

### Mine land reforestation can bring multiple environmental, economic, and social benefits

Today, more landowners and mine operators are reforesting their property instead of turning it into grasslands. They recognize that reforestation delivers substantial economic value as well as environmental and social benefits. This economic value includes the concurrent development of valuable ecological assets and renewable timber resources. Environmental benefits include reduced carbon dioxide in the atmosphere, improved water quality, and habitat preservation. Social or “community” benefits consist of job creation, increased tax revenue, and greater opportunities for recreation and tourism.

The result for landowners and mine operators who choose reforestation is a “win-win” scenario, which often yields improved community relations and greater economic value than can be achieved by traditional alterna-



*This reclaimed area in Tennessee has received final bond release. Species include those that have been planted (e.g., white pine, black alder, green ash), and those that have established themselves through natural succession (e.g., yellow poplar, maple). Photo: Vic Davis, Office of Surface Mining.*



*This healthy 6-year old white pine is growing very well on reforested mine land. Photo: Vic Davis, Office of Surface Mining.*

tives, such as selling land in traditional real-estate markets or leasing it as pasture.

#### What is reforestation?

Reforestation is the re-establishment of a natural forest system on formerly mined lands or other deforested sites.

#### How does reforestation benefit landowners, the community, and the environment?

Reforestation offers significant economic, social, and environmental benefits. These include:

- **Environmental benefits**—Forests can minimize soil erosion (thereby preventing soil and nutrients from entering bodies of water), remove large amounts of carbon dioxide from the atmosphere, conserve water resources, and provide habitats for diverse plant and animal species.

- **Ecological asset value**—By providing environmental improvements, reforestation also produces ecological assets. Ecological assets are tradable credits based on the economic value of ecological “services”—such as removing carbon from the atmosphere—to key stakeholders. Through reforestation, landowners and mine operators may generate carbon sequestration credits, stream and wetland restoration credits, watershed pollution reduction credits, endangered species habitat preservation credits, and potentially other types. These credits can be sold to other companies or “banked” to enhance property value.
- **Timber value**—Forests provide marketable timber and pulp products. In addition, managed commercial timber harvesting can be compatible with the maintenance of ecological assets. Timber harvesting offers additional revenue for landowners and mine operators as well as job opportunities for local residents.
- **Recreational areas**—Forests provide an aesthetic venue for hiking, mountain biking, skiing, seasonal hunting, and other outdoor activities. The development of recreation opportunities supports regional tourism, and benefits area residents.



*Christmas tree farms are found on reclaimed mine land in many areas of the country. Photo: Chuck Meyers, Office of Surface Mining.*

- **Job creation**—Reforestation and forest maintenance activities (including timber harvesting) bring jobs to local communities. As noted above, reforestation also indirectly contributes to the creation of tourism industry jobs.
- **Local tax revenue**—By creating jobs and attracting tourists, reforestation can make a substantial contribution to an area’s tax base.
- **Landowner tax reduction** – Many states offer tax incentives for landowners to choose a forestry land use. These incentives can result in significant property tax reductions.

### **When is reforestation the right option?**

Because many coal mine sites (particularly in the Appalachian region) were originally forests, reforestation is often the most suitable option for reclamation. However, to determine the feasibility of a reforestation project, landowners and mine operators need to carefully consider a site’s productivity potential, reforestation costs, future timber value, and potential for ecological asset development. For many mine sites, reforestation offers optimal economical and environmental value over the long term.