



2015 Joint Conference ASMR and ARRI



32nd Annual Meeting of the American Society of Mining and Reclamation

9th Annual Meeting of the Appalachian Regional Reforestation Initiative

June 7-11, 2015 – Clarion Hotel – Lexington, Kentucky

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2015 NATIONAL MEETING PROGRAM COMMITTEE

Dr. Richard Barnhisel, ASMR Co-Chair

Chris Barton, ASMR Co-Chair and Field trips coordinator

Paul Rothman, ARRI Co-Chair

Lela and Karen Barnhisel, On-site registration

Dr. Robert Darmody, Pre-registration

Other planning committee members

Patrick Angel, Hannah Angel, Mike Bower, Steve Felch, and Kenton Sena

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Texas Westmoreland Coal Company – Awards Luncheon

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OVERVIEW OF EVENTS

NEC – SUNDAY SESSION, 10:00 AM TO 4:00 PM, CLAIBORNE ROOM

WORKSHOP #1- SUNDAY, 1:00 TO 4:00 PM, DERBY, ROOM 4

EXHIBITORS' AND SPONSORS' RECEPTION – SUNDAY, 6:30 – 8:30 PM, BELMONT ROOM

HAULIN' ASMR - Meet in the hotel lobby 6:30 AM each day

WILD WOMEN OF RECLAMATION – MONDAY, 7:00 AM, MAN-O-WAR, ROOM 1

ASMR, ARRI AWARDS LUNCHEON – MONDAY, 11:45 AM - 2:00 PM, LUNCH AREA

TOURS – ALL TOURS WILL LEAVE FROM THE HOTEL LOBBY

Tour of a local distillery – Alltech, Sunday, 2:30 – 4:30 pm

EARLY CAREER – Monday, Transportation between 5:45 AND 6:30 PM and Return at 9:00

Forestry Field Trip – Tuesday, 7:00 am – 4:30 pm to Eastern Kentucky Research Sites

Historical Sites around Lexington – Tuesday, 8:00 am – 4:30 pm

Tour of local distillery – Woodford Reserve, Tuesday, 1:30 – 4:00 pm

Tuesday Evening at the Horse Park – Transportation provided will begin at 4:30 until 6:00 pm; return to the hotel from the horse park beginning at 9:00 pm.

Golf – Check at the ASMR registration desk. Sunday Tee Time at 1:20 pm, Tuesday Tee Times begin at 10:00 am. Need to depart to golf course no later than 30 minutes prior to tee times each day.

CONFERENCE WORKSHOPS

WORKSHOP 1: ASMR 2015 Workshop: ArcPAD and IOS based geodatabase collection for active and abandoned coal mining sites.

Date: Sunday, June 7, 1:00 pm to 4:00 pm **Location: Derby** (Meeting Room 4) – Clarion Convention Center.

Lead Instructor: Andrew Schaer with the West Virginia Department of Environmental Protection, Charleston, WV 25304 and Kwang Kim with the Office of Surface Mining, Alton, IL 62002

Equipment: None required, participants might want to bring their own IPAD, smart phone, or similar mobile smart device.

Description: The Office of Surface Mining, Technical Innovation and Professional Services (TIPS) is developing and deploying training for Mobile GIS and GPS on several different platforms for use in mining and reclamation. This includes ESRI ArcPAD and Trimble TerraSync on various Windows operating systems and a whole suite of GIS apps for Apple IOS and Android devices. This workshop will provide an overview and demonstration of the existing and emerging mobile applications and show how they can be of use in mining and reclamation related fieldwork. The above and additional information might be placed on the ASMR web page under Upcoming Meetings and Workshops later.

WORKSHOP 2: Implementing the Forestry Reclamation Approach on active and legacy mine sites

Date: Monday, June 8, 2:00 pm to 5:30 pm **Location: Room 4, Session 3**

Description: The Appalachian Regional Reforestation Initiative will present the 5 steps of the Forestry Reclamation Approach (FRA) for active mining operations with a forestry post-mining land use. The modified version of the FRA for previously reclaimed mine sites where reforestation was not attempted, or where the results were undesirable will also be presented. Since 2004, approximately 95 million trees have been planted on newly mined land and approximately 140,000 acres restored to forests using the FRA. This workshop will provide experienced reclamation practitioners with an update on the latest research findings concerning the FRA as well as a basic understanding of the FRA for inexperienced reclamation practitioners.

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Haulin' ASMR

When/Where: 6:30 am, Clarion Hotel lobby, every day during the conference.

Haulin' ASMR is the low key running group that meets at 6:30 am to run. We usually run for 30-50 minutes (depends on the conference schedule). The pace is approximately 5-6 mph, but is generally based on the ability of the participants. Some people stay with the group for part of the run and then branch off to either go faster, farther, or slow down. Running is a wonderful way to meet new people and get some exercise in the morning and to explore the lovely trail system in Lexington during the quiet of the morning. Did you remember to bring your running shoes to Lexington in 2015?

Contact: Michele Coleman- MColeman@nbpower.com

WILD WOMEN OF RECLAMATION

When/Where: 7 am, Monday June 8, just grab your breakfast in the dining area of the Clarion and meet in the Man-O-War Room (Meeting Room 1) in the Clarion Convention Center (see map).

Wild Women of Reclamation (WWR) was originated in Laramie in 2013 as an idea of Brenda Schladweiler. WWR was an integral part of the Monday agenda at the 2014 national meeting of the American Society of Mining and Reclamation. Participants met on Monday morning at a kickoff breakfast to the week. Brenda Schladweiler and Michele Coleman shared their career histories with the group through PowerPoint presentations that showed some amazing pictures of a much younger Brenda and Michele. Feedback from participants at the breakfast meeting and after indicated that those participants just starting their careers appreciated the honest feedback on "how it used to be" and, in many ways, "how it still is." We will continue this tradition by meeting Monday morning at 7 am for breakfast and be entertained by Margaret Dunn's presentation on how to be a mentor.

To keep the fire going throughout the coming year, the group was divided into "more experienced" individuals, i.e., greater than five years in your career, vs. "less experienced," i.e., less than five years. One person from each group was paired with one from the other group. Those mentors and "mentorees" were then given the assignment to keep in touch with each other throughout the coming year. It will be

interesting to find out how well this worked. We also received a few interesting and humorous stories about "worse field day" ever. We should think about how to showcase those stories during the WWR Breakfast meeting in Lexington. Most of the stories involved bad weather. Go figure.

Contacts: Michele Coleman:

MColeman@nbpower.com

Cindy Adams: cadams@bksenvironmental.com



BKS Environmental
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ASMR-ARRI Field Tour

Tuesday 9 June 2015

7:00 Board bus and travel to the eastern Kentucky coal field.

9:30 Arrive at the PVB Wildlife Management Area that was mined and reclaimed in the early 2000s.

Activities:

- Invasive species removal
- American chestnut plantings
- Climate change adaptation study
- Native warm-season grass experiment

11:30 – 12:30 Lunch provided by Green Forests Work.

1:00 Arrive at the Little Elk mountaintop removal surface mine.

Activities:

- Pine Branch mining will demonstrate grading techniques used in the Forestry Reclamation Approach (FRA)
- Visit 18-year old forest planted on low compaction (FRA) spoil plots

3:00 Leave and return to Lexington.

Contact: barton@uky.edu



Historic Tour of Central Kentucky

Tuesday 8:00 am, leave from Hotel lobby

Hunt- Morgan House

In the midst of Lexington's historic antebellum Gratz Park, the Hunt-Morgan House stands as a reminder of early 19th century life, when Lexington was known as The Athens of the West. The Hunt-Morgan House, historically known as Hopemont, was built by John Wesley Hunt in 1814. Hunt was known as the first millionaire west of the Alleghenies. The Federal style Hunt-Morgan House has many beautiful architectural features, including the Palladian window with fan and sidelights that grace its front façade.



Dr. Thomas Hunt Morgan brought international fame to the family and the Bluegrass by becoming the first Kentuckian to win a Nobel Prize. Morgan graduated in 1886 from the State College of Kentucky, later the University of Kentucky, and received his doctorate from Johns Hopkins University.



The Confederate General John Hunt Morgan was christened "Thunderbolt of the Confederacy" by an adoring south and described as "King of the Horse Thieves" by Northern sympathizers. Morgan legends abound from his dramatic escape from a federal prison to

a ride through the Hunt-Morgan House on horseback to kiss his mother goodbye. He was John Wesley Hunt's great grandson.

Henry Clay Estates

Ashland is the name of the plantation of Henry Clay, the 19th-century Kentucky statesman, and is located in Lexington. Henry Clay came to Lexington from Virginia in 1797 and he began buying land for his plantation in 1804. The Ashland farm, which during Clay's lifetime was outside the city limits, at its largest consisted of over 600 acres. Kentucky University purchased Ashland and used it as part of its campus. University founder and regent John Bryan Bowen occupied the mansion. The Agricultural and Mechanical College (Kentucky A & M) was situated on Clay's former farm. Kentucky University split into what became Transylvania University and the University of Kentucky, and sold Ashland in 1882.



Shaker Village of Pleasant Hill Kentucky

In 1805, a group of Shakers came to central Kentucky and established a village known as Pleasant Hill, now America's largest restored Shaker village. Their numbers peaked at 500 in 1820. The village preserves 34 original buildings on 3,000 acres



EXHIBITORS' AND SPONSORS' WELCOME SOCIAL

The Joint Conference Exhibitors' and Sponsors' Welcome Social for all attendees will be held from 6:30 – 8:30 pm on Sunday, June 7 in the Exhibit Hall (Belmont Room) of the Convention Center of the Clarion Hotel. Light appetizers and refreshments will be available. Meet the exhibitors, renew old acquaintances, and meet new people that share mutual professional interests! Two beverage tickets are included in the registration package.

FOOD FUNCTIONS

The **Awards Luncheon** will be held Monday, June 8th, from 11:45 am – 2:00 pm **in the Lunch Area of the Convention Center**. The cost of the Awards Luncheon is included in the registration fee. Additional tickets may be purchased for guests, spouse and/or significant other who did not otherwise register. Catered lunches will be provided on Wednesday and Thursday in the Lunch Area. All **breakfasts** are a part of the Hotel Room Registration and will be available in the **Clarion Hotel Restaurant**.

The **refreshment breaks** with coffee in the mornings and soft drinks in the afternoons will be held in the **Exhibit Area (Belmont)** of the Clarion Convention Center during the technical sessions on **Monday and Wednesday**, and in the hallway near the registration area on **Thursday**. Each of these provides an opportunity for fellowship with colleagues with similar reclamation interests.

EARLY CAREER PROFESSIONALS' SOCIAL (MONDAY EVENING)

The Early Career Professionals will host a social on Monday, June 8, 6:00 to 9:00pm, at the **Blue Stallion Brewing Company**. Transportation will be provided for those who wish it. Meet in the hotel lobby between 5:45 and 6:30, and a bus will transport you to the location and return to the hotel beginning at 9:00. Check at the registration desk for a map if you wish to drive. This function is sponsored in part by BKS Environmental Associates, Inc.

This is especially for those just beginning their reclamation career (<10 years), to interact with the “mature folks” that have a great deal of experience and knowledge in the field of land reclamation.

EVENING SOCIAL (TUESDAY)

The Tuesday evening Social will be at the Kentucky State Horse Park, 1,250 acres, located about four miles from the Clarion Hotel. We will begin providing transportation about 4:30 pm with the last bus leaving about 6:00. The cost of the evening is \$60, which includes the Horse Park entry fee of \$16. However, if you choose to drive yourself, you will need to pay that entry fee as this is included for only those riding the bus. **Crazy regulations, but that was what they required to be in the contract.**

The evening includes a few options. (1) A tour of International Museum of the Horse, which is within one block of the visitor center; allow as much as one hour. (2) A tour of the American Saddlebred Museum, which is between two to three blocks away; allow at least one hour for this. (3) Visit the Big Barn, one of the largest horse barns in the world, 463 feet in length and 74 feet in width (probably four to five blocks walk to see it.). Check upon arrival at the Visitor Center to make sure the barn is still open. On the path to the Big Barn is the Mounted Police Barn, Farrier Shop (closes at 5:00 pm), and Kids' Barn. There is also a golf cart tour of the farm; ask at the Visitor Center, as availability is variable and subject to change. There are two other museums but they are too far to walk and some of them close at 5:00 pm; maybe something to visit later. There is a gift shop near the Visitor Center. We will eat near the Visitor Center at the Bit and Bridle Restaurant. The meal will take place at 7:30 pm along with musical entertainment to follow. Two beverage tickets are included in the registration package for this event.

POSTER SESSION/RECEPTION

An evening **Poster Session** is scheduled for Wednesday, June 10, 5:30 – 7:00 pm in the Henry Clay and Claiborne Rooms of the Convention Center with light snacks and beverages compliments of the Clarion.

SILENT AUCTION

Please bring items to contribute to the ASMR Silent Auction to the reservation desk upon arrival to complete the bidding form for each item. Items will be on display in the Henry Clay Room, and in the Claiborne Room if that room is needed, after 8:00 AM on Monday. This event is used to raise money for the ASMR Student Travel Fund to help students attend future meetings! Bidding will begin on Monday and continue until Thursday at 10:30 am. Successful bidders can pick up their items immediately following the morning sessions. Payment may be made by cash, check, or credit card.

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- **Bear Branch**
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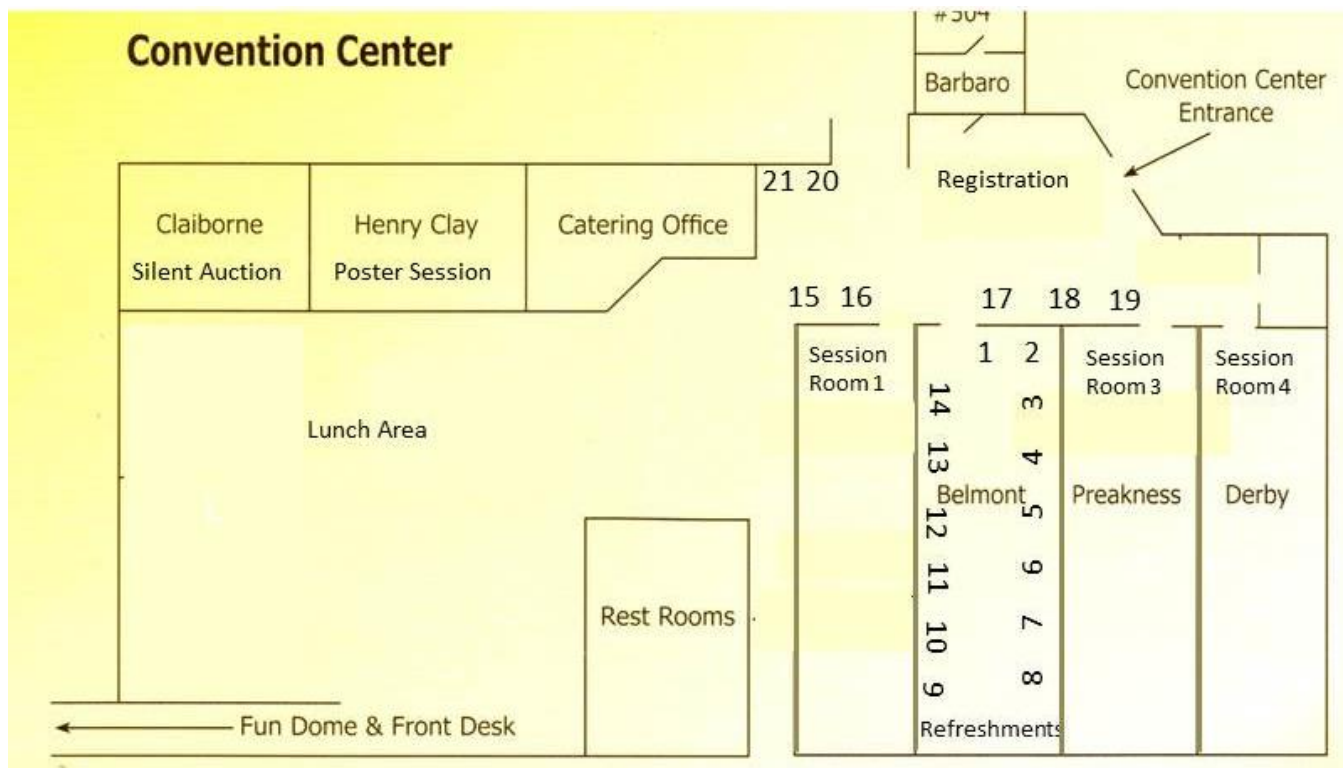
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Exhibit Booths The set-up of exhibits in the Belmont Room can begin at noon Sunday, June 7, and should be completed by 5:00 pm prior to the Exhibitors' and Sponsors' Reception. Breakdown of the exhibits can begin after the 3:30 pm break on Wednesday, June 10. The contractor will begin removing the pipe and drapes at 4:00 and must be completed by 5:00 to allow set up of this room for Thursday to become Session Room 2. The Clarion Convention Center will be open daily during the conference with the Exhibit Hall locked at night.

MAP OF CONVENTION CENTER OF THE CLARION HOTEL



Exhibitors

- | | |
|---|--|
| 1 – Copperhead Environmental Consulting | 13 – Skelly and Loy, Inc. |
| 2 – Caudill Seed Co. | 14 – Trihydro Corporation and Herrera |
| 3 – Arbrogen Inc. | 15 – Sovereign Consulting |
| 4 – Truax Co. | 16 – JRW Bioremediation |
| 5 – BioMost | 17 – ASMR |
| 6 – NASLR | 18 – Appalachian Research Initiative for Environmental Science (ARIES) |
| 7 – Hy-Tech Mushroom Compost, Inc. | 19 – Voss Signs, LLC |
| 8 – Pacific Inter-Mountain Distribution | 20 – Foam Concepts LLC |
| 9 – Rainier Seeds, Inc. | 21 – Carus Corporation |
| 10 – Respec, Inc. | |
| 11 – OSM | |
| 12 – ARRI | |

2015 William T. Plass Award Winner – Jeffery G. Skousen

Established by ASMR to honor Bill Plass for his long-time commitment to mine land reclamation and for his major role in the establishment and organization of ASMR, the Plass Award is the most prestigious society award and reflects outstanding contributions in the areas of mining, teaching, research, and/or regulatory or environmental consulting as they relate to land reclamation. **Jeffery G. Skousen** is Extension Specialist-Land Reclamation and Professor in the Division of Plant and Soil Sciences at West Virginia University. He has been a regional, national, and international contributor in the fields of post-mining rehabilitation and environmental protection through his teaching, research, and outreach/dissemination of his knowledge. This spans the fields of mine drainage, mine spoil materials, reforestation, agronomy, energy crops, and ecology.



2015 Reclamationist of the Year Award – Brenda K. Schladweiler

The Reclamationist of the Year Award recognizes individuals demonstrating outstanding accomplishments in the practical application or evaluation of reclamation technology. **Brenda K. Schladweiler** is President of BKS Environmental Associates, Inc. For over 30 years, she has shown tireless efforts in the area of land reclamation dealing with the mining industry and the oil and gas industries. She promotes application of the most effective and up-to-date reclamation technologies, educating the next generation of reclamationists, reviewing mining and oil and gas proposed projects, and works with State and Federal regulatory agencies to enhance effective reclamation technology and regulations.



2015 Richard I. and Lela M. Barnhisel Reclamation Researcher of the Year Award – Christopher D. Barton

The Richard I. and Lela M. Barnhisel Reclamation Researcher of the Year Award recognizes substantive contributions to the advancement of reclamation science and/or technology through scientific research. **Christopher D. Barton** is Professor of Forest Hydrology and Watershed Management in the Department of Forestry at the University of Kentucky. His research in the area of topsoil substitutes for reforestation of mine sites clarified the now accepted knowledge that weathered spoils are superior to unweathered spoils for establishing native plant communities, including trees. He has also contributed significantly to emerging knowledge concerning mining practices to limit water resource impacts. He is the recipient of numerous awards; of special importance is the USEPA, Scientific and Technological Achievement Award Providing Science to Inform Decisions on Compensatory Mitigation of Headwater Streams Affected by Surface Mining in 2014.



2015 Distinction in Reclamation Award - The Coteau Properties Company Freedom Mine.

This award is intended to recognize a specific project in which a company has demonstrated excellence in reclamation design, implementation, and overall success resulting in the conservation of the natural resources and the ecosystem. This is a new award in 2015. The **Coteau Properties Company Freedom Mine** is this year's recipient and is being recognized for the design and development of the Harmony Lake Wildlife Management Area near Beulah, ND. This project uniquely demonstrates superior reclamation: it is the first public fishery specifically planned, designed, and constructed on reclaimed land at an active mining operation in the semi-arid West. Development of the Harmony Lake Wildlife Management Area involved the cooperation of the North Dakota Game and Fish Department, North Dakota Public Service Commission, and Coteau Properties Company Freedom Mine. It is recognized as a major local recreational asset for pheasant hunting, duck hunting, Canada goose hunting, and fishing for many species that were not previously available to the public.



Development of the Harmony Lake Wildlife Management Area involved the cooperation of the North Dakota Game and Fish Department, North Dakota Public Service Commission, and Coteau Properties Company Freedom Mine. It is recognized as a major local recreational asset for pheasant hunting, duck hunting, Canada goose hunting, and fishing for many species that were not previously available to the public.

2015 ARRI Excellence in Reforestation Regional Award – DRC Coal, LLC White Oak Surface Mine

The ARRI Excellence in Reforestation Awards are presented annually to honor active and abandoned coal mine reclamation operations from each state in the Appalachian Region that best exemplifies the use of the Forestry Reclamation Approach (FRA). Each year, states nominate one of their award winning projects for consideration of the Regional Award. White Oak Surface Mine is a 649-acre surface and underground mining operation permitted by DRC Coal, LLC. The permitted land was historically used extensively by the mining and logging industries. These industries left degraded land that had orphan highwalls, numerous open pits, non-native grasses, and barren soil. The FRA was used extensively throughout this operation and DRC Coal, LLC has repeatedly gone above and beyond what the permit calls for in order to help promote and implement the FRA. The land use of the site has been improved, native species are invading, and wildlife habitat has been established.



One-pass grading and tree-compatible groundcover is evident on this FRA prepared slope.

Scholarship Winners

Abhishek RoyChowdhury earned a B.S. in Zoology (Honors) and an M.S. in Environmental Science from the University of Calcutta, India. He received the Endowment Foreign Scholarship 2011 from the University of Calcutta after completing his Master's degree for his good academic performance and acceptance in a foreign university. He joined the Environmental Management Ph.D. program in Fall 2011 at Montclair State University, and is currently working as a Doctoral Assistant. His dissertation work involves sustainable remediation of acid mine drainage (AMD) impacted systems in the surface coal mines. As part of his PhD thesis, Abhishek is developing a "green" and cost-effective technology for the remediation of AMD-impacted soil and water. He is currently developing a filter media to treat AMD-impacted water using a drinking water treatment plant by-product, namely Water Treatment Residuals (WTRs). Abhishek is also developing a technology to remediate, and stabilize AMD-impacted soil using WTR and a metal hyperaccumulator plant commonly known as Vetiver grass. Abhishek is committed to pursuing a career in the field of remediation of mining impacted soil and water after completing his PhD.



Bryan Page is a Graduate Research Assistant studying to obtain his Masters of Environmental Science at the School of Civil Engineering and Environmental Science at the University of Oklahoma (OU) under Dr. Robert Nairn. He is a research team member of the Center for Restoration of Ecosystems and Watersheds (CREW). His research focuses on the amelioration of abandoned mine drainage, with a focus on operation and maintenance issues in passive treatment systems. Additionally, he is working on the installation of a new passive treatment system at the Tar Creek Superfund Site in Commerce, Oklahoma. For five years prior to attending OU, he worked as an environmental scientist at BioMost, Inc. and Stream Restoration, Inc., working on passive treatment systems and mining reclamation projects. He obtained his BS in Environmental Science from Slippery Rock University in Pennsylvania.



Christine McManamen is a senior in the Ecological Restoration program at the University of Montana in Missoula, MT. She earned a bachelor's degree in Geography and Environmental Studies from the University of Texas in Austin in 2011 and left for Montana the day after she graduated. Since moving to Montana, she has balanced school, work, undergraduate research, and several field seasons working for the Nez Perce Tribe and the Montana Conservation Corps. In addition, Christine is the president of UM's Society for Ecological Restoration student guild. She enjoys growing native plants and teaching people about flora and fauna in the Rocky Mountains. In the future, Christine hopes to find a career that will help bridge the gap between research and land management to promote the return of diverse, healthy, and well-functioning ecosystems.



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Sunday, June 7, 2015	
6:30 am – 9:00 am	Breakfast – Clarion Hotel Restaurant (Included with room registration)
10:00 am – 4:00 pm	NEC – Claiborne Room
10:00 am – 4:00 pm	Registration – Convention Center Lobby
1:20 pm – 5:00 pm	Golf Outing – Griffin Gate Golf Course Depart for golf at 12:50; \$60/person, pay at pro shop
1:30 pm – 5:00 pm	Workshop 1 – Derby Room, Session Room 4
2:30 pm – 4:30 pm	Tour of Alltech distillery – Depart from hotel lobby
6:30 pm – 8:30 pm	Exhibitors' and Sponsors' Welcome Reception – Exhibit Hall Various snacks and two beverage tickets/person in registration packet
Monday, June 8, 2015	
6:30 am – 8:00 am	Breakfast – Clarion Hotel Restaurant (Included with room registration)
6:30 am – 7:30 am	Haulin' ASMR meet in lobby
7:00 am – 8:00 am	Wild Women of Reclamation – Man-O-War, Session Room 1
7:30 am – 5:00 pm	Registration – Convention Center Lobby
8:45 am – 11:30 am	Plenary Session – Session Rooms 3 and 4
8:45 – 9:00 am	Welcome – ASMR President Joe Friedlander
9:00 – 9:15 am	Welcome - ASMR Executive Secretary Robert Darmody
9:15 – 9:30 am	Welcome - ARRI Leonard K. Peters, Secretary of the Energy and Environment Cabinet
9:30 – 9:45 am	Welcome - University of Kentucky Dean of Agriculture, Nancy Cox
9:45 – 10:15 am	Break - Exhibit Hall
10:15 – 10:45 am	Steve Gardner – SME President - Changing Minds about Mines in America
10:45 – 11:15 am	Joe Pizarchik – Director OSMRE
11:15 – 11:30 am	Announcements and proceed to lunch
11:45 am – 2:00 pm	ASMR and ARRI Luncheon and Awards – Lunch Area

Technical Sessions			
	Soils and Overburden Reclamation in Arid or Semi-Arid Environments Moderator, Zenah Orndorff Room 1, Session 1	Water Management Sulfate Removal Moderator, Bryan Page Room 3, Session 2	Forestry — FRA Moderator, Carl Zipper Room 4, Session 3
2:00 – 2:30	Defining Restoration Success in Wyoming's Natural Gas Fields: Suggestions for Using Reference Sites and Ecological Site Descriptions by Michael Curran (Student), and P.D. Stahl	Sulfate Removal from Coal Mine Water in Western PA: Regulatory Requirements, Design, and Performance: Part 1 by William J. Walker, Jorge Montoy, and Tyler Chatriand	FRA Step 1-Create A Suitable Growth Medium by Jeff Skousen
2:30 – 3:00	Construction and Testing of a Low Permeability Barrier Using Weathered Mine Spoil by Sarah Smith, (Student) Carmen Agouridis, and Richard Warner	Sulfate Removal from Coal Mine Water in Western PA: Regulatory Requirements, Design, and Performance: Part 2 by William J. Walker, Jorge Montoy and Tyler Chatriand	FRA Step 2-Placement of the Growth Medium by Scott Eggerud
3:00 – 3:30	Break – Exhibit Hall - Belmont		

	Soils and Overburden (Continued)	Water Management (Continued)	Forestry — ARRI (Continued)
3:30 – 4:00	Sand Capillary Barriers Increase Water Retention and Facilitate Salt Leaching in Arid Disturbed Lands by Seth Cude (Student), Jay B. Norton, Thijs Kelleners, Mark D. Ankeny, and Calvin F. Strom	Biotic and Abiotic Treatment Methods for Remediation of Low Sulfate and Hard Rock Mining-Influenced Water by Nathan Smith, N.R. Anton, D.J. Reisman, K.S. Whiting, A.K. Frandsen, K. Saller, M.J. Fischer, and R.L. Olsen	FRA Step 3-Use Compatible Ground Covers by Jennifer Franklin
4:00 – 4:30	Evaluation of Appalachian Mine Spoil Leachate Chemistry and Its Associated Geochemical Influences by Elyse Clark (Student), W.L. Daniels, Z. Orndorff, C.E. Zipper, and K. Eriksson	Evaluating the Impact of Na-SO ₄ ²⁻ Dominated Ionic Strength on Trace Metal Removal in Vertical Flow Bioreactors by Julie LaBar (Student)	FRA Step 4-Tree Species Selection by Ron Rathfon
4:30 – 5:00	So Where IS that Treatment Sludge Going in the Waste Rock? By Michele Coleman, K.E. Butler, E. Mott, T. Al, and K.D. Phinney	Iron Oxide Accumulation Profiling Within the Initial Oxidation Unit of a Passive Treatment System by Leah R. Oxenford (Student)	FRA Step 5-Proper Tree Planting Techniques by Chris Miller
5:00 – 5:30	Soils and Overburden, Geotechnical Engineering, Land Use Planning, and Tailings Technical Division Business Meeting Michele Coleman, Moderator	Passive Water Treatment of Iron, Arsenic, and Manganese at the Empire Mine State Historic Park in Grass Valley, California by Neal Gallagher, T.L. Rutkowski, S. Lofholm, D. Ernst, and D. Millsap	Legacy Mine Reforestation by Michael French

6:00 – 9:00 **Early Career Reception at Blue Stallion Brewing Company** Transportation available for those who need it – Meet in Lobby beginning at 5:45 pm, with the last bus leaving at 6:30,.

Tuesday, June 9, 2015	
6:30 am – 7:30 am	Haulin’ ASMR meet in hotel lobby
6:30 am – 9:00 am	Breakfast – Clarion Hotel Restaurant (Included with room registration)
7:00 am – 5:00 pm	Forestry Field Trip – Eastern Kentucky Research Sites
7:30 am – 8:30 pm	Registration – Convention Center Lobby
8:00 am – 4:30 pm	Tour of Historical Sites, <i>Lunch at Shaker Village</i>
10:00 am – 3:00 pm	Golf Outing – Griffin Gate Golf Course Depart for golf at 9:30; \$32/person, pay at pro shop
12:00 noon	Lunch on your own
1:30 pm – 4:00 pm	Tour of local Distillery -- Woodford Reserve, leave from hotel lobby
4:30 pm – 9:00 pm	Social Evening at the Kentucky State Horse Park, leave from hotel lobby

Wednesday, June 10, 2015

6:30 – 8:30	Breakfast – Clarion Hotel Restaurant (Included with room registration)		
7:30 – 5:00	Registration – Convention Center Lobby		
6:30 – 8:00 am	ARRI Core & Science Team Meetings Pick up your breakfast and go to the lunch area to eat. The group will be split into two groups, one meeting in the Lunch area the other in Session Room 1 then recombine at 7:30 in Session Room 1.		
	Technical Sessions		
	Forestry – Wildlife Moderator, Steve Felch Room 1, Session 4	Federal and Energy Issues Moderator, Joe Friedlander Room 3, Session 5	Water Management Moderator, Leah R. Oxenford Room 4, Session 6
8:30 – 9:00	Successful Reclamation of Kentucky Minelands Using Wildlife-Friendly Mixes By D.L. Baxley, J.M. Yeiser, B.A. Robinson, J.J. Morgan, J.N. Stewart, and J.O. Barnard	Appalachian Coal Mining Related Research at US EPA by Brian Topping	Recovery of North Potato Creek, Copper Basin, Tennessee by Ben B. Faulkner and K.S. Deal
9:00 – 9:30	Bird Diversity and Abundance on Reclaimed Surface Coal Mines in Alabama: Temporal and Habitat Related Variations by Richard R. Borthwick and Y. Wang	Coal Combustion By-Products and SMCRA Coal Mines: The Case For and Against New Federal Rules by Kimery C. Vories	Case Study: 20 Years of ARD Mitigation After a Bactericide Application by James Gusek and V. Plocus
9:30 – 10:00	Validation of a Stream and Riparian Habitat Assessment Protocol Using Stream Salamanders in the Southwest Virginia Coalfields by Sara Sweeten (Student) and W.M. Ford	Federal Energy Regulatory Commission Licensing For Microhydropower Utilizing Mine Drainage by Tim Danehy, Cody ‘Buck’ Neely, S.L. Busler, C.F. Denholm, D.A. Guy, and M.H. Dunn	Assessment of Performance of a Passive Treatment System Over a Twenty Year Period in East Central Tennessee by Terry W. Schmidt and K. Milmine
10:00 – 10:30	Break – Exhibit Hall - Belmont		
	Forestry – Wildlife (Continued)	Bat Symposium Craig Walker, Moderator Room 3, Session 7	Water Management (Continued)
10:30 – 11:00	Genetic Diversity of Brook Trout (<i>Salvelinus fontinalis</i>) Populations Isolated Due to Abandoned Mine Drainage in the West Branch Susquehanna River Watershed, PA by Frederic J. Brenner and Shawn M. Rummel	Bat News: The U.S. Fish and Wildlife Perspective by Carrie Allison, M.P. Armstrong, and A. King	Biogeochemical Analysis of Spent Media from a Vertical Flow Treatment Pond by N. Shepherd, R. Nairn, M. Dunn, C. Denholm, C. Neely, and T. Danehy

11:00 – 11:30	American Elm as a Tool in Mineland Reforestation by Mary Beth Adams and P. Angel	Update on Bat Survey Guidelines by Andy King , FWS	Replacing an Active AMD Treatment System with Semi-Passive Techniques by Tyler Chatriand and William Walker
11:30 - noon	Shortleaf Pine as a Reclamation Species on Former Mining Sites by J. Holly Campbell	Update on White Nose Syndrome by Mike Armstrong , FWS	Evaluation and Restoration of Passive Treatment System Performance in Pennsylvania by Ryan M. Mahony , D.A. Guy, C.F. Denholm, T.P. Danehy, C.A. Neely, S.L. Busler, and M.H. Dunn

Noon – 1:00	Luncheon – Included in Meeting Registration – Lunch Area		
	Ecology Moderator, Michael Curran Room 1, Session 8	Bat Symposium (Continued) Room 3, Session 7	Water Management (Continued) Moderator, Julie LaBar Room 4, Session 9
1:00 – 1:30	Suggestions for Improvements to Restoration Monitoring by Michael Curran (Student) and P.D. Stahl	Brandenbark™: Mitigation Tool for Projects Involving Federally Listed Bark Roosting Bats by Josh Adams , Piper Roby, Price Sewell, Jeffrey Schwierjohann, Mark Gumbert, and Michael Brandenburg	Influence of Water Chemistry and Sediment Transport on Biological Recovery Downstream of Lime Dosers by Henry Legwaila (Student) and Natalie Kruse
1:30 – 2:00	Benthic Algae, Leaf Breakdown, and Litter Fall in Constructed Streams: The Case for Riparian Reforestation to Replicate Headwater Organic Matter Functions by Robert J. Krenz III (Student) , S.H. Schoenholtz, and C.E. Zipper	Northern Long-eared Bat (<i>Myotis septentrionalis</i>) Management: Insights from a Multi-year Study at Fort Knox, Kentucky by Alexander Silvis , W. Mark Ford, and Eric R. Britzke	Total Dissolved Solids and Biotic Condition in Central Appalachian Headwater Streams Influenced by Coal Mining by Anthony J. Timpano (Student) , Beth Boehme, Stephen H. Schoenholtz, David J. Soucek, and Carl E. Zipper
2:00 – 2:30	Development of Ecosystem Structure and Function on Reforested Surface-Mined Lands by Brian D. Strahm , B.N. Avera, J.A. Burger, and C.E. Zipper	Bat Use of Culverted Gates at Abandoned Underground Portals in West Virginia by Craig A. Walker	Effect of Leaching Scale on Prediction of Total Dissolved Solids Release from Coal Mine Spoils and Refuse by Lucas C. Ross, W.L. Daniels , and C.E. Zipper

2:30 – 3:00	Some Lessons from Long Term Monitoring of Forest Rehabilitation at Three Surface Mine Complexes in Australia by Neil Humphries	A Shout in the Dark: The (Cold, Dark) Reality of Applying Acoustic Surveys to Determine Occupancy for Bats in the Myotis Species Guild By Janet Tyburec and J. Chenger	Quantitative Sampling to Detect Invertebrate Community Change in Mine-Influenced Streams with Elevated TDS by Damion Drover (Student) , Stephen Schoenholtz, Carl Zipper, Tony Timpano, David Soucek, and Beth Boehme
3:00 – 3:30	Break – Exhibit Hall		
	Geotechnical Engineering Moderator, Ryan Mahony Room 1, Session 10	Bat Symposium (Continued) Moderator, Beth A. Botsis Room 3 Session 7	Water (Continued) Room 4 Session 9
3:30– 4:00	Zero Slump Grout for Remote Closure of Mine Openings by Brad S. Petri and Nathan T. Rouse	State Perspectives on Bat Protection Issues at Mine Sites by Beth A. Botsis	Hydrologic Assessment of a Stream Created on Mined Land by Whitney Blackburn-Lynch (Student) , C. Agouridis, C. Barton, R. Warner, and T. Maupin
4:00– 4:30	Geomorphic Reclamation Design and Construction of the Teach AML Site by Derrick Thompson and M.R. Donner	Panel on Bats	Prediction of Acid-Producing Potentials for Coal Overburden and Waste by Static Geochemical Methods by Louis M. McDonald , Mingliang Zhang, Jeff Skousen, and Zhenqi Hu
4:30 – 5:00	Slippery Rock Creek Stream Bank Stabilization by Daniel Guy , R.M. Mahony, S.L. Busler, T.P. Danehy, C.F. Denholm, C.A. Neely, and M.H. Dunn	Panel on Bats	The Impact of Surface Coal Mining on Water Quality in the Northern Great Plains by Joseph D. Friedlander
5:00 – 5:30	McKinley Mine: A Commitment to Stable Land Forms Utilizing Geomorphic Principles by Scott Motycka and Kyle Kutter	Panel on Bats	Water Management Technical Division Business Meeting Gwen Geidel and Louis McDonald, Moderators

POSTER SESSION

Wednesday, June 10, 2015, 5:30 pm – 7:00 pm Claiborne and Henry Clay Rooms

Light snacks and beverages available, Compliments of the Clarion.

Poster Session
1. Effects of Organic and Inorganic Amendments on Soil C and N Dynamics in a Reclaimed Coal Mine Soil by Ardeshir Adeli, John J. Read, David Lang, and Rebecca McGrew
2. Animal Waste and FGD Gypsum Effects on Bermudagrass and Soil Leachate Nutrient Contents by John J. Read, A. Adeli, D. J. Lang, and N. R. McGrew
3. Occurrence of Native Species Following Lignite Mine Land Reclamation in Mississippi by David J. Lang, Victor Maddox, Judd Sanborn, and Rebecca McGrew
4. The Influence of Vegetation on TDS Generation in Reclaimed Mine Land by Amy C. Gondran, K.J. McGuire, B.D. Strahm, J.R. Seiler, and C.E. Zipper
5. Effectiveness of 10 Plant Species in the Removal of Selenium from Soil by Matt Aldrovandi (Student) and J.A. Franklin
6. Re-establishment of Wyoming Big Sagebrush Using Container Grown Seedlings by David Casey Balthrop (Student) and P.D. Stahl
7. Geochemical Characteristics of Low Versus High TDS Potential Strata in Central Appalachian Surface Coal Mines by Daniel K. Johnson (Student), W.L. Daniels, and C.E. Zipper
8. Alternate Sediment Control Rules Allow Accelerated Sediment Pond Removal Schedule by William R. Kirk
9. Use of a Dispersed Alkaline Substrate and Limestone Beds to Treat Acid Mine Drainage at Soudan Mine, Minnesota by Kristen Dieterman (Student), C.L. Kairies-Beatty, and P. Eger
10. Eighth International Acid Sulfate Soils Conference at University of Maryland, July 17-23, 2016 by Delvin S. Fanning, Martin C. Rabenhorst, Brian Needelman, Maxine Levin, and W. Lee Daniels
11. Identifying and Resolving Passive Treatment System Hydrologic Operation and Maintenance Issues by Bryan J. Page, N.L. Shepherd, and R.W. Nairn
12. Soil and Water Quality in an AMD-Impacted Abandoned Mine Site in Southern Illinois by Abhishek RoyChowdhur (Student), Dibyendu Sarkar, Rupali Datta, and Yang Deng
13. Green Remediation of Acid Mine Drainage Impacted Water Using an Industrial Byproduct: Filter – Column Study by Abhishek RoyChowdhur (Student), D. Sarkar, R. Datta, and Y. Deng
14. The Appalachian Forest Renewal Initiative: Demonstrations of Legacy Mine Land Reforestation Across Appalachia by Tiffany Heim, C.D. Barton, M. French, and P.N. Angel

Thursday, June 11, 2015				
6:30 - 8:30	Breakfast – Clarion Hotel Restaurant (Included with room registration)			
7:30 – 8:30	Registration – Convention Center Lobby			
	Technical Sessions			
	Forestry Moderator, Kenton Sena Room 1, Session 11	Water Management Moderator, Buck Neely Room 3, Session 12	Grasslands Moderator, Cindy Adams Room 4, Session 13	Soils Moderator, Mary Beth Adams Belmont Room, Session 14
8:00 - 8:30	Ecosystem Evolution and Ecological Storage in Opencast Mining Area: A Case Study of Pingshuo Coal Mine in China by Xiaoran Zhang (Student) , Z.K. Bai, Y.G. Cao, J. Pan, and X. Fan	The Role of Manganese in Trace Metal Removal by Paul Eger , James Gusek, Ben B. Faulkner, K. Dieterman, and C. Kairies-Beatty	Invasive Species on Reclaimed Native Grasslands in North Dakota by Guy A. Welch	Effects of Quarry Treatment on the Attractiveness of Reclaimed Limestone Quarries by Israel A. Legwaila , Eckart Lange, and John Cripps
8:30 - 9:00	Effects of Soil Amendments on the Growth of Hardwood Trees on Reclaimed Mines in West Virginia by Kara Dallaire (Student) , Jeff Skousen, and Keith O'Dell	Biochemical Reactor/Anaerobic Wetland Design/Startup Issues by Paul Eger , Ben B. Faulkner, and James Gusek	Forage Nutritive Value and Productivity of Grass on Reclaimed and Undisturbed Lignite Land by David J. Lang , Brandon Shankle, Jeremy Duckworth, Robert Elmore, and Vitalis Temu	Frac Sand Mining and Reclamation in Wisconsin by Tom Hunt
9:00 - 9:30	Engaging the Public in Mine Land Reforestation: Volunteer Tree Planting Projects and Events in Appalachia by Hannah Angel (Student) , C.D. Barton, M. French, and P.N. Angel	Bioremediation of Selenium in Valley Seep Coal Mining Effluents Using Charophytes (Stoneworts) by Robin W. Scribailo , Margarete Kalin, and William N. Wheeler	Switchgrass and Miscanthus Yields on Reclaimed Surface Mines for Bioenergy Production Capabilities by Steffany Scagline (Student) , Jeff Skousen, and Thomas Griggs	Ecological Risk Assessment of Land Destruction in Large Open-pit Coal Mine – Exemplified for AnTaiBao Open-pit Mine, China by Sun Qi (Student) , Z.K. Bai, M.M. Xie, Y.G. Cao, X. D. Hu, Y.Z. Jisng, and Y.Q. Lu
9:30 - 10:00	Climate Change and Native Forest Establishment on Surface Mines: A Case Study from Eastern Kentucky by Elizabeth Rose Clark (Student) , Christopher Barton, and Andrea Drayer	An Innovative Package Treatment System for the Orcutt-Smail Discharges; a Moderate Flow High Strength Acid by Jonathan M. Dietz and M. Morosetti		Progress of the Research Project on Reclaiming Subsidence Land with Yellow River Sediments by Zhenqi Hu

10:00 - 10:30	Break – Adjacent to Registration Area			
	Forestry (Continued)	Water (Continued)	New Technologies Moderator, Brenda Schladweiler Room 4, Session 15	Soils (Continued)
10:30 - 11:00	Application of the Forest Reclamation Approach to Establish Nothofagus in Chilean Patagonia by Eduardo Arellano , James Burger, Patricio Valenzuela, and Gabriel Rodriguez	Cost Saving and Performance Enhancing Modifications at a Lime-Based Treatment System: Rushton Treatment Plant Case Study by Jonathan M. Dietz and T.S. Gourley	Comparison of Point Line Intercept and SamplePoint Data Collection Methods for Total Vegetation Cover, Total Ground Cover, and Time Requirements on Reclaimed Sites in Wyoming by Clay Wood , Cindy Adams, and Brenda K. Schladweiler	Applying of Geomorphic Reclamation to Excess Spoil Fills in West Virginia by Peter R. Michael , Leslie C. Hopkinson, Nathan DePriest, and John D. Quaranta
11:00 - 11:30	Productivity and Site Index Data Support the Efficacy of Luminant's Forestry Reforestation Approach in Texas by Jeremy Stovall , J.S. Priest, H.M. Williams, D.W. Coble, and B.P. Oswald	Reclamation of Abandoned Mine Land Using Stabilized Flue Gas Desulfurization Material to Mitigate Acid Mine Drainage by Chin-Min Cheng , Robert Baker, Tarunjit Butalia, John Massey-Norton, and William Wolfe	Testing Unmanned Aerial Systems for Surface Coal Mine Oversight Inspections by Natalie Carter , L.J. Monette, and D.T. Beaman	Managing Closure and Reclamation Liabilities: Closing the Gap – and Improving the Process by Mike Slight and H.W.B Lacy
11:30 - 12:00	Forestry-Wildlife and Ecology Technical Division Business Meeting Jennifer Franklin and Pete Stahl, Moderators	Impact of Coal Mine Reclamation Using Coal Combustion By-products (CCBs) on Groundwater Quality: Two Case Studies by Chin-Min Cheng , Robert Baker, Tarunjit Butalia, John Massey-Norton, and William Wolfe	Case Study: Utilizing In-Situ XRF Field Measurements, Mobile Gamma Radiation Survey Systems and Geostatistical Techniques to Predict Heavy Metals and Radionuclide Soil Concentrations in Surface Soils at an Abandoned Uranium Mine in Custer National Forest, SD by Aaron S. Orechwa	Using Nationwide Permit 49 to Obtain Corps Permit for Mining by Eddie Bearden
Noon - 1:00	Luncheon – Included in Meeting Registration – Lunch Area			
12:45 pm	Announcement of Student Poster and Oral Presentation Winners			

	Forestry Moderator, Hannah Angel Room 1, Session 16	Ecology Moderator, Michael Curran Room 3, Session 17	New Technologies (Continued) Room 4 Session 15	Soils Moderator, Keri Anne Pritchett Belmont Room, Session 18
1:00 – 1:30	An Overview of Lignite Mine Reforestation at Luminant’s Martin Lake Mines in Eastern Texas by Dan Darr and Sid Stroud	One Step Forward – Two Backward: Evaluating and Measuring Ecosystem Function and Completion Criteria in Mine Rehabilitation by Harley Lacy, D. Jasper, and S.Birch	Using Electrical Resistivity Imaging to Track Water Movement through Surface Coal Mine Valley Fills by Breeyn M. Greer, T.J. Burbey, C. Zipper, and E.T. Hester	Successful Reclamation of a Fly Ash Landfill with Alternative Funding Approach by Andy Willis and Bill Adams
1:30 – 2:00	Bur Production and Canker Incidence on Backcrossed Restoration Chestnut Trees by Jenise Bauman, C. Cochran, J. Chapman, and K.E. Gilland	Use of Native Vegetation Reference Sites in the Specification and Evaluation of Forest Rehabilitation of Surface Mines by Neil Humphries	Delineation of Surface Coal Mining and Reclamation History in Appalachia Using Satellite Imagery by Jing Li, Patricia F. Donovan, Carl E. Zipper, Randolph H. Wynne, and Adam J. Oliphant	Improving Remedy Sustainability Through Use of Local Construction Materials by Todd Bragdon, Cody Lechleitner, Mark Nelson, and Dan Meyer
2:00 –2:30	Identification of Ectomycorrhizal Fungi Forming Symbolic Associations with the American Chestnut by Shiv Hiremath, Kirsten Lehtoma, and Carolyn McQuattie	OSMRE/VISTAS at Work: Building Capacity to Meet Challenges in Pre-Regulatory Mining Areas by T. Allan Comp, Sarah Meade, Amy Showalter, and Cody Zirkle	Application of Remote Sensing for Mine Revegetation Mapping in the Fire Affected Areas of Jharia Coalfields, India: A Case Study by Pradeep Kumar, and Rajesh K. Chopra	Current Land Reclamation Policy and the Facing Problems in China by Zhao Shu-qin
2:30 – 3:00	Review of Reforestation efforts of the Bituminous District for Abandoned Mine Land Reclamation of PA by Dean Baker and Tom Malesky			China's Abandoned Mining Land Reclamation System And Best Practices of Diversified Reclamation Purposes by Luo Ming, Zhou Yan, Xiao Wen, Zhang Lijia, and Chen Yuanpeng
3:00 – 3:30				
5:00–7:00 pm NEC – Claiborne				

Notes

Notes

Exhibitor Logos



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