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Members of the Railroad Environmental Community,

The Rail Transportation and Engineering Center (RailTEC) at the University of Illinois at Urbana-Champaign is pleased to host the 2019 Railroad Environmental Conference (RREC). This year marks the twenty-first annual RREC and we are honored to have played a role in its development from the small gathering of 150 people and five supporter companies in 1999 to its present scope. Interest and attendance at the conference has grown considerably in the years since then and it has emerged as the principal annual gathering of the railroad environmental professional community. Last year more than 500 people attended from throughout North America and abroad, including railroaders, consulting engineers, environmental control equipment suppliers, regulators, industry attorneys, academics and other rail transportation professionals.

The vitality of the conference program benefits from the excellent input provided by representatives from the railroads, environmental engineering, and supply firms who participate in the RREC Planning Committee. Each year this group considers topics of particular interest to the railroad industry, reviews the submitted abstracts, and selects presentations based on their quality, timeliness, and relevance. The goal is coverage of the broad array of current and emerging subjects of interest to railroads. An important criterion is innovative new ideas and results with potential to benefit and improve railroad environmental practice. The RREC organizing team has strived to achieve the proper balance with this year’s selection of presentations in the following topic areas:

- Compliance & Permitting
- Ecological Protection & Conservation
- Energy, Emissions & Air Quality
- Environmental Analytical Data & Applications
- Environmental Management Systems
- Environmental Response
- Passenger Rail & Transit
- Remediation
- Risk & Liability Management
- Stormwater & Wastewater
- Sustainability, Climate Resilience & Engagement
- Environmental Response Resilience & Engagement

The RREC provides a forum for attendees to meet with colleagues, clients, regulators, researchers, and other members of the railroad environmental community to learn about new techniques and technologies, exchange views, catch up on regulatory and legislative developments, and generally stay in touch with the direction of the railroad industry’s environmental programs. It is also an excellent opportunity to renew old acquaintances and make new contacts in the ever-changing railroad environmental arena.

On behalf of RailTEC at the University of Illinois at Urbana-Champaign, I would like to extend an invitation to everyone interested in railroad environmental performance, practices, and engineering to attend this year’s conference. I hope you can attend and look forward to meeting you.

Sincerely,

Chris Barkan
Professor
George Krambles Director - RailTEC
University of Illinois at Urbana-Champaign
Meeting Location:
Concurrent sessions will be held in the Illini Union
1401 W. Green St., Urbana, IL 61801

Registration Fees:
Early Bird Registration (paid before 8/30) $365
Regular Registration (paid after 8/30, before 10/11) $475
Onsite Registration (after 10/11) $600
Speaker and Moderator Registration $200
Student Registration* Free
AREMA Committee Dinner $60
2-Day Parking $50
*Proof of full-time student status required

Poster Presentation Reception and AREMA Banquet:
All conference attendees and guests are encouraged to take the opportunity to meet and discuss ideas with the poster presenters at the Poster Presenter Reception that will be held on Tuesday, October 22nd from 5:00pm to 6:30pm in the Illini Union. The AREMA Banquet Program will be held immediately following the reception from 7:00pm to 9:00pm.

Attire:
Recommended attire for the conference is “business casual.”

Conference Website and Online Registration:
rrec.railtec.illinois.edu

Monday, October 21st, 2019
Exhibitor Setup 1:00pm - 5:00pm

Tuesday, October 22nd, 2019
Continental Breakfast 7:00am - 9:00am
Registration Open 7:00am - 5:00pm
Presentation Sessions 8:00am - 12:00pm
Luncheon 12:00pm - 1:15pm
Presentation Sessions 1:15pm - 5:05pm
Reception/Poster Presentations 5:05pm - 6:30pm

AREMA COMMITTEE 13 BANQUET 7:00pm
AREMA Banquet Speaker: TBD 8:00pm

Wednesday, October 23rd, 2019
Continental Breakfast 7:00am - 9:00am
Registration Open 7:00am - 5:00pm
Women’s Networking & Outreach Breakfast 7:00am - 8:00am
Presentation Sessions 8:00am - 11:55am
Luncheon 12:05am - 1:35pm
Presentation Sessions 1:35pm - 5:30pm
Adjourn 5:30pm
Compliance & Permitting

“Crossing Protected Waters” - The CSXT Elvira Bridge Replacement
Cole Reagan - Wood Environmental & Infrastructure
Matt Adkins - CSX Transportation, Inc.

“So you Want to Build a Railroad?” - An Environmental Clearance and Permitting Story
Kevin Keller - HDR

Environmental Issues Affecting the Association of American Railroads and North American Rail Industry
Robert Fronczak - Association of American Railroads

Environmental Planning to Reduce Project Delays and Environmental Impacts
William Parry - CSX Transportation, Inc.
Daniel Ley & Thomas Steiner - Arcadis U.S., Inc.

FRA’s Environmental Rulemaking, Joining 23 CFR 771 & 774 and Environmental Project Development for Federally Sponsored Rail Projects
Andrea Martin - U.S. Department of Transportation

Hidden in Plain Sight - Environmental, Health, and Safety Violations and How to Avoid Them
James Schneider - ERM

New PHMSA Compliance Challenges for Railroad ‘Comprehensive Oil Spill Response Plans’
Colin McWilliams - RIO Environmental Consultants
Leo Thorbecke - TRC Companies, Inc.

Regulatory Implications for the U.S. and Canada: British Columbia’s New Spill Planning Regulations for Rail
Colin McWilliams - RIO Environmental Consultants

Replacing Canadian National Railroad’s Bonnet Carré Spillway Bridge - Permitting Strategies to Replace Historic Structures in a Complex Regulatory Environment
Kari Harris - CN Railway
James Thomas - HDR

Staying Ahead of Emerging Regulations
Violet Fisher - BNSF Railway
Matt Prasek - EA Engineering, Science, and Technology, Inc.

Surface Transportation Board Environmental Reviews - How to Get Started
Elizabeth Diller - ICF
Danielle Gosselin - Surface Transportation Board
Ecological Protection & Conservation

Consideration of a No-Action-Alternative Remedy for Surface Water Sheen to Protect Threatened and Endangered Species
Mark Holsing - AECOM
Ryan Schwegman - EnviroScience
L. Christopher - Norfolk Southern Railway

Fire on the Track - Managing Methane During Bridge Construction
Kelly Gearhart - Union Pacific Railroad

Fresh Cross-Ties on River Bridges - Solutions for Summer Sheens and Regulatory Compliance
David Sullivan & Jeff LaRock - TRC Companies, Inc.
Paul Mastrodomenico - Global Remediation

Managing Improperly Treated Bridge Ties Over Water
Christopher Hunsicker & Troy Carpenter - Norfolk Southern Railway

Monitoring and Mitigating Rail-Related Moose Mortality in Northern British Columbia
Garrett Kerr & Brad Pollard - McElhanney Consulting Services Ltd.
Luanne Patterson - CN Railway

Energy, Emissions, & Air Quality

Air Pollution Reduction Efforts on the NCDOT Piedmont Passenger Rail Service
Lynn Harris - McDowell Engineers & Associates / NCDOT

Building the National Rail Emissions Inventory
Mark Janssen - Lake Michigan Air Directors
Matt Harrell - Illinois EPA

Introduction and Application of New AREMA Air Quality Compliance Chapter Update and Primer on AREMA Environmental Committee 13
Gale Hoffnagle - TRC Companies, Inc.

Stationary Air Source Compliance:
Refrigerants & Ozone Depleting Substances
Jeffrey Barwick - Norfolk Southern Railway
Tony Jabon - Trinity Consultants

Successful Implementation of a Generator Compliance Program at CSX Transportation, Inc.
Meaghan Atkinson - CSX Transportation, Inc.
Christine Schaub - Environmental Consulting & Technology, Inc.

Use of Digital Cameras to Measure Visible Emissions
Rebecca Heilman - CSX - TRANSFLO Terminal Services
Presentations

**Environmental Analytical Data & Applications**

**Challenges and Considerations with PFAS Analysis**
Erin Rodgers - Environmental Standards, Inc.
Christopher Oakes - Norfolk Southern Railway

**Differentiating Impact Areas Using Compound-Specific Isotope Analysis**
Erin Busby & Sean Gormley - Wood Environmental & Infrastructure
Daniel Dyer - CSX Transportation, Inc.

**Environmental Data Science Innovation in the Age of Big Data**
Michael Hawthorne - GEI Consultants, Inc.

**Implementing Mobile App Technology for Trash Management**
Gipsy Plis - CSX Transportation, Inc.

**Technological Advancements and Direct Improvements to Field Sampling**
Judith R. Morgan - Pace Analytical

**The Next Evolutionary Step in Railroad Infrastructure Surveying: A Drone-Mounted LiDAR Approach to Gathering Accurate Spatial Data**
Zachary Powers, Micah Santos & E. Daniel Carre - GHD
Christopher Beranek & Bryan Naranjo - Norfolk Southern Railway

**Environmental Management Systems**

**Creating a New User-Friendly Environmental Audit Management Information System**
Eric Chang - Norfolk Southern Railway

**Environmental Culture Change in the Rail Industry: Affecting Change through a Comprehensive Environmental Culture Assessment**
Danielle Post & Stacey Harvey - ERM
Dana Banks - Pan Am Railways

**Scheduled Railroading and Environmental Management - A Tale of Collaborative Success**
Samuel Ross & Brian Booth - CSX Transportation, Inc.

**Environmental Response**

**Agency Coordination Following Extreme Flooding: When Emergency Repairs Are No Longer Sufficient**
Steve Cheney & Kevin Rice - Union Pacific Railroad
Abby Korte - Jacobs

**Heavy Oil Transportation: Challenges, Regulations, & Risk Management for the Misunderstood ‘Non-Floating Boogeysman’**
Colin McWilliams - RIO Environmental Consultants
Tony Houdyshell - Canadian Pacific Railway

**Planning for the Worst: COSRP for Crude, Ethanol, and Other Nasties**
Matthew Horn & Gabrielle McGrath - RPS
The Real Time Benefits of GIS Data Collection During a Natural Disaster: CSX Transportation’s Emergency Response to Hurricane Florence
Lance Rasnake - Wood Environmental & Infrastructure
Erik Henderson & Jacob Metcalf - CSX Transportation, Inc.

Passenger Rail & Transit

Improving the South Shore Line, One Dune Wetland at a Time
Janice Reid - HDR

NJ TRANSIT’s First-of-its-Kind “Microgrid” (a.k.a. NJ TRANSITGRID TRACTION POWER SYSTEM) to Provide Highly Reliable Power in the Core Region During Emergencies
Mittul Patel - BEM Systems
John Geitner - New Jersey Transit Corporation

Piloting the FFGA and Permitting Simultaneously without Derailing the Process
Joshua Gillespie, Jordan Myers & Caitlin Timoney - HDR

Remediation

Amtrak Lumber St. Facility; Eliminating Diesel Fuel Sheen to the Chicago River
Frank Aceto & Jeff Johnsen - Stantec Consulting Corporation
Robert Mesec & Craig Caldwell - Amtrak

Evolution of an Environmental Conceptual Site Model: 32 Years of Progress and Innovation
Barbara Oslund & Barry Harding - AECOM

Forensic Chemistry at Trial: Refuting Claims of Diesel Fuel Contamination at a Complex Industrial Site
Pamela Nehring & Sean Sullivan - Daley Mohan Groble PC
Allen Uhler - NewFields Environmental Practice

Pre-emptive Measures and Enhanced Reductive Dechlorination to Address
Steve Baggett, Frank Aceto & Paul Miller - Stantec Consulting Corporation
Craig Caldwell & Andy Enzman - Amtrak

Remediation of a Nitrate Plume: It’s All About the Bugs
Joshua Sales - Kennedy/Jenks Consultants
Violet Fisher & Thomas Jones - BNSF Railway

Sixteen Sweet Lines of Evidence for Surface Water Protection at an LNAPL Site
Sean Karoly & Wayne Amber - Geosyntec Consultants
Steven Aufdenkampe - Norfolk Southern Railway
Presentations

Risk & Liability Management

Development and Implementation of a Direct to Locomotive Fueling (DTL) Audit Program
Ted Bailey & Ken Roberge - Aureus Solutions Inc.

Managing Environmental Compliance During Construction - Proactive Strategies for Risk Management
Leslie Voss & Craig Broadhead - Jacobs
Kyle Sumsion - BNSF Railway

New Approach to Evaluate Risk with Environmental Audit
Jason Martin - BNSF Railway
Joseph Muggli - AECOM

Successful Implementation of Electronic Risk Assessment Scoring
Meaghan Atkinson - CSX Transportation, Inc.
Tiffanee Grumbly - Arcadis U.S., Inc.

Using Predictive Analytics to Mitigate EHS Risks
William Brokaw & Rachel Mutholland - Kestrel Management Services, LLC

Water Well History, Decommissioning and Risk
Jessica Johnson - Union Pacific Railroad

Stormwater & Wastewater

An Equalization Approach to Protect Industrial WWTPs from Highly Concentrated Waste Streams
Lara Thurn, Divya Malyala, Samuel Karlovich & Robert Stolt - AECOM
Christopher Beranek - Norfolk Southern Railway

Condition Based Maintenance
Christopher Lager - BNSF Railway
Timothy White - AECOM

One Stormwater Basin, Three Permits: Amtrak’s Regional Solution to Maryland’s Chesapeake Bay Restoration Requirement
Brian Sariano, Nathan Walker & Cedric Ruhl - Wood Environmental & Infrastructure
Michael Panhuise - Amtrak

Storm Water and Waste Water Design Guidelines: Examples of How the ‘Devil is in the Details’…
Chad Prior - BNSF Railway
Kevin (Beau) Perry, Damon Sams & Kelsey Blaisdell - TRC Companies, Inc.

Waterproofing a Railroad Crosstie Storage Platform and Treating Surface Water with Reverse Osmosis
Robert Noël de Tilly, Idris Sadoun & Peter Howard - GHD
Frederic Gauthier & Sylvain Renaud – CN Railway
Presentations

Wetlands Treatment Pond Improvements for Industrial Stormwater at a Rail Yard
Brian Zacker - CSX Transportation, Inc.
Anthony Hoffman - Gannett Fleming, Inc.

**Sustainability, Climate Resilience & Engagement**

Assessing the Design, Construction, and Life Cycle Sustainability of MTA New York City Transit Capital Projects
Steven Eget - Dewberry
Thomas Abdallah - New York City Transit

Getting to the Sweet Spot in a World of Changing Climates
Ryan Gottsch - Union Pacific Railroad

Maladapted: Railroads and the Urgency of Physical Climate Adaptation
Scott Nadler - Nadler Strategy

NJ TRANSIT’s Wayside Signals, Power & Communication Resiliency Project
Mittul Patel - BEM Systems
John Geitner - New Jersey Transit Corporation

Off the Beaten Track: Rethinking Stakeholder Engagement, Disclosure and Sustainability Performance of the North American Class I Railway Industry
Shelley-Ann John - Athabasca University

CREATE – Implementing Precedence: Fostering Collaboration and Partner Commitments for Community Benefits
Samuel Tuck - Illinois Department of Transportation

Refining a Successful Approach to Indigenous Engagement for Major Infrastructure Project Developments
Paul Schaap & Andrea Nokleby - Dillon Consulting Limited
Chris Dane - Canadian Pacific Railway

Sustainable Metrics for Railroad Demolition and Maintenance Wastes and Construction Material Beneficial Use Advantages
Brandon Fagan & Kevin McCarty - GEI Consultants, Inc.
Poster Presentations

**Compliance & Permitting**

Advisory Council on Historic Preservation’s Program Comment: Streamlining Section 106 Compliance for Rail Rights-of-Way
Chris Moelter, Rick Starzak & Elizabeth Diller - ICF
Greg Martin - BNSF Railway

Expediting the NEPA Process For Rail Projects While Remaining Legally-Compliant: Challenges in Responding to Calls for Streamlining Environmental Reviews
Michael Smith - GEI Consultants, Inc.

Fairmont, Morgantown, and Pittsburgh (FM&P) - Environmental Planning to Develop a Public Partnership and Preserve Rail History
John Blanton – CSX Transportation, Inc.
Daniel Ley & Jamie Barnette - Arcadis U.S., Inc.

Minimize Waste and Avoid the Penalty - How Sifting through Accumulated Materials Can Save Money and Prevent Unnecessary Fees
Ryan Jorrey & Jeffrey LaRock - TRC Companies, Inc.
Joel Melino - Hepaco, LLC
Rick Norris - Genesee & Wyoming Railroad Services, Inc.

Permitting Class 1 Freight Railroad Bridge Replacement Projects in the 21st Century: Collaboration Required
Amber Robinson & Ricky Wilson - HDR

**Ecological Protection & Conservation**

Save Migration Along Catenary - The Impact of Electrified Railway Infrastructure on Bats in Central Europe
Marcin Pakula - AECOM
Joanna Furmankiewicz - University of Wrocław Poland

**Energy, Emissions, & Air Quality**

ISC Optimizes Cleaning Process in the Rail Industry
Scott Arnold & Tim Koziatek - ISC - A DMP Corporation

Stationary Air Source Compliance: Emergency Generators
Jeffrey Barwick - Norfolk Southern Railway
Tony Jabon - Trinity ConsultantsEnvironmental Analytical Issues

Application Potential of New High-Resolution Site Characterization Tools at Railroad Spill Sites for Characterization and Optimized Remediation Design
John Fontana - Vista GeoScience

TOP Assay, Years of Lessons Learned
Charles Neslund - Eurofins Lancaster Laboratories Environmental
**Environmental Response**

Deployment of Digital Geospatial Solutions to Provide Real-time Field Data During Union Pacific Railroad’s Salton Sea Mud Pot Emergency Response  
Steve Cheney & Kevin Rice - Union Pacific Railroad  
Chris Powers & Shannon Gonzales - Jacobs

Environmental Impact of Non-Hazardous Materials on Rail Operations  
Glen Rudner - Norfolk Southern Railway

Incorporating Railroad Response Scenarios into Area Contingency Plans  
Gabrielle McGrath - RPS

Managing Liability on Railroad Projects and Emergency Responses  
Dave Patten - Norfolk Southern Railway

**Passenger Rail & Transit**

Navigating the Maze of Asbestos-Containing Materials Licensing in New York City and State  
Margaret Halasnik - GEI Consultants, Inc

NJ TRANSIT’s Use of Mobile App to Expedite Facility Environmental Compliance Audit  
Mittul Patel - BEM Systems  
John Geitner - New Jersey Transit Corporation

**Remediation**

Bioremediation Successes in Cold-Weather Climates  
Katie Hoffmann & Keith Rapp - Pinnacle Engineering, Inc  
Greg Jeffries - BNSF Railway

Geochemical Analysis Techniques to Establish Secondary Sources of Nutrient Contamination at Legacy Fertilizer Spill Site  
Andrew McManus, Janette Wilson & Sandy Conard - Arcadis U.S., Inc.  
Matthew Adkins - CSX Transportation, Inc.

**Risk & Liability Management**

Considerations for Closure or Mothballing of Fuel, Oil and Industrial Wastewater Facilities  
Glen Smith & James Gorley - Argus Consulting, Inc.

Former Beacon Park Railyard, Demolition & Disposal of Physical Improvements for Property Transfer  
Robert McKeever & Roy Stancil - AECOM  
William Parry & Coley Campbell - CSX Transportation, Inc.

**Stormwater & Wastewater**

A Unique Environmental Problem at a Railyard Yields a Unique Solution  
Robert Stolt - AECOM
Christopher Beranek - Norfolk Southern Railway

**Best Management Practices to Improve Industrial Stormwater Quality at a Fertilizer Terminal Facility**
Brian Zacker - CSX Transportation, Inc.
Anthony Hoffman - Gannett Fleming, Inc.

**The Story of Ballast in Maryland**
William Parry - CSX Transportation, Inc.
Daniel Ley & Noelle Slater - Arcadis U.S., Inc

**Sustainability, Climate Resilience & Engagement**

**Don’t be Ashamed of Your Wood Ties - They Tell a Great Story**
Dallin Brooks - Western Wood Preservers Institute

**Turning the Tides - Flood Resilience for Above and Below Ground Flood Risk at Aquarium Station**
Julie Eaton - Weston & Sampson Engineers, Inc.
Andrew Brennan - Massachusetts Bay Transportation Authority

**Resilience Risk Analysis for Railroads - Practices not Paper, Tools not Tasks**
Michael Bilney - Cardno
Please join us for the inaugural Women’s Networking & Outreach Breakfast

Wednesday
23 October 2019

The Women’s Networking & Outreach Breakfast will provide a networking opportunity for women professionals and students at the Railroad Environmental Conference. The breakfast will also feature a panel discussion with women railroad professionals to discuss their experiences and perspectives on careers in this field. More details to come.