

To: Corey, Chad[chad_corey@nps.gov]
Cc: Bob Vogel[bob_vogel@nps.gov]
From: Boone, Whitney
Sent: 2017-07-13T13:52:44-04:00
Importance: Normal
Subject: Fwd: monuments review
Received: 2017-07-13T14:02:03-04:00
GCPNM 07 10 17.docx

Hi Chad,

The DOI Office of Policy Analysis has compiled the attached Grand Canyon Parashant report for the Secretary's Office- it is primarily a summary of the information we submitted to last month's monument review data call, but also includes some information about nearby communities.

Can you please review this report and let me know by July 20 if you recommend any edits? I will send comments to the DOI Office of Policy Analysis on July 21.

Feel free to give me a call with any questions. FYI- copying Bob Vogel here; he is stepping in for Bert Frost.

Thanks,
Whitney

----- Forwarded message -----

From: **Bowman, Randal** <randal_bowman@ios.doi.gov>
Date: Tue, Jul 11, 2017 at 1:48 PM
Subject: Fwd: monuments review
To: "McAlear, Christopher" <cmcalear@blm.gov>, Nikki Moore <nmoore@blm.gov>, Sally Butts <sbutts@blm.gov>, "Boone, Whitney" <whitney_boone@nps.gov>, Aaron Moody <aaron.moody@sol.doi.gov>, "Schmidt, Jaime T -FS" <jtschmidt@fs.fed.us>, "Eberlien, Jennifer - OSEC, Washington, DC" <Jennifer.Eberlien@osec.usda.gov>
Cc: Benjamin Simon <benjamin_simon@ios.doi.gov>

Here are 10 additional monument economic reports for review. Some of these areas are jointly managed, either BLM-FS or BLM-NPS, and some by individual agencies. Please provide any comments to Ben Simon, copied on the email, with a copy to me, by next Friday the 21st, which will provide 10 working days for review.

----- Forwarded message -----

From: **Simon, Benjamin** <benjamin_simon@ios.doi.gov>
Date: Tue, Jul 11, 2017 at 1:20 PM
Subject: monuments review
To: Randal Bowman <randal_bowman@ios.doi.gov>
Cc: Ann Miller <ann_miller@ios.doi.gov>, "Stern, Adam" <adam_stern@ios.doi.gov>, Christian Crowley <christian_crowley@ios.doi.gov>, Sarah Cline <sarah_cline@ios.doi.gov>

Hi Randy,

Here are drafts for the following monuments:

Grand Canyon Parachant

Grand Staircase

Sonoran

Ironwood Forest

Canyons of the Ancients

San Gabriel

Giant Sequoia

Carrizo

Mojave

Vermillion

W

e would appreciate it if these could be circulated for comment.

Ben

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Benjamin Simon, Ph.D., Chief DOI Economist

Office of Policy Analysis

U.S. Department of the Interior

1849 C St. NW

Washington DC

202 208 4916

benjamin_simon@ios.doi.gov

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Whitney Boone

Park Planning and Special Studies

National Park Service

202 354 6970

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Grand Canyon-Parashant National Monument

Economic Values and Economic Contributions

DRAFT



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Introduction

The purpose of this paper is to provide an overview of the economic values and economic contributions of the activities and resources associated with Grand Canyon-Parashant National Monument (GCPNM or the Monument). The GCPNM is located entirely within Mohave County in northwest Arizona, bordering Nevada to the west and near the southern border of Utah. With the Grand Canyon along the south perimeter, the GCPNM can only be accessed through rough, unpaved roads from the north, west, and northeast. For context, this paper provides a brief economic profile of the surrounding area, focused on Mohave County, Arizona and supplemented with basic and relevant information for Clark County, Nevada; Washington County, Utah; and Coconino County, Arizona.

Grand Canyon-Parashant National Monument, Arizona

Location: Mohave County, AZ

Managing agencies: NPS, BLM

Adjacent cities/counties/reservations:

- Clark County, Nevada to the west;
- Washington County, Utah to the north;
- Coconino County, Arizona to the east

Resources and Uses:

- ☒ Recreation ☐ Energy ☐ Minerals
☒ Grazing ☐ Timber ☒ Scientific Discovery
☒ Tribal Resources ☒ Cultural / Paleo Resources

Background

The GCPNM was established by President Clinton on January 11, 2000 (Proclamation 7265) and is jointly managed by the National Park Service (NPS) and the Bureau of Land Management (BLM) under a Service First Agreement. The Monument consists of 1,048,321 acres including 808,744 acres of BLM-administered land, 208,447 acres of NPS-administered land, 23,205 acres of Arizona State Trust lands, and 7,920 acres of private land. NPS-administered lands within the monument are part of the Lake Mead National Recreation Area legislated unit, established by Congress in 1964. There are four Wilderness Areas located on the Monument, accounting for just over 93,000 acres. The Foundation Document for the GCPNM summarizes the purpose of the Monument to: “protect undeveloped, wild, and remote northwestern Arizona landscapes and their resources, while providing opportunities for solitude, primitive recreation, scientific research, and historic and traditional uses.”¹ To protect objects within the Monument, the Proclamation directed the following management:

- Prohibit all motorized and mechanized vehicle use off road, except for emergency or authorized administrative purposes.
- Withdraw from all forms of entry, location, selection, sale, or leasing or other disposition under the public land laws including mineral and geothermal leasing.
- Only permit the sale of vegetative material if part of an authorized science-based ecological restoration project.
- Continue to issue and administer grazing leases within the portion of the Monument within the Lake Mead National Recreation Area as well as the remaining portion of the Monument.

The Proclamation also states that the establishment of the monument is subject to valid existing rights.

The GCPNM boundary occupies approximately 12% of the area of Mohave County. Communities in Clark County, Nevada; Washington County, Utah; and Coconino County, Arizona also serve as access points to the Monument and are therefore connected economically and socially to the Monument.

¹ DOI. 2016. Foundation Document, Grand Canyon Parashant National Monument. As stated in document, “The purpose statement identifies the specific reason(s) for establishment of the monument. The purpose statement for Grand Canyon Parashant National Monument was drafted through a careful analysis of its enabling presidential proclamation and the legislative history that influenced its development.

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Individuals from the Hopi, Southern Paiute, Hualapai, Havasupai, and Navajo tribes continue visiting sites, gathering, and using resources in the Planning Area.²

Public Outreach Prior to Designation

In November 1998, former Department of Interior Secretary Babbitt went to Northern Arizona and began a dialogue that included two more visits, two large public meetings, and more than 59 other meetings with concerned local governments, tribes and other groups regarding the future of these lands.³

A December 21, 1999 briefing paper for the Secretary described the position of interested parties as follows: “Legislation was introduced in August 1999 by Senator Kyl (S. 1560) and Congressman Stump (H.R. 2795) proposing a National Conservation Area designation for the region. Stump's bill would actually lower protections in existing law. No hearings have been held on Kyl's legislation. Environmental groups have expressed support for the monument designation, most notably, The Grand Canyon Trust. The Arizona Strip Grazing Board has expressed general opposition to further designation, but stated that if a proposal is pursued, they would like to work with those making the designation to ensure grazing activities continue. Private land owners, recreationists and mining interests have expressed concerns over possible restrictions and changes to past agreements, but desire to participate in the process.”

Local Economy and Economic Impacts

Table 1 summarizes some key demographic and economic indicators for Mohave County, Arizona and the State as a whole. While the County accounts for just 3 percent of the State's population, the percent increase since 1990 was larger than the State (118% compared to 81%). The unemployment rate in Mohave County is higher than the State and a substantial portion of the Mohave County workforce are employed in jobs outside the County. This observation is reflected in the ratio of jobs to population (33% in Mohave County compared to 53% for the State) and BEA personal income data that shows a net inflow of income. Furthermore, the median household income in Mohave County was 77% of the State average in 2015. The demographics of Mohave County consists of a relatively higher percentage of non-Hispanic Whites compared to the State (78% compared to 57.5%) and, as shown in Table 1, a relatively small percentage of Native Americans. The USDA Economic Research Service's (ERS) county-level typology codes indicate that Mohave County is a recreation-dependent county. That classification is supported, in part, by the relatively higher percentage of jobs recreation/tourism related sectors (e.g., retail trade and accommodation and food services) in Mohave County in 2015 as reported by the BEA. The proportions of jobs in Mohave County associated with other natural resource related sectors are relatively low (0.9%,

Table 1. Mohave County and State of Arizona Economic Snapshot

Measure	Mohave County, AZ	Arizona
Population, 2016 ^a	203,362	6,641,928
Native American % of population ^a	2.1%	4.4%
Employment, December 2016 ^c	67,304	3,542,969
Unemployment rate, March 2017 ^b	5.5%	3.1%
Median Household Income, 2015 ^a	\$38,488	\$50,255

^a U.S. Census Bureau, 2011-2015 American Community Survey

^b <https://laborstats.az.gov/sites/default/files/documents/files/emp-report.pdf>

^c U.S. Bureau of Economic Analysis (BEA), Regional Economic Accounts. Table CA25N.

² BLM and NPS. 2007. The Proposed Resource Management Plan/FEIS for the Arizona Strip Field Office, the Vermilion Cliffs National Monument, and the BLM Portion of Grand Canyon Parashant National Monument, and a Proposed General Management Plan/Final EIS for the NPS Portion of the Canyon Parashant National Monument.

³ White House Press Release.

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0.2%, 0.4% for the Farm, Forestry, fishing, & ag. and Mining sectors; respectively) and are comparable to the State as a whole.

Non-labor income (income from dividends, interest, and rent and transfer payments) has become an increasingly large source of total income within the County, reaching over 52 percent of all income as of 2015 (compared to about 40% for the State as a whole). A relatively high proportion of this non-labor income is associated with age-related transfer payments (Social Security and Medicare) which is reflective of the relatively older population in the County compared to the State as a whole.

As noted above, communities in Clark County, Nevada; Washington County, Utah; and Coconino County, Arizona are common access points for the Monument. Coconino County has a population around 135,000 with half of the population living in Flagstaff. Much of the County does not provide easy access to the Monument. The Town of Fredonia (population around 1,300) represents the main access point to the Monument from the County and bills itself as “the gateway to the North Rim of the Grand Canyon.”⁴ Washington County, Utah has a population around 155,000 with half of the population living in St. George. The County is classified by ERS as recreation dependent. St. George, an access point for the GCPNM, has been a tourist destination since the 1960s and provides access to a number of other National Parks and Monuments.⁵ Clark County, Nevada has a population of around 2.1 million with the vast majority of the population living in the greater Las Vegas area. The closest communities in the County to the Monument are Mesquite (population of about 17,000) and Bunkerville (population of about 1,000). Mesquite is a “growing resort destination”⁶ providing local activities (such as golf and casinos) and access to a range of publically managed lands. Information on the primary economic drivers for Bunkerville are not readily available.

Activities and Resources Associated With GCPNM

Activities taking place on and resources within the GCFNM include:

- Recreation:** As described in the Final Environment Impact Statement (FEIS) associated with the GCPNM Resource Management Plan, GCPNM’s remote, open, sparsely developed area and engaging scenery provides a wide array of dispersed recreation opportunities for moderately regulated recreation. Exploration, driving for pleasure, hiking, backpacking, camping, picnicking, big and small game hunting, and wildlife observation are the most common activity types. Motorized or mechanized vehicle, small aircraft, walking, or equestrian are typical modes of travel. Approximately 30,000 visits to the GCPNM resulted in \$1.8M in expenditures in local gateway regions in 2016. These expenditures supported a total of 27 jobs, \$0.9 million in labor income, \$1.5 million in value added, and \$2.6 million in economic output in local gateway economies surrounding the Monument. The total consumer surplus associated with recreation at the GCPNM in 2016 was estimated to be \$2.4M. This estimate is based on average consumer surplus values and participation counts for camping, big game hunting, other

Table 2. Estimated Economic Contributions, 2016

Activities	Economic output (\$millions)	Value added (net additions to GDP), \$ millions	Employment supported (number of jobs)
Recreation*	\$2.6	\$1.5	27
Grazing	\$3.7	Grazing value added is not available	100

*Source: BLM data.

⁴ See <http://www.fredoniaaz.net/>.

⁵ See <https://www.sgcity.org/aboutstgeorge/>.

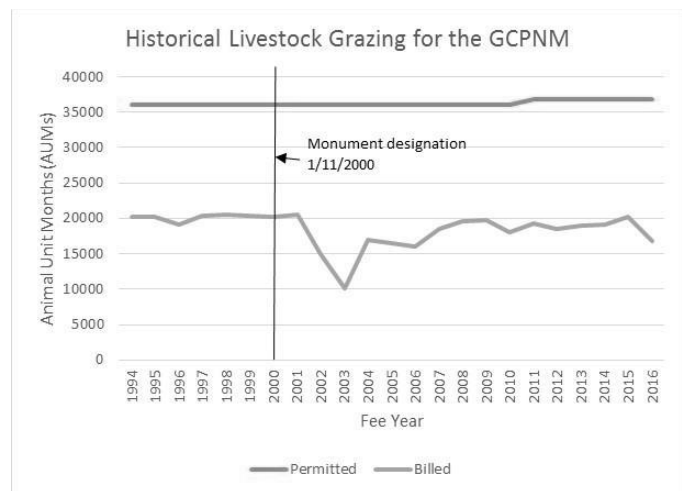
⁶ See <https://www.visitmesquite.com/about/>.

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hunting, mountain biking, hiking, off highway vehicle, and general recreation.⁷ The Proclamation's prohibition of all motorized and mechanized vehicle use off road was implemented through travel management decisions during the planning process. In general, the BLM considered motorized and mechanical use on existing routes to be consistent with the Proclamation. The BLM, based on input from interested stakeholders, classified existing routes open, closed, or administrative. The analysis in Final Environmental Impact Statement (FEIS) concluded that routes identified for closure would have negligible impact on recreational OHV use and the businesses in nearby communities that cater to those users.

- Energy:** The FEIS identified moderate potential for oil and gas and geothermal resources and no potential associated with coal, although the level of certainty associated with these ratings varies. Furthermore, the ratings were associated with the Planning Area as a whole so the potential within the GCPNM may differ. There are no active energy-related mineral production and no existing energy related right-of-way developments (including renewable developments) within the Monument. Given the remote setting and limited access, there has been very little interest in energy resources in recent decades. The designation withdrew the Monument from location, entry, and patent under mining laws, subject to valid existing rights.
- Non-Energy Minerals:** The FEIS identified moderate potential for sodium and high potential for metallic minerals, uranium, gypsum, and mineral materials (such as sand, stone, gravel, pumicite, and clay). Again, the ratings were associated with the Planning Area as a whole so the potential within the GCPNM may differ. The FEIS describes historical mining within the Monument associated primarily with copper and residual amounts of the other metals and hardrock minerals as well as uranium ore exploration. These activities occurred in the 1910s through 1980s. There are no active mining claims in the Monument. Given the remote setting and limited access, there has been very little interest in non-energy mineral resources in recent decades. The designation withdrew the Monument from location, entry, and patent under mining laws, subject to valid existing rights.
- Grazing:** The BLM issues and administers grazing leases on both BLM and NPS administered lands within the Monument. The Proclamation states that management with respect to livestock grazing would not be altered by the designation of the Monument. At the time of the FEIS (based on 2004 data), the BLM administered 28 grazing allotments and managed them in cooperation with 25 permittees throughout the Monument. The permits authorized 38,000 Animal Unit Months (AUMs), primarily associated with cattle operations. Figure 1 shows permitted and billed AUMs from 1994 through 2016.

Figure 1 GCPNM Grazing.



⁷ Recreation unit value is a survey based value for general recreation for the Intermountain region from the USGS Benefit Transfer Toolkit <https://my.usgs.gov/benefit-transfer/>. Economic value is the net benefit to recreational users (total benefits minus total costs).

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The figures shows that permitted AUMs have remained relatively stable over the 23 year period. Billed use (which approximates actual use) has fluctuated over time and ranging from a low of 28 percent to a high of 57 percent of the permitted AUMs. Various reasons, in any given year, affect the number of AUMs used by permittees such as drought conditions, market forces, and fluctuations in individual permittee livestock operations. Based on the 5-year average of recent annually billed AUMs (18,758), livestock grazing on the Monument has supported approximately 100 paid and unpaid (i.e., family labor) jobs annually resulting in approximate \$980 thousand in labor income and generating about \$3.7 million in total economic output.

- **Timber:** Upon designation, the BLM and NPS were directed to only permit the sale of vegetative material if part of an authorized science-based ecological restoration project. The FEIS describes the limited opportunities and interested in commercial use of woodland products from within the Monument. No commercial activity associated with timber have been reported in the Monument since the 1960s.
- **Resource values:** Monument designation is intended to protect scientific and historic objects. In general, these objects are valued by society but those values are not bought or sold in the marketplace and therefore difficult to quantify. Below is a brief overview of the objects identified in Proclamation that the designation is intended to protect⁸:
 - **Scientific Investigation:** Scientific research and opportunities associated with the ponderosa pine ecosystem in the Mt. Trumbull area and ecological research opportunities made possible by the vast, remote, and unspoiled landscapes.
 - **Cultural (Historic and Archaeological) and Paleontological Resources:** Undisturbed archaeological evidence, displaying the long and rich human history spanning more than 12,000 years. Historic resources, including evidence of early European exploration, Mormon settlements, historic ranches, sawmills, and old mining sites. Abundant fossil record.
 - **Cultural Tribal Resources:** Individuals from the Hopi, Southern Paiute, Hualapai, and Havasupai tribes continue visiting sites, gathering, and using resources in the Monument.
 - **Recreation:** The value of recreation opportunities and experience extend beyond the economic activity supported by visitors to the Monument. The Monument provides iconic western viewsheds in a setting known for its solitude, natural soundscapes, internationally recognized night skies, and wilderness values.

Land Management Tradeoffs

This section presents some information to help understand land management tradeoffs. Decision-making often involves multiple objectives and the need to make tradeoffs among those objectives. However, tradeoffs and decision making are often subject to constraints, such as Monument designations. In general, market supply and demand conditions drive energy and minerals activity; societal preferences and household disposal income affect recreation activity levels; and market prices and range conditions affect the demand for forage. Culturally important sites and unique natural resources, by definition, have limited or no substitutes. A particularly challenging component of any tradeoff analysis is estimating the nonmarket values associated with GCPNM resources, particularly the nonmarket values associated with cultural and scientific resources.

⁸ In addition to the Proclamation, Chapter 1 of the FEIS provides a more detailed description of these objects and their significance.

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Planning for permitted resource use on National Monuments will involve trade-offs among different activities on the land area being managed in order to allow permitted activities that are compatible with monument objects. Once designated, National Monuments continue to be managed under the multiple use mandate outlined in the Federal Land Policy and Management Act of 1976. In some cases, certain areas of the Monument may be appropriate for more than one use. After the careful consideration of tradeoffs, management decisions in those cases may prioritize certain uses over others. In other cases, land areas may be more appropriate for a particular use and activities could be restricted to certain areas of the Monument. These decisions are based upon whether a use is compatible with the designation. Factors that could inform these tradeoffs include demand for the good or activity, prices, costs, and societal preferences. Other considerations might include the timeframe of the activity - how long the benefits and costs of a given activity would be expected to extend into the future. Trust responsibilities and treaty rights should also be considerations.

In considering any trade-offs, it is not just the level and net economic value associated with an activity that occurs in a given year that is relevant to decision making. Virtually all activities within the Monument occur over time and it is the stream of costs and benefits over a given period of time associated with each activity that is relevant. For example, recreation activities could continue indefinitely assuming the resources required for recreation remain intact and of sufficient quality for individuals to remain interested in the activity. Likewise, the values associated with the natural and cultural resources could continue indefinitely provided they are not degraded by other activities (and assuming preferences do not change). Grazing could also continue indefinitely as long as the forage resource is sustainably managed and remains consistent with the protection of monument objects. Timber harvest may also continue indefinitely as long as the timber resource is sustainably managed. The stream of costs and benefits associated with some other non-renewable resources would be finite, however (assuming these activities were consistent with the designation). For example, oil, gas, coal and minerals are all non-renewable resources and would only be extracted as long as the resource is economically feasible to produce.

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Draft Interim report on Monument Review Process

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Bears Ears National Monument Economic Considerations *DRAFT*



Bears Ears National
Monument

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Introduction

The purpose of this paper is to provide information on the economic values and economic contributions of the activities and resources associated with Bears Ears National Monument (BENM) as well as to provide a brief economic profile of San Juan County.

Background

The Bears Ears National Monument encompasses 1.4 million acres in San Juan County, UT and was established in 2016 for the purposes of protecting lands that contained cultural, prehistoric, historic, and scientific resources, including objects of archaeological significance, as well as providing access to outdoor recreation activities that serve a growing travel and tourism industry in the area. Prior to establishment of the monument, all lands within the monument boundaries were Federal lands managed by BLM (Monticello Field Office) and the USFS (Manti-La Sal National Forest), with the exception of over 100,000 acres of land owned by the State of Utah and managed by the Utah School and Institutional Trust Lands Administration (SITLA).¹ Economic activities occurring on SITLA land in the area are similar to those on adjacent Federal land, including visitation to prominent cultural resource sites and grazing.² Of the federal acreage, 57% was protected under other BLM land use designations (i.e. Wilderness Study Area, Natural Area, Area of Critical Environmental Concern, Special Recreation Management Area).

Proposals to protect land in the Bears Ears area date back over 80 years. More recently, in 2015, the “Inter-Tribal Coalition for Bears Ears” proposed establishing a 1.9 million acre national monument.³ Utah Congressmen Rob Bishop and Jason Chaffetz proposed establishing two National Conservation Areas (NCAs) – Bears Ears and Indian Creek -- totaling 1.3 million acres as part of their Public Lands Initiative (PLI).⁴

Bears Ears National Monument

Location: San Juan County, UT

Managing agencies: BLM, USFS

Adjacent cities/counties/reservations:

- Counties: San Juan County, UT
- Reservations: Navajo Nation
- Cities: Bluff, UT; Blanding, UT; Monticello, UT; Navajo Nation Reservation

¹ SITLA serves as fiduciary of Utah’s 3.4 million acres of trust lands, parcels of land held in trust to support 12 state institutions, primarily the K-12 public education system. SITLA is constitutionally mandated to generate revenue from trust lands to build and grow permanent endowments for these institutions, which were designated by Congress in 1894. Utah’s public school system is the largest beneficiary, holding 96% of all Utah trust lands.

² Different rules apply to grazing on SITLA land versus Federal land, such as allowing SITLA to post expiring permits on the agency’s website, establish 15 years as the maximum length for grazing permits, and set a fee of \$10/AUM when permits are assigned. The Federal grazing fee in 2017 is \$2.11/AUM.

³ The Inter-Tribal coalition consists of representatives from the Hopi Tribe, Navajo Nation, Uintah and Ouray Ute Tribe, Ute Mountain Ute Tribe, and Zuni Tribe.

⁴ National Conservation Areas are designated by Congress. In contrast to the Inter-Tribal Coalition’s proposal, the PLI did not specify that all areas were to be withdrawn from future mineral development, places a restriction on decreasing grazing permits in one of the proposed NCAs, and places restrictions on Federal negotiations with the State of Utah for land exchanges for State-owned land within the proposed boundaries. In addition, the PLI also included greater local government and community involvement in the development and administration of the management plan through a committee that included Federal, State, local government, tribal, and community interest representatives.

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A management plan for the Monument has not yet been drafted. Development of a management plan would typically require at least several years and involve extensive public involvement.⁵ The Presidential proclamation established the Bears Ears Commission, consisting of one elected official each from five different tribes (Hopi Tribe, Navajo Nation, Ute Mountain Ute Tribe, Ute Indian Tribe of the Uintah Ouray, and Zuni Tribe). The Commission is to work with the Federal government to provide guidance and recommendations on the development and implementation of management plans. In addition, DOI is seeking to enter into a MOU with the State of Utah to negotiate the exchange of state land within the monument boundaries for other BLM land outside the Monument.⁶

Public outreach prior to designation

Table 1. San Juan County and state of Utah

Measure	San Juan County, UT	Utah
Population, 2016 ^a	15,152	2,903,379
Native American % of population ^a	47.0%	1.7%
Unemployment rate, March 2017 ^b	7.0%	3.1%
Median Household Income, 2015 ^a	\$41,484	\$60,727
Native American Median Household Income, 2015 ^a	\$24,132	\$36,428

⁵ Land management plans are developed in compliance with Federal Land Policy and Management Act (FLPMA) and NEPA regulations.

⁶ A May 2017 SITLA land auction included a 1,120 acre parcel within BENM, the Needles Outpost, which sold for \$2.5 million, or \$2,232 per acre (<https://trustlands.utah.gov/land-auction-earns-3-million-for-public-schools/>).

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A public meeting was held in Bluff, UT in July 2016. Over 1,500 individuals attended, including representatives from DOI, USDA, tribes, members of the Utah congressional delegation, and Utah state legislature. In addition, almost 600 written comments were submitted, the majority of which were in favor of the monument designation.⁷

^a U.S. Census Bureau, 2011-2015 American Community Survey

^b <http://www.jobs.utah.gov/wi/pubs/une/season.html>

Local Economy and Economic Impacts

San Juan County in southeastern Utah is home to roughly 5% of the State's population. In recent years, it has experienced higher levels of unemployment and lower levels of median household income in comparison to the State. The population of the county has increased substantially over the past 20 years. Nearly half of the population of the county is Native American. The median household income of Native Americans in San Juan County is over 40% lower than that of the county (see Table 1).

The San Juan County economy is dependent upon recreation-based businesses and the accommodation and food services industry is the largest by employment in the county (see Figure 1). According to the USDA Economic Research Service's county-level typology codes, San Juan County is classified as: Mining dependent (a county is classified as mining dependent if mining accounted for 13% or more of the county's earnings or 8% of the employment averaged over 2010-12); low employment (less than 65% of residents age 25-64 were employed in 2008-12); persistent poverty (a county was classified as persistent poverty if 20 percent or more of its residents were poor as measured by the 1980, 1990, and 2000 decennial censuses and the American Community Survey 5-year estimates for 2007-11); and persistent related child poverty (a county was classified as persistent related child poverty if 20 percent or more of related children under 18 years old were poor as measured by the 1980, 1990, and 2000 decennial censuses and the American Community Survey 5-year estimates for 2007-11).⁸

Figure 1. Percent of employment by use sector in San Juan County, 2015



⁷ Fast Facts and Q&A about the Bears Ears National Monument Designation, BLM.

⁸ <https://www.ers.usda.gov/data-products/county-typology-codes/documentation/>.

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*Other includes agriculture/forestry; utilities; wholesale trade; finance and insurance; real estate; professional, scientific and technical services; admin and support services; waste management; educational services; arts and entertainment; and transportation and warehousing. Each of these represents less than 4% of total employment.

Information is provided below on two different types of economic information: “economic contributions,” and “economic values.” Both types of information are informative in decision making. Economic contributions track expenditures as they cycle through the local and regional economy, supporting employment and economic output (see Table 2). It is estimated that recreation activities in the BENM area supported about 460 jobs and provided about \$23 million in value added in FY 2016.

Definitions

Value Added: A measure of economic contributions; calculated as the difference between total output (sales) and the cost of any intermediate inputs.

Economic Value: The estimated net value, above any expenditures, that individuals place on goods and services; these are particularly relevant in situations where market prices may not be fully reflective of the values individuals place on some goods and services.

Employment: The total number of jobs supported by activities.

Economic values, in contrast to economic contributions, represent the net value, above and beyond any expenditures, that individuals place on goods and services. To the extent information is available some of these values are presented in Table 3. Economic values are particularly relevant in situations where market prices may not be fully reflective of the values individuals place on some goods and services.

Table 2. Estimated Economic Contributions, 2016

Activities and Resources Associated With Bears Ears National Monument

Activities occurring at Bears Ears National Monument include recreation (camping, hiking, canyoneering, mountain biking, boating, rock climbing, hunting, ATV use), viewing ancestral Puebloan cultural sites, collection of materials for tribal ceremonial purposes, scientific and archaeological research, firewood collection and other non-commercial timber production, grazing and energy/non-energy mineral production with valid existing rights. Further details on these activities are provided below.

Activities	Value added (net additions to GDP), \$ millions	Employment supported (number of jobs)
Recreation	\$22.9	463
Non-energy Minerals	\$0.24	2
Grazing	Grazing value-added is not available	161
Cultural resources	Unquantifiable; some values would be included in recreation	Unquantifiable; some values would be included in recreation

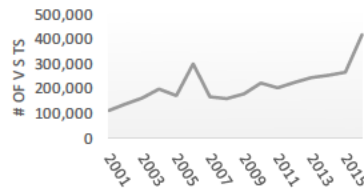
- **Recreation:** Annual recreation visitation data for 2001-2016 is available for the BLM Monticello Field Office. About 60 percent of area formerly under the jurisdiction of the Field Office represents the area included in the Monument. This area receives the vast majority of recreation

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use. Recreation visits increased steadily from about 111,000 in 2001 to about 419,000 in 2016 (see Figure 2). Comparatively, visitation to National Monuments and NCAs that have tracked unit-level visitation since 2005 has grown at an average rate of about 5.4% per year. Prior to designation, BLM also tracked the number of visits to the Kane Gulch ranger station that served the southern end of the monument. The number of visits to this ranger station in March and April of 2017 was more than 50% higher than the average visitation during the same months of the four previous years. Recreation activities provide the opportunity for economic activity to be generated from tourism for an indefinite period of time. The economic contributions occur annually, and in cases where visitation increases over time, recreation generates additional activity each year. The net economic contributions associated with recreation in 2016 are estimated to be about \$23 million in value added and 463 jobs. These contributions affect the regional and state economies.

In addition, annual recreation visits to the Manti-La Sal National Forest, part of which is now within BENM boundaries, are estimated to number around 350,000. USFS does not have information on visits to specific areas within the National Forest, so it is not possible to determine visitation to the part of the forest that is now in BENM. However, it is likely that recreation visitation to the area that is now BENM exceeds what was captured by the BLM Monticello Field Office since there was likely additional visitation to the included section of the Manti-La Sal National Forest. The estimates of economic contributions associated with recreation are based solely on the level of visitation to the BLM-managed land in 2016; these could be considered conservative estimates as they do not include the impacts of visitation to USFS-managed land.

Figure 2. Recreation Visits to BLM Monticello Field Office, 2001-2016



- **Energy:** In general, the scope, magnitude, and timing of energy and minerals activities are closely related to supply and demand conditions in world markets and the market prices of mineral commodities. To date, energy development on the Monument has been limited.
 - **Coal.** There have been no coal developments in the Monument area. Furthermore, there is very little, if any, prospectively valuable coal within the monument boundaries, based on the energy and mineral resource assessment conducted for BENM. Potential for prospectively valuable coal, as surveyed by the USGS, lies almost entirely to the east of the monument.
 - **Oil and gas.**
 - USGS assessments indicate a high level of potential for oil and gas within the monument boundaries, however there are currently no producing oil and gas wells within the Monument.⁹ The upper northeast panhandle of BENM lies within the boundaries of the Moab Master Leasing Plan and portions of the southeastern and southcentral areas of the monument were included in a

⁹ The Monument area is within a USGS Energy Assessment Unit (AU) and has historic uranium mining activity (the Monument is within 2 conv. AUs and 1 cont. AU, Paradox Basin Province (315 MMBO, 999 BCF, 18 MMBNGL) <https://pubs.usgs.gov/fs/2012/3031/>.

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proposed San Juan Master Leasing Plan. Approximately 63,600 acres within the proposed San Juan Master Leasing Plan area have been nominated for leasing since 2014. All of these lease nominations were deferred due to existing land use plan decisions and potential adverse impacts on cultural resources.

- There are currently 25 existing federal oil and gas leases that are partially or wholly contained within the monument boundaries, with lease authorizations spanning the period from 1972 to 2012. Valid existing rights are protected under the proclamation, so development on these existing leases could occur if development is found to be economic. Currently, there are no authorized or pending applications for permit to drill (APDs) associated with these leases. No oil and gas wells have been drilled on existing leases since 1993 and all wells within monument boundaries have been plugged. Of the 250 wells that have been drilled since 1920, only three wells have produced economical quantities of oil and gas. The last producing well was drilled in 1984 and ceased production in 1992.
- **Non-fuel minerals.**
 - **Sand and gravel.** There is one commercial minerals materials mining site within monument boundaries that produces sand and gravel. The permit for this site was renewed in March, 2016 for a 10-year period. Production is limited to a maximum of 200,000 cubic yards over the life of the 10-year permit, and designation of the monument does not affect the limits on production.¹⁰
 - **Potash.** While USGS surveys have assessed potential for potash in the northeastern panhandle of BENM (an area within the boundaries of the Moab Master Leasing Plan prior to designation), no sites in this area were identified as Potash Leasing Areas in the most recent Moab Master Leasing Plan (2016). BLM has denied all potash prospecting permit applications received from 2008 to 2015, primarily because they were inconsistent with protection of multiple resource values use (such as natural or cultural use) in the area.¹¹
 - **Uranium.** While there are no active mining operations on USFS-managed land, there are 78 active unpatented mining claims for uranium. There are no mining claims for uranium on BLM-managed land. The uranium ore in the Manti-La Sal National Forest is low grade, affecting the ability of the local industry to compete economically on the world market.¹² Uranium prices are volatile and, though currently higher than historical prices, have been trending downward since peaking in 2008.¹³

¹⁰ Supply and demand conditions determine how much is produced annually within the overall limit on overall production. BLM receives a royalty of \$1.08 per cubic yard (\$0.66 per ton) of mineral production. The national average price for sand and gravel used in construction was \$8.80/metric ton (https://minerals.usgs.gov/minerals/pubs/commodity/sand_&_gravel/construction/mcs-2017-sandc.pdf).

¹¹ Potash production depends largely on market forces. U.S. consumption of potash was down in 2016 owing to a drop in agricultural use in the first half of the year and lower industrial usage, primarily in oil well-drilling mud additives. The world potash market in 2016 was marked by weak demand in the first half of the year, mainly in China and India, the largest consumers of potash. This excess supply resulted in lower prices, and reduced production. The average price of potash in 2016 was \$360 per ton.

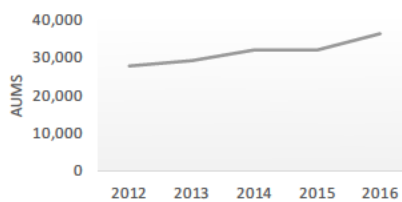
¹² Manti-La Sal National Forest Land and Resource Management Plan, 1986.

¹³ <https://www.eia.gov/uranium/marketing/>.

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- Timber.** Timber harvest activities such as non-commercial Christmas tree cutting and collection of wood for posts and firewood are allowed by permit on both BLM and USFS-managed land. For BLM-managed lands, no information is available on the level of magnitude of these activities strictly within monument boundaries, however within the boundaries of the Monticello Field Office the total estimated value of harvested firewood, wooded posts, and Christmas trees was about \$12,000 in FY 2016. In addition to selling permits for Christmas trees, firewood, and wood for posts, there were about 736,000 cubic feet of forest products produced within the USFS-managed land within the monument boundaries between 2012 and 2015. The monument proclamation allows for the continuation of all pre-designation timber activities.
- Forage.** Grazing is permitted on both BLM and USFS-managed lands within the Monument boundaries; no grazing permits were bought out upon designation of the monument. The allotments that are wholly or partially contained within the boundaries of BENM include 50,469 permitted Animal Unit Month (AUMs)¹⁴ on BLM-managed land and 11,078 AUMs permitted on USFS-managed land. The monument proclamation allows for the continuation of all pre-designation grazing activities, including maintenance of stock watering facilities. Figure 3 shows the number of AUMs billed by BLM annually over 2012-2016. In 2016, there were about 36,400 billed AUMs on BLM-managed land; on average, billed AUMs represent about 60% of permitted AUMs. Information on billed AUMs on USFS-managed land is not currently available.
- Cultural and historic resources.** Indigenous communities may utilize natural resources to an extent and in ways that are different from the general population, and the role that natural resources play in the culture of these indigenous communities may differ from that of the general population. Culturally important sites and unique natural resources, by definition, have limited or no substitutes. Recognizing this is a critical consideration in land management because it may affect consideration of tradeoffs.

Figure 3. BLM AUMs Billed, 2012-2016 (BLM)



According to the Utah State Historic Preservation Office, as of Feb. 6, 2017, there are 8,480 recorded archaeological sites and four archaeological districts within BENM. The following archaeological districts are either completely within or partially within BENM: Butler Wash, Grand Gulch, Natural Bridges, and the Salt Creek Archaeological District. More than 70 percent of these sites are prehistoric (pre-dating the 1800s). These prehistoric sites include pottery and stone tool (lithic) scatters, the remains of cooking features (hearths), storage features such as

¹⁴ BLM measures an AUM as the amount of forage needed to sustain one cow and her calf, one domestic horse, or 5 sheep or goats for one month. <https://www.blm.gov/programs/natural-resources/rangelands-and-grazing/livestock-grazing/fees-and-distribution>.

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adobe granaries and subsurface stone lined granaries, prehistoric roads, petroglyphs, pictographs and cliff dwellings. The remaining sites are historic and include debris scatters, roads, fences, and uranium and vanadium mines from World War II and the Cold War. The total percentage of the BLM-managed portion of BENM that has been surveyed for cultural resources is 9.2 percent.

In addition the USFS-managed portion of BENM includes 2,725 known cultural sites and features an area containing over 2,027 Puebloan sites, most of which are *Pueblo I*. The *Pueblo I* culture is limited to only a few locations and the USFS-managed portion of BENM contains the only high elevation communities of this era. These sites include hunting camps and blinds, ceremonial sites, granaries, stone quarries, villages and residences, agricultural systems, kilns, rock art, and shrines, as well as protohistoric sweat lodges and hogans. Only 15 to 20 percent of the USFS-managed portion of BENM has been surveyed for cultural resources. Activities currently undertaken by tribal members include hunting, fishing, gathering, wood cutting, and the collection of medicinal and ceremonial plants, edible herbs, and materials for crafting items like baskets and footwear.

Multiple Use, Tradeoffs among Permitted Activities, and Types of Economic Information

Decision-making often involves multiple objectives and the need to make tradeoffs among those objectives. Table 3 provides a summary of activities and economic values and information on the timing and drivers of future activity levels. Market supply and demand conditions drive energy and minerals activity; societal preferences and household disposal income affect recreation activity levels; and market prices and range conditions affect the demand for forage. Culturally important sites and unique natural resources, by definition, have limited substitutes and are difficult to value.

As with any land managed for multiple uses, planning for permitted uses on National Monuments will involve trade-offs among different activities on the land area being managed. In some cases, certain areas of the Monument may be appropriate for more than one use, and the trade-offs must be considered and management decisions may be made that prioritize certain uses over others. In other cases, land areas may be more appropriate for a particular use and activities could be restricted to certain areas of the Monument. Factors that could inform these tradeoffs include demand for the good or activity, prices, and societal preferences. Other considerations might include the timeframe of the activity - how long the benefits and costs of a given activity would be expected to extend into the future.

In considering the trade-offs, it is not just the level and net economic value associated with an activity that occurs in a given year that is relevant to decision making. Virtually all activities within the Monument occur over time and it is the stream of costs and benefits over a given period of time associated with each activity that is relevant. For example, recreation activities could continue indefinitely assuming the resources required for recreation remain intact and of sufficient quality for the activity. Grazing could also continue indefinitely as long as the forage resource is sustainably managed. The stream of costs and benefits for some other non-renewable resources would be finite, however. For example, oil, gas, coal and minerals are all non-renewable resources and would only be extracted as long as the resource is economically feasible to produce.

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Likewise, in considering the trade-offs, it is not just economic values that is relevant to decision-making. While the focus of this report is on economic values, the Federal Government must also consider the potential effects on tribal cultural resources in accordance with the Federal trust relationship to Indian tribes.

In the 2008 update to the Resource Management Plan for the Monticello Field Office, 60% of which is now BENM, an alternative emphasizing commodity development was considered but not selected due to its adverse impacts on wildlife and recreation opportunities, which includes visits for cultural purposes. This alternative was determined to be insufficient to protect all the important and sensitive resources within the planning area. Likewise, an alternative emphasizing protection of the area's natural and biological values was not selected in part due to the restrictions it placed on recreation permits and opportunities, which would have resulted in negative economic impacts on local businesses.

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Table 3. Summary of Activities and Economic Values, FY 2016

Activities	Level of annual activity	Unit Value	Timing	Drivers of the current and future levels of activity
Recreation ^a	530,892 visitor days (FY 2016)	\$54.19/visitor day	Visitation could continue indefinitely if landscape resources remain intact and of sufficient quality.	Societal preferences for outdoor recreation; disposable income; changing individual preferences for work and leisure time
Oil, gas, coal production	Little or none to date, see "Oil and gas" section for more information	FY 2016 average prices: crude oil (WTI): \$41.34/bbl natural gas: \$2.29/mcf coal (subbituminous): \$12.08/ton	Development of energy and non energy minerals is subject to market forces (worldwide supply and demand, prices). Mineral extraction is non renewable and occurs only as long as the resource is economically feasible to produce.	Market prices of energy commodities affect both supply and demand.
Non energy Minerals	34,813 tons ^b of sand and gravel (average of 2011-2015 production)	National average price for sand and gravel (2016): \$7.72/ton		Market prices of non energy commodities affect both supply and demand. Mineral production is limited to 200,000 cubic yards over a 10 year period per the existing resource management plan.
Grazing	36,402 AUMs (2016)	2016 grazing fee: \$2.11/AUM	Grazing could continue indefinitely if forage resources are managed sustainably.	Market prices for cattle and sheep and resource protection needs and range conditions (due to drought, fire, etc.) can affect AUMs permitted and billed.
Cultural resources	Indigenous communities often use natural resources to an extent and in ways that are different from the general population, and the role that natural resources play in the culture of these indigenous communities may differ from that of the general population. Culturally important sites and unique natural resources, by definition, have limited substitutes. Recognizing this is a critical consideration in land management because it may affect consideration of tradeoffs. BENM contains substantial cultural resources that have not been fully surveyed. Tribes use the sacred sites within BENM for hunting; fishing; gathering; wood cutting; and for collection of medicinal and ceremonial plants, edible herbs, and materials for crafting items like baskets and footwear.			
Benefits of nature	Services provided by nature underpin all sectors of a local economy. As many of these services are not sold in markets, we have limited information on their prices or values. Specific benefits related to BENM include protection of crucial habitats for deer, elk, desert bighorn sheep, pronghorn, and endemic plant species that inhabit rare habitat types such as hanging gardens.			

^a Recreation unit value is a survey-based value for general recreation for the Intermountain region.^b Reported average production of 21,396 cubic yards converted to tons using a conversion factor of 1.63 cu yds/ton.