



In Focus

Assessing economic impacts of national parks

By Thomas E. Fish

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NATIONAL PARK UNITS IMPACT LOCAL ECONOMIES in a variety of ways. In particular, park visitors spend money on items such as entrance fees, overnight accommodations, local attractions and tourism activities, fuel, food, beverages, entertainment, and souvenirs. Parks also contribute to local economies through employment of agency personnel; park operations and capital expenditures; by influencing park-related employment and economic development, especially in amenity and tourism support industries; and through associated local household spending. Dollars that enter the local economy are redistributed through purchase of local goods and services, residential and commercial construction, and other expenditures. Accurately estimating the economic impact a unit of the National Park System has on a community or region can be very useful for planning and management decisions at the park level as well as for local and regional planning.

The Money Generation Model (MGM) is an economic assessment tool available to national park managers to help gauge the economic impact of national park visitor spending on local economies. The MGM was developed by Dr. Ken Hornback in 1995. An updated version—MGM2—was developed in 2000 by Drs. Daniel Stynes and Dennis Probst at Michigan State University. The NPS Social Science Program has worked with Stynes's team (through the Great Lakes–Northern Forest CESU) over the past several years to incorporate additional features and refinements.

The basic equation for computing the economic impact of visitor spending is *economic impacts = number of visitors × average spending per visitor × economic multipliers* (Stynes et al. 2000). The inputs to the model include number of visitors, average spending (per visitor or party), and multipliers. According to Stynes et al. (2000), these inputs can come from a variety of sources. Visitor numbers are typically provided by the NPS Public Use Statistics Office; average spending is estimated from NPS Visitor Services Project survey data, where available. If these data are not available, generic estimates are provided for natural resource and cultural and historical park units. Several multipliers are included with the model, although customized multipliers can be used.

The MGM2 arranges visitors into eight visitor segments according to visit characteristics: local day

visitors; nonlocal day visitors; visitors who stay in overnight commercial lodging (e.g., motels, cabins, lodges) within the park; visitors who stay in campgrounds within the park; backcountry camping visitors; visitors who stay in commercial lodging outside the park; those who camp outside the park; and those who stay at vacation homes with friends or relatives. Visitor spending is divided into 12 spending categories: commercial accommodations (e.g., motels, cabins, bed-and-breakfasts [B&Bs]); camping fees; restaurants and bars; groceries and take-out food/drinks; fuel; nonfuel vehicle expenses; local transportation; admission fees; clothing; sporting goods; gambling; and souvenirs and other expenses. Multipliers are assigned to each spending category to arrive at the adjusted value per dollar spent and to estimate the corresponding jobs and income for the particular park unit or region.

The MGM2 estimates “direct,” “indirect,” and “induced” effects of visitor spending. Direct effects relate to the direct receipt of visitor funds (e.g., paid directly to a motel or restaurant). Indirect effects reflect funds transferred from direct recipients to their associated support industries (e.g., beverage supplier). Induced effects reflect the “household spending” of funds received by direct or indirect recipients in the local economy. Economic impacts calculated by the MGM2 are reported in four key areas: sales, jobs, personal income, and value added.

The MGM2 can be applied to one park unit or a collection of units, or scaled to a larger geographic area. It has also been used to aggregate statistics across the National Park System for annual estimates of visitor spending and payroll impacts ([see sidebar](#)). The latest technical report (for 2008) is available online and includes summaries of economic impacts for 356 park units and the national aggregate analysis.

Managers from national park units have indicated that the MGM2 has utility not only as an assessment tool but also as a public relations tool, useful for engaging local communities and elected officials and decision makers (e.g., mayors, county commissioners, planners) as verification of the impact of NPS facilities and programs in relation to the local economy. They have also indicated that repeated applications of the MGM2 can be useful for comparing economic impact data over time and to gauge changes in relation to particular management actions or policies. Results from the MGM2 can also be used to inform future program planning and additional economic studies relevant to NPS presence in the community.

For more information

Money Generation Model Web site <http://web4.msue.msu.edu/mgm2/default.htm>

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National Park Service
U.S. Department of the Interior

Natural Resource Stewardship and Science
Office of Education and Outreach



Park Science, Volume 26, Number 2, Fall 2009, ISSN 1090-9966
National Park Service, U.S. Department of the Interior
Natural Resource Program Center, Office of Education and Outreach
Lakewood, Colorado