. Pettigrew lives in South Knoxville where she raises bees and has a large garden with her family.

CONTACT INFORMATION

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Session(s)

Health, **Session** Four
Tuesday, 3/15/2016
Time: 1:10-1:45
Title: Bringing Tap Back

ABSTRACT

Tennessee is the only state in the United States that has made installing water refill stations a statewide initiative through TCWN's Bringing Tap Back Program (BTB). BTB was created by a Tennessee Department of Health Project Diabetes Grant and seeks to encourage Tennesseans to replace sugar-sweetened beverages with water to fight obesity and diabetes in our state. Thus far, we have installed 65 fountains in public parks, schools, universities and municipalities across the state. By installing fountains, we give communities access to free, clean drinking water in public places.

The water refill stations also cut down on waste generated from bottled water. Bottled water is 2000 times more expensive than tap water. Research also shows that it takes 1.39 liters to make one liter of water. (That means it takes more water to make the bottle than you actually get to drink!)

We plan to continue installing refill stations across the state and are seeking partners and funding to make that happen. We would love for Bringing Tap Back to reach every county in Tennessee!

Mr. Ken Rea

Deputy Director
First Tennessee Development District

EDUCATION:

M.B.A.-East Tennessee State University
B.A.-Economics, Rhodes College

BIOGRAPHY

Mr. Rea has been with the First Tennessee Development District for 30 years. He currently serves as the Deputy Director of Economic & Community Development. In his capacity at the District, he and his staff have assisted communities in obtaining 589 grants and loans totaling \$183.2 million for a variety of projects from infrastructure to parks to buildings.

Mr. Rea also serves as the Executive Director and Loan Officer of the Northeast Tennessee Economic Development Corporation, a nonprofit corporation to review, process, and administer government loan programs of the First Tennessee Development District. To date, 97 loans totaling \$6.8 million have been completed to private sector businesses. Companies assisted have created 690 jobs to date.

Mr. Rea has been on the Board of Directors of Eastern Eight Community Development Corporation since its inception in 1996.

CONTACT INFORMATION

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Session(s)

Panel, **Session** One
Wednesday, 3/16/2016
Time: 9:00-9:35
Title: TDEC Grants

ABSTRACT

Mr. Rea has worked with communities on competing applications and administering projects for TDEC programs including the Local Parks Recreation Fund, the Recreation Trails Program, State Revolving Fund, and Clean Tennessee Energy Grant.

Ms. Diane Scher

Environmental Manager
Bridgestone Americas, Inc.

EDUCATION:

B.S.-Chemical Engineering, Washington University, St. Louis

BIOGRAPHY

Ms. Scher, Environmental Manager, Bridgestone Americas Tire Operations, is an 18 year veteran of the company. She leads, supports, and confirms the environmental compliance, performance and reputational programs at 9 North American tire plants, 8 tire distribution centers, and the Akron Research and Technical Centers. Under Ms. Scher leadership, the Bridgestone passenger tire plant in Wilson, NC, achieved Zero Waste to Landfill status, and the first manufacturing facility of any kind to receive UL's claim validation for Zero Waste to Landfill. Prior to Bridgestone, she worked in the chemical industry as a field engineer, technical service representative, state air pollution control regulator, and environmental consultant.

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Session(s)

Innovation +
Sustainability, **Session**
2+3
Tuesday, 3/15/2016
Time: 10:40-11:55
Title: Zero Waste

ABSTRACT

Under the industry category, Ms. Scher proposes a panel of presentations representing the landscape of "Zero Waste", "Zero Waste to Landfill", and "Waste-Free" programs, certifications, goals and achievements.

Mr. Michael K. Stagg

Partner

Waller Lansden Dortch & Davis, LLP

EDUCATION:

J.D.-The University of Tennessee College of Law
LL.M.-The George Washington University (Environmental Law)
B.S.-Major in Natural Resources Management, Minor in English,
Colorado State University

BIOGRAPHY

Mr. Stagg is a partner in Waller's Regulatory and Environmental Law practice and focuses his practice primarily on the defense of environmental and toxic tort litigation and environmental and natural resources regulatory proceedings. He has extensive experience in environmental policy and law, including compliance counseling related to water, air, and waste issues; environmental auditing; natural resource issues; and real estate and corporate transactions.

CONTACT INFORMATION

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Session(s)

Industry + Energy,
Session Three
Tuesday, 3/15/2016
Time: 11:20-11:55
Title: New Ozone
Standards - Implications
for Business and Industry

ABSTRACT

In October 2015 Environmental Protection Agency (EPA) revised the National Ambient Air Quality Standard (NAAQS) for ozone – lowering it from 75 parts per billion (ppb) to 70 ppb. Over the course of the next year or so, the states will work with EPA to determine which areas of the country have ambient air quality that is not meeting or “attaining” the new NAAQS. Areas classified as “nonattainment” will be impacted in a number of ways. During this presentation Mr. Stagg will discuss the classification process, summarize ozone trends in Tennessee and the drivers for those trends, look at what areas in Tennessee might be classified as “nonattainment”, and talk about how such a classification could impact businesses, industries, and the citizens of the state.

Mr. Quincy Styke

Deputy Director, Air Pollution Control Division

State of Tennessee

Department of Environment and Conservation

EDUCATION:

M.P.H.-Industrial Hygiene, The University of Tennessee
B.S.-Biology, Middle Tennessee State University

BIOGRAPHY

Mr. Styke has lived all his life in Tennessee and loves every minute of it, stating "Tennessee is truly the place to be." He began working for the State of Tennessee's Air Pollution Control Division in 1975 in the Knoxville office and transferred to the Nashville office in 1980 to become Chief of Enforcement. In 1993 he was tasked to write the regulations to implement Titles III, IV & V of the Federal Clean Air Act and became Assistant Director of the Division. Mr. Styke has since been promoted to Deputy Director. He's married with two sons, who have recently graduated college, and is very proud of his family. Model railroading is his hobby.

CONTACT INFORMATION

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Session(s)

Environment, **Session**
Five
Tuesday, 3/15/2016
Time: 1:50-2:25
Title: Tennessee Division
of Air Pollution Control
Update

Environment, **Session**
Six
Tuesday, 3/15/2016
Time: 3:05-3:45
Title: Summary Panel
Discussion

ABSTRACT

Session 5: In tandem with the new Tennessee Department of Environment and Conservation Air Pollution Control Director, Michelle Owenby, Mr. Styke will give an update on air quality in Tennessee along with pertinent legislation and policy updates.

Session 6: This session is a panel discussion including questions and answers with our distinguished speakers that are available for the day.

Mr. Steven Turaski

Environmental Protection Specialist

State of Tennessee

Department of Environment and Conservation

EDUCATION:

M.S.-Environmental Sciences, University of Virginia
B.S.-Civil Engineering, The University of Tennessee
B.S.-Forest Resources, University of Georgia

BIOGRAPHY

Mr. Turaski worked 9 1/2 years with the Tennessee Department of Environment and Conservation (TDEC), Water Pollution Control Division in the Knoxville Environmental Field Office and Mining Section. After 4 years of environmental compliance work with Nyrstar Tennessee Mines, he returned to TDEC in June 2015 and joined the statewide stormwater program. Mr. Turaski's current responsibilities include technical assistance and training for TDEC field office staff and the regulated community.

CONTACT INFORMATION

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Session(s)

Industry + Energy,
Session 4,5+6
Tuesday, 3/15/2016
Time: 1:10-3:45
Title: Technical
Approaches to Treat a 1"
Rainfall / Panel
Discussion

ABSTRACT

Tennessee's National Pollutant Discharge Elimination System (NPDES) Phase II permit includes a permanent (post-construction) stormwater performance standard, which requires the treatment of a one-inch rainfall using Stormwater Control Measures (SCM's) prior to discharge.

This workshop will provide an overview of the permit requirements and proposed changes. The presentations will provide insight into the primary approaches being implemented in Tennessee and the key policies and procedures needed to adapt them to an individual community.

Finally, we will have a panel available to field questions or concerns from the audience regarding the draft permit.

Ms. Dana Vaughn

President

Tennessee Environmental Education Association

EDUCATION:

M.A.-Education, Carson-Newman University
B.A.-Biology, Carson-Newman University

BIOGRAPHY

Ms. Vaughn is the President of the Tennessee Environmental Education Association (TEEA). She received a B.A. from Carson-Newman University with a focus in aquatic biology, ecology, and environmental sciences. Her Master's work involved developing a sustainability curriculum for middle and high schools. Ms. Vaughn specializes in planning and coordinating public-education programs and assisting in the professional development of K-12 teachers, which prepares teachers to coordinate the involvement of their classes in service-learning projects, community sustainability, field research, and environmental conservation. She has worked as a Watershed Specialist and Sustainability Program Manager for the Tennessee Valley Authority. Ms. Vaughn is currently an Environmental Scientist at Arcadis Consulting Firm.

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Session(s)

Innovation +
Sustainability, **Session**
Three
Wednesday, 3/16/2016
Time: 10:45-11:20
Title: Tennessee
Environmental Literacy
Program

ABSTRACT

The Tennessee Environmental Literacy Plan was completed July 23, 2012 but has not been adopted by the Tennessee Board of Education. The purpose of this plan is to advance national education goals by creating and implementing plans to enrich the curriculum with environmental education, thus giving teachers and students new opportunities to take learning outside. As part of the No Child Left Inside initiative, the plan identifies steps needed to achieving environmental literacy in our state.

Despite the immense need, integrating environmental education into school curriculum in Tennessee has been challenging. For example, as a result of the No Child Left Behind Act, teachers have been limited in the amount of time spent on environmental education and science in order to focus more on the testing standards required for math and language arts. Other barriers to integration include the limited amount of professional development opportunities for teachers, and reduced time and resources for field trips and outdoor activities. This session will focus on an overview of the purposes and goals of this plan and implementation steps being taken at the state level.

Mr. Sam Vinson

Manager, Generation Construction & Civil Projects
Tennessee Valley Authority

EDUCATION:

M.S.-Geology, Vanderbilt University, Nashville, TN, 1999
B.S.-Geology, Western Kentucky University, Bowling Green, KY, 1996

BIOGRAPHY

Mr. Vinson is a manager for the Tennessee Valley Authority, Generation Construction and Civil Projects Group. He holds Professional Geology Licenses in Tennessee, Alabama, Georgia, and Kentucky. His experience ranges from managing environmental and geotechnical engineering groups in the private sector to serving as a groundwater hydrologist for the Kentucky Department for Environmental Protection. Mr. Vinson has also taught geology at the college level and specializes in karst geology. Currently, Mr. Vinson is serving as the Project Manager for the Boone Dam Embankment Remediation.

CONTACT INFORMATION

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Session(s)

Industry + Energy,
Session One
Wednesday, 3/16/2016
Time: 9:00-9:35
Title: TVA Boone Dam
Project Update

ABSTRACT

In October 2014, a sinkhole occurred near the control building and muddy discharge was observed in the tailrace on the downstream side of Boone Dam. As part of the interim risk reductions, TVA Dam Safety engineers recommended immediate lowering of the reservoir to elevation 1350 to 1355 feet, corresponding to a level approximately 10 feet below its typical winter pool. This removes the reservoir head from the embankment and provides stability for the earthen embankment.

TVA has completed an Environmental Assessment and FONSI for several remediation options and the lowering of the reservoir. In addition, TVA has completed downstream improvements to storm water drainage, sinkhole remediation near the control building, replaced potable water lines and other utilities in the area, and also constructed a temporary filter at the location of the seep.

As a result of the decision-making process and internal challenge sessions, TVA has identified a composite seepage barrier as the preferred option to remediate the problems at Boone Dam. The primary factor in recommending a composite seepage barrier is that a positive cutoff from the reservoir is created from non-erodible material and therefore has a very low probability of a seepage connection with the reservoir reoccurring. The composite seepage barrier will consist of low-mobility grouting in the epikarst, high-mobility grouting in the underlying, more competent, rock and a cementitious-diaphragm wall in the earthen portion of the embankment.

At this time the Boone Dam Remediation Project is performing exploratory drilling and grouting within the earthen embankment on a 24 hour, five day a week schedule to gather data for the design. Implementation is scheduled to start later in 2016 and the project is expected to be completed in 5 to 7 years.

Mr. Dan Wankel

Stormwater Engineer
City of Kingsport, TN

EDUCATION:

B.E.-Environmental and Water Resources Engineering, Vanderbilt University

BIOGRAPHY

After graduation, Mr. Wankel worked for Metro Nashville Water Services for 4 years, gaining experience in water and sewer systems design, operation and maintenance. He returned to his hometown of Kingsport in 1989 as Environmental Engineer for the Municipal Government. He developed and implemented programs involving recycling, hazardous waste/materials management and water/sewer maintenance. Mr. Wankel served as Wastewater Services Manager until assuming his position managing the City's stormwater program.

CONTACT INFORMATION

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wankel@kingsporttn.gov

Session(s)

Industry + Energy,
Session 4,5+6
Tuesday, 3/15/2016
Time: 1:00-3:55
Title: Approaches to Meeting Stormwater Runoff Reduction Requirements in Tennessee

ABSTRACT

Tennessee's NPDES Phase II permit includes a permanent (post-construction) stormwater performance standard, which requires the treatment of a one-inch rainfall using Stormwater Control Measures (SCM's) prior to discharge.

This workshop will provide an overview of the permit requirements and proposed changes. The presentations will provide insight into the primary approaches being implemented in Tennessee and the key policies and procedures needed to adapt them to an individual community.

Finally, we will have a panel available to field questions or concerns from the audience regarding the draft permit.

Mr. William Wolfe

United States Geological Survey
Tennessee Water Science Center

EDUCATION:

Ph.D.-Geography, Clark University
M.S.-Environmental Science, Indiana University
B.S.-Geology, University of Alaska

BIOGRAPHY

Dr. Bill Wolfe is the Associate Director for Science of the United States Geological Survey (USGS) Lower Mississippi-Gulf Water Science Center, encompassing the state of Tennessee, Alabama, Mississippi, Louisiana, and Arkansas. His scientific interests include geomorphology, ecology, and environmental geography. During his 25-year-long career with the USGS in Tennessee, he has conducted research and published on topics that include streambank stability, floodplain sedimentation rates, wetland hydrology and geomorphology, contaminant transport in karst, effects of climate change on plant communities, stability and vegetation of alluvial bars, effects of road construction on sediment transport, and ecological flows. Dr. Wolfe is based in Nashville, TN, where he has worked for the USGS since 1990.

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Session(s)

Environment, **Session** Two
Wednesday, 3/16/2016
Time: 9:40-10:15
Title: Clinch Powell Clean Rivers Initiative

ABSTRACT

The panel will summarize the work, partnerships, and results of the Clinch Powell Clean Rivers Initiative (CPCRI). CPCRI is a bi-state effort to protect and restore aquatic species and water quality in the Clinch and Powell Rivers. These two rivers, which begin in Virginia and flow into Tennessee, harbor some of the greatest biodiversity in North America. However, rare freshwater mussels, one of the rivers' leading indicators of environmental health are showing signs of serious decline in some river sections. The reasons for this decline are complex and have historically been a point of contention between Tennessee and Virginia.

In response to this challenge, the CPCRI formed in 2008 as a collaborative bi-state effort including an array of state and federal agencies, scientists, and The Nature Conservancy. CPCRI has developed a coordinated science and monitoring program to diagnose water quality stressors and take informed actions to remediate them. Results are emerging and additional monitoring and scientific analysis is planned. We are beginning to see a pattern of associations between mussel decline and elevated dissolved solids, certain major ions, and certain metals. The results are informing both regulatory and non-regulatory decisions and actions aimed at reducing relevant stressors and improving water quality. CPCRI involves a wide range of partners so emerging results are influencing a variety of strategies related to Clean Water Act implementation, land and water restoration, mussel augmentation, abandoned mined land reclamation, and outreach to local communities.

Ms. Robin Wooten

East Tennessee Park Area Manager
State of Tennessee, Environment and Conservation
Tennessee State Parks

EDUCATION:

B.S.-Natural Resource Management, Virginia Tech, Blacksburg, VA
Graduate work in Botany at Tennessee Technological University,
Cookeville, TN
Currently enrolled in M.P.P.A. (Masters in Policy and Public
Administration), The University of Tennessee

BIOGRAPHY

Ms. Wooten has been with Tennessee State Parks since 1996 and has served as a Park Naturalist, Park Ranger, Park Manager, Program Manager for the Natural Areas Program, and now East TN Parks Area Manager where she has served since January 2013. The parks where she has worked include Montgomery Bell State Park, Radnor Lake State Natural Area, Pickett "CCC Memorial" State Park, and Cordell Hull Birthplace & Sgt. Alvin C. York State Historic Parks. She currently oversees 20 parks in the eastern region of the state. Ms. Wooten is originally from North Carolina and has been a Tennessean since that first wandering across the mountain in 1996 and currently resides in Maryville. She has a passion for wildflowers, history and environmental sustainability.

CONTACT INFORMATION

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Session(s)

Innovation +
Sustainability, **Session**
Four
Tuesday, 3/15/2016
Time: 1:10-1:45
Title: "Go Green With Us"
in Tennessee State Parks

ABSTRACT

Ms. Wooten will provide an overview and discussion of Tennessee State Parks' "Go Green With Us" initiative which launched in 2015. "Go Green With Us" is a sustainability initiative which incorporates activities at all 56 state parks to better protect the environment and natural resources. The first component was to provide improved recycling options for guests and park staff at every park. Other components of the program include greening of our facilities and practices including offices and waste reduction efforts, as well as energy conservation efforts which have been facilitated and coordinated with Tennessee Department of Environment and Conservation's Office of Sustainable Practices. This exciting "Go Green With Us" program is still underway and much is being done every day to make our Tennessee State Parks more sustainable and to provide less impact to the environment and provide green choices for our park guests and staff.

Replacement / Additional Speakers

Mr. Gary Brinkworth

Director, Technology Innovation
Tennessee Valley Authority

EDUCATION:

B.S-Electrical Engineering, Auburn University
M.S-Electrical Engineering, Auburn University

BIOGRAPHY

Mr. Brinkworth has over 33 years of utility industry experience in generation and transmission planning, forecasting, and demand-side management evaluation. He holds a B.S. and M.S. in Electrical Engineering from Auburn University, and is a registered professional engineer in four states. He began his career at Southern Company in Birmingham, AL where he worked for about 6 years in generation and transmission planning, and then moved to Tallahassee, FL where he worked for 20 years for the municipal utility in various assignments related to system planning, rate and debt analysis, power contract negotiations, and customer care and billing.

Mr. Brinkworth joined Tennessee Valley Authority (TVA) in March 2009 as the Senior Manager, New Generation & Portfolio Optimization, where he managed the development of long-term capacity plans, resource portfolio evaluations, and capacity optimization studies. In that role, he led the analytical team that developed TVA's Integrated Resource Plan that was published in March 2011. In July 2013 he left the system planning group to become the project manager for the 2015 IRP study. Following the successful completion of that project, he took on a new role at TVA as Director of Technology Innovation, where he leads the team responsible for coordinating the company's R&D efforts.

Mr. Brinkworth has been married to his wife Kathy for 29 years and they have two daughters in their 20's and one cocker spaniel.

CONTACT INFORMATION

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Session(s)

Industry + Energy,
Session Two
Wednesday, 3/16/2016
Time: 9:40-10:15
Title: TVA's Integrated
Resource Plan

ABSTRACT

Mr. Brinkworth will present on Tennessee Valley Authority's (TVA's) 2015 Integrated Resource Plan (IRP) which sets a direction for how TVA will meet the long-term energy needs of the Tennessee Valley region economically, while supporting TVA's equally important mandates for environmental stewardship and economic development across the valley.

Mr. John Clark

City of Kingsport Mayor
City of Kingsport

EDUCATION:

Transportation and Logistics Major-The University of Tennessee, 1980

BIOGRAPHY

Mayor John Clark has a 35 year career in medical technology manufacturing with DuPont and Agfa HealthCare with 15 assignments and 4 relocations, California, Delaware, South Carolina and Tennessee. He managed large radiology and healthcare IT solutions manufacturing and marketing organizations, growing small, medium and large size businesses across North American for Agfa HealthCare.

- Mayor Clark's community service leadership roles and goals consist of the following:
- St. Dominics Church Finance Committee
- Kingsport Board of Mayor and Aldermen, current Alderman for 3years
- United Way Campaign Tocqueville society past president
- Elected Mayor, Kingsport, TN - May 2015 election
- Help City achieve Kingsport vision
- Become preferred city in region to live and work
- Improve education, help KCS achieve world class vision
- Recruit high paying jobs in healthcare and manufacturing
- Revitalize downtown
- Improve quality of life for all residents
- Achieve responsible growth without mandated residential annexations
- Keep taxes and fees low as possible

Mayor John Clark was born in Havana, Cuba in 1958 and proudly became a U.S. citizen in 1970. He was raised in Havertown, PA, a Philadelphia suburb. He and his wife of 31 years, Etta Ryan, a Rogersville farm girl, lawyer, and Eastman employee has resided in Kingsport for the past 20 years. They have two daughters Alex and Haley that are graduates of Doby's Bennett High School.

CONTACT INFORMATION

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Session(s)

Plenary Open, **Session**
Keynote I
Wednesday, 3/16/2016
Time:
Title:

ABSTRACT

Open / Welcome

Ms. Kitty Frazier

Parks and Recreation Manager
City of Kingsport

EDUCATION:

B.S.

BIOGRAPHY

Certified Parks and Recreation Professional. Active member of the Tennessee Recreation and Parks Association and the American Academy of Parks and Recreation Administrators, Serves as a national accreditation reviewer of Parks and Recreation Agencies. Currently works for the City of Kingsport. Involvement in community activities includes Rotary and TSSAA officiating.

CONTACT INFORMATION

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Session(s)

Environment, **Session**
One
Wednesday, 3/16/2016
Time: 9:00-9:35
Title: TDEC Grants

ABSTRACT

Several elements are key in grant writing that results in a grant award. Join TDEC for a facilitated panel discussion with successful grantees and gain insight into what makes a great project and application. Panelists will include experience in all of the TDEC grant programs.

ABSTRACT

This presentation will briefly outline the start-up of the program, strategies for problem-solving, avenues for overcoming barriers, and ideas for promoting environmental awareness for students and families

Ms. Carol Kemker

Deputy Director
U.S. Environmental Protection Agency, Region IV
Air, Pesticides and Toxics Management Division

EDUCATION:

Industrial and Systems Engineering, Georgia Institute of Technology

BIOGRAPHY

Ms. Kemker is the Deputy Director of the Air, Pesticides and Toxics Management Division. She provides leadership in carrying out the mission of the Agency, as well as the Air, Pesticides and Toxics Management Division. She has been with the Environmental Protection Agency since 1989 working in various aspects of environmental protection, including planning, regulatory development, enforcement, and research. Among her numerous leadership positions, Ms. Kemker has also served as Deputy Director of the Water Management Division. Her experience includes strategic planning and programmatic development and support for multiple statutes such as the Clean Air Act, Federal Insecticide, Fungicide and Rodenticide Act, Toxic Substances Control Act, and Emergency Preparedness and Community Right to Know Act. Prior to becoming a part of EPA, Ms. Kemker worked in automotive and chemical manufacturing.

CONTACT INFORMATION

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Session(s)

Panel, **Session** Six
Tuesday, 3/15/2016
Time: 3:05-3:45
Title: Summary
Discussion

ABSTRACT

This session is a panel discussion including questions and answers with our distinguished speakers that are available for the day.

Ms. Angie Hyche

Instructional Assistant
Jackson Elementary School, part of Kingsport City Schools

EDUCATION:

M.S.-Medical Science, Emory University
B.S.-Biology, Tennessee Technological University

BIOGRAPHY

Ms. Hyche has worked at Jackson Elementary School as an Instructional Assistant for 3 years. During her first year at Jackson, she was concerned about the amount of food and drink that was thrown away in the cafeteria every day. Working together with school staff and the international organization Rock and Wrap it Up! (RWU) Ms. Hyche initiated the RWU program at Jackson. Within a few months, the program was implemented at all 11 schools in the Kingsport City School system. Though her focus at Jackson currently is in 2nd grade literacy, she continues to monitor the collection and distribution of food to students and to outside agencies. Ms. Hyche enjoys public speaking, and welcomes any opportunity to spread the word about RWU.

CONTACT INFORMATION

600 Jackson Street
Kingsport, TN 37660
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ahche@k12k.com

Session(s)

Special Interest, **Session**
Two
Wednesday, 3/16/2016
Time: 9:40-10:15
Title: Rock and Wrap It
Up! Sharing Our Success
- Andrew Jackson
Elementary School



2016 Tennessee Environmental Conference

Speaker Biographies & Abstracts

Dr. Sung Han

Director of Technology
Eastman Chemical Company

EDUCATION:

BIOGRAPHY

Ever progressing 3-D printing technology has already had a profound impact on our society. The greatest impact so far is the enablement of any person in society becoming a supplier of goods and services without needing access to a costly manufacturing infrastructure. But more importantly, the technology has enabled the possibility of delivering customized and low-cost personal apparatus, such as prosthetic devices, to a broad population, especially to those children who are especially in low-income households or in the developing world where the cost of a prosthetic device for a child could otherwise be prohibitive. In the near future, Eastman Chemical Company, through its Corporate Social Responsibility (CSR) efforts, will facilitate the printing, assembly, and distribution of mostly polymer-based prosthetic devices to those children in need, in collaboration with non-governmental organizations (NGOs), globally. These proposed prosthetics will be printed and assembled using a newly launched polymer resin called Amphora™. The project will not only enable improved life for the children in need, but will also enable a greater understanding of the utility of polymers for prosthetic applications for the mass population.

CONTACT INFORMATION

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Session(s)

Innovation +
Sustainability, **Session**
One
Tuesday, 3/15/2016
Time: 10:00-10:35
Title: 3D Printed
Prosthetics for Children

ABSTRACT

Birth: Seoul, Korea

Residence: Emigrated to the USA in 1973 and currently lives in Kingsport, TN

Education: All in the USA, starting with elementary through graduate education (UC Berkeley, BS in Material Science and Nuclear Engineering, MS/PhD in Nuclear Engineering)

Prior Professional Experience:

- SVP of Global R&D, ATMI, a specialty formulated chemistry and critical fluids packaging for semiconductor industry
- VP of Electronic Devices and Materials Laboratory, LG Electronics – Advanced Research Institute, Seoul, Korea
- VP and CTO, Samsung-Corning Inc., Seoul, Korea
- Technology Director, GE Explosive and Biological Weapons Detection, GE Security Products & Technology, General Electric Co.



2016 Tennessee Environmental Conference

Speaker Biographies & Abstracts

Mr. Austin Ramsey

Junior at Sullivan Central High School

EDUCATION:

BIOGRAPHY

Austin is a Junior at Sullivan Central High School who has a passion for flying Unmanned Aircraft Systems for a few years. He has flown many different types of unmanned aircraft. He has enjoyed learning all the new rules and regulations that the FAA has created. Furthermore, he enjoys informing people on the safe operation of UAS and their many uses.

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Session(s)

Industry + Energy,
Session Two
Tuesday, 3/15/2016
Time: 10:40-11:15
Title: Unmanned Aircraft
Systems (UAS): Their
Many Uses; Present and
Future

ABSTRACT

UAS have become an explosive technology that is used today in many applications. In this presentation, Austin will explain some of the uses of UAS. Furthermore, I will discuss the future of UAS and the rules and regulations established by the FAA.