

Sunday, June 7

Registration Desk Open
Conference Foyer
7:00 AM - 8:00 PM

Reclamation 101
Ballroom D
8:00 AM - 12:00 PM

Reclamation 201
Ballroom E
8:00 AM - 12:00 PM

Silent Auction
Dyekman (2nd Floor)
12:00 PM - 8:00 PM

NEC Opening Meeting
First Interstate Bank (2nd Floor)
1:30 PM - 5:00 PM

WY AML Certification Class
Ballroom D
1:30 PM - 4:00 PM

Exhibitor Hall Open
Ballroom ABC
6:00 PM - 8:00 PM

Welcome Reception
Ballroom ABC
6:00 PM - 8:00 PM

Monday, June 8

Registration Desk Open
Conference Foyer
6:00 AM - 4:30 PM

Breakfast Served
Ballroom ABC
6:30 AM - 8:00 AM

Haulin' ASRS
Conference Foyer
6:30 AM - 7:30 AM

Exhibitor Hall Open
Ballroom ABC
7:00 AM - 5:00 PM

Silent Auction
Dyckman (2nd Floor)
7:00 AM - 5:00 PM

Opening Plenary Day 1
Ballroom ABC
8:00 AM - 10:00 AM

Break
Ballroom ABC
10:00 AM - 10:30 AM

SYMPOSIA AND ORAL SESSIONS

Active AMD Treatment
Ballroom D
10:30 AM - 12:00 PM

10:30 AM	100	Geochemical modeling of specific conductance and net acidity for mine water treatment. C. A. Cravotta* ¹ , A. Barroso ² , and B. R. McCleskey ³ , ¹ <i>Cravotta Geochemical Consulting LLC, Bethel, PA</i> , ² <i>Universidade do Minho, Campus de Gualtar, Institute of Earth Sciences, Braga, Portugal</i> , ³ <i>US Geological Survey, Boulder, CO.</i>
11:00 AM	101	The Little Conemaugh Mine Drainage Treatment Plant project, Portage Township, Cambria County, Pennsylvania. E. E. Cavazza*, <i>Tetra Tech Inc, Pittsburgh, PA.</i>
11:30 AM	102	Belt, Montana, water treatment plant. J. R. Flesher*, <i>Montana Department of Environmental Quality, Helena, MT.</i>

Innovative Reclamation Design
Legacy
10:30 AM - 12:00 PM

10:30 AM	104	J19 West Reclamation Project at Kayenta Mining Complex. G. Altsisi* and M. Shepherd, <i>Peabody Western Coal Company, Kayenta, AZ.</i>
11:00 AM	105	Design and reclamation of postmining playas in the Powder River Basin: Successful examples from the North Antelope Rochelle Mine, Campbell County, Wyoming. P. A. Murphree*, <i>Peabody Energy, Gillette, WY.</i>
11:30 AM	173	From remedial investigation to remedy focus, lessons learned at an abandoned mercury mine. S. Dent*, <i>CDM Smith, Helena, MT.</i>

Reclamation Across Borders: International
Boyd (2nd Floor)
10:30 AM - 12:00 PM

10:30 AM	107	Assessment of the ecological integrity of reclaimed mine sites at Newmont Ghana Gold Limited: Ahafo South project. P. K. Nsiah* ¹ , S. Kumi ¹ , J. Gyamfi ⁴ , B. Oforu-Bamfo ² , D. Adusu ¹ , and H. K. Ahiabu ³ , ¹ <i>Department of Environmental Management, University of Energy and Natural Resources, Sunyani, Ghana,</i> ² <i>Department of Biological Science, University of Energy and Natural Resources, Sunyani, Ghana,</i> ³ <i>Environmental Protection Authority, Accra, Ghana,</i> ⁴ <i>The Forestry Commission, Accra, Ghana.</i>
11:00 AM		Placeholder.
11:30 AM		Placeholder.

Reclamation Planning
Ballroom E
10:30 AM - 12:00 PM

10:30 AM	109	Importance of pre-mining baseline data for sustainable reclamation efforts, surface coal mines, USA. A. Krzyszowska Waitkus*, <i>Environmental Consulting, Laramie, WY.</i>
11:00 AM	110	ReclaimNet: Curating collaborative efforts to identify and mitigate barriers to successful dryland reclamation. K. Eckhoff* ^{1,2} , R. Mann ¹ , G. Penn ^{1,2} , R. Finger-Higgins ¹ , J. Bradford ³ , S. Munson ³ , S. Reed ¹ , M. Villarreal ⁴ , and M. Duniway ¹ , ¹ <i>US Geological Survey, Southwest Biological Science Center, Moab, UT,</i> ² <i>Northern Arizona University, Flagstaff, AZ,</i> ³ <i>US Geological Survey, Southwest Biological Science Center, Flagstaff, AZ,</i> ⁴ <i>US Geological Survey, Western Geographic Science Center, Moffett Field, CA.</i>
11:30 AM	111	Standards-based reclamation evaluation and action framework for adaptive management. G. Kenney* and J. M. Schroeder, <i>Tetra Tech Inc, Lander, WY.</i>

OTHER EVENTS

Professional Awards Luncheon
Ballroom ABC
12:00 PM - 12:30 PM

NEC Business Meeting (Public)
Ballroom ABC
12:30 PM - 1:30 PM

SYMPOSIA AND ORAL SESSIONS

Abandoned Mine Land Section 1 Ballroom D 1:30 PM - 3:00 PM		
1:30 PM	112	Temporal projections of land use patterns and ecosystem service valuations for mine closure alternatives: A case study. Y. N. Li ¹ , J. Li* ¹ , Y. P. Chugh ² , Y. Han ¹ , and Z. Q. Hu ³ , ¹ <i>China University of Mining and Technology—Beijing, Beijing, China</i> , ² <i>Southern Illinois University, Carbondale, Carbondale, IL</i> , ³ <i>China University of Mining and Technology, Xuzhou, China</i> .
2:00 PM	113	Dynamic cost effectiveness and recovery trajectory estimation in a post-mining reclamation chronosequence in central Wyoming. R. Coupal*, C. Johnson, M. Oreshkina, F. Nippgen, and K. M. Hufford, <i>University of Wyoming, Laramie, WY</i> .
2:30 PM	114	From field metrics to decisions and refinements: Scalable reclamation portfolio monitoring, analysis, and refinement. J. M. Schroeder and R. Walsh*, <i>Tetra Tech Inc, Lander, WY</i> .

Oil and Gas Ballroom E 1:30 PM - 3:00 PM		
1:30 PM	115	St. Clairsville, Ohio—Carbon dioxide gas investigation. O. M. Beckford* and P. J. Huemmrich, <i>US Office of Surface Mining, Pittsburgh, PA</i> .
2:00 PM	116	Restoration of oil and gas pads in the Chihuahuan Desert of West Texas. K. E. Christensen* ^{1,2} , J. R. Myers ^{1,2} , C. E. Gonzalez-Gonzalez ^{1,2} , J. S. Avila ^{2,3} , and A. Cantu ^{1,2} , ¹ <i>Sul Ross State University, Alpine, TX</i> , ² <i>Borderlands Research Institute, Alpine, TX</i> , ³ <i>Texas A&M AgriLife Extension Service, College Station, TX</i> .
2:30 PM	117	Net primary productivity and native vegetation cover exceed reference conditions three years after reclamation on abandoned roads and well pads in a semi-arid natural gas field in the Powder River Basin, Wyoming. M. F. Curran* ¹ , Z. D. Farmer ¹ , T. J. Robinson ² , L. B. Myers ³ , and J. Tachik ³ , ¹ <i>Abnova Ecological Solutions LLC, Laramie, WY</i> , ² <i>University of Wyoming, Laramie, WY</i> , ³ <i>EOG Resources Inc, Denver, CO</i> .

Water Quality Issues Section 1 Boyd (2nd Floor) 1:30 PM - 3:00 PM		
1:30 PM	118	Electro-biochemical treatment for selenium and trace metals in coal-affected waters. O. Opara and E. Hotz*, <i>WesTech Engineering, Salt Lake City, UT</i> .
2:00 PM	119	Speciation and sequestration of manganese in organic wetland substrates. A. M. Hardgrave* and J. LaBar, <i>Oklahoma State University, Stillwater, OK</i> .
2:30 PM	120	Leaching tests suggest that lake dredge could have positive chemical outcomes for coal mine reclamation. N. A. Kruse Daniels, E. Abbiw, J. Bowman, J. Pensky*, and L. Sloane, <i>Ohio University, Athens, OH</i> .

Wildlife Legacy 1:30 PM - 3:00 PM		
1:30 PM	121	Incorporating wildlife habitat in mine reclamation design. T. S. Cross* and M. E. Gentry, <i>Herrera Environmental Consultants, Casper, WY</i> .
2:00 PM	122	Tracking reclamation progress—A wildlife approach. P. L. Hunter* ¹ and C. Kirol ² , ¹ <i>Herrera Environmental Consultants Inc, Casper, WY</i> , ² <i>Kirol Applied Ecological Research, Sheridan, WY</i> .
2:30 PM	123	Coexisting with industry: Ferruginous hawk nesting at a Navajo mine. Trevor Harvey*, <i>NTEC, Fruitland, NM</i> .

Break
Ballroom ABC
3:00 PM - 3:30 PM

SYMPOSIA AND ORAL SESSIONS

Abandoned Mine Land Section 2
Ballroom D
3:30 PM - 5:00 PM

3:30 PM	124	High-resolution microgravity for detection and delineation of abandoned mine voids: A rapid, non-intrusive tool for optimized subsidence risk assessment. L. Steele* and W. Levandowski, <i>Tetra Tech Inc, Lakewood, CO.</i>
4:00 PM	125	Design of bat gates and culverts to protect bat habitat on abandoned mine land reclamation projects. A. J. Pontzer*, <i>Kleinfelder, State College, PA.</i>
4:30 PM	126	Evaluating effects of legacy hard-rock mining on a watershed scale. J. I. McCann* and R. W. Nairn, <i>University of Oklahoma, Norman, OK.</i>

Data Innovation in Reclamation
Ballroom E
3:30 PM - 5:00 PM

3:30 PM	127	Improving visibility and professional engagement in reclamation through social media. L. Van Hise* ¹ and M. Curran ² , ¹ <i>Speak Media, Columbus, NJ</i> , ² <i>Abnova Ecological Solutions, Laramie, WY.</i>
4:00 PM	128	Coupling optimized sampling algorithms with GIS and cell phone technologies to rapidly collect and report data over vast linear features. M. F. Curran and Z. D. Farrmer*, <i>Abnova Ecological Solutions, Laramie, WY.</i>
4:30 PM	129	Quantifying ecosystem services in post-mining pit lakes: A meta-database function transfer approach. Z. Iranmanesh* and B. Abbasi, <i>University of Nevada, NV.</i>

Seed Availability
Legacy
3:30 PM - 5:00 PM

3:30 PM	130	Increasing native seed availability for restoration through the Wyoming Seed Partnership. M. Owens ¹ and A. Nelson* ² , ¹ <i>The Nature Conservancy, Lander, WY</i> , ² <i>The Institute for Applied Ecology, Lander, WY.</i>
4:00 PM	131	The role of the Wyoming seed strategy in improving reclamation outcomes. K. Wahl-Villarreal ¹ , E. Freeland ¹ , B. Norton ³ , C. Eckman ⁴ , M. Pokorny ⁴ , M. Graham ⁵ , M. Eshleman* ² , M. Owens ² , K. Clause ⁶ , K. Skeen ⁶ , B. Fowers ⁷ , D. Harris ⁷ , K. Hufford ⁷ , B. Mealor ⁷ , S. Franklin ⁸ , ¹ <i>Bureau of Land Management, Cheyenne, WY</i> , ² <i>The Nature Conservancy, Lander, WY</i> , ³ <i>Institute of Applied Ecology, Lander, WY</i> , ⁴ <i>Natural Resources Conservation Service, Bridger, MT</i> , ⁵ <i>Teton Conservation District, Jackson, WY</i> , ⁶ <i>United States Forest Service, Sheridan, WY</i> , ⁷ <i>University of Wyoming, Laramie, WY</i> , ⁸ <i>Wyoming Department of Agriculture, Cheyenne, WY</i> , ⁹ <i>Wyoming Department of Environmental Quality, Lander, WY</i> , ¹⁰ <i>Wyoming Department of Transportation, Cheyenne, WY</i> , ¹¹ <i>Wyoming Game and Fish Department, Cheyenne, WY</i> , ¹² <i>Wyoming State Forestry Division, Cheyenne, WY</i> , ¹³ <i>Wyoming Seed Production Consultant, Powell, WY.</i>
4:30 PM	132	The “art of the possible”: Enhancing biodiversity through a dedicated native seed nursery. S. Jensen*, <i>EcoPoint, Rifle, CO.</i>

Water Quality Issues Section 2
Boyd (2nd Floor)
3:30 PM - 5:00 PM

3:30 PM	133	Improving the accuracy of mineral scaling risk assessments: Insights from a northwestern Colorado coal mine. K. Wright*, L. Schultz, and A. Gilden, <i>Trihydro Corporation, Austin, TX.</i>
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4:00 PM	134	Geochemical ensemble modeling for bracketing uncertainty in pit lake water quality predictions. M. Blair* ¹ and L. Breckenridge ² , ¹ <i>Barr Engineering Company, Duluth, MN</i> , ² <i>Global Resource Engineering, Golden, CO</i> .
4:30 PM	135	Life cycle analysis of an almost 37-year-old AMD passive treatment system. K. J. Green* ¹ , T. P. Danehy ¹ , C. F. Denholm ² , and N. M. Lamagna ² , ¹ <i>Bio Most Inc, Mars, PA</i> , ² <i>Stream Restoration Inc, Slippery Rock, PA</i> .

OTHER EVENTS

Monday Night Social
Territorial Prison
5:30 PM - 9:00 PM

Tuesday, June 9

Registration Desk Open
Conference Foyer
6:00 AM - 4:30 PM

Breakfast Served
Ballroom ABC
6:30 AM - 8:00 AM

Haulin' ASRS
Conference Foyer
6:30 AM - 7:30 AM

Wild Women Reclamation Breakfast
Boyd (2nd Floor)
6:30 AM - 8:00 AM

Exhibitor Hall Open
Ballroom ABC
7:00 AM - 5:00 PM

Silent Auction
Dyckman (2nd Floor)
7:00 AM - 3:00 PM

Opening Plenary Day 2
Ballroom ABC
8:00 AM - 10:00 AM

Break
Ballroom ABC
10:00 AM - 10:30 AM

SYMPOSIA AND ORAL SESSIONS

Disturbance Impacts on Pollinators
Ballroom D
10:30 AM - 12:00 PM

10:30 AM 136 **Do actively or passively reclaimed roads support more pollinators?**
L. M. Tronstad*¹, B. P. Tronstad¹, M. Curran², and L. B. Myers³, ¹University of Wyoming, Laramie, WY, ²Abnova Ecological Solutions, Cheyenne, WY, ³EOG Resources Inc, Denver, CO.

11:00 AM 137 **Bees and butterflies use an inactive bentonite mine prior to restoration: Vane traps are useful tools in ecosystems with few floral resources.**
L. M. Tronstad*, B. P. Tronstad, and T. L. Tronstad, University of Wyoming, Laramie, WY.

11:30 AM	138	Insect response to reclamation efforts on an abandoned road in Wyoming's Powder River Basin. M. F. Curran* ¹ , Z. D. Farmer ¹ , M. Milbrath ² , L. Tronstad ² , and L. B. Myers ³ , ¹ <i>Abnova Ecological Solutions LLC, Laramie, WY</i> , ² <i>University of Wyoming, Laramie, WY</i> , ³ <i>EOG Resources Inc, Denver, CO</i> .
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Geomorphic Reclamation Case Study in Wyoming
Ballroom E
10:30 AM - 12:00 PM

10:30 AM	139	McIntosh uranium mine dewatering and backfill. C. Warren* and H. Hutson, <i>BRS Inc, Riverton, WY</i> .
11:00 AM	140	McIntosh pit habitat enhancements. R. Lockyear* and H. Hutson, <i>BRS Inc, Riverton, WY</i> .
11:30 AM	141	McIntosh uranium pit geomorphic reclamation project overview. H. J. Hutson*, <i>BRS Inc, Riverton, WY</i> .

Rare Earth and Critical Mineral Recovery Section 1
Legacy
10:30 AM - 12:00 PM

10:30 AM	142	Reclamation and ecological restoration practices around rare-earth and critical-minerals mining areas and possible use of previous experiences with non-ferrous metals for restoration. M. Pietrzykowski* ¹ , V.-A. Prakash ¹ , and P. C. Yoginder ² , ¹ <i>University of Agriculture, Department of Ecological Engineering and Forest Hydrology, Krakow, Poland</i> , ² <i>College of Engineering, Southern Illinois University, Carbondale, IL</i> .
11:00 AM	143	Integrated remediation and critical-mineral recovery through co-processing of acid mine drainage sludge and coal-derived solid wastes. I. Miskovic* and S. Miskovic, <i>Novex LLC, Bellingham, WA</i> .
11:30 AM	144	EMRTAI: Technologies for characterizing critical minerals in solid mining and mineral processing waste at legacy sites. D. Krishnan Nair* and J. Heisler-White, <i>Battelle Memorial Institute, Columbus, OH</i> .

Watershed Scale Reclamation Management
Boyd (2nd Floor)
10:30 AM - 12:00 PM

10:30 AM	145	A watershed scale approach to mine drainage management. P. Ziemkiewicz*, <i>TetraTech, Pittsburgh, PA</i> .
11:00 AM	146	How many mine drainage discharge flows are really enough? A cautionary tale of trusting an immense data set. T. Clark and S. Stahle*, <i>Kleinfelder, State College, PA</i> .
11:30 AM	147	Effects of sediment ponds on hydrochemistry of headwater streams in reclaimed surface mine sites in central Appalachia. M. DeMatt*, R. Cantrell, and A. Hass, <i>West Virginia State University, Institute, WV</i> .

OTHER EVENTS

Lunch On Own
Ballroom ABC
12:00 PM - 1:30 PM

Reclamation Sciences Lunch
Boyd (2nd Floor)
12:00 PM - 1:30 PM

SYMPOSIA AND ORAL SESSIONS

Coal Reclamation Section 1 Boyd (2nd Floor) 1:30 PM - 3:00 PM		
1:30 PM	148	Influences of reclaimed mines on landscape-level ecosystem services: A case study from Appalachia. J. A. Franklin ^{*1} , Y. P. Chugh ² , Z. Hu ³ , X. Wu ⁴ , and A. Moore ¹ , ¹ <i>University of Tennessee, Knoxville, TN</i> , ² <i>Southern Illinois University, Carbondale, IL</i> , ³ <i>China University of Mining and Technology, Xuzhou, China</i> , ⁴ <i>Zhejiang University, Hangzhou, China</i> .
2:00 PM		Placeholder.
2:30 PM		Placeholder.

Rare Earth and Critical Mineral Recovery Section 2 Legacy 1:30 PM - 3:00 PM		
1:30 PM	151	Effects of microbial presence and pH on major and trace metal attenuation in passive AMD treatment systems. T. J. Boothe-Lordon ^{*1,2} , B. C. Hedin ³ , B. W. Stewart ¹ , R. C. Capo ¹ , and M. A. G. Hinkle ⁴ , ¹ <i>University of Pittsburgh, Pittsburgh, PA</i> , ² <i>Battelle Memorial Institute, Columbus, OH</i> , ³ <i>Hedin Environmental, Pittsburgh, PA</i> , ⁴ <i>Washington & Lee University, Lexington, VA</i> .
2:00 PM	152	Computational approaches assist in critical mineral recovery and remediation effort prioritization within mining-affected systems. R. R. Terra ^{*1,2} , D. M. Gulliver ² , P. DiGirolamo ¹ , N. Dalgaard ¹ , J. Rahman ¹ , J. Bowman ¹ , C. Crawford ¹ , K. Kelly ¹ , I. Cann ¹ , and N. J. Trun ¹ , ¹ <i>Duquesne University, Pittsburgh, PA</i> , ² <i>National Energy Technology Laboratory, Pittsburgh, PA</i> , ³ <i>Oak Ridge Institute for Science and Education, Oak Ridge, TN</i> .
2:30 PM	153	Recovery of critical minerals from mining-influenced water during legacy Superfund Site remediation: Advancing innovative technologies through the EMRTAI. J. Heisler-White [*] , S. Winecki, and T. Boothe-Lordon, <i>Battelle Memorial Institute, Columbus, OH</i> .

Reclamation by, with, and for Indigenous Communities Ballroom D 1:30 PM - 3:00 PM		
1:30 PM	154	Community engagement in winter grazing and the native seed program at Kayenta Mining Complex. A. L. Taugher ^{*1} , R. F. Bay ¹ , and M. Shepherd ² , ¹ <i>HMI, LLC, Englewood, CO</i> , ² <i>Peabody Western Coal Company, Kayenta, AZ</i> .
2:00 PM	155	Restoring Hozho on the Navajo Nation with geomorphic reclamation . D. Jacquez [*] , <i>NTEC, Fruitland, NM</i> .
2:30 PM	156	Blending indigenous knowledge and ecological restoration in mine reclamation. R. Benally [*] , <i>NTEC, Fruitland, NM</i> .

Technology and Innovation Ballroom E 1:30 PM - 3:00 PM		
1:30 PM	157	Engineered wood strand erosion control mulch: Technical and performance update from 20 years of use. J. Dooley ^{*1} , T. Jones ² , and M. King ³ , ¹ <i>Forest Concepts, LLC, Auburn, WA</i> , ² <i>Mountain Pine Mfg, Craig, CO</i> , ³ <i>Heartwood Biomass, Wallowa, OR</i> .
2:00 PM	158	The use of polymers for dust and erosion control on mine sites. J. Vermillion [*] , <i>Environmental Products and Applications</i> .
2:30 PM	159	Experiments to assess the environmental impact of fire retardant. D. Barnett ^{*1} , K. Kinzli ¹ , J. Ranville ¹ , T. Wildeman ¹ , and A. Leak ² , ¹ <i>Colorado School of Mines, Golden, CO</i> , ² <i>Respec Company, Denver, CO</i> .

OTHER EVENTS

Break
Ballroom ABC
3:00 PM - 3:30 PM

Closing Silent Auction
Dyckman (2nd Floor)
3:00 PM - 3:30 PM

SYMPOSIA AND ORAL SESSIONS

Geospatial Issues
Boyd (2nd Floor)
3:30 PM - 5:00 PM

3:30 PM	160	<p>Temporal visibility bias in earth observation distorts global mining footprints and reclamation. W. Xiao*^{1,2}, J. Guo¹, and Z. Hu², ¹<i>School of Public Affairs, Zhejiang University, School of Public Affairs, Zhejiang University, Hangzhou, China</i>, ²<i>Institute of Land Reclamation and Ecological Restoration, China University of Mining and Technology, Beijing, China</i>.</p>
4:00 PM	161	<p>A remotely sensed approach to assess riparian vegetation development and flow pathways in relation to remediation approaches at a historic bentonite mining site. P. Kozak*^{1,2}, J. Walker^{1,2}, M. Beason³, and L. Kunza^{1,2}, ¹<i>Center for Sustainable Solutions at South Dakota School of Mines, Rapid City, SD</i>, ²<i>Department of Chemistry, Biology, and Health Sciences, South Dakota School of Mines, Rapid City, SD</i>, ³<i>South Dakota Wing Civil Air Patrol, Rapid City, SD</i>.</p>
4:30 PM	162	<p>Machine learning integration with remote sensing for reclamation planning and restoration monitoring at mining sites. A. C. Reicks*, <i>CDM Smith, Milwaukee, WI</i>.</p>

Post Large-Scale Disturbance Issues
Ballroom D
3:30 PM - 5:00 PM

3:30 PM	163	<p>Designing for recovery: Streambank restoration on the Pigeon River after Helene. T. L. Wishart* and M. L. McKinney, <i>University of Tennessee-Knoxville, Knoxville, TN</i>.</p>
4:00 PM	164	<p>Flood mitigation planning in a heavily mined community: Insight from a community driven planning process. N. A. Kruse Daniels*¹, C. Partlow¹, and Z. Ruehman², ¹<i>Ohio University, Athens, OH</i>, ²<i>University of Georgia, Athens, GA</i>.</p>
4:30 PM	165	<p>Sharing is caring: How multi-stakeholder collaboration accelerates Hurricane Helene restoration. D. Mills* and M. McKinney, <i>University of Tennessee, Knoxville, TN</i>.</p>

Reclamation: A Long-term View
Ballroom E
3:30 PM - 5:00 PM

3:30 PM	166	<p>What can the reclamation industry learn from organic farmers? C. Youngquist*, <i>Dirt Works Wyoming, Worland, WY</i>.</p>
4:00 PM	167	<p>40 years of revegetation monitoring and success at Kayenta Mine Complex. R. F. Bay*¹, A. L. Taugher¹, and M. Shepherd², ¹<i>HMI, LLC, Englewood, CO</i>, ²<i>Peabody Western Coal Company, Kayenta, AZ</i>.</p>
4:30 PM	168	<p>Mastering reclamation cost estimates with SHERPA. K. Noyes*, <i>Costmine Intelligence, Spokane Valley, WA</i>.</p>

**Vegetation Issues
Legacy
3:30 PM - 5:00 PM**

3:30 PM	169	<p>Effectiveness of sagebrush reduction treatments for greater sage-grouse in Wyoming big sagebrush habitats. J. L. Beck*¹, J. R. LeVan^{1,2}, J. E. Hess^{1,3}, A. D. Chalfoun⁴, S. R. Harter⁵, T. J. Christiansen⁶, S. Oberlie⁷, and K. T. Smith^{1,8}, ¹<i>Department of Ecosystem Science and Management, University of Wyoming, Laramie, WY</i>, ²<i>Natural Resources Conservation Service, Pinedale, WY</i>, ³<i>HWA Wildlife Consulting, LLC, Laramie, WY</i>, ⁴<i>Wyoming Cooperative Fish and Wildlife Research Unit, Department of Zoology and Physiology, University of Wyoming, Laramie, WY</i>, ⁵<i>Wyoming Game and Fish Department, Lander, WY</i>, ⁶<i>Wyoming Game and Fish Department, Green River, WY</i>, ⁷<i>Bureau of Land Management, Lander, WY</i>, ⁸<i>Department of Zoology and Physiology, University of Wyoming, Laramie, WY</i>.</p>
4:00 PM	170	<p>Reclamation and noxious weed control on a large-scale wind energy project. N. J. Wojcik*¹, J. Kehmeier¹, and K. Cummins², ¹<i>SWCA Environmental Consultants (SWCA), Oak Creek, CO</i>, ²<i>Power Company of Wyoming, LLC, Denver, CO</i>.</p>
4:30 PM	171	<p>Vegetation change along a post-mining reclamation chronosequence in central Wyoming. M. V. Oreshkina*¹, K. Fufford¹, F. Nippgen¹, R. Coupel¹, and C. Johnson¹, ¹<i>University of Wyoming, Laramie, WY</i>, ²<i>University of Wyoming, Laramie, WY</i>, ³<i>University of Wyoming, Laramie, WY</i>, ⁴<i>University of Wyoming, Laramie, WY</i>, ⁵<i>University of Wyoming, Laramie, WY</i>.</p>

POSTER PRESENTATIONS

**Poster Session
WYO Ranch Club (stadium)
5:30 PM - 7:30 PM**

P101	<p>Heavy metal transfer in smelter-contaminated forest ecosystems. A. P. Vairamuthu*¹, M. Pietrzykowski¹, and Y. P. Chugh², ¹<i>Department of Ecological Engineering and Forest Hydrology, Faculty of Forestry, University of Agriculture in Krakow, Krakow, Malopolskie, Poland</i>, ²<i>College of Engineering, Southern Illinois University, Carbondale, IL</i>.</p>
P102	<p>Soil properties from traditional and geomorphic reclamations at an abandoned uranium mine in Wyoming. L. M. Farver* and J. Bell, <i>University of Wyoming, Laramie, WY</i>.</p>
P103	<p>Assessing coal char as an alternative soil amendment in Wyoming semi-arid agroecosystems. L. Sielski*, R. Thapa, and J. Bell, <i>University of Wyoming, Laramie, WY</i>.</p>
P104	<p>Rapid site screening with high-resolution microgravity: non-intrusive void detection in Colorado's abandoned mine lands. A. McDonald*, W. Levandowski, L. Steele, L. Clyne, and Z. Spence, <i>Tetra Tech Inc, Lakewood, CO</i>.</p>
P105	<p>Insects are more abundant and diverse along reclaimed roads and pipelines? M. Milbrath*¹, M. Curran², and L. Tronstad¹, ¹<i>University of Wyoming, Laramie, WY</i>, ²<i>Abnova Ecological Solutions, Cheyenne, WY</i>.</p>
P106	<p>Evaluating coal char as a carbon-based amendment for semi-arid mine land reclamation. R. B. Thapa*, L. J. Sielski, and J. K. Bell, <i>University of Wyoming, Laramie, WY</i>.</p>
P107	<p>Integrating multi-temporal UAS photogrammetry and terrestrial LiDAR for monitoring underground coal fire induced surface deformation. J. L. Hiatt*^{1,2}, W. Zhou¹, L. Wood¹, and M. Johnson², ¹<i>Colorado School of Mines, Golden, CO</i>, ²<i>Tetra Tech, Lakewood, CO</i>.</p>
P108	<p>State of the art reclamation monitoring system for large portfolio reclamation programs. J. M. Schroeder*, <i>Tetra Tech Inc, Lander, WY</i>.</p>
P109	<p>Design and application of a monitoring geodatabase for statewide reclamation programs and a portfolio-wide dashboard communication system. J. M. Schroeder*, <i>Tetra Tech Inc, Lander, WY</i>.</p>
P111	<p>Challenges to creating seed mixes in the "Pipeline State." J. S. Crumpler* and A. D. Falk, <i>Texas A&M University-Kingsville, Kingsville, TX</i>.</p>
P112	<p>Invertebrates in the diet of greater sage-grouse: A systematic map. F. Bott*^{1,3}, N. Whitford², S. Bower¹, and M. F. Curran¹, ¹<i>Abnova Ecological Solutions LLC, Laramie, WY</i>, ²<i>Wyoming Game and Fish Department, Cheyenne, WY</i>, ³<i>Colorado State University, Fort Collins, CO</i>.</p>
P181	<p>Trends in lek attendance for greater sage-grouse before and after wind energy development. J. A. Cobb*¹, K. Ebenhoch², C. Kelly², C. LeBeau², S. Weller², A. C. Pratt³, and J. L. Beck¹, ¹<i>Department of Ecosystem Science and</i></p>

Management, University of Wyoming, Laramie, WY, ²Western EcoSystems Technology, Inc, Laramie, WY, ³George Miksch Sutton Avian Research Center, Bartlesville, OK.

OTHER EVENTS

**Early Career Professionals Social
WYO Ranch Club (stadium)
7:30 PM - 9:30 PM**

Wednesday, June 10

Registration Desk Open
Conference Foyer
6:00 AM - 3:00 PM

Breakfast Served
Ballroom ABC
6:30 AM - 8:00 AM

Haulin' ASRS
Conference Foyer
6:30 AM - 7:30 AM

TD Breakfast Meeting
Boyd (2nd Floor)
6:30 AM - 8:00 AM

SYMPOSIA AND ORAL SESSIONS

Abandoned Mine Land Section 3 **Legacy** **8:00 AM - 10:00 AM**

8:00 AM	172	Long-term review of reclamation and vegetation management at Colorado's underground coal mine fire sites. T. Tafi ¹ and J. Nuttall* ² , ¹ Colorado DNR – Division of Mining Reclamation and Safety, Denver, CO, ² Tetra Tech, Gillette, WY.
8:30 AM		placeholder.
9:00 AM	174	Remediation efforts of abandoned mine land in central Idaho. E. M. Hurley* ² and F. E. Cassidy ¹ , ¹ Alta Science & Engineering, Inc, Kellogg, ID, ² Alta Science & Engineering, Inc, Boise, ID.
9:30 AM	175	Abandoned and active coal mine reclamation using micronutrient fertility strategies to improve soil health. T. Tafi* ¹ and S. Jennings ² , ¹ CO Division of Reclamation Mining and Safety, Denver, CO, ² Edaphix, LLC, Bozeman, MT.

Mine Reforestation **Ballroom D** **8:00 AM - 10:00 AM**

8:00 AM	185	Native tree community establishment in a 17-year old FRA-reclaimed coal mine. S. K. Klopff* ¹ and C. Fields-Johnson ² , ¹ Virginia Tech, Blacksburg, VA, ² Davey Institute, Charlottesville, VA.
8:30 AM	182	Assessing the taxonomic and functional response of soil microbial communities to sagebrush steppe restoration efforts in Grand Teton National Park. D. M. Romero*, L. T. A. van Diepen, and J. K. Bell, <i>University of Wyoming, Laramie, WY.</i>
9:00 AM	189	Beaver dam analogs for stream reclamation: Influences on food web structure, function, and water quality. M. Milbrath* and L. Tronstad, <i>University of Wyoming, Laramie, WY.</i>
9:30 AM	186	Identification and spatial characterization of a novel autumn olive pathogen in Southwestern Virginia. S. K. Klopff* ¹ , C. Fearer ¹ , D. Putnam ¹ , P. Donovan ¹ , J. Barney ¹ , and C. Fields-Johnson ² , ¹ Virginia Tech, Blacksburg, VA, ² Davey Institute, Charlottesville, VA.

Post-mining Soil Issues

Ballroom E

8:00 AM - 10:00 AM

8:00 AM	176	Uranium mine soils and spoils: Characterization and 3D modeling. S. M. Cude*, <i>Rockwell Science, Lexington, KY.</i>
8:30 AM	177	From model to field: Constructible soil planning. C. J. Sloan*, <i>Herrera Environmental Consultants, Cheyenne, WY.</i>
9:00 AM	178	Impact of biochar on reclaimed mine soils. A. Hass*, A. Chadband, and R. Cantrell, <i>West Virginia State University, Institute, WV.</i>
9:30 AM	179	Reclamation with biotic soil media. R. Reynolds*, <i>Profile Products LLC, Denver, CO.</i>

OTHER EVENTS

Break

Ballroom ABC

10:00 AM - 10:30 AM

SYMPOSIA AND ORAL SESSIONS

Sagebrush Reclamation Impacts on Wildlife

Ballroom D

10:30 AM - 12:00 PM

10:30 AM	180	Modeling greater sage-grouse habitat suitability, habitat potential, and risks in Wyoming through an interactive web-based map. G. Kenney* ¹ and C. Kiroi ² , ¹ <i>Tetra Tech, Inc, Lander, WY,</i> ² <i>Kirol Applied Ecological Research, Sheridan, WY.</i>
11:00 AM	183	Restoring big sagebrush islands with wildling plantings and microtopography to enhance sage-grouse habitat. N. J. Wojcik* ¹ , L. Bailey ² , J. Kehmeier ¹ , and K. Cummins ³ , ¹ <i>SWCA Environmental Consultants (SWCA), Oak Creek, CO,</i> ² <i>SWCA Environmental Consultants (SWCA), Logan, UT,</i> ³ <i>Power Company of Wyoming, LLC, Denver, CO.</i>
11:30 AM		Placeholder.

Stream and Forest Restoration

Ballroom E

10:30 AM - 12:00 PM

10:30 AM	184	Tree establishment and growth in an FRA-reclaimed mine 17 years post-establishment. C. W. Fields-Johnson* ¹ , S. K. Klopff ² , and J. Holliday ² , ¹ <i>Davey Institute, Kent, OH,</i> ² <i>Virginia Polytechnic Institute and State University, Blacksburg, VA.</i>
11:00 AM	187	Clark Fork River Operable Unit (CFROU) Reach A Phase 7: Building on decades of river remediation and restoration to advance streambank stabilization. M. Hatten* ¹ , M. Barnes ¹ , and R. English ¹ , ¹ <i>Tetra Tech, Helena, MT,</i> ² <i>Logan Dudding Montana DEQ, Helena, MT.</i>
11:30 AM	188	Process-based design (PBR) as an integral part of post-fire disturbance recovery. C. Barry*, <i>Ayres Associates, Fort Collins, CO.</i>

Weed Management on Reclaimed Areas

Legacy

10:30 AM - 12:00 PM

10:30 AM	190	Is indaziflam a good fit for weed control on reclamation projects? B. A. Mealor*, J. N. Arndt, and B. Fowers, <i>University of Wyoming Institute for Managing Annual Grasses Invading Natural Ecosystems, Sheridan, WY.</i>
11:00 AM	191	Cheatgrass monoculture treatment in coal mine reclamation. A. Wellborn* ^{1,2} , ¹ <i>Navajo Transitional Energy Company, Decker, MT</i> , ² <i>Spring Creek Mine, Decker, MT.</i>
11:30 AM	192	Sustained cheatgrass suppression using Rejuvra in bentonite mine reclamation in the Big Horn Basin, Wyoming. D. H. Call* and L. S. Triplett, <i>Wyo-Ben Inc, Greybull, WY.</i>

OTHER EVENTS

Student Awards Luncheon
Ballroom ABC
12:00 PM - 1:30 PM

NEC Wrap Up
Ballroom ABC
1:30 PM - 2:30 PM

Optional Tours
Conference Foyer
1:30 PM - 5:00 PM

2027 Pittsburgh Planning Meeting
Ballroom ABC
2:30 PM - 3:30 PM

Thursday, June 11

**McIntosh All Day Tour
Hilton Garden Inn
6:45 AM - 4:45 PM**

**Shirley Basin All Day Tour
Hilton Garden Inn
6:45 AM - 4:45 PM**