



2012 Reforestation Award

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What's new in ARRI?

- Introduction of a formal workshop
 - Open to industry, government, citizens
 - Annual safety meetings
- Outlines the 5 steps of the FRA

What's new in ARRI/FRA?

- Forest Reclamation Advisory No. 10
 - <http://arri.osmre.gov/Publications/Publications.shtm>



THE APPALACHIAN REGIONAL REFORESTATION INITIATIVE (ARRI) FOREST RECLAMATION ADVISORY

Forest Reclamation Advisory No. 10

10 October 2013 – Final?

REFORESTATION TO ENHANCE APPALACHIAN MINED LANDS AS HABITAT FOR TERRESTRIAL WILDLIFE

Petra Wood, Jeff Larkin, Jeremy Mizel, Carl Zipper, and Patrick Angel

Surface mining is widespread throughout the Appalachian coalfield, a region with extensive forests that are rich in wildlife. Game species for hunting as well as non-game wildlife are abundant in the region's natural environments. Both are important contributors to ecosystem function. For an ecosystem to be sustainable and productive, ALL component organisms must be present as they all depend on each other in some way. This Forest Reclamation Advisory provides guidance on reforestation practices to provide high quality wildlife habitat on Appalachian coal mines.

Mined lands reclaimed using conventional

habitat for numerous wildlife species that require mature forest as well as those that require young forest conditions.

Many wildlife species (amphibians, reptiles, birds and mammals) that depend on young forests for foraging, cover or breeding (Gilbart 2012) are experiencing population declines (Litvaitis 1993). Native young forest communities consist of dense herb, vine, sapling, and shrub growth that exist for a relatively short time (≤ 12 years). Therefore, patches of young forest must be continuously created and dispersed across the landscape to

ensure long-term viability of the many species

What's new in ARRI/FRA?

- Forest Reclamation Advisory No. 10
 - Target audience – Permittees/Landowners who wish to establish a post-mining land use of wildlife habitat.
- Provides specific guidance on methods to increase wildlife habitat on mine sites.

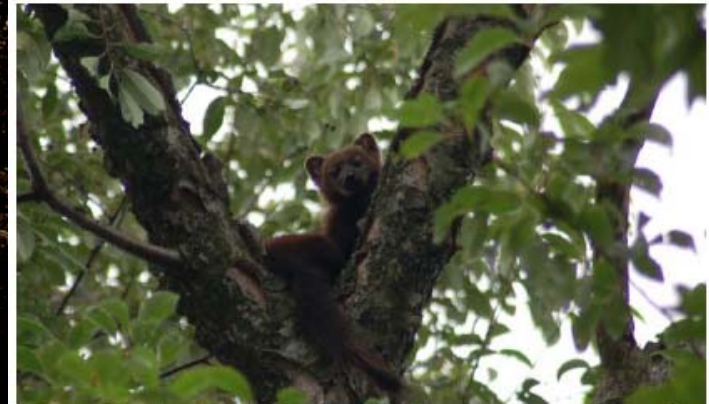


Figure 2. The fisher is a forest-dependent carnivore that is colonizing many Appalachian states after reintroductions in West Virginia, Tennessee, and Pennsylvania. Young forest along mature forest edges provides habitat for many of the fisher's favorite prey.

What's new in ARRI/FRA?

- Forest Reclamation Advisory No. 11
 - <http://arri.osmre.gov/Publications/Publications.shtm>



Forest Reclamation Advisory No. 11

8 October 2013 Draft

ESTABLISHING NATIVE TREES ON LEGACY SURFACE MINES

J.A. Burger, C.E. Zipper, P.N. Angel, N. Hall, J.G. Skousen, C.D. Barton, S. Eggerud

More than one million acres have been surface mined for coal in Appalachia. Today, much of this land is unmanaged, unproductive, and covered with non-native plants. Establishing productive forests on such lands will aid restoration of ecosystem services provided by forests – services such as watershed protection, water quality enhancement, carbon storage and native wildlife habitat – and will enable mined lands to produce valued products such as commercial timber.

This Advisory describes practices for establishing native forest trees on lands that were surface mined for coal and reclaimed to meet legal standards, and where the mine operator no longer has any legal responsibilities ("legacy surface

provided here. Hence, we reference other [Forest Reclamation Advisories](#) that provide detail and suggest that reforestation experts be consulted if necessary.

PLAN: Assess the Site and Develop a Plan

The first step is to develop a reforestation plan or strategy by assessing site conditions. Preparing a written plan will aid the reforestation process.

Survey Existing Vegetation

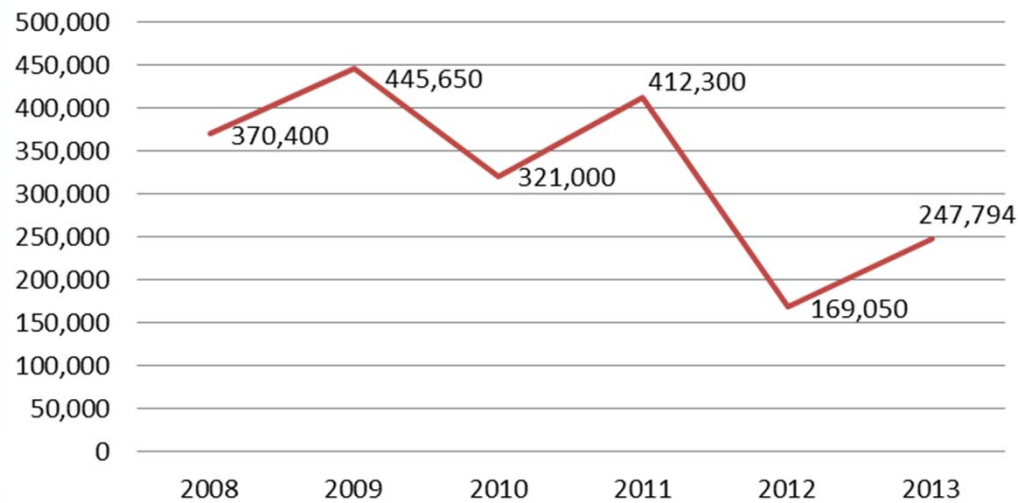
Herbaceous plants and woody shrubs, including non-native and invasive species, often dominate legacy surface mines. Herbaceous plants that are common on mine sites, such as non-native grasses and *sericea lespedeza*, will outcompete young

What's new in ARRI/FRA?

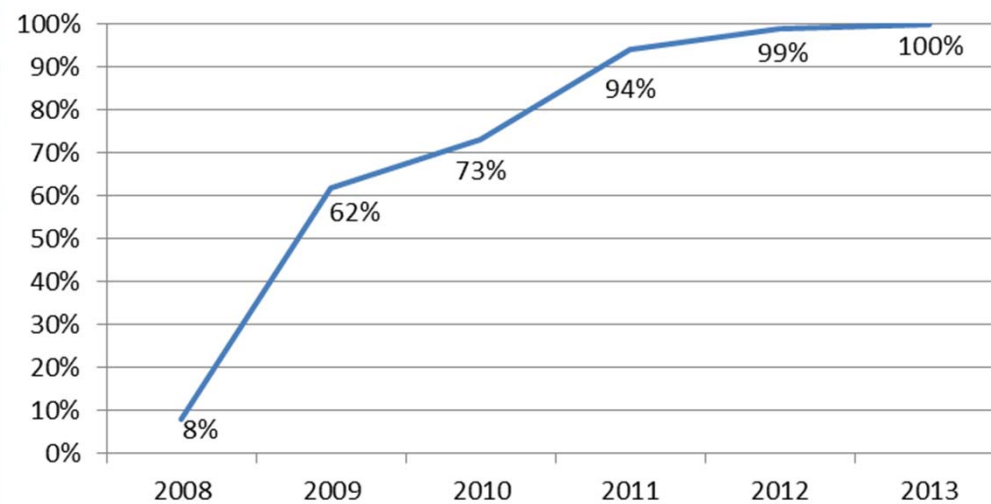
- Forest Reclamation Advisory No. 11
 - Target audience – Landowners with Pre-SMCRA mines on their land.
 - Provides guidance and references for landowners who wish to establish forests on their land.

Tree Planting Progress in Tennessee

Trees Planted in Tennessee



% Planted Using FRA



Appalachian Regional Reforestation Initiative Excellence in Reforestation State Award



Forestry Reclamation Approach

What qualifies a site?

- ARRI Excellence in Reforestation Awards Criteria:
 - “The ARRI Core Team has created an awards program to honor both active and abandoned coal mine reclamation operations from each State in the Appalachian Region that best exemplify the use of the Forestry Reclamation Approach (FRA) in conducting reclamation operations.”

What qualifies a site?

- ARRI Excellence in Reforestation Awards Criteria:
 - “Each State Regulatory Authority (RA) will be responsible for seeking sites for submission. The methods a State chooses for seeking nominations will be at its discretion.”

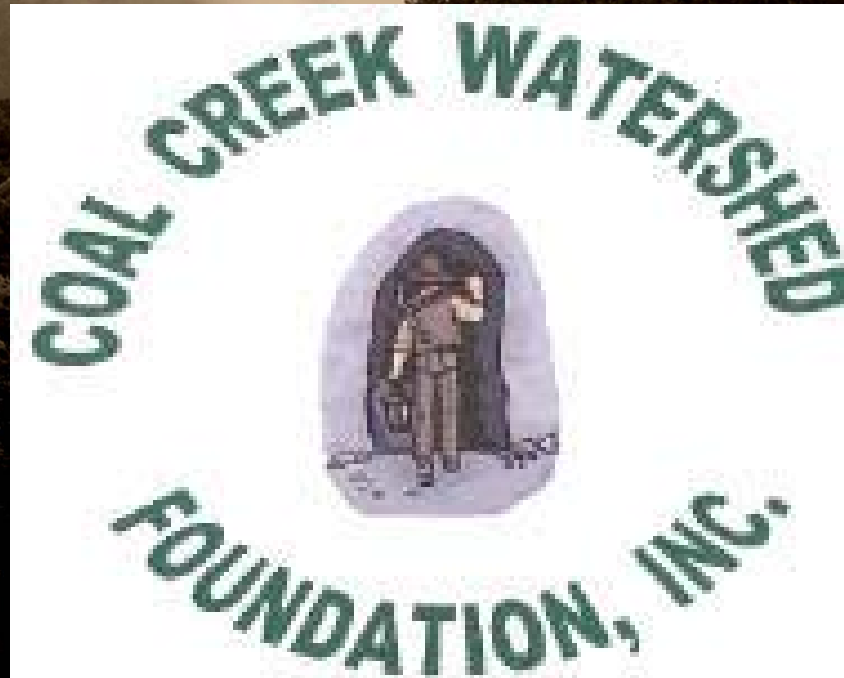


The winner...

- Has planted trees on FRA prepared sites for the past six years.
- Has educated the community on the benefits of reforestation on mine sites.
- Has fully supported ARRI and the FRA through its objective to “improve the quality of life in the Coal Creek Watershed.”

The winner...

- Coal Creek Watershed Foundation, Inc.



Community Education



Community Education



Chestnut Restoration



Chestnut Restoration



6 years of Arbor Day events

- 2008
 - Zeb Mountain



- Coal Creek and Elk Valley Students

6 years of Arbor Day events

- 2009
 - High Point and Zeb Mtns.
 - Over 1200 trees



- Elk Valley, Lake City, and Coal Creek Students
- 100 volunteers



6 years of Arbor Day events

- 2010
 - Cross Mtn
 - 1400 trees



- Coal Creek and Elk Valley Schools
- 110 volunteers

6 years of Arbor Day events

- 2011
 - Kopper Glo mine



- Clairfield and White Oak Schools
- 50 volunteers

6 years of Arbor Day events

- 2012
 - Dalco Deep Mine
 - 600 trees



- Lake City and Norwood Schools
- 115 volunteers

6 years of Arbor Day events

- 2013
 - Triple H Mine
 - 820 trees



- Lake City and Wynn-Habersham Schools
- 100 volunteers

Congratulations Coal Creek Watershed Foundation!

- ARRI Excellence in Reforestation – Tennessee State Award Winner

