

35th Annual Meeting of the American Society of Mining and Reclamation (ASMR 2018)

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3 – 7 June 2018

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Monday, June 4, Technical Sessions

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	SUBSIDENCE SESSION 1A ONLY ROOM MODERATOR Dan Barkley	LONG TERM RECLAMATION EVALUATION SESSION 1B HEATHROW AB MODERATOR Amy Sikora	SOILS SESSION 1 C GATWICK AB MODERATOR Ed Janak
2:00 p.m. - 2:30 p.m.	Agricultural Longwall Subsidence Mitigation Utilizing Subsurface Drainage Systems: Why Can't We Make It Better? By Gerry Spinner and Dan Barkley	Hickory and Oak Growth Over 10 Years in Response to Initial Fertilization. By Jennifer Franklin and D.S. Buckley	Development of Soil Physicochemical Properties of Reclaimed Croplands in a Large Opencast Mining Area on the Loess Plateau. By Yingui Cao
2:30 p.m. - 3:00 p.m.	Overview of Insar Technology For Areas Monitoring Subsidence Over Undermined Areas By Zach Agioutantis	Survival, Growth, and Blight Incidence of Chestnuts on an FRA-Reclaimed Coal Mine in Southwestern Virginia. By Sara Klopff	Soil Stockpile Seed Viability is Affected By Depth and Current Surface Vegetation. By Jennifer Buss, Student, and Brad Pinno
3:00 p.m. - 3:30 p.m.	Response of Petro Pipelines to Longwall Subsidence. By Gennaro Marino	Soil Water Quality of Reforested Mine Site Twelve Years after Reclamation. By Amir Hass	Early Physical, Chemical and Biological Impacts of Using Stockpiled vs Directly Placed Reclamation Soils By Brad Pinno
Monday, 3:30 p.m. - 4:00 p.m. BREAK - CONCOURSE BCD			
	SUBSIDENCE SESSION 2A ONLY ROOM MODERATOR Dan Barkley	FORESTRY SESSION 2B HEATHROW AB MODERATOR Brandon Holzbauer-Schweitzer	SOILS SESSION 2C GATWICK AB MODERATOR Brenda Schladweiler
4:00 p.m. - 4:30 p.m.	An Assessment of Long-wall Mining Subsidence on Internationally Important Floodplain Meadows: I. Plant Communities and Their Response to Increase in Wetness. By Paul Benyon and Neil Humphries	The Influence Herbaceous Vegetation on Ectomycorrhizal Root Colonization and Nutrient Uptake. By Janice Bauman, Martha Fergus, and J.A. Franklin	Effect of Alders (Alnus sp.) on Technosols Development on Lignite Combustion Wastes Disposal. By Marcin Pietrzykowski

4:30 p.m. -5:00 p.m.	An Assessment of Long-wall Mining Subsidence on Internationally Important Floodplain Meadows: II. A Model for the Prediction and Quantification of Impact and Mitigation. By Neil Humphries and Paul Benyon	Using Groundcover to Outcompete Tall Fescue (<i>Festuca arundinacea</i>) Without Outcompeting Tree Seedlings on a Legacy Mine Site. By Matt Aldrovandi, Student, and J. Franklin	APedologicView of Geomorphic Reclamation View in Wyoming. By Amanda Pennino, Student
5:00 p.m. - 5:30 p.m.	Reliance, Wyoming Mine Subsidence Mitigation Project. By Doug Beahm	Technical Division (TD) meeting: ECOLOGY / FORESTY & WILDLIFE (Jerry Schuman, chair)	

Monday Social Dinner 6:00–9:00 PM – Renaissance Ballroom: Living Legends features:

“The Life and Times of a Career Reclamationist” by Vernon Pfannenstiel

Tuesday, June 5, 2018

- 6:30 a.m. – 7:30 a.m.....Haulin’ ASMR - Meet in lobby
- 7:00 a.m. – 8:30 a.m.....Breakfast – Concourse BCD
- 7:30 a.m. – 5:00 p.m.Registration – Concourse Foyer
- 7:45 a.m. – 8:30 a.m.JASMR Editors and TD Chair meetings (TBA)
- 8:00 a.m. – 6:00 p.m.....Silent Auction – Lambert CD
- 8:30 a.m. – 4:00 p.m.Poster Session - Heathrow AB

TUESDAY, JUNE 5, TECHNICAL SESSIONS			
	NOVEL TECHNOLOGIES SESSION 3A ORLY ROOM MODERATOR Bob Nairn	POSTERS SESSION 3B HEATHROW AB	ABANDONED MINE LANDS SESSION 3C GATWICK AB MODERATOR Michele Coleman
8:30 a.m. - 9:00 a.m.	WebGIS Application to Visualize Historical Reclamation Research Sites Using a Modified QGIS2Web Framework. By David Leifer, student, and Ruopu Li	Posters will be installed between 8:00 -10:30, and remain up until 4:00. Presenters will be present 2:00-4:00	Implementation of the 2016 AML Pilot Program in Pennsylvania: Successes, Challenges, and Lessons Learned. By Eric Cavazza
9:00 a.m. - 9:30 a.m.	Using Novel Geophysical Techniques to Relate Surface Coal Mining Fill Characteristics to Effluent Stream Water Quality. By Kathryn Little, student, and Erich Hester		Planning and Implementation of the 2017 AML Pilot Program in Pennsylvania By Eric Cavazza

9:30 a.m. - 10:00 a.m.	Surveyor in the Sky: Using Very High-resolution Drone-collected Data to Monitor Ecological Restoration. By Grayson Koenemann, Student		Investigations of Acidic Discharges from the Historic Mining of the Davis and Dekoven Coal Beds in Southern Illinois. By Paul Behum and Angie Mick
Tuesday, 10:00 A.M. - 10:30 A.M. BREAK - CONCOURSE BCD			
	MINE POOL STUDIES SESSION 4A ORLY ROOM MODERATOR Julie LaBar	POSTERS SESSION 4B HEATHROW AB	LONG TERM RECLAMATION SESSION 4C GATWICK AB MODERATOR Paul Griswold
10:30 a.m. - 11:00 a.m.	Statistical Modeling of Mine Pool Formation in Underground Coal Mines of Ohio. By Lindsey Schafer, student, and N. Kruse Daniels	Posters will be up until 4:00. Presenters will be present 2:00-4:00	Developing Diverse, Effective, and Permanent Plant Communities on Reclaimed Surface Coal Mines: Establishing Ecosystem Function in Reconstructed Wildlands. By Edward Vasquez & Roger Sheley
11:00 a.m. - 11:30 a.m.	Data Management for OSM Mine Pool Project at Ohio University: Lessons Learned. By Rebecca Steinberg, student, and N. Kruse Daniels		Eucalypt Plantations for Mine Site Rehabilitation, Carbon Sequestration, and Wood Products in the Hunter Valley, Australia. By Ashley Webb
11:30 a.m. - 12:00 p.m.	Modeling and Parameter Sensitivity of Mine Pool Formation in the Meigs Mine, Ohio. By Frederick Twumasi, student, and N. Kruse Daniels		Reclamation in Smelter-Impacted Landscapes in Northern Regions – A Comparison of Canadian and Russian Experiences. By Peter Beckett
Tuesday, 12:00 P.M. - 2:00 P.M. LUNCH - RENAISSANCE BALLROOM			
CANCELED 2:00 – 5:30 PM Cultural Tour 2 – Jefferson National Memorial Gateway to the West Park			
	TAR CREEK, OK SESSION 5A ORLY ROOM MODERATOR Tim Danehy	POSTERS SESSION 5B HEATHROW AB	RECLAMATION SESSION 5C GATWICK AB MODERATOR Hannah Angel
2:00 p.m. - 2:30 p.m.	Metal Mass Retention in Passive Treatment Systems at the Tar Creek Superfund Site. By Robert Nairn	Posters will be up until 4:00. Poster Presenters will be at their posters from 2:00-4:00.	A Proactive Approach to Imperiled Species Management: Monarch Butterfly Habitat Enhancement on Mined Lands to Prevent Federal Listing By Kristi Dodson

2:30 p.m. - 3:00 p.m.	Geospatial Distribution of Trace Metals in Soils of a Mining Impacted Agricultural Watershed. By Amy Sikora, Student		Geomorphic Reclamation and Landscape Heterogeneity: Results of Vegetation Analysis and Implications for Wildlife. By Kurt Fleisher, Student
3:00 p.m. - 3:30 p.m.	Metals Retention and Remobilization in a Small Mine Drainage Impacted Stream Colonized By <i>Castor canadensis</i> (North American Beaver). By Nick Shepard, Student		Impacts of a Modified Forestry Reclamation Approach on Seedling Growth and Survival on Reclaimed Mines in the Western Gulf. By Cassie Phillips, Student
Tuesday, 3:30 p.m. - 4:00 p.m. BREAK - CONCOURSE BCD			
	PASSIVE TREATMENT SESSION 6A ORLY ROOM MODERATOR Tim Danehy	TD BUSINESS MEETINGS SESSION 6B HEATHROW AB	FORESTRY RECLAMATION SESSION 6C GATWICK AB MODERATOR Michele Coleman
4:00 p.m. - 4:30 p.m.	Phytoremediation of Stormwater By Aquatic Macrophytes. By Michael Natrass, Student	TD Business Meeting: Water Management Gwen Geidel and, Louis McDonald; co-chairs	Phytophthora cinnamomi is Capable of Colonizing Forestry Reclamation Approach Sites. By Kenton Sena, Student
4:30 p.m. - 5:00 p.m.	Measuring the Recovery of Fish Communities in a First Order Stream to Tar Creek After Implementation of Two Passive Treatment Systems. By Nick Shepard, Student	TD Business Meeting: Land Use and Planning Jon Bryan Burley, chair	Aspen Sprouting Response to Above Ground Disturbance on a Reclaimed Boreal Oil Sands Site in Alberta, Canada. By Stephanie Jean
5:00 p.m. - 5:30 p.m.	A Comparison of Methods for Analyses of Soil Trace Metals in a Mining Impacted Agricultural Watershed. By Amy Sikora, Student		Switchgrass and Giant Miscanthus Biomass from Reclaimed Mine Lands. By Steffany Scagline-Mellor and Jeff Skousen

Tuesday Social Dinner: 6:00 – 8:00 PM, Renaissance Ballroom:

**Featuring:
Muddy Horse Band**

Note: This is not included in the regular registration and is only for those who paid the additional \$60 fee.

POSTER SESSION - HEATHROW AB - TUESDAY, JUNE 5 8:30 A.M. - 4:00 P.M.

Presenters present 2:00-4:00

1	Individual Tree and Stand-Level Carbon and Nutrient Contents Across One Rotation of Loblolly Pine Plantations on a Reclaimed Surface Mine. By Hannah Angel, Student
2	Investigation Acidic Discharges at the Monahan Abandoned Mine Lands Site, Kansas. By Paul Behum
3	Restoring an Oak Savanna in the Upper Mississippi Valley Zinc-Lead District. By Dan Brumm, and Cody Zink, Students
4	Mine reclamation using bioenergy crops: An investigation into plant-microbe interactions of switchgrass (<i>Panicum virgatum</i>). By Brianna Mayfield, Student, and Zachary Freedman
5	Correlating Surface Water Quality and Spectral Reflectance with small Unmanned Aerial System (sUAS)-Collected Imagery. By Brandon Holzbauer-Schweitzer, Student
6	Stormwater management for a large open-cast coal mine: A case study and proposed solutions. By Justin Hugo, Student
7	Preserving Reclamation Research by Geocoding American Society of Mining and Reclamation Proceedings. By Kari Lagan, Lily Currie, Ashley Rovder, Staci Wolfe, Zach Shoff, and David Madl; Students
8	Seeding Techniques to Promote Woody Plant Establishment in the Northern Great Plains. By Gabe Johnson
9	Restoration of the Soil Microbiome Following Mine Land Reclamation. By Jennifer Kane, Student
10	Rehabilitation of the Reitz #1 Passive Treatment System. By Julie LaBar and Grace Bailey, Student
11	Mummified and Partially Petrified Wood from an Eocene Deposit in Mississippi. By David Lang
12	China's Mining Land Policies and Reclamation Practices. By Luo Ming
13	Geomorphic Reclamation: A pioneer method on the frontier of the Wild West. By Amanda Pennino, Student
14	Analysis of EPA Mandated Soil Amendments. By Madison Peppers, Student
15	Continued Assessment of Acid Mine Drainage Treatment Systems in the Greater Kumurana Valley, Bolivia. By Andrew Potopa, Student
16	Use of Poultry Litter, Swine Mortality Compost, and FGD Gypsum on Reclaimed Mine Soil in Mississippi. By John Read
17	The Role of Algal Biomass Growth on Nutrient and Metal Interactions at the Sediment-Water Interface. By Zepei Tang, Student
18	A Lab-Based System to Study the Microbial Impacts on Passive Remediation Systems for AMD. By Michelle Valkanas, Student
19	Quantifying Sulfide Removal Using Solar Powered-Aeration in Passive Treatment of Net Alkaline Mine Waters. By Taylor Wall, Student

Wednesday, June 6, 2018

6:30 a.m. – 7:30 a.m.....Haulin’ ASMR - Meet in lobby
 7:00 a.m. – 8:00 a.m.Breakfast – Concourse BCD
 7:30 a.m. – 5:00 p.m.....Registration - Concourse Foyer
 8:00 a.m. - 11:30 a.m.Silent Auction – Lambert CD

WEDNESDAY, JUNE 6, TECHNICAL SESSIONS			
	RECLAMATION CONSTRUCTION SESSION 7A ORLY ROOM MODERATOR Gabe Johnson	RECLAMATION IN CHALLENGING ENVIRONMENTS SESSION 7B HEATHROW AB MODERATOR Julie LaBar	RECLAMATION SESSION 7C GATWICK AB MODERATOR Zepei Tang
8:00 a.m. - 8:30 a.m.	Initial Evaluation of Ripper and Tillage Methods on Reclaimed Heavy Mineral Mine Soils. By Zenah Orndorff	Passive System Rehabilitation of a High Flow Acidic Coal Mine Discharge. By Ryan Mahony	Land Cover Monitoring for Mining Reclamation Area Based Random Forest Classification from Remotely Sensed Images. By Chen Yuanpeng
8:30 a.m. - 9:00 a.m.	Selection Criteria for Sedimentation Ponds that may be Transitioned to Permanent Impoundments for a Reclaimed Surface Mine in the Southwest USA. By Kyle Kutter	Targeted Maintenance Efforts to Ensure a Decade of Successful Passive Treatment. By Robert Nairn	The Use of GPS Treatment Data and ArcGIS Tools to Evaluate Herbicide Treatment Effectiveness on a Reclaimed Coal Mine. By Wayne Erickson
9:00 a.m. - 9:30 a.m.	Integrating Geochemical Characterization and Field Procedures in Construction to Mitigate Potentially Acid-Generating Materials in Northern Minnesota, USA. By Meghan Blair	Manganese Oxide Production and Harvesting Using Metal Removal Units. By Colin Lennox	Why Does Cobalt Supply Need to Move Out of Africa? By Rahul Verma
Wednesday, 9:30 a.m. - 10:00 a.m. BREAK - CONCOURSE BCD			

	RECLAMATION - BOND COST SESSION 8A ORLY ROOM MODERATOR Scott Belden	WATER TREATMENT SESSION 8B HEATHROW AB MODERATOR Gwen Geidel	RECLAMATION SESSION 8C GATWICK AB MODERATOR Zepei Tang
10:00 a.m. - 10:30 a.m.	Case Study to Assess the Costs of the Appalachian Regional Reforestation Initiative's (ARRI) Forest Reclamation Approach. By Jacob Johnson	Peat Based Sorption Media – Passive Treatment of Trace Metals Without a Stink. By Paul Eger	The Deployment and Risks Associated with Different Types and Combinations of Earth Moving Equipment in the Restoration of Soil Profiles. An Updating of the UK Guidance. By Neil Humphries

10:30 a.m. - 11:00 a.m.	Anticipating the True Costs of Mine Closure Reclamation. By Zachary Wappes	Dominant Trace Metal Removal Products in a Hard Rock Mine Discharge Bioreactor. By Julie LaBar	Hydrology-Based Design of Geomorphic Evapotranspiration Covers for Reclamation of Mine Land. By Z. Fred Zhang
11:00 a.m. - 11:30 a.m.	Reclamation Bond Optimization Using 3d-dig Plus. By Jake Anderson	Selenium, Uranium, and Nitrate: Treatment of Troublesome Contaminants in Mining Wastewaters—EBR Case Studies. By Ola Opara	Hydrologic Budgets and Conservative Ions: Potentially Important Yet Neglected Tools in the Evaluation of Passive Treatment System Effectiveness By Robert Nairn

Wednesday, 11:30 P.M. - 1:00 P.M. STUDENT AWARDS AND SILENT AUCTION RESULTS – RENAISSANCE BALLROOM

1:00 p.m. – 5:00 p.m. Cultural Tour 3 – Cahokia Mounds State Historic Site

Website: <https://cahokiamounds.org>

Meet Kim Vories at the Registration Table.

	HYDROLOGY SESSION 9A ORLY ROOM MODERATOR Nick Shepherd	WATER TREATMENT SESSION 9B HEATHROW AB MODERATOR Bob Nairn	RECLAMATION SESSION 9C GATWICK AB MODERATOR Paul Griswold
1:00 p.m. - 1:30 p.m.	Quantitative Evaluation of Flow Loss Restoration Associated with Undermined Streams at the Bailey Mine in Southwestern Pennsylvania. By Michael Shema	Zinc-, Lead-, and Cadmium-bearing Mine Drainage at the Rex Mine Site Coeur d' Alene, Idaho. By Kent Whiting	What is the best time of year to use prescribed fire to control invasive shrubs? A Case Study from the Upper Midwest. By Yari Johnson
1:30 p.m. - 2:00 p.m.	Innovation of Filling Reclamation with Multi-Layered Soil Profile. By Zhenqi Hu	Retrofitting a Lime Doser with Automatic Siphon and Mix Well System. By Tim Danahy	Loblolly Pine Survival and Growth on a Reclaimed Mineral Sands Mine in Southeastern Virginia. By Sara Klopff
2:00 p.m. - 2:30 p.m.	Seasonal Trends in Water Quality in a Treated Acid Mine Drainage Impaired Stream. By Natalie Kruse Daniels	Lion Mining Borehole Project: Drilling a Flowing Artesian Water Well into a Mine Pool. By Daniel Guy	Restoring Wyoming Big Sagebrush to Annual Brome-Invaded Landscapes with Seeding and Herbicides. By Matthew Rinella

Wednesday, 2:30 P.M. - 3:00 P.M. BREAK - CONCOURSE BCD

	WATERSHED APPROACHES SESSION 10A ORLY ROOM MODERATOR Gabe Johnson	SESSION 10B HEATHROW AB	WATER & SOIL TECHNOLOGY SESSION 10C GATWICK AB MODERATOR Brandon Holzbauer-Schweitzer
3:00 p.m. - 3:30 p.m.	A Suite of Options at Tar Creek. By Tim Kent and Summer King		Sloping Sand Filtration Bed for Mineral Sand Plant Effluent Clarification. By Jim Gusek

3:30 p.m. - 4:00 p.m.	Treatment Success in a Heavily Mined Watershed in Ohio. By Natalie Kruse Daniels		Biotic Soil Technology for Cost Effective Mine Closure Cover Systems. By Marc Theisen
4:00 p.m. - 4:30 p.m.			TD Business Meetings: Soil and Overburden/Geotechnical Engineering/International Tailings Michele Coleman (Soils); Suzette R. Burckhard (Geotec); Dennis Neuman (Tails)
4:30 PM – 6:30 PM NEC COMMITTEE MEETING – Lambert CD			
6:30 PM -8:30 PM EARLY CAREER PROFESSIONALS EVENT–MEET IN LOBBY, first bus departs 6:00			

Dinner on your own.

Thursday, June 7, 2018

Breakfast on Your Own

Optional professional Field Trips:

8:00 a.m. – 5:00 p.m.....Professional Tour #1: Remediation of Underground Mine Subsidence on Farmland in Illinois.
Lunch included. Meet in Lobby at 7:50 a.m.

8:30 a.m. – 2:00 p.m.....Professional Tour #2: Prairie State Power Plant and Coal Mine. Appropriate attire required*.
Meet in Lobby at 8:20 a.m. Lunch provided by Prairie State generation Company.



Dinner on your own.

*** Safety and Tour #2 Attire**

Prairie State Energy Campus is a coal mine and a power plant on the same site, falling within the strict safety regulations from the Occupational, Health and Safety Administration (OSHA) and the Mine Safety and Health Administration (MSHA) as well as other federal and state agencies. Because of these rules and regulations, we ask that all visitors touring the site wear the following:

- Long pants
- Full cover leather shoes with substantial rubber soles
- Shirt with sleeves

Prairie State will provide visitors with all necessary personal protective equipment.