Economic Impacts of the Proposed Greater Grand Canyon Heritage National Monument
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Executive Summary

The operation and visitor spending associated with the proposed Greater Grand Canyon Heritage National Monument area (GGCHNM) in northern Arizona provides substantial benefit to the local economy—about $51 million per year, including direct and secondary impacts. The proposed monument also benefits the region by preserving lands that are historically and culturally significant, as well as an invaluable natural resource.

This study involves identifying operational characteristics of the proposed GGCHNM and an analysis of the economic impacts associated with its existence. The study also discusses visitation and economic impacts typically associated with national monument designation and strategies to leverage a designation for economic growth.

The proposed GGCHNM covers about 1.7 million acres of public land north and south of Grand Canyon National Park and in between two existing national monuments: Grand Canyon–Parashant National Monument and Vermillion Cliffs National Monument. The area is home to pristine southwestern desert landscapes; numerous American Indian cultural and historical sites; and an array of wildlife, including unique and endangered species. Outdoor recreation is the primary use of the proposed monument, though secondary uses include livestock grazing, mining, and timber harvest.

The land proposed for inclusion in the monument positively affects the local and regional economy through multiple channels. The proposed monument attracts a substantial number of visitors each year from outside the region, many of whom spend multiple days in the area, contributing to the local economy. Visitation and tourism expenditures are especially important in rural areas and in recreation-oriented economies where people may be particularly reliant on income derived from tourism.

The area also provides economic value through grazing allotments available to local ranchers and, to a lesser extent, through extractive industries such as mining and logging. Forest Service and BLM operations (salary and non-salary expenses) and payments in lieu of taxes to counties (PILT) are also considered economic investments to the area.

BBC estimated direct spending by visitors to the proposed GGCHNM and the production value of other land uses and operations by analyzing the best available data for all current activities within the proposed monument. BBC further evaluated how those dollars circulate through the local economy using well-known economic modeling techniques involving IMPLAN multipliers to calculate the secondary (induced and indirect) economic benefits. The total economic benefits are expressed in the labor income and economic output supported by the proposed GGCHNM visitor spending (non-local, primary visitors only), operations of land management offices (e.g., program expenditures, office supplies, payroll), and other use values. Economic output is generally synonymous with economic activity or consumption.

As shown in Figures 1 and 2 on the following page, the proposed GGCHNM has a total economic impact of about $51 million per year, including direct and secondary impacts, and contributes an estimated $22 million in labor income in the four-county study area (Coconino and Mohave counties in Arizona and Kane and Washington counties in Utah). The region is already a hub for economic activity, which would be preserved and even enhanced after a national monument designation.

1 http://greatergrandcanyon.org
Executive Summary

Figure 1.
Annual Economic Impact—Output, Coconino, Mohave, Kane and Washington County Region


Figure 2.
Annual Labor Income Impact—Coconino, Mohave, Kane and Washington County Region

Background and Methodology

Background

The proposed Greater Grand Canyon Heritage National Monument (GGCHNM) is an ecologically and culturally significant area located in northern Arizona that lies north and south of the Grand Canyon. The 1.7 million acres of public land are home to pristine southwestern desert landscapes; numerous American Indian cultural and historical sites; and an array of wildlife, including unique and endangered species.

The proposed monument would connect two existing national monuments—Vermilion Cliffs National Monument and Grand Canyon–Parashant National Monument—across the northern border of Grand Canyon National Park. As shown in Figure 3, the proposed monument would be comprised of land currently managed by the Bureau of Land Management (BLM) and the United States Forest Service (USFS). The BLM portion would include about 42 percent of the Arizona Strip Field Office land and the USFS land would include two of the three ranger districts in the Kaibab National Forest (the North Kaibab Ranger District and the Tusayan Ranger District).

Spanning centuries of human history, the area was once home to Clovis, Basketmaker, and Puebloan peoples and contains archeological sites and rock art from as early as 11,000 BCE. The region includes thousands of Native American archeological sites including a collection of sites in Red Butte that were collectively given a “traditional cultural property” designation to recognize the area for its native history and cultural significance. The Kaibab Plateau, which encompasses the proposed monument, is part of the Kaibab Paiute tribe’s traditional territory and is still considered a land of great significance to the tribe. The area also holds historical and cultural significance to Hopi, Zuni, Hualapai, Havasupai, and Navajo tribes.

In addition to historical, cultural and recreational resources, the proposed monument is home to an array of distinctive wildlife including the Kaibab squirrel, the northern goshawk, the Kaibab-Paunsagunt mule deer herd, mountain lion, and the endangered California condor. The proposed GGCHNM also contains one of America’s most endangered ecosystems—old growth ponderosa pine forests.²

² http://utah.sierraclub.org/content/grand-canyon-watershed-national-monument
Background and Methodology

Figure 3. Proposed Greater Grand Canyon Heritage National Monument

GGCHNM Designation Proposal

National monuments can be designated by legislative action in Congress or by presidential Executive Order. The Antiquities Act of 1906 grants the president the authority to proclaim “historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest” as national monuments, ensuring their protection.

In January of 2015, U.S. Representatives Ann Kirkpatrick, Raul Grijalva, and Ruben Gallego sent a letter to President Barack Obama requesting the greater Grand Canyon area be designated a national monument. In March 2015, 36 Arizona state legislators signed and sent a similar letter calling for national monument designation. There have also been expressions of political opposition to the monument, including a letter from Senators John McCain and Jeff Flake requesting that President Obama refuse to designate the area as a national monument. In November 2015 Rep. Grijalva introduced the Greater Grand Canyon Heritage National Monument Act to legislatively protect the area. At the time this report was written, no decision regarding national monument status for the GGCHNM had been made.

Current oversight of the area allows for a variety of outdoor recreation, including hiking, fishing, hunting, biking, horseback riding, and other uses. Supporters of national monument designation view uranium mining interests and old-growth logging as threats to the greater Grand Canyon region. National monument designation would help mitigate these concerns.

In addition to solidifying protection of natural resources, evidence from previous monument designations suggest that a new national monument designation could be economically beneficial to the region by raising the profile of the area to potential visitors. In general, designation has enhanced the value of other public lands as a natural, cultural and recreation attraction, spurring additional visitation and visitor spending.

The purpose of this study is to quantify the existing economic benefits of the region around the proposed Greater Grand Canyon Heritage National Monument. This report does not provide a recommendation for or against national monument status. Nor does this report provide a projection of changes to economic contribution related to the potential change in designation. Instead, the report documents the current economic benefit of the land included in the proposed monument—an economic benefit that would be more strongly preserved and likely enhanced through designation.

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4 www.azhousedemocrats.com/2015/03/democrats-urge-president-obama-to.html
5 https://www.govtrack.us/congress/bills/114/hr3882
7 The U.S. Department of Interior instituted a 20-year moratorium on new mining in the Grand Canyon Watershed region in 2012, but multiple attempts have been made to repeal the moratorium.
Background and Methodology

Methodology

The economic value quantified in this report focuses on the primary use values and operation of the proposed monument. The analysis begins with the impact of recreation, which is the largest and most complex use within the proposed monument. Critical factors influencing economic impact of recreation include the number and type of visitors, mode of accommodations and the amount and pattern of their expenditures. This analysis distinguishes between non-local visitation (new money to the local economy) and local visitation as well as primary and non-primary visitation. Non-local visitation and spending is considered a basic economic contribution and serves as the foundation for local economic stimulation. Limiting the analysis to primary trips allows the study team to isolate the recreation benefit of the proposed monument from other outdoor recreation attractions in the area (e.g. Grand Canyon National Park).

BBC estimated visitation and local spending using various data sources, including BLM Recreation Management Information System (RMIS) data and USFS National Visitor Use Monitoring (NVUM) data. These data sources provide the most recent data collection and analysis representative of the study area. Information obtained through stakeholder interviews was used to supplement the data where appropriate.

BBC calculated the economic benefits of the proposed monument based on estimates of visitation and direct spending. BBC estimated direct spending by visitors and utilized IMPLAN Regional Input-Output Modeling System software multipliers to calculate secondary (induced and indirect) economic impacts. Economic impacts are expressed in the labor income and economic output supported by non-local visitation and non-local visitor spending.

Report Organization

This report is organized into five sections:

- The first section provides a general description of the study area’s economic characteristics;
- The second section provides a characterization and quantification of visitation and visitor spending in the proposed monument;
- The third section identifies and quantifies other economic use values associated with the proposed monument;
- The fourth section provides a description of the spending flow model used to calculate economic impacts;
- The fifth section provides economic impacts as well as non-economic benefits; and
- The sixth section discusses the relationship between monument designation and economic impact.

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9 For the purpose of this analysis, non-local visitors are defined as those who travel from outside the four-county study area (Coconino and Mohave counties in Arizona and Washington and Kane counties in Utah). Non-primary visitors are those whose recreation in the proposed monument is not the primary trip purpose.
When determining the economic activity of an area, it is important to determine the appropriate geographic area for study. Regional economic relationships are based on proximity, transportation and location of production and consumption of goods and services. Economists define this as a “functioning economic unit.” Appropriately defining this area helps ensure the direct and secondary economic impacts are properly estimated.

This study defines the regional economy as Coconino and Mohave counties in Arizona and Washington and Kane counties in Utah. This specification is consistent with other economic studies of the area as well as local planning documents. Coconino and Mohave counties contain the proposed monument and the Utah counties are included because they serve as the primary economic hub and entry point for recreation access north of the Grand Canyon.

The study area is generally rural, with two major urban centers—Flagstaff, Arizona and St. George, Utah. All four counties have large land areas with substantial federal land holdings. Figure 4 shows the monument’s location in relation to the greater regional economy.

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Figure 4. Proposed Greater Grand Canyon Heritage National Monument and Surrounding Region

Source: BBC Research & Consulting, 2015

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Study Area

Figure 5 displays county characteristics from the 2013 American Community Survey (ACS) for the study area. Mohave is the largest county by population with just over 200,000 residents. Kane County is the least populous county with fewer than 10,000 residents. Median income is relatively consistent between Coconino, Kane and Washington counties ranging from about $48,500 to $49,500 but is substantially lower in Mohave County at $39,000. Poverty rates and unemployment are higher in the Arizona study area counties than in the Utah counties.

Early economic drivers of the area included farming, ranching, and mining but the area also has a long history of tourism as a major economic sector. In 1909 Mukuntuweap National Monument (later named Zion National Park) was established, marking the beginning of tourism as a significant sector in the northern portion of the study area. In 1919 Grand Canyon National Park was established, solidifying tourism as a major economic driver, particularly for the City of Flagstaff and Coconino County.

Tourism continues to be a primary economic contributor today. Forty percent of all study area jobs are in tourism-related industries (retail; arts, entertainment and recreation; and accommodations and food services). Outdoor recreation opportunities in the broader area include a host of national parks (Zion, Bryce Canyon, Grand Canyon, Capitol Reef, Canyonlands) and national monuments (Grand Canyon–Parashant, Vermilion Cliffs, Grand Staircase–Escalante, Natural Bridges, Pipe Spring, Wupatki, Sunset Crater, and Walnut Canyon). According to some government estimates, outdoor recreation in those parks and monuments accounts for over 11 million visits and $950 million in visitor spending, supporting over 21,000 local jobs.

<table>
<thead>
<tr>
<th>Coconino County, Arizona</th>
<th>Mohave County, Arizona</th>
<th>Kane County, Utah</th>
<th>Washington County, Utah</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>134,795</td>
<td>201,680</td>
<td>7,176</td>
</tr>
<tr>
<td>Median household income</td>
<td>$49,555</td>
<td>$39,200</td>
<td>$48,540</td>
</tr>
<tr>
<td>Median home value</td>
<td>$220,400</td>
<td>$133,900</td>
<td>$162,300</td>
</tr>
<tr>
<td>Percent unemployed</td>
<td>7.2%</td>
<td>8.8%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Percent in poverty</td>
<td>23%</td>
<td>19%</td>
<td>8%</td>
</tr>
</tbody>
</table>


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Visitation and Local Spending

Annual Visitation and Local Spending

Based on BLM and Kaibab National Forest visitation data, BBC estimates about 337,000 visits to the proposed monument annually. Visits to the Kaibab National Forest account for 83 percent of all visits to the proposed monument; the remaining 17 percent of visits are to BLM land.

Given the proposed monument’s proximity to Grand Canyon National Park and other high profile outdoor recreation opportunities, it is critical to understand the balance between primary and non-primary visits to the proposed GGCHNM. Many visitors may view Grand Canyon National Park as their primary destination but choose to visit the proposed monument as a side trip. While this type of secondary activity is an economic contribution to the region, it cannot be attributed to the proposed monument since the trip would not have originated without the draw of the Grand Canyon or some other local attraction. According to the most recent USFS study, nearly half of all visits (48%) to the Kaibab National Forest are non-primary visits. Applying that proportion to total visits to the proposed monument suggests that 162,000 of the 337,000 total visits are non-primary trips.

Another critical component of the visitor spending profile is the makeup of local vs. non-local visitors and day visitors vs. overnight visitors, as the length of time spent in the area and visitor origin affects the amount spent in the local economy.

For the purposes of this study, “non-local” means the visitor traveled from outside the study area counties. The most recent USFS NVUM data for the region indicate that 70 percent of visitors to the proposed monument travel from outside the study area counties. Local visitors are more likely to take day trips and non-local visitors are more likely to be on overnight trips. Figure 6 displays total visitation by primary purpose, origin and duration.

<table>
<thead>
<tr>
<th>Visitor Type</th>
<th>Number of Visits</th>
<th>Percent of Visitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Primary Visitors</td>
<td>161,841</td>
<td>48%</td>
</tr>
<tr>
<td>Local Visitors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day visits</td>
<td>45,378</td>
<td>13%</td>
</tr>
<tr>
<td>Overnight visits</td>
<td>7,717</td>
<td>2%</td>
</tr>
<tr>
<td>Non-Local Visitors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day visits</td>
<td>45,353</td>
<td>13%</td>
</tr>
<tr>
<td>Overnight visits</td>
<td>76,881</td>
<td>23%</td>
</tr>
<tr>
<td>Total</td>
<td>337,169</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: Non-primary includes local and non-local visitors. Overnight visits include those staying on or off the proposed monument.
Source: BLM RMIS, USFS NVUM, Stynes and White 2010 and BBC Research & Consulting.

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13 Non-primary visits are those where recreating in the proposed monument is not the primary trip purpose.

Visitation and Local Spending

In addition to the visitor distinctions, primary activity types influence spending patterns (e.g., hunters may purchase different goods and services than hikers). Hence, it is useful to estimate visitor spending by activity. Figure 7 shows visitation to the proposed monument by primary activity.

Average daily visitor expenditures by activity type were estimated in a 2010 joint USFS–Oregon State University study of NVUM data. In that study, visitors were surveyed and asked to estimate their party’s total expenditures per day during their stay. They also indicated the primary activity of the visiting party.15

The study team tabulated visitation data to the proposed monument by activity type, fit that information to the distribution of local/non-local and day/overnight, and used the spending patterns by activity described in the 2010 USFS NVUM study (adjusted for inflation to 2015 dollars) to arrive at estimated spending by activity and by market segment (local or non-local, day or overnight).

Figure 8 presents the spending profile by activity type on a per person basis, not per party. The overnight spending values represent total spending associated with the trip, not on a per day basis. Non-local visitors spend more than their local counterparts and overnight visitors spend more than day visitors, primarily due to lodging and dining.

Figure 7.
Proposed GGCHNM Visitations by Primary Activity

Note: Nature related activities include viewing natural features, wildlife or historic sites; relaxing; resort use; nature center activities and nature study.

Source: BLM RMIS data, USFS NVUM data and BBC Research & Consulting.

Figure 8.
Spending Profiles by Activity Type, per Person (2015 dollars)


15 Stynes and White, 2010.
Visitation and Local Spending

Using these estimates, the proposed GGCHNM visitor spending profile is estimated to be over $32 million per year, shown in Figure 9. Because the economic model focuses on “new” money entering the area that can be reasonably attributed to the proposed GGCHNM, the analysis considers only non-local visitor expenditures and excludes both local and non-primary expenditures.

Expenditures made by non-local visitors whose primary trip purpose was to visit the proposed monument total $15.6 million. Local visitors spend about $1.4 million on primary trips to the proposed monument. The Forest Service does not provide spending profiles by activity for non-primary visitors, but if we assume those visitors mimic the distribution and spending patterns of primary visitors, the total non-primary spending is estimated to be $15.7 million per year.

Importantly, these recreation and visitation uses, including hunting and fishing, would be preserved with the designation of a national monument. While there has been some concern expressed that hunting and fishing uses will be negatively impacted, our analysis of other monument designations by the Obama administration along with the language in Rep. Grijalva’s Greater Grand Canyon Heritage National Monument Act indicates that hunting and fishing will continue to be permitted.¹⁶, ¹⁷, ¹⁸

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**Table:**

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Non-Local Visits</th>
<th>Local Visits</th>
<th>Non-Primary* Visits</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunting</td>
<td>$53,287</td>
<td>$557,094</td>
<td>$49,458</td>
<td>$24,488</td>
</tr>
<tr>
<td>Fishing</td>
<td>$1,122</td>
<td>$10,002</td>
<td>$904</td>
<td>$219</td>
</tr>
<tr>
<td>Nature-related</td>
<td>$443,887</td>
<td>$4,785,380</td>
<td>$308,453</td>
<td>$76,419</td>
</tr>
<tr>
<td>OHV-use</td>
<td>$16,169</td>
<td>$128,404</td>
<td>$16,468</td>
<td>$2,801</td>
</tr>
<tr>
<td>Driving for pleasure</td>
<td>$427,126</td>
<td>$3,936,393</td>
<td>$234,143</td>
<td>$39,885</td>
</tr>
<tr>
<td>Picknicking / Developed camping</td>
<td>$13,921</td>
<td>$849,751</td>
<td>$2,100</td>
<td>$39,885</td>
</tr>
<tr>
<td>Primitive camping or backpacking</td>
<td>$0</td>
<td>$286,876</td>
<td>$0</td>
<td>$116,240</td>
</tr>
<tr>
<td>Hiking/biking</td>
<td>$2,936</td>
<td>$63,757</td>
<td>$39,885</td>
<td>$632,960</td>
</tr>
<tr>
<td>Other</td>
<td>$182,483</td>
<td>$2,693,005</td>
<td>$106,937</td>
<td>$775,224</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>$1,223,846</strong></td>
<td><strong>$14,339,779</strong></td>
<td><strong>$15,684,162</strong></td>
</tr>
</tbody>
</table>

Utilized in IMPLAN Analysis: $1,223,846

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¹⁶ http://www.blm.gov/pgdata/content/nm/en/prog/NLCS/RGDN_NM.html
Other Direct Economic Impacts

Grazing

The monument also provides economic benefit to the community through ongoing livestock grazing. The economic value attributed to grazing on the proposed monument amounts to $7.1 million annually.\(^\text{19}\) This economic value calculation multiplies the number of animal unit months (AUMs) grazing in the proposed monument (74,030) by the dollar value per AUM for cattle and calves ($66.54), which is a weighted average of county level data reported in the 2012 USDA Census of Agriculture.\(^\text{20}\) Recent monument designations—in addition to the legislation drafted by Rep. Grijalva—allow for continued grazing rights and that is expected to be the case with the GGCHNM.\(^\text{21, 22, 23}\)

Forest Products

In 2014, the total volume of convertible forest products harvested in the Kaibab National Forest was approximately 22,500 CCF (hundred cubic feet), valued at $235,000. Another $29,000 of non-convertible products, such as Christmas trees, boughs and cones were also harvested. The total value of convertible and non-convertible products for the forest was approximately $264,000; 51 percent of that ($136,000) is estimated to have been generated within the proposed GGCHNM.\(^\text{24}\)

Minerals

The U.S. Department of Interior instituted a 20-year moratorium on new mining in the Grand Canyon region in 2012, but valid existing claims are currently allowed to operate and would not be impacted by national monument designation. Currently, there are four existing uranium mines with approved operating plans and seven additional mines with valid claims. Only one of those 11 mines is currently engaged in extractive activities. According to the Northern Arizona Mineral Withdrawal FEIS, the annual production value (including mining, hauling and milling) of a single mine in the proposed monument is approximately $4.2 million (in 2015 dollars).\(^\text{25}\)

Payments to states and counties

Federal lands are not subject to property taxes that support county governments and education, although local communities play an important role in supporting the management of federal lands. Two federal programs, the Payment in Lieu of Taxes (PILT) program and the Secure Rural Schools and Community Self-Determination Act (SRSCS) require federal land management agencies to allocate income to states and counties to help offset lost tax revenues. Annual payments to counties in the study area

\(^{19}\) Grazing economic impacts from the BLM Rangeland Administration System (RAS) http://www.blm.gov/ras/, Kaibab National Forest RMP FEIS and 2012 USDA Census of Agriculture County Profiles for Coconino, Mohave, Kane and Washington Counties.
\(^{20}\) Over 100,000 AUMs are permitted but only 70%, on average, are used annually.
\(^{22}\) https://www.whitehouse.gov/the-press-office/2014/05/21/presidential-proclamation-organ-mountains-desert-peaks-national-monument
\(^{24}\) As detailed in the Kaibab National Forest RMP FEIS, 25% of forest products are harvested in the North Kaibab Ranger District. The 75% harvested in the Williams and Tusayan districts was assumed to be proportional to the land area of those districts.
\(^{25}\) Northern Arizona Proposed Withdrawal FEIS, 2011. The value estimate is derived from the average annual production per mine of 1.05 million pounds of uranium and the 2010 price of yellow cake uranium of $40 per pound. The value includes production value added through hauling and milling.
Other Direct Economic Impacts

attributed to BLM and Forest Service land included in the proposed monument are about $1.9 million.26

Annual Operations

Program expenditures by the Kaibab National Forest and the BLM Arizona Field Office, including salaries, recurring contracts, and operational expenses, also contribute to the economic impact of the proposed GGCHNM. Allocating the proportion of departmental spending commensurate with the portion of land area that falls within the proposed monument indicates an additional $13 million in salaries and operational spending.27


Total Direct Economic Impact

Combining non-local recreation spending with these additional uses yields a combined annual direct economic impact of about $40 million. Figure 10 displays the direct spending and/or output associated with each use discussed in the previous section. The values shown in the figure were used as inputs in the spending flow model, discussed in the following section.

Figure 10.
Direct Spending by Use in Proposed GGCHNM

<table>
<thead>
<tr>
<th>Source</th>
<th>Direct Spending/Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-local Recreation</td>
<td>$15,563,625</td>
</tr>
<tr>
<td>Grazing</td>
<td>$5,119,818</td>
</tr>
<tr>
<td>Minerals</td>
<td>$4,178,575</td>
</tr>
<tr>
<td>Forest Products</td>
<td>$135,950</td>
</tr>
<tr>
<td>Payments to Local Counties</td>
<td>$1,937,754</td>
</tr>
<tr>
<td>Annual Operations</td>
<td>$13,414,463</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$40,350,185</strong></td>
</tr>
</tbody>
</table>

Note: Dollar values adjusted for inflation and expressed in 2015 dollars.
Source: BBC Research & Consulting.

Spending Flow

The direct impact only represents a portion of the total impact of the proposed monument on the local economy. Visitor expenditures and spending generated by operations and other uses circulates in the local economy, as businesses where visitors spend their money purchase intermediate goods and services from other businesses and as workers spend a portion of their earnings on local goods and services. This recirculation of money in the economy is termed a “secondary impact.” The direct and secondary economic impacts produced by recreation within the proposed GGCHNM and other use values also support certain levels of labor income, described later in this analysis.

For the purposes of this analysis, BBC defines the local economy as Coconino and Mohave counties in Arizona and Washington and Kane counties in Utah. This study area was chosen because it is a functioning economic unit and captures most project-related impacts.28

To determine the average annual economic impact of the proposed monument (the direct impact plus the secondary impacts), BBC developed a spending flow model—shown in Figure 11 on the following page—to trace the flow of dollars and associated labor income generated by the proposed monument through the local economy.

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28 See Page 6 for a more detailed description of the economic study area.
This model is based on the IMPLAN Regional Input-Output Modeling System. A widely-used economic modeling software, IMPLAN estimates secondary economic impacts based on user-supplied direct impacts and accounts for revenue leakage from the local economy. BBC used IMPLAN to estimate economic and labor income impacts based on the spending data discussed in the preceding section.\(^\text{29}\)

As shown in Figure 11, recreation spending was allocated to specific expenditure categories based on visitor type. Lodging and gasoline are the largest expenditure categories for non-local visitors, followed by restaurants and groceries.

\(^{29}\) For more information on IMPLAN, refer to http://implan.com/.

Total Economic Impact

Including direct and secondary impacts, the proposed GGCHNM has a total estimated economic impact of around $51 million per year, as illustrated in Figure 12. This figure includes economic activity generated by average annual visitor expenditures, other use values (grazing, mining and timber) and operation expenditures.

The direct impact of visitor spending presented in Figure 12 ($10 million) differs from the non-local spending numbers presented in Figures 9 and 10 because retail expenditures are treated differently than other categories in the IMPLAN model. Most products purchased at retail establishments are manufactured outside of the study area. As such, the economic contribution of those purchases should not include the wholesale value of manufacturing the product. For this reason, the study team conservatively included only the retail margin in estimating the local secondary (indirect and induced) economic effects associated with retail purchases, including labor income.

The direct output of mining differs from Figure 10 because the IMPLAN model excludes the value added from milling the ore (15% of the total value) which occurs outside the study area.30, 31

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30 Uranium ore is milled at White Mesa Mill in San Juan County, Utah.
Impact on Labor Income

Proposed GGCHNM operations and uses result in approximately $22 million in labor income per year in Coconino, Mohave, Kane and Washington counties, as shown in Figure 13.

Among the sectors supported by visitor spending, lodging ($1.4 million), restaurant ($1.1 million), and gasoline ($1.8 million) industries produce the most labor income in the local economy. GGCHNM operations generate $9.9 million in labor—that estimate reflects Forest Service and BLM employees but also labor income for services contracted for program operations.

The $22 million in total labor income generated by the proposed GGCHNM supports approximately 567 jobs per year in the local economy. Non-local visitor expenditures support more jobs than any other single use in the study area (274 jobs) but at relatively low wages (about $28,800 per year on average).
Other Economic Impacts

Apart from the effects that visitor spending has on the regional economies in the area surrounding the Grand Canyon, previous studies have documented that many people place a value simply on the existence of unique and pristine places like the canyon, whether they have ever visited it or not. Research indicates that existence value of a resource is most likely to be greater when the resource is unique (e.g., Grand Canyon National Park or Old Faithful Geyser in Yellowstone National Park).32

The existence value and value of ecological services reflects the value that people place on the sheer existence of a unique resource and the value of the ecological services that a large, pristine area like the greater Grand Canyon provides, such as supporting an abundant variety of species and protecting water quality.

A 1995 study estimated the existence value of the Grand Canyon at between $2.3 billion and $3.4 billion per year.33 This study has not been updated, but presumably the effects of inflation and population growth continue to increase this value over time.

In its natural condition, the canyon and the surrounding area support numerous species of flora and fauna. The Colorado River and its watershed represent one of the most important river systems in the United States, heavily relied on by a large portion of the population of the southwest for public drinking water, agricultural production and other services.

While economists are beginning to develop tools to estimate the monetary value of some ecosystem services, these tools are far from ready to assign a monetary value on the services provided by an area as complex as the greater Grand Canyon region.

Although we cannot provide specific quantitative estimates of the existence value of the Grand Canyon and surrounding areas, it is important to note that additional land protections, such as national monument designations, help protect and even enhance the full value of the region’s important ecosystem services, pristine vistas and sacred Native American sites.


Monument Designation and Economic Impact

In addition to solidifying the protection of natural resources and preserving the economic and non-market values discussed in this report, evidence from previous monument designations suggest that a new national monument could be economically beneficial to the region by raising the profile of the area to potential visitors and increasing visitation and visitor spending in the region. In general, designation has enhanced the value of other public lands as a natural, cultural and recreational attraction, spurring additional visitation and visitor spending.

A 2011 study by Headwaters Economics evaluated the economic performance of communities surrounding 17 national monuments in the western United States, including nearby Vermilion Cliffs and Grand Canyon–Parashant National Monuments. The study found that the local economies associated with each national monument expanded after monument designation. Headwaters updated the study in 2014 with post-recession data and found that the positive trends identified in 2011 continued or improved in each market. It should be noted that neither the 2011 nor the 2014 study attempt to identify a cause-and-effect relationship between monument designation and economic growth; however, the results do indicate that monument designation is consistent with local economic expansion and is not detrimental to it.

In addition, previous BBC studies evaluating the economic impacts of national monument designation have consistently identified increases in visitation, associated visitor spending and subsequent economic effects post designation.

As a part of those previous studies, BBC reviewed data from recently designated national monuments to gain an understanding of the potential visitor response. Although each monument is different, understanding the average impact of designation on visitation can provide a benchmark for potential visitation growth in proposed monuments, such as the proposed GGCHNM.

Monument selection for the benchmark analysis was based on data quality and availability as well as site similarities (i.e., location in the West, designation in 2000 or later and presence of multiple types of recreation). The final benchmarks included were Sonoran Desert, Kasha-Katuwe Tent Rocks, Carrizo Plain, Vermilion Cliffs, Grand Canyon–Parashant and Upper Missouri River Breaks. Data sources include interviews with staff at recently-designated sites and visitation data from the BLM RMIS.

To understand the change in visitation pre- and post-designation, BBC calculated the change in visitation at each site compared to the site’s average pre-designation visitation in 1999 and/or 2000. The change in visitation per site was then averaged by year across the six benchmark sites. Figure 14 shows the average annual visitation increase compared to pre-designation visitation.

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35 BBC has conducted economic studies of the following national monuments: Organ Mountains—Desert Peaks, Rio Grande Del Norte, Chimney Rock, Great Bend of the Gila and Upper Missouri River Breaks.

36 Visitation data at several national monuments, including Agua Fria, Canyons of the Ancients, Ironwood Forest, Cascade Siskiyou and Prehistoric Trackways were unavailable in pre-designation years, making them unusable as benchmarks.

37 All monuments that fit the selection criteria are managed by the BLM.
The benchmark analysis indicates that visitation growth is extensive following designation. Growth between 2002 and 2003 was slightly slower, possibly due to the September 11th terrorist attacks and a general aversion to travel in the U.S. Between 2003 and 2007, the growth in visitation is substantial, and in some sites grew by more than 500 percent. Reduced visitation in 2008 could be attributed to the financial crisis in the U.S. and the change in consumer spending patterns, but despite the decline, visitation remained greater than in pre-designation years. In recent years, visitation growth is rebounding and looks to be returning to levels found prior to 2008.

In summary, national monument designation seems to have a significant impact on visitation, but it is not the only factor that influences visitation. Other economic factors affect tourism such as geopolitical events and changes in consumer disposable income. It is important to note that overall visitation growth at all BLM lands relative to 2001 was between 3 percent and 14 percent per year, which is substantially lower than the national monument benchmarks.

Two of the benchmarks are uniquely applicable to the proposed GGCHNM due to their immediate proximity to the GGCHNM: Vermilion Cliffs National Monument and Grand Canyon–Parashant National Monument. BBC took an in-depth look at visitation patterns for those two benchmarks.

In the year after monument designation, Grand Canyon–Parashant and Vermilion Cliffs collectively increased their visitation at a faster rate (6%) than the nearby Arizona Strip BLM land (4%) and faster than other Arizona BLM lands (9% decrease). That difference is even more pronounced when we look at the first five years following national monument designation (13% average annual increase for Grand Canyon–Parashant and Vermilion Cliffs v. 2% for the Arizona Strip field office and 2% for other BLM lands in Arizona). Although we cannot assume the GGCHNM would follow the same growth pattern, the increase in visitation following designation for these two monuments provides an example of potential growth for the GGCHNM.

Figure 14.
Average Visitation Increase Compared to Pre-designation

Source: BBC Research & Consulting with data provided by the BLM.
Local Community Participation

The data reveal strong correlations between visitation growth and monument designation; however, potential gains in visitation and spending are dependent on surrounding communities’ ability to leverage a change in status. National monument designation will increase awareness of the unique historic, cultural and natural resources contained in the proposed monument but local communities should be prepared to benefit from that publicity.

The location of the proposed monument provides unique opportunities as well as challenges to capturing economic impact. One of the biggest advantages of the proposed monument’s location is that potential non-local visitors are well aware of the broader area as a prime destination for outdoor recreation opportunities, due to the proximity of Grand Canyon National Park. The challenge then is not to draw visitors to the area but to draw them from the broader pool of visitors into the GGCHNM. Gateway communities should strive to position themselves as gateways to the broader Northern Arizona region, not just gateways to the Grand Canyon.

Gateway communities in southern Utah have a similar opportunity to leverage connections between the greater Grand Canyon area and the nearby Utah national parks and recreation areas such as Bryce Canyon and Zion national parks and Glen Canyon National Recreation Area.

Another advantage the GGCHNM offers is the ability to connect two existing national monuments, creating a more substantial recreational opportunity for visitors to the area. Collective marketing and branding efforts could leverage visitation and economic impact, particularly for the communities north of the Grand Canyon which serve as access points for recreation on the Kaibab Plateau.