



ARRI Newsletter

The Woodlands: Grand Opening August 1st First Phase of the Pittsburgh Botanic Gardens

Woodlands Botanic Gardens Grand Opening	1
Reclamationist Of the Year Award	3
PA State ARRI Award	4
Tennessee's Oldest ARRI Site	6
Kentucky's Arbor Day Event	8
Tennessee's Arbor Day Event	10
West Virginia's State ARRI Award	12
ARRI Conference	13
AmeriCorp Volunteer	15
ARRI Regional Award	16
Tennessee State Award	17

Friday, August 1st, 2014 was the official opening of the first phase of the Pittsburgh Botanic Gardens located near Settler's Ridge Park in North Fayette and Collier Townships. The gardens will be the first outdoor comprehensive botanic garden in the region and will encompass 460 acres when completed.

The project site was originally farmland which was deep mined in the 1920's followed by strip mining in the 1940's. The biggest challenges facing this project was acid mine drainage and mine subsidence. To help fund this project

Continued on Page 2



Sally Jewell , Secretary of the Department of the Interior, spoke about the beauty of the trails and the partnerships that are making this project possible.

One of the three beautiful hiking trails at the Woodlands framed by wild flowers and mature trees.





Sally Jewell
Secretary of the
Interior

**APPALACHIAN
REGIONAL
REFORESTATION
INITIATIVE**



Pittsburgh Botanic Gardens

Continued from Page 1

coal is still being sold from 142 undermined acres and active mining is still occurring on 25% of the acreage. Upon completion of the gardens there will be 18 theme gardens, an amphitheater, an events center, and a botanic research facility.



The ribbon cutting ceremony with two Allegheny County officials, Sally Jewell, Greg Nace, Rich Fitzgerald and Joe Pizarchik.

Greg Nace, the president of the Botanic Gardens, opened the ribbon cutting ceremonies for Woodlands, the first phase of the park which includes 60 acres of hardwoods and three miles of

hiking trails. One of these trails is handicapped accessible. Speakers included the Secretary of the Department of Interior, Sally Jewell, who spoke about the importance of reclaiming and maintaining our natural resources; she also applauded the government agencies and the private sector for their cooperation on this project. Joe Pizarchik, Director of OSMRE, and Rich Fitzgerald, an Executive with Allegheny County, also spoke. Thirty students in first through fifth grade from the Turtle Creek based Human Services Center's summer program attended the ceremony and spent the day enjoying the outdoors.

ARRI foresters worked closely with the officials and planners associated with the Botanic Gardens in the early developmental stages of the project, consulting with skeptical contractors and explaining how the Forestry Reclamation Approach would restore the ecological services of the pre-mine forests at the facility. At the invitation of ARRI, representatives of the Botanic Gardens toured the University of Kentucky's surface mine reforestation research complex in eastern Kentucky to see firsthand how end-dumping and implementation of the FRA can be utilized to enhance the biodiversity and productivity of the mined area on the periphery of the gardens. The FRA was fully embraced and will serve as a regional model to the industry, the regulatory authorities, and the public of what excellent forestry reclamation should look like.

The work done to reclaim this land is breathtaking, the hardwoods are amazing and they create a sensational background for the meadows filled with wildflowers, birdlife and butterflies. The Botanical Gardens is already a place of beauty in infancy with the promise of so much more to come.



Virginia Department of Mines, Minerals and Energy's Ken Coomer Wins National Reclamation Award

Big Stone Gap, VA- The Virginia Department of Mines, Minerals and Energy's Reclamation Specialist and Field Supervisor, Ken Coomer, has been awarded the Dean Spindler Reclamationist of the Year Award for 2014 from the National Association of State Land Reclamationists. (NASLR)

Coomer, a Lee County native, joined DMME shortly after the federal Surface Mining Control and Reclamation Act was passed in 1977. In his 37 years with DMME, he has won several awards within the department for his work in reclaiming coal sites after they've been mined. And, those permits in which he's inspected have won numerous private, state and national awards. This is the first national honor received by one of DMME's inspectors.



Ken Coomer holding his award which was presented to him at the NASLR Conference in September.

Deputy Director of DMME, Butch Lambert, said he was not surprised when Coomer was announced the winner. "Ken is an example to anyone looking to do reclamation right. Operators have commented that he is the one of the best inspectors at DMME and we are honored to have a professional like Ken in the field and on our team as a mentor for new reclamation inspectors."

Coomer accepted the award at the NASLR conference in Newburgh, New York in September.

As a nationally recognized authority on the reclamation of mined lands, the National Association of State Land Reclamationists (NASLR) advocates the use of research, innovative technology and professional discourse to foster the restoration of land and water affected by coal and mineral mining activities.



The Dean Spindler Award was established to recognize exemplary work in the field of coal and mineral mined land reclamation across the United States.

DMME's Division of Mined Land Reclamation (DMLR) promotes environmentally sound coal mining through regulating surface effects of coal mining, reclaiming abandoned mine lands, issuing permits, performing inspections, assisting small operators and responding to citizen concerns.





Recipient
Bureau of Abandoned
Mine Reclamation –
CROWN/
TYLERSBURG
Abandoned Mine
Reclamation Contract
No. OSM 16
(0886,3316)101.1,
Farmington
Township, Clarion
County

Pennsylvania's ARRI 2013 Excellence in Reforestation Award



From Left to Right — Dean Baker, BAMR; Pat Webb, BAMR; Marty Gray, Galan Corp., Deputy Secretary John Stefanko, AAMO; Tom Malesky, BAMR; Bill Dadamo, BAMR; and Ron Lindmuth;

APPALACHIAN REGIONAL REFORESTATION INITIATIVE



The Pennsylvania ARRI Excellence in Reforestation Award for 2013 was presented on May 13, 2014 to the PA Department of Environmental Protection, Bureau of Abandoned Mine Reclamation and the contractor Galan Corporation.

The project consisted of grading the available adjacent spoil material into the pit and returning the surface mine site to approximate original contour. The project included the draining and removal of two water impoundments and eliminated 3,500 linear feet of hazardous high-walls. The reclamation will provide cover and habitat for the local wildlife and provide enjoyment for the local sportsman of the area. The project was designed and inspected by the Cambria Office Staff, Bureau of Abandoned Mine Reclamation. The site was reclaimed by Galan Corporation of West Port Ann, New York utilizing the FRA. The total project covered 25.3 acres of which 12.3 acres were planted with 5,381 trees utilizing the FRA method.

The contractor utilized end dumping of the fill material and a ripper tooth attached to an excavator to rip the cut areas of the project several feet deep providing very loosely compacted soil areas for tree planting. The tree species that were hand planted on site were: northern red oak, black cherry, yellow poplar, sugar maple, white oak, black walnut, chestnut oak, bur oak, eastern white pine, and American chestnut that the land owner was able to obtain. Reclamation was completed May 13, 2013.

Continued on Page 5



Pennsylvania's ARRI Award

Continued from Page 4

The ARRI method assured minimal run off from the site. The loose earth fill worked very well to control runoff during a wet spring and early summer, as the heavy rain soaked in the backfill. During the final construction inspection for the project, it was noted that the site was very stable and a high survival rate for the trees was attained. The reclamation project returned the property to pre-mining land uses. The site was inspected in the summer of 2012 and even though the trees were planted in the fall the site had a 90% survivability rate for the tree species. This could be in part due to the relatively mild winter experienced in the area.



Abandoned Mine Features



Reclaimed Site



Bittersweet success at Tennessee's oldest FRA site

In 2001, the OSMRE Knoxville Field Office began working with TECO Coal to develop the White Oak Reforestation Project (WORP). TECO Coal was in the process of re-mining an area which had been previously mined many times in the past, leaving pre-SMCRA disturbance consisting of exposed highwall, un-vegetated spoil piles, and acid water pit impoundments. The focus of the

WORP was to create demonstration areas using new techniques (developed by those now in the ARRI Science Team) which would later become known as the Forestry Reclamation Approach. The Knoxville Field Office has been intently monitoring one of these bond-released sites since trees were planted in 2003. The site consists of an un-compacted growth medium of mostly brown weathered sandstone seeded with weeping lovegrass, foxtail millet, perennial rye, orchard grass, kobe lespedeza, birdsfoot trefoil, and appalow lespedeza. Tree seedlings planted consisted of northern red oak, pin oak, yellow poplar, white ash, white pine, and green ash at a rate of 400 trees per acre. Those who participated in the 2011 ARRI Conference field trip might remember visiting this site.

The following pictures show the succession of the forest at Tennessee's oldest FRA demonstration site. The power pole shown in all pictures was our reference point throughout the years. This year, many of the trees on the site were killed by the local utility company while clearing their right-of-way. Although we lost many trees due to the utility company, we consider it a success when they consider our trees a threat to their power lines.



2005 : Planted trees and tree-compatible ground



2007 : Planted trees becoming established as planted ground cover diminishes.

Continued on Page 7



Tennessee's FRA site

Continued from Page 6



2010: Tree growth and natural succession accelerate as native forest plants including sweet birch, red maple, and black cherry volunteer and become established.



2011 : The site nearing crown closure.



2014: Taken from the top of the hill, showing many of the tallest oaks on the site which were killed when the utility company cleared their right-of-way.



2014: Not all the trees were killed! The Knoxville Field Office will continue monitoring the site's success through the years to come.



The Kentucky Department for Natural Resources and ARRI Join J.W. Resources for Arbor Day Celebration



J.W. Resources, a recipient of the prestigious 2012 Excellence in Reclamation Award, hosted the 2014 Appalachian Regional Reforestation Initiative (ARRI) Arbor Day event on one of its Straight Creek surface mining operations located in Bell County near the community of Stoney Fork on April 18, 2014. J. W. Resources, the Kentucky Department for Natural Resources (DNR), the federal Office of Surface Mining Reclamation and Enforcement (OSMRE), ARRI, The American Chestnut Foundation, and the Kentucky Division of Forestry (KDF) co-sponsored the 2014 celebration to showcase partnerships that promote the planting of high-value hardwood trees on mined lands in Appalachia. These groups jointly endorse the use of current day reforestation techniques that can properly restore reclaimed surface mines back to a beneficial multi-purpose post mining land use. DNR Commissioner Steve Hohmann presented the company with the 2013 state ARRI "Excellence in Reforestation" award during the event.

**APPALACHIAN
REGIONAL
REFORESTATION
INITIATIVE**



Commissioner Steve Hohmann (right) presenting Mr. Clifford Berry, Manager of Engineering at Straight Creek Coal Mining, Inc., with the 2013 state ARRI Award for "Excellence in Reforestation" at the ARRI Arbor Day event.

Continued on Page 9



Kentucky Arbor Day Celebration

Continued from Page 8

Commissioner Hohmann was quoted as saying that “This event is a reflection of the company’s continuing commitment to environmental stewardship and a wonderful opportunity to encourage these students to protect and cherish Kentucky’s natural resources.”

The annual Arbor Day celebration provided an educational opportunity for future Kentuckians to appreciate the environmental benefits of forests throughout the Appalachians. Thirty eight elementary students and a number of teachers from Right Fork Elementary School participated in the tree planting activities. Dr. Tammy “Bee Lady” Horn and Mr. Michael French of The American Chestnut Foundation provided the students with presentations on honey bees and the American chestnut prior to the tree planting event.

The event took place on a surface mine that is being reforested according to guidelines promoted by the Department of Natural Resources through their “Kentucky Reforestation Initiative” or the FRA guidelines. Once established, these new forests are capable of providing wildlife habitat, improve water quality, sequester carbon and mature into a valuable resource. For the Arbor Day celebration, a variety of native seedlings including the various oaks, ash, tulip poplar, American chestnut, elm and white pine were among the species planted. The American Chestnut Foundation also successfully completed a 37-acre NRCS CIG reforestation project area during the Arbor Day Event. This project area also contains a 1-acre progeny test plot that was planted during the Arbor Day Event. Approximately 1,000 American chestnuts have been inter-planted throughout the project site with a mixture of Appalachian hardwoods. Approximately 150 “Dutch Elm Disease” resistant American elms were also planted on the site during that event.



Planting American chestnuts in the NRS CIG progeny plot during the Arbor Day event on April, 18, 2014.



Right Fork Elementary students who participated in the 2014 Kentucky ARRI Arbor Day event on Straight Creek Coal Mining, Inc.



**APPALACHIAN
REGIONAL
REFORESTATION
INITIATIVE**



Tennessee's Arbor Day Event

Tennessee's held its annual Arbor Day event on April 17, 2014 at a Kopper Glo Mining, LLC's Log Mountain Mine in Claiborne County, Tennessee. The event was organized by ARRI core team members from OSMRE's Knoxville Field Office, the Coal Creek Watershed Foundation (CCWF), and Kopper Glo Mining, LLC. This is the second Arbor Day event Kopper Glo has hosted, and one of many of their mines employing the FRA.



OSMRE's Tim Rudder helps students plant an American chestnut that was grown in their classroom.



ARRI Core Team member Chris Miller and a local student are interviewed about this year's planting event (Photo courtesy CCWF)

Continued on Page 11



Tennessee's Arbor Day Event

Continued from Page 10



The planting crew (Photo courtesy of CCWF).

Over 60 5th through 7th graders from Clairfield and White Oak schools were enlisted by CCWF for this year's event. These students learned about the history of mining, reclamation, and reforestation in their classroom before the event in a school visit from OSMRE and CCWF. In an effort to better understand the entire process of reforestation, the students grew American chestnut seedlings provided by CCWF in their classroom to be planted on the mine site. At the event, ARRI core team members and CCWF educated the students about the importance of being good environmental stewards, reforestation, and proper tree planting techniques. These young tree planters then used these techniques to plant their classroom-grown chestnuts along with 1,600 other native hardwood seedlings that are now thriving on Log Mountain. As they were crawling over two roughly-graded acres to plant the seedlings, Tim Dail from Knoxville's NBC station WBIR interviewed students to find out what reforestation meant to them. Many remarked that they hoped people in the future can enjoy the forest their class planted many years ago.

The video posted by WBIR can be seen at the following link:
<http://www.wbir.com/media/cinematic/video/7843695/students-reclaim-the-land-by-planting-trees/>



The newly-planted two acre site on Kopper Glo Mining's Log Mountain mine.



**APPALACHIAN
REGIONAL
REFORESTATION
INITIATIVE**



2014 West Virginia ARRI Excellence in Reforestation Award



Left to right: Greg Mitchell, OSMRE; Kevin Quick, WV DEP; Joey Elia, Alpha Natural Resources; John Long, Alpha Natural Resources; Rusty Jude, Alpha Natural Resources; and Allison Miller, WV DEP inspector.

The West Virginia DEP Division of Mining and Reclamation in cooperation with Office of Surface Mining has Awarded the first of two state level Appalachian Regional Reforestation Initiative Excellence in Reforestation Awards for 2014. The first of these two awards was presented to The Whitman Surface Mine May 23, 2014. The Whitman Surface Mine is located in Logan County just off County Highway 9 in Holden, WV. This surface mining permit is 368.33 total acres and operates under West Virginia Article 3 Permit No.S-0005- 80 for Alex Energy, Inc., a subsidiary of Alpha Natural Resources. Alex Energy, Inc. planted for the final vegetative cover, trees at a rate of 680-690 trees per acre, with more than 60% of the community being hardwoods. At the present, there have been 22 different woody plant species planted in the soils of the Whitman Creek Surface Mine Permit.



The 2014 ARRI Conference hosted in Frostburg, Maryland on August 6th and 7th



Tomatoes growing in the greenhouse by Frostburg Grows.



Shadehouse for growing tree seedlings by Frostburg Grows.

The 2014 ARRI conference was held in Frostburg, Maryland at Frostburg State University on August 6 and 7. The conference began on Tuesday, the 6th with a welcome message from Mike Garner from the Maryland Department of the Environment which was followed by a safety training session for the field trip which was to follow. The field trip began with a tour of a greenhouse and tree nursery established under the Frostburg Grows initiative. The greenhouse, shadehouse, and related facilities were constructed on reclaimed mine land. The project relies on solar energy and water collected from the site to grow vegetables and tree seedlings.

The next stop on the tour was to Vindex Energy Corporation's Carlos Mine site coal mining permit. Vindex's use of the Forestry Reclamation Approach (FRA) began on the Carlos mine using the contour method. In using this method stored topsoil was spread across the site with dozers. The soil was pushed along the contour allowing a windrow of loose material to build up along the contour. The loose material was allowed to remain in-place and a new row was pushed into place. This method created a row of loose material separated by a dozer wide section of compacted topsoil. This pattern was repeated up the slope to create a series of loose and compacted rows. Grass and trees were then planted on



The 2014 ARRI Conference

Continued from Page 13

The next stop on the tour was Vindex's Island Mine coal mining permit. On this site, Vindex applied what was learned from its earlier work with the FRA to plant trees on the site. On the Island Mine site, Vindex spread out the more compacted access areas allowing for more area of loose rooting medium. Between the access areas, a mixture of topsoil and subsoil was "pushed up" in mounds to create a non-compacted rooting medium that would enhance tree growth while still reduce erosion and runoff.

On the final stop on the field tour, the group separated into three groups with the option of attending either the New page Paper Mill in Luke, Maryland, the Wind Criterion Windmill project in Oakland, Maryland or the Evergreen Heritage Center in Mt. Savage, Maryland.

The conference continued on Wednesday the 7th with a meeting of the ARRI Core Team and the ARRI Science team. The two teams at first met separately, then combined for a joint meeting during which upcoming projects and concerns were discussed. Following the meetings, representatives of Frostburg State University and the Maryland Department of the Environment welcomed the attendees.

Continued on Page 15



Excellent tree growth on Vindex Energy's Carlos Mine site .



Loose grading and tree seedlings planted on Vindex's Island Mine site.



The 2014 ARRI Conference

Continued from Page 14

Following the opening speakers, experts in the field of reforestation gave presentations on various aspects of mined land reclamation. The presentations included: Reclamation Grading & Seeding Influences on Trees on a Virginia Mine Site After Six years, by Dr. Carl Zipper; Reclaimed Surface Mines as Refugia for Early Successional Bird Species, by Dr. Frank Ammer; Frostburg Grows, An Innovative Sustainability Project, by Dan Fiscus and Corey Armstrong; Local History of Mining and Forestry, by Al Feldstein; Forest Reclamation Approach Methods & Results, by Austin Belcher; Forest Restoration Opportunities in the Chesapeake Watershed by Julie Mawhorter; A Landscape Approach to utilizing GIS to Identify Priority Areas for Active Habitat Management of Golden-winged & Cerulean Warblers in Western MD, by Gary Aaronhalt; Targeting Tree Planting Locations for Water Quality by Angela Patterson; and, Biomass Estimation with Auxiliary Airborne Laser Scanning Data: A Potential Assessment Technique for Evaluating Past Reclamation Efforts, by Nick Skowronski.

Approximately 80 people attended the conference representing industry, government, academic institutions, environmental groups and private citizens. ARRI's next conference will be in June, 2015 in Lexington, Kentucky.



Tiffany Heim, AmeriCorp Intern joins the ARRI Team

Tiffany Heim is being hosted as an OSMRE AmeriCorps member this year, working specifically for the ARRI and Green Forests Work (GFW). As an OSMRE AmeriCorps member she is promoting the Forestry Reclamation Approach (FRA) and working with ARRI Core and Science Team members in breaking through the cultural barriers that exist for establishing healthy and productive forests on mine sites. Tiffany's first assignment for ARRI is to work as a videographer documenting the 5 steps of the FRA, which will be edited into 3-minute YouTube videos for public consumption. Tiffany just completed a week of training in Beckley, WV at the AmeriCorps/VISTA conference where she shared in her passion for engaging youth in conservation practices including the FRA and legacy mine reforestation methodologies. She plans to recruit and work with youth and other volunteers to engage them in ARRI/GFW projects. Tiffany hopes to accomplish this outreach to youth by organizing tree planting events and conservation training for alternate spring break students, local high school students and boy/girl scout troops. Another goal for Tiffany this year is to engage coal field communities in sustainable ARRI/GFW reforestation projects that will benefit community stakeholders environmentally and economically. As a native of the Eastern Kentucky, Tiffany has experienced reclamation of mine sites in the field throughout her life. She feels that serving as an OSMRE AmeriCorps member for ARRI and GFW this year will further her commitments to serving the people and environment of the Appalachian coal fields.



Vindex Energy Corporation wins ARRI Regional Award

On August 6, 2014, during ARRI's eighth annual conference in Frostburg, Maryland, the Director of the Office of Surface Mining Reclamation and Enforcement's Appalachian Region, Thomas Shope, recognized the 2013 State winners of ARRI's Excellence in Reforestation Awards. The awards are given by the States in the Appalachian Region to those individuals, companies or organizations that best exemplify the use of the Forestry Reclamation Approach in reclaiming active and abandoned mine lands.

At the conclusion of the presentation, Director Shope presented the 2013 ARRI Excellence in Reforestation Regional Award to Vindex Energy Corporation for its outstanding work implementing the Forestry Reclamation Approach at its minesites in Maryland.



Regional Director Tom Shope (right) presents the Regional ARRI Excellence in Reforestation Award to Vindex Energy employees (from left to right) Rich Riggins, Rusty Bush, and Jeffrey Kelley.

Vindex's strategy for employing the FRA during reclamation of its coal mines evolved over the years. Initial efforts pushed soil along the contour allowing a window of loose material to build up along the contour. The loose material was allowed to remain in-place and a new row was pushed into place. This method created a row of loose material separated by a dozer wide section of compacted topsoil. This pattern was repeated up the slope to create a series of loose and compacted rows in which trees and grasses were planted.

In its subsequent efforts, Vindex eliminated the compacted areas that existed on the contour sites. In this method the site is rough backfilled leaving the best available material on the surface. Available topsoil is then spread over the area. Following the topsoil distribution, the site is systematically gouged by a large dozer to create a backfill resembling a series of ski moguls.

On a third permit Vindex applied what it learned at the two early sites and created a hybrid of the two methods. The more compacted access areas from the contour method were spaced at a much greater distance allowing for more area of loose rooting medium. Between the access areas, a mixture of topsoil and subsoil was "pushed up" in mounds to create a non-compacted rooting medium that would enhance tree growth while still reduce erosion and runoff.

Vindex's efforts at employing the FRA were viewed during a field trip at the ARRI conference. The minesites exhibit excellent growth and survival rates of the planted seedlings.

The Regional Award is selected from State award winning nominees throughout the Appalachian Region and exemplifies the most innovative and best use of the Forestry Reclamation Approach in reclaiming mine sites. Accepting the award for Vindex Energy Corporation were Rich Riggins, Rusty Bush, and Jeffrey Kelley. ARRI appreciates Vindex's efforts in reforesting Appalachia using the FRA.



Tennessee Presents its ARRI Excellence in Reforestation State Award



ARRI Core Team member Chris Miller presenting Tennessee's 2014 FRA numbers and the 2013 ARRI Excellence in Reforestation State Award.



James Thacker (Kopper Glo Mining, LLC) receiving the award with Robin McCarter (Kopper Glo Mining, LLC) and company consultant Phil Boggs (Mark V Mining and Engineering, Inc.)

KFO annually recognizes performance and execution of the FRA for the previous calendar year. This year, Kopper Glo Mining, LLC's Log Mountain Mine, permit number 3230 was Tennessee's 2013 ARRI-Excellence in Reforestation State Award winner for implementation of FRA techniques. Representatives from Kopper Glo Mining received their award on November 17 at the Tennessee Mining Conference in Gatlinburg, TN.

Log Mountain Mine is a steep-slope contour and area mining operation in Claiborne County, Tennessee. Portions of the permit area were mined prior to SMCRA, leaving highwalls and open pits. During this remining operation all available spoil was retained for highwall elimination. Orphan benches were used as permanent spoil storage areas to reclaim highwall and avoid building hollow fills. The backfill was constructed in lifts with compaction occurring by loaded trucks passing over the previously placed material. Once the backfill reached the desired height, growth medium was dumped over the backfill. The growth medium was left un-compacted by using the one pass dozer method advocated by the FRA. Organic material including root balls and surface rock were incorporated into the tree growth medium to enhance development of the native forest habitat. After seeding with a tree compatible groundcover, Kopper Glo planted native hardwood trees to facilitate restoration of native hardwood forest habitat, accommodate the wildlife post-mining land use, and provide habitat for the endangered Indiana Bat. Of the 150 acres that were mined, 100% were reforested according to the FRA. Kopper Glo has fully implemented the FRA on all of their new permits which will be reforested, regularly hosts reforestation researchers, and has hosted two Arbor Day events. For these reasons, ARRI core team members were proud to present Kopper Glo Mining, LLC the ARRI Excellence in Reforestation Tennessee State Award.



**APPALACHIAN
REGIONAL
REFORESTATION
INITIATIVE**



The Appalachian Regional Reforestation Initiative was started in 2004 with the goal of encouraging the planting of high-value hardwood trees on reclaimed coal mine sites using the Forestry Reclamation Approach. The initiative is a coalition of the States of the Appalachian Region, the Office of Surface Mining and their partners in industry, environmental organizations, academia, local, State and Federal government agencies and local citizens who have come together to support this valuable initiative.

For more information on ARRI see our website at: <http://arri.osmre.gov/>

GOALS OF ARRI

- Plant more high-value trees on reclaimed coal-mined lands in Appalachia.
- Increase the survival rates and growth rates of planted trees.
- Expedite the establishment of forest habitat through natural succession.

ARRI Core Team Leaders:

Paul Rothman, Kentucky DNR

Mike Bower, OSM Appalachian Region

Science Team Leaders:

Dr. Carl Zipper, Virginia Tech

Dr. Christopher Barton, University of Kentucky

Science Team Liaisons:

Dr. Patrick Angel, OSM Appalachian Region

Chris Miller, OSM Knoxville Field Office

Steve Felch, OSM Washington DC

ARRI News Editor: Mike Bower

Layout Design: Patty Hoffman