SOC 1 Appendix 2

Descriptive Text of Money Generation Model

THE MONEY GENERATION MODEL

From: http://www.nps.gov/planning/mgm/mgmdoc.doc

INTRODUCTION AND DISCUSSION

The Money Generation Model (MGM) provides a way to estimate economic benefits of parks on gateway communities and adjacent local areas. The model provides for the following:

- First, a calculation of the economic benefits to the local area resulting from expenditures by park visitors who live outside the local area (non-local tourists).

- Second, a calculation of the economic benefits to the local area resulting from Dark-related Federal Government expenditures, (for example, NPS expenditures for park employee salaries, supplies, services, construction projects, etc.).

- Third, a calculation of the economic benefits to the local area resulting from Dark-related expenditures by other non-local parties, (for example, State expenditures for park access roads; or capital expenditures to build concessioner facilities, such as a new marina).

In other words, the Money Generation Model estimates the economic benefits to the local economy resulting from monies that come into the local economy from outside sources.

In applying the Money Generation Model, the following three types of economic benefits are considered: SALES BENEFITS; TAX REVENUE BENEFITS; AND JOB BENEFITS.

SALES BENEFITS consist of income to local area businesses or individuals for goods and services that these businesses or individuals provide as a result of expenditures by non-local park visitors, Federal Government expenditures, and park-related expenditures by other non-local parties such as State governments, concessioner capital expenditures, etc.

TAX BENEFITS consist of increases in local area tax revenues that result from expenditures by non-local park visitors, Federal Government expenditures, and park-related expenditures by other non-local parties.

JOB BENEFITS consist of the new jobs that are created in the local area as a result of expenditures by non-local park visitors, Federal Government expenditures, and park-related expenditures by other non-local parties.

The material that follows provides a step-by-step procedure for calculating the economic benefits of parks on the local economy. Section I deals with the economic benefits resulting from expenditures by non-local park visitors.

Section II deals with the economic benefits to the local area resulting from park-related Federal Government expenditures.

Section III deals with the economic benefits to the local area resulting from park-related expenditures by other non-local parties such as State governments or outside developers.

A set of Standardized Worksheets is attached at the end of the report to facilitate carrying out the economic benefit calculations. Two examples showing completed sets of worksheets also are included, one set for a rural area national park in the Rocky Mountain Region, and one set for an urban area national

historic site in the Midwest Region.

Finally, it is noted that, in most cases, year-to-year expenditures by park visitors will be considerably greater than park-related expenditures by the Federal Government or by other outside parties. Therefore, a preliminary estimate of the economic benefit of the park in the local area economy frequently may be calculated by considering only monies spent by non-local tourists, and by ignoring, at least initially, monies spent in the local area by the Federal Government, or by other outside interests. Such a preliminary estimate will involve only SECTION I: THE ECONOMIC BENEFITS OF PARK TOURISM, and WORKSHEET #1: ECONOMIC BENEFITS RESULTING FROM PARK VISITOR EXPENDITURES. The economic contributions to the local area economy that are attributable to expenditures by the Federal Government or to expenditures by other outside parties can be calculated later utilizing the step-by-step procedures outlined in SECTIONS II and III respectively.

As you proceed to apply the Money Generation Model, two points are noted:

First, the MGM is applicable to local areas near the park. The MGM cannot be used for large areas such as Statewide areas without considering very carefully additional factors such as travel time and enroute expenditures.

Secondly, as you use the Money Generation Model, you will be asked to make assumptions about certain economic functions such as tax rates or levels of indirect sales, which will be explained later. If you are uncertain as to what number to select, or if you feel that the average number suggested in the step-by-step calculation process may not be applicable for your park, you may find it helpful to choose reasonably high and low values, and then calculate a range for the variable in question.

I.   THE ECONOMIC BENEFITS OF PARK TOURISM

A. SALES BENEFITS RESULTING FROM TOURISM EXPENDITURES.

Sales benefits are calculated in two stages. First, DIRECT SALES are calculated. Second, TOTAL SALES are calculated by adding INDIRECT AND INDUCED SALES to DIRECT SALES.

DIRECT SALES include visitor expenditures for accommodations, food, transportation, recreation services, and any other expenditures made in conjunction with a park visit. This is the general formula:

(4)	(1)	(2)	(3)
	Estimated	Annual	Average daily
DIRECT SALES	NON-LOCAL	RECREATION	EXPENDITURES
=	X	X	per person
	PERCENT	VISITOR DAY	
	of park use	volume	

1. Estimate the NON-LOCAL PERCENT of park use. The DIRECT SALES calculated is based only on spending by non-local park users rather than spending by people who live around the park. The park attracts non-local people to the area, and their spending is income for local businesses that supply a wide variety of goods and services. The "non-local" area may vary depending on the intended audience, but is must be clearly defined. For example, one might choose an area based on political boundaries such as townships or counties. Time and/or distance zones may be used, e.g., "non-local" may be defined as a one-hour drive or 50 miles from the park.

    The local Chamber of Commerce, travel and tourism agencies, or other large businesses can help define the non-local area. With the non-local area in mind, the percentage of park recreational visitation from that area is

estimated or measured. The basis for measurement may be a license plate observation survey if plates are coded by county of residence. Non-local residence data often are collected as part of visitor interview surveys conducted for verification of visitor statistics or other purposes. Local travel and tourism groups also may have information about non-local visitation within an area.

2. Look up the annual volume of RECREATION VISITOR DAYS. RECREATION VISITOR DAYS are reported monthly by all parks, and the annual figures are published in the latest National Park Statistical Abstract. Bear in mind the conservative nature of this procedure. The visitor day represents time visitors spend in the park rather than the total time they spend in the local area during their visit to the park.

3. Estimate the average daily dollar EXPENDITURES per person. Actual expenditures usually come from visitor surveys. In the absence of a recent visitor survey, American Automobile Association cost estimates can be used (see the Appendix for lodging and meal averages per person by state). In addition to lodging and meal costs, visitors spend money on a variety of things such as local driving while visiting the park and miscellaneous items, e.g., clothes, admissions and tolls, snacks, souvenirs, gifts, film, bug spray, sun screen, etc.. If the park is high in recreation participation (birding, biking, camping, climbing, fishing, hiking, kayaking, rafting, etc.), associated rentals or retail sales would seem an appropriate addition. Frequently, Chambers of Commerce or state business and tourism groups have compiled relevant expenditure data. If other sources are used, be careful that the information used is reduced to a per person rather than a group figure.

4. Calculate the DIRECT SALES by multiplying the estimated NON-LOCAL PERCENT by the RECREATION VISITOR DAYS and average daily dollar EXPENDITURES. The DIRECT SALES figure will be used again in the next step.

Up to this point we have accounted for the direct benefits of the park visitor who gives money to the clerk, waiter, guide, etc., who then turn it over to the business owner. These moneys then circulate within the local economy. Business owners use tourism money to pay utility bills, employee wages, bills of suppliers, leases of equipment, space rental, and other costs of doing business necessary to support park visitors. These dollar exchanges are called INDIRECT AND INDUCED SALES. When INDIRECT AND INDUCED SALES are added to DIRECT SALES they produce TOTAL SALES which account for the entire sales benefits of park tourism. This is the general formula:

$$\begin{array}{cccc}(6) & (4) & & (5) \\ \text{TOTAL SALES} & & & \text{INDIRECT 6 INDUCED} \\ \text{BENEFITS} \quad = & \text{DIRECT SALES} & \text{X} & \text{SALES MULTIPLIER} \\ \text{FROM PARK TOURISM} & & & \text{(Range is 1.2 - 2.8, AVG. -} \\ & & & \text{2.0)} \end{array}$$

5. Estimate the multiplier for INDIRECT AND INDUCED sales. The INDIRECT AND

INDUCED SALES multiplier varies with the complexity of the local economy. Smaller and more isolated areas, generally, have lower multipliers because support spending for goods and services usually will be made outside the local trading area, e.g., vendors and suppliers will be non-locals. The more diverse the activities for visitors and the greater their volume, generally, the higher the multiplier since more people and businesses will be involved. Because of such involvement, people who work in supporting businesses will tend to live locally, making the gateway population a good indicator of how big or small the multiplier will be. The INDIRECT AND INDUCED multiplier ranges from 1.2 to 2.8 and averages 2.0.

6. Calculate the TOTAL SALES by multiplying DIRECT SALES by the INDIRECT AND

INDUCED SALES Multiplier. The TOTAL SALES figure is the direct, indirect and induced economic benefits of park tourism.

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