

BETTER RECLAMATION WITH TREES
- A VIDEOTAPE ¹ -

by

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Abstract. A videotape was produced based on ten years of forestry reclamation research in the Central Appalachian coal fields of Virginia, West Virginia, and Kentucky. The purpose of the videotape is to provide information for practicing reclamationists about certain aspects of reclamation that are critical for the construction of productive forest land. The videotape shows how to maximize long-term forest productivity and achieve bond release requirements by considering the special needs of trees with respect to overburden selection and placement, surface grading practices, ground cover establishment, and tree establishment.

Additional Key Words: forest land, compaction, ground cover, productivity.

Reclamation recommendations have been developed to improve the use of mined land reclaimed for forest production. These recommendations are based on research conducted in the College of Forestry at Virginia Tech and corroborate findings from other

reclamation researchers throughout the country. The research was sponsored in large part by the Powell River Project, a cooperative research and public service program located at Virginia Tech in southwestern Virginia. The project was established in 1980 to maximize land-use opportunities for surface mined land and enhance the quality of life for the coal field region of the Central Appalachians. An important land-use in this part of the country is forestry, and accordingly, numerous forestry research projects and extension efforts, including the videotape, have been sponsored by the Powell River project.

¹ Videotape presented at the 1992 National Meeting of the American Society for Surface Mining and Reclamation, Duluth, MN, June 14-18, 1992.

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The process of surface mining and reclamation presents the opportunity to replace poorly productive forest soils with carefully constructed mine soils that can be among the most productive forest soils in the

region. To achieve this productivity, however, it is important that landowners, coal companies, and regulatory agencies understand the establishment and long term growth requirements of trees and how reclamation practices can be manipulated to provide the needs of a healthy forest ecosystem. Consequently, a videotape was developed to help reach people in the reclamation community that might not otherwise be exposed to this information.

Mining and reclamation operations involve several groups of people. The recommendations discussed in the videotape were developed by taking into consideration the concerns and goals of landowners, coal companies, and regulators. The landowners and coal companies are usually separate entities. Whereas landowners will derive the long term benefits of productively reclaimed land, coal companies incur the expenses associated with reclaiming the land. Fortunately, reclamation practices that enhance forest and wildlife opportunities also reduce the costs of reclamation, thereby benefiting both the landowner and the coal company. Furthermore, the recommendations in the videotape do not violate regulations or sacrifice environmental concerns for long term productivity. In fact, adoption of practices which ensure the rapid establishment and growth of a healthy forest will increase soil stability, water quality, and wildlife benefits.

This videotape was developed for an audience of people that have the ability to make a difference in the way that reclamation practices are conducted. Many of these people have never considered the impact of reclamation on forest productivity. These include coal company executives, reclamation

supervisors, equipment operators, regulators, and landowners. The videotape provides practical information in non-technical language designed to explain that reclamation to forest land should involve different practices and look different when finished compared to land reclaimed as hayland/pasture. This 23 minute videotape presents several topics which affect long term productivity and tree establishment success: 1) mine spoil selection for trees (versus grasses), 2) spoil placement and grading practices to reduce compaction, 3) tree-compatible ground cover species to control erosion and improve seedling survival, 4) tree species selection, 5) seedling storage, handling, and planting techniques.

This videotape was developed with funding from the Powell River project and the Virginia Cooperative Extension Service, and with cooperation and review by the Virginia Department of Forestry, the Virginia Division of Game and Inland Fisheries, the Virginia Division of Mined Land Reclamation, and numerous landowner and coal companies throughout the Central Appalachian region of Virginia, West Virginia, and Kentucky. The videotape was released in late 1991 and more than one hundred copies were distributed by the beginning of 1992. Hopefully, this videotape will increase the productivity of land reclaimed with trees.

Copies of the videotape, entitled "Better reclamation with Trees" are available through the Virginia cooperative extension Service. To obtain a copy, mail a \$20 check (payable to Virginia Tech Treasurer) to:

Videotape Request
Extension Distribution Center
112 Landsdowne Street
Blacksburg, VA 24061-0512