

MGM2Operate : User manual

MGM2Operate.xls is a Microsoft Excel spreadsheet to estimate economic impacts of NPS payroll, operating expenses and construction activity. It uses a similar model as MGM2, but focuses on park operations rather than visitor spending. You must choose the "enable macros" option when opening the spreadsheet for the macros to work (this spreadsheet has a few simple macros to paste in multipliers in Step 2, reset inputs and print results).

The spreadsheet is divided into four pages:

Welcome : basic instructions and links to NPS sites and MGM2 home page

Inputs: Enter park payroll, operating and construction expenses in a set of broad categories. Also select type of region to choose multipliers.

Calculations: All calculations are carried out here.

Results: Direct and Total economic impacts are summarized in terms of sales, income, jobs and value added.

General Instructions:

1. Yellow cells are for entering information. Other cells contain formulas or labels that are protected.
2. Cells with a small red marker in the corner contain comments to help in either entering information or interpreting the information in that cell. To view comments either hold the mouse over the cell or select the cell.
3. Should you need to adjust column widths or make any other changes to a sheet, you must unprotect the sheet. (Tools, Protection, Unprotect). Changing any cells with formulas, cutting and pasting, or inserting new rows or columns in the middle of any page should be avoided as this may disrupt a built in macro. Always keep a copy of original file as backup.
4. You can add extra worksheets where you may freely add notes or other calculations.

Inputs

Step 1: Choose the Input page from tabs at the bottom of spreadsheet

First enter identifying information at the top (Cells B6:B8) in yellow cells

NPS Unit : name of park or unit

Budget Year : enter year of the analysis. Budget may be entered on a fiscal or calendar year basis.

Local Region : identify the region for which impacts are estimated. The region should normally be a group of counties or geographic area within 30-100 miles of the park. It should be a meaningful economic region, where the majority of park employees live and where local suppliers of goods and services to the park are located. Impacts will be for businesses and households within this region.

Complete yellow cells in Table 1.

In expense column enter park unit budget (expenses) for the given year. Only spending that accrues to local businesses will have a local impact. Economic impacts are computed only for the Local Purchases in Column D. There are two options for estimating local purchases

1. You may estimate local purchases directly in Column B and then leave the RPC Column (D) set at 100% so Column D and B are identical.

OR

2. You may enter the complete operating budget in Column B and adjust the percentages in Column C to reflect the proportion of spending on each item that accrues to local businesses.

Column D is protected, so do not attempt to enter local purchases directly here. The RESET button will reset all operating expenses to zero and all RPC's to 100%.

Operating Expense Categories

A. Payroll expenses divided between wages and salaries and employer paid retirement, health, and other benefits.

Number of NPS jobs, split between:

Year-round employees, including both full time and part time

Seasonal jobs, converted to year-round equivalents. Four seasonal jobs for 3 months = 1 year round job, 2 jobs for six months = 1 year round job.

Since other job estimates will not be full time equivalents, part time and full time jobs are treated the same. However, seasonal positions should be converted to 12 month equivalents.

B. Operating expenses should be itemized within the categories shown. A rough breakdown of operating expenses suffices for most applications. Three basic categories are utilities, services and supplies. If you wish, you may itemize auto leasing/rental and gasoline/oil purchases separately. If not you may set them to zero and group with services and supplies, respectively. It is important to distinguish purchases of services from purchases of goods. Local purchases of goods are treated as retail purchases, with only the retail margins accruing to the local area. The default retail margins may be adjusted on the Calculation page.

C. Construction spending can be divided into construction of roads and utilities, new buildings, or repairs. The model uses distinct economic ratios and multipliers for each category. Assign construction expenses to the category it best fits. Leave construction categories blank (zero) if you do not wish to include construction in the analysis. Construction should be entered on an annual basis if you want impacts for a given year. As with operating expenses it is important to estimate the portion of construction activity that involves local firms.

Other expenses. You may also include park-related expenses that may not be part of the regular park budget. Estimate impacts of other special grants, centers, and other activities by simply including the associated expenses in the category that best matches. As above, you should enter **expenses** for a given year, not revenues or donations.

The model estimates sales, income, jobs and value added in the local area associated with whatever spending you enter on the input page - that is, impacts of the local portion of this spending.

Step 2: Scroll down the page to Step 2 and choose the type of region surrounding the park. If you have used the "generic multipliers" in the MGM2 model to estimate visitor spending, choose the same type of generic region here.

Step 3: Go to the "Results" page for table with estimates of economic impacts. Table 2 below is a sample table, which we will use to help interpret the results.

Sample Set of Inputs

MGM2 Operating Expense Impacts

Scroll down to complete 3 steps

Step 1. Complete Yellow cells in Table 1 and identify the park, year and region for this analysis

NPS Unit	Sample Park	Reset Table 1
Year	2000	
Region	Rural Area	

Reset Help

Table 1. Park Payroll Operating and Construction Expenses			
	Expenses	RPC (Percent to Local Firms)	Local Purchases
A. Payroll			
Wages and Salaries	646,538	100%	646,538
Payroll Benefits	156,490	100%	156,490
Total Payroll	803,028		803,028
Jobs (annual, full & part time)	10		
Jobs -seasonal (annual equivalent)	1		
B. Operating Expenses			
Utilities			
Electric	48,500	0%	-
Gas	6,350	0%	-
Telephone	13,750	0%	-
Water/sewer	4,490	100%	4,490
Postal service	2,000	0%	-
Services	-	100%	-
Auto rental/lease	-	100%	-
Supplies	80,000	49%	39,504
Auto Gas and oil	-	100%	-
Total Operating	155,090		43,994
Payroll plus Operating	958,118		847,022
C. Construction			
Roads & Utilities	-	100%	-
New Buildings	-	100%	-
Repairs	-	100%	-
Total Construction	-		-

Sample Results Table - Numbers reflect the inputs in Table 1 and the rural economy multipliers.

Table 4. Economic Impacts of Park Operations and Construction									
Spending Category	Park Budget	Sales (Local)	Direct Effects			Total Effects			
			Jobs	Personal Income	Value Added	Sales	Jobs	Personal Income	Value Added
A. Impacts of Park Payroll									
Wages and Salaries	646,538		11.0	646,538	646,538		11	646,538	646,538
Payroll Benefits	156,490		-	156,490	156,490		-	156,490	156,490
<u>Induced effects of NPS payroll</u>						<u>333,484</u>	<u>5.7</u>	<u>94,935</u>	<u>188,651</u>
Total Payroll effects	803,028		11.0	803,028	803,028	333,484	16.7	897,963	991,679
B. Impacts of Park Operations									
Utilities + postal	75,090	4,490	0.1	1,235	2,999	5,875	0.1	1,837	3,826
Services	-	-	-	-	-	-	-	-	-
Supplies	<u>80,000</u>	<u>19,752</u>	<u>0.8</u>	<u>10,076</u>	<u>15,738</u>	<u>24,970</u>	<u>0.9</u>	<u>11,819</u>	<u>18,963</u>
Total Operating Expense Effects	155,090	24,242	.9	11,311	18,737	30,845	1.0	13,656	22,790
Total Impacts of Park Payroll + Operating	958,118	24,242	11.9	814,339	821,765	364,329	18	911,620	1,014,469
C. Construction Impacts									
	-	-	-	-	-	-	-	-	-
D. Total Impacts (Payroll, Operating, & Construction)									
	958,118	24,242	11.9	814,339	821,765	364,329	18	911,620	1,014,469

Interpretation :

Inputs: This park has 10 full time employees and 4 seasonal employees during 4 summer months. The four seasonals equate to 1 year-round job. The park payroll is \$803,028 split \$646,538 to wages and salaries and \$156,490 to payroll benefits. The annual operating budget is \$155,090, split mostly between utilities and supplies. Only water and sewer accrue to a local utility and about half of supplies are bought locally. Total park budget is \$958,118. No construction is included in this analysis.

Impacts: **Direct effects** are 11.9 jobs including the 11 NPS jobs and .9 jobs from park spending in local community. These jobs represent \$ 814,339 in personal income and \$821,765 in direct value added.

Secondary effects arise mostly from the induced effects of NPS employee spending of their income in the local region. The induced effects of the NPS payroll supports 5.7 jobs in the region paying a total of \$94,963 in personal income and contributing \$188,651 in value added (includes income plus rents & profits and indirect business taxes). There is a small amount of secondary effects (indirect and induced) from NPS purchases in the local area.

Total effects are the sum of all direct and secondary effects. Total impact of this scenario is 18 jobs, \$911,620 in personal income and over a million dollars in value added. Most of the impacts result from the park payroll and its induced effects.