

Competitive Research Grant Program

Economic Impacts of the Great River Birding Trail in Mississippi

Investigators: Stephen C. Grado, Marcus K. Measells, Forestry; W. Daryl Jones, Wildlife and Fisheries; Greg Ibendahl, Agricultural Economics

Project Goal:

This research and outreach project will measure and communicate the current and potential social and economic impacts of birdwatching activities on The Great River Birding Trail (GRBT) within the Lower Mississippi River counties and the state of Mississippi including total employment, personal income, value added, tax generation, and total economic impacts. The goal is to assist in the development of the GRBT in the Lower Mississippi Alluvial Valley.

Project Objectives:

1. Determine birdwatching expenditures directed toward relevant private and public sites in Mississippi by residents and non-residents of the state.
2. Quantify the current and potential economic impacts of birdwatching expenditures from The Great River Birding Trail on the economy of the Mississippi River counties and Mississippi from these birdwatching expenditures.
3. Quantify the current and potential economic impacts of birdwatching sites affiliated with The Great River Birding Trail on the economy of the Mississippi River counties and Mississippi.
4. Establish a business profile for nonindustrial private forest and agricultural landowners engaged in granting access to their lands for the purposes of birdwatching.
5. Determine the business establishments, or lack thereof, that currently exist to support The Great River Birding Trail.

Synopsis of research activities per objective:

1. To determine birdwatching expenditures directed toward relevant private and public sites in Mississippi by residents and non-residents of the state a two-prong approach has been taken. One is to survey participants at bird festivals, as this project views festivals as a “part” of the Trail activity. The second approach was to develop a Web site to collect birding expenditures. The Web site for the birding trail is under development as is an interactive, hands-on type interface where the average user or birding enthusiast will be able to browse around and not only learn about the various birding areas bordering the entire river, but also discover places along the river where one can take a family vacation. The purpose of the site is to give users the ability to locate, learn about, and print maps to birding sites along the Mississippi River Valley. These sites have already been documented and include a mix of public and private sites. Currently, 252 sites have been identified with an increasing number of them being private. Some of the lake sites listed among these sites consists of public water bodies

surrounded by private land. Therefore, they are really a mix. Many of the economic benefits occurring at these lake sites would potentially accrue to the private sector. A focal point of the project has always been to assist in growing the private side of the Trail. During the past year, a number of private landowners have made inquiries about how to incorporate birdwatching activities, on a fee basis, on their property.

2. Thus far, the economic impacts of two birding festivals have been quantified in 2006 and one in 2007.
3. The project has made ties with efforts affiliated with the Trail in Arkansas and Tennessee. Potentially, Louisiana is also going to cooperate with our efforts.
4. Thus far, we have visited birding site operators to create profiles for business owners and public sites.
5. Only until we have completed the economic impacts from festivals, bird watching enthusiasts along the Trail, and the business and public ownerships will the level of support in the economy along the Trail for birdwatching and related activities be known.

Significant findings/results per objective to date:

Relative to Objectives 1 and 2. Birding, or birdwatching, is a recreational activity gaining increased popularity in the



United States. The Great River Birding Trail research project undertaken at Mississippi State University is measuring current and potential social and economic impacts of birdwatching activities on the trail in Mississippi. Trail activities will consist of bird watching-related recreation on private and public sites, along with accompanying birding festivals. Since the numbers of sites are being assessed, this project focused on expenditure data and economic impacts from festivals. The study performed on-site interviews at two festivals in 2006. One festival was hosted by TARA Wildlife Inc., a private entity, and one was hosted by Audubon Mississippi, a non-governmental organization. The economic impacts, derived from expenditure data, were modeled using the Impact Analysis for Planning (IMPLAN) System. The Stork and Cork festival held at TARA Wildlife Inc. had a total attendance of 145 individuals resulting in a total economic impact of \$10,031 for the three-day event.

Competitive Research Grant Program**Economic Impacts of the Great River Birding Trail in Mississippi (continued)**

Investigators: Stephen C. Grado, Marcus K. Measells, Forestry; W. Daryl Jones, Wildlife and Fisheries; Greg Ibendahl, Agricultural Economics



The four-day Hummingbird Migration Celebration was attended by 7,970 individuals resulting in a total economic impact of \$97,654. Overall, the two festivals resulted in a \$107,685 annual economic impact to Mississippi.

Relative to Objective 3, 4 and 5. The Great River Birding Trail Web site now accessible to the public has now been expanded to include sites in Minnesota, Kentucky, Tennessee, Arkansas, Mississippi, and Louisiana (there are a few additional sites in Louisiana that remain to be added to the database). See the Web site at www.greatriverbirding.org/sponsors.php. Additionally, site data for sites in Southern Missouri and Illinois have been entered into the database but this data is not yet publicly accessible. A total of 252 sites are now included on

the Trail. Kilroy Technologies is continuing to improve the Web site look with input from Audubon Headquarters and Mississippi State University. It is the intention of this project to get birdwatchers along the Trail to enter their trip-related and equipment expenditures into the Web site database. This information coupled with in field surveys will help establish a method and validation for birdwatching expenditure profiles. To evaluate potential economics of birdwatching activities in Mississippi and along the Trail, an assessment is needed on the economic impacts of expenditures tied to sites and visitors. This initial step involves determining the expenditures related to these activities, the number of individuals and days partaking in the activity, and subsequently determining an economic impact for a given year. Since the IMPLAN model, which is

a linear model, is being used to determine economic impacts for this project, projections on potential economic impacts from increases or decreases in participation can only be made within a narrow, but reasonable range for each activity. A current economic model of the State was built using the most up-to-date IMPLAN software (Version 2.0.1025) and the latest database for the State economy (2006). The model was used to determine economic impacts in 2008 dollars of wildlife-watching, most of which is tied to birdwatching, in Mississippi by residents and nonresidents to the State. Expenditures and activity days for wildlife watching have been derived by adapting data from the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. This is the latest comprehensive database, although a specific 2006 database is due to be published shortly for Mississippi only and will refine the analysis.

In 2006, 731,000 resident and non-resident wildlife-watchers in Mississippi spent 1,302,000 activity days away from home (at-home not reported in activity days) in pursuit and maintenance of various wildlife species. Expenditures for residents and non-resident wildlife-watchers were derived on an annual basis and used in the IMPLAN model to calculate economic impacts of participants based on these annual expenditures. Their trip-

related and equipment expenditures totaling \$464,799,040 (2006 dollars) leading

to an economic impact for the State of \$791,337,311 (2008 dollars), which supported 20,985 full- and part-time jobs. This resulted in a multiplier effect of 1.62, meaning that for each dollar expended in the State for wildlife watching, there was a \$1.62 of economic impact generated.

Currently, a model of the economy for the Trail counties is being developed to determine the potential economic impacts to those counties and the State. This will be done using collected data and secondary data to describe birdwatching site operations and the expenditure profiles of birdwatchers themselves. The statewide multiplier is low for activities of this type (typically range from 15. to 2.7 nationally), thus giving an indication that the dollars being spent on this activity are not being kept in the State economy. It is hypothesized that the multiplier for the Trail county economies will be even lower, since this encompassed a poorer part of the State.



Competitive Research Grant Program**Economic Impacts of the Great River Birding Trail in Mississippi (continued)**

Investigators: Stephen C. Grado, Marcus K. Measells, Forestry; W. Daryl Jones, Wildlife and Fisheries; Greg Ibendahl, Agricultural Economics

Applications or broader impacts of significant findings, including economic impacts or projected impacts:

Information from this study will assist natural resource (e.g., U.S. Fish and Wildlife Service) and tourism agencies and non-governmental organizations (e.g., Forest and Wildlife Research Center, Audubon Mississippi, The Nature Conservancy) as they attempt to complete the Trail in the Lower Mississippi River area. It will also allow rural land planners and policy makers to estimate benefits accrued from various land management alternatives on areas related to the Trail and will also be useful for establishing marketing and policy strategies related to eco-tourism and resource management oriented toward

birdwatching. The combined result of the economic impacts from wildlife watching and birdwatching in the State and for the Trail specifically will provide a measure of the current status and further potential for rural economic development tied to these activities. This is important for a State and area that is looking to eco-tourism related activities to diversify and further support local economies, while preserving and enhancing the natural resources base.

Project success relative to original objectives:

The project successes are in line with the project objectives.

Fund Leveraging

U.S. Fish and Wildlife Service

\$56,859

Mitsui and Co. LTD, the primary sponsor, Arkansas Parks and Tourism, Arkansas Delta Byways, Entergy Mississippi, Mississippi State University, Mississippi Division of Tourism, Mississippi River Parkway Commission, Tennessee Wildlife Resources Agency, and the National Fish and Wildlife Foundation.

In-Kind