

Monday, June 8

Opening Plenary Day 1 Main Ballroom 8:00 AM - 10:00 AM		
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. Fleisher*, <i>Montana Department of Environmental Quality, Helena, MT</i> .
Innovative Reclamation Design Legacy 10:30 AM - 12:00 PM		
10:30 AM	103	Geomorphic reclamation at the Walker Coal Mine. S. J. Mitchell* ¹ and T. Triplett ^{1,2} , ¹ <i>Colorado Division of Reclamation, Mining & Safety, Grand Junction, CO</i> , ² <i>Respec Engineering, Cheyenne, WY</i> .
11:00 AM	104	J19 West Reclamation Project at Kayenta Mining Complex. G. Altsisi* and M. Shepherd, <i>Peabody Western Coal Company, Kayenta, AZ</i> .
11:30 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> .
Reclamation Across Borders: International Boyd 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. Ofosu-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> .

**Professional Awards Luncheon
Main Ballroom
12:00 PM - 12:30 PM**

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

**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. Li¹, J. Li^{*1}, Y. P. Chugh², Y. Han¹, and Z. Q. Hu³, ¹China University of Mining and Technology–Beijing, Beijing, China, ²Southern Illinois University, Carbondale, Carbondale, IL, ³China University of Mining and Technology, Xuzhou, China.

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, *University of Wyoming, Laramie, WY.*

2:30 PM 114 **From field metrics to decisions and refinements: Scalable reclamation portfolio monitoring, analysis, and refinement.**
J. M. Schroeder and R. Walsh*, *Tetra Tech Inc, Lander, WY.*

**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. Huemrich, *US Office of Surface Mining, Pittsburgh, PA.*

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}, ¹Sul Ross State University, Alpine, TX, ²Borderlands Research Institute, Alpine, TX, ³Texas A&M AgriLife Extension Service, College Station, TX.

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. Farmer¹, T. J. Robinson², L. B. Myers³, and J. Tachik³, ¹Abnova Ecological Solutions LLC, Laramie, WY, ²University of Wyoming, Laramie, WY, ³EOG Resources Inc, Denver, CO.

**Water Quality Issues Section 1
Boyd
1:30 PM - 3:00 PM**

1:30 PM 118 **Electro-biochemical treatment for selenium and trace metals in coal-affected waters.**
O. Opara*, *WesTech Engineering, Salt Lake City, UT.*

2:00 PM 119 **Speciation and sequestration of manganese in organic wetland substrates.**
A. M. Hardgrave* and J. LaBar, *Oklahoma State University, Stillwater, OK.*

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, *Ohio University, Athens, OH.*

**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, *Herrera Environmental Consultants, Casper, WY.*

2:00 PM 122 **Tracking reclamation progress—A wildlife approach.**
P. L. Hunter^{*1} and C. Kirol², ¹Herrera Environmental Consultants Inc, Casper, WY, ²Kirol Applied Ecological Research, Sheridan, WY.

2:30 PM 123 **Coexisting with industry: Ferruginous hawk nesting at a Navajo mine.**
Trevor Harvey*, *NTEC, Fruitland, NM.*

**Break
Main Ballroom
3:00 PM - 3:30 PM**

**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, *Tetra Tech Inc, Lakewood, CO.*

4:00 PM 125 **Design of bat gates and culverts to protect bat habitat on abandoned mine land reclamation projects.**
A. J. Pontzer*, *Kleinfelder, State College, PA.*

4:30 PM 126 **Evaluating effects of legacy hard-rock mining on a watershed scale.**
J. I. McCann* and R. W. Nairn, *University of Oklahoma, Norman, OK.*

**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. Curran², ¹*Speak Media, Columbus, NJ*, ²*Abnova Ecological Solutions, Laramie, WY.*

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. Farmer*, *Abnova Ecological Solutions, Laramie, WY.*

4:30 PM 129 **Quantifying ecosystem services in post-mining pit lakes: A meta-database function transfer approach.**
Z. Iranmanesh* and B. Abbasi, *University of Nevada, NV.*

**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. Owens¹ and A. Nelson*², ¹*The Nature Conservancy, Lander, WY*, ²*The Institute for Applied Ecology, Lander, WY.*

4:00 PM 131 **The role of the Wyoming seed strategy in improving reclamation outcomes.**
K. Wahl-Villarreal¹, E. Freeland¹, B. Norton³, C. Eckman⁴, M. Pokorny⁴, M. Graham⁵, M. Eshleman*², M. Owens², K. Clause⁶, K. Skeen⁶, B. Fowers⁷, D. Harris⁷, K. Hufford⁷, B. Meador⁷, S. Franklin⁸, ¹*Bureau of Land Management, Cheyenne, WY*, ²*The Nature Conservancy, Lander, WY*, ³*Institute of Applied Ecology, Lander, WY*, ⁴*Natural Resources Conservation Service, Bridger, MT*, ⁵*Teton Conservation District, Jackson, WY*, ⁶*United States Forest Service, Sheridan, WY*, ⁷*University of Wyoming, Laramie, WY*, ⁸*Wyoming Department of Agriculture, Cheyenne, WY*, ⁹*Wyoming Department of Environmental Quality, Lander, WY*, ¹⁰*Wyoming Department of Transportation, Cheyenne, WY*, ¹¹*Wyoming Game and Fish Department, Cheyenne, WY*, ¹²*Wyoming State Forestry Division, Cheyenne, WY*, ¹³*Wyoming Seed Production Consultant, Powell, WY.*

4:30 PM 132 **The “art of the possible”: Enhancing biodiversity through a dedicated native seed nursery.**
S. Jensen*, *EcoPoint, Rifle, CO.*

**Water Quality Issues Section 2
Boyd
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, *Trihydro Corporation, Austin, TX.*

4:00 PM 134 **Geochemical ensemble modeling for bracketing uncertainty in pit lake water quality predictions.**
M. Blair*¹ and L. Breckenridge², ¹*Barr Engineering Company, Duluth, MN*, ²*Global Resource Engineering, Golden, CO.*

4:30 PM 135 **Life cycle analysis of an almost 37-year-old AMD passive treatment system.**
K. J. Green*¹, T. P. Danehy¹, C. F. Denholm², and N. M. Lamagna², ¹*Bio Most Inc, Mars, PA*, ²*Stream Restoration Inc, Slippery Rock, PA.*

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

Tuesday, June 9

Opening Plenary Day 2 Main Ballroom 8:00 AM - 10:00 AM		
Break Main Ballroom 10:00 AM - 10:30 AM		
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. Tronstad ¹ , M. Curran ² , and L. B. Myers ³ , ¹ <i>University of Wyoming, Laramie, WY</i> , ² <i>Abnova Ecological Solutions, Cheyenne, WY</i> , ³ <i>EOG Resources Inc, Denver, CO</i> .
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, <i>University of Wyoming, Laramie, WY</i> .
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> .
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 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>
Lunch On Own Main Ballroom 12:00 PM - 1:30 PM		
Reclamation Sciences Lunch Legacy 12:00 PM - 1:30 PM		
Coal Reclamation Section 1 Boyd 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	149	Theory, principle, and key technologies of concurrent mining and reclamation. Z. Hu* ¹ , Z. Mao ¹ , W. Xiao ² , J. Franklin ³ , Y. P. Chugh ⁴ , and B. K. Schladweiler ⁵ , ¹ <i>China University of Mining and Technology, Xuzhou, Jiangsu, China,</i> ² <i>Zhejiang University, Xihu District, Hangzhou, China,</i> ³ <i>University of Tennessee, Knoxville, TN,</i> ⁴ <i>Southern Illinois University at Carbondale, Carbondale, IL,</i> ⁵ <i>BKS Environmental Associates Inc, Gillette, WY.</i>
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>
Break Main Ballroom 3:00 PM - 3:30 PM		
SYMPOSIA Geospatial Issues Boyd 3:30 PM - 5:00 PM		
3:30 PM	160	Temporal visibility bias in earth observation distorts global mining footprints and reclamation. W. Xiao* ^{1,2} , J. Guo ¹ , and Z. Hu ² , 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>
4:00 PM	161	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. Beason ³ , 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>
4:30 PM	162	Machine learning integration with remote sensing for reclamation planning and restoration monitoring at mining sites. A. C. Reicks*, <i>CDM Smith, Milwaukee, WI.</i>
Post Large-Scale Disturbance Issues Ballroom D 3:30 PM - 5:00 PM		
3:30 PM	163	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>
4:00 PM	164	Flood mitigation planning in a heavily mined community: Insight from a community driven planning process. N. A. Kruse Daniels* ¹ , C. Partlow ¹ , and Z. Ruehman ² , ¹ <i>Ohio University, Athens, OH</i> , ² <i>University of Georgia, Athens, GA.</i>
4:30 PM	165	Sharing is caring: How multi-stakeholder collaboration accelerates Hurricane Helene restoration. D. Mills* and M. McKinney, <i>University of Tennessee, Knoxville, TN.</i>
Reclamation: A Long-term View Ballroom E 3:30 PM - 5:00 PM		
3:30 PM	166	What can the reclamation industry learn from organic farmers? C. Youngquist*, <i>Dirt Works Wyoming, Worland, WY.</i>
4:00 PM	167	40 years of revegetation monitoring and success at Kayenta Mine Complex. R. F. Bay* ¹ , A. L. Taugher ¹ , and M. Shepherd ² , ¹ <i>HMI, LLC, Englewood, CO</i> , ² <i>Peabody Western Coal Company, Kayenta, AZ.</i>
4:30 PM	168	Mastering reclamation cost estimates with SHERPA. K. Noyes*, <i>Costmine Intelligence, Spokane Valley, WA.</i>
Vegetation Issues Legacy 3:30 PM - 5:00 PM		
3:30 PM	169	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. Chalfoun ⁴ , S. R. Harter ⁵ , T. J. Christiansen ⁶ , S. Oberlie ⁷ , 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>

4:00 PM	170	Reclamation and noxious weed control on a large-scale wind energy project. N. J. Wojcik* ¹ , J. Kehmeier ¹ , and K. Cummins ² , ¹ <i>SWCA Environmental Consultants (SWCA), Oak Creek, CO</i> , ² <i>Power Company of Wyoming, LLC, Denver, CO</i> .
4:30 PM	171	Vegetation change along a post-mining reclamation chronosequence in central Wyoming. M. V. Oreshkina* ¹ , K. Fufford ¹ , F. Nippgen ¹ , R. Coupel ¹ , and C. Johnson ¹ , 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> .
Poster Session Wildcatter Suite 5:30 PM - 7:30 PM		
P101		Heavy metal transfer in smelter-contaminated forest ecosystems. A. P. Vairamuthu* ¹ , M. Pietrzykowski ¹ , and Y. P. Chugh ² , 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> .
P102		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> .
P103		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> .
P104		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> .
P105		Insects are more abundant and diverse along reclaimed roads and pipelines? M. Milbrath* ¹ , M. Curran ² , and L. Tronstad ¹ , ¹ <i>University of Wyoming, Laramie, WY</i> , ² <i>Abnova Ecological Solutions, Cheyenne, WY</i> .
P106		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> .
P107		Integrating multi-temporal UAS photogrammetry and terrestrial LiDAR for monitoring underground coal fire induced surface deformation. J. L. Hiatt* ^{1,2} , W. Zhou ¹ , L. Wood ¹ , and M. Johnson ² , ¹ <i>Colorado School of Mines, Golden, CO</i> , ² <i>Tetra Tech, Lakewood, CO</i> .
P108		State of the art reclamation monitoring system for large portfolio reclamation programs. J. M. Schroeder*, <i>Tetra Tech Inc, Lander, WY</i> .
P109		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> .
P110		Managing soil for successful reclamation: Addressing the biological and physical processes. H. L. Farrell* ¹ and R. Waldron ² , ¹ <i>SWCA Environmental Consultants, Fort Collins, CO</i> , ² <i>SWCA Environmental Consultants, Tucson, AZ</i> .
P111		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> .
P112		Invertebrates in the diet of greater sage-grouse: A systematic map. F. Bott* ^{1,3} , N. Whitford ² , S. Bower ¹ , and M. F. Curran ¹ , 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> .
181		Trends in lek attendance for greater sage-grouse before and after wind energy development. J. A. Cobb* ¹ , K. Ebenhoch ² , C. Kelly ² , C. LeBeau ² , S. Weller ² , A. C. Pratt ³ , and J. L. Beck ¹ , ¹ <i>Department of Ecosystem Science and Management, University of Wyoming, Laramie, WY</i> , ² <i>Western EcoSystems Technology, Inc, Laramie, WY</i> , ³ <i>George Miksch Sutton Avian Research Center, Bartlesville, OK</i> .
Early Career Professionals Social Wildcatter Suite 7:30 PM - 9:30 PM		

Wednesday, June 10

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	173	From remedial investigation to remedy focus, lessons learned at an abandoned mercury mine. S. Dent*, CDM Smith, Helena, MT.
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, University of Wyoming, Laramie, WY.
9:00 AM	189	Beaver dam analogs for stream reclamation: Influences on food web structure, function, and water quality. M. Milbrath* and L. Tronstad, University of Wyoming, Laramie, WY.
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*, Rockwell Science, Lexington, KY.
8:30 AM	177	From model to field: Constructible soil planning. C. J. Sloan*, Herrera Environmental Consultants, Cheyenne, WY.
9:00 AM	178	Impact of biochar on reclaimed mine soils. A. Hass*, A. Chadband, and R. Cantrell, West Virginia State University, Institute, WV.
9:30 AM	179	Reclamation with biotic soil media. R. Reynolds*, Profile Products LLC, Denver, CO.

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

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. Kirol ² , ¹ Tetra Tech, Inc, Lander, WY, ² Kirol Applied Ecological Research, Sheridan, WY.
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 SWCA Environmental Consultants (SWCA), Oak Creek, CO, ² SWCA Environmental Consultants (SWCA), Logan, UT, ³ Power Company of Wyoming, LLC, Denver, CO.

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. R. English*, M. Hatten, and M. Barnes, <i>Tetra Tech, 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> .
Student Awards Luncheon Main Ballroom 12:00 PM - 1:30 PM		
NEC Wrap Up Main Ballroom 1:30 PM - 2:30 PM		
2027 Pittsburgh Planning Meeting Main Ballroom 2:30 PM - 3:30 PM		