



**LAND BETWEEN THE LAKES NATIONAL RECREATION AREA
PLANNING BACKGROUND DOCUMENT
JUNE 4, 2003**

INTRODUCTION

Land Between The Lakes National Recreation Area (LBL) was transferred from the Tennessee Valley Authority (TVA) to the United States Department of Agriculture Forest Service (FS) on October 1, 1999, under the provisions of the LBL Protection Act of 1998. The Act calls for the Forest Service to develop a Land and Resource Management Plan (LRMP) that complies with the basic laws applicable to all National Forests and will guide management direction for the next ten to fifteen years. The plan will describe the public's expectations for desired conditions at LBL and the strategies for achievement of the desired conditions; LBL has named this planning process "Focus on the Future". The plan will not resolve issues in detail, but it will provide a general framework by which future decisions will be made.

The National Forest Management Act (NFMA) requires LBL to assess the existing conditions and describe potential changes to the existing plan. The most recent strategic management plan is TVA's 1994 LBL Natural Resources Management Plan (NRMP). Since Congress granted LBL authority to use the NRMP, as appropriate, and since much of this plan is still valid, LBL has opted to use the NRMP as the "plan of record" from which we will base analysis for potential improvement. The Forest and Management Area Assessments section of this background document cites the primary changes that should be addressed in the LRMP.

This DOES NOT mean that most of the decisions have been made. This Planning Background Document is a good way to document some of the things we need in the process and share LBL's assessment of existing conditions. The Notice of Intent (NOI), published in the Federal Register, is a requirement of NEPA, however. It begins to focus the critical issues to be decided by the plan and identifies existing management direction. Given it is less than 10 years old, some parts of the NRMP are still working well. Using the viable parts of the NRMP will streamline the process. The public is encouraged to provide comments about any conclusions or assumptions described within this document.

Within the Protection Act, Congress designated LBL as an area of demonstration and innovation and to share the results with other agencies. The FS has struggled to balance the time and expense required to develop complex and detailed LRMPs with the need to implement decisions and actively manage National Forests while still keeping the public actively engaged in the planning process. LBL will use its demonstration role to innovatively produce a good plan, completing the process in less than two years (a reduction of nearly 60 percent of the national average). The LBL Advisory Board, created by the Protection Act and charged with advising the Secretary of Agriculture on ways to promote and improve public involvement in the planning process, is supportive of this initiative.

We will focus on the decisions legally required to be addressed by the plan, and analyze only the issues that need to be decided in order for LBL to operate those programs once the Record of Decision is signed. Public involvement is needed to help LBL prioritize the mix of goods and services to be provided in the face of potential budget reductions.

BACKGROUND ON LBL PROTECTION ACT

Beyond transferring management responsibility for LBL, the Protection Act defines the LBL mission "to protect and manage the resources of the Land Between The Lakes for optimum yield of outdoor recreation and environmental education for the American people. In so doing, to utilize the demonstration assignment to authorize, cooperate in, test, and demonstrate innovative programs and cost-effective management; to help stimulate the development of the surrounding region; and to extend the beneficial results as widely as possible." This mission must be supported by the LRMP.

CEMETERIES, FEES AND MINERAL RIGHTS

The LBL Protection Act provides clear and legally binding management direction for cemeteries, fees, and mineral rights. The FS shall maintain an inventory and ensure access to cemeteries within LBL. The Act precludes mining and mineral leasing. However, the FS may use mineral materials for the development and maintenance of the Recreation Area. The Act allows a reasonable admission fee for specific facilities and programs, but precludes a general entrance fee. Since the Protection Act defines management direction in these areas, the LRMP will not address them.

REQUIREMENTS OF NATIONAL FOREST MANAGEMENT ACT (NFMA)

The LRMP will be analogous to a county or municipal zoning plan. The following six decisions are made in an LRMP, as required by the planning regulations (1982 36 CFR 219):

- Area-wide multiple-use goals and objectives. Goals: A condition to be achieved. Objectives: Concise, time-specific statements of measurable results that respond to the goals.
- Area-wide management requirements. These are limitations on management activities, or advisable courses of action that apply across the entire area.
- Management area direction applying to future activities in each management area. This is the desired condition specified for certain portions of the Area, and the standards to help achieve that condition. · Lands suited and not suited for resource use and production. · Monitoring and evaluation requirements to gauge how well the plan is being implemented.
- Special Designations and Recommendations to Congress, if any such as Wilderness or Wild and Scenic Rivers.

Much of the new NFMA-compliant LRMP will contain the same direction as the NRMP with updates to supporting data, presented in a different format. This strategic document will not resolve all issues in detail, but will provide guidance for future resolution. Concerns raised by the public that are not addressed in the LRMP can be addressed by LBL management in the future. In some cases changes will be the subject of Plan amendment or revision.

NEED FOR PUBLIC PARTICIPATION

Everyone is directly or indirectly affected by the LRMP, and your opinion or idea is important. Informed decisions are based on careful consideration of diverse perspectives. The LRMP will reflect the public's interests and values, using the best available science to support LBL's mission. This process is not based on a voting or petition system. The quality of input carries more weight than quantity. Your input is critical in shaping an appropriate and balanced future for LBL. Even if you like things as they are, the only way to ensure the decision includes your views is to become actively involved. You can help develop a balanced plan that will guide the management of LBL's environmental, recreational, cultural, and natural resources for the next 10 to 15 years. A variety of public scoping opportunities have been scheduled at convenient times to help everyone participate. Through research and

public collaboration, and by integrating science into decision-making, we can develop a plan to ensure sustainable management of LBL.

LBL is a regional economic centerpiece, a national destination, and a national Demonstration Project site. Viewing LBL within this context is important when developing desired conditions. Facilities and services provided on LBL should complement and not compete with local interests. You can help balance these benefits LBL is uniquely poised to provide and, given the importance of LBL to the region, help shape the future of western KY and TN.

To learn more about how to participate or to get your name on the mailing list for future information, contact us by e-mail at FocusLBL@fs.fed.us, by telephone at 270-924-2161, or by writing to Area Planner, Land Between The Lakes National Recreation Area, 100 Van Morgan Drive, Golden Pond, KY 42211.

EXPECTED PROCESS AND TIMELINE

Planning Background Document

Here, we make an assessment of the current conditions at LBL compared to the desired conditions as described by the NRMP. This assessment identifies opportunities for improvements based on new information, including FS directives and public input to date. This report will be available for the public soon after the Federal Register publication of the NOI announcing LBL's intent to prepare a draft Environmental Impact Statement (EIS) to support the planning process.

Notice of Intent (NOI)

The NOI is an official announcement in the Federal Register informing the public of LBL's intention to prepare an environmental impact statement (EIS) in conjunction with the development of a LRMP. The NOI invites comment on the scope of the decision to be included in the EIS and announces public participation opportunities.

Initial Public Input — Scoping

After an official NOI announcement, LBL will begin meetings to solicit input from the public on the future direction of LBL and this Planning Background Document. The information collected at these meetings and any written comments received to date will be summarized, posted on the website, and used to refine the issues described below. This collection and analysis of public input is defined as "scoping". The FS will conduct further resource data analysis during this "scoping" stage.

Draft and Final Area Plan

The FS will work closely with the public to develop alternatives for revising the NRMP based on the information received and results of analysis. All alternatives must comply with direction of the Protection Act. The environmental effects of each alternative will be described in a Draft Environmental Impact Statement (DEIS) that will be open to public comment for 90 days (a specific requirement of NFMA). Workshops will likely be conducted to help explain what is being proposed. The preferred alternative is called the Draft Area Plan (DAP), which is further described below. The DAP and the DEIS are expected to be published in early 2004. Public comments on the DAP and DEIS will be analyzed and used by the FS to make any needed changes. The Area Plan and Final EIS are expected to be complete in late 2004.

Interdisciplinary Planning Team

LBL identified an interdisciplinary Planning Team to lead development of the Area Plan. The Regional Forester and the LBL Area Supervisor make official decisions for the planning process.

Plan Implementation

The goals, objectives and standards contained in the Area Plan will guide later site-specific project decisions. Monitoring and evaluation of the area will also be compliant with the plan.

MOCKUP OF NEW PLAN / WHAT'S INCLUDED

Philosophy: The LRMP makes few specific decisions other than those legally required. Instead, it creates a framework of desired conditions and spatially describes how areas of LBL are to be managed. Direction is stated in descriptive terms that help the public understand what can be expected and will help guide decision-makers at the project level. The LRMP clarifies priorities, articulates standards by which actions can be conducted, and describes what one might expect to find in the future.

Layout: The LRMP will be divided into major sections to make it easy to use and understand. It will begin with an introductory summary and will help clarify the major emphases of LBL and its overall goals and objectives. The next section lists overall "operational standards" that are conditions all future actions must observe. Standards are further defined as courses of action or levels of attainment required to achieve the goals and objectives and are usually developed when laws or policies do not exist, when implementation benefits from further clarification or when unacceptable impacts are expected if a standard were not in place.

On a landscape basis, the overall area of LBL is allocated into 10,000 to 20,000-acre blocks called management areas (MA). MAs are established to more clearly describe desired conditions and to prioritize strategies and direction for each part of LBL. We expect between 10 and 20 MAs covering LBL, spatially separated by other areas of differing emphases. For example, an area might be designated as "Environmental Education Area" or "Primitive Backcountry, Non-motorized Area." Maps and descriptive text will be provided for each individual MA. Desired outcomes and conditions are described in relative terms to those currently existing in that geographic area. Examples that might be used to communicate what will happen in the future are: "this activity is expected to increase (decrease) slightly," "this will remain approximately the same" or "these opportunities will be the primary emphasis in this area". Specific decisions will not appear within the MA write-ups, except when needed to describe prohibited practices or uses. There are often MA-specific standards provided that more clearly describe how activities are to be conducted in the Management Area.

The LRMP concludes with a description of how the Area will be monitored, including measurement procedures and performance indicators, to help the FS and the public evaluate its implementation and effectiveness. Appendices include a glossary and rough estimates of expected outcomes over short- and longer-term time periods.

DIRECTION, CURRENT STATUS AND NEED FOR CHANGE

Forest and Management Area Assessments

Below is a discussion of the current management direction for LBL based on the NRMP, and describing any perceived shortfalls or opportunities for improvement.

Recreation

The 1994 NRMP has eight chapters that address program objectives and guidelines for the management of natural resources. It appears, on the surface, this plan overlooked the primary purpose of LBL since there was not a chapter specifically devoted to recreation or environmental education. In reality, these are integrated into all eight chapters of the NRMP. LBL's recreation program currently provides a wide variety of recreational opportunities. Camping, hiking, biking, boating, fishing, hunting, wildlife viewing, driving for pleasure, horse back riding, off-highway vehicle riding, picnicking, canoe-

ing, and nature photography comprise most of the recreational activities available at LBL. There is no question whether the public desires these activities in the future. The current level of documented visitation in each of these activities shows public demand justifies providing the opportunity. National recreational trends of user groups and the settings to provide quality recreation opportunities can be found in the National Visitor Use Monitoring (NVUM) study. The volume and location of each activity and the long-term sustainability are the issues related to recreation at LBL. A mix of active and passive, motorized and non-motorized, developed and backcountry activities are currently permitted in LBL. The distribution and balance of elements of the recreation program, and the question of whether to increase or decrease specific recreational opportunities, will be reviewed through public input and review of current information. This analysis will examine current and anticipated user demands and needed changes.

No significant changes in the direction of recreation mixes and uses are expected in the LRMP, unless public input during scoping indicates otherwise. Unlike the 1994 NRMP, the LRMP will explicitly address recreation as required by NFMA and the LBL Protection Act.

Scenery

Visual management has been important since the initial designation of LBL. The high quality scenery that now exists is because of active management since 1963. Chapter 5 of the NRMP addresses the visual resource. All management practices have consistent visual management objectives applied to activities across LBL.

Information in the NRMP related to visual management activities can be used to evaluate alternatives in the area planning process. The visual quality zones along roads, trails, and shoreline and around facilities designated in the NRMP can be used in the visual resource inventory. Using the buffer guidelines of the NRMP, 49% of the land area is in a visual quality enhancement zone with 51% remaining as general forest areas (including thirteen scenic drives that will add to the inventory data).

No significant scenery management changes are expected in the LRMP. The visual resource will be inventoried and evaluated as required by the planning regulations.

Environmental Education

Environmental Education (EE) is part of LBL's mission and thus incorporated into all aspects of the NRMP. While EE is incorporated into all activities in LBL, most of the EE program delivery to the public is facility based. These facilities include Woodlands Nature Station, The Homeplace Living History Farm, Elk & Bison Prairie, Golden Pond Planetarium, and Brandon Spring Resident Center. The FS has established a goal to provide an EE message to every visitor, each time they come to LBL, whether visiting a facility or not.

The articulation of a more integrated environmental education strategy to accomplish this objective must be added to the new plan. The LBL Protection Act, not the planning regulations, mandates this requirement.

Vegetation Management

Forest Lands: The NRMP for the forest management program (Chapter 3) directs a mature, productive oak hickory forest with a range of size and age classes to meet wildlife habitat needs, enhance visual quality of the landscape, promote use of environmentally responsible management practices, demonstrate sustainable forest management compatible with other uses and to research methods and techniques in ecosystem management. This direction remains sound in 2003.

Approximately 89% of the land base is forest cover, comprised primarily of the oak-hickory type with the remainder in maple-beech, pine, bottomland hardwoods and reverted old fields. The Continuous Forest Inventory (CFI), surveyed in 1996, demonstrates a 30-year trend towards more big trees with a major shift from small saw-timber to trees over 16 inches in diameter within the past decade. Because

LBL is only cutting a small percentage of its net annual growth, the forest will continue to grow older and larger. The CFI 30-year trend indicates an increase of maple, beech and poplar trees and a decrease in oak trees. CFI further predicts a rapid growth in maples, beech and poplar, based on cubic foot volumes, however this vegetation won't comprise a major cover type for many years.

Since the transfer of LBL to the FS, timber harvesting has been further reduced due to orientation of the new staff and higher priority transitional issues.

This data indicates a need for change to maintain and regenerate the oak-hickory forest types if wildlife habitat needs are to be met. Based on public opinion, forest management for the promotion of wildlife habitat, forest health and landscape diversity is of higher concern than set levels of timber sales.

Old growth: Old growth is referred to as deferred forest management in the NRMP. The plan deferred 9,060 acres from forest management until interdisciplinary review processes selected 4,830 acres of this total to be included in the designation as biosphere reserve core areas. These core areas would be minimally disturbed areas. The remaining 4,230 acres would then be available for management, based on site capabilities and conditions. To date, these areas have not been selected. There is no clear definition of old growth but LBL currently relies on the FS Region 8 (R8) Guidelines for Old Growth. R8 guidelines need to be followed for old growth designation and delineation. Biosphere reserve core areas are the most likely acres of LBL that would be selected for old growth in the LRMP. Direction for the remaining deferred areas needs to be clarified.

Open Lands: NRMP direction provides for early plant succession to meet wildlife habitat needs, for visual quality, for supplemental wildlife food and cover and to demonstrate ecological restoration. Open lands total 7% of the total land base, excluding biosphere reserve core areas. Objectives would be met by managing five categories of open lands including cooperative farming, woods openings, wildlife plantings, other (reverting) open lands and miscellaneous lands. (See Appendix A)

- Co-op farmlands: 3,400 acres of prime farmland for production of row crops and 500 acres for grass/legume hay crops. 20 percent of grain crops are left in place for wildlife use.
- Woods openings: 350 acres out of 1,050 are managed annually (a 3 year cycle) that allows plant succession to advance only to the grass/legume or forb stage. Hay may be harvested.
- Wildlife food plantings: 600 acres annually. Variable means to control vegetation competition are not always successful and reduce this acreage. Over 90 acres are annually recovered through ecological restoration sites that are managed for native grasses and forbs.
- Other open lands: 900 acres per year (over a 4 year cycle) to prevent reversion to forest lands, are accomplished by disking, burning, chemicals or mowing.
- Miscellaneous: 2,650 acres (including right-of-ways, waterfowl plantings, bison range, scenic vistas, and utility corridors) experience varied treatments.

Open land acreages have decreased from 7% to approximately 5% due to reduced active management and forest encroachment. More acres per year of maintained openings would prevent further reversion. Other concerns are determination of cumulative effects from use of herbicides, possible restrictions of certain chemicals, access to fields and storage of crop (hay). There is increased interest in habitat partnerships to create more restoration acres. Recent developments in bio-intensive Integrated Pest Management surface the need for further research sites. These, and related issues need to be addressed in the LRMP.

The vegetation issue to be addressed in the LRMP is whether to change the land management direction from the direction set in 1994, including total acreages and appropriate mix of management practices of the forest and open lands. LBL expects to continue most of the open land management direction of the 1994 NRMP.

Fire Management: Wildfires are suppressed as necessary to protect visitors, facilities, and adjacent landowners. Fires are suppressed in biosphere reserve core areas at the discretion of the Area Supervisor and may be allowed to burn under certain weather conditions, following a biosphere fire plan.

The states of KY and TN Divisions of Forestry provide fire suppression and reconnaissance service through Memorandums of Agreement. LBL has trained personnel in wildfire methods who supplement any suppression efforts. Fire use areas need to be determined and delineated.

Prescribed burning may be used as necessary to regenerate oak and pine stands, manage wildlife habitat, maintain fire dependent plant communities (warm season and tall grass prairie grasses), reduce leaf litter in recreation areas, and to reduce undesirable vegetation in open lands.

Prescribed burning is allowed for seedbed preparation within the 400 acres/year of timber stand improvement areas, 90 acres of ecological restoration open lands, and 900 acres of maintained open lands. The 2,650 acres of miscellaneous open lands have variable treatments allowed but burning is specified only for clearing of viewing areas. Prescribed burning is listed in the NRMP as a practice allowed for forest management under passive management of the pine ecological study areas. Currently 800-1200 acres annually are treated by prescribed fire, primarily in open lands and around facilities. Allowing fire to run under the forest canopy is not a current use although it is a preferred treatment for oak-hickory regeneration and fuel reduction. Clearer direction for the use and volume of prescribed fire is needed.

Fish, Wildlife and Habitat Resources

Habitat management direction for wildlife in LBL provides for diverse habitat and overall biological diversity with many successional stages of vegetation. Mature oak/hickory cover is favored for productive mast crops. LBL's forest cover type primarily supports upland plant and animal species. There is little wetland or bottomland habitat after the impoundments of Kentucky Lake and Lake Barkley. Developed man-made wetlands ? Bear Creek, Long Creek, and Prior Creek ? are managed using moist soil techniques. There are an estimated 1,300 plant species scattered across LBL's landscape.

Management Indicator Species (MIS): NFMA regulations require selection of MIS and linking MIS to habitat objectives. There is a need to incorporate monitoring of these species habitat into the LRMP monitoring chapter.

Proposed, Endangered and Threatened Species (PETS) LBL's NRMP maintains a list of species titled "Federal and State Listed Endangered, Threatened and Sensitive Species of LBL" to guide management decisions. This list is similar to the Proposed, Endangered and Threatened Species (PETS) and Management Indicator Species (MIS) lists required by NFMA. (See Appendix B) This list includes state listed species along with federal listed species. The Endangered Species Act and Forest Service call for development of a PETS list. The PETS list needs to be addressed in the monitoring chapter of the LRMP. A biological assessment (BA) is required to be completed for each federally listed species under formal consultation with the USFWS.

Sensitive Species: State sensitive species listed in the NRMP will be compared to the R8 RF's Sensitive Species list. A separate biological evaluation (BE) with consultation with USFWS needs to be completed on these species. The LRMP should address the need for an RF sensitive species list.

Migratory Birds: Pursuant to Executive Order 13186, Migratory Bird Treaty Act, migratory bird species have only cursory mention in the NRMP under discussion of long-term population trend monitoring and breeding bird counts. The Cerulean warbler, a C2 species, is identified as a Neotropical migratory bird. Conservation measures for the identified migratory bird species, and other relevant

birds of conservation concern, should be incorporated into the LRMP.

Required MIS, PETS, sensitive species, and migratory birds lists must be reviewed and updated in the LRMP. BA's and BE's will be completed for federal and regional listed species. Directions for management of habitat to protect these species will also be addressed.

Air, Soil, and Water Resources

Air: The air resource is not addressed under the current NRMP. TVA continues to monitor air quality over LBL, in conformance with clean air regulations of their power generation. There is significant data from the monitoring stations in place at LBL. Prescribed burning on LBL is coordinated through the appropriate state agency for smoke management and air quality control.

Soil: The soil resource is not addressed under the current NRMP. Site suitability for management activities should guide any decisions. The LRMP needs to incorporate R8 Soil Quality Standards, as appropriate to LBL, for measures of quality, disturbance, and establishment of monitoring protocols for long-term productivity.

Water: Objectives of the water resource program at LBL are to protect and maintain aquatic and wetland ecosystems, provide diverse aquatic and wetland habitat and provide information about water quality values to the public. LBL does not have jurisdiction over the two large lakes. TVA and the Corps of Engineers share regulation jurisdiction of Kentucky Lake. The Corps of Engineers has regulatory, navigational and management jurisdiction over Lake Barkley. All water resources that LBL manages are classified as warm water fisheries. (See Appendix A)

Water quality is managed through implementation of stream management zones (SMZ) of varying widths, dependent on side slope. Perennial and intermittent streams generally have SMZ of 100-200 feet where management activities are restricted primarily for protection of bat habitat. Co-op farmlands, because of their generally flat (<5%) slope, have a minimum 10-foot buffer. Recent regional water quality assessments have not shown problems in LBL.

The LRMP should define, delineate and adopt management guidelines for riparian areas. Regional Soil and Water Conservation Practices may be adopted as best management practices to mitigate effects to the soil and water resources and to assure water resources meet the intent of the Clean Water Act.

Heritage Resources

A Heritage Resource Management Plan (HRMP) was finalized in March 2003 and has current information to be incorporated into the planning record. Strategies are needed in the new plan to guide future decision-making, comply with heritage management regulations, and ensure sensitivity to these important resources.

Infrastructure Analysis

With development beginning in 1964, most of LBL's current infrastructure was built during the late 60s and 70s, and some facilities are at the end of their design life. Several facilities have been closed due to low use and high maintenance costs: part of Rushing Creek, Youth Station, Empire Farm, and Silo Overlook.

Recent efforts have been to standardize utilities, upgrade the electrical service, improve reliability and influence the built environment. This is being accomplished by reducing deferred maintenance backlogs, focusing on restoration activities at heavily visited sites, primarily for safety and operational efficiencies. The natural features are the focus on LBL and the buildings should blend in with landform and setting.

The transportation system on LBL is a mix of roads that were in place at the time of designation

and new routes that access facilities built since that time. (See Appendix C) The Protection Act designates the maintenance of the Area Highways to the states of TN and KY. This equates to 43.1 miles in TN and 75.6 miles in KY. The Federal Highway Administration did a study on these roads and estimates 39 million dollars are needed for maintenance over the next 10 years. Roads are essential for LBL to meet its mission and for the public to enjoy LBL.

LBL expects to continue the current direction regarding infrastructure management, unless public scoping results in the need for a different direction. Any direction regarding facilities management at LBL must be consistent with the environmental education, recreation, wildlife diversity, and economic sustainability mission of the LBL Protection Act. The infrastructure decisions will not be specific in the LRMP, except as infrastructure needs relate to the allocation and strategic direction of management areas.

Social and Economic Assessment

LBL maintains a database that allows tracking of the market segment (families with children, mature adults, young adults and groups) of the two million annual visitors, where they live and when they visit. Based on this data, we know the following about LBL visitors:

Families with Children:	36%	visits peak Jun-Aug
Mature Adults:	41%	visits peak May-Oct
Young Adults:	22%	visits peak Apr-May
Groups:	0.9%	visits peak Apr-May & Sep-Nov

LBL visitors come from three major areas: 67% local visitors from the counties surrounding LBL, 21% regional visitors from adjoining states, and 12% national visitors from the rest of the nation.

There are vast amounts of data available. Appendix D reflects the pertinent data to be considered when making plans for LBL programs and the use of LBL. Reasonable conclusions can be drawn from this data, such as:

- A relatively equal balance of recreational opportunities should be made available for males and females and for each market segment (age group)
- More than 70% of LBL customers make less than \$50,000 per household, making free or extremely affordable recreation alternatives essential.

SUITABLE USES AND LAND ALLOCATION

Timber

In the NRMP, all of the 151,550 forested acres of LBL have been designated for potential forest management activities and delineated into 65 work areas. These work areas are collated into 7 work area sets, to correspond to a 7-year cycle of forest management activities. Available forest acreage for timber harvest approximates 2,880 acres/year. Additionally, 400 acres of timber stand improvement activities on mesic forest areas are currently allowable to reduce undesirable tree species.

The forestlands are divided into suitable categories for even-aged, uneven-aged, and passive management. (See Appendix A) This equates to a 150-year rotation for hardwoods and a 60-year rotation for pine. This allocation includes 29,960 acres of low-intensity uneven-aged management where timber harvest would occur only to maintain or restore unique ecological communities. Suggestions have been made to designate LBL as unsuitable for timber production. This does NOT mean that timber sales do not occur?it simply clarifies that timber removals are only accomplished to enhance habitat, improve forest health or visual objectives. Public comments indicate general satisfaction with the forestland management and allocation of the NRMP and there appears no need for change at this time.

Open lands

Refer to "Open lands" on pages 7 and 8 of this report. Public comments indicate general satisfaction with the distribution of open lands management of the NRMP and there appears no need for change at this time.

Rangelands

Rangeland is not designated under the NRMP. Two fenced pasture areas are designated for bison and managed under miscellaneous open lands. Open lands in general are not well suited for grazing permits because of their scattered locations and small size. While the fields around Empire Farm may be suitable as pastures, public comments indicate general satisfaction with the absence of grazing permits at LBL and there appears no need to address this issue in the LRMP.

Wilderness

LBL has no congressionally designated Wilderness. NFMA requires LBL to conduct an analysis of areas that might be suitable for Wilderness designation when areas may contain wilderness characteristics. The history of land use on the area that became LBL was resource based and intensive. Farming, logging, iron industry, community development and transportation systems have all impacted the area. Many building foundations are left where structures once stood. A few isolated buildings can still be found and are evidence of the area's history. Many cemeteries are spread across LBL, as it was tradition to be buried on the family homestead. Access to these areas, specifically provided in the Protection Act, combined with other transportation needs of visitors and the managing agency will tend to make acreages of non-motorized lands isolated and relatively small.

Solitude can generally be found in the 42,500 acres (25% of LBL) of the land designated in the Biosphere Reserve program core areas. LBL needs to evaluate whether any land could be designated as Wilderness per the forest planning regulations. It is expected motorized access needs for research within Biosphere Reserve areas would be in conflict with Wilderness designation.

No roadless or Wilderness designations are expected in LBL after evaluation during the planning process, however as noted below, Biosphere Reserve designations are expected to remain unchanged.

Biosphere Reserve Core Areas

The entire LBL and 17 surrounding counties were designated as an International Biosphere Reserve (IBR) in 1991, as part of the Man and the Biosphere Reserve program of the United Nation Education, Scientific and Cultural Organization (UNESCO). Great Smoky Mountains National Park and Mammoth Cave National Park also hold this designation. (See Appendix A)

It is important to remember that Core Area does not mean roadless area. Most Core Areas have some roads permissible for research activities. It is expected that the 42,500 acres of Biosphere Reserve Core Areas will be retained and no changes are needed in management of the Core Areas.

DESIRED CONDITIONS AND STANDARDS

Desired conditions and standards in the existing NRMP are in many ways still applicable. The primary area of change will be to include those program elements that have been described in the sections above as either missing or needing significant change. For example, if a particular activity were to be de-emphasized, those areas within LBL that previously prioritized this program or activity would be revised to reflect a reduced level of emphasis. If the NRMP did not list strategic direction for a specific program, this must be written and included to make desired outcomes more obvious. The second warranted change will be dictated by the conversion from program write-ups and work areas to newly described management areas. Each management area will have specific standards and desired con-

ditions that will apply only to the actual land area delineations that are ultimately selected. This will result in revision of sections of the 1994 NRMP such that direction will apply to the new management areas. Much of the existing text and direction may be usable by cross-walking between the NRMP work areas and the new Plan management areas, however those elements described in the individual resource sections may have to be moved one by one to the MA write-ups that are applicable.

MONITORING PLAN

The existing NRMP has good monitoring elements, however, they are distributed throughout the plan within each resource section and in some areas there are none listed. Within the new plan, these will be consolidated into a separate section that will appear near the back of the plan and should be easier to reference and implement. The existing monitoring elements must each be reviewed in concert with proposed program area emphases to test for relevance. Others must be revised to describe programmatic activities that will effectively measure when key work activities are achieving desired goals and objectives. This section of the plan must also be expanded to include pertinent items that are needed to determine the effectiveness of any new plan components, including some estimate of expected outputs.

The overall monitoring plan will be "reality checked" to ensure that it describes both minimum legally required activities as well as additional monitoring that is desired. The monitoring plan must be both reasonable and practicable under expected budgets and available personnel. The level and intensity of monitoring and analysis will vary during the life of the plan, depending on Forest Service priorities. This section of the plan will be written to communicate to the public what can be expected.

The LRMP monitoring section will be expanded to include ways to measure the effectiveness of programming in LBL and progress toward desired conditions.

NEED FOR CHANGE AND SUMMARY

LBL will use the 1994 NRMP as the basis for the LRMP we will develop under the forest planning regulations. Only necessary changes will be made; recreation and environmental education will be added to the plan. Below are the statements from the previous discussion summarizing the direction the development of the LRMP is expected to take. These statements are based on public input to date, resource evaluation, project reviews, and staff feedback.

The parts of the NRMP not expected to change include:

- No significant scenery management changes are expected in the LRMP. The visual resource will be inventoried and evaluated as required by the planning regulations.
- The vegetation issue to be addressed in the LRMP is whether to change the land management direction from the direction set in 1994, including total open land acreage and appropriate mix of management practices of the forest and open lands. LBL does not anticipate changing the open land management direction of the 1994 LRMP.
- LBL expects to continue the current direction regarding infrastructure management, unless public scoping results in the need for a different direction. Any direction regarding facilities management at LBL must be consistent with the environmental education, recreation, wildlife diversity, and economic sustainability mission of the LBL Protection Act. The infrastructure decisions will not be specific in the LRMP, except as infrastructure needs relate to the strategic direction of land management areas.
- No roadless or Wilderness designations are expected in LBL after evaluation during the planning process.

Some areas need updating or clarification in the new plan. Management direction to be added to the LRMP, as compared to the NRMP, includes the following.

- No significant changes in the allocations and mix of recreation uses are expected in the LRMP, unless public input during scoping indicates otherwise. Unlike the 1994 NRMP, the LRMP will explicitly address recreation as required by NFMA and the LBL Protection Act.
- The articulation of a more integrated environmental education strategy to accomplish this objective must be added to the new plan. The LBL Protection Act, not the planning regulations, mandates this requirement.
- Guidance is needed in the new plan to guide management decisions under changing budgets during the next 10 to 15 years.
- Our review indicates a need for change to maintain and regenerate the oak hickory forest types if wildlife habitat needs are to be met. Based on public opinion, forest management for the promotion of wildlife habitat, forest health and landscape diversity is of higher concern than set levels of timber sales.
- Clear direction for the use and amount of prescribed fire is needed.
- Required MIS, PETS, sensitive species, and migratory birds lists must be reviewed and updated in the LRMP. BA's and BE's will be completed for federal and regional listed species. Directions for management of habitat to protect these species will also be addressed.
- The LRMP should define, delineate and adopt management guidelines for riparian areas. Regional Soil and Water Conservation Practices may be adopted as best management practices to mitigate effects to the soil and water resources and to assure water resources meet the intent of the Clean Water Act.
- Strategies are needed in the new plan to guide future decision-making, comply with heritage management regulations, and ensure sensitivity to these important resources.
- The LRMP monitoring section will be expanded to include ways to measure the effectiveness of programming in LBL and progress toward desired conditions, and discuss potential outputs at varying budget levels.

The public needs to provide comment of agreement or disagreement with the approach this document describes. LBL will be conducting public meetings and taking comment on the NOI to refine and focus the desired conditions to be addressed in the development of the plan and EIS.



**LAND BETWEEN THE LAKES NATIONAL RECREATION AREA
PLANNING BACKGROUND DOCUMENT**

**APPENDIX A:
QUICK FACTS
FOREST AND MANAGEMENT AREA**

The total land area of Land Between The Lakes encompasses 170,310 Acres (2/3 Kentucky & 1/3 Tennessee).

LAND AREAS	PERCENTAGE	ACRES
FORESTED	89%	151,550
Forest Mature to Over Mature 76% maple/beech 5%, oak/hickory 80%, pine 4%		
Biosphere Core	25%	42,500
	Number	
Large blocks >5000 acres	3	24,320
Medium >2,500 acres	4	11,640
Stands <300 acres	130	6,540
OPEN LANDS	5-6%	12,050 (8,490 acres actively managed each year)
Coop Farmland	31%	3,900
Woods Opening	9%	1,050 (350 acres managed annually)
Wildlife Food Plantings	5%	600
Maintained Open Lands	33%	3,600
Miscellaneous Lands	22%	2,650
INFRASTRUCTURE	4%	7,000

There are 12,500 acres of Wildlife Refuges within the forested and open lands areas listed above.

**APPENDIX A (CONTINUED):
QUICK FACTS
FOREST AND MANAGEMENT AREA**

ACRES

TIMBER

Designated for Forest Management	151,550	(65 work areas)
Available forest acreage timber harvest	2,880	per year
Timber stand improvement activities	400	(mesic forest areas to reduce undesirable tree species)
Even-aged Management		
(primarily shelterwood and seed tree cuts)		
Hardwoods	52,980	
Pines	3,250	
Uneven-aged Management		
(guided by tree diameter to maintain a number of stems/acre)		
Hardwoods	51,460	
Pines	1,360	
Passive Management		
Biosphere Reserve Cores	42,500	
Ecology Study Areas (34)		
Designated Natural Areas (3)		

PRESCRIBED FIRE

1,390 acres allowed, currently 800-1200 burned annually

WILDLIFE COMPOSITION

355	Terrestrial
230	Birds (41 Neotropical Migratory Birds) 53 Mammals
28	Amphibians
41	Reptiles
76	Fish (21 additional species in interior lakes)

NATURAL RESOURCE COMPOSITION

1310	Plant Species; 229 are Woody Species
82	Stream Basins (mostly intermittent)
11	Perennial Streams
131	Natural Spring
75	Ponds
300	Wildlife Watering Holes
5	Interior Lakes

**APPENDIX B:
QUICK FACTS
THREATENED AND ENDANGERED SPECIES**

Threatened Plant

Latin Name

Apios priceana

Common Name

Price's potato bean

Proposed C1 Plant

Latin Name

Aureolaria patula

Common Name

False foxglove

Proposed C2 Plant

Latin Name

Armoracia aquatica

Cimicifuga rubifolia

Juglans cinera

Lysimachia fraseri

Prenanthes barbata

Common Name

Lake cress

Black cohosh

Butternut

Fraser's loosestrife

White lettuce

Endangered Animal

Latin Name

Falco peregrinus

Myotis grisescens

Myotis sodalis

Sterna antillarum

Common Name

Peregrine falcon

Gray Bat

Indiana Bat

Least tern

Threatened Animal

Latin Name

Haliaeetus leucocephalus

Common Name

Bald Eagle

Proposed C2Animal

Latin Name

Cryptobranchus alleganiensis Hellbender

Dendroica cerulea

DLanius ludonvicianus

Macroclmys temmincki

Myotis austroriparius

Nerodia erythrogaster neglecta

Pituophis melanoleucus

Plecotus rafinesquii

Common Name

Cerulean warbler

Loggerhead shrike

Alligator snapping turtle

Southeastern myotis

Copperbelly water snake

Pine snake

Rafinewque's big-eared bat

C1 On US Fish & Wildlife Service status review list; existing biological information is sufficient to warrant listing.

C2 On US Fish & Wildlife Service status review list; biological information is still being collected.

APPENDIX C: QUICK FACTS INFRASTRUCTURE

MAIN FACILITIES

NAME	TYPE	CAPACITY
Brandon Springs	EE Group	128 Beds
Piney Campground	Campground	380 Sites
Hillman Ferry Campground	Campground	369 Sites
Energy Lake Campground	Campground	48 Sites
Wranglers Campground	Horse Campground	175 Sites
Turkey Bay OHV Area	OHV/Camping	
Lake Access Areas	Primitive Camping	(22 areas)
Woodlands Nature Station	Nature Center	
The Homeplace	Living History Farm	
Elk & Bison Prairie	Wildlife Viewing	
Golden Pond Planetarium	Planetarium	
Golden Pond Visitor Center	Visitor Information	
North Welcome	Visitor Information	
South Welcome	Visitor Information	

OTHER SUMMARIES

	NUMBER
Sewage Treatment Plants	4
Water Systems	22
Boat Ramps	22
Camping Cabins	9 Piney, 12 Wranglers
Shoreline	300 miles
Picnic Areas	10
Pavilions	7
Cemeteries	228-248
Iron Furnace Ruins	6
Trails	200 miles hiking, 99 miles horseback, 45 miles mnt. bike, & 2,500 acre OHV
Roads	162.69 Level 5 110.16 Level 4 93.02 Level 3 291.77 Level 2 72.08 Level 1

Road Service Levels

- Level 5 — Highly developed paved road
- Level 4 — Low developed paved road
- Level 3 — Highly maintained gravel road
- Level 2 — Tertiary road
- Level 1 — Minimum maintenance (sometimes impassable)

**APPENDIX D:
QUICK FACTS
DEMOGRAPHICS**

<i>Data taken from the 2000 Census</i>	LOCAL	REGIONAL	NATIONAL
Total Population	138,268	47,852,581	281,421,906
Males	49%	49%	49%
Females	51%	51%	51%
Youth (up to 19 yrs)	24%	28%	29%
Young Adults (20-34 yrs)	20%	21%	21%
Adults (35-54 yrs)	28%	29%	29%
Mature Adults (over 55 yrs)	28%	22%	21%
Median Age	40	36	35
White	93%	79%	68%
Black	4%	12%	11%
Hispanic	1%	5%	11%
Native American	0%	0%	3%
Asian	1%	2%	3%
All other	0%	2%	5%
Families	69%	68%	68%
Living Alone	31%	32%	32%
Less than 9th grade education	11%	7%	8%
9th – 12th grade with no diploma	17%	13%	12%
High School Graduate	31%	33%	29%
Some College	21%	20%	21%
Associate's Degree	4%	6%	6%
Bachelor's Degree	9%	14%	16%
Graduate / Professional Degree	7%	8%	9%
Persons with disabilities	22%	18%	18%

**APPENDIX D (CONTINUED):
QUICK FACTS
DEMOGRAPHICS**

<i>Data taken from the 2000 Census</i>	LOCAL	REGIONAL	NATIONAL
Unemployment	3.4%	3.5%	3.7%
Business / Professionals	25%	31%	34%
Service Occupations	15%	14%	15%
Sales	23%	26%	27%
Farming	1%	1%	1%
Construction	13%	9%	9%
Production	23%	18%	15%
Household income: less than \$10K	15%	10%	10%
\$10K – \$15K	10%	6%	6%
\$15K – \$25K	15%	13%	13%
\$25K – \$35K	14%	13%	13%
\$35K – \$50K	15%	17%	17%
\$50K – \$75K	19%	20%	19%
\$75K – \$100K	7%	10%	10%
\$100K – \$150K	4%	7%	8%
\$150K – \$200K	1%	2%	2%
Over \$200K	1%	2%	2%
Average Household Income	\$36,953	\$39,624	\$41,994
Families below poverty line	9%	9%	9%
Individuals below poverty line	13%	13%	12%