



NEWSLETTER

Fall 2012 Vol. 34 No. 2

INSIDE

President's Message	
NAAMLPLP 2012 Conference	2
Stan Barnard Award	4
Dave Bucknam Award	4
NAAMLPLP Scholarships	5
Winter Meeting	5
National Award	6
Appalachian Region Award	7
Mid-Continent Region Award	8
Western Region Award	9
Small Project Award	10
iPads with GIS, ND	11

UPCOMING MEETINGS

2013 Winter Business Meeting
Annapolis, MD March 11 - 13

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, Western Interstate Energy Board and all other organizations dedicated to wise use and restoration of our natural resources.

Colleagues and members of the NAAMLPLP States and Tribes,

It is an honor to serve the States and Tribes of the NAAMLPLP. I have been involved with the Iowa AML reclamation program for almost 13 years. The biggest lesson that I have learned is that there is always more to learn. "Hats off" to Bruce Stover (CO) serving as Vice President and Eric Cavazza (PA) serving as the Secretary/Treasurer. I look forward to working with them and all delegates in the coming year.

One of the greatest attributes of the NAAMLPLP is the open platform of working together to address the myriad of issues. From funding to certification, hard rock to historic coal, the delegates of the NAAMLPLP find strength in numbers and are often able to formulate a multi-faceted approach to addressing tough issues that have a direct impact on programs. Please do not let me mislead you into believing that all programs are the same and that they agree on everything. They are not and do not. But, it is the intricacies inherent to each program that is accounted for by the policies and procedures of the NAAMLPLP. It is the NAAMLPLP that allows for a medium in which to discuss issues and reconfirm their integrity and true intent. It is this fortification that will empower the NAAMLPLP to communicate with Congress regarding/reinforcing the wording and intent of the 2006 reauthorization. Collectively our voice and position will be stronger and more resilient as it is directed toward the Congressional representatives in their decision making process.

As the NAAMLPLP, we have several issues to make a priority in the coming year. Committed funds and how expenditures of recently increased grant allocations are evaluated will be at the forefront. Each program is very capable of identifying the

major priority features and projects in their state that require reclamation. That is the easy part. As it has been stated, developing a comprehensive plan to address Priority Features, environmental impacts, and socio-economic factors requires more than just a couple of lines on paper. What has been learned from the beginning of SMCRA is how to get things done the right way. In early 2012, the NAAMLPLP presented Congress with a justification of how grant funds have been utilized since the 2006 reauthorization. As was expected by programmatic people, there was a delay from the receipt of grant funds to the actual implementation for reclamation of priority features. In this scenario, our greatest asset as individual programs is being effective at getting the highest quality product for the most cost-effective price. Nobody understands our individual situations better than ourselves. Therefore, we set out to do the best job that we could with the resources at hand. When this report is again developed in early 2013, there is no doubt in my mind that obligated funds will continue to close the gap on grant allocations, further reinforcing State and Tribe's outstanding abilities to achieve program success.

As individual programs, we endeavor daily to address priority features and achieve reclamation success by working at many levels to develop and strengthen partnerships. These partnerships can be at the local level, intra-state with other agencies, inter-state with other programs or with our federal counterparts addressing a tough issue. In a successful partnership, each party has something objective and tangible to offer. Whether it is "how to get it done" or "how not to repeat what I have learned", communication and working together are key to reclaiming priority features.

The annual conference provides that opportunity to share, reinforce, and highlight

successes that have been achieved and challenges that have been overcome. Congratulations to the award winners at the 2012 Annual Conference! Pennsylvania for the National Winner, Kentucky for the Appalachian Region, Illinois for the Mid-Continent, Montana for the Western Region, and Utah for the Small Project category. Many excellent applications were submitted, each successful and deserving, but these projects demonstrated and communicated to a group of colleagues the true intent of SMCRA. From a host state perspective, it was great to share with staff, partners, and colleagues how great an impact is being made across the nation. Kudos to you and your staff for demonstrating success in the highest degree. On a side note, thanks to all that travelled to Iowa. It is truly the attendees that make the conference worthwhile, whether it was a presentation, conversation with an exhibitor, or just meeting up with old friends. Next year will mark the 35th annual conference for the NAAML P. I have no doubt that

West Virginia will provide a great venue, so be sure to mark your calendars now. Keep up the good work in your individual programs as we prepare to turn the calendars and welcome 2013.

Throughout its history, the NAAML P has demonstrated proven leadership in addressing issues affecting reclamation programs and undertaking the challenge of speaking for the individual State and Tribe programs. It is an honor to serve as President of the NAAML P and I look forward to the coming year.

Best,



2012 NAAML P Conference

The 34th annual conference for the National Association of Abandoned Mine Land Programs welcomed travelers from across the nation for a taste of Midwestern hospitality. The Iowa AML program's motto: "Reclamation for the Next Generation: Partnering for Success" was reinforced throughout the event, from the hospitality, during the technical sessions, and highlighted in the tours.

Opening remarks highlighted the success in the Iowa AML program that is built on partnerships working together to do more. Local priorities and decision making through Soil and Water Conservation Districts was reinforced by Jim Gillespie, Director of the Division of Soil Conservation. Iowa Secretary of Agriculture, Bill Northey, highlighted agriculture's role in Iowa and the world, focusing on technology and resourcefulness of various ag sectors in meeting the world's demand for food, fuel and fiber. Director Pizarchik rounded off the plenary session acknowledging the need for States and Tribes to reinforce the partnership to address priority features as we move forward.

Experienced professionals from States, Tribes, the private sector, and federal government shared 46 excellent presentations with conference attendees. Topics ranging from LiDAR, natural stream re-grade, GIS, and numerous other topics provided attendees learning opportunities on how to improve what they do. And, maybe even not to do what has already been deemed "unsuccessful"! The presentations are available at [NAAML P Google Docs](#). The site is free to the public and will be open until the end of the calendar year. Photos of the event can be found at the [2012 NAAML P flickr account](#).



Monday evening's Awards Banquet showcased the 2012 award winning projects, highlighting the true success of partnership demonstrated by each of the projects. Hard work by dedicated people tackling the problems associated with historic mining truly exemplifies the can-do attitude shared by all programs. Congratulations to each of the winners. It was an honor to host the conference and share with Iowans how reclamation is performed across the United States. On a side note, we are still looking into the "randomness" of the random number generating app used for the State's gifts.



Highlighting mining in Iowa, three tours offered a view of Iowa's coal mining heritage, today's limestone industry, and the initial effort to incorporate natural stream re-grade techniques into Iowa's reclamation program. The timing of the conference offered guests excellent fall colors on trees, an overview of the harvest, and the opportunity to meet many of the partners involved in reclamation progress. The day of tours was topped off by an excellent venue offering some down time to catch up with friends. An excellent meal along the water was complimented by great music at the Embassy Club West.



I would like to take this opportunity to thank the sponsors and exhibitors of the 34th Annual Conference. 18 sponsors, representing national and local industries, helped make the event possible. 22 exhibitors made the event worthwhile for visitors. Also, I would like to extend a sincere “Thank You” to the many individuals from other states and companies that helped carry out room moderator duties in true partnership style. Many conversations and friendships were started in Des Moines, and, with a little effort, will continue into the future. As a measure of success, providing the opportunity for networking to complete strangers is a pretty high mark.



On behalf of the Iowa AML Program, we would like to offer a sincere thanks to all who attended and participated in the 34th annual conference. Sharing our state with you was truly an honor. We hope that you enjoyed yourselves and invite you to look us up when you come back! It was an honor to host the 34th annual NAAML P conference, but we are looking forward to the 35th!



Stan Barnard Award



Dianne Ireton is the Administrative Officer for the Oklahoma AML Program. For many years Dianne has performed many “behind-the-scenes” tasks in support of the National Association of Abandoned Mine Land Programs. She designed the Association’s first letterhead. From 1999 through 2003 she was the design and layout coordinator for the Association newsletter. Dianne developed the NAAML P website and continues to maintain it on a daily basis. In addition, Dianne maintains an archive of NAAML P meeting minutes. Dianne is a person who likes challenges and utilized her skills to meet these challenges.

Dave Bucknam Award



Eric Cavazza is an exceptional instructor and is most deserving of the “Instructor Award”. Eric has over 27 years of service with the Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation. Eric has a B.S. in Mining Engineering and an M. Eng. in Environmental Engineering both from Penn State University. Eric has served as an instructor for the Office of Surface Mining’s National Technical Training Program (NTTP) for over 15 years. He is an instructor for AML Design Workshop: Dangerous Highwalls, AML Design Workshop: Dangerous Openings and Passive Treatment.

NAAML P Scholarship Winners

Ms. Ashley Hodgson of Orem, Utah receives the 2012 NAAML P scholarship for the western states. This fall Ms. Hodgson will be entering her sophomore year at the University of Utah, majoring in mining engineering with an emphasis in environmental protection, including land reclamation. She is very aware of the environmental concerns that arise with mining and understand the need for the reclamation of sites that are hazardous to personal safety, as well as reclamation of environmental problems, caused by historic mining on abandoned mine land sites. During the summer break, Ms. Hodgson began learning about the lime mining industry as a summer intern for Graymont Western, Inc. Following receipt of her undergraduate degree in mining engineering she plans to continue her education by completing graduate studies in this field.



Winners Ashley Hodgson and Evan Thibaud(center), with(l-r) Mike Garner, Todd Coffelt, Luci Malin, Bruce Stover

Mr. Evan Thibaud of Chattanooga, Tennessee receives the 2012 NAAML P scholarship for the eastern states. Mr. Thibaud will be in his senior year at the Missouri University of Science and Technology, previously known as the University of Missouri - Rolla. He is currently working on an engineering degree at the university with an emphasis in explosives. His ultimate goal at the Missouri University of Science and Technology is to become an explosives engineer. Mr. Thibaud has worked at several underground room and pillar mine operations including the Cargill Salt Mine in Avery Island, Louisiana and an underground limestone mine in Alton, Illinois. He is an avid outdoorsman and enjoys golfing and skiing in his free time.

2013 NAAML P Winter Meeting, March 11 - 13

The Maryland AML Program is looking forward to hosting the 2013 Winter Meeting in Annapolis. Annapolis is a beautiful, small city founded in 1649. The City was originally named Providence and later renamed "Anne Arundel's Towne" after the wife of Lord Baltimore. When Sir Francis Nicholson, the Royal Governor, moved the capital from Saint Mary's City, the city was given the current name of "Annapolis" after Princess Anne, heir to the throne of England. The City's history can be seen everywhere you go.

The hotel, the [Maryland Inn](#), is one of the oldest inns in Maryland. Presidents, Governors and statesmen have all stayed at the inn, including eleven delegates from the 1786 US Congress, as well as Spanish Admirals who were held prisoner at the Inn in 1898. The Hotel is located in the heart of the city with most attractions being just a short walk. There are plenty of restaurants and unique shops close by. You can also take a water taxi for \$2 or \$3 across the harbor to Eastport for more restaurants, the Annapolis Maritime Museum, or to shop for your new yacht. Hope to see you there.

Annapolis Attractions:

[Saint Johns College](#) – Founded in 1696
[The United States Naval Academy](#) – Founded in 1845
[The Maryland State House](#) – Built in 1772.
[Saint Anne's Episcopal Church](#) – Founded 1692
[The Annapolis Maritime Museum](#)
[Rams Head Tavern](#)
[The City Dock](#)

The Maryland State House is the oldest state capitol still in continuous legislative use and is the only state house to have ever served as the nation's capitol. The Continental Congress met in the Old Senate Chamber from November 26, 1783, to August 13, 1784.



Dents Run AML/AMD Ecosystem Restoration - Pennsylvania

National Award Winner

The 25 square mile Dents Run watershed is best known for its role as a home to Pennsylvania's elk herd and its world class trout stream. However, nine historic surface and underground coal mines dating back to the 1800s were leaching acid mine drainage so heavily into the watershed that passive treatment methods would not be effective, and active treatment would be very expensive.

To carry out such a large project, the state asked government agencies, mining companies, watershed groups and landowners to commit funding and manpower. Eventually, about 56 percent of the project cost was underwritten by non-government sources.

Project managers also discovered that one of the targeted areas contained both marketable coal and a huge deposit of high quality limestone – more than a million and a half tons – perfect for treating acid mine drainage. In addition, the presence of the coal and the limestone helped hold down costs, and mining both helped establish a relationship with a mining company.

October 2002 Dents Run Project groundbreaking ceremony



Elk on reclaimed AML sites in the Dents Run Watershed



A small portion of the 25 square mile Dents Run watershed area.



Tipping bucket lime doser treating AMD Discharge No. 17 PA 1934

Before the project ended, the group graded 320 acres, and replanted it for the resident elk herd. They reclaimed ten highwalls of more than 30-thousand linear feet. They mined more than a half-million tons of limestone to provide alkalinity in the stream and in the reclaimed sites, moved more than 5000 cubic yards of coal waste, closed 23 old mine openings, installed five wet seals, and treated 14 AMD discharges.

It took almost ten years, starting in October 2002, but in March, Pennsylvania declared the downstream portion of Dents Run as net alkaline for the first time in one hundred years. The incredibly large reclamation numbers tell one story.

But it's the return of trout – and fishermen – and the growth of Pennsylvania's famous Elk herd that tell the most vivid tale. In March 2012, the state declared Dents Run as "net alkaline" for the first time in 100 years, enabling fish and wildlife to return and flourish.

**Pennsylvania Department of Environmental Protection
Bureau of Abandoned Mine Reclamation**

Lower Rock Creek Watershed Restoration - Kentucky

Appalachian Region Award Winner

The project covered four locations in Kentucky and Tennessee. Lower Rock Creek stretches from Kentucky's Pickett State Park, through the Daniel Boone National Forest, and into the Big South National Recreation area. The watershed is a prime location for fishing, hunting, hiking, backpacking, and camping and hosts thousands of people each year. Rock Creek is also home to more than 40 portals leading to hundred year old underground mines, and eight mine refuse dumps, these killed aquatic life and limited the fresh water available for land animals. Rock Creek was the largest contributor of acid mine drainage to the Big South Fork of the Cumberland River until recently.

The McCreary project required a ten year commitment among four state agencies, eight Federal agencies, and a non-profit outdoor advocacy group to clean up the damage from acid mine drainage that rendered several miles of Lower Rock Creek sterile of aquatic life.

In White Oak Creek, a major tributary of Lower Rock Creek, project managers stopped dosing the water with crushed limestone sand each month. To replace it, they installed six miles of open limestone rock channels, which increases the stream's PH and provides a long term source of alkalinity.

At the upper Paint Cliff site, managers created a series of ponds to treat water seeping from a collapsed mine entry on the hillside, which filled the site with acidic waste and metal precipitates. The pond system uses organic material to strip oxygen from the liquid, which then promotes sulfide production, which in turn removes metals and increases the water's alkalinity.

On lower Rock Creek, the team removed 20-thousand cubic yards of acidic waste from the stream bank, then planted trees and fast growing grasses. In other areas, they graded over contaminated land, treated it with lime, and introduced new vegetation.

Workers removed acidic waste that leached into the water.



An example of the limestone channels created to help increase PH levels in the watershed.

The results speak for themselves. At Robert's Hollow, average PH rose from 3.1 to 5.8 after the project was completed. The change is mirrored at White Oak Creek, Paint Cliff and Lower Rock Creek. Through the entire system, the project reduced the monthly acidic load in the water by 99%. As a result, fish and other aquatic life and land-borne animals have returned to lower Rock Creek and White Oak Creek.

**Department for Natural Resources
Division of Abandoned Mine Lands**

Fish and wildlife have returned to the Lower Rock Creek Watershed.



I-72 Piers 3 Sag Subsidence Emergency Project - Illinois

Mid-Continent Region Award Winner

This project not only responded to a life-threatening emergency situation, but proved for the first time that it is possible to stop mine subsidence while it is happening. The State of Illinois discovered that two heavily traveled interstate bridges were subsiding, or slowly sinking, because of the collapse of two underground mines about 200 feet below the surface. The problem threatened both bridges structural integrity and the lives of thousands of people traveling on the road every day.

In late November 2010, the Illinois Department of Transportation performed a routine inspection of the bridges on Interstate-72, a major east-west artery through the heart of Illinois, and discovered a problem with the bridges over the Sangamon River - tire skid marks in several unexpected places. Starting in 1974, about 15,000 cars each day crossed these 800 foot spans with few problems.

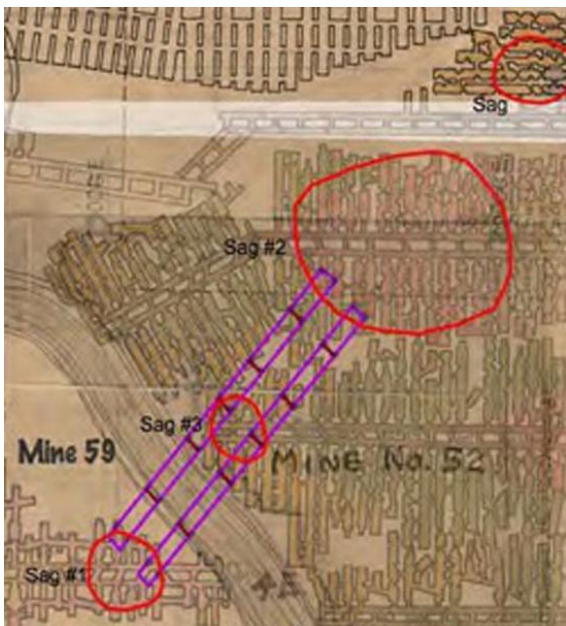
In December, state AML officials began 24 hour monitoring of the bridges, collected data, and confirmed the suspicion that three ongoing mine subsidences - one at each end of the bridges and one in the middle - were causing land under the bridges to sag. They determined the cause of the subsidence were two underground room and pillar mines last operated in 1931 and 1951, about 200 feet down. In turn, the subsidence caused warping and damage to parts of the bridge pier supports. A state engineer warned that because of their unique design characteristics, the bridges could not handle uneven sagging from the sinking ground, and said failing to act could lead to the loss of one or both bridges, and of human life. The state moved quickly to address those threats.



The twin 800-foot Interstate 72 bridges over the Sangamon River in Illinois.



Skid marks from cars momentarily becoming airborne due to the sinking of the bridges.



A map of the old underground coal mines. The red circles show where subsidence (or, sagging) was happening underground.

Working in bitter subzero temperatures and heavy snowfall, the state drilled 40 boreholes in mid-January, and began filling the old mines with grout in March 2011. A month later, despite harsh weather, flooding, related delays, the constant fear of further subsidence, and the possibility of the bridges collapsing, the grouting was completed. The state identified the problem, contracted for the repair work, and completed grouting to stop the sinking in slightly over four months.

The emergency project was the first of its kind and provided a key finding: the Sangamon repair indicates that stopping an active mine subsidence incident while it is happening is technically feasible.

**Illinois Department of Natural Resources
Abandoned Mine Lands Program**

Spring Meadow Lake State Park - Montana

Western Region Award Winner

In 2003 an undergraduate college student working on his senior thesis at Carroll College in Helena discovered that a well-known and heavily utilized state park in Helena, Montana was contaminated with extremely high lead and arsenic levels.

Historic records indicated the man-made lake was a hardrock milling site prior to World War I. Between 1912 and 1920, it processed gold, silver, zinc and manganese ore from all over the state - ore from mines that are now listed on the EPA's Superfund list. State AML officials confirmed the student's findings that pollutants from those milled ores contaminated the park area.

Testing indicated arsenic levels in the lake exceeded drinking water standards by 20 times the limit, and high levels of heavy metals. Fortunately, the recreational beach areas were not contaminated, and fish and aquatic insects were not bio-accumulating heavy metals. The state reassessed its mine site reclamation priority list; Spring Meadow rose to the top by a large margin due to the volume and toxicity of the wastes at the site.



Spring Meadow Lake State Park today, where the contaminated soil was removed. The park hosts about 85,000 people each year to swim, fish, canoe, picnic and play.



Contaminated soil is removed from Spring Meadow Lake.

The project removed waste from gold, silver, zinc and manganese processing dating from 1910 to 1920.



The state converted the old ore milling site, including some of the old structures, into the new Montana Outdoor Discovery Center, which provides visitors with opportunities to learn about wildlife and nature.

Cleaning up the park required a two-pronged approach. Some of the soil was contaminated so lightly that it could be transported to a lower-level disposal site in Montana. Other soil and sediment, however, was so badly contaminated it would require heavier treatment or transport out of state. The team excavated about nine acres of lightly contaminated soil at a depth of 3 feet. They removed 65,000 tons, which was treated and hauled away to an approved disposal site.

To address the heavier contaminated soil, workers mixed it into Portland cement, which trapped the heavy metals and prevented leaching. This allowed the final product to be sent to the lower-level disposal site. Workers then backfilled the area with replacement soil and rock, then graded, seeded, and planted about 13 acres. Finally, the state redeveloped the old milling structures and named it the Montana Outdoor Discovery Center.

**Montana Department of Environmental Quality
Abandoned Mine Lands Program**

Utah Defeats 60 Year Old Maclean Coal Fire

Small Project Award Winner

Utah's Abandoned Mine Reclamation Program worked for more than 20 years to extinguish an underground mine fire that ignited in 1945. Putting out the 67-year old fire, which migrated underground, required the use of new mapping technologies as well as creating new chemical fire retardants, while working on extremely steep slopes.

The mine in question began operating in 1919, then closed in 1945, when the underground fire ignited. By the time the state program came into existence in the 1980's, what was thought to be one fire had spread into several, with fissures, crevices, and landslides allowing oxygen in, and multiple seams of coal were burning. A full acre of land had slumped because the fire had burned away underlying coal. In addition to threatening air quality, the fire created several public safety hazards.



Workers had little room to work while drilling the boreholes to locate the fire, and then inject fire retardant to extinguish the fire.

In spite of these obstacles, on May 31st, the Utah Abandoned Mine Reclamation Program declared the Maclean fire officially extinguished after three tries to put it out, in 1990, 1992, and then 20 years later. The difference, project managers say, was developing the skills to work in cramped, unstable, high slope areas while applying state of the art, Utah-developed fire retardants into specific locations.

Utah has about a dozen similar underground fires currently burning. The state will apply the techniques and tools developed at the Maclean fire to extinguish those fires at lower cost and in less time.

Utah Division of Oil, Gas & Mining Abandoned Mine Reclamation Program



An example of the many crevices that formed as the fire migrated underground. Some cracks were large enough to swallow large animals.

The ground surface near the fire was prone to caving underfoot; some crevices were large enough to swallow a person or livestock. The fire also threatened to ignite forests above ground. Even though the state reclaimed the area in the mid-80's, sealing mine portals and burying coal refuse piles, the fire raged on.

One of the biggest challenges was determining the exact location of the fires. By 2010, foot wide cracks appeared on the mountainside about 170 feet above the old mine site. Using signs on the surface proved unreliable, even using infrared photography. To determine the location, project managers drilled dozens of boreholes and modeled the data in three dimensions, then overlaid the data on traditional geologic and mine working maps. The fire affected an area that covered 400 vertical feet on very steep slopes. Creating work pads to drill the boreholes and build seals were difficult.



Workers on a steep-slope drilling pad as part of the effort to extinguish the Maclean mine fire.

North Dakota AML Using iPads With GIS In The Field

Many people realize the advantages of having a device as portable as the iPad and appreciate the power that it wields. Obviously it has potential. But is it rugged enough for use in the field? What options exist for GIS? North Dakota's Abandoned Mine Lands (AML) Division has addressed these questions and based on the needs of the division, has issued staff iPads for use in the field.

AML is using a ruggedized case which seals the iPad protecting it from environmental elements and offers a high level of impact protection. Visibility is improved by setting the screen brightness high. Temperature is a potential issue as the device can overheat and shut down if the device exceeds 95 degrees.

AML is currently using iPads on a drilling and grouting project near Beulah, ND. Holes were drilled along the road and ditch the previous year and their locations recorded with GPS. The drill holes had been capped off, buried just below the surface and markers placed beside them with pink top stake chasers. These cased drill holes with voids were now being filled with grout in an attempt to stabilize this extensively undermined area. The iPad displays the map of these locations and gets within proximity of missing markers. Progress is tracked through data collection as voids are filled with grout.



AML using GIS on the iPad in the field.



Screen shot of GIS Pro on the iPad.

The AML construction inspector is also inventorying area sink holes using the iPad. Location points are recorded. Data is collected including photos. This will become a resource for AML in assessment of danger levels of these sink holes.

AML met with a realtor recently regarding property with possible undermining. The iPad had the most recent underground workings of the Knife River mine loaded enabling zoom and pan of the area. The discussion was far more detailed than it would have been with only a paper map.

The iPad works well for many AML needs. The close of the construction season will provide valuable feedback from AML's construction inspector as to the successes and failings of iPad use in the field.

The iPad itself ranges from \$629 to \$829. GIS Pro is the GIS option that AML is currently using. It has a \$299.99 cost per user. If subscribing to the cloud is not a viable option (security or cost concerns), then GIS Pro is a nice alternative. It provides open source base maps, caching and offline capability. Data is stored locally through a simple import (shapefiles, KML/KMZ).

AML iPads also have the free ArcGIS app installed. It integrates nicely with ArcGIS Online (ESRI's cloud) and offers easy access to a collaboration of maps. AML participated in the beta of ArcGIS Online, but currently does not have a paid subscription. A 30-day free trial subscription is available (5 users). The subscription costs start at \$2,500/year (5 users). Expect the ArcGIS app for iPad to improve greatly over the next year adding offline functionality and full editing capability.

NEWSLETTER ARTICLE SPECIFICATIONS

400 - 500 words. Articles subject to editing. Submit in e-mail or hard copy. 2 photo limit. Include author's name, title of article, captions for photos. Submit photos in TIF (preferred) or JPG format, 300 DPI, and original photo size. E-mail photos as individual files, not embedded.

Deadline for Spring Edition is April 15, 2013.

Email articles to bobf.scott@ky.gov or mail articles to:

Bob Scott, Director
Division of Abandoned Mine Lands
Department for Natural Resources
2521 Lawrenceburg Road
Frankfort, KY 40601

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