



## **Monitoring and Evaluation Report**

### **Land Between The Lakes National Recreation Area**

**Fiscal Years 2005/2006**



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## **A. Forest Supervisor's Certification**

I have evaluated and endorse the monitoring and evaluation results presented in this report. I have directed that the Action Plan developed to respond to these results be implemented according to the timeframes indicated, unless new information or changed resource conditions warrant otherwise. I have considered funding requirements in the budget necessary to implement these actions.

I find that there are no recommended changes to the Land and Resource Management Plan at this time, and therefore it is considered sufficient to continue to guide land and resource management of the Land Between The Lakes National Recreation Area for the foreseeable future.

/s/ William P. Lisowsky  
Area Supervisor

December 22, 2006  
Date



*Aerial view of Land Between The Lakes*

## **B. Introduction**

This Monitoring and Evaluation (M&E) report presents a summary and analysis of results accomplished at the Land Between The Lakes National Recreation Area (LBL) during Fiscal Years 2005 and 2006. The Record of Decision (ROD) for the new Land and Resource Management Plan (LRMP or Plan, hereafter) and accompanying Environmental Impact Statement was signed on December 10, 2004 and became effective on January 10, 2005. This report covers the period of January 10, 2005 to September 30, 2006.

The report emphasizes the findings and conclusions that have been compiled from various monitoring activities and data sources available on the unit. As stated in Section 2 of the Plan, the monitoring and evaluation program is designed to serve as an important link between implementation of the Plan and on-the-ground accomplishments. For your convenience and reference, a more complete excerpt of this section of the Plan is found in Appendix 1 of this document.

Monitoring activities can range from day-to-day inspections of operations to long-term research projects. They track how well LBL is moving towards the stated desired conditions in the Plan. Evaluations serve as a springboard to any needed changes within the Area Plan or its implementation. The M&E program determines and informs the decision maker on whether:

- Goals and Objectives are being achieved;
- Design Criteria are being followed;
- Effects of implementation are occurring as predicted;
- Emerging or unanticipated issues are arising.

This report represents a variation to the way the Forest Service M&E reports have been presented in the past, in part because the Plan also demonstrated a new way of thinking, but to also consider an approach that will tier to a new M&E framework currently under consideration by the Forest Service. We plan to evaluate its effectiveness based on feedback we receive over the next year. Section D of this report represents the most visible change to the typical M&E report. It is broken up into eight pieces, one for each of the Plan's goals. Each goal has a table that combines in one location, the desired condition and trend statements, monitoring questions, performance measures, and data sources that are listed in the Plan. As an aid to understanding why the goal is important and what the information can tell us, there are statements that address these questions included in the tables as well. In an effort to make this a meaningful and usable document while still being of a manageable size, we chose not to include the reams of data that we used to draw our conclusions, and have attempted to summarize only the key ones within the body of a "monitoring results and evaluations narrative" that follows each goal's table. This is the heart of the report and focuses on the significant items that have driven the conclusions presented. It is also important to note that obviously, there is much more information that has been looked at in development of this report. But, if it did not contribute or lead to a meaningful conclusion, it may not have been included within this report.

Citizens have a stake in understanding the effects and effectiveness of management at LBL. Only by hearing from you, our stakeholders and owners of the public land, can we know whether we are providing the information and program benefits you desire. Comments about LBL can always be provided by mail to the Area Supervisor, 100 Van Morgan Drive, Golden Pond, KY, 42211; by electronic mail to [lbl\\_planning@fs.fed.us](mailto:lbl_planning@fs.fed.us); or by phone to Barbara Wysock, Area Planner, at 270-924-2131. We welcome your thoughts and comments about this report or any aspect of LBL management at any time.



## C. Executive Summary

The FY2005/2006 M&E report demonstrates visibly there are a number of initiatives underway over the past twenty months of implementing the new plan and a good number of accomplishments have been achieved. The full effect and resulting conditions of many projects cannot be measured until a longer period of time has passed; however, and principally because the plan is relatively new, this report has not identified any major deficiencies or significant changes to the Plan that are needed at this time.

Some of the highlights of this initial M&E report include:

- LBL has moved ahead of the Plan objective for acres of fuels reduction/prescribed fire program.
- The Oak-Grassland Restoration Demonstration Area projects in the Tennessee portion of LBL have made significant progress and on-the-ground activities have caught the attention of other professionals, media, and the general public.
- According to the states of Kentucky and Tennessee, the regional tourism industry surrounding LBL is estimated to have increased by nearly \$50 million over the past three years. Visitation has been nearly flat during this time, but was down slightly in FY06. Studies indicate LBL's promotional activities have been very effective.
- Partnership efforts have supported several key accomplishments, and the volunteer program has grown steadily over the past two years.
- Native warm season grasses restoration has slightly exceeded the expectations of the Plan.
- Turkey Bay Off-Highway Vehicle (OHV) Area has undergone a remarkable transition from permitted open riding to designated trails. A number of significant resource restoration projects have been completed.



*Golden Pond Visitor Center & Planetarium*

## D. Monitoring Results and Evaluations

<b>Goal 1:</b>	<b>Prioritize projects to provide the greatest recreation, environment education, and resource stewardship benefits.</b>
<b>Sub-element NFS Generic Desired Condition</b>	“LBL will play a pivotal role in supplying and supporting the recreational and environmental education experiences people seek.” “All vegetation management activities will be designed to sustain or improve wildlife habitats, forest health, recreation opportunities, or environmental education experiences.” [LRMP, Vision]
<b>Example LRMP Desired Condition Statement</b>	“The responsibility for meeting this (recreational and environmental education) increasing demand will fall to those areas and entities capable of providing outdoor recreational opportunities while sustaining natural environments.” “Vegetation management activities will incorporate environmental education messages, themes, and information in programs and projects as much as practical.” [LRMP, Vision]
<b>Desired Trend Statement</b>	“Eighty percent of all special projects will have identified and demonstrated benefits to recreation, environmental education, and resource stewardship.” [Objective 1a]
<b>Monitoring Questions</b>	<ol style="list-style-type: none"> <li>1. Has the Forest Service made progress toward providing satisfactory recreational and environmental educational experiences to visitors while providing for resource stewardship?</li> <li>2. Have resource management projects been integrated?</li> </ol>
<b>LRMP Performance Measures</b>	<ol style="list-style-type: none"> <li>1. Trends in segmented visitation in comparison to numbers of related resource stewardship projects completed</li> <li>2. Number of integrated projects being completed</li> </ol>
<b>Data Sources Utilized</b>	--Summary of visitor satisfaction surveys or personal letters and notes received; visitation; and focused area accomplishments --Objective accomplishments, summary of integrated projects completed
<b>Importance</b>	This goal contains key emphases of the LBL Protection Act and reinforces the key purposes described for LBL when created in 1963. Optimizing efficiency and integration of resources are also primary objectives of both LBL and the agency.
<b>What It Tells Us</b>	The results related to this goal will provide key information about whether LBL is meeting its legislated objectives and tiering to national strategic goals.

### Goal 1, Monitoring and Evaluation Narrative

Land Between The Lakes (LBL) National Recreation Area (NRA) has a primary mission to provide recreation and environmental education. As one of the largest blocks of contiguous forest east of the Mississippi River, LBL hosts a substantial public responsibility to meet the citizen’s needs and attempts to exceed their expectations in the recreational and environmental education arenas.

The foundational focus employed to accomplish the objective to provide the “optimum yield” of recreation, environmental education, and resource stewardship benefits is to provide at least one significant environmental message to each LBL guest during their recreational visit. This tactic engages the citizen in the midst of the recreational event they enjoy, with what we intend to be a positive-impact, environmental message that will translate into life-long resource stewardship benefits.

While some progress has been made, it is too early in the process to definitively ascertain any significant market segment visitation trends in comparison to numbers of related resource stewardship projects completed. Early signs indicate initial efforts are being met with reasonable success. In targeted LBL recreational facilities where environmental education is deeply rooted, as in the case of the day-use facilities, participation has increased since our LRMP-inspired focus. The Homeplace participation increased by 7%; Woodlands Nature Station participation increased around 8%; and Brandon Spring Group Center (environmental education facility) occupancy increased nearly 16%. This constitutes the highest occupancy rate in the past four years. However, LBL's overall visitation was down approximately 5% during FY06, this is consistent with regional tourism, which was down 6% during this same period. Nationally, public lands visitation was also slightly down, primarily attributed to high fuel prices. Some impact was felt as a result of several tornado damaged facilities, primarily at Hillman Ferry Campground, where campsites and trails were affected.

Through partnering with the LBL Association, or Friends of LBL, we have exerted a concentrated effort since inception of the new Plan to target inner city and ethnically diverse school groups, enticing them to visit LBL and actively participate in our various environmental education programs. We have achieved significant success, increasing the participation over previous years, reaching over 3,500 students from five states. LBL and LBLA have provided \$18,000 worth of transportation grants annually, making it possible for these school groups to visit LBL and enjoy environmental education opportunities at Woodlands Nature Station, The Homeplace, Golden Pond Planetarium, and Brandon Spring Group Center. More than 40% of the students that benefited from these grants are full or partial free lunch program recipients.



*Students learn about lake ecology and explore the diversity of aquatic life in this environmental education program.*

In terms of integrated projects completed, being only 20 months into Plan implementation, our documented success is somewhat limited. While we are proudly tracking progress towards achieving the goals and objectives of the LRMP, we are obviously just getting underway. Thus far, the integrated projects we have completed consist of eight prescribed burns, the Fox Ridge habitat improvement timber sale, a salvage timber sale necessitated as a result of violent weather, and extensive (on-going) restoration to LBL's Turkey Bay OHV Area. Two other major projects, the

continued maintenance of open lands (~10,000 acres) and the Prior Creek watershed project (~8,800 acres) are currently undergoing environmental assessments.

To briefly elaborate on efforts in our OHV Area, Turkey Bay was initially the Forest Service's biggest resource and recreational user challenge during transition. High volume, minimally controlled use, and liberal riding policies had created serious sustainability and safety concerns. Conscientious changes made through collaborative efforts with riders, such as changing the policy to restrict OHV use to designated trails; and concerted effort, such as closing portions of the area due to unacceptable damage; remarking the area boundaries; accomplishing extensive watershed reconstruction; and aggressive erosion control; combined with rider education, have all contributed to putting LBL's Turkey Bay OHV Area well on the road to becoming a national showplace for responsible riding and motorized trail stewardship. One key example of the dramatic changes now visible at Turkey Bay is the conversion of a 10-acre mudding area, called the "Gator Pit" by the regular rides. This area is now fenced off to riding, was re-graded and planted in native warm season grasses, with two small wildlife ponds and a park-and-walk-in picnic area. The riders have assisted in this and other restoration and inventory efforts.

During 2006, LBL completed a promotional effectiveness study that offers tremendous insight into the trip planning and information needs of the recreating public. This study found that LBL is effectively meeting the public's expectations for information and promotions. Some key findings from that report are now driving initiatives for the new fiscal year. For example, we learned that:

- The overall gross conversion rate (people who inquired and received LBL information, and visited LBL was an outstanding 66.4%.
- The net conversion rate (people who responded to an ad about LBL and were then "converted" to visit LBL because of the advertisement, was 31.2%.
- Newspapers are the most efficient traditional advertising media (10.8%).
- LBL's website is highly effective in converting website visitors to actual visitors (52.5%)
- On average, potential visitors request information about LBL approximately 10.6 weeks in advance of selecting their vacation destination. The median was 6 weeks. On average, visitors make their travel decision 8.1 weeks in advance of their most recent trip to LBL.
- The satisfaction ratings of the LBL website (on a scale from lowest = 1 and highest = 7) was overall very positive, with a rating of 5.9 for helpfulness, 5.5 for appeal, 5.4 for timeliness, and 5.4 for sufficiency.
- In addition to information about LBL, the next highest interest areas are maps, local attractions, additional recreational opportunities in the area, events and festivals, dining, and lodging information.
- The top two sources of effective information for finding places to go on a pleasure trip, again on a scale of lowest = 1, highest = 7, were identified as friends, family, and acquaintances at 5.8, closely followed by the internet at 5.7.
- On a scale of 0 (not likely) to 10 (extremely likely), LBL was much more likely to be recommended as a place to visit (8.5) than its two most similar and closest competitors Mammoth Cave National Park (6.6) and Lake of the Ozarks. (5.6).
- On average, visitors camped or stayed 2.9 nights. They spent an average of 3.3 days at LBL and 3.5 days in the area but not at LBL. There was an average of 5.4 people in the visitor's immediate group.
- On their most recent trip, visitors and their immediate traveling party spent a total of \$425.10. The top three expenditures were lodging, food and beverage, and transportation. On average, each person spent \$41.60 per day.



The chart found within the narrative for Goal 8 lists the key target accomplishments summary at LBL over the past two years. Review of that data indicates that LBL is continuing to provide a high level of recreation and environmental activity. Customer feedback from formal surveys, personal letters, comment cards, user feedback to individual program managers, and the general consensus from surrounding communities are predominantly positive and indicative to reasonably conclude that the projects we have prioritized and the areas in which we are currently putting significant focus are indeed providing for significant recreation, environmental education and resource stewardship benefits.



*A wildflower program at Woodlands Nature Station.*



*Visitors to The Homeplace living history farm enjoying a historical dance..*

<b>Goal 2:</b>	<b>Emphasize partnerships and cooperation with citizen groups, community businesses, private corporations, tourism organizations, and government agencies.</b>
<b>Sub-element NFS Generic Desired Condition</b>	“LBL will continue to be a destination point for visitors throughout the region and nation, thereby contributing to the local and regional economy.” [LRMP, Vision]
<b>Example LRMP Desired Condition Statement</b>	“Maintaining and developing partnerships will be important to keeping LBL positioned as a premiere Rec/EE destination.” “The public will continue to play an important role in project-level actions and decisions.” [LRMP, Vision]
<b>Desired Trend Statement</b>	“Establish at least one local partnership for tourism, economic development, or environmental education; and at least one new cooperative with a regional, state, and federal agency or organization annually in support of the LBL mission.” [Objective 2a] “Increase visitation to more than 2 million visitors per year by the end of 2015 to support local and regional economies. [Objective 2b]
<b>Monitoring Questions</b>	3. Has the Forest Service made progress toward supporting vitality of gateway communities and maintaining/enhancing relationships with its neighbors and regional organizations?
<b>LRMP Performance Measures</b>	3. Trends in visitation, levels of community participation
<b>Data Sources Utilized</b>	--Summary of visitation results, community participation in meetings, programs provided, grants sponsored, cooperative gateway projects, feedback from elected officials and business leaders, and visitation --Number of MOUs, partnership agreements, and challenge cost share agreements with local, regional, and state agencies
<b>Importance</b>	This goal contains important strategies for the collaborative delivery of goods and services at LBL. It also reinforces several of the key purposes described for LBL when created in 1963, namely to work cooperatively with the gateway communities in support of their strategic direction.
<b>What It Tells Us</b>	The results related to this goal will provide key information about whether LBL is meeting its stated objectives to work closely with partners and communities and developing strong relationships with local, state, and regional organizations and publics.

## Goal 2, Monitoring and Evaluation Narrative

LBL has continued to focus efforts towards supporting the vitality of gateway communities and maintaining relationships with neighbors and regional organizations. LBL’s gateway communities have limited resources and have come to depend on tourism as a primary industry. The region looks to LBL as the centerpiece for this tourism industry. The importance of tourism partnerships is recognized by the Forest Service as critical in order for LBL to continue to be a destination of choice for visitors

throughout the region and nation. Kentucky and Tennessee statistics for 2005-2006 indicate that LBL is now the center of a \$650 million industry, up nearly 10% in recent years.

LBL continues to be a member and active partner with regional tourism organizations such as Kentucky Western Waterlands (KWW) and the Kentucky Federal Agency Tourism Council. This year, LBL provided staff support for KWW's marketing booth at the Kentucky State Fair. In addition, LBL works actively with KWW on cross promotions through website links, electronic publications, and distribution of printed materials. LBL's gateway state resort parks are another key partner. LBL works closely with each of the four resorts to provide visitors and potential visitors, information for trip planning, including in-room promotional items, updated maps, and information sources. Another level of tourism promotion efforts are facilitated on the state level, including all major visitor centers in the region. LBL has periodically hosted tours for state visitor centers' staff to increase awareness of the recreational opportunities available. LBL works with both the state of Kentucky and Tennessee tourism programs to provide an accurate representation of the recreation opportunities available at LBL.

A new tourism partnership initiative was tested this year to provide promotion benefits for LBL and the surrounding communities. The partnership was established with the regional radio station, WKDZ in the Murray/Cadiz/Hopkinsville/Ft. Campbell area. This is a new model for media coverage that is a more collaborative effort in support of regional tourism. Initial results, though only rough estimates, do indicate that the partnership is resulting in increasing community awareness and involvement in LBL's recreation and environmental education facilities. It will be further evaluated to determine if the partnership promotion will be continued.

In regards to maintaining and enhancing relationships with neighboring communities, LBL has continued traditional avenues and implemented new links with community members and business leaders. LBL currently holds a membership with each of 10 surrounding community Chambers of Commerce and frequently provides speakers for Chamber and local organizational meetings. In addition, LBL staff speaks at other community and business organizational meetings. During FY06, approximately 125 presentations and contacts were made with local, state, federal, and other organized groups.

A renewed initiative, an effort to collaborate with gateway communities, has been the establishment of a "Business Leaders Focus Group." The primary objective of this group is to share information among the various entities within the surrounding region, creating an efficient synergy that is based on extrapolation of applicable information gathered by one entity, but usable by many. This group also provides valuable input and perspective on the needs within the community and feedback on how LBL business decisions affect their communities. Both the communities and LBL feel this is an initiative that should be continued.

The Forest Service maintains a high priority on keeping surrounding communities informed on and engaged with LBL planning and projects. One note worthy example is an Appreciative Inquiry session that was hosted for the general public and community leaders to look collaboratively with the Forest Service at the future needs for dispersed recreation sites across LBL. LBL received positive feedback on the use of this format from those who participated. Another wide variety of constituencies, the 17-person LBL Advisory Board, is now in its sixth year and continues to provide tremendous assistance to the Forest Service. This past year, they have embarked on development of an important recommendation that will provide their view of key elements, goals, and proposed action items that should be contained within the LBL Environmental Education Strategic Plan, when developed.



*A former resident shares information with FS-LBL staff.*

The Forest Service has continued to build and maintain relationships with former residents of the area; however, no progress has been made in updating the Heritage Resource Management Plan. A new archeologist was hired during FY06, and this has been identified as a priority for the upcoming year. The records at the Administrative Office are available for review by the public, and over time the goal is to expand this information through inclusion of oral histories and information provided by those wanting this information recorded and filed. The Forest Service continues to respond to family requests as best it can, primarily by provision of road grading prior to burials and family reunions and occasionally, tree removal. Between the Rivers, Inc. extended their cooperative maintenance agreement with the Forest Service for St. Stephen's Church.

A project, still in the early planning stages, that will greatly impact LBL is the highway improvements to Highway 68/80. This design/build project is managed by the Kentucky Transportation Cabinet but is viewed by the Forest Service as a critical priority to ensure it will meet the needs of regional commerce and tourism while protecting resources and blending with the natural environment. The Transportation Cabinet has been very receptive and has selected the alternative that addresses these concerns. Impacts to tourism during the construction phases will be mitigated as much as possible. Some reduced visitation and travel delays can be expected at times.

Partnerships provide critical resources that augment facilities and services provided at LBL for recreation and environmental education. While partnerships have always been a part of how LBL operates, the Plan places added emphasis on the value partnerships bring to LBL and the surrounding region. Our partnership with LBLA, or Friends of LBL, secured grants from the National Forest Foundation that brought \$30,000 to the ground for resource and trails restoration and improvement. In addition, through funds development efforts, Friends of LBL raised over \$30,000 for purchasing new seats, which were past due for replacement, in the Golden Pond Planetarium.

The National Wild Turkey Federation (NWTF) partnered with LBL again this past year. The NWTF provided support funding for an aerial ignition burn in the southern Oak-Grassland Demonstration Area which was extremely successful. Funding through a new partnership with the Nature



Conservancy is making possible environmental education materials about LBL's oak-grassland available to the public.

This past year the forestry staff, in conjunction with biomass experts from the Forest Products Lab in Madison Wisconsin, conducted a workshop for area loggers, rural conservation districts, and business leaders to learn more about the potential market for small diameter woody debris. Eight individuals and companies attended, reviewing a market study for the region that indicated there is potential for industry to utilize some of the byproducts from resource improvement projects at LBL and in the surrounding counties. The critical need in the area is a sorting and storage yard, which would allow for various materials to be directed to a variety of potential uses, such as for co-generation facilities as fuel, conversion to ethanol, or as wood chips for such things as landscaping materials.

LBL continues to host a significant number of "regional events" and weekend programs that contribute greatly to visitation to the area. Some examples include weekend drag boat races, "The Hummingbird Festival," "Pickin' Party," mountain bike races, equestrian events, civil war re-enactments, eagle viewing weekends, and many others.

Overall visitation trends for LBL are slightly down by about 5%, while visitation to campgrounds is up 6%. While not an apple to apple comparison, regional and state visitation has shown very little, if any, growth in recent years. Also, all public lands, especially national parks, are experiencing a decline in visitation. Two predominant factors are identified as reasons for this trend, soaring gas prices and the "x and y generation" preference for electronic entertainment. The recently completed Promotion Effectiveness Study, highlighted under Goal 1, also indicates gas prices are affecting people's travel decisions.

<b>Goal 3:</b>	<b>Utilize a variety of methods and opportunities to provide an environmental education message to every visitor.</b>
<b>Sub-element NFS Generic Desired Condition</b>	"Environmental education messages, information and principles will be incorporated into all projects on LBL through diverse cooperative, interdisciplinary efforts designed to potentially reach every visitor to LBL." [LRMP, Vision]
<b>Example LRMP Desired Condition Statement</b>	"Environmental Education will emphasize more non-facility-based messages, programs, and projects. The current EE facilities will remain hubs for expansion of the reach and effect of the EE programs and projects. Environmental education programs will be integrated with recreation activities and will provide messages and information to recreational visitors that make them more aware of the importance of sustaining their environmental surroundings while participating in their desired activity." "Self-guided loop trails, road pull-offs, viewing blinds, and environmental education messages in these areas (Nature Watch Demonstration Areas) will engage visitors with the natural environment. "Environmental education will be an integral component of activities in the Oak-Grassland Demonstration Areas. Visitors will be able to watch and learn about the application of various vegetation management practices used to restore native ecological communities." [LRMP, Vision]



<b>Desired Trend Statement</b>	“Insure that 80% of LBL communications, programs, and activities have an interwoven environmental education message.” [Objective 3a] “An average of one to two user impact challenges will be addressed annually through environmental education.” [Objective 3b]
<b>Monitoring Questions</b>	4. Has the Forest Service made progress toward successfully changing behaviors as a result of environmental education experiences to visitors?
<b>LRMP Performance Measures</b>	4. Trends in onsite visitor behaviors and visitor comment surveys
<b>Data Sources Utilized</b>	--Summary of visitor information surveys or personal letters and notes received, project accomplishments, annual monitoring results, programs, and communication products completed
<b>Importance</b>	This goal contains one of the key emphases of the LBL Protection Act and reinforces the key purposes described for LBL when created in 1963. Effective delivery of conservation education messages is also a primary objective of both LBL and the agency.
<b>What It Tells Us</b>	The results related to this goal will provide key information about whether LBL is meeting its legislated objectives.

### Goal 3, Monitoring and Evaluation Narrative

Progress is being made by incorporating environmental educational messages into visitor experiences at LBL. The overarching environmental education program “Respect the Resource” (RTR) which originated about two years ago under advice of the LBL Advisory Board, provides thematic context we hope visitors will continue to recognize and respond to when seen. The connection when a visitor sees the RTR logo is they will recognize and understand there is an environmental message the Forest Service wants to communicate to them. The message can be as simple as not picking wildflowers so others can enjoy them or to avoid areas completely. This program will expand as more projects are planned to implement the Land and Resource Management Plan.

The RTR fishing line collection tubes placed at boat ramps in LBL, incorporating the RTR logo, have been well received by the fishing community. Our Youth Conservation Corps student enrollees and other volunteers installed these collection tubes. It is easy for the fishing public to see the environmental education message--prevent used monofilament line from entering the lake before becoming a threat to their sport. The tubes were also installed by state parks surrounding LBL, so this simple project and attached messages have gained a larger audience.



*YCC students with fishing line collection tubes.*

The RTR message has been very effective in conjunction with the restoration work being done in Turkey Bay OHV Area. The logo was placed along the perimeter of restored areas to help riders understand they should avoid restored areas to allow the land to heal. This method of triggering a positive change in rider behavior has been successful on 2,100 acres within Turkey Bay. Changing the policy from an open riding area, which was unsustainable in the long term given the historic growth of the sport, to one of designated trails, would have been more difficult without users supporting the end goal of providing a sustainable riding area. No activity has come under more pressure to limit use on public lands, than off-highway vehicles. Increasing the understanding of these concerns has gained riders' cooperation and helped to change rider behavior in Turkey Bay, thus keeping areas open for riding. Ultimately, these learned behaviors benefit other places they ride as well.



*OHV trail restoration projects with visible results after one week.*

Another Regional initiative used in Turkey Bay to reinforce the philosophy that rider behavior is one key to keeping the area available for motorized recreation is the “Ride 4 Keeps” message. This message fits well under the RTR program as it delivers in a quick and easy-to-remember format that rider’s actions influence future availability of locations to enjoy their sport. There are four key points:

1. *Keep it Safe.*
2. *Keep it Legal.*
3. *Keep on Trails.*
4. *Keep the Privilege.*

LBL’s volunteer program is another successful avenue to change behavior as a result of incorporating work experiences with environmental education messages. Most of the individuals that volunteer for activities like shoreline cleanup, trail maintenance, restoration work, invasive species eradication, and interpretation activities are users of LBL. Another important segment is Alternative Break Groups colleges host for students during breaks within their school year. On average, four or five groups visit LBL each year, with each group comprised of around 10 to 12 individuals. All of these volunteers see first-hand the cause-and-effect resource management. Volunteers that aren’t local take with them what they learned from the experience and make more informed decisions about resource issues where they live. Many parents and children participate in these volunteer activities together to pass along the value of public lands to future generations. Because volunteers hold public land ethic values they often pass along information to people they come in contact with in their daily lives. Volunteer hours for FY06, including those that may receive a stipend such as our campground hosts, were over 120,000 hours.

Upgraded and standard messaging in our developed camping areas provides valuable visitor information to users, while incorporating environmental education messages.

By enforcing regulations to park vehicles on designated parking areas, and providing metal posts for lanterns, LBL's natural resources are better protected for everyone to enjoy. Compliance with these regulations happens easily if the reasons are sound, explained, and supported. With large numbers of families using our campgrounds, the future camping public will be lighter on the land and minimize impacts if these lessons are learned now.

A program area just now gaining focus for delivery of environmental education messaging is the Oak-Grassland Restoration Demonstration project in the Tennessee portion of LBL. Staff hosted a Society of American Foresters and the Fire Learning Network during FY06, exchanging ideas about and sharing the latest scientific information in this arena. LBL Staff also participated and made a formal presentation at a regional "Fire in Eastern Oak Forests, Delivering Science to Land Management" forum.

The sign messages within the Elk & Bison Prairie (EBP) were updated, in part because they were dated but also to aid in changing a potentially dangerous pattern that was developing; users have been observed on a more frequent basis by staff and the Bugle Corps volunteers walking closer to the animals, often to try to get better photographs. A stop sign was added just inside the gate to remind visitors of the wild nature and potential risks associated with the large animals in the EBP.



*Bison and calf at the FS-LBL Elk & Bison Prairie.*

<b>Goal 4:</b>	<b>Manage natural and physical resources, and authorized Forest Service activities, to reduce erosion or deterioration of riparian areas and watershed conditions.</b>
<b>Sub-element NFS Generic Desired Condition</b>	“Restoration of riparian area functioning and improvements of priority watersheds will be another focus of the resource improvements.” [LRMP, Vision]
<b>Example LRMP Desired Condition Statement</b>	<p>“Damage to natural resources caused by unmanaged recreation activities will be reduced...”</p> <p>“Roads will continue to be integral to many activities at LBL, but will be kept to the minimum number needed to meet the needs of multiple use management. The road system and its road segment maintenance levels will continue to be evaluated and modified, as appropriate. Evaluations will result in reconstruction or decommissioning of roads, when necessary, to improve watershed condition, facility and activity access, and wildlife habitat.” [LRMP, Vision]</p>
<b>Desired Trend Statement</b>	<p>“Within a 10-year period, improve two watersheds by one condition class (see definition of watershed condition class in glossary).” [Objective 4a]</p> <p>“The 10-year trend will be to reconstruct 10 to 15 miles of trail annually.” [Objective 4b]</p> <p>“Unneeded roads will be decommissioned to improve watershed condition and wildlife habitat. The 10-year trend will be one to three miles per year.” [Objective 4c]</p> <p>“Maintain to objective maintenance level, 75% of system roads and 75% of trails annually.” [Objective 4d]</p>
<b>Monitoring Questions</b>	<ol style="list-style-type: none"> <li>5. Has the Forest Service made progress in reducing erosion and improving watershed conditions and how was this accomplished?</li> <li>6. Has the Forest Service established baseline data for channel classification of its major intermittent and perennial streams?</li> </ol>
<b>LRMP Performance Measures</b>	<ol style="list-style-type: none"> <li>5. Sediment transport, stream bank stability, water quality parameters, properly functioning riparian areas, watershed condition class</li> <li>6. Completion of stream classification and determination of channel function process</li> </ol>
<b>Data Sources Utilized</b>	<p>--Watershed Watch program, stream and riparian surveys, number of improved or relocated roads, and trails summary of watershed improvement projects; sample projects during program reviews to determine and document where riparian values, and soil and water resource considerations were implemented through BMP's and design criteria.</p> <p>--Stream inventory of substrate, Level II Rosgen channel type, average water flow (discharge), and stream bank vegetation.</p>
<b>Importance</b>	This goal emphasizes LBL legislated multiple use mission and the need to direct resources and policies to sustain critical soil and water resources.
<b>What It Tells Us</b>	The results related to this goal will provide key information about whether LBL is meeting its legislated objectives and tiering to national strategic goals.



## Goal 4, Monitoring and Evaluation Narrative

The Forest Service is making steady progress in reducing erosion and sediment transport in order to improve watershed conditions. Since January 2005, two miles of road have been decommissioned, staying on course toward the 10-year trend objective. These roads within the Devil's Elbow area were identified under the Area-wide Roads Analysis and the 68/80 Highway Improvement access plan as no longer needed for public or administrative use and were permanently closed by ripping of the road prism and seeding to grass. Across LBL, 50% of roads were maintained to standard, which is not meeting Plan objectives of 75%. This is due to prioritization of road maintenance focusing on high use roads needs, within budget constraints. For instance, Road #165 to Wranglers Campground and Road #134 to Energy Lake Campground are maintained at higher standards than the regional standard (grading 8 times per year versus 4 times) due to heavy use from recreational vehicles. A secondary, but important consideration is there have been many recent special needs associated with maintaining legal access to cemeteries. Less money is therefore available for more remote and less-used roads. As budget allows, a strategy in place to grade and maintain the remote roads, setting them up on a longer maintenance (not annual) schedule. In the Plan, a recreation program strategy directs LBL to inventory and determine condition and need of access to backcountry camping areas for resource protection. All roads accessing backcountry camping areas were inventoried during fiscal year 2006. A number of these roads are minimally used and in deteriorating condition. In upcoming years, project level analysis will consider each road in light of providing for the minimum transportation system that is needed to meet the needs.



*Typical Paved Road Deterioration*

Over 20 acres have been improved within Turkey Bay OHV watershed area. Trails were designated, removed, relocated, or improved. Hill slopes were rehabilitated and streams armored with in-stream woody debris structures. Through a State of Kentucky Recreational Trails Program grant, over 35 miles of trails were improved and maintained, and one major stream crossing was protected with geotextile materials. A National Forest Foundation Grant and a Forest Service Century of Service grant provided funding for major reclamation of hill slope gullies and erosion control along stream-banks. Watershed improvement monies funded the armoring of stream banks and crossings with terre-matting



materials and woody debris and the rehabilitation of closed hillside trails. Youth Conservation Corps crewmembers helped place the woody structures within stream channels. Volunteer groups including Jeep Jamboree Trail Guides, Turkey Bay OHV volunteer riders, and Alternative Break groups from the University of Wisconsin, provided trail maintenance within Turkey Bay OHV.

All hike and bike trails were maintained at least once during the past year. Popular trails were maintained more often. Many sections of trails across LBL are under the “Adopt a Trail” program and maintained by volunteers. These trail sections include the entire track of the North/South Trail, portions of the Fort Henry Trail and Nature Station Trails—Long Creek, Hematite Lake and Honker Lake. Nature Station Trails were maintained three times. Fort Henry and North/South Trails were maintained twice. A section of the North/South Trail near Jenny Ridge was relocated through volunteer efforts to avoid a migrating stream channel. The entire Canal Loop mountain bike trail system was maintained to high standards solely by the volunteers from the Chain Reaction Cycle Club. One hundred miles of equestrian trails were also reconstructed and/or maintained during this period, to control erosion and provide safe riding opportunities.

Eight miles of streams were classified, using Rosgen Level 1 and 2 methodologies, within Crockett and Prior Creek watersheds. Two miles of streams, (Panther and Long) were monitored by Watershed Watch and Hancock Biological Station for physical, chemical, and biological characteristics. These stream miles are added to earlier monitored and classified streams from a 2001 Rosgen Level 1 survey for a total of 20 miles of baseline, classified streams. LBL staff was trained by Watershed Watch in 2006, and beginning in 2007 more streams will be monitored for physical and biological data.

It is too early in the 10-year monitoring period to show changes in stream bank stability and properly functioning stream conditions or for the hill slope processes to be improving watersheds by one condition class. Results and trends would be expected toward the end of the 10-year period. But annual monitoring and reporting will continue to assure activities continue to reduce erosion and improve the watershed environment.



*Hiking a portion of the LBL North/South Trail.*

<b>Goal 5:</b>	<b>Use a collaborative approach to maintain and restore: 1) a diversity of plant and animal communities that support viability of associated plants, fish, and wildlife; and 2) sustainable levels of habitat and wildlife populations to support public demand for wildlife-related recreation.</b>
<b>Sub-element NFS Generic Desired Condition</b>	“Visitors to LBL will see active management of forests and other vegetation designed to support ecological needs for forest health and wildlife habitat, in addition to supporting recreational and environmental education goals.” [LRMP, Vision]
<b>Example LRMP Desired Condition Statement</b>	<p>“Much of the vegetation management program will be aimed at restoring ecological conditions to those best suited for sustaining native wildlife species. Vegetation management will target restoration and maintenance of oak woodlands and open oak forests, native short-leaf pine forests, canebrakes, and diverse structures characteristic of old growth forests.”</p> <p>“Sustainable open land management will be demonstrated through ecological restoration of native grasslands, maintenance of hayfields, and rights-of-way, and continued agricultural practices. Open lands management is directed at providing habitat for wildlife, especially those species in demand for hunting and viewing. Open lands located on sites incompatible with sustaining other resources (such as in riparian corridors) will be allowed to revert to forest, or will be maintained in native grassland or canebrake.”</p> <p>“Active management techniques will include the increased use of prescribed fire, which is documented to sustain native ecological communities and improve habitat for many wildlife species.”</p> <p>“Habitats will be provided for native and desired non-native plants, fish, and wildlife. “All vegetation management activities will be designed to sustain or improve wildlife habitats, forest health, recreation opportunities, or environmental education experiences. The public will continue to play an important role in project-level actions and decisions.” [LRMP, Vision]</p>
<b>Desired Trend Statement</b>	<p>“In mature oak forests, provide open forest structure on approximately 19,000 acres by the end of the first decade with a long-term objective of 31,000 acres.” [Objective 5a]</p> <p>“In mature oak forests, provide woodland structure on approximately 6,000 acres by the end of the first decade with a long-term objective of 30,000 acres.” [Objective 5b]</p> <p>“Provide a sustained supply of regenerating forest habitats totaling approximately 5,400 acres at any point in time. Regenerating forest will be treated predominantly within oak forests although other forest types and natural disturbances will be included.” [Objective 5c]</p> <p>“Increase the abundance of mature forest habitats toward achieving the long-term objective of approximately 123,000 acres of mature forest, of which 52,000 acres will meet old growth criteria.” [Objective 5d]</p> <p>“In mature forests on moist sites, provide canopy gaps on a minimum of 1,600 acres by the end of the first decade with a long-term objective of a minimum of 9,000 acres.” [Objective 5e]</p> <p>“Create and maintain at least 250 acres of short-leaf pine forests by developing desired mature open forest and woodland structural conditions over the first decade with a long-term objective of 450 total acres of short-leaf</p>

	<p>pine forest.” [Objective 5f]</p> <p>“Restore 50 acres of canebrake over the first 10 years of Area Plan implementation, with a long-term objective of 240 total acres of canebrake.” [Objective 5g]</p> <p>“In addition to the approximately 600 acres of open lands currently in native grasses, restore native grasses and forbs to another 750 acres of current open lands within the first 10 years of Area Plan implementation, with a long-term (50-year) objective of 2,600 total acres of native grassland.” [Objective 5h]</p> <p>“Maintain approximately 10,600 acres in open lands-cultivated and grassland cover types to - support game species, early successional species, and watchable wildlife. Approximately 1,100 acres of this 10,600 will be converted from cultivated field to grassland within riparian corridors over a 10-year period to improve riparian functions.” [Objective 5i]</p> <p>“Restore and maintain fire regimes and fire return intervals in fire dependent communities by prescribed burning an average of approximately 10,000 acres per year by the end of the first decade, with a long-term objective of 21,000 acres per year on average. Some acres will incur repeat fire application during the planning period.” [Objective 5j]</p>
<b>Monitoring Questions</b>	<ol style="list-style-type: none"> <li>7. How well are species of viability concern being maintained on LBL?</li> <li>8. How is management of LBL affecting recovery of threatened and endangered species? (Duplicate questions for Measures 9-10)</li> <li>11. How is management of LBL affecting demand for wildlife-related recreation? (Duplicate questions for Measures 12-14)</li> <li>15. How is management of LBL affecting special habitats and major biological communities? (Duplicate questions for Measures 15-25)</li> <li>26. Is the forest less likely to be affected by insects, disease, and wildfire? (Duplicate questions for Measures 26-28)</li> <li>29. Has the Forest Service made progress towards identifying old growth stands on the ground?</li> </ol>
<b>LRMP Performance Measures</b>	<ol style="list-style-type: none"> <li>7. Trends in key habitats and/or populations of viability concern species</li> <li>8. Trends in highest risk species</li> <li>9. Trends in Price’s Potato Bean populations in relationship to Threatened &amp; Endangered (T&amp;E) Recovery</li> <li>10. Trends in Bald Eagle populations in relationship to T&amp;E Recovery</li> <li>11. Trends in Eastern Bluebird populations as a Non-game Demand species</li> <li>12. Trends in White-tailed deer populations as a Demand Game species</li> <li>13. Trends in Eastern Wild Turkey populations as a Demand Game species</li> <li>14. Trends in Northern Bobwhite Quail populations as a Demand Game species</li> <li>15. Trends in Pileated Woodpecker populations in relationship to Snags in Forested Situations</li> <li>16. Trends in Eastern Bluebird populations in relationship to Snags in Open Forested Situations</li> <li>17. Trends in Acadian Flycatcher populations in relationship to Mature Riparian Forests</li> <li>18. Trends in Northern Bobwhite Quail populations in relationship to Grasslands</li> </ol>

	<p>19. Trends in Prairie Warbler populations in relationship to Oak Woodlands</p> <p>20. Trends in Great-crested Flycatcher populations in relationship to Mature Open Oak Forest</p> <p>21. Trends in Wood Thrush populations in relationship to Mesophytic and Riparian Forests with Canopy Gaps and Mature Forest Interior</p> <p>22. Trends in Eastern Meadowlark populations in relationship to Grassland</p> <p>23. Trends in Yellow-breasted Chat populations in relationship to All Forest Type Regeneration</p> <p>24. Trends in composition of aquatic communities dependent on clear water and stable channels</p> <p>25. Trends in bat population levels</p> <p>26. Trends in early, mid-, and late-successional forests by prescription group</p> <p>27. Trends in species diversity, structural diversity, age class, and stocking levels</p> <p>28. Trends in native insect and disease effects</p> <p>29. Completed inventory of old growth stands</p>
<b>Data Sources Utilized</b>	<p>--Habitat trends for key factor indicators used in the species viability analysis assessed through ongoing inventory of vegetation cover and structure types; population status for selected species inventoried and monitored as appropriate for species or species group; species selected based on priorities identified and modified throughout plan implementation using improving information about threats and risks, and in cooperative efforts with conservation partners.</p> <p>--Periodic survey and assessment of highest risk species occurrences; project level survey information and accomplishments</p> <p>--Periodic assessment of status of known occurrences; new occurrence inventory</p> <p>--Breeding Bird Survey/Point counts occurrence trends for the bird communities</p> <p>--Summary of data received in deer surveys, harvest statistics; summary of comments related to recreational uses of White-tailed Deer</p> <p>--Summary of data received in Breeding Bird Surveys/Point counts, harvest data, and poult summaries; summary of comments related to recreational uses of Eastern Wild Turkey</p> <p>--Surveys similar to those done by the Center for Aquatic Technology Transfer (CATT)</p> <p>--Collection and analysis of area bat survey data-Map and update changes through routine inventories; monitor acres by successional stage and trend; fuel monitoring following Regional protocol and condition classes</p> <p>--Acres of hazardous fuels treated through wildland fire use, prescribed fire, and mechanical treatments</p> <p>--Sample for specific insects or disease as evidence of infestations occurs following established protocols for the organisms of concern; track Forest Health Monitoring results to identify emerging concerns</p> <p>--Collection and analysis of old growth characteristics data, locations, and patch size</p>

<b>Importance</b>	This goal contains key emphases of the LBL Protection Act and reinforces the key purposes described for LBL when created in 1963, as well as those legislated for the Forest Service in 1998. Managing LBL under a multiple use should lead to many on the ground accomplishments and support primary objectives of both LBL and the agency.
<b>What it Tells Us</b>	The results related to this goal will provide key information about whether LBL is meeting its legislated objectives, managing ecosystems in a healthy and sustainable way, and are tiering to national strategic goals.

## Goal 5, Monitoring and Evaluation Narrative

While it is early in the 10-year planning period, integrated vegetation management at LBL has made some progress in improving habitat diversity to support viability of threatened and endangered species and major biological communities. More importantly, groundwork is being laid for near-future work to make significant progress toward providing habitat diversity in support of species viability. This groundwork includes a growing prescribed fire program, planning of large ecosystem projects, conversions toward oak-grasslands, and planning for open lands maintenance with pesticide use.

To date, one small timber sale piloted custom selection and harvest of a 65-acre forest stand. This pilot project initiates work toward opening up the oak-hickory canopy to accelerate conversion toward an oak-grassland community. In response to a natural wind event, a salvage timber sale will provide gaps in the mature forest canopy on 108 acres of moist mesic sites. This is about 6% of the total acres determined by the Plan as needed for the structure type. Prescribed fire, as a tool for vegetation management and oak-grassland maintenance, has increased its annual acreage slightly above the expected trend line. Since Plan implementation, over 5,850 acres have been treated by fire. Prescribed fire on 2,625 acres within the southern Oak-Grassland Restoration Demonstration Area (Cemetery Ridge) was implemented by the first aerial ignition on LBL in 2006. Learning to use tools such as aerial ignition and further training of LBL's fire militia will enable larger blocks of forest to receive treatment as prescribed by the new Plan.



*LBL first timber sale since transfer to Forest Service.*



LBL is slightly above its trend line for converting open lands to warm season native grasses, estimated at 75 acres annually. Since the LRMP was implemented, 225 acres of warm season grasses have been re-established. Two grants from the Forest Service's Century of Service award accelerated this accomplishment. Through mowing and burning, a total of 587 acres in 2005 and 465 acres in 2006 have been treated for non-native invasive species (NNIS). Intensive monitoring and repeat treatments are required to stem the spread of NNIS. The maintenance of all open lands is currently undergoing environmental analyses that will further advance, on the project level, the specific course of activities that will provide for critical early successional habitats, and in particular, planned activities and locations of cultivated lands and the various types of grasslands. All existing open lands have been inventoried to support this analysis and aid in bringing them all into compliance with the new Plan standards. Riparian corridors are being implemented in 2007, and the approved list of pesticides has been greatly reduced. LBL is confident it will be able to more effectively and efficiently manage open lands when this analysis is complete.

In regards to specific management for the recovery and support of threatened and endangered species and species of concern: Surveys were conducted during field seasons of 2005 and 2006, establishing permanent monitoring plots at the five known locations of *Apios priceana* (Price's Potato Bean) by a consultant botanist. These plots will aid in site assessments and plans for future management decisions. Population counts and baseline data was collected at each site. All sites were in relatively good condition with little change noted since the last site visit. No flowering or fruiting was observed, however. The populations are mostly stagnant and not flourishing. Shade problems from upper canopy and shrub competition were noted at most sites. A preliminary strategic plan for management for this species began with discussions with The Nature Conservancy and Dr. Ed Chester from Austin Peay State University (APSU).

Bald Eagle monitoring continued during this period. Winter occurrence counts, nesting sites and nesting success were recorded. Monitoring of eagles was completed primarily through volunteer efforts of the Bugle Corps. During nesting season of 2005, there were 14 active nests that successfully produced 16 eaglets. During nesting season of 2006, there were 16 active nests that fledged 12 eaglets. The number of nests has risen steadily in the past 20 years with the past 5 years holding steady, around 15 active nests. Nests are always protected from disturbance during activity. If the nest is lost or becomes abandoned, the nesting area continues to be protected for several breeding seasons following. Winter counts of eagle sightings can vary greatly by the weather to the north and availability of open water locally. Recent winter counts have ranged from 130 to 150 birds.

Breeding Bird Surveys/Bird Point Counts were conducted annually on 213 historical points located on transects throughout LBL. Nine additional points were created and run within the Tennessee Oak Grassland Restoration Demonstration Area. There has been no change or recent area-wide analysis of this bird point count data since the Plan was developed; however, over time, in conjunction with other bird analysis information from within the Central Hardwoods eco-region, this is expected.

Other field surveys in 2006 found an important Regional Forester's Sensitive listed plant, Barbed Rattlesnake Root. This plant was verified by Dr. Chester of APSU. All total, 47 plants at 11 sites were surveyed. This recording moved the plant from an F1 listing to F2. The survey and locations of the plant provides important information for its protection and management.

During July 2005, mist netting and AnaBat surveys were conducted across LBL. Four species of bats are of concern on LBL: gray, Indiana, Rafinesque's big-eared, and Southeastern myotis. Mist netting

was conducted area-wide, while AnaBat recordings were taken at areas with high capture probability such as streams, stream-road crossings, and small upland ponds. No T&E or Regional Forester's listed bats were captured during this intense survey period. In some past surveys, gray bats have been captured. No Indiana bat, Rafinesque's big eared, or Southeastern myotis have ever been captured on LBL but suitable foraging and roosting habitat exists. No suitable winter hibernacula exist. Mitigations for bats were implemented in the two timber sales of 2006. This includes implementation of riparian corridors along stream channels, retention of at least 6 snags per acre, and providing for older, large trees to serve as roosting and maternity sites. Proposed wildlife improvement projects within the Tennessee Oak Grassland Demonstration Area, such as the Prior Creek project now undergoing environmental analysis, offer potential recruitment sites for bats over time.



*Open Woodland (Oak-Grassland) Desired Condition*

Successional stages of forest have changed very little since the LRMP. Surveys were conducted in 2006 in the oak-grassland prescription area and adjacent general forest. Over 8,000 acres of survey using variable radius basal area plots, plus some cursory surveys have been completed. Generally speaking, there is little early successional habitat (less than 15%) due to little recent management across surveyed prescription areas. Mature, late successional forest groups are increasing, meaning trees across LBL are getting older, bigger, with closed canopy. There are more white oaks in most stands than red oaks. The red oak group is approaching maturity, approximately 80 years. Forest Management needs to increase the supply of regenerating forest habitat and provide for more mid-age forest through forest thinnings. It is too early to notice any significant effect from prescribed fire on the overstory or regeneration. The Prior Creek project, totaling nearly 8,800 acres within a Tennessee watershed, is currently undergoing environmental analysis to develop an approved list of projects that will be accomplished over the next five years.

Red oaks may be vulnerable to oak decline in the near future, due to their age. White oaks are more susceptible to *Armillaria* root rot and some normal levels of occurrence have been captured in the surveys. Twenty-five gypsy moth traps were put out in the forest, and no moths were found. APHIS put additional traps out across LBL and also did not find any. None were found in surrounding counties as well, but gypsy moth has been found near Cincinnati, Ohio. No specific forest health concerns have been identified in surveys, but forest health concerns are a possibility in the future.

<b>Goal 6:</b>	<b>Demonstrate and widely export innovative, efficient, and effective management techniques that can benefit others.</b>
<b>Sub-element NFS Generic Desired Condition</b>	“Through the Demonstration Project role, the Forest Service will continually seek to sharpen its management policies and techniques with an eye toward exporting these innovative and beneficial approaches to others locally, regionally, and nationally.” [LRMP, Vision]
<b>Example LRMP Desired Condition Statement</b>	“In its demonstration role, LBL will develop and test the programs, methods, and systems by which recreation, environmental education, and vegetation are managed, with the intention of promoting those elements that would provide benefits to other public and private land managers and units.” [LRMP, Vision]
<b>Desired Trend Statement</b>	“Each year, export three to five demonstration products.” [Objective 6a]
<b>Monitoring Questions</b>	30. Has LBL produced measurable results from demonstration projects that have lead to positive changes on other units? 31. How many demonstration products have been exported?
<b>LRMP Performance Measures</b>	30. Trends and annual summary of accomplishments and results 31. Trends and annual summary of accomplishments and results
<b>Data Sources Utilized</b>	--Annual summary of units supported, accomplishment reports, feedback, policies changed, results; tracking, by documenting the assistance provided, support to specific organizations and agencies --Track annual accomplishments with standard tracking system
<b>Importance</b>	This goal contains one of the key emphases of the LBL Protection Act and reinforces the key purposes described for LBL when created in 1963. Effective delivery of conservation education messages is also a primary objective of both LBL and the agency.
<b>What It Tells Us</b>	The results related to this goal will provide key information about whether LBL is meeting its legislated objectives.

## Goal 6, Monitoring and Evaluation Narrative

In order to expand the types of demonstrations LBL will undertake to benefit FS units, make demonstration operations more cost effective, and to involve a larger sphere of input from all Forest Service entities, LBL has dramatically improved its demonstration program in 2006 by:

- Establishing with the Region 8 Regional Forester an official Charter for the Demonstration Laboratory at LBL to provide better connection and oversight of the Demo Lab at LBL, within the Forest Service organizational structure.
- Adding a Demonstration Laboratory Board of Directors, made up of a wide spectrum of Forest Service staff, to review submitted Demo Lab project proposals and providing recommendations to the Regional Forester.
- Moving from a single staff delivery system to including all LBL staff as potential demo project staff at an average level of 5% of LBL staff time within a fiscal year. Assigned the demonstration function to the LBL Communications Department.

- Clarified project focus from primarily recreation management to address a wider spectrum of management issues for field units.

The Plan set a target of serving between three and six customers each year, on average. In 2006, the LBL Demonstration Laboratory exceeded this target by serving seven units in a variety of ways. It has been apparent from interviews conducted after efforts have been completed, that efforts have been extremely helpful to the units and thus all have been deemed successful. Details of projects and their effected changes are listed below:

**A. Finger Lakes National Forest–Conservation Recreation/Interpretation Plan--**The FL National Forest staff was asked to facilitate a congressionally funded feasibility study for development of a new visitor center. LBL staff served as project advisor.

**Change/Outcome(s):** The completed study identified alternative actions the Forest and regional tourism partners could take to achieve project objectives without capital outlays or depletion of forest budget capacity of existing services by funding Operations & Maintenance (O&M) requirements of a new visitor center. A congressional ear mark (\$5 million+) for use of FS capital funds for the project has been canceled and the Forest’s O&M budget was not depleted with increased visitor center expenditures. The study prompted new regional partner initiatives for increased service delivery. LBL was presented with a Certificate of Merit Award by the Green Mountain and Finger Lakes National Forests Supervisor for “innovation and acumen guiding the Feasibility Study.”

**B. Chequamegon/Nicolet National Forest–Forest Lodge Public Use Feasibility Planning--**LBL staff served as a planning advisor to the Cheq/Nic National Forest staff conducting an initial planning effort for the new Forest Lodge project in northern Wisconsin as a financially self-sufficient project.

**Change/Outcome(s):** LBL assistance helped Forest staff retool their planning processes with new thinking to address potential customer demand that could be matched with project objectives. The assistance has led the staff to create a potential customer advisory board, and engage in a scenario testing effort to ascertain actual marketability of proposed public use scenarios.

**C. WO–Recreation Management Improvement Project--**LBL staff is serving as project lead to implement the new OPM 401 job series for Recreation Management within the US Forest Service. The project will include creation of the official Knowledge, Skills, and Abilities (KSAs) inventory that will be used in agency recruitment, hiring, and supervision. This project will also involve participation by other federal agencies to consider a single set of recreation management competencies for all federal agencies managing recreation experiences.

**Change/Outcome(s):** The draft of competencies is now complete and being tested by expert review panels before they go to OPM for use by all federal agencies to offer the first capacity to recruit, select, and supervise recreation management staff in the Forest Service with established recreation KSAs.

**D. South Carolina National Forests–Union County Sustainable Development Project--**LBL staff advised the South Carolina Forest staff on their efforts to manage a community proposal for a new recreation lake on Forest lands.

**Change/Outcome(s):** The Forest staff was able to retool their planning process to look at sustainable alternatives for Union County’s sustainable economic development program that might include



recreation improvements that would not require diversion of FS funds for the construction of a new lake in the Forest.

**E. Florida Trails–Conservation Education Master Plan--**LBL staff is advising staff of the Florida Office of Greenways and Trails as they conduct surveys and plan for improvements in Florida Trails and Greenways systems to communicate conservation messages as a part of trail user’s recreation experience.

**Change/Outcome(s):** Services to date have helped the Florida staff produce the Scope of Work for the Phase I Trial Use Survey of Florida that can be used as a model by other states.

**F. San Dimas Development and Technology Lab–OHV Area Dust and Impact Studies--**The purpose of the dust study was to develop a low-cost technique for monitoring road dust that would enable land managers to quantify soil loss. The “sticky-trap” collectors developed were evaluated at Turkey Bay Off-Highway Vehicle Area. The study also encompassed human health and volume of aerial erosion loss at Turkey Bay. LBL was one of many sites that participated in the Wheel-to-Ground Impact Study. The purpose of this study was to look at differences between stock tires and aftermarket tires and their associated impacts on the ground. The two types of bikes compared were sport and utility, each with stock and aftermarket tires.

**Change/Outcome(s):** The dust study is producing the new OHV road dust monitoring techniques that will be the technique standard for use by all Forest Service field units. The Ground Impact results are expected to be used by all Forest Service field units to make management decisions for OHV and tire use policies.

**G. Cherokee National Forest–Lake Watauga Recreation Area Development Proposal--**LBL staff helped Forest staff respond to a request by community interests to build a new campground and recreation area on Watauga Lake.

**Change/Outcome(s):** LBL staff assistance helped Forest staff work with community leaders to reexamine customer demand for recreation in the Watauga Lake area, which resulted in concurrence that campground development might not be successful and that a less costly water access improvement might be much more sustainable and meet high demand.

<b>Goal 7:</b>	<b>Enhance dispersed recreational and environmental education opportunities throughout LBL.</b>
<b>Sub-element NFS Generic Desired Condition</b>	<p>“...management will also promote and increase support for dispersed day-use and extended-stay activities in anticipation of increased demand in dispersed recreational and educational activities and experiences.</p> <p>“Hunting and fishing will continue to be important dispersed recreation opportunities at LBL.” [LRMP, Vision]</p>
<b>Example LRMP Desired Condition Statement</b>	<p>“Dispersed activities and opportunities will become an extension of the developed Rec/EE facilities and sites that currently exist.”</p> <p>“Program and project efforts will be directed toward improving and developing self-guided trail systems for nature viewing, hiking, biking, and horseback riding. Scenic lake vistas will be opened up, and the road system will support scenic driving, access to cemeteries, and access to dispersed recreational opportunities.” [LRMP, Vision]</p>
<b>Desired Trend Statement</b>	<p>“Rehabilitate one to two areas contributing to dispersed recreation opportunities (e.g. backcountry, lake access, etc.) annually as determined by the realignment process, based on meeting present and anticipated user needs, providing resource protection, reducing maintenance costs, and reducing infrastructure.” [Objective 7a]</p> <p>“An average of one to two miles of trail will be constructed annually.” [Objective 7b]</p> <p>“Complete an average of one interpretive project annually within the Nature Watch Demonstration Areas and Oak-Grassland Demonstration Areas.” [Objective 7c]</p>
<b>Monitoring Questions</b>	32. Have dispersed recreational and environmental education opportunities at LBL been enhanced? (Duplicate question for Measures 32-35)
<b>LRMP Performance Measures</b>	<p>32. Trends and annual summary of accomplishments and results</p> <p>33. Backlog of facility and trail maintenance needs and trends</p> <p>34. Results and trends in user satisfaction ratings</p> <p>35. Trends in financial resources needed and available to provide recreation opportunities</p>
<b>Data Sources Utilized</b>	<p>--Objective accomplishments, percentage of visitation utilizing dispersed Rec/EE opportunities</p> <p>--Analysis of Infra Deferred Maintenance Report and reporting of percent change in backlog</p> <p>--Summary of visitor satisfaction surveys or personal letters and notes received; objective accomplishments, integrated projects completed</p> <p>--Analysis of incoming funds-traditional budgets and fee collections-and costs of operations, in view of needs; reports using standard tracking systems</p>
<b>Importance</b>	This goal contains one of the key program changes displayed in the LBL Area Plan and responds to concerns voiced by the visiting public during the planning process that LBL was not meeting changing customer demands through existing services.
<b>What It Tells Us</b>	The results related to this goal will provide key information about whether LBL is meeting its stated objectives in the Plan and is responding to the feedback of the public.

## Goal 7, Monitoring and Evaluation Narrative

There have been few specific “on-the-ground” activities completed to significantly change dispersed recreation and environmental education activities within the past year. There are several projects in the planning stage with a main goal to improve these activities. Nature Watch, Oak Grassland Demonstration Area, and the Backcountry Recreation Sites review have all begun but are in different stages. In particular, a public Appreciative Inquiry session was held to discuss and frame the backcountry/boat ramp issue. Simultaneously, LBL staff has been gathering recreation and transportation infrastructure and financial data related to facilities in anticipation of future discussions with the public about balancing demand, backlog maintenance and changing public tastes. As always, site-specific activities will continue to involve the public in meaningful ways prior to any major changes in services or program activities.

LBL participates in a number of regional partnership’s activities that have increased environmental education activities in the area. Earth Camp is held annually and hosted by the Partners for Education on Public Lands (PEPL). LBL held two educators workshops to help teachers see LBL as an outdoor lab for their students including the now annual Teacher’s Appreciation Weekend.

The School Grant program is a partnership with Friends of LBLA and Murray State University that provides grants to schools for field trips to LBL. In FY06, this program benefited 3,500 students. This program has been an excellent outreach program for disadvantaged and under-represented populations, as well as more than 40% of those students who have participated are eligible for partial or free school lunch programs.

There was a concerted effort to move ahead in development of partnerships, expertise sharing, and development of environmental education and resource management information related to the Oak-Grassland Restoration Demonstration Areas (OGRDA). The Society of American Foresters of Kentucky and Tennessee were hosted for an open discussion field trip to the area in June; the Fire Learning Network spring meeting showcased the southern OGRDA; a poster presentation was made about this same project area at the 11/05 “Fire in Eastern Oak Forests, Delivering Science to Land Managers” forum in Ohio. Simple placards explaining intent and planned activities were posted in the Fox Ridge and Cemetery Ridge project areas so the public would be able to see and understand onsite what was happening. New signing is planned for the upcoming year.

Turkey and Deer quota hunt applications were down nearly 6% between 2005 and 2006 seasons. In 2005, there were 13,055 deer and 2,897 turkey applications. In 2006, these numbers dropped to 12,312 and 2,724 respectively. Biologists believe that quota hunt applications represent the trend in overall hunting statistics. Statewide, hunting licenses have dropped only 2% during this same time period, reflecting a greater local change.

The “Respect the Resource” (RTR) program has been previously mentioned in relation to Turkey Bay and its expansion into the fishing program this year. The placement of a series of monofilament line collection sites has truly helped anglers and general public think a bit differently about the dangers fish and other wildlife face when not disposed of properly. The public has reacted very positively, usually indicating they were simply not aware of this threat. The RTR program has definitely shown it has great potential to expand over time into many more resource management areas by highlighting desired and sustainable actions or behaviors that are needed, while helping the public understand the consequences of poor ones.

The Environmental Education staff has continued to provide diverse and regularly updated and new programs at the developed campgrounds, Brandon Spring Group Center, and the day-use facilities. Of course, the most popular programs like The Homeplace Wedding and the Hummingbird Festival are offered each year, but staff works hard to add variety to their programs. Just this past year, the public was invited to take night hikes, participate in bird counts, iron furnace tours that tied with those in the surrounding areas, and a variety of eagle tours.



*A School Group at Brandon Spring.*



<b>Goal 8:</b>	<b>The LBL Area Plan will remain effective and usable and lead to accomplishments that support National Strategic Goals.</b>
<b>Sub-element NFS Generic Desired Condition</b>	“...as a unit of the Forest Service, LBL will actively fulfill its role in support of the Forest Service’s National Strategic Goals.” [LRMP, Mission]
<b>Example LRMP Desired Condition Statement</b>	“The programs and methods used at LBL will be in a constant state of evaluation for improvement and refinement, assuring that LBL will maintain a cutting-edge management focus in all disciplines.” [LRMP, Vision]
<b>Desired Trend Statement</b>	“A user-friendly and informative Area Plan monitoring and evaluation report will be produced annually and include comparison of LBL accomplishments and National Strategic Goals.” [Objective 8a]
<b>Monitoring Questions</b>	36. Are the goals of the LBL Plan leading to accomplishments that support national objectives? (Duplicate question for Measures 36-39)
<b>LRMP Performance Measures</b>	36. Trends and annual summary of accomplishments and results 37. Determine whether standards, guidelines, and management requirements are being met and are effective in achieving expected results 38. Determine if planning information or physical conditions have changed and provisions remain scientifically valid 39. Comparison of estimated and actual costs of plan implementation
<b>Data Sources Utilized</b>	--Comparison of projects and recent accomplishments to the National Strategic Plan goals and objectives; public comments; standard tracking systems --Interdisciplinary review; sample projects to observe effectiveness of implemented standards --Interdisciplinary review of Area Plan for needed changes as new information becomes available and/or significant changes in conditions are observed --Compare trends in operating budgets to the estimated costs of implementing the Area Plan
<b>Importance</b>	Ensures that the Plan stays usable and is working to support not only LBL goals, but those of the agency. Aids in communication with stakeholders.
<b>What It Tells Us</b>	By reviewing the accomplishments, we are able to find trends that indicate if the Plan is moving towards desired conditions, and should emerging issues begin to occupy more time and resources than the objectives in the Plan, indications for a “need for change” can be identified.

## Goal 8, Monitoring and Evaluation Narrative

LBL boasts an LRMP that is consistently and wholly aligned with the national strategic goals of the Forest Service.

The over-arching strategic goals of the Forest Service are manifest in the specific Performance Attainment Reporting (PAR) targets assigned to each field organization. Most of these are very directly aligned to objectives listed in the Plan. The following table displays key accomplishments of FY05 and FY06. LBL has accomplished the vast majority of our assigned PAR targets, and in some cases we have significantly exceeded the targets. The only significant target in which LBL has been deficient has been in the area of habitat improvement timber sales. One key project was delayed because of a lawsuit, ultimately settled in favor of the government, and is now expected to be sold in FY07. LBL's administrative process and scientific-based decision was subsequently upheld by the courts, and activity on this project is resuming.

<b>Specific National Objective (Target)</b>	<b>Unit of Measure</b>	<b>FY05 Accompl.</b>	<b>FY06 Accompl.</b>
<b>Miles of high clearance system roads receiving maintenance</b>	<b>Mile</b>	<b>41</b>	<b>30</b>
<b>Miles of passenger car system roads receiving maintenance</b>	<b>Mile</b>	<b>192</b>	<b>210</b>
<b>Miles of road decommissioned</b>	<b>Mile</b>	<b>5</b>	<b>1</b>
<b>Total trail system miles meeting standard</b>	<b>Mile</b>	<b>57</b>	<b>60</b>
<b>Miles of system trail improved to standard</b>	<b>Mile</b>	<b>8</b>	<b>15</b>
<b>Miles of system trail receiving maintenance to standard</b>	<b>Mile</b>	<b>20</b>	<b>30</b>
<b>Number of recreation, interpretive, and conservation education products provided to standard</b>	<b>Product</b>	<b>880</b>	<b>535</b>
<b>Priority Heritage assets managed to standard</b>	<b>Plan</b>	<b>0</b>	<b>3</b>
<b>Recreation site capacity (number of People At One Time) operated to standard</b>	<b>PAOT</b>	<b>2,100,555</b>	<b>2,100,000</b>
<b>Number of wildlife interpretation and education products</b>	<b>Product</b>	<b>41</b>	<b>42</b>
<b>Acres of inland lake habitat enhanced</b>	<b>Site</b>	<b>101</b>	<b>121</b>
<b>Acres of inventory data collected or acquired meeting corporate standards</b>	<b>Acre</b>	<b>0</b>	<b>14,000</b>
<b>Acres of non-threatened/endangered terrestrial habitat enhanced</b>	<b>Acre</b>	<b>6,598</b>	<b>6,690</b>
<b>Soil and water resource acres improved</b>	<b>Acre</b>	<b>20</b>	<b>20</b>
<b>Volume of Regular Timber (*05=offered; 06=sold)</b>	<b>CCF</b>	<b>917</b>	<b>474</b>
<b>Number of forest special projects permits issued</b>	<b>Permit</b>	<b>219</b>	<b>9</b>
<b>Annual monitoring requirements completed</b>	<b>Number</b>	<b>0</b>	<b>8</b>
<b>Landscape scale assessments completed</b>	<b>Assessment</b>	<b>0</b>	<b>1</b>
<b>Highest priority acres treated annually for noxious weeds and invasive plants on NF lands</b>	<b>Acre</b>	<b>587</b>	<b>465</b>
<b>Land use authorizations administered to standard</b>	<b>Authorization</b>	<b>20</b>	<b>7</b>
<b>Miles of land ownership boundary marked to standard</b>	<b>Mile</b>	<b>0</b>	<b>3</b>
<b>Number of non-wildland/urban interface acres treated</b>	<b>Acre</b>	<b>2,219</b>	<b>2,625</b>
<b>Number of acres treated to reduce the risk of catastrophic wildland fire</b>	<b>Acre</b>	<b>2,517</b>	<b>3,340</b>
<b>Number of land use proposals and applications processed</b>	<b>Application</b>	<b>2</b>	<b>3</b>

While in the relatively early stages of the LRMP, it is impossible to ascertain definitive trends; however, successful attainment of nationally assigned targets is fairly indicative that LBL is adequately and consistently aligned along the nationally designed and developed strategic roadmap for the agency.

From the narratives for each of the other goals, it is clear LBL is becoming more integrated and moving ahead to accomplish its stated multiple use goals and objectives. Some key examples:

- LBL has completed one habitat-driven, green timber sale under auspices of the USDA Forest Service. Additionally, we have accomplished two salvage sales that were necessary and safety-driven as a result of violent weather.
- LBL met all wildlife and habitat PAR targets. We are proud to boast LBL accomplished the lion's share of the Regional targets for invasive species control.
- Radically extensive improvements in LBL's Turkey Bay OHV Area have created positive and significant strides toward control of unmanaged recreation, which is one of the primary objectives contained within the national strategic goals. The most recent water quality evaluations were included within the EIS for the Plan.

Because of the relative freshness of the LRMP, the planning information, assumptions, and provisions of the LRMP remain scientifically valid. The relatively short time since the LRMP has been in place precludes a substantive comparative analysis, at this point, between projected cost of implementation and actual expense incurred.

In summation, LBL is tracking quite well early in our LRMP journey, and at this point there are no red flags to indicate any significant issues or shortfalls to preclude our continued alignment with national strategic goals, nor are there any indications we will be unable to attain any of the associated PAR targets.

## **E. Action Plan**

LBL monitoring results did not establish the need for any major actions or changes needed at this time. There are a number of minor actions listed below recommended to aid in implementation of several program initiatives outlined in the Plan, have some level of public expectation, or have had limited progress towards the desired conditions. These action items are drawn from narratives made in the preceding section of the report.

This report has not identified the need for any Plan amendments.

1. Action—Collaborate with the public to review, identify, and determine backcountry or boat ramp facilities that are obsolete, excessively expensive to maintain, and can be consolidated to fewer but better-maintained facilities meeting today's public service needs.

Responsibility—Customer Service Department Staff

Completion Date—Ongoing; Complete an action plan by October 1, 2008

2. Action—Expand use of the "Respect the Resource" program to littering, perhaps along The Trace or Highway 68/80. Collaborate with users to find creative ways that will lead to a noticeable improvement in the scenic quality of LBL. The upcoming Trace Scenic Byway Corridor Management Plan and the reconstruction of US 68/80 may offer the opportunity to begin this initiative.

Responsibility–Customer Service Department Staff

Completion Date–January 1, 2008

3. Action–Implement the Plan strategies associated with major blocks of wildlife habitat. Collaborate with the public and complete environmental analyses of the 10,000 acres of open lands maintenance and 8,800 acres of Prior Creek projects. Ensure environmental education aspects of the project are highlighted in the decision.

Responsibility–Environmental Stewardship Department Staff

Completion Date–Ongoing

4. Action–Collaborate with the public to revise the Heritage Resource Management Plan and gather information about former area residents.

Responsibility–Customer Service Department Staff

Completion Date–Ongoing





## **F. Appendix**

**Appendix 1 – Explanation of M&E Activities from LRMP, Section 2.**

**Appendix 2 – List of Key Preparers**

## **Appendix 1**

*The following section is excerpted directly from Section 2 of the Area Plan. It clearly articulates both the reasons to develop this report and the methodologies being employed.*

### **Monitoring and Evaluation**

Monitoring constitutes an important link between the goals of the Area Plan and annual program accomplishments. The planning process has identified key monitoring questions that address each of the priority goals and objectives; they are listed in Part 1 of the document (*2004 Area Plan*) under Area Wide Goals. The monitoring program will focus on some risks mentioned previously while addressing suitable uses, use strategies, and design criteria.

Monitoring will track the wide variety of components of the Area Plan. Roles and contributions identified include the LBL interdisciplinary program specialist who will complete data gathering and evaluation of the Area Plan's implementation. Additionally, both the general public and stakeholders will be involved to capture the perceptions of how successfully LBL achieves the area wide goals and objectives. Monitoring will track how well implementation of the Area Plan's goals and objectives is bringing the conditions of LBL to the desired conditions specified by the Area Plan.

Because this Area Plan also supports the Forest Service National Strategic Goals, the monitoring program will also weigh the Area Plan's progress and achievements in supporting these national goals. However, as these national goals are likely to change over time as national issues and special initiatives dictate, they were not included as formal goals of the Area Plan. This monitoring program, therefore, will include a comparison of this Area Plan's goals, annual LBL program accomplishments, and current or future national goals as part of the monitoring process.

By applying the evaluation questions and measures for each area goal, results and trends will provide a clearer picture of progress toward the vision. The evaluation of monitoring information will measure how close LBL is to reaching desired conditions identified in the Area Plan, including goals, objectives, and susceptibility to emerging issues.

An important concept incorporated in this Area Plan is the continuing use of some evaluation factors used in the analyses of the Environmental Impact Statement (EIS) alternatives. This approach allows for those EIS evaluation factors to serve as benchmarks from which original assumptions can be tested, and progress toward desired conditions can be measured.

Evaluations will serve as the springboard from which the resource specialist can identify changes needed in the Area Plan or its implementation, or research needed to clarify and address management issues. Results will also be used to help set shorter-term (three-to-five-year) strategic direction, as well as annual work plans. Existing strategies will be updated as needed, based on these evaluations. Results will be reported annually in the Area Plan M&E report. The Monitoring Summary Table in the Appendix (*of the Area Plan*) includes a complete list of questions, measures, method of collection, frequency, and responsible staff.

*Note: items in italics are clarifications to the original section in the Plan, intended to aid the reader.*

## **Appendix 2**

### **Key Preparers:**

Judy Hallisey – Environmental Stewardship Department Manager  
Steve Bloemer – Wildlife Program Manager  
Elizabeth Raikes – Wildlife Biologist  
Jim McCoy – Fire Management Officer/Wildlife Biologist  
Barry Haley – Business Performance Department Manager  
Kathy Coursey – Budget Officer  
Brian Beisel – Customer Service Department Manager  
Gary Hawkins – Recreation Program Manager  
Sharon Waltrip – Environmental Education Program Manager  
Kathryn Harper – Communications Department Manager  
Barbara Wysock – Area Planner  
Tom Christensen – Demonstration Program Manager

All program areas were consulted in the development of this report.