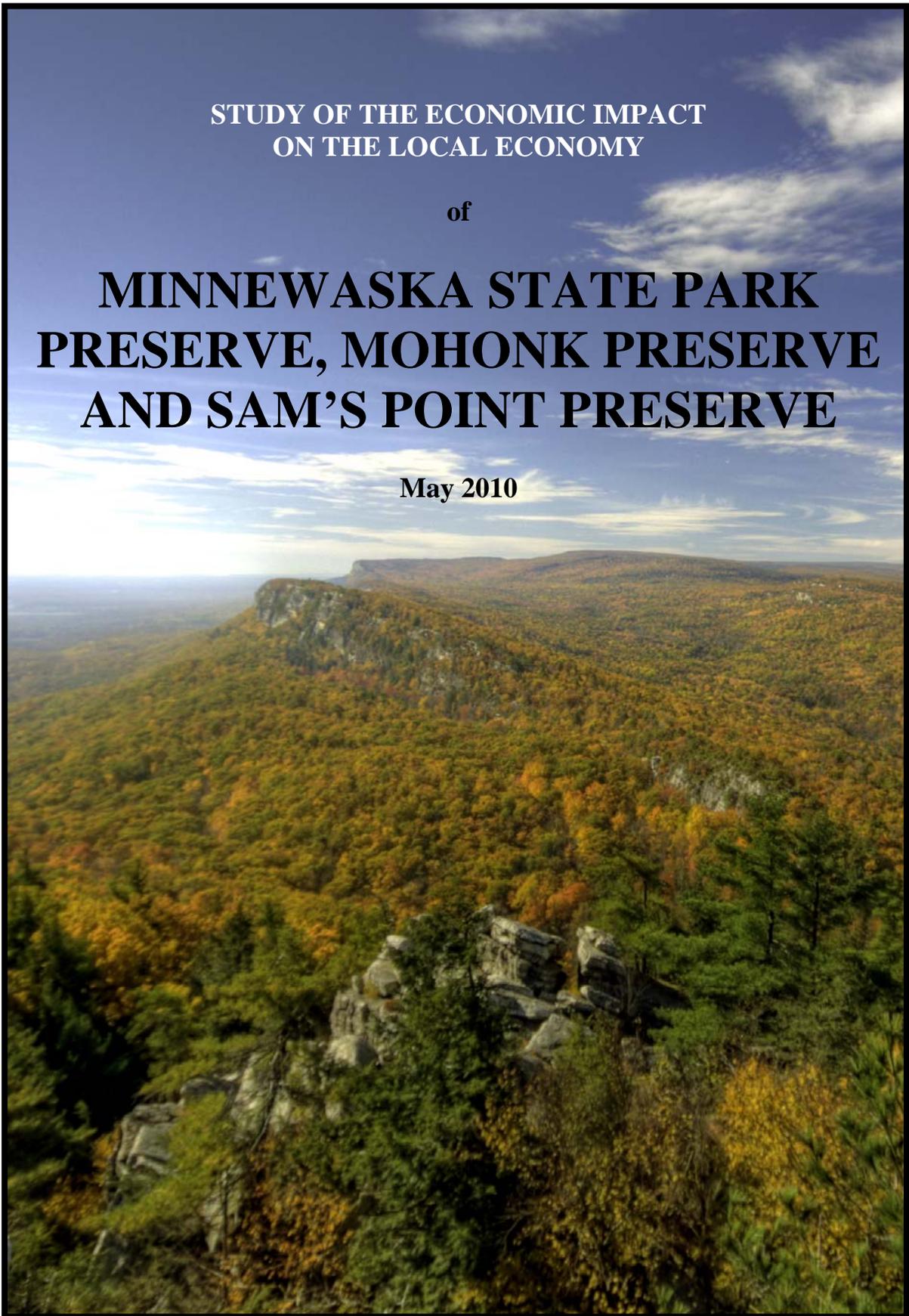


STUDY OF THE ECONOMIC IMPACT
ON THE LOCAL ECONOMY

of

**MINNEWASKA STATE PARK
PRESERVE, MOHONK PRESERVE
AND SAM'S POINT PRESERVE**

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Open Space Institute



Commissioned by

Minnewaska State Park Preserve
Mohonk Preserve
Sam's Point Preserve

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BACKGROUND

The northern Shawangunk Ridge (Gunks) is a branch of the Appalachian Mountains located in Ulster County, New York. The geologically unique ridge is regionally famous for its world-class rock climbing, quartz bottomed lakes and rare ecological communities. The Gunks contain over 30,000 acres of protected land, including properties under the jurisdiction of the following three entities:



Photo by John Rozell

Minnewaska State Park Preserve: The 21,000-acre Minnewaska State Park Preserve (Minnewaska) is owned and managed by New York State Office of Parks, Recreation and Historic Preservation. Minnewaska is located in Ulster County, east of the Village of Ellenville. Minnewaska is among the areas overseen by the State's Palisades regional division, with park operations located in Kerhonkson. Both the Mohonk Preserve and Sam's Point border the Minnewaska Preserve, with the Mohonk Preserve located along the northeast boundary of Minnewaska and Sam's Point on the southwest. Adjacent to Minnewaska on the west is the Witch's Hole State Forest, which is owned and managed by the New York State Department of Environmental Conservation.

Mohonk Preserve: The Mohonk Preserve is 7,000 acres, making it the largest private, non-profit nature preserve in New York State. The Mohonk Preserve is located about five miles west of the Village of New Paltz. The Mohonk visitor center is located in the Preserve in the Town of Gardiner. Founded with the mission of protecting the Shawangunk Mountains, the Preserve is supported by 12,000 members and over 250 active volunteers. From its office in Gardiner, the Preserve maintains a staff that conducts programs in land stewardship, land protection, education and research. The Mohonk Preserve surrounds the Mohonk Mountain House, a separate 2,200-acre privately owned resort. (The Mohonk Mountain House is not included in this study.)



Photo by Frank Tkac



Photo by Cara Lee

Sam's Point Preserve: Sam's Point Preserve (Sam's Point), comprises 5,400 acres on the southern end of the Gunks. Sam's Point is owned by the Open Space Institute and managed by the Nature Conservancy's Eastern New York Chapter. The Sam's Point Conservation Center, located at the Preserve, was opened in 2005 to accommodate school groups, volunteers and other visitors to Sam's Point. The Center is also the base of operations for the Nature Conservancy's stewardship, science and outreach activities at the Preserve.

Tens of thousands of visitors come to the Gunks each year to enjoy the natural beauty and recreational opportunities offered by the region, including rock climbing, hiking and biking. These visitors, along with the operations of the organizations that protect and manage these natural areas, have a significant impact on the local economy of the region. To quantify the benefits to the local area that are generated by the protected land of the Shawangunk Ridge, the three entities commissioned this economic impact study.

METHODOLOGY

Economic models are used to estimate the impacts that tourist destinations have on a local economy. To estimate the economic impacts generated by the three protected areas identified above, the Money Generation Models (MGM) developed for the National Park Service by a team from Michigan State University were selected. The MGM models have been used for the past fifteen years to estimate the economic impact of national parks and historic sites on the local regions where these attractions are located ("Estimating National Park Visitor Spending and Economic Impacts; The MGM2 Model" Stynes, Propst, Chang and Sun, May 2000).

The MGM2 model is used to calculate the impact of spending by park visitors on the local economy. To do this, the total local spending by park visitors is first calculated, based on the number of park visitors and average spending per visitor. Average visitor spending figures are provided by the model, with visitor spending profiles that depend on the characteristics of the area where the park is located (urban, rural, etc.) and the lodging requirements of visitors (live locally, camping, staying at hotel, etc.). Economic multipliers are then applied to the local visitor spending total to compute the various impacts that this spending has on the local economy. The economic multipliers are based on sophisticated economic analyses that have been incorporated into the MGM2 model. The economic impacts of visitor spending include the **number of jobs supported** and the **value added** to the local economy as a result of visitor spending. **Value added** is the most commonly used measure of the contribution of an industry to a region and represents the sum total of increased value to goods and services that is generated

by the local activities being evaluated (“Estimating National Park Visitor Spending and Economic Impacts; The MGM2 Model” Stynes, Propst, Chang and Sun, May 2000).

The MGM2 model calculates the following impacts on the local economy:

- **Direct Effects:** This includes the impact that visitor spending has on the local vendors that receive the visitor spending directly (motels, restaurants, etc.), as well as the jobs that exist to support this spending by visitors. This economic activity is calculated to only include impacts on the local economy. As such, the impact of spending on an item purchased includes only the portion of the amount paid that went to local businesses. It does not include the portion of the selling price that went to vendors located outside of the region. As such, when a visitor purchases a gallon of gasoline, the direct effect includes the amount paid per gallon of gas, less the amount that the gas station pays its supplier for that gallon of gasoline.



Photo by Frank Tkac

- **Secondary or “Multiplier” Effects:** Secondary effects represent the local economic activity that results from the re-circulation of money spent by visitors making purchases from local vendors. This includes the indirect effects of visitor spending which goes to local entities that supply the vendors that service visitors. An example of this would be the impact of visitor spending on local farmers that sell vegetables to restaurants serving meals to visitors. It also includes the induced effect of spending by employees that are paid to provide services to visitors.

An example of induced effects would include the economic activity produced when waitresses that work at the restaurant spend their paychecks to buy food at the local grocery store. Secondary effects also include the number of jobs supported by the economic activity generated by the secondary effects of visitor spending.

The **total effects** of visitor spending, therefore, include the **direct effects** that accrue primarily to tourism-related businesses in the area, the **indirect effects** that accrue to the suppliers of these tourism businesses, and the **induced effects** that result from household income produced by employees hired because of visitor spending. **Total effects** also include the **jobs** supported by visitor spending, including **jobs** supported by both direct and secondary effects.

Similarly, the MGM2 Operate model is used to estimate the economic impact of park operations on the local economy. The model uses the following information to calculate economic impact:

- number of employees, including year-round (part time and full time) and seasonal employees (expressed in terms of full-time equivalents)
- annual labor costs (total amount and amount spent locally)
- annual operating expenses (total amount and amount spent locally)
- annual capital spending (total amount and amount spent locally)

As with the MGM2 model, the MGM2 Operate model uses multipliers developed from research of economic activity at national parks and historic sites around the country to calculate direct and secondary impacts. The specific set of multipliers used depends on the characteristics of the area where the park is located (urban, rural, etc.).

The MGM2 Operate model quantifies the **total effects** of park operations. This includes the **direct effects** associated with payments to employees and vendors that work for the park. It also takes into account the **secondary effects** resulting from recirculation of money spent by the preserves and preserve employees. **Total effects** in dollars are represented as the **value added** to the local economy as a result of park operations. **Total effects** also include the **jobs** supported by park operations, including park employees, as well as the **jobs** supported by both direct and secondary effects of spending on park operations.

DATA AND ASSUMPTIONS

The following information was provided by each participating entity (Mohonk Preserve, Minnewaska, Sam's Point) for their most recent available fiscal year:

- **Number of Visitors** (total for the year)
- **Number of Employees** (full time and part time, seasonal full-time equivalents)
- **Operating Expenses**, including wages, salaries, benefits, utilities, services, supplies (total for the year and amount spent locally)
- **Capital Expenses**, including roads and utilities, buildings, repairs (total for the year and amount spent locally)

The above information was combined for the purpose of determining the economic impact of the three entities on the local economy using the MGM models. The local economy, for the purpose of this study as defined by the MGM models, typically includes the county where parks are located, plus the surrounding counties where visitors stay overnight and spend their money.



Photo by Frank Tkac

Impact of Visitor Spending: Spending by park and preserve visitors depends not only on the number of visitors, but also how long visitors stay in the area and their lodging while in the area. For example, day visitors that live locally have different spending patterns than visitors coming from out-of-town that stay in hotels. For this reason, the MGM model uses park visits expressed on a party-night basis, with party-nights defined as one party spending one day in the area either within the park/preserve or in the local area. The party will generally be all the people traveling together or staying in a single room or campsite for a given night.

The MGM model was used to convert the total number of visitors to the three properties to the total number of party nights spent by visitors in the area. Next, an estimate was made to reflect visitor lodging. For the purpose of this analysis, it was assumed that 10% of park/preserve visitors stayed in a hotel and the remaining 90% either lived locally or were staying with local residents such that they did not

require an expense for their lodging. The assumption that 10% of visitors paid for lodging is consistent with a 1996 survey of Mohonk Preserve visitors (“The Economic Impact of Mohonk Preserve Visitors on the Surrounding Communities” by Paul Kerlinger, May 1996). This number is a conservative figure when compared to typical lodging proportions at national parks, whose visitors typically travel greater distances than do visitors to state parks and protected areas. It also seems conservative based on information about the point of origin for visitors to Mohonk Preserve (from 2009 visitor surveys) and to Minnewaska (Minnewaska State Park Preserve Master Plan). Visitors to Minnewaska and Mohonk Preserve make up over 90% of total visitors to the three entities.

Since there is no current visitor survey information detailing spending by visitors to the three entities, total visitor spending was calculated based on generic visitor spending profiles developed by the MGM2 model. These profiles were developed using information from visitor surveys conducted at national parks. Visitors to national parks tend to spend more than visitors to state parks and protected areas, but the use of a conservative proportion of visitors that pay for hotel lodging is intended to compensate for this factor. The MGM2 model provides for three sets of generic spending profiles for park visitors; low, medium and high. The low spending levels are 30% below medium levels and high spending levels are 30% above medium. The medium profiles were selected for this analysis. Total visitor spending can then be calculated by multiplying the number of party nights by the visitor spending profiles that have been specified in the model.

Multipliers are applied to the total visitor spending to generate the economic impact of this spending on the local area. The MGM2 model allows for multipliers to be selected based on the area where parks are located (rural, small metro, large metro and state). For this analysis, the multipliers for small metro areas were selected. By applying these multipliers, economic impact numbers are generated, including direct effects and secondary effects expressed as value-added dollars and the number of jobs supported.

Impact of Park and Preserve Operations: To calculate the impact of park and preserve operations of the three Shawangunk Ridge entities on the local economy, employee, operating and capital spending information is entered into the MGM2 Operate model. As with the MGM2 model, generic multipliers developed based on studies of national park operations are used to calculate economic impacts and jobs supported as a result of park/preserve operations. Like the multipliers applied to visitor information, the MGM2 Operate model allows for multipliers to be selected based on the area where parks are located (rural, small metro, large metro and state). The multipliers applicable to small metro areas were again selected.



With these inputs specified, the MGM2 Operate model produces estimates of the economic impact of park and preserve operations, including direct and secondary effects, expressed as value-added dollars. The model also calculates the number of jobs supported, including those supported by the direct effects of park/preserve operations and the secondary effects of park/preserve operations. Job figures include the people currently employed by the three entities.

RESULTS

Using the combined visitor and financial information from Minnewaska, Mohonk Preserve and Sam's Point, the MGM2 and MGM2 Operate models generated the following results:

Shawangunk Ridge Park Preserves: Economic Activity and Impact Data

Visitors (#)	392,659
Visitor Spending	\$13,051,000
Avg. Spending/Visitor	\$33.24
Local Sales Taxes Generated by Visitor Spending	\$459,000
Direct Effects of Visitor Spending	\$5,371,000
Secondary Effects of Visitor Spending	\$2,418,000
Total Effects of Visitor Spending	\$7,789,000
Jobs Supported by Direct Effects of Visitor Spending	197
Jobs Supported by Secondary Effects of Visitor Spending	45
Total Jobs Supported by Visitor Spending	242
Annual Operations Spending (Local)	\$3,750,871
Year-round Employees (# FT & PT)	48
Seasonal Employees (# FTE)	14.85
Total Effects of Operations Spending	\$4,518,593
Jobs Supported by Operations Spending	116
Total Economic Impact of Park Preserves on Local Economy	\$12,307,593
Total Jobs Supported	358

The \$13,051,000 in estimated spending by the 392,659 visitors to the three park preserves produces an average spending of \$33.24/visitor. This figure seems reasonable when compared to estimates produced by other studies. The study of Mohonk Preserve visitors done in 1996 estimated average visitor spending of \$23.41 ("The Economic Impact of Mohonk Preserve Visitors on the Surrounding Communities" by Paul Kerlinger, May 1996). This study used visitor spending data from a 1993 survey. Adjusting this amount for inflation results in average spending of \$34.32/visitor in 2009 dollars. A more recent study done of New York State Parks, which included Minnewaska, estimated visitor spending to be between \$17 and \$35/visitor ("The NYS Park System: An Economic Asset to the Empire State" Political Economy Research Institute, University of Massachusetts-Amherst, Heintz, Pollin and Garrett-Peltier, March 2009).



The figures generated for economic impact and jobs supported also seem reasonable when compared to the estimates developed in the New York State Parks study. The chart below compares the findings of the New York State Park study for the Palisades Region

(which includes Minnewaska) to the estimates generated by the MGM models for the Shawangunk Ridge preserves on a proportional basis. If the three preserves had the same relative impact as all of the New York State Parks located in the Palisades Region, the total impact would have been just under \$10.5 million and 118 jobs would have been supported. While the dollar amounts for economic impact are relatively close, the MGM model shows more jobs supported than would be expected based on the New York Park study. This is likely due, in part, to the number of local employees that work for the separate organizations that run the three preserves. In the case of the State Parks, much of the organization is located outside of the local area. For the preserves, Mohonk Preserve in particular, most employees are based locally.

NY State Parks System: Economic Impact Estimates for Palisades Region

	<u>Visitors</u>	<u>Spending by Park (tot)</u>	<u>Jobs Supported</u>	<u>Impact</u>
Visitor Impact	4,400,000		421	\$37,200,000
Operations Impact		\$32,400,000	631	\$56,800,000
Total Impact	4,400,000	\$32,400,000	1052	\$94,000,000

Source: “The NYS Park System: An Economic Asset to the Empire State” Political Economy Research Institute, University of Massachusetts-Amherst, Heintz, Pollin and Garrett-Peltier, March 2009

Proportional Comparison to Shawangunk Preserves

	<u>Visitors</u>	<u>Spending by Park (tot)</u>	<u>Jobs Supported</u>	<u>Impact</u>
Visitor Impact	392,659		38	\$3,319,750
Operations Impact		\$4,093,542	80	\$7,176,333
Total Impact	392,659	\$4,093,542	118	\$10,496,083

Assumes jobs supported and economic impact for Shawangunk Preserves are proportionally the same as estimated for the New York State Parks in the Palisades Region.

Another indication that the economic impact figures generated by the MGM models are realistic and conservative is a comparison with the Kerlinger study of Mohonk Preserve visitors. This study suggested that Mohonk Preserve alone had an economic impact on the local area of \$4.6 million. When converted to 2009 dollars, the impact of Mohonk Preserve would be \$6.7 million, a figure that does not take into account the impact of Minnewaska and Sam’s Point.

An estimate made for the Minnewaska State Park Preserve Master Plan used 2007-08 attendance figures and indicated that Minnewaska alone had an economic impact of \$14.1 million and supported 350 jobs. These figures suggest a significantly greater impact than the totals generated by the MGM models for the combined impact of the three preserves. This appears to be because the Minnewaska analysis assumed a much higher percent of visitors paying for lodging than the 10% figure assumed for this study (Minnewaska State Park Preserve Master Plan, Chapter 2).

The conclusion drawn from these comparisons is that the economic impacts generated by the MGM models used in this study are not inconsistent with estimates previously developed. The estimate of total visitor spending produces an average spending/visitor of \$33.24, which is in the range of previous studies. With a good estimate of visitor spending, along with well-supported data for the number of visitors, operations spending and numbers of employees, there is

confidence that the information used by the MGM models was representative of the economic activity generated by the three entities. In addition, the results generated for economic impact and jobs supported seem consistent with results generated for comparable attractions, including the Olana Historic Site and the Women’s Rights National Historic Park, both of which are located in Upstate New York. Based on these comparisons, therefore, it is reasonable to state that Mohonk Preserve, Minnewaska and Sam’s Point have a combined economic impact on the local area of about **\$12.3 million** and support **358 local jobs**.

Listing of Sources

- “Estimating National Park Visitor Spending and Economic Impacts; The MGM2 Model” Stynes, Propst, Chang and Sun, May 2000
- MGM2Operate: User Manual and MGM2 website (web4.msue.msu.edu/mgm2/)
- “The Economic Impact of Mohonk Preserve Visitors on the Surrounding Communities” by Paul Kerlinger, May 1996
- Minnewaska State Park Preserve Master Plan
- “The NYS Park System: An Economic Asset to the Empire State” Political Economy Research Institute, University of Massachusetts-Amherst, Heintz, Pollin and Garrett-Peltier, March 2009
- Websites for Minnewaska State Park Preserve (nysparks.state.ny.us), Mohonk Preserve (MohonkPreserve.org) and Sam’s Point Preserve (nature.org/samspoint)
- US Consumer Price Index

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The key staff at the three natural areas who worked on the study are:

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