

ENVIRONMENTAL FEDERALISM



State Coalitions and Private Companies Work to Revitalize Forests

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Abstract

Trees are important. They filter carbon dioxide into oxygen, which is vital for animal life; they provide shade, permitting diverse plant and fungus life to foster in protection from the sun; they hold soil together and prevent erosion. Trees also provide important functions for human life as well. They are used for construction, paper, and food. Additionally, trees are great for recreation, and many people enjoy walking through forests, climbing trees, or simply enjoying the beauty of the green they provide. With trees being so important, revitalizing areas where deforestation has occurred – the way Appalachian states have by partnering with coal companies and private organizations – key to ensuring the environmental stability of our lands.

Problem

In the Appalachian region, where the coal industry removed hundreds of thousands of acres of forests to make room for surface mines, there remain unused areas of land void of topsoil or vegetation. Without tree roots to bind soil, these areas can fall victim to erosion and even mudslides. Diverse plant life cannot grow without the shade of trees, nor can wildlife survive.

State Experiment

In 2004, the states of Kentucky, Maryland, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia launched a cooperative effort dubbed the Appalachian Regional Reforestation Initiative (ARRI). The ARRI consists of a coalition of citizens, private organizations, industry leaders, and government agencies dedicated to restoring forests and wildlife on lands that were used as coal mines in the Appalachian region.

One of the goals of the ARRI is to plant high-value hardwood trees on reclaimed coal mined lands. High quality hardwood is not only a good economic investment that offers substantial revenue for landowners and potential job opportunities – jobs in logging, arboriculture, and other tree-related fields – for locals, but trees help minimize soil erosion, remove carbon dioxide from the air, foster wildlife populations and plant growth, and conserve water resources.¹ Additionally, the ARRI aims to maintain and improve the survival rates of planted trees and expedite the establishment of forest habitat.²

To accomplish these goals, the ARRI implemented the Forestry Reclamation Approach (FRA). Based on forestry research and studied from universities, the FRA 5 step approach includes: (1) creating a suitable medium for good tree growth that is no less than 4 feet deep and comprised of topsoil, weathered sandstone, and/or the best available material. (2) Loosely grade the topsoil or topsoil substitutes established in step one to create a non-compacted growth medium. (3) Use ground covers that are compatible with growing trees. (4) Plant two types of trees: early

¹ Appalachian Regional Reforestation Initiative. “Getting Started,” 2004. <https://arri.osmre.gov/PDFs/Pubs/ARRI.brochure.pdf>

² IBID

succession species for wildlife and soil stability, and commercially valuable crop trees. (5) Use proper tree planting techniques.³

Results

According to the states, figures estimate that approximately 38 million trees were planted on about 63,000 acres between 2005 and 2008.⁴ Regional mining companies' contributions during this period were immense. West Virginia company Progressive Coal planted over 200,000 hardwood trees -- white oak, red oak, black cherry, green ash, sugar maple, and sycamore -- on 300 acres between 2004 and 2009 with an 85% survival rate.⁵ Additionally, 160 apple and 40 pear trees were planted.⁶ The Oxford Mining Company planted 100,000 hardwoods on 100 acres in 2 years⁷, and the Triple H Coal Company was able to revitalize 73% of their 59 acre surface mine to forested habitat.⁸ In total, about 70 million trees were planted on about 103,000 acres between 2004 and 2011.⁹

The ARRI has benefitted from partnerships with other private groups as well. In 2018, over 400,000 trees were planted on 660 acres of former legacy mines in Kentucky as a result of the work of nearly 2000 volunteers and professional tree planters from the ARRI and Green Forests Work.¹⁰

Conclusion

Restoring Appalachian forests is a task that cannot be done by one company, one state, or even the federal government, on their own. Multi-state coalitions that work to revitalize land no longer used for coal mining, with assistance from private organizations and the federal government, can

³ Office of Surface Mining Reclamation and Enforcement. "Forestry Reclamation Approach (FRA)." Osmre.gov, 2019. <https://arri.osmre.gov/FRA/FRAApproach.shtm>.

⁴ ARRI. "ARRI's First Five Years," September 2009. <https://arri.osmre.gov/Publications/Brochures/ARRI's%201stFiveYears%2010-1-09.pdf>, pg. 6

⁵ ARRI. "ARRI News," July 2010. https://arri.osmre.gov/Publications/Newsletters/ARRI_newsletter_Vol.II.Issue3.pdf, pg. 5

⁶ IBID

⁷ ARRI. "ARRI News," June 2009. https://arri.osmre.gov/Publications/Newsletters/ARRI_newsletter_Vol.II.Iss.1.pdf, pg 2

⁸ ARRI. "ARRI Newsletter," February 2014. https://arri.osmre.gov/Publications/Newsletters/ARRI_newsletter-VolIII_Issue7-Feb2014.pdf, pg. 6

⁹ US Department of the Interior. "Secretary Salazar Announces Presentation of Presidential Migratory Bird Federal Stewardship Award to U.S. Office of Surface Mining," May 25, 2011. <https://arri.osmre.gov/PDFs/News/DOI%20AwardPR52511.pdf>

¹⁰ ARRI. "ARRI Newsletter," 2018. https://arri.osmre.gov/Publications/Newsletters/2018_Fall_ARRI%20Newsletter_Volume6_Issue12.pdf, pg. 11

work to restore forests. Allowing coal companies to continue to make money on land no longer used for mining by planting hardwood trees that can be potentially used for other purposes serves as a positive incentive for them to adopt healthy environmental practices and cooperate with revitalization groups.