

MANAGEMENT FOR RECREATION AND ENVIRONMENTAL EDUCATION BENEFITS AT TVA'S LAND BETWEEN THE LAKES¹

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The Land Between The Lakes (LBL) is a demonstration in environmental education, outdoor recreation, and resource management comprising 170,000 acres between Kentucky Lake on the Tennessee River and Lake Barkley on the Cumberland River (Figure 1). It is being developed and managed by the Tennessee Valley Authority, a Government corporation of the United States.

Since its inception in 1964, LBL has been managed under a multiple-use concept. Open space is intermingled with the predominant forest setting to provide an aesthetically pleasing background for environmental education and outdoor recreation. A 1850's farm is under construction to depict early periods of the area's history. A well-balanced and diverse wildlife population is being maintained. Facilities are provided to accommodate both pure enjoyment and intensive study of the out-of-doors.

A wide variety of activities in LBL, from hunting to environmental education, is wholly or in part

related to management of its natural resources. Hunting and fishing are well-known resource-dependent recreation activities; however, the interests and activities of photographers, artists, birders, hikers, horseback riders, campers, field trail enthusiasts, educators, and many others are greatly enriched by the wise use and management of the resources.

Resource Priorities. Environmental education and recreation have top priority at LBL. Environmental education programs and facilities attract the general public as well as teachers, students, and researchers. The 800 campsites, 27 lake access areas, year-round ground camps, managed hunts, and other high-value features accommodate about 2 million visits each year.

Forest and wildlife management, then, have become tools through which environmental education and recreation benefits are made a reality. Forested areas are among the most favored by the recreating public, and the number

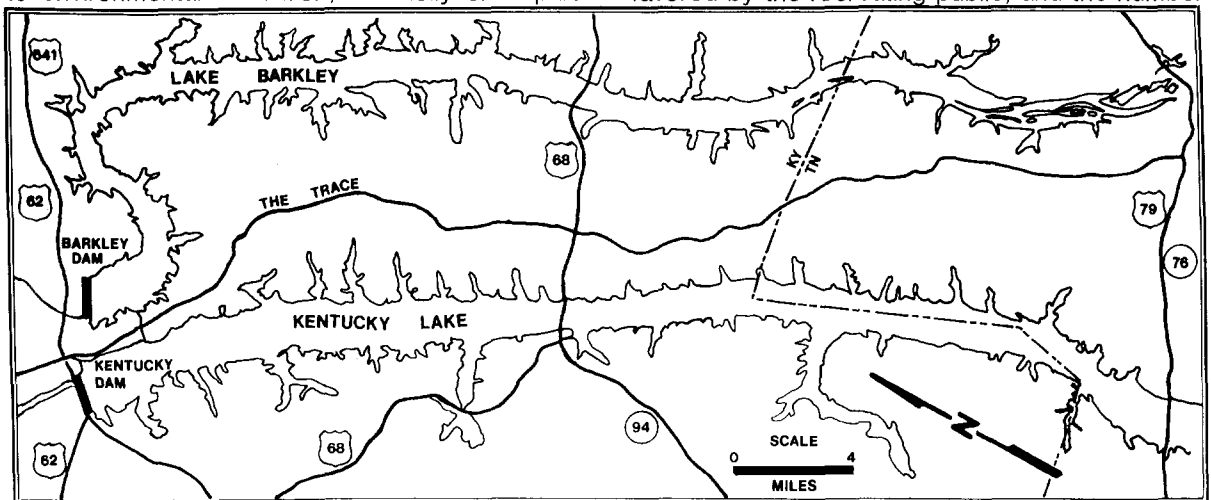


Fig. 1. Land Between The Lakes, TVA's 170,000 acre demonstration area for environmental education, outdoor recreation, and resource management.

¹Presented at the annual conference of the International Society of Arboriculture in Toronto, Ontario in August 1978.

of areas of forested lands used for recreation is likely to increase. These forests need intensive management and care if they are to remain in an aesthetically pleasing condition. Specialized forms of forest management and silviculture are needed to maintain forest quality in the face of environmental education and recreation pressures.

The key lies in distributing timber harvest and other management activities in small, selected land areas (usually less than 40 acres) throughout LBL. This serves to reduce the negative aesthetic impact usually associated with timber harvest operations, and at the same time, provides an overall improved wildlife habitat.

A variety of timber harvesting methods is used. Single tree selection is used to thin stands in order to maintain stand vigor; group selection and forms of shelterwood harvests are used to encourage oak-hickory regeneration. Clearcutting is performed in special cases, to create wildlife woods openings and to salvage usable timbers resulting from wildfire or windstorms. All forms of harvest provide for the retention of wildlife den trees and trees of flowering species. Special harvesting techniques are used in preparing areas for future campground development. In this case, low-vigor, large-sized individual trees and those tree species not able to withstand visitor impact are removed.

Open lands play an important part in providing a

quality wildlife habitat. In fact, it may be a limiting factor in maintaining adequate numbers of wildlife species since only a few species are true creatures of the mature forest. A major objective is to have open land dispersed at ½-mile intervals throughout LBL. This takes the form of agricultural lands, woods openings, food plots, utility rights of way, and pasture. Approximately 4,500 acres of land is farmed each year under a cooperative farming arrangement with local farmers. The farmers leave between 25 and 30 percent of the crop in the field for wildlife use in lieu of cash payment. Other open land is mowed, disked, or burned regularly to maintain the desired successional stages or maintained in cover and food crops.

Management Operations. LBL is subdivided into 65 compartments (Figure 2) which average 2,500 acres. Each is assigned one of several color codes representing a single year of the adopted seven-year cycle; colors are dispersed evenly. All areas of the same color are operated during a given year of the seven-year cycle. Timber is harvested, food plots are planted, and other planned work is done. Plans are based on an inventory made one year prior to entering a compartment. The inventory establishes existing conditions. From it, recommendations are made concerning needs for habitat improvement and treatment of special areas. A cutting schedule is then set for

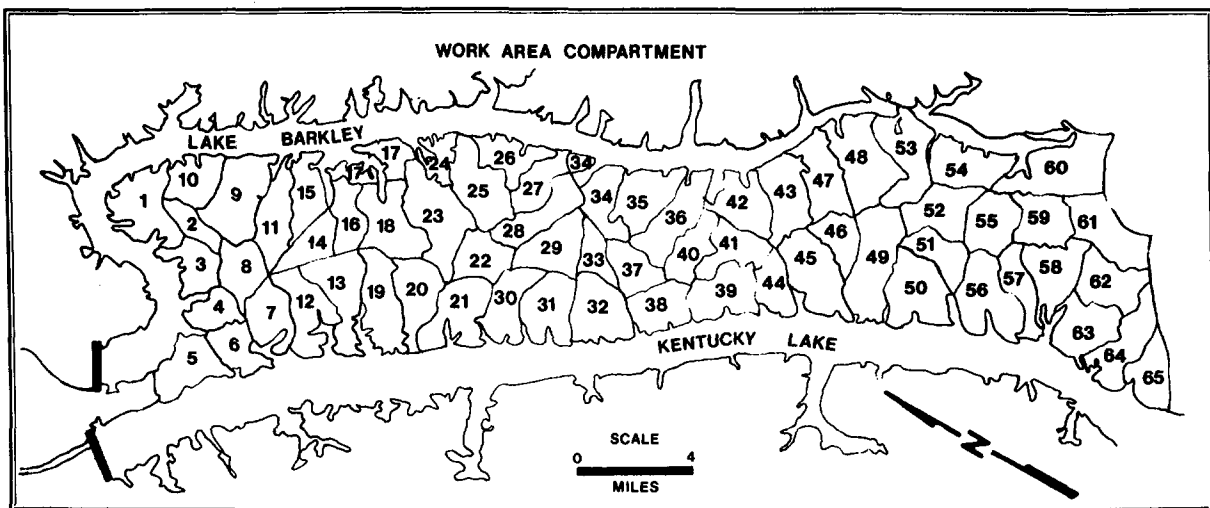


Fig. 2. Land Between The Lakes is subdivided into 65 compartments of about 2,500 acres each to facilitate management practices.

the area. Annual harvest is usually about 3 to 4 million board feet, while annual growth is about 20 million.

A typical compartment and the operations planned for it are shown in Figure 3. Note timber harvests extend to roads. There is no policy against crossing roads and trails. To the contrary, TVA believes this to be an educational aspect of the overall strategy and means for the public to view its operations. Aesthetic treatments shown are used to enhance a particularly pleasing situation along heavily traveled roads. Two good examples are management for tunnel effect, trees on either side converging overhead, and use of shelterwood harvests. All harvest areas are refurbished. Log decks and roads are leveled and drained, and erosion control structures are built and then seeded to grass.

Most harvesting is performed through one contract duly executed with a single contractor. This arrangement has proven highly satisfactory. Once the contractor has become familiar with the stringent contract provisions, he is able to do an excellent job of logging. The arrangement also has served to reduce administrative costs.

Summary. TVA is using its LBL national recreation and environmental education demonstration for fun and learning of a very practical nature. By choice, visitors can relax in beautiful surroundings and, with little extra effort, learn what it takes to provide such an environment. Our message is: "Enjoy yourself to the fullest, but be aware of what is going on so you can tell others how multiple resource management works."

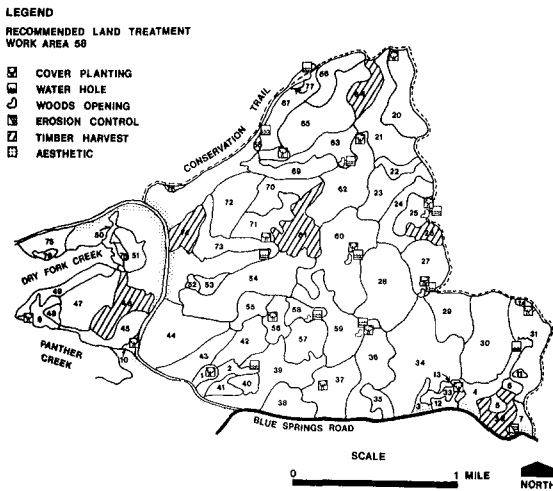


Fig. 3. A typical management compartment illustrating operations planning procedures.

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ABSTRACT

Shurtleff, Malcolm. 1978. **Rust-resistant junipers.** Grounds Maintenance 13(4): 50, 52.

There are literally hundreds of juniper (*Juniperus*) species, cultivars or varieties and forms that differ greatly in shape, size and color. Many of these junipers have been rated as resistant or susceptible to the two most common rust diseases: cedarapple and cedar hawthorn rust.