

# 20<sup>th</sup> RAILROAD ENVIRONMENTAL CONFERENCE



## PROGRAM 23-24 October 2018



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# Conference Overview & Featured Events

## Monday October 22nd, 2018

Exhibitor set-up	1:00pm	5:00pm	Exhibit Hall
AREMA Committee 13 Meeting	3:30pm	4:30pm	314A

## Tuesday October 23rd, 2018

Registration	7:00am	8:30am	Pine Lounge
Continental Breakfast	7:00am	9:00am	Exhibit Hall
Plenary Session	8:00am	9:50am	Illini Room A (IR A)
Registration	8:30am	5:30pm	Illini Room Lobby
Break	9:50am	10:20am	Exhibit Hall
Presentation Sessions	10:20am	12:00pm	IR A / 314 / 210
Lunch	12:00pm	1:15pm	Pine Lounge / Exhibit Hall
Presentation Sessions	1:15pm	2:55pm	IR A / 314 / 210
Break	2:55pm	3:25pm	Exhibit Hall
Presentation Sessions	3:25pm	5:05pm	IR A / 314 / 210
Poster Reception	5:05pm	6:45pm	Pine Lounge / Exhibit Hall
AREMA Committee 13 Banquet	7:00pm	9:30pm	Memorial Stadium

**Keynote: Michael Rush - Association of American Railroads**

## Wednesday October 24th, 2018

Registration	7:00am	5:00pm	Illini Room Lobby
Continental Breakfast	7:00am	9:00am	Exhibit Hall
Plenary Session	8:00am	9:40am	Illini Room A
Break	9:40am	10:10am	Exhibit Hall
Presentation Sessions	10:10am	11:55am	Illini Room A / 314
Lunch	11:55am	1:25pm	Pine Lounge / Exhibit Hall
Presentation Sessions	1:25pm	3:05pm	Illini Room A / 314
Break	3:05pm	3:35pm	Exhibit Hall
Presentation Sessions	3:35pm	4:55pm	Illini Room A / 314
Adjourn	4:55pm		

## Wireless Internet



Choose the "IllinoisNet\_Guest" wireless network.

Open an internet browser and the UI Wireless page should load.

Select the "Register a temporary guest account" link below the Log In.

Fill out the form, accept the terms of use, and click Register.

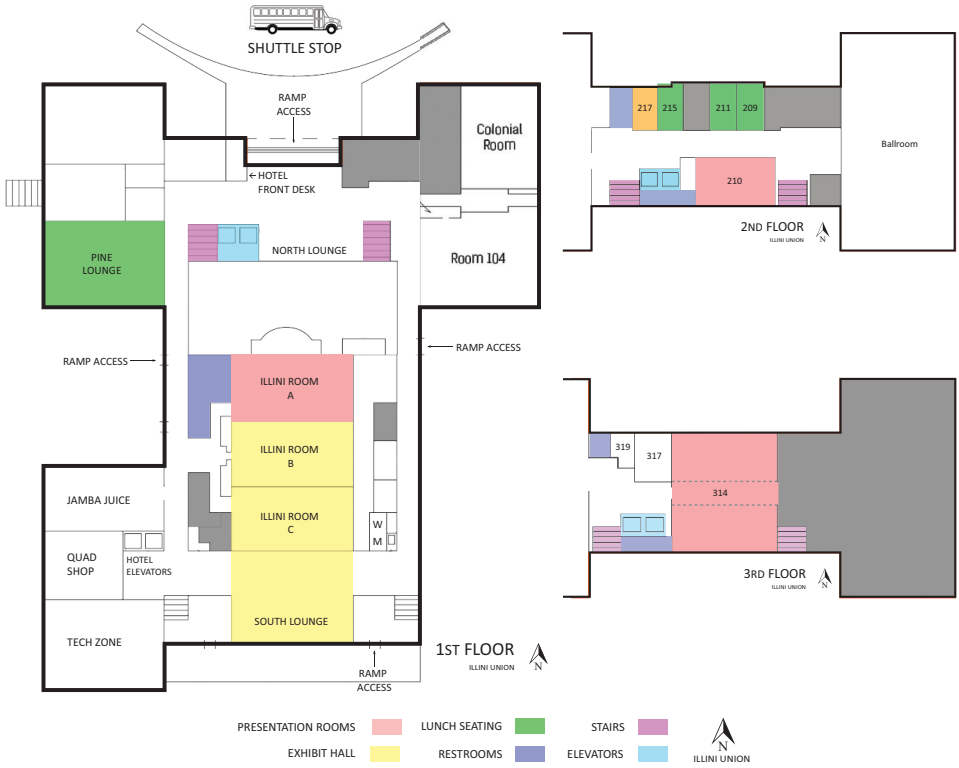
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For help with the Illinois wireless network, please contact the Help Desk at 217-244-7000.

Note: WiFi Registration forms are valid for a 24 hour period. A new registration form will need to be completed to gain access after 24 hours.

# Illini Union Floor Plans



## Emergency Information



Dial **911** for assistance or **911** from a campus phone. The conference location is: Illini Union, 1401 W. Green St., Urbana, IL.



**Tornado:** Use the stairs on the north or south side of the building to go to the basement for shelter.



**Fire:** Use the doors located on the west side of the building and meet near the Alma Mater statue.

**POLICE**



### Non-Emergency Police Department Contact Information

Champaign  
82 East University Ave  
Champaign IL  
217- 351-4545

Urbana  
400 South Vine Street  
Urbana IL  
217- 384-2320

University of Illinois  
1110 W Springfield Ave  
Urbana IL  
217- 244-7209



**Carle Foundation Hospital**  
611 West Park Street, Urbana IL  
217- 383-3311

**Presence Covenant Medical Center**  
1400 West Park Street, Urbana IL  
217- 337-2000

# TUESDAY 23 OCTOBER

## Plenary Session

Moderator: Betsy Beauchamp - TestAmerica

Location: Illini Room A

**8:00 Welcome and Introduction**

Christopher Barkan - University of Illinois at Urbana-Champaign

**8:10 Environmental Issues Affecting the North American Railroads**

Robert Fronczak - Association of American Railroads

**8:35 LNAPL Recovery and Remedy Transitions: A Case Study at a Railyard Fueling Facility**

Andy Pennington & Dawn Gabardi - Arcadis U.S., Inc

Jeremy Coughlin & LeeAnn Thomas - Canadian Pacific Railway

**9:00 Facility Response Plan - Application of Lessons Learned**

Christopher Huniscker - Norfolk Southern Railway

**9:25 RREC Sponsor Recognition**

Christopher Barkan - University of Illinois at Urbana-Champaign

**9:50 Break - Exhibit Hall**

## Remediation

Moderator: Daniel Dyer - CSX Transportation, Inc

Location: Illini Room A

**10:20 Is Bioventing a Better Alternative for LNAPL Remediation?**

Brad Koons, Jonathon Smith & Steven Gaito - AECOM

Andrew Kirkman - BP

**10:40 Remedial Optimization: Transitioning from Physical LNAPL Removal to Enhanced Biological Degradation**

Todd Miller & Ben Carreon - Kennedy/Jenks Consultants

Yueh Chang - BNSF Railway

## Remediation Panel

Moderator: Andy Pennington - Arcadis U.S., Inc

Location: Illini Room A

**11:00 Updated ITRC LNAPL Guidance: A Tool for Effective Site Management**

David De Courcy Bower - ERM

Erik Gessert - Terracon

David Harn - Michigan DEQ

Andy Pennington - Arcadis U.S., Inc

**11:20**

**12:00 Lunch - Boxed Lunches available in Pine Lounge & Exhibit Hall**

**Conference Presentation Summaries & Slides**

[http://railtec.illinois.edu/RREC/2018\\_Presentations.php](http://railtec.illinois.edu/RREC/2018_Presentations.php)



Download Whoova from your app store. Then, search for the 2018 Railroad Environmental Conference and enter the invitation code **2018RREC**.

**Sustainability**

Moderator: Ken Richardson - Arcadis US, Inc  
Location: 314

**Zero-Emission Motive Power: Overview of Hydrogen Fuel Cell Technology Applied to Rail (Hydrail)**

Andreas Hoffrichter - Michigan State University

**STEM Outreach to K-12 Students: The Root of Railway Engineering Education**

C. Tyler Dick - University of Illinois

**Sustainability Panel**

Moderator: Nathan Loftice - BNSF Railway  
Location: 314

**Recruiting and Retaining the Next Generation of Rail Engineering Professionals**

Patrick Crain - CN Railway  
Linellis Santiago-Bernier - Union Pacific Railroad  
Adrian Diaz de Rivera - University of Illinois  
Ulyssia Dennis - University of Illinois  
Chris Lager - BNSF Railway  
Grant Lesak - University of Illinois

**Compliance & Permitting**

Moderators: Robert Fronczak - Association of American Railroads  
Location: 210

**Navigating Environmental Regulatory Hurdles for New Rail Yard Development Projects - Strategies and Lessons Learned**

Erin Brosnan Davis - GEI Consultants, Inc  
Stephen Chambers - Chambers Engineering  
Chadwick Conn - Eco-Energy, LLC  
Coley Campbell - CSX Transportation, Inc

**Planning Distance Calculations – A Better Mouse Trap**

Terri Allen - Norfolk Southern Railway  
Wade Narin van Court, Heather Aherns & Rebecca Spring - TRC Companies, Inc

**Thompson River Coal Spill – Regulatory Requirements and Post-Spill Monitoring Results**

Trevor Welton - Hemmera Envirochem, Inc  
Chris Dane - Canadian Pacific Railway

**Best Management Practices for Proactive Environmental Audits**

Eric Chang - Norfolk Southern Railway  
Mary Beaton - AECOM

Lunch Seating available in 209, 211, 213, 215, 402, 403, 404, 405, 406, 407, 408, 409, Pine Lounge & Food Court (lower level)

## Remediation

Moderator: Stella Karnis - CN Railway &  
Leroy Leonard - GeoSyntec Consultants  
Location: Illini Room A

**1:15 Regulatory Closure Through Pathway Elimination - Former Wood Treatment Plant on Railroad Property**

Ben Iden & Laura Funk - Wood Environment & Infrastructure Solutions, Inc  
Dan Dyer - CSX Transportation, Inc

**1:35 Challenging Bioremediation beneath Historic Railyard and Turntable in Queens, New York Accomplished with Horizontal Injection Wells**

Kyle Carlton - Directional Technologies, Inc

**1:55 Pipeline Project Leads to Groundwater Remediation**

Jason Diamond - Arcadis U.S., Inc  
Matthew Adkins - CSX Transportation, Inc

**2:15 In-Situ Stabilization and Removal of Soil Impacted by Lead and Arsenic**

Brandt Morrow - AECOM  
Steven Aufdenkampe - Norfolk Southern Railway

**2:35 New Approach with an Old Tool: Aerobic Biooxidation to Effectively Deplete Groundwater Contaminants from Creosote**

Randy Sillan - AECOM

**2:55 Break - Exhibit Hall**



**Passenger Rail & Transit**

Moderator: Gary Rozmus - GEI Consultants  
Location: 314

**Ecological Conservation**

Moderator: Luanne Patterson - CN Railway  
Location: 210

**Addressing Archaeological Concerns During the Eglinton Crosstown Light Rapid Transit Project**

Barbara Slim & Shaun Austin - Wood Environment & Infrastructure Solutions, Inc

**CN Kaien Island Siding Reef Compensation Habitat: Fish Recruitment to Artificial Marine Reef Habitat in Northern British Columbia**  
Shannon Bard - Hemmera Envirochem, Inc

**Super Storm Sandy Five Years Later: Expediting NEPA, Permitting and Environmental Compliance for NJ Transit's Resilience Program**

Harold Orlate - BEM Systems, Inc  
John Geitner - NJ Transit Corporation

**Accurate and Efficient Desktop Reviews of Potential Threatened and Endangered Species Occurrences for Oil Spill Facility Response Plans**

Terri Allen - Norfolk Southern Railway  
Stephen Ellingson, Heather Ahern & Rebecca Spring - TRC Companies, Inc

**Enhancing Flood Resiliency of New York City Subway System**

Manuel Ramos & Luv Sehgal - ARUP

**The Design, Construction and Commissioning of a Best in Class 99-Acre Wetland in Association with Canadian Pacific's Belle Plaine Spur in Saskatchewan, Canada**

Lisette Ross, Kristel Unterschultz & Glen Koblun - Ducks Unlimited Canada  
Chris Dane - Canadian Pacific Railway

**Environmental Response**

Moderator: Leo Thorbecke - TRC Companies, Inc  
Location: 314

**Industry Spill Planning on High Visibility Waterbodies: Railroad and Agency Case Studies**

Colin McWilliams - CPSSC  
Chad Livingston - Canadian Pacific Railway

**Breeding Birds, Leopard Frogs and Mammoths, oh my! A Canadian Perspective on Environmental Construction Monitoring in the 21st Century**

Joe Van Humbeck - Canadian Pacific Railway

**Uses and Benefits of Crude Oil Mass Balance Results**

Andrew McManus - Arcadis U.S., Inc  
Chris Machenberg & Matthew Adkins & Raghu Chatrathi - CSX Transportation, Inc

**Ecological Restoration of Sulfur-impacted Soil on Indigenous Land Following a Train Derailment**

Andrei Zawadzki - SNC-Lavalin Environment Inc

## Remediation

Moderator: Jay Diebold - Golder

Location: Illini Room A

**3:25 Property Line Interim Measure Using PlumeStop and AquaZVI to Passively Treat Groundwater and Gather CSM Information**  
Matthew Burns - WSP

**3:45 Rapid Site Characterization of a Chlorinated Solvent Plume**  
Jennifer Williams & Jeffrey Bryan - AECOM  
Steven Aufdenkampe - Norfolk Southern Railway

## Panel Discussion

Moderator: Christopher Barkan - University of Illinois

Location: Illini Room A

**4:05 Reflections on a Half Century of Progress in Railroad Environmental Performance: Lessons Learned for the Future**

Peter Conlon - Association of American Railroads (Retired)

Robert Fronczak - Association of American Railroads

**4:25**

Michael Iden - Union Pacific Railroad

Michael Rush - Association of American Railroads

Mark Stehly - BNSF Railway (Retired)

**5:05 Poster Reception - Pine Lounge / Exhibit Hall**

**7:00 AREMA Committee 13 Dinner - Memorial Stadium (details below)**

## Dinner Transportation & Parking

**Memorial Stadium** - (Dinner in the Colonnades Club - **Enter Stadium at Gate 16 on the West side**) - 1402 South 1st Street, Champaign, IL 61820

**Bus Transportation will be provided from the Illini Union. If you wish to drive, there are 2 parking options:**

**Parking Option 1** - Campus Recreation (metered spots, free after 6pm)  
201 East Peabody Drive, Champaign, IL 61820

**Parking Option 2** - State Farm Center  
1800 South 1st Street Champaign, IL 61820

**Environmental Response**

Moderator: Leo Thorbecke - TRC Companies, Inc  
Location: 314

**Lessons Learned at Canadian Pacific Railway Coal Derailments**

Steve Jones - GHD  
Chris Dane - Canadian Pacific Railway

**Innovative Approach to Develop a Geographic Response Plan (GRP)**

Daniel Dyer & Chris Oakes - CSX Transportation, Inc  
Chris Harvey & Wade Narin van Court - TRC Companies, Inc

**Environmental Response Panel**

Moderator: Colin McWilliams - Polaris Applied Sciences & Leo Thorbecke - TRC Companies, Inc  
Location: 314

**Geographic Response Planning (GRP's), A Class I perspective:  
An Interactive Panel Discussion**

Pat Brady - BNSF Railway  
Michael Algots - Union Pacific Railroad  
Tony Houdyshell - Canadian Pacific Railway  
William Parry - CSX Transportation, Inc  
Bryan Naranjo - Norfolk Southern Railway  
Devin Sprinkle - CN Railway

**Environmental Analytical Data Applications**

Moderator: John Williams - Pace Analytical  
Location: 210

**Unlocking the Mystery of Environmental Forensics Analyses**

Erin Rodgers - Environmental Standards, Inc  
Christopher Oakes - Norfolk Southern Railway

**Using Computational Models to Assess Hypothetical Crude-by-Rail Releases Associated with the Tesoro Savage Vancouver Energy Project**

Matthew Horn & Jenna Ducharme - RPS

**Waste Soils - Reducing Costs of Characterization and Management**

Jim Schneider & Dave Edwards - ERM

**Emerging Contaminants - The Concern for PFAS Contamination from the Use of AFFF**

Robert Brown & Charles Neslund - Eurofins Lancaster Laboratories Environmental

**Shuttle Information**

**Tuesday**

7:00am - 6:15pm

Transportation will be provided to and from the dinner at Memorial Stadium

**Wednesday**

7:00am - 5:30pm

**Shuttles Provided between Illini Union - Hampton Inn - Hawthorn Suites (Champaign Suites) - Hilton Garden Inn**

# WEDNESDAY 24 OCTOBER

## Plenary Session

Moderator: David Smat - BNSF Railway

Location: Illini Room A

- 8:00 Enhancing Efficiency: a Multi-Faceted Approach to a Wastewater Treatment Upgrade**  
Nicole DeRose - CN Railway  
Beau Perry - TRC Companies, Inc
- 8:25 Evolution of Switcher Technology at Union Pacific**  
Mike Iden & Jim Brannen - Union Pacific Railroad
- 8:50 Grow Your Own: Engaging Rail Community Stakeholders to Encourage Minority Youth STEM Education**  
Sergio "Satch" Pecori - Hanson Professional Services
- 9:15 AAR Environmental Excellence Awards**  
Robert Fronczak - Association of American Railroads

## 9:40 Break - Exhibit Hall

## Sustainability

Moderator: François Beaudoin - Golder

Location: Illini Room A

- 10:10 Lessons Learned from Managing Weird Waste**  
Kara Angotti - Amtrak
- 10:30 Norfolk Southern Railway Corporation Sustainable Remediation Program Update**  
Gerlinde Wolf - AECOM  
Scott Pittenger & Steven Aufdenkampe - Norfolk Southern
- 10:50 Lifecycle Design and Cumulative Benefit-Cost Analysis for Rail Resiliency**  
Mark Westray, Sam Merrill & Scott Keating - GEI Consultants, Inc
- 11:10 Pilot Project to Determine the Effectiveness of Transforming Used Rail Ties Into Biofuel**  
Francisco Perello, Richard Johns & Christina Chan - Keystone Environmental Ltd.  
David Brogliatto & Mike Linder - CN Railway
- 11:30 Reuse Success Redevelopment to the Tex Tin Superfund Site in Texas City, Texas**  
Micheal Dobbs & Catherine Cognetti - Kelley Drye & Warren, LLP

## 11:55 Lunch - Boxed Lunches available in Pine Lounge & Exhibit Hall

## Conference Presentation Summaries & Slides

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### Environmental Management

Moderators: Jeff LaRock - TRC Companies, Inc

Location: 314

#### **Sewer System Investigation Using Mobile Data Management for Regulatory Compliance - Norfolk Southern Decatur Yard**

Terri Allen - Norfolk Southern Railway

Chris Harvey, Brian Hartwig & Leo Thorbecke - TRC Companies, Inc

#### **Connecting People and Information to Enhance Environmental Performance**

Bryan Naranjo - Norfolk Southern Railway

Mark Jasper - GHD

#### **Facilitating Collaborative Environmental Management within Lean Organizations: Canadian Pacific's Experience**

David Huck - Canadian Pacific Railway

Carlos da Ponte - Sustainable Elements, Inc

#### **ITRC's Adaptive Site Management Approach**

Roy Thun - GHD

#### **Using Corrective Action Reports (CARs) to Monitor and Improve Compliance and Performance**

Ted Bailey - Aureus Solutions, Inc

Craig Fisher - Canadian Pacific Railway

Lunch Seating available in 209, 211, 213, 215, 402, 403, 404, 405, 406, 407, 408, 409, Pine Lounge & Food Court (lower level)

# WEDNESDAY 24 OCTOBER

## Sustainability

Moderator: Nathan Loftice - BNSF Railway

Location: Illini Room A

**1:25 Efficient Railway Networks through Sustainable Mainline and Yard Capacity**

C. Tyler Dick - University of Illinois

**1:40 Sustainability Through Adaptation: The Rail Industry's Changing Environment**

John Gray - Association of American Railroads

**2:05 Sustainability and Other Life Cycle Considerations for Railway Crossties**

J. Riley Edwards - University of Illinois

## Risk & Liability Management

Moderator: Michael Clift - BNSF Railway

Location: Illini Room A

**2:25 Planning for Resilience**

Mark Nardolillo & Mittul Patel - BEM Systems

**2:45 Managing Health and Safety: Are Your Programs Up to Date?**

Peter Masson - Antea Group

Matt Carne & Jared Martin - Modesto and Empire Traction Company

**3:05 Break - Exhibit Hall**

## Risk & Liability Management

Moderator: Michael Clift - BNSF Railway

Location: Illini Room A

**3:35 Severe Weather Risk Management Tools for Transportation Corridors and Applications for the Railroad Industry**

Rich Niles & Robert Boggs - Wood Environment & Infrastructure Solutions

**3:55 Reducing Risk While Growing the Bottom Line Through Demolition**

Lance Rasnake - Wood Environment & Infrastructure Solutions

Coley J. Campbell & Walker Brazell - CSX Transportation, Inc

**4:15 Minimization of Unanticipated Costs Related to Unknown Conditions during Remediation and Infrastructure Improvement Projects**

William Parry - CSX Transportation, Inc

Ben Girard - Arcadis U.S., Inc

**4:35 CSXT REFM Abandoned Bridge Demolition Program**

Troy Neisz - Wood Environment & Infrastructure Solutions

Coley Campbell - CSX Transportation, Inc

**4:55 Adjourn**

## Stormwater & Wastewater

Moderators: Craig Fisher - Canadian Pacific Railway & Lara Thurn - AECOM  
Location: 314

### **A Simple Solution to Keep Stormwater Debris Out of Your WWTP**

Christopher Beranek - Norfolk Southern Railway  
Samuel Karlovich & Bob Stolt - AECOM

### **Local Stormwater Charges: What Running Your Rail Through a City Might Cost You**

Brent Azzo - Genesee & Wyoming, Inc  
Fred Schesny - Norfolk Southern Corporation  
Lupe C. Valdez - Union Pacific Railroad  
Peter T. Masson - Antea Group

### **Dissolved Air Flotation Retrofit-Simplified**

Richard Mohlenoff - Amtrak  
Jack Waggener - AECOM

### **Waste Water & Storm Water - Big Data & How It Can Reduce Risk**

Chad Prior & Greg Martin - BNSF Railway  
Neale Jentsch - Casne Engineering

### **EAM - Environmental Asset Management**

Casey Felder Jr. - BNSF Railway  
Gregory Meitler - AECOM

## Break - Exhibit Hall

## Stormwater & Wastewater

Moderator: Craig Fisher - Canadian Pacific Railway & Lara Thurn - AECOM  
Location: 314

### **Railroad Storm Water - Challenges and Opportunities in Discharge Compliance: De Soto, MO Case Study**

Corey Johnson - Union Pacific Railroad  
Carolyn Kossik - Jacobs

### **Using 3-D Visualization for Effective Design Communication**

Divya Malyala & Lara Thurn - AECOM  
Christopher Beranek - Norfolk Southern Railway

### **Pilot-testing of a Sustainable Innovative Technology to Treat Emulsified Oil at a Rail Yard Facility**

François Beaudoin, Marie-Pier Ross-Pilon & Eric Bergeron - Golder  
Seble Afework - CN Railway

Adjourn

## **Compliance & Permitting**

**FCC NEPA Requirements for Wireless Infrastructure for Improving Railroad Communications**

Woo Lim - Terracon Counsultants, Inc

**Union Pacific's Lead in Construction Program**

William Walsh - Union Pacific Railroad

**Final Rule: Hazardous Waste Generator Improvements - Maximizing New Guidelines & Integrating E-Manifest**

Katelyn Cameron Sigler - EA Engineering, Science & Technology, Inc

## **Ecological Conservation**

**Collaborative Conservation: Creating an Agreement to benefit Monarch Butterfly and Rights-of-Way Management**

Caroline Hernandez - University of Illinois at Chicago

## **Environmental Management Systems**

**Benefits and Challenges of System Level Waste Disposal and Used Oil Contracts**

David Patten - Norfolk Southern Railway

## **Environmental Response**

**CAER Groups**

James Holland & Cory Teff - Pinnacle Engineering

**Train 501 Derailment, DuPont, WA; Regulatory and Stakeholder Obstacles Encountered During Remedial Response Actions**

Leah Vigoren & Kathleen Goodman - Wood Environment & Infrastructure Solutions

Robert Graham - Amtrak

## **Remediation**

**Line of Evidence Approach to Accelerate to Remedy – Old Rail Yard & New Regulatory Policies, Optimized by Field Screening**

David Sullivan - TRC Companies, Inc

William Parry - CSX Transportation, Inc

**Design and Implementation of an Arsenic Phytoremediation Pilot Study at a Wood Treatment/Chromated Copper Arsenate Site**

Caleb Krouse - AECOM

Alan Moore & David Huff - Nutter and Associates, Inc

Steve Aufdenkampe & Scott Pittenger - Norfolk Southern Railway

**Remediation of Railroad Fill in New Jersey: Not So Fast! - Options for Handling Railroad Contamination under the LSRP Program**

Charles Stebbins - Dewberry

John A. Geitner - Environment, Energy & Sustainability New Jersey Transit Corporation

**Better Serving Your Customers Through Innovation**

Tim Acri - Environmental Management Specialists, Inc.

Kara Allison - Environmental Management Specialists, Inc.

Donny Beaver - HalenHardy

James "Bubba" Bryan - Norfolk Southern

Ryan Prewitt - CSX Transportation, Inc

**Sorbents for Railroad Related NAPLs**

James Olsta & Ben Cross - HUESKER Inc

**Continued top of page 17**



## Natural Source Zone Depletion: A New Tool in the Management of LNAPL Contaminants

Julio Zimbron - E-Flux

### Stormwater & Wastewater

#### Stormwater Treatment in the Rail Industry

Ryan Hibbs - BNSF Railway

#### Importance of Stormwater & Wastewater System Studies at Large Industrial Sites

Richard Johns, Thuy Wong & Christina Chan - Keystone Environmental Ltd

## Planning Committee

### Meaghan Atkinson

CSX Transportation, Inc

### Christopher Barkan

University of Illinois

### Betsy Beauchamp

TestAmerica

### François Beaudoin

Golder Associates

### Craig Caldwell

Amtrak

### Michael Clift

BNSF Railway

### Jay Diebold

Golder Associates

### Dan Dyer

CSX Transportation, Inc

### Sam Farnsworth

Wood

### Craig Fisher

Canadian Pacific Railroad

### Bob Fronczak

Association of American Railroad

### Jeff Gentry

Jacobs

### Stella Karnis

CN Railway

### Scott Keating

GEI Consultants

### Kevin Keller

HDR Engineering, Inc

### John Kind

CTEH

### Hilary Konczal

Metra

### Jeffrey LaRock

TRC

### Leroy Leonard

Geosyntec Consultants

### Jay Martin

Wood

### Joanne Maxwell

Amtrak

### Lance Meister

Cross-Spectrum Acoustics, LLC

### Greg Menniti

Geosyntec Consultants

### Bryan Naranjo

Norfolk Southern Railway

### Luanne Patterson

CN Railway

### Kevin Peterburs

Union Pacific Railroad

### Ken Richardson

Arcadis U.S., Inc

### Ken Rose

OmniTrax

### Sam Ross

CSX

### Gary Rozmus

GEI Consultants

### Rich Russell

Norfolk Southern Railway

### Joshua Sales

Kennedy/Jenks Consultants

### Martina Schlauch Jones

Arcadis U.S., Inc

### Devin Sprinkle

CN Railway

### Amanda Taylor

AECOM

### Leo Thorbecke

TRC Companies, Inc

### Lara Thurn

AECOM

### Bob Toy

Union Pacific Railroad

### John Williams

Pace Analytical Services

### Joseph Williams

Norfolk Southern Railway

### Devon Wilmington

Union Pacific Railroad

# Be sure to visit our Exhibitors in Illini Rooms BC & the South Lounge.

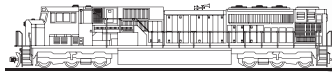
**AECOM**  
**Antea Group**  
**AquaBlok, Ltd**  
**Arcadis U.S., Inc**  
**BELFOR Environmental**  
**Beyond Environmental**  
**Cascade Drilling**  
**Century Group**  
**Chase Environmental Group, Inc**  
**Clean Earth, Inc**  
**Clean Harbors/Safety-Kleen**  
**Dewberry**  
**Directional Technologies, Inc**  
**E-Tank, Ltd/E-Pump**  
**EA Engineering, Science, and Technology, Inc, PB**  
**Elastec, Inc**  
**Environmental Management Specialist, Inc**  
**Environmental Works, Inc**  
**EnviroScience, Inc**  
**Eurofins Lancaster Laboratories**  
**Gannett Fleming, Inc**  
**GEI Consultants, Inc**  
**Geo-Solutions Inc**  
**Geosyntec Consultants**  
**GHD**  
**Global Risk Solutions, Inc**  
**Golder**  
**HalenHardy, LLC**  
**Haz-Mat Response, Inc**  
**HDR**  
**HEPACO**

**Huesker**  
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**J.F. Brennan Company, Inc**  
**Jacobs**  
**JRW Bioremediation, LLC**  
**Marion Environmental, Inc**  
**Moran Environmental Recovery**  
**NRC NYa Environmental Services, Inc**  
**Oil Skimmers, Inc**  
**Pace Analytical**  
**PeroxyChem**  
**Pinnacle Engineering**  
**Polystar, Inc**  
**Ramboll**  
**RPS**  
**S&S Technical, Inc**  
**SGS Accutest**  
**Specialized Professional Services, Inc**  
**StormwaterRx, LLC**  
**SunPro, Inc**  
**TestAmerica**  
**Tetra Tech**  
**TRC Companies, Inc**  
**Wood Environment & Infrastructure Solutions, Inc**

Save the Date - 2019 RREC

October 22-23, 2019

21<sup>st</sup> RAILROAD  
ENVIRONMENTAL  
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## **2018 Railroad Environmental Conference**

Rail Transportation and Engineering Center (RailTEC)  
University of Illinois at Urbana-Champaign  
1239B Newmark Civil Engineering Laboratory  
205 N. Mathews Avenue  
Urbana, IL 61801  
217-300-1340 | [rrec-conf@illinois.edu](mailto:rrec-conf@illinois.edu)