



**NAAAMLIP/NASLR 2018**  
**40<sup>th</sup> ANNUAL CONFERENCE**

**VIRGINIA**

# PEOPLE, ENERGY, and the ENVIRONMENT!



The Office of Surface Mining Reclamation and Enforcement's (OSMRE) partnership with the National Association of Abandoned Mine Land Programs (NAAML) aids in successful reclamation of land and water resources adversely affected by past coal mining that was abandoned or inadequately restored.

## Abandoned Mine Land RECLAMATION AWARDS

Established in 1992, the Abandoned Mine Land (AML) Reclamation Awards recognize exemplary state and tribal reclamation projects that reclaim coal mine sites that were abandoned or inadequately restored before the enactment of the Surface Mining and Reclamation Act of 1977.

OSMRE congratulates  
this year's award winners:

*Iowa*  
*Kentucky*  
*Indiana*  
*Alaska*  
*Virginia*



U.S. Department of the Interior, OFFICE of SURFACE MINING RECLAMATION and ENFORCEMENT

[www.osmre.gov](http://www.osmre.gov)

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OSMRE Data notations Map Repository Mine Map Document Number 3009552





SAVE THE DATE!



  
Bureau of Abandoned Mine Reclamation

**SAVE THE DATE!**  
*September 7-12, 2019*

  
**pennsylvania**

  
#PENNSYLVANIA  
Annual Conference  
Abandoned Mine Reclamation

Access : [www.NAAMLP2019.com](http://www.NAAMLP2019.com) to see the details!!!!

**41st NAAMLP Annual Conference**  
www.naamlp.net

Wyndham Grand Pittsburgh Downtown  
600 Commonwealth Place  
Pittsburgh, PA 15222  
[www.WyndhamGrandPittsburgh.com](http://www.WyndhamGrandPittsburgh.com)



  
Bureau of Abandoned Mine Reclamation



**pennsylvania**

[www.NAAMLP2019.com](http://www.NAAMLP2019.com)

[Information@NAAMLP2019.com](mailto:Information@NAAMLP2019.com)

717-783-2267

# WELCOME TO WILLIAMSBURG

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# "New Solutions for Historic Mining"





## COMMONWEALTH of VIRGINIA

Office of the Governor

Ralph S. Northam  
Governor

September 10, 2018

Dear Members of the NAAML P,

Welcome to the Commonwealth of Virginia, to the beautiful, historic city of Williamsburg and to the joint conference of the 40<sup>th</sup> annual National Association of Abandoned Mine Land Programs and the 46<sup>th</sup> annual National Association of State Land Reclamationists. Virginia is honored to host this year's conference and to showcase the important work that NAAML P and NASLR members contribute to the environment by reclaiming mined lands.

As a native of the Eastern Shore of Virginia and a long-time resident of the Hampton Roads region, I am happy to welcome you to Eastern Virginia. I hope that you will enjoy the beauty of our coastlines, explore our historical attractions, and take advantage of the many cultural offerings. With over 400 years of history, the Commonwealth boasts many firsts. In nearby Jamestown, we have the first permanent English settlement in North America. Just outside of our capital city, in Richmond, we have evidence of the first commercial production of coal in the United States. As the Richmond coalfield developed, improvements in Virginia's roads, canals, and railways followed.

Your continued efforts and collaboration in the best interest of our nation's mining community is admirable. Reclaiming these lands in an environmentally responsible fashion is essential and why NAAML P and NASLR are so valuable and important. We hope that all of you find the conference motivating and educational as you share common interests with your peers from across the country.

You are a distinguished group and we are proud to host your 2018 National Conference.

Sincerely,

A handwritten signature in black ink that reads "Ralph S. Northam".

Ralph S. Northam



## NATIONAL ASSOCIATION OF ABANDONED MINE LAND PROGRAMS

Welcome to Williamsburg, Virginia and the 40th Annual Conference of the National Association of Abandoned Mine Land Programs (NAAML P). The staff of Virginia's Department of Mines, Minerals and Energy laid the groundwork for these next few days to be a time of learning and motivation, to reacquaint with colleagues, and to develop new friendships and business contacts. The NAAML P officers and leadership teams appreciate your attendance and participation in this established and well-attended conference.

Forty years is a significant time period for a group to meet annually. This alone testifies to the strong bonds that have developed and the dedicated commitment of those among us, and those who have gone before us, to reclaim historic mine-scarred lands. Many of the AML programs impressive coalition of partners, dedicated to AML reclamation and restoration, will be in attendance this week. Through the cooperation of private land owners, coal industry representatives, federal and state agencies, local officials and watershed groups, thousands of acres of AML sites have been transformed into productive uses such as farmland, pasture, wildlife habitat and outdoor recreational areas.

Historic mining was crucially important to the United States economy, producing the fuel that spurred the Industrial Revolution and allowing our nation to become a global economic leader. Equally important are the efforts of AML programs to heal the impacts associated with this vital mining legacy. Throughout the nation, our agencies have made great progress in eliminating some of the most dangerous hazards from these mining sites. Reclamation accomplishments from the previous forty years are impressive; however, time and funding have not been sufficient to reclaim the entirety of the problems created by more than 200 years of predominantly unregulated mining. The Surface Mining Control and Reclamation Act (SMCRA) of 1977 requires all active coal mine operators to pay an AML reclamation fee on each ton of coal mined. Our important work is not yet finished and it is in our collective best interest to ensure that this fee, which was established and maintains the Abandoned Mine Land Fund, is renewed beyond its current expiration date in 2021.

This National conference is a time for us to celebrate our successes; to participate in technical sessions that will enlighten us on the most effective reclamation methods; to honor the National Reclamation Award winners; recognize outstanding individuals; and to lay the groundwork for our mission to continue well into the future. Throughout the NAAML P Conference, networking opportunities abound. Interaction between state and tribal employees, federal employees, engineers, contractors and suppliers is a key component of the event.

A sincere thank you is also extended to our sponsors. Be sure to visit their booths and let them become a part of your solutions to those unique sites that are awaiting reclamation.

Sincerely,

A handwritten signature in blue ink that reads 'Robert F. Scott'.

Robert F. Scott, PE, PLS  
President, NAAML P



# NASLR

## NATIONAL ASSOCIATION OF STATE LAND RECLAMATIONISTS

Dear Conference Attendees,

Welcome to beautiful Williamsburg, Virginia for NASLR's 46<sup>th</sup> Annual Conference. I want to express my gratitude to the National Association of Abandoned Mine Land Programs (NAAML) for spearheading the conference this year. They have done a great job of integrating NASLR into the conference. A big thank you also to the State of Virginia and the exceptional employees of the Virginia Department of Mines, Minerals and Energy whose hard work and dedication have made this conference possible. Last, but certainly not least, I'd like to thank the conference sponsors and exhibitors. Please don't forget to visit the sponsor/exhibitor booths outside of the James River Grand Ballroom. This event has a packed agenda of enjoyable educational sessions, conference tours, and networking opportunities. I hope you will take advantage of all of them.

For those of you not familiar with NASLR, we are an organization that has been providing service for 46 years and are comprised of reclamation professionals looking for scientific, and preferably tested solutions to "on the ground" challenges associated with mining and reclamation. We promote the formulation of lasting partnerships between state land reclamationists, private mining groups and other interested parties to advance the art and science of land reclamation. Membership in NASLR is not burdensome and the benefits are significant. For anyone who is not a NASLR Member, but is interested in joining/re-engaging or obtaining additional information, please come see me, go to the NASLR booth, or visit our website at [www.naslr.org](http://www.naslr.org).

NASLR members and delegates, please note that we will close out the conference with the NASLR Business Lunch at 12:30 on Wednesday, September 12, at the Eagles Alcove Restaurant. The annual Business Meeting will be held immediately after the lunch in the hospitality suite. Lunch expenses will be covered by NASLR. Please plan to attend the business meeting. We need to elect officials, and discuss details of the upcoming annual meetings. Your attendance and input is essential to adequately discuss NASLR business.

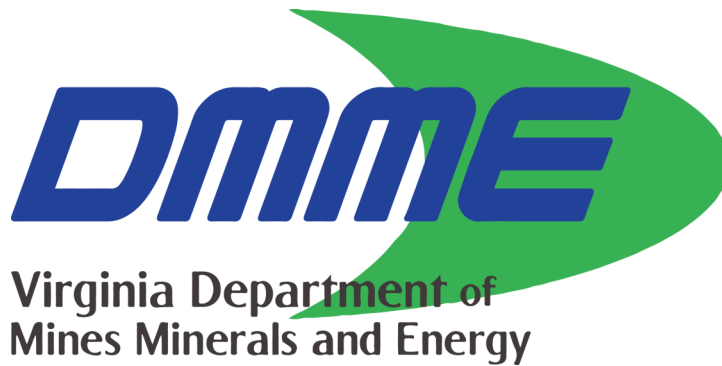
In closing, I hope you learn a lot, make long-lasting professional connections, have a great time at the conference, and enjoy Virginia!

Sincerely,

Edward L. Coleman  
NASLR President

*Since this is a digital conference, I thought some of you might be interested in Montana coal mine reclamation. Here is a link to our video: <https://www.youtube.com/watch?v=Bn4NYISLgWU>*





The Virginia Department of Mines Minerals and Energy (DMME), welcomes you to our great Commonwealth! We, as this year's host state, have been looking forward to having you all here with us and know this conference will be productive, a career recharge and lots of fun!

As promised, we are "going green". All conference information can be accessed one of three ways. The conference gift this year is a tablet and flash drive with the entire conference program. All conference information is accessible on the conference website and, in addition, we are introducing a NAAML P Yapp App. It also holds all the conference information you will need and even has an option for you to share your photos of your experience with other attendees. We also hope you will all embrace **#naamlp2018** when posting your photos.

This 2018 joint conference of the National Association of Abandoned Mine Land Programs and (NAAML P) the National Association of State Land Reclamationists (NASLR) here at the Kingsmill Resort in beautiful Williamsburg is the perfect place for both associations to share ideas, celebrate successes and make new acquaintances.

As we, mark the 40<sup>th</sup> Annual NAAML P conference we keep the traditions of the association alive. Sunday evenings "Meet and Greet" allows us to visit with each other and our great sponsors. Monday morning we will begin with breakfast and the plenary session followed by exciting and informative technical sessions. Monday evening we recognize and celebrate those who made great strides in land reclamation at the awards dinner.

Tuesday's tours of historic areas of Virginia takes some attendees to the Mid-Lothian Mines Park in Chesterfield County. This is a unique abandoned mine land project in which the Virginia Department of Mines, Minerals and Energy worked with the county to preserve what was left of one of the first commercial coal mines in America. Attendees can also visit historic Jamestown or Williamsburg. Others will venture to the Nauticus and Battleship Wisconsin. All sites have a role in the start of this country.

It is with great pleasure I say, welcome to Virginia!

Sincerely,

Lesa C. Baker, AML Projects Coordinator

Virginia DMME

# NAAML P-NASLR 2018

## CONFERENCE AGENDA

### SUNDAY, SEPTEMBER 9, 2018

09.09.18	1:00 p.m.	5:00 p.m.	Exhibitor Set-Up	<i>Pre-Conference Area</i>
09.09.18	1:00 p.m.	6:30 p.m.	Help Desk	<i>Pre-Conference Area</i>
09.09.18	1:00 p.m.	6:30 p.m.	Presenter/Speaker Ready Room	<i>Fairfax</i>
09.09.18	1:00 p.m.	5:00 p.m.	NAAML P Committee Meeting	<i>Randolph</i>
09.09.18	1:00 p.m.	6:00 p.m.	Registration	<i>Pre-Conference Area</i>
09.09.18	6:30 p.m.	8:30 p.m.	Welcome Reception Meet and Greet with Exhibitors	<i>Burwell Ballroom</i>
09.09.18	9:00 p.m.	11:00 p.m.	Hospitality House Open	<i>Padgett House</i>

### MONDAY, SEPTEMBER 10, 2018

09.10.18	6:30 a.m.	8:00 a.m.	Breakfast with Exhibitors	<i>James River Ballroom</i>
09.10.18	6:00 a.m.	5:00 p.m.	Help Desk	<i>Pre-Conference Area</i>
09.10.18	6:00 a.m.	5:00 p.m.	Registration	<i>Pre-Conference Area</i>
09.10.18	7:00 a.m.	5:00 p.m.	Speaker Ready Room	<i>Fairfax</i>
09.10.18	8:00 a.m.	10:00 a.m.	Plenary Sessions	<i>James River Ballroom</i>
09.10.18	10:00 a.m.	11:00 a.m.	Break with Exhibitors	<i>Pre-Conference Area</i>
09.10.18	11:00 a.m.	12:00 p.m.	Technical Sessions 1– Burwell B, 2– Burwell A, 3– James River Ballroom A&B	
09.10.18	12:00 p.m.	1:00 p.m.	Lunch (on your own)	
09.10.18	1:00 p.m.	3:00 p.m.	Technical Sessions 1– Burwell B, 2– Burwell A, 3– James River Ballroom A&B	
09.10.18	3:00 p.m.	3:30 p.m.	Break with Exhibitors	<i>Pre-Conference Area</i>
09.10.18	3:30 p.m.	5:00 p.m.	Technical Sessions 1– Burwell B, 2– Burwell A, 3– James River Ballroom A&B	
09.10.18	5:30 p.m.	6:30 p.m.	Cash Bar	<i>James River Ballroom</i>
09.10.18	6:30 p.m.	9:00 p.m.	Awards Banquet	<i>James River Ballroom</i>
09.10.18	9:00 p.m.	11:00 p.m.	Hospitality House Open	<i>Padgett House</i>

## TUESDAY, SEPTEMBER 11, 2018

09.11.18	6:00 a.m.	8:00 a.m.	Breakfast with Exhibitors <i>James River Ballroom</i>
09.11.18	6:00 a.m.	8:00 a.m.	Help Desk <i>Pre-Conference Area</i>
09.11.18	7:00 a.m.	5:00 p.m.	Tours <i>Midlothian-7:15 a.m., Jamestown 8:00 a.m., Battleship 8:45 a.m., Williamsburg 8:45 a.m.</i>
09.11.18	6:00 p.m.	9:00 p.m.	Cookout w/live band <i>James River Ballroom</i>
09.11.18	9:30 p.m.	11:00 p.m.	Hospitality House Open <i>Padgett House</i>

## WEDNESDAY, SEPTEMBER 12, 2018

09.12.18	6:00 a.m.	8:00 a.m.	Breakfast with Exhibitors <i>James River Ballroom</i>
09.12.18	6:00 a.m.	12:30 p.m.	Help Desk <i>Pre-Conference Area</i>
09.12.18	6:00 a.m.	12:30 p.m.	Speaker Ready Room <i>Fairfax</i>
09.12.18	8:00 a.m.	10:00 a.m.	Technical Sessions <i>1-JRBR D, 2-JRBR A, 3-JRBR B</i>
09.12.18	10:00 a.m.	10:30 a.m.	Break with Exhibitors <i>Pre-Conference Area</i>
09.12.18	10:30 a.m.	12:00 p.m.	Technical Sessions <i>1-JRBR D, 2-JRBR A, 3-JRBR B</i>
09.12.18	12:30 p.m.	1:30 p.m.	Conference Concludes – Lunch on your own
09.12.18	12:30 p.m.	2:00 p.m.	Exhibitor Tear Down <i>Pre-Conference Area</i>
09.12.18	12:00 p.m.	5:00 p.m.	NAAML P Business Meeting <i>JRBR C</i> (Lunch served)
09.12.18	1:30 p.m.	5:00 p.m.	NASLR Business Meeting <i>Padgett House</i>

## THURSDAY, SEPTEMBER 13, 2018

09.13.18	8:00 a.m.	5:00 p.m.	NAAML P Business Meeting <i>JRBR C</i> (Lunch served)
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## 2018 Annual Conference and Business Meeting

September 9-13, 2018  
Kingsmill on the James  
1010 Kingsmill Road, Williamsburg VA 23185  
Reservations 800-832-5665

### AGENDA

#### Sunday, September 9, 2018

##### 11:00 AM → 5:45 PM

**Committee Meetings: Times to be confirmed or rescheduled by Committee chairs**

**11:00-12:00 meetings will be held in Fairfax. 1:00- 4:00 committees will meet in Randolph.**

- 11:00 Membership Committee – Autumn Coleman
- 11:30 Training Committee and Research Committee – Bob Scott and Travis Parsons
- 12:00 Minimum Program Committee – Justin Ireys
- 1:00 Hard Rock Committee – Jeff Graves
- 2:00 Public Information Committee - Jim Bishop
- 3:00 Finance Committee and Scholarship Committee – Eric Cavazza and Mike Garner
- 4:00 NAAML P Steering Committee

##### 6:30 PM → 8:30 PM Evening Social event, meet and greet

**Burwell Ballroom**

#### Monday, September 10, 2018

##### 6:30 AM → 8:00 AM Breakfast

**James River Ballroom**

##### 8:00 AM → 10:00 AM Plenary Session

**James River Ballroom**

##### 11:00 AM → 5:00 PM Technical Sessions

**1 Burwell B, 2 Burwell A and 3 James River Ballroom (A&B)**

##### 6:00 PM → 9:00 PM Awards Banquet James River Ballroom



**Tuesday, September 11, 2018**  
**(Times may vary slightly)**

**6:30 AM → 8:00 AM Breakfast**

**James River Ballroom**

**7:00 AM → 5:00 PM – Technical field day tours (Please arrive in the lobby at least 10 minutes before your departure time)**

Mid-Lothian Mines Park/Tuckahoe Plantation 7:15 a.m.

Jamestown 8:00 a.m.

Battleship 8:45 a.m.

Williamsburg- 8:45 (there will be two trips so the second riders will leave shortly after)

**6:00 PM → 9:00 PM Evening casual dinner and live music**

**James River Ballroom**

**Wednesday, September 12, 2018**

**6:00 AM → 8:00 AM Breakfast**

**James River Ballroom**

**8:00 AM → 12:00 Noon Technical Sessions and National Award winner technical presentations**

**James River Ballroom 1-D, 2-A and 3-B**



Wednesday, September 12, 2018  
Business Meeting

**12:00 PM → 1:00 PM NAAML P Delegate and Business Meeting Lunch**

James River Ballroom C

**12:30 PM- 1:30 PM NASLR Lunch**

Eagle's Alcove

**1:30 PM-5:00 PM NASLR Business Meeting**

Padgett's Home 402

**1:00 PM → 5:00 PM NAAML P Business Meeting**

James River Ballroom C

**Call to Order 2018 Winter Business Meeting (Opening Remarks)**

- Roll Call
- Proxies
- Introductions
- Approval of Agenda
- Approval of Minutes from February 2018 Winter Business Meeting in San Antonio, Texas
- Treasurer's Report

**AML Summit Work Groups** Work Group Reports and Collaboration Sessions

- E-AMLIS
- AML-1
- Data Reporting Requests
- Messaging
- NEPA
- Grant Process

**OSMRE Update-** (Sterling Rideout, Asst. Director and Yolande Norman, AML Chief, OSMRE)

**Other Federal Program Updates**

- BLM-Update on BLM AML Activities (Miyoshi Stith)
- USFS-Update on USFS AML Activities (Scott Ludwig)
- NPS-Update on NPS AML Activities (Hillary Smith)





NATIONAL ASSOCIATION OF ABANDONED MINE LAND PROGRAMS

**Thursday, September 13, 2018**

**Business Meeting (continues)**

**James River Ballroom C**

**7:00 AM → 8:00 AM Breakfast on your own**

**8:00 AM → 5:00 PM Delegate and Business Meeting (James River Ballroom C)**

**IMCC Update- Tom Clarke (Executive Director) Ryan Ellis (Legislative and Regulatory Affairs Specialist)**

**Old Business**

**New Business**

**Election of Officers**

**Committee Reports and Discussion**

- Finance Committee (Eric Cavazza)
- Research Committee (Travis Parsons)
- Training Committee (Bob Scott)
- Scholarship Committee (Mike Garner)
- Minimum Program Committee (Justin Ireys)
- Membership Committee (Autumn Coleman)
- Public Information and Education Committee (Jim Bishop)
- Hardrock Committee (Jeff Graves)
- SMCRA Reauthorization Committee (Brian Bradley/Susan Kozak)

**Future Meetings Update**

Feb 5-7, 2019, St. George, Utah

Sept. 8-12, 2019 – Pittsburgh, Pennsylvania

Winter 2020 – Morgantown, West Virginia

Fall 2020 – South Lake Tahoe, Nevada

Winter 2021 – Orange Beach, Alabama

Fall 2021 – Colorado/Utah or Maryland

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**Meeting Adjourned—Safe Travels**

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# 2018 NAAML P-NASLR PLENARY SESSION

September 10, 2018

8:00– 10:00 a.m. James River Ballroom

## WELCOME

Bob Scott, President



Ed Coleman, President



## VIRGINIA WELCOME

Butch Lambert, Deputy Director



## PLENARY PROGRAM

U.S. Representative Morgan Griffith, VA

*Ninth Congressional District*

Joe Balash, Assistant Secretary

*U.S. Department of Interior*

### **Special Presentation Flight 93**

Greg Conrad

*Interstate Mining Compact Commission (Retired)*

"Of Swinging Pendulums, Roller Coasters and Straight Paths: Lessons Learned from the Legislative History of the AML Program"

# PLENARY SPEAKERS



## **Congressman Morgan Griffith (VA-09)**

Morgan Griffith was first elected to represent the Ninth Congressional District of Virginia in the U.S. House of Representatives on November 2, 2010 and is currently serving his fourth term. Morgan is a member of the House Energy and Commerce Committee, which has jurisdiction over some of the most important issues facing Virginia's Ninth District including public health and federal regulations.

For the 115th Congress, Morgan was named Vice Chairman of the Energy and Commerce Committee's Subcommittee on Oversight and Investigations. In addition, Morgan serves on its Subcommittee on Health and the Subcommittee on Energy.

Prior to his election to the U.S. House of Representatives, Morgan served as a member of the Virginia House of Delegates from 1994 to 2011, where he represented the Eighth District. In 2000, Morgan was elected House Majority Leader, the first Republican in Virginia history to hold that position.



## **Joe Balash**

**Joe Balash** is the Assistant Secretary for Land and Minerals Management for the U.S. Department of the Interior. He is a former Alaska Department of Natural Resources Commissioner where we managed one of the largest single portfolios of land and water resources in the world, with more than 100 million acres of uplands, 40-60 million acres of submerged lands and tidelands, and more than 500,000 barrels of oil produced daily. Before going to the Department of the Interior, he served as chief of staff for U.S. Sen. Dan Sullivan, R-Alaska.

As Assistant Secretary for Land and Minerals Management, Balash oversees DOI federal agencies including the Bureau of Ocean Energy Management, Bureau of Land Management and Bureau of Safety and Environmental Enforcement.



## **Greg Conrad**

**Greg Conrad** is the former Executive Director of the Interstate Mining Compact Commission (IMCC), a multi-state governmental organization representing 26 mineral producing states. Greg served in his position since 1988 and was responsible for overseeing several issues of importance to the states in the legislative and regulatory affairs arenas including mining and reclamation, mine placement of coal combustion products, financial assurance, identification and restoration of abandoned mine lands, mine safety and health, and various environmental issues associated with mineral production such as surface and ground water quality and quantity.

Prior to joining IMCC, Greg served for nine years as senior counsel with the American Mining Congress, which is now part of the National Mining Association. While with AMC, Greg had primary staff responsibility for several coal related issues including transportation, leasing, research and development

initiatives, and surface mining and reclamation.

Greg has spoken and presented papers at a variety of meetings and conferences hosted by such organizations as the Eastern Mineral Law Foundation, the National Academy of Science, the Conference of Government Mining Attorneys, the American Association of State Geologists, the Colorado School of Mines, the Office of Surface Mining, the National Association of Abandoned Mine Land Programs, the National Mining Association, the Environmental Law Institute and various state government groups. He has written extensively on mining issues for professional journals and magazines.

# "New Solutions for Historic Mining"

# TECHNICAL SESSIONS SCHEDULE

MONDAY SEPTEMBER 10, 2018

	Burwell Room B (Technical 1)	Burwell Room A (Technical 2)	James River Ballroom A&B (Technical 3)
11:00 AM	Ryan Shipper Performance Review of a Passive Treatment System	Rich Palladino Using Foam as a Transportation Medium for Backfilling Underground Voids	Jon Smoyer The Planning and Design of Horizontal Directional Drilling for Pipeline Installation through Abandoned Mine Lands
11:30 AM	Paul Behum, Mike Sharp, Hamid(Kevin) Kahilil and Wallace Greenlees Occurrences of Artesian Net Acid Mine Drainage in the Western Interior Coal Field and Implications for Passive Treatment	David Hallman, P.E., P.G. Foamed Sand Backfilling for Subsidence Mitigation at Glenrock, Wyoming	Alden Ozment, Michael A. Trevits The Combined use of direction drilling and gas enhanced foam to mitigate and suppress abandoned underground coal mine fires
<b>12:00 PM</b>	<b>Lunch - On Your Own</b>		
1:00 PM	Rebecca Steinberg, Natalie Kruse, Nora Sullivan, Jen Bowman, Dina Lopez Mapping the Risk of Acid Mine Drainage Impairment in the Coal-Bearing Region of Ohio	Mohamad Gamal Challenges to Mine Backfilling using New Grouting Techniques in Previously Mitigated Areas	Adam Wells Innovative Reclamation Through Collaboration
1:30 PM	Richard L. Beam, P.G., Tom Malesky, P.E. Overview of Active Mine Drainage Treatment Facilities Currently Operated By the PA DEP	David Carter, Lewis Dixon	Maria T. Kasecky, P.E. Implementation of the 2016 AML Pilot Program in Pennsylvania: Success, Challenges and Lessons Learned
2:00 PM	William D. Neider, P.E. Utilization of an Echosounder Drone for AMD Treatment Ponds	Steve Kravitz Target Drilling Directional Drilling in the Appalachian Region	Patrick M. Webb, P.E. Planning and Implementation of the 2017 AML Pilot Program in Pennsylvania
2:30 PM	Elizabeth Meredith Isotopic Identification of AMD - Groundwater Interaction	Rebecca Steinberg, Natalie Kruse, Nora Sullivan, Jen Bowman, Dina Lopez Statistical Modeling of Mine Pool Formation In Underground Coal Mines of Ohio	Autumn Coleman, Scott Graham Montana AML Establishing Partnerships Model
<b>3:00 PM</b>	<b>Break</b>		
3:30 PM	Greg Conrad AML Reauthorization: Building and Executing an Effective Legislative Strategy	<b>GEOMORPHIC WORKSHOP</b> <b>MODERATOR: Alan Edwards</b> Harold J. Hutson, PE, PG An Analysis of Cost Factors in Geomorphic Mine Reclamation	Jeffery Nuttal, Danial O'Connell, Thomas Gray, James, Turner, Mitch Isaacson Risk Characterization for Critical Infrastructure Design Engineering - Advanced Geophysical Imaging of Abandoned Underground Coal Mines and Karst Regions
4:00 PM	Michael Schultz Using Horizontal Directinoal Drilling for Acid Mine Drainage Remediation and Blowout Prevention at Two Sites in Colorado	Kurt Fleisher Geomorphic Reclamation and Landscape Heterogeneity: Results of Vegetaion Analysis and Implications for Wildlife	James Brown C-ALS Borehole Deployable Laser Scanner for Inaccessible Voids
4:30 PM	Michael C. Korb Support your Local Mine Tour	Gina Clingerman Seeding the Future: Wyoming AML Native Plants Project	Cory Gretlein Leveraging Sharpoint in the AML Workflow

**"New Solutions for Historic Mining"**





**2018 NAAML and NASLR AWARDS BANQUET PROGRAM**

**September 10 , 2018**

**5:15-6:15 p.m.**

**Cocktail Hour, Cash Bar**

**6:30 p.m.**

**Ball Room Opens for Awards Banquet Program**

6:43 p.m. **Welcome and Opening Remarks** *Lesla Baker, AML Project Coordinator*

*Virginia DMME*

6:45 p.m. **Prayer** *Greg Baker, DMLR Permit Program  
Manager - Virginia DMME*

6:48-7:30 p.m. **Dinner**

7:30-7:32 p.m. **Awards Introduction** *Lesla Baker*

**NASLR Awards**

7:33-7:42 p.m. **Scholarship Award** *Danielle Duhé, Geologist DCL  
Louisiana DNR Office of Conservation*

7:43-7:50 p.m. **Non Coal Award** *Danielle Duhé*

7:51-8:05 p.m. **Outreach Award** *Ed Coleman, President  
National Association of State Land  
Reclamationists*

*(NASLR)*

8:06-8:12 pm. **Coal Award** *Ed Coleman*

8:12-8:18 p.m.

NAAMLPL Awards

**Scholarship Awards**

*Bob Scott, President*

*National Association of Abandoned Mine Land Programs  
(NAAMLPL)*

8:18-8:26 p.m.

**Hardrock Awards**

*Rob Ghiglieri, AML Chief*

*Nevada DM*

8:25-8:56 p.m.

OSMRE AML Awards

*Glenda Owens, Acting Director*

*Office of Surface Mining and Enforcement  
(OSMRE)*

8:56-9:02 p.m.

**Dave Bucknam Award**

*Ann Walker, Technical Training Division Chief*

*OSMRE*

9:02-9:10 p.m.

**Stan Barnard Award**

*Chuck Williams, 2017 Stan Barnard Award Winner*

*Alabama DOL*

9:10-9:15 p.m.

**2019 NAAMLPL**

*Eric Cavazza, Director*

*Pennsylvania DEP*

9:15 p.m.

**Closing Remarks**

*Lesa Baker*



# NASLR SCHOLARSHIP WINNER



**JENNIFER KANE**

## **WEST VIRGINIA UNIVERSITY**

As the 2018 NASLR Scholarship winner, Jennifer Kane is currently a Master's student majoring in Applied and Environmental Microbiology at West Virginia University in Morgantown, West Virginia. Ms. Kane is excelling in her education, holding a 4.0 Grade Point Average as she enters her final year of studies with the hopes of graduating in the Spring of 2019. Most recently, she received an Honorable Mention at the American Society of Mining and Reclamation conference in St. Louis, Missouri, where she presented a poster on her Master's thesis: "Restoration of the soil microbiome following mine land reclamation." Ms. Kane's graduate research focuses on gaining a better understanding of the soil microbial community dynamics existing in reclaimed mine sites. In doing so, her studies may help improve strategies of surface mine reclamation processes, and fostering more favorable conditions for soil microbes, and thus, increasing the overall health of the ecosystem.

# OUTREACH AWARD

## Thalle Industries, Inc. Fishkill Quarry Fishkill, NY

The Thalle Industries, Inc. Fishkill quarry was nominated for the Outreach Award by Matthew Podniesinski, Director of the Resource Development and Reclamation Bureau, Division of Mineral Resources, of the New York State Department of Environmental Conservation. Thalle Industries, Inc. (“Thalle Industries”) impressive concurrent reclamation and innovative reclamation practices far exceeded the minimum regulatory standards for reclamation in New York State. Thalle Industries has set the standard for bench reforestation of mined areas in an effort to eliminate visual impacts to nearby public lands by re-creating an oak-hickory forest which surrounds the mine site.



In 2002, Thalle Industries submitted an application to expand the mine site by 29 acres for a total life of mine of 64.9 acres. The final reclamation objective of this site and the minimization of visual impacts to the Fishkill Ridge/ Scenic Hudson lands were paramount issues during the permit review process to add 29 acres to the existing mine. At the time the permit modification was approved, the management of the quarry was given to Glenn Pacchiana. Mr. Pacchiana’s approach was markedly different than that of his predecessors. Glenn Pacchiana has taken this opportunity to embrace environmental stewardship

concurrent with his extractive operations and asphalt plant. As quoted on the company’s website “I am an environmentalist, and I am also a quarry owner, and I show people that I can do both.” Mr. Pacchiana relies on his mining consultant to lay out shots and provide mining and reclamation direction to the blasting company and quarry manager to establish the final bench configurations. In addition, Mr. Pacchiana has also employed the services of an arborist who routinely inspects the tree plantings and provides recommendations to the quarry. The plantings consisted of early and late succession trees as well as nitrogen fixing shrubs. Coarse woody debris was left on the benches to benefit the seedlings microsite by providing shade, moisture retention, and capture leaves to create more organic matter and provide a time release fertilizer as they decay. It is important to note that this concurrent bench reclamation of a successional oak-hickory forest is the only bench reforestation of its kind in New York State.

Mr. Pacchiana and Thalle Industries have received many awards for their business and operating approach. They have won awards from the New York League of Conservation Voters for Leadership and Vision; The “Best Green Friend” Award from Friends of Westchester County Parks; Environmental Beautification Award by the NYS Nursery and Landscape Association; Commitment to Green Business Leadership in Westchester County; Small Business “General Excellence Award, Groundwork Hudson Valley Community Hero Award, The Business Council of Westchester Hall of Fame Family Business Success Award. In addition, Glenn Pacchianna and Thalle Industries has been recognized by the Audubon Society and Scenic Hudson for their commitment to the environment and community.





# MINED LAND RECLAMATION AWARD— COAL

## Spring Creek Coal LLC Spring Creek Mine Big Horn County, Montana

Spring Creek Coal LLC's, Spring Creek Mine (SCM) was nominated for the Mined Land Reclamation Award by Ed Coleman of the Montana Department of Environmental Quality's Coal and Opencut Mining Bureau. Spring Creek's impressive reclamation and innovative practices especially as they relate to the reclamation of sage-grouse habitat, including sagebrush densities that far exceed regulatory required densities, warranted this nomination. These achievements can be visualized through this short video about Spring Creek's reclamation practices: <https://youtu.be/D9duYku5LCY>.



Reclamation plans at the 9,126-acre Spring Creek Mine incorporate a mosaic of livestock grazing, pastureland and wildlife habitats into the post-mining environment. However, one of the key aspects of the reclamation plan is protection and mitigation of potential impacts to wildlife. In particular, the Greater Sage-Grouse deserves special considerations because of population decline and a near listing as a threatened and endangered species by the US Fish and Wildlife Service in 2015. Spring Creek Mine's action to protect the bird is of significant importance because of the mines proximity to the habitat designated as "core." This "core" designation has been delineated by the state as having the highest conservation priority. These areas contain the highest concentration of breeding males and include the best areas in which to promote sage-grouse populations. Spring Creek Mine's approved reclamation plan will ultimately result in no net loss of habitat for the Sage-Grouse. Perhaps more importantly, SCM has demonstrated it can, in many ways, improve the habitat to ensure survival of the species.



Sage-Grouse conservation efforts are not new to Spring Creek's parent company, Cloud Peak Energy (CPE). CPE has been a member of the Thunder Basin Grassland Prairie Ecosystem Association Since 2003. This Association is a voluntary organization of ranchers, coal mining companies and oil and gas companies working together to achieve common conservation goals. The Association's conservation strategy is

endorsed by the US Fish and Wildlife Service, Bureau of Land Management and US Forest Service. The Association's coverage area is the largest such known conservation effort and spans 13.2 million acres. As a founding member, CPE has contributed over \$90,000 to off-site conservation projects dispersed across the region on area ranch lands.

# MINED LAND RECLAMATION AWARD— NON-COAL

## Mid-State Materials, LLC

### Big Springs Quarry

### Lecompton, Kansas

The Big Springs Quarry is located near Lecompton, Kansas and is approximately 2000 acres in size. Three different types of limestone are extracted from the surface mine: the Ervine Creek Limestone, Rock Bluff Limestone, and Ozawkie Limestone. The quarry extracts the aggregate materials and then manufactures high-quality materials for the local construction industry. MSM works with various departments and commissions at the county and state level to ensure the protection of the environment and that the quarry is reclaimed to suitable conditions.

The quarry pits of Big Springs Quarry range from 30-40 feet in depth, and the reclamation procedure is concurrent with active mining operations, ensuring the completion of quarry pit reclamation as soon as practically possible. Determined to go above and beyond basic reclamation, MSM has excelled in the creation of a thriving wildlife habitat. In addition to doing design and drainage studies, MSM made the effort to build wetlands with environmentally friendly grasses, stock the ponds with fish, and reintroduce quail and pheasant into the area.



local ranching and fishing and blends in with the surrounding land uses, including agriculture use (haying and ranching) and residential housing. It has also provided additional acreage for surrounding wildlife to grow and thrive. Not only is the resulting wildlife habitat aesthetically pleasing, it is a self-sustaining habitat intended to continue providing many ecological and economic benefits to the area. MSM recognizes that it has a responsibility to protect its employees, the public, and the environment. This wildlife habitat is just one way that MSM strives daily to be environmentally conscious in its mining and reclamation processes.

The wildlife habitat created by MSM supports

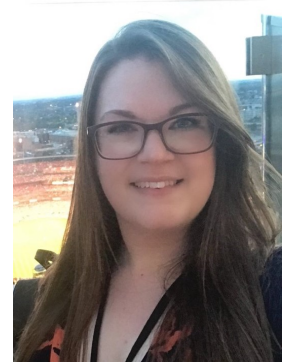


# NAAML P SCHOLARSHIP WINNERS

## WESTERN REGION

### **BRIANNA MAYFIELD, WEST VIRGINIA UNIVERSITY**

Brianna Mayfield is entering her final year as a Master's student in Applied and Environmental Microbiology at West Virginia University. Her current research investigates the plant-microbe interactions of bioenergy crops grown on reclaimed mined lands. She focuses on probing the soil microbial community to identify key nutrient cycling deficiencies and/or important belowground community networks responsible for the fate of reclamation initiatives. As an undergraduate student, she sought to create molecular-based ecotoxicology field bioassays that could be used to monitor waterbodies and land exposed to acid mine drainage. She plans to put her experience in ecosystem and reclamation health assessment to use through a career in environmental consulting.



## MID-CONTINENT REGION

### **DANIEL'LE DEVOSS, NORTHERN ARIZONA UNIVERSITY**

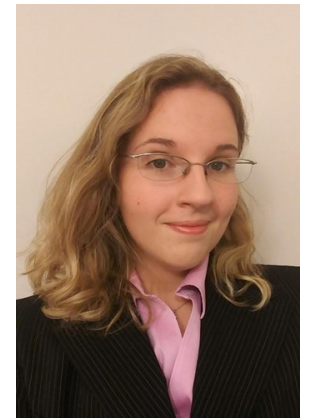


Daniel'le DeVoss is a senior at Northern Arizona University studying Environmental Engineering. She gained insight into the importance of mine land reclamation while working during her junior year as a research aid on a project assessing the environmental impacts of acid mine drainage from an abandoned mine in Arizona. She has also completed a summer environmental engineering internship at an active copper mine in New Mexico, where her work focused on remediation and reclamation. Daniel'le is proud to be a first-generation college student and is committed to making STEM fields more accessible to a broader audience. She is an officer and founding member of her university's chapter of the Society of Women Engineers, where she mentors underrepresented engineering students.

## EASTERN REGION

### **BETHANY WITTER, VIRGINIA TECH**

Bethany Witter is a senior at Virginia Tech, majoring in Mining and Minerals Engineering with a minor in Green Engineering. In the summer of 2017, she had a mining engineering internship with Newmont Mining Corporation at the Carlin Surface Location. The summer of 2018, she had an Underground Construction Engineering Internship with Kiewit, at a tunneling project outside of Omaha, NE. She is the two-time president of the International Society of Explosives Engineers at Virginia Tech and was the secretary of the Society for Mining, Metallurgy, and Exploration Chapter of Virginia Tech last year. Also, she is an undergraduate researcher studying respirable dust. She hopes these experiences will help her acquire a professional engineer certification and eventually become a chief engineer in a metals, industrial minerals, or rare earth mine. She hopes to spend time working on environmental and reclamation projects during her career. Bethany wants to innovate and design high efficiency, safe mines that provide society with the resources it needs to sustain itself and grow.





# REMEDIATION OF ENVIRONMENTAL HAZARDS

## HARDROCK AWARD

### *Saints John Tailings Reclamation Project* Colorado Inactive Mine Reclamation Program

The Saints John Mine and Mill Complex is located near the town of Montezuma in Summit County, Colorado, and was the location of significant silver mining and milling from the 1860s through the 1930s. The site is located on both private land and United States Forest Service managed property, and stands as one of the first silver mines in Colorado.



During operations at the site, both mine waste and tailings were deposited into Saints John Creek and associated wetland below the mill resulting in significant impacts to downstream water quality from elevated cadmium, copper, lead and zinc.

The goal of the reclamation project was to improve downstream water quality by reducing contact of water with contaminated tailings and mine waste. To achieve this the project incorporated removal of tailings from the wetland, consolidation and capping of tailings in an upland repository, and diversion of groundwater from the site by construction of a French drain. One of the challenges associated with construction was protection of the historic mill structure within the tailings removal area. This was accomplished with the use of small equipment and hand work to protect the stone foundations. By projects end, over 23,000 cubic yards of tailings were removed and nearly 2 acres of wetland were restored. Total cost for the project was \$310,000.

Post reclamation monitoring has indicated a significant improvement in water quality below the site along with successful establishment of revegetation on the disturbed areas. The project was made possible with significant partnerships and financial contributions by Freeport MacMoran Corporation, Colorado Water Resource and Power Development



Authority, Colorado Water Quality Control Division, the United States Forest Service, and the United States Environmental Protection Agency.



# REMEDIATION OF PHYSICAL SAFETY HAZARDS

## HARDROCK AWARD

### *Wolf Den Fire Reclamation Project* Utah Abandoned Mine Reclamation Program

Gilsonite is a solid hydrocarbon. It occurs in linear veins that can be miles long, often breaking out onto the surface. At surface, these veins may be only a few feet wide, but the deposit widens with depth. Historically, the veins were mined by stoping. Miners entered the vein from below and brought the mineral to the surface through shafts. The mine might break through to the surface, resulting in a long, open trench, or be left with a crown pillar, a relatively thin cap.



The Rector Ridge mine targeting the Black Dragon gilsonite vein is located in Utah's Uinta basin about one mile west of the Colorado line. In 2012, a lightning strike in the Wolf Den Range resulted in a range fire that encountered the Black Dragon vein. There were waste piles of gilsonite on the surface; these caught fire, along with the seam itself. Old, dry timber supports and gilsonite pillars left in place by mining both burned, making the crown pillars unstable. The heat resulted in secondary surface fires, and since hot gilsonite is ductile, like asphalt, as well as flammable, streams of melting gilsonite ran like ribbons of lava. Visibility was extremely poor due to clouds of black smoke, which hampered evaluation of the fire.

Mine maps could not be relied on, because props were flammable and the gilsonite pillars were both flammable and ductile. Pumping water into the workings might simply have generated very hot steam in a confined area. The Utah AMRP chose a closure approach using prepared sediment as fill. From the beginning, the project benefitted from good coordination with landowners and the Bureau of Land Management, and AMRP was able to identify a borrow area on BLM ground close enough that fill could be moved with scraper, dozer, and trackhoe.

The fire was snuffed and open trenches were filled using four-inch-minus material obtained from the borrow area, and treated with water. This closure addressed not only the hazard of the slow-burning fire and pyrotechnic flows of gilsonite, but hazards from smoke and physical hazards. Earth work started end of July, 2015 and was completed by October 5. The total construction cost was \$146,335.

# NATIONAL AWARD

## ***Logan Abandoned Mine Land Reclamation Project*** **Mines and Minerals Bureau, Division of Soil Conservation** **Iowa Department of Agriculture and Land Stewardship**

Prior to reclamation, the site's barren, eroded spoil piles and pits were concealed by invasive shrubs, stunted trees, and a small plot of pines. The Logan reclamation project provided several opportunities to adopt and refine new approaches to overcome technical challenges. The site was seeded with plants that attract pollinators, in particular the seldom seen monarch butterfly. The effort is already taking effect. Vegetation is attracting local wildlife, including a goose nest and a beaver dam.



## REGIONAL AWARDS– WESTERN

*Hydraulic Pit Reclamation Project*  
**Abandoned Mine Land Program, Division of Mining,  
Land and Water**  
**Alaska Department of Natural Resources**

Coal mined in the first half of the 20th century by various companies created 3½ miles of large open pits along the south side of Healy Creek. The highwall extended for 1,600 feet in length and stood as high as 265 feet. The reclamation project eliminated the dangerous high wall, improved safety, conserved and improved water quality, enhanced wildlife habitat, and augmented recreation opportunities.

## REGIONAL AWARDS– APPALACHIAN

*Joan Bernat Slide*  
**Division of Abandoned Mine Lands**  
**Kentucky Department of Natural Resources**

The Joan Bernat Slide High Priority Abandoned Mine Land Reclamation Project was completed at the historic coal camp town of Hardburly, near Hazard, Kentucky. In May 2016, local residents reported that a slide had occurred on a hillside above multiple residences and feared that further movement would threaten their homes. Hazard KDAML Emergency Branch personnel hastily worked to re-route the drainage above the slide, controlling drainage and silt from the slide, and improving drainage structures near the homes. The actions of the state and partners brought peace of mind to the residents of Hardburly.

## REGIONAL AWARDS– MID-CONTINENT

*Snow Hill Abandoned Mine Land Site 882*  
**Division of Reclamation**  
**Indiana Department of Natural Resources**

The Snow Hill Abandoned Mine Land project addressed public safety concerns and environmental damage caused by two large, coarse, coal refuse piles, with a total area of 40 acres on each side of North Coal Creek in Vigo County, Indiana. Acid mine drainage and eroding coal refuse from the two refuse piles clogged the North Coal Creek channel and substantially degraded its water quality. The Division of Reclamation took actions to make the area safe for the community by installing drainage structures, establishing a wetland, and regrading the coal refuse embankments.





# SMALL PROJECT AWARD

## *Mid-Lothian Mines Park* Division of Mined Land Reclamation Virginia Department of Mines Minerals and Energy

The historic Mid-Lothian Mines abandoned mine land features the remains of the first documented mining in Virginia's Richmond Coalfields. Unfortunately, the features were in serious disrepair and disintegration. Open shafts, subsidence areas and falling structures were huge safety hazards to the surrounding residential areas. After the land owner donated the land to Chester County, the State was able to close two vertical openings, stabilize and close two hazardous equipment and facilities structures, close one subsidence area, and stabilize two pits and three slumps. Today the Mid-Lothian Historical Mines Park comprises the 42-acre reclamation site and is the most visited park in the County.





# TOURS

## Tour 1 - Colonial Williamsburg



When you visit the world's largest living history museum, you become part of one of the greatest stories ever told. This is the dawn of America. Our 18th-century city is alive where the dreamers with a bold vision quite literally changed the world. You'll meet artisans, craftsmen (and women), and talk with America's founding generation whose diversity, aspirations, and struggles shaped who we are today. 18th-century artifacts take center stage at the Art Museums, many of which were discovered by archaeologists just blocks away. This isn't just history. This is where history comes alive.

When you visit [Colonial Williamsburg's](#) 18th-century city, you'll discover why Williamsburg was the capital of Virginia, the largest and most prosperous American colony. At the Capitol, independence was declared before all other colonies, setting the pace for the American Revolution. Men and women from all walks of life walked these streets, and you're following in their footsteps.

Tradespeople use real 18th-century tools and techniques in their crafts, many of which have been around since the beginning of our civilization. These skilled men and women are true apprentices, journeymen, and masters and they hone their skills with every hammer, needle, or plow.



### GEORGE WYTHE HOUSE

Our most famous buildings give you a new understanding of life in the 18th century and you'll feel as if you stepped off a time machine. At the [George Wythe House](#), you'll be transported to the age of enlightenment, when students of George Wythe, such as Thomas Jefferson, were introduced to revelations in science and the arts. When you visit these sites, you're standing on the exact same ground as influential nation builders such as George Mason, Martha Washington, and James Madison.

For more information on Colonial Williamsburg visit their website at <https://www.colonialwilliamsburg.com>

Tour departs at 8:45 a.m.



# Tour 2 - Jamestown Settlement



## HISTORIC JAMESTOWNE

Visit with the [Jamestown Rediscovery](#) archaeologists and ask them about their latest excavations in front of you. This tour allows you to walk the surface of the ground once trod by Captain John Smith, Pocahontas, and Queen Elizabeth II. Hear how the original fort site, once thought eroded into the James River, was relocated in 1994 and how the archaeological findings are changing our understanding of life in the settlement's early years.

The 1907 Memorial Church is a place where men contemplated the beginning of English representative democracy in North America. [The Archaearium museum](#) houses some of the most spectacular finds of the two million artifacts uncovered since the Jamestown Rediscovery Project began in 1994.

## JAMESTOWN SETTLEMENT

Near the site of the original colony, [Jamestown Settlement](#) tells the story of 17th-century Virginia; from the arrival in 1607 of English colonists in Jamestown to the cultural encounters and events that planted the seeds of a new nation. The world of Jamestown, America's first permanent English colony, comes to life through film, gallery exhibits and outdoor living history.



Explore the world of America's first permanent English settlement and the Powhatan Indian, English and African cultures that came in contact in 17th-century Virginia. Learn about Jamestown and its people-Powhatan, Pocahontas, John Smith and John Rolfe and see 1600s artifacts and dioramas. You'll take part in an immersive outdoor living-history experience and opportunities to try on 17th-century style clothing.

Climb aboard re-creations of the three ships that sailed from England to Virginia in 1607 and explore life-size re-creations of the colonists' fort and a Powhatan village. In the outdoor areas, costumed historical interpreters describe and demonstrate life in early 17th century Jamestown.

For more information on Historic Jamestown and Jamestown Settlement visit their websites at <https://www.historyisfun.org> and <http://historicjamestowne.org>

Tour departs at 8:00 a.m.



# Tour 3 - USS Battleship Wisconsin



## NAUTICUS

Nauticus is a maritime-themed science center and museum located on the downtown waterfront of Norfolk, Virginia and features hands-on exhibits, interactive theaters, aquaria, digital high definition films, and the Hampton Roads Naval Museum.

The second floor of Nauticus houses the Hampton Roads Naval Museum and the entrance to the Battleship Wisconsin. The museum's exhibits include material on the Battle of the Chesapeake (1781), the American Civil War in Hampton Roads, the Great White Fleet, World War II and the Cold War. Museum holdings are strong in the areas of naval prints, ship models and underwater archaeology. The Hampton Roads Naval Museum is the official repository of the remains of two Civil War shipwrecks: USS Cumberland and USS Florida.



## USS BATTLESHIP WISCONSIN

One of the largest battleships ever built arrived at Nauticus on the downtown Norfolk waterfront on December 7, 2000. That date was significant because it marked the 57th anniversary of the USS Wisconsin's launching in 1943 – two years to the day after the attack on Pearl Harbor.

The USS Wisconsin, one of four Iowa-class battleships constructed by the U.S. Navy, was built from 1941 to 1943 at the Philadelphia Navy Yard and commissioned in 1944. She played a major role in World War II, earning five battle stars for service against Japanese forces. She served during the Korean War, and led the Navy's surface attack on Iraq during the Persian Gulf War in 1991, firing not only her first but also the campaign's first Tomahawk Missile. She was decommissioned at Philadelphia and retired to the Naval Inactive Reserve Fleet in Portsmouth, Virginia, in October 1996.

On April 16, 2010, exactly 66 years from the day she was commissioned at Philadelphia Naval Shipyard, the United States Navy ceremoniously transferred ownership of the vessel to the city of Norfolk, Virginia. Vice Admiral David Architzel joined Mayor Paul Fraim, other city and military leaders, and former crew members on deck to conduct the ceremony. VADM Architzel presented the long glass to Norfolk Mayor Paul Fraim signifying that the Mayor now has the watch.

By the end of November 2009, more than 2,495,296 visitors have walked the teak decks of historic BB-64. These visitors have come from all fifty U.S. states and from many other nations to experience the awesome battleship.

**Tour departs at 8:45 a.m.**





# Tour 4 - Mid-lothian Mines Park

## MID-LOTHIAN MINES PARK

For generations of early Chesterfield County residents, the area around Midlothian was known for its coal and its railroads. Today, this site is among the county's treasured parks.

It is here where coal was first discovered in the early 1700s. During the Revolutionary War, coal pits from Chesterfield County supplied a cannon factory near Richmond with fuel to manufacture ammunition for the Continental Army. As the mining industry grew, coal from Midlothian was shipped throughout the nation.

The Chesterfield Rail Road began service in 1831 and was the first railroad in Virginia. In the mid-1830s, a vein of coal 36 feet thick was found in the Mid-Lothian Mine, and this mine soon became the largest in the county.

Coal continued to be mined in the Midlothian area by a number of companies until the early 1930s. Today, [Mid-Lothian Mines Park](#) is a 44-acre preserve. Dedicated to the residents of Chesterfield County, past and present, the cut-stone ruins of the mines, surrounded by beautiful woodland and walking trails, stand in remembrance of the courage, innovation and sacrifice of those whose work so long ago heralded the beginning of an American Industrial Revolution.



## TUCKAHOE PLANTATION

### Old Tredegar

Tuckahoe Plantation is the boyhood home of Thomas Jefferson and is a National Historic Landmark.

In 1745 Peter and Jane Jefferson moved to Tuckahoe with their children, including two-year old Thomas, to care for the plantation and the Randolph children, who were orphaned at Tuckahoe after the untimely death of both their parents.

This was where Thomas Jefferson spent his youth at Tuckahoe and received his first education in the small one-room school house that still stands today. It is interesting to note the architectural features of Tuckahoe, including elaborate cornices, alcoves, grand staircases, and domed ceilings that may have influenced Jefferson's thoughts of architecture.

### Tuckahoe Garden

The mansion was built in the era of great plantations in Virginia, during the 17th and 18th centuries. There were few towns and cities in the colony, therefore, plantations developed as economically and geographically independent entities. At its height, Tuckahoe consisted of 25,000 acres that farmed tobacco, livestock, and wheat with three mills on the property.



Tour departs at 7:15 a.m.



# TECHNICAL SESSIONS SCHEDULE

WEDNESDAY SEPTEMBER 12, 2018

	Technical Session 1	Technical Session 2	Technical Session 3
	James River Grand Ballroom D	James River Grand Ballroom A	James River Grand Ballroom B
8:00 AM	Dean R Baker, P.E. Reclamation of Abandoned Highwall in an Urban Setting	John Curley, P.E. Curry Hill - Avondale Mine Reclamation Project	Award Winner (Indiana, Chris Hostetler) Indiana AML Site 882 Snow Hill
8:30 AM	Warren "Ted" Dean Rock Slope Stability Assessment of an Abandoned Quarry for Reclamation to Recreational Use	Constance Loucks Restoring Water Quality and Brook Trout Populations in the Casselman River	Award Winner (Virginia, Lorrie Coiner) (Schnabel Engineering, Kenneth Megison) Virginia AML Site Mid-Lothian Mine Park
9:00 AM	M. J. Hughes, P.E. Advantages of Having an In-House Construction Crew in an AML Program	Daniel Werner, P.E. N. 16th St. Subsidence, Pottsville PA	Award Winner (Utah, Seth Button, Ph.D., RPA) Wolf Den Fire Reclamation Project
9:30 AM	Chris Robson Use of Drones in Mining Reclamation	Melissa Reckner State of the Kiski-Conemaugh River Watershed: 18 years later	Award Winner (Kentucky, Jim Cable, Justin Adams, Tim Rader) Joan Bernat Landslide
<b>10:00 AM</b>	<b>Break</b>		
10:30 AM	Sandra K. Holoman, P.E. Wheatley Engine Shaft Subsidence Emergency AML Reclamation Project	Michael A. Haney, P.G. Statistical Evaluation for Bituminous Remining Projects in West-Central Pennsylvania	Award Winner (Iowa, Randy Cooney, Shive-Hatter, Chris Bauer, Luke Monat) Logan Abandoned Mine Land Reclamation Project
11:00 AM	Brianna L. Mayfield, Keffery Skousen and Zachary B. Freedman Mine Reclamation using Bioenergy Crops: An investigation into plant-microbe interactions of switchgrass ( <i>Planicum Virgatum</i> )	Tom Clark Susquehanna River Basin Mine Drainage Data Portal: Additions and Improvements for 2018	Cassandra Forte Systematic Review of Mining Effects on Human and Environmental Health
11:30 AM	Michael A. Stayrook, E.I.T. Review of Reforestation Efforts of the Bituminous District for Abandoned Mine Reclamation of PA	Kelsey Q. Jones, P.E. Development Phase of the Pine Grove North Waterline Extension Project	Rebecca Steinberg, Natalie Kruse, Nora Sullivan, Jen Bowman, Dina Lopez Development of a Tool to Estimate Post-Mining Water Level in Ohio

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