

## **An Economic Feasibility Study for Recreational Development on the Bienville National Forest in Mississippi**

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**Abstract:** An economic impact analysis for recreational development on the USDA Forest Service's Bienville Ranger District indicated the potential for a new, long-term revenue stream to the four counties encompassing Bienville National Forest (BNF). Economic impacts were based on annual net returns for proposed and enhanced recreational activities, associated with a 1,000-acre lake, derived from new non-resident dollars. Estimates for total visitation in activity days ranged from 543,500 to 1.46 million. Economic impacts were based on minimum and maximum non-resident visitation at 40% (current BNF estimate) and 70% of total visitation. At 40% and 70%, net total sales impacts for non-resident visitation ranged from \$10.43 to \$28.60 million and \$18.52 to \$49.16 million, respectively. Net annual, indirect business taxes were used as a funding benchmark for the long-term sustainability of proposed or enhanced recreational activities. This benchmark was \$1.31 million, which equals the current U.S. government, short-term funding provided to the four counties. Net indirect business taxes, based on minimum and maximum projections for non-resident visitation at 40% and 70%, totaled \$765,656 to \$2.05 million and \$1.47 to \$3.73 million, respectively. Overall, results were favorable for initiating proposed and enhanced recreational activities. The break-even point was a non-resident visitation of 356,751.

**Key Words:** economic impact analysis, indirect business taxes, National Forests, recreation, rural development

### **INTRODUCTION**

In 1999, representing Smith County, Mississippi community leaders met with personnel from the National Forests in Mississippi to request agency support of their proposal to develop a large recreational lake on the Bienville National Forest (BNF) in Smith County, Mississippi. The objective of constructing the lake was to create a setting that will be conducive to investment in large-scale recreation development. It was believed that once the lake was developed tourism and tourism-related services would increase, thereby providing an additional source of revenue for Smith County and the surrounding area. The increase in economic development was expected to help offset declining federal payments to the county (Twenty-five Percent Fund), attributed to the reduction of National Forest timber sales.

In 2000, the 106<sup>th</sup> Congress (H.R. 4578) directed the U.S. Forest Service (USFS) to conduct an economic feasibility study of the impacts of constructing a recreational lake on the BNF in Jasper, Newton, Scott, and Smith Counties in Mississippi. To facilitate completion of the study, the National Forests in Mississippi formally entered into an agreement with the

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Mississippi Water Resources Institute and the Department of Forestry at Mississippi State University to conduct the study prior to further planning and development.

The overall project objective was to determine economic feasibility for long-term recreational development, particularly for a large recreational lake in BNF in Mississippi. The study examined long-term economic feasibility based on the increase in economic impacts and taxes generated from proposed recreational activities and visitor participation rates versus economic impacts and taxes generated from the current mix of recreational activities and participation rates and federal payments from national forest management activities. The current mix of activities that would be affected by the BNF developments included ATV use, biking, boating, camping, fishing, hiking, horseback riding, picnicking, and swimming. The proposed activities included newly introduced or enhanced ATV designated trails, biking, boating (non-anglers), conference center activity, fishing, fishing tournaments, hiking, horseback riding, jet skiing, outdoor education, picnicking, playground activity, shooting range activity, sightseeing, swimming, water skiing, and wildlife-watching.

## **METHODS**

Initially, an assessment was made of existing recreational activities and facilities in BNF, which lies within Jasper, Newton, Scott, and Smith Counties. Consideration was given to additional or enhanced recreational activities and facilities, particularly a large recreational lake that could be incorporated into the forest setting. These proposed or enhanced activities and facilities were incorporated into the study based on discussions with the U. S. Forest Service and the Smith County Board of Supervisors, and through the use of a pilot survey. Varying investment levels needed to provide new activities and facilities, and the monetary benefits derived from these investments, were evaluated for their long-term feasibility. In addition, investigations uncovered the socio-demographics within a 150 and 300-mile radius around Bienville National Forest. Other recreational sites also were catalogued within the 150-mile radius to assess potential markets for planned activities.

Feasibility, from the standpoint of tax generation, would be determined through the use of Economic Impact Analysis (EIA). Economic impacts, founded upon the fundamentals of input-output analysis, are especially useful in describing current and potential economic roles of travel and tourism activities and facilities (e.g., water skiing, fishing) in an overall economy (USDI 1992, Johnson and Moore 1993, Strauss et al. 1995, Grado et al. 1997). Economic impacts are generated from models developed by using the Impact Analysis for Planning (IMPLAN) System (Alward et al. 1985). This software was originally developed by the USFS to estimate regional economic impacts of management plans for National Forests (Olson and Lindall 1999). These studies provide regions or states with useful information about social and economic effects of proposed projects (Loomis and Walsh 1997). Economic impacts of potential investments providing new or enhanced recreational activities at BNF would be modeled using IMPLAN to determine the monetary value to the 4-county economy from these new activities.

One issue of concern for any economy is leakage that occurs when dollars are spent. Leakage is defined as those dollars attributed to foreign or domestic imports, purchases of commodities produced by government and other institutions, and those portions of value-added which are not spent in the region (Olson and Lindall 1999). For each activity, a leakage value was produced and served as a measure of the potential for future economic impact. These impacts would result from the creation of businesses both directly and indirectly associated with BNF and its activities. In addition, multipliers derived from economic impact analysis can be

used to assess relationships in a local or regional economy (Loomis and Walsh 1997). Multipliers show how direct sales promote other effects on total economic output. We examined Type II multipliers, which are total sales output for the region divided by the direct sales.

Preferably, expenditure data should be collected on recreation-related activities directly from visitors participating in a specific region. However, due to time constraints and the unavailability of data, information was collected from a variety of sources. In some cases, this data was previously collected in Mississippi, although not for BNF. In other cases (e.g., ATV use), secondary data sources were relied on to develop expenditure profiles. In both cases, this included daily expenses (both on-site and off-site) and expenses for durable items like ATVs or other vehicles. For EIA purposes, all expenses have been converted into a per day basis. To truly assess the economic impacts to the four county region, we also needed to know what was spent in this region versus purchases spent outside this area. In cases where purchase location was unknown, IMPLAN's Regional Purchase Coefficients for the four counties served as a proxy for the upper limit on expenditures for specific items purchased in those four counties.

Another issue addressed when estimating economic impacts is residency of recreationalists. Typically, non-residents have more impact on economies than residents because their expenditures represent an influx of new money. Resident expenditures are commonly excluded when determining impacts because it is theorized that, in lieu of the activity of concern, they would spend that money in another way. Residents also may go to other areas to recreate, leading to decreased local expenditures. In this study, resident expenditures were excluded from the EIA. In addition, separate economic impacts were not performed for lodging facilities such as the conference center, cabins, RV stations, and camping sites because expenditures associated with these sites were built into the expenditure profiles for activities under analysis. Care was also taken to estimate attendance for each activity without duplicating recreational participants under multiple activities. This avoided, to the extent possible, the double counting of participants and their expenditures on a given day for multiple activities.

## **RESULTS**

The estimated economic impacts were summarized from proposed or enhanced recreational activities on BNF based on minimum and maximum activity days used for each activity at a 40% and 70% non-residency visitation rate, respectively (Tables 1-4).

**Table 1. Total estimated economic impacts from proposed or enhanced recreational activities on Bienville National Forest based on minimum activity days used for each activity and a 40% non-residency visitation rate.**

<b>Proposed Activity</b>	<b>Total Sales Impact \$</b>	<b>Percent %</b>	<b>Indirect Business Taxes \$</b>	<b>Percent %</b>	<b>Employment #</b>	<b>Percent %</b>
ATV Designated Trails	400,319	3.64	25,533	3.18	11	3.92
Biking	13,293	0.12	859	0.11	0	0.11
Boating (non-anglers)	1,387,410	12.62	103,853	12.91	33	12.27
Conference Center	121,541	1.11	7,308	0.91	3	1.15
Fishing	1,235,343	11.24	117,577	14.62	33	12.20
Fishing Tournaments	97,191	0.88	3,915	0.49	2	0.67
Hiking	570,532	5.19	54,878	6.82	15	5.66
Horseback Riding	620,773	5.65	30,748	3.82	12	4.55
Jet Skiing	181,214	1.65	9,271	1.15	3	1.18
Outdoor Education	11,821	0.11	969	0.12	0	0.11
Picnicking	786,960	7.16	54,186	6.74	20	7.21
Playground Activity	78,696	0.72	5,419	0.67	2	0.70
Shooting Range	34,233	0.31	3,574	0.44	1	0.33
Sightseeing	1,573,918	14.32	108,372	13.48	39	14.42
Swimming	3,147,838	28.64	216,744	26.95	78	28.84
Water Skiing	473,597	4.31	36,609	4.55	11	4.14
Wildlife-Watching	254,980	2.32	24,324	3.02	7	2.55
Totals	10,989,659	100.00	804,139	100.00	270.5	100.00

**Table 2. Total estimated economic impacts from proposed or enhanced recreational activities on Bienville National Forest based on maximum activity days used for each activity and a 40% non-residency visitation rate.**

<b>Proposed Activity</b>	<b>Total Sales Impact \$</b>	<b>Percent %</b>	<b>Indirect Business Taxes \$</b>	<b>Percent %</b>	<b>Employment #</b>	<b>Percent %</b>
ATV Designated Trails	1,200,955	4.12	43,849	2.10	12	1.69
Biking	19,939	0.07	1,289	0.06	1	0.07
Boating (non-anglers)	2,081,115	7.14	155,780	7.46	50	7.31
Conference Center	729,245	2.50	43,849	2.10	19	2.77
Fishing	3,706,028	12.71	352,731	16.89	99	14.55
Fishing Tournaments	242,978	0.83	9,787	0.47	5	0.76
Hiking	1,597,491	5.48	153,659	7.36	43	6.28
Horseback Riding	1,862,321	6.39	92,243	4.42	37	5.40
Jet Skiing	497,648	1.71	50,036	2.40	13	1.85
Outdoor Education	35,464	0.12	2,907	0.14	1	0.13
Picnicking	3,147,838	10.79	216,744	10.38	78	11.45
Playground Activity	204,609	0.70	14,088	0.67	5	0.75
Shooting Range	410,790	1.41	42,892	2.05	11	1.59
Sightseeing	5,508,716	18.89	379,302	18.16	137	20.04
Swimming	6,295,676	21.59	433,488	20.76	156	22.89
Water Skiing	1,200,955	4.12	54,913	2.63	17	2.47
Wildlife-Watching	424,967	1.46	40,540	1.94	0	0.00
Totals	29,166,735	100.00	2,088,097	100.00	681.2	100.00

**Table 3. Total estimated economic impacts from proposed or enhanced recreational activities on Bienville National Forest based on minimum activity days used for each activity and a 70% non-residency visitation rate.**

Proposed Activity	Total Sales Impact	Percent	Indirect Business Taxes	Percent	Employment	Percent
	\$	%	\$	%	#	%
ATV Designated Trails	700,557	3.67	44,683	3.17	19	3.69
Biking	23,262	0.12	1,503	0.11	1	0.12
Boating (non-anglers)	2,427,967	12.72	181,744	12.91	58	11.52
Conference Center	212,697	1.11	12,789	0.91	6	1.09
Fishing	2,161,849	11.33	205,759	14.62	58	11.46
Fishing Tournaments	170,084	0.89	6,851	0.49	4	0.71
Hiking	998,432	5.23	96,037	6.82	27	5.29
Horseback Riding	1,086,354	5.69	53,809	3.82	22	4.26
Jet Skiing	116,118	0.61	11,675	0.83	3	0.57
Outdoor Education	20,687	0.11	1,696	0.12	1	0.10
Picnicking	1,377,179	7.22	94,826	6.74	34	6.76
Playground Activity	137,718	0.72	9,483	0.67	3	0.67
Shooting Range	109,602	0.57	11,305	0.80	3	0.63
Sightseeing	2,754,358	14.44	189,651	13.47	68	13.52
Swimming	5,508,716	28.87	379,302	26.94	137	27.06
Water Skiing	828,796	4.34	64,065	4.55	20	3.89
Wildlife-Watching	446,216	2.34	42,567	3.02	44	8.66
Totals	19,080,592	100.00	1,407,745	100.00	504.5	100.00

**Table 4. Total estimated economic impacts from proposed or enhanced recreational activities on Bienville National Forest based on maximum activity days used for each activity and a 70% non-residency visitation rate.**

Proposed Activity	Total Sales Impact	Percent	Indirect Business Taxes	Percent	Employment	Percent
	\$	%	\$	%	#	%
ATV Designated Trails	2,101,672	4.23	134,048	3.55	56	4.40
Biking	34,892	0.07	2,255	0.06	1	0.07
Boating (non-anglers)	3,641,950	7.32	272,615	7.23	87	6.87
Conference Center	1,276,179	2.57	76,735	2.03	33	2.60
Fishing	6,485,548	13.04	617,278	16.36	174	13.69
Fishing Tournaments	425,210	0.86	17,127	0.45	9	0.70
Hiking	1,741,594	3.50	268,903	7.13	75	5.91
Horseback Riding	3,259,062	6.55	161,426	4.28	64	5.08
Jet Skiing	870,883	1.75	87,562	2.32	22	1.74
Outdoor Education	62,063	0.12	5,088	0.13	2	0.13
Picnicking	5,508,716	11.08	379,302	10.06	137	10.77
Playground Activity	358,066	0.72	24,655	0.65	9	0.70
Shooting Range	1,315,219	2.64	135,660	3.60	39	3.04
Sightseeing	9,640,253	19.39	663,779	17.60	239	18.84
Swimming	11,017,433	22.16	758,604	20.11	273	21.53
Water Skiing	1,243,194	2.50	96,098	2.55	29	2.32
Wildlife-Watching	743,692	1.50	70,945	1.88	20	1.59
Totals	49,725,626	100.00	3,772,080	100.00	1267.4	100.00

Total economic impacts from current activities were \$563,395, with indirect taxes of \$38,483 and 15 jobs supported. As previously stated, economic impacts from current activities in the forest were subtracted from proposed and enhanced activities associated with a 1,000-acre lake. This was done for a minimum and maximum projection for non-resident visitation at both the 40% and 70% levels. This resulted in a minimum and maximum range for net total sales impacts of \$10.43 to \$28.60 million at 40% non-residency. For 70% non-residency, net total sales impact minimum and maximum range was \$18.52 to \$49.16 million. This also resulted in a minimum and maximum range of an annual net employment impact of 256 to 505 jobs at 40% non-residency. For 70% non-residency, annual net employment impact minimum and maximum range was 490 to 1,253 jobs. In general, the largest impacts for sales, taxes, and employment were derived from swimming, sightseeing, boating (non-anglers), and fishing.

Tax contributions of current and proposed or enhanced recreational activities fall into two broad categories; those that are collected and stay in the local four county region and those that are collected and do not. For the most part, the majority of the indirect business taxes stay in the local area and are respent. The "other" tax category primarily includes federally related taxes, most of which leave the local area. For the purposes of this study, it was assumed that net annual, indirect business taxes could be used as a benchmark for long-term sustainability of proposed or enhanced recreational activities in BNF. When non-resident visitorship stayed at 40%, net indirect business taxes, based on minimum and maximum projections for non-resident visitation, totaled \$765,656 and \$2.05 million, respectively. When the non-resident visitorship was projected to 70%, net indirect business taxes, based on minimum and maximum projections for non-resident visitation, totaled \$1.37 and \$3.73 million, respectively. The overall annual net tax gain, with non-resident visitorship at 40%, totaled \$1.92 and \$5.14 million, respectively. The overall annual net tax gain, with non-resident visitorship projected to 70%, totaled \$3.42 and \$9.27 million, respectively.

## **DISCUSSION**

### **Economic Impact Analysis**

Economic impacts in this study represent a new, long-term revenue stream to the four counties encompassing BNF. The economic impacts are an annual net return (proposed or enhanced activities minus current activities) based on the proposed and enhanced activities associated with a 1,000-acre lake derived from non-resident dollars that exclude the economic impacts from current, non-resident activities in the forest.

There were a number of variables in this study that had an influence on its outcome. The key variables included potential participation rates by visitors for new or enhanced activities, treatment of residency status of recreationists used in the EIA, estimates for non-resident visitation, and expenditure profiles, all of which were acquired from secondary data sources. In some cases current data were acquired in Mississippi, although not at BNF.

There were a number of activities proposed for BNF for which there were no recreation or tourism-related expenditure studies to acquire the necessary expenditure profiles and attendance data. The same was true of these activities for the state of Mississippi. As a result, making conjectures based on limited, localized data was difficult, particularly if these data were to be used for economic impact analysis. However, available data and the implementation of an economic impact analysis over a range of values revealed the possibilities for determining economic feasibility of proposed and enhanced recreational opportunities at BNF.

Overall study results indicated the proposed project is, for the most part, economically favorable from a tax generation standpoint. The project was not feasible from the standpoint of indirect business taxes when non-resident visitation remained at 40% or when projections approached the minimum visitation for all activities involved. However, as visitation projection approached the maximum, the project became feasible. If all activities remained at 40% non-resident visitation, there was an annual shortfall of \$543,864 in indirect business taxes from the \$1.31 million the government now provides. However, when non-resident visitation reached the maximum projection there was a positive annual gain of \$740,094. If non-resident visitation is 70%, both minimum and maximum visitation projections show positive annual gains of \$59,742 and \$2.42 million, respectively. The break-even point was a non-resident visitation of 356,751.

The range of values for indirect business tax generation will likely be higher if the BNF 1,000-acre lake is built and accompanying activities are incorporated. There are several reasons for this optimism. One, the use of 40% for non-residents was an estimate given by BNF and verified by the pilot survey. However, this does not consider any marketing activities that would take place to promote the new BNF lake and associated recreational activities. Also, if proposed or enhanced changes in BNF become a reality, coupled with new highway projects due to take place in the near future, visitation will most certainly rise. Thus, the non-resident portion of visitation will likely increase to at least 50% and perhaps as high as 70% and, along with it, so will the economic impacts and accompanying tax generation. For this reason, a range of 70% was incorporated into this analysis to project high end economic impacts and tax benefits from increases in non-resident visitation. However, while these non-residency estimates are average projections, each recreational opportunity will vary in its resident/nonresident distribution. Second, the new BNF 1,000-acre lake will inevitably lead to an expansion of existing businesses and the creation of new firms. This will result in increased economic impacts and tax generation both directly from these enterprises and indirectly from the surrounding businesses in the four counties. It should be noted that this study was accomplished with a 1998 version of the four county economy. Once proposed and enhanced activities become reality, a new economy in the area will develop which will capture more dollars on the local level. These new enterprises (i.e., retail, wholesale, and manufacturing) will help stem the leakage from the four counties which was estimated to range, at 40% non-residency, from \$10.89 to \$28.84 million. For 70% non-residency, leakage was \$19.01 to \$51.33 million. Third, the \$1.31 million that the U.S. government will provide annually to the four counties is only guaranteed until 2007. There is no guarantee that these funds will continue. Improvements made to BNF for recreation will, despite variations in the economy, still provide a more stable income and tax base for the four counties. Fourth, funds coming from the government will not be indexed to the inflation rate. In contrast, total sales impacts and resulting taxes will keep pace with inflation. For example, purchasing power of the \$1.31 million provided by the U.S. government will continually erode whereas tax dollars will continue to increase because they are based on sales of products that will inflate annually at a rate of at least 2-3%. Last, resident expenditures have been ignored in this project as contributors to economic impacts and the resulting tax base increase. Studies have been done to determine the contribution resident expenditures make to economic impacts (Grado et al. 2001). In a waterfowl hunting study in the Mississippi Delta, it was determined that 70% of resident expenditures would leave the area to pursue duck hunting elsewhere and could be considered legitimate impacts. Therefore, a portion of resident expenditures could be added to the non-resident totals for total sales impacts and indirect taxes, thus increasing these numbers even further.

It should be noted that this project, while generating new revenue, will also lead to additional costs. These may range from new law enforcement costs (e.g., problems with unauthorized ATV use on private lands if ATV use was emphasized on BNF) and costs associated with increased traffic, or sewage treatment operations. However, most of these expenses related to infrastructure can be built with state and federal assistance. Counties also have dollars in their budgets for some of this expansion. Also, as the economy in the four counties changes with developments not directly related to activities in the forest, their tax bases will also increase.

Rural development initiatives, assisted by state and federal agencies and private businesses, can improve local economies by marketing and planning developments that accommodate the resource's of BNF and its users based on economic impact analysis. We used economic multipliers, derived from our study results, to illustrate the region's ability to incorporate and use in-region recreational expenditures. The Type II multiplier for our study region was 1.46 indicating that for each dollar spent in the region there is an additional \$0.46 of economic impact. In general, a multiplier of 1.46 for these types of activities is somewhat low and indicates that the study region is failing to capture recreational expenses, and that many supporting businesses are located out of four county study region. Regional and state level output multipliers for recreation expenditures usually range from 1.5 to 2.7 in the United States (Loomis and Walsh 1997). Grado et al. (1997) determined that turkey hunting in Mississippi produced a multiplier of 2.3. However, multiplier size may be related to the size of region because value added within a region increases as its geographic area is increased and a smaller proportion of expenditures are purchased outside the region (Loomis and Walsh 1997). This state multiplier is greater than our study multiplier, in part, because the industrial capacity of the state surpasses that of the four county area of BNF and more expenditures are captured within the state economy. The industrial or commercial make-up of an area influences the size of the multiplier. A study of anglers in Maine produced a multiplier for non-resident expenditures of 1.60 (Steinback 1999). In a study of nine rural counties in Pennsylvania, Strauss et al. (1995) produced a multiplier of 2.96 for all recreational activities by non-residents, with the range extending from 2.29 to 3.42. By comparison, the range for our study was 1.40 to 1.49.

#### Marketing Analysis

The creation of a 1,000-acre recreational lake within BNF would be convenient for single-day and multiple-day travelers. The National Forest is conveniently located between Jackson and Meridian, Mississippi and is easily reached by interstate from Memphis, Tennessee, New Orleans, Louisiana, and Atlanta, Georgia. In addition, the National Forest is only 30 miles from the Silver Star and Golden Moon Casinos in the Choctaw Reservation near Philadelphia, Mississippi.

Funds to promote marketing of BNF and surrounding recreational sites would be provided primarily by private enterprise, since it is envisioned that they would have a key role in recreational activity development. A review of competing sites and activities, from a geographical standpoint, shows that there are many recreational opportunities that could be developed in coordination with a 1000-acre lake at BNF (Grado et al. 2002). For example, an important activity would be the development of an 18-hole golf course in the vicinity of BNF. Only 5 of 80 state and federal recreational areas offer this activity in Mississippi. Another opportunity is the development of ATV trails. Currently, BNF offers limited ATV opportunities, but expanding existing trails would help develop an important niche for this outdoor recreational



market. Further support for developing enhanced ATV activities is that recreational sites in the surrounding states of Alabama, Arkansas, and Louisiana do not offer designated ATV trails. It should be noted that while the pilot survey in this study showed no large opposition to ATV use there is a good deal of pressure to eliminate or severely limit ATV use on federal lands. However, elimination of ATV use at BNF would not jeopardize the feasibility of the 1,000-acre lake. It is also important to note that the largest impacts for sales, taxes, and employment were derived from boating (non-anglers), fishing, sightseeing, and swimming. All of these activities are viewed as relatively benign from an environmental standpoint.

Some of the activities on the Lake Project may be mutually exclusive and/or may not be feasible to provide. For example, jet skiing and water skiing may conflict with fishing tournaments. However, the conservative use projections of this study will assist recreational planners in developing recreational opportunities that will not only be feasible but avoid user conflicts. The use projections for this project (activity days) are in-line with visitation on other National Forests (Zinser 1995). If certain activities meet with public resistance or are unable to be successfully incorporated into the Lake Project, they can be dropped from the data provided by this report to assess the monetary losses for the four counties.

Although, convention centers and cabins are found on other federal lands and state parks within Mississippi, an opportunity exists for developing a unique convention center not found elsewhere in the state. These facilities could be built in conjunction with visitor activity buildings stressing outdoor education, which are only found in State Parks within Mississippi. Other activities that are not common and could be developed include horseback riding trails, shooting ranges, group and RV camping facilities, and other educational programs. It is also possible to expand upon wildlife-watching activities on BNF. For example, endemic species along with other species attached to a large lake would make this a key visit along a proposed birding trail for the South.

## **CONCLUSIONS**

The study conclusions are based on a conservative approach given the treatment of key variables in this study. Those variables included present and future attendance estimates provided by BNF and competing recreational sites, residency of participants, and their estimated expenditure profiles. A major change in any of these factors could influence the results. However, the range provided for long-term total sales impacts, employment, tax dollar generation provides a measure of assurance as work on the lake progresses.

The long-term positive results from this study necessitated that the project moves on to the next stage. It has been estimated that it will cost \$2.85 million and take three years to complete an Environmental Impact Statement (EIS). Once the EIS is complete and the feasibility of the project is determined, it will cost approximately \$25.00 million and take from five to eight years to accomplish: 1) land and mineral acquisitions; 2) design and construction of the dam; 3) wildlife and fisheries habitat enhancement projects; 4) vegetation management; 5) basic infrastructure development; and 6) preparation of a prospectus and design narrative for solicitation/award of a long-term special-use permit for private sector development/operation of the recreational facilities.

Successful implementation of a project of this magnitude will also require significant investment from the state and counties, in combination with the federal government, for required infrastructure development (i.e., road improvements, sewage treatment facilities). Mississippi has appropriated \$1.25 million for the construction of turn-out lanes from State Highway 98 into

the Okhissa Lake Project in Franklin County, Mississippi. Design and construction of required sewage treatment facilities is expected to cost Franklin County an estimated \$3.5 million.

#### **FUTURE CONSIDERATIONS**

The experience from this study highlights the need for a coordinated effort in Mississippi on the part of those members of the outdoor recreation community and their stakeholders to coordinate studies that look at visitor attendance, expenditures, values, attitudes, and perceptions relative to the natural resource base. This information is invaluable for economic feasibility studies, making decisions that affect the natural resource base, and promoting a natural resource-based tourism economy in the state.

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