

NAAMLP

NATIONAL ASSOCIATION OF ABANDONED MINE LAND PROGRAMS

NEWSLETTER
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UPCOMING MEETINGS

Winter Business Meeting
 St. George, Utah
 Feb 5 - 7, 2019

MISSION STATEMENT

1. To provide a forum to address current issues, discuss common problems and share new technologies regarding abandoned mine land reclamation;
2. To foster positive and productive relationships between the states and tribes represented by the Association and the federal government;
3. To serve as an effective, unified voice when presenting the states’/ tribes’ common viewpoints; and
4. To coordinate, cooperate and communicate with the Interstate Mining Compact Commission, and all other organizations dedicated to wise use and restoration of our natural resources.

Letter from the President

Greetings from Montana! I just want to start off this letter thanking everyone from Virginia for an excellent NAAMLP Conference and Annual Meeting! Despite the coming storm, the staff kept their cool and made sure all of us were well taken care of. I very much enjoyed the tour to the Jamestown Settlement, it has been on my wish list since I was a kid. Thank you so much for all your hard work.

Next, I would like to extend my deepest gratitude to our outgoing president, Bob Scott. He is a kind man and an incredible leader, I hope that I can be half of the president that he was. I also want to thank him in advance for all the hand holding he will have to do with me in the coming months (years).

I would like to congratulate all the 2018 award winners. To Brent Means for the coveted Dave Bucknam award for excellence in teaching. Alan Edwards, congratulations again for receiving the Stan Barnard award recognizing your service to NAAMLP, you are truly deserving. Thank you for your leadership and tenacity. To the Colorado DMR Program and the Utah AML Program for receiving the NAAMLP’s own Hardrock Abandoned Mine Land Reclamation Awards. To the OSMRE Abandoned Mine Land Reclamation Award Winners: Iowa, Indiana, Virginia, Kentucky and Alaska.

- Congratulations, those awards are well deserved!

I learned so much at the 2018 NAAMLP Conference, I thought I would take some time to share some of those nuggets with all of you. I was so grateful for Congressman Griffith’s remarks that the work the AML programs do is recognized and that reauthorization is attainable. DOI Assistant Secretary Joe Balash and retired IMCC Director, Greg Conrad both want us to know that we need to be in lock step with each other to get the AML Fee reauthorized. This brings me to my next point, all the AML States and Tribes must deliver the same message, we need to coordinate our efforts. Thank you in advance to IMCC for working to get us there. I left the meeting energized by the work that the Summit Groups have done to help us coordinate our message and efforts, but I was dismayed that the misrepresentation of the AML Program’s use of funds still lingers out there.



Let's be clear on the facts:

Total AML revenue between 1977 – 2016 was \$10.9 billion and all that money can be accounted for:

- \$1.6 billion has been used for OSMRE Title IV Operations.
- \$1.4 billion has been provided to the United Mine Work Association health and retirement funds.
- \$5.5 billion has been distributed to State and Tribal AML Programs.
- \$2.4 billion remains in the Unappropriated Balance. Title IV dictates that the majority of this money will be distributed following the expiration of the AML fund.

Working with OSMRE, the \$5.5 billion in grants to State and Tribal AML Programs can be accounted for as such:

- \$3.48 billion has been spent on AML Project Construction (63%).
- \$1.02 billion has been spent on AML Project Design (19%).
- \$438 million has been spent on Administration (8%).
- \$297 million is in Acid Mine Drainage Set Aside (5%).
- \$262 million is in Undelivered Orders (5%) which is funding yet to be spent on AML Projects.

Based on my experience with other grant programs an 8% administrative budget is unparalleled, that figure alone is one we should all be proud of. I encourage you to look back at your Program's financial history and run these same calculations. Additionally, 63% of all the AML funds have gone directly to high paying construction wages and materials necessary to reclaim our Nation's abandoned mine hazards. We, the States and Tribes and OSMRE, know where the AML fee has gone and we have a great deal to be proud of.

Our AML Programs also know that [Our Work's Not Done](#). We as a nation have over \$10.7 billion in unfunded abandoned mine hazards yet to be reclaimed. We need to be ready to answer the question, why does the inventory continue to increase? From Montana, we have chipped away at the abandoned mine hazards over the years, but there are so many that remain. We constantly find new hazards at reclaimed mines, as those mines continue to age, the ground continues to unravel. As people move further out into new areas of Montana, new mines are discovered and finally, problems we have had that we didn't think we could address, new technology has made it possible to reclaim those features.

It is one thing for us to meet twice a year and tell each other about what we do, but our story needs to turn outward. Think about who benefits from abandoned mine reclamation, gather those names and organizations and share with them our new NAAML P booklet and the AML story. It is time to get engaged, do the math for your program, and share that data. Find out how much you have spent on construction, tell everyone how many miles of highwalls your state or tribe reclaimed, how many people now have clean drinking water, how many acres are now safe for farmers and ranchers. Help us find the citizen stories that can help inform our lawmakers on the importance of the AML Program. The time is now, 2021 is rapidly approaching.

I just want to thank you in advance for your commitment and hard work over the next few years while we move forward, in lock step, to see Reauthorization of the AML Fee.

Sincerely,



Autumn Coleman
NAAML P President



Virginia DMME Hosts The 2018 NAAML P Conference In Williamsburg

Nearly 300 reclamationists from across the country gathered in Williamsburg in September for the annual National Association of Abandoned Mine Land Programs (NAAML P) and National Association of State Land Reclamationists (NASLR) conference. Virginia served as the 2018 host and held the conference at Kingsmill Resort in Williamsburg.



The conference kicked off on September 9th with a reception. Monday started with a plenary session hosted by Virginia's DMME Deputy Director Butch Lambert. Speakers included U.S. Congressman Morgan Griffith (9th District, VA), retired Interstate Mining Compact Commission Director Greg Conrad and, from the Department of Interior, Joe Balash. An awards banquet was held Monday night in which Virginia was awarded the Abandoned Mine Land Small Projects honor from OSMRE for reclamation work at Mid-Lothian Mines Park.



Vexine at the Tuesday night cookout



On Tuesday, conference attendees boarded buses for field trips. Those who chose to tour historic Williamsburg got to hear DMME Director John Warren play the fife. Attendees also visited Jamestown and Nauticus - for a tour of the Battleship Wisconsin. A tour also took most of the conference attendees to Mid-Lothian Mines Park where they could see the award winning reclamation work and hear from Lorrie Coiner about DMME's involvement over the years.



NAAMLPScholarship Awards

Daniel'le DeVoss, Northern Arizona University - Mid-Continent Region

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.



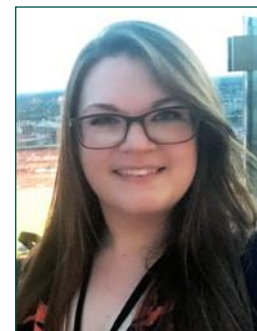
Bethany Witter, Virginia Tech - Eastern Region



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 minerals. 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.

Brianna Mayfield, West Virginia University - Western Region

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 below ground 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.



NASLR Scholarship Award

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.

Stan Barnard Award - Alan Edwards



Alan Edwards serves as the Deputy Director of the Wyoming DEQ and as Wyoming's AML Program Administrator. In those capacities, he is very committed to the elimination of health and safety hazards and the restoration of environmental degradation resulting from abandoned and unreclaimed mine sites (both coal and noncoal/hardrock) located throughout the State of Wyoming. Alan has had a long and distinguished career centered around the energy industry which includes significant time in the regulation of active coal mining and the reclamation of those mines as well as the reclamation of abandoned mine lands.

Alan has not only worked on abandoned mine land issues in Wyoming, but also in national AML issues by actively serving as Wyoming's delegate to the National Association of Abandoned Mine Land Programs (NAAMLPL) for many years. Alan is an extremely active member of NAAMLPL who always shares his perspective, insight, and recommendations during NAAMLPL business meetings. Alan has had significant involvement in a number of association initiatives over the years. Alan has recently been involved with efforts to reauthorize Title IV of SMCRA prior to the expiration of the fee collection authority in September of 2021. He has spearheaded efforts to develop an educational and messaging plan to get the word out about the good work that AML Programs across the country are accomplishing as well as the need to continue that work since "[Our Work's Not Done](http://www.ourworksnotdone.org)". Wyoming, under Alan's inspiration and leadership, has taken the lead to develop a website (www.ourworksnotdone.org) that will showcase videos, positive news stories, and educational materials that will help to tell the story of AML program's successes and inform key stakeholders of the good work that AML Programs are completing and the need to continue that work. In addition to the website, Alan has worked to develop a series of videos and public service announcements that show the unified position of the NAAMLPL membership toward SMCRA Title IV reauthorization and the many benefits of the AML Program.

Dave Bucknam Award - Brent Means

Mr. Means is by degree and experience a hydrologist that believes that the best decisions are science based with the analysis grounded in tried and true technologies. He also believes in people. Thus he has provided support as an instructor ("Geochemist Workbench" and "AMDTreat") and course lead for TIPS/NTTP for over 20 years. He has instructed multiple sessions every year, and was one of the main developers of the "AMDTreat" class. He was instrumental in pioneering the AMDTreat Online course, one of the first for OSMRE.



Brent is the Field Hydrologist for the Pittsburgh Field Division of OSMRE where he has become an ambassador for NTTP and TIPS programs encouraging everyone he comes into contact with – federal, state, Industry, environmental groups -- to become active in solving and improving the work in the field through technical transfer and applied science. As an instructor, Brent has consistently achieved high ratings from his fellow students; more telling, after nearly every class, his supervisor receives request for Brent to do follow-on training for the States and companies represented by the attendees. In short, the attendees were so motivated by Brent, and they wanted to share him with their entire organization. No matter how complicated or complex the topic, he can explain it at a level that is perfect for each audience member.

Brent exemplifies the passion that Dave Buckman represents. Passion to make the people and coalfield country a better place by empowering others through knowledge, skills, tools and the confidence to put knowledge to work. He saw the need for, and was the driving force behind AMDTreat -- a software for assisting and estimating AMD abatement costs. He continuously pushed the SMCRA community to share technology and solve issues through collaboration.

Logan Abandoned Mine Land Reclamation Project, Iowa

National Award Winner

The Logan abandoned mine site is located in the rolling hills of Southeast Iowa. Prior to reclamation, the site's barren and eroded spoil piles and pits were only host to 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 reuse of downed trees as wood chips and compost
- Extensive floodplain creation
- Use of a waste bi-product from water treatment facilities as a high quality soil neutralizer

The site was seeded with plants that attract pollinators, in particular the monarch butterfly. The effort is already taking effect. Vegetation is attracting local wildlife, including a goose nest and a beaver dam. In an effort to engage with communities and improve reclamation, the Iowa Department of Land Stewardship (IDALS) also partnered with Pathfinders Resources Conservation and Development in Fairfield, Iowa to accomplish the Logan Reclamation Project.

In FY 2018, Iowa received \$2.8 million in AML funding from OSMRE. Iowa has not had any active coal mining since 1994, but the state does have over 300 AML sites in the national inventory and has completed reclamation of 104 sites. IDALS partners on reclamation with community groups such as the Pathfinders Resources Conservation and Development in Fairfield, who help complete AML projects in Iowa.

[Watch a video about the Logan AML Project](#)



Mines and Minerals Bureau, Division of Soil Conservation
Iowa Department of Agriculture and Land Stewardship

Joan Bernat Slide, Kentucky

Appalachian Region Award Winner

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 to the Kentucky Division of Abandoned Mine Lands (KDAML) that a slide had occurred on a hillside above multiple residences and feared that further movement of the slide would threaten their homes.

Hazard KDAML Emergency Branch personnel expedited a design for a project aimed at rerouting and controlling the drainage above the slide, controlling silt, and improving drainage structures near the homes. The time between the initial complaint to the completion of the project spanned 16 months and brought peace of mind to the residents of Hardburly.

[Watch a video about the Joan Bernat Slide](#)



Kentucky Department for Natural Resources
Division of Abandoned Mine Lands

Snow Hill Abandoned Mine Land Site 882, Indiana

Mid-Continent Region Award Winner

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.

Acid mine drainage and eroding coal refuse from the two refuse piles clogged the North Coal Creek channel and substantially degraded its water quality. In addition, the steep, eroding coal refuse on either side of the creek was unstable and posed a danger to the public.



The Division of Reclamation took the following actions to make the area safe:

- Placed impermeable liners and subsurface drainage structures on the tops of the two refuse piles and covered them with three feet of fill.
- Constructed a three-stage aerobic wetland and settling pond complex downstream of the refuse piles to encourage oxidation of dissolved iron and remove suspended iron oxides from the water column.
- Regraded and stabilized coal refuse embankments.

The Indiana DNR, Division of Reclamation, Abandoned Mine Land Program oversaw the project. Design was completed by ATC Group Services, LLC of Indianapolis and project construction activities were completed by general contractor Kerns Excavating, LLC of Bruceville, Indiana.

[Watch a video about the Snow Hill AML Project](#)

Indiana Department of Natural Resources
Abandoned Mine Land Program

Hydraulic Pit Reclamation Project, Alaska

Western Region Award Winner

The Hydraulic Pit, mined in the late 1950s and 1960s, is one of several abandoned coal strip mines that operated in the Healy Valley between the 1920s and early 1970s. Alaska DNR's goals for the Hydraulic Pit reclamation project were to:

- Eliminate human health and safety hazards.
- Improve water quality in receiving streams.
- Enhance wildlife habitat.
- Create additional recreational opportunities on state land.

The Hydraulic Pit was more than 1,600 feet long with vertical highwalls, some exceeding 265 vertical feet. Approximately 805,000 cubic yards of material were regraded to eliminate the highwalls. The project area was revegetated with an approved seed mix and improvements in water quality have been documented downstream of the project. Alaska will continue an intensive tree planting program to ensure long-term success.

[Watch a video about the Hydraulic Pit AML Project](#)



Abandoned Mine Land Program
Division of Mining, Land and Water
Alaska Department of Natural Resources

Mid-Lothian Mines Park, Virginia

Small Project Award Winner

The historic Mid-Lothian Mines abandoned mine land contains the remains of the first documented mining in Virginia's Richmond Coalfields. Unfortunately, the remains were in great disrepair and were disintegrating. Open shafts, subsidence areas and falling structures were huge safety hazards to the surrounding residential areas. Initially the Virginia Division of Mined Land Reclamation(DMLR) reclaimed two features within the park: the entrance and the air shaft to the Murphy slope.



The owner of the property donated the land to Chesterfield County to create the park, and the reclamation project activities included the following:

- Closure of two Priority 1 vertical openings.
- Stabilization and enclosure of two Priority 1 and one Priority 2 Hazardous Equipment and Facilities structures.
- Closure of one Priority 1 subsidence area.
- Stabilization of two Priority 3 pits and three Priority 3 slumps.

Today the Mid-Lothian Historical Mines Park comprises the 42-acre reclamation site and is the most visited park in the County.

[Watch a video about the Mid-Lothian Mines Park Project](#)

**Virginia Department of
Mines, Minerals and Energy
Division of Mined Land Reclamation**

NAAML P Hardrock Abandoned Mine Land Reclamation Award

Remediation of Contamination Impacting the Environment or Human Health Award - Colorado

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 the end of the project, 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.

NAAML P Hardrock Abandoned Mine Land Reclamation Award Remediation of Physical Safety Hazards Award - Utah

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 hazards of the slow-burning fire and pyrotechnic flows of gilsonite, but hazards from smoke and physical dangers. Earth work started at the end of July, 2015 and completed by October 5. Total construction cost was \$146,335.

NASLR Mined Land Reclamation Award - Non-Coal Mid-State Materials, 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. Mid-State Minerals (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 pits at Big Springs Quarry range from 30-40 feet in depth, and the reclamation procedure is concurrent with active mining operations, ensuring the completion of pit reclamation as soon as practically possible. Determined to go above and beyond basic reclamation, MSM excelled in the creation of a thriving wildlife habitat. In addition to design and drainage studies, MSM made the effort to build wetlands with environmentally-friendly grasses, stock ponds with fish, and reintroduce quail and pheasant into the area.

The wildlife habitat created by MSM supports local ranching and fishing and blends in with the surrounding land uses, including agriculture use (hay 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.

NASLR Mined Land Reclamation Award - Coal

Spring Creek Coal, 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.

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 mine's 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.



[Watch a video about the Spring Creek Mine](#)

NASLR Outreach Award

Thalle Industries, Fishkill Quarry - Fishkill, New York

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 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 final bench configurations. In addition, Mr. Pacchiana has also employed the services of an arborist who routinely inspects 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. This provided shade, moisture retention, and an ability to better 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.



Tom Henderson



The project prevented catastrophic failure of the site's tailings impoundment, and successfully returned a previously unusable area to its historical landscape. The cleanup involved two years of investigation and design work followed by five years of construction, and was recognized as a milestone for restoration of abandoned mine lands across the country. The project cleaned up Soda Butte Creek flowing into Yellowstone National Park, leading to the creek's removal this year from Montana's list of Impaired Waters.

The McLaren project was completed in October 2014, and in 2015 Tom and his DEQ team were awarded the American Council of Engineering Companies Engineering Excellence Award for the cleanup.

In 2016, the McLaren Cleanup won the first-ever National Association of Abandoned Mine Land Programs Hardrock Award for environmental cleanup.

In the midst of the massive McLaren project, Tom became project manager for the construction of a new drinking water system for the community of Sand Coulee Montana. In 2016 the Sand Coulee Water System Project won a National Award from the Office of Surface Mining reclamation and Enforcement for Abandoned Mine Reclamation.

Tom passed away after giving a joint presentation on the McLaren Cleanup with the National Park Service at the annual Conference of the American Water Resources Association where he stated that his work on McLaren and Soda Butte Creek was the highlight of his career.

May Tom's passion for the work we do continue to inspire and motivate us all.

On Oct. 18, Montana DEQ lost our beloved colleague, teacher and friend, Tom Henderson. Tom was a Senior Project Manager with the Montana Abandoned Mine Lands Program. He was a leader in his field, and an inspiration to those who knew him as a friend and colleague. You may remember Tom as an instructor for TIPS Groundwater Vistas or from one of his colorful presentations at NAAML, ASMR or SME Conferences.

Tom is survived by his wife, Kate and their three children. For those of you who knew Tom, he was an immensely committed father and husband. He worked hard to take his family on epic backpacking adventures across Europe and the United States.

Tom earned a degree in Geology from Oberlin College, Ohio, in 1987. He worked as a mine inspector for OSMRE in Kentucky and hydrologist before coming to DEQ in 1997. In 2001, he moved his family to Vancouver, B.C., to pursue his doctorate in hydrogeology at the University of British Columbia. Tom returned to DEQ in 2004, and in 2006 moved to the Abandoned Mine Lands Program where he took over the program's most ambitious project to date: the McLaren Mine Cleanup in Cooke City near Yellowstone National Park.





Winter Business Meeting, February 5 - 7 2019

THE INN AT ENTRADA | ST. GEORGE, UTAH

The city was named for 19th century LDS Church apostle George A. Smith (not the Roman martyr the English are so fond of) but the Mormons were hardly the first to set up shop. From 1000 BCE to 1300 CE, Ancestral Puebloans (forbears of the modern Hopi, Zuni, Pueblo and Southern Paiute nations) traded their nomadic ways for rows of corn and squash. The Southern Paiutes were settled there when the Dominguez-Escalante Expedition passed through in 1776 and when 300 Mormon families founded a cotton mission in 1861.

BOOK ROOMS - THE INN AT ENTRADA | PROMO CODE - NAAML

(435) 634-7100 - Mention "NAAML 2018 Winter Business Meeting" for rates.

The Inn at Entrada - 2588 West Sinagua Trail, St. George, UT 84770

The room block is reserved for the 4th – 7th of Feb.

\$93 room rate + 11.92% tax.

One night deposit plus tax to guarantee room.

Fully refundable deposit if cancelled 7 days or more prior to arrival.

Cancelled within 7 days the deposit is forfeited.

SCHEDULE:

2/5 - Tuesday: Committee Meetings and Evening Reception

2/6 - Wednesday: Business Meeting

2/7 - Thursday: Business Meeting

GETTING THERE:

Shuttle from St. George Airport: 29 minutes

Rental car from McCarran International Airport, Las Vegas: 2 hours 18 minutes

Rental car from Salt Lake International Airport: 4 hours 36 minutes

An hour flight from Salt Lake City to St. George Municipal Airport (SGU) via Skywest Delta Connections.



NEWSLETTER ARTICLE SPECIFICATIONS

Articles subject to editing. Submit an article by e-mail.
Include author's name, title of article, captions for photos.
Submit photos in TIF (preferred) or JPG format, and original photo size.

E-mail photos as individual files, not embedded.

Deadline for Spring Edition is April 15, 2019.

Email articles to **Bob Scott** (bobf.scott@ky.gov) or

mail articles to: Bob Scott, Director
Division of Abandoned Mine Lands
Department for Natural Resources
300 Sower Blvd.
Frankfort, KY 40601

For more information call **Bob Scott** or **Ben Enzweiler** at 502-564-2141.