



Grand Staircase Escalante National Monument *DRAFT*

To go in Text Box:

Location: Kane County, Garfield County, Utah

Managing agency: BLM

Adjacent cities/counties/public lands: Dixie National Forest, Capitol Reef National Park, Glen Canyon National Recreation Area, Bryce Canyon National Park, other Bureau of Land Management (BLM) administered lands, and Kodachrome Basin State Park.

Introduction

The purpose of this paper is to provide information on the economic values and economic contributions of the activities and resources associated with Grand Staircase Escalante National Monument (GSENM) as well as to provide a brief economic profile of Kane and Garfield counties.

Background information

Grand Staircase Escalante National Monument, which encompasses 1,866,331 acres in Kane and Garfield counties in Utah, was established in 1996 by President Clinton to protect an array of historic, biological, geological, paleontological, and archaeological objects. It was the first National Monument under BLM multiple use management. Since designation, there have been two congressional boundary adjustments as well as an exchange of all of the State of Utah School and Institutional Trust Lands Administration (SITLA) lands within the Monument boundaries. In May 1998, Secretary of the Interior Bruce Babbitt and Utah Governor Michael Leavitt negotiated a land exchange to transfer all State school trust lands within the Monument to the Federal government, as well as the trust lands in the National Forests, National Parks and Indian Reservations in Utah. On October 31, 1998 President Clinton signed the Utah Schools and Lands Exchange Act (Public Law 105- 335) which legislated this exchange. The federal government received all State inholdings in GSENM (176,699 acres) while the State received \$50 million in cash plus \$13 million in unleased coal and approximately 139,000 acres, including mineral resources. The federal government received additional State holdings within other NPS and US Forest Service units as part of the same exchange. On October 31, 1998, President Clinton also signed Public Law 105-355. Section 201 of this law adjusted the boundary of the Monument by including certain lands (a one-mile wide strip north of Church Wells and Big Water) and excluding certain other lands around the communities of Henrieville, Cannonville, Tropic, and Boulder. This law resulted in the addition of approximately 5,500 acres to the Monument. In 2009, H.R. 377, the Omnibus Public Land Management Act (Public Law 111-11), directed a boundary change and purchase for the Turnabout Ranch, resulting in the removal of approximately 25 acres from GSENM.

Public outreach prior to designation

GSENM was designated in 1996 without public engagement. However, the area in southern Utah had long been considered, discussed and evaluated for the possibility of providing greater recognition of, and legal protection for, its resources. In 1936, the National Park Service (NPS) considered making a recommendation to President Roosevelt to designate a 6,968 square mile

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"Escalante National Monument" (which also extended to portions of Bears Ears National Monument). A second NPS proposal proposed a 2,450 square mile National Monument (Background folder-Google Drive). In the late 1970's, the area was evaluated for its wilderness characteristics under the Federal Land Policy and Management Act, and more than a dozen wilderness study areas, totaling about 900,000 acres, were established in the area.

Local Economy and Economic Impacts

Combined, Kane and Garfield counties make up less than half a percent of Utah's population. Current unemployment rates are similar to the state average in Kane county, but higher in Garfield county. Median household income is similar in the two counties but lower than at the State level (Table 1). The accommodation and food services industry is the largest by employment in both Kane and Garfield counties (see Figure 1).

Table 1. Economic Profile for Kane and Garfield Counties

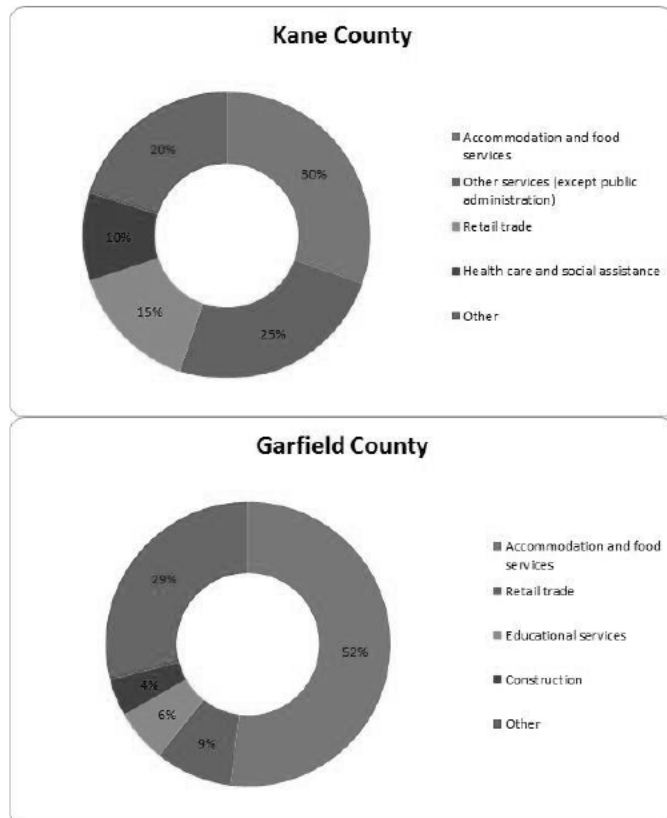
	Kane County, UT	Garfield County, UT	Utah
Population, 2015	7,131	5,009	2,995,919
Unemployment rate, March 2017 ^a	3.3%	7.6%	3.1%
Median Household Income (2015) ^b	\$47,530	\$45,509	\$62,961
^a http://www.jobs.utah.gov/wi/pubs/une/season.html ^b https://jobs.utah.gov/wi/pubs/wmi/income/index.html			

Figure 1. Percent employment by sector in Kane and Garfield Counties, 2015

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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). Economic values, on the other hand, represent the net value, above any expenditures, that individuals place on goods and services (see Table 3). These values are particularly relevant in situations where market prices may not be fully reflective of the values individuals place on some goods and services.

Activities and Resources Associated with Grand Staircase Escalante National Monument
Activities taking place on Grand Staircase Escalante National Monument lands include recreation, hunting, fishing, scientific research, grazing, and energy/non-energy mineral production with valid existing rights. Further detail on these activities are listed below:

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- Recreation:** Grand Staircase Escalante National Monument provides a large variety of multiple-use recreation opportunities including traditional hiking and camping, hunting, fishing, horseback riding, mountain biking, as well as motorized activities for off-highway vehicles. Visitation has increased since designation, rising from 456,369 visits in 1997 to 926,236 visits in 2016 (Figure 2). BLM also issues commercial Special Recreation Permits for GSENM. The number of permits issued has increased from 35 in 1999 to 115 in 2017. Recreation activities provide the opportunity for economic activity to be generated from tourism for an indefinite period of time. Recreational visitors spend money at local businesses, and that spending can lead to economic contributions that affect regional and state economy. 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 \$51 million in value added and 1,024 jobs.

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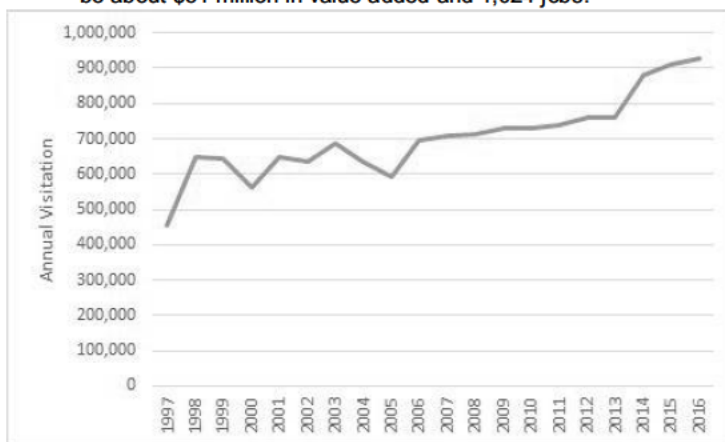


Figure 2. Annual Visitation to Grand Staircase Escalante National Monument

- 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. Since designation, there has been some oil and gas production, but no coal production or exploration.
 - Coal.**
 - Exploration and Production in GSENM:**
 - No coal lands have been explored or coal produced within the GSENM since designation. Existing coal leases were voluntarily exchanged for Federal payments totaling \$19.5 million (not adjusted for inflation) in Dec. 1999/Jan. 2000. As many as 23 companies acquired coal leases in the 1960s.
 - 64 coal leases (~168,000 acres) were committed and a plan was submitted for Andalex Resources' Smoky Hollow Mine prior to designation. The plan proposed mining on 23,799 acres of the area

eased in GSENM. In the mid-1990's an EIS was initiated. Subsequently, the Andalex coal leases were voluntary sold to BLM? at market value in December 1999. At the time of designation, the Warm Springs Smoky How DEIS was in progress to analyze the proposed mine.

Coal Resources in GSENM:

- Most of the coal resources in the Monument are within the Kaiparowits Plateau Coal Field, which contains one of the largest undeveloped coal resources in the United States. An estimated 62.3 billion tons of organic coal resources (coal beds > 1 foot thick) are contained in the Kaiparowits coal field, with an estimated 44.2 billion tons within the Monument (at least 32 billion tons are unkey mineable). Estimates indicate that around 11.5 billion tons would be considered potential development and 6.3 billion tons would be considered the total recoverable resource (including 2.4 billion tons of low-sulfur content and 3.9 billion tons non-content coal). In addition to the Kaiparowits Plateau Coal Field, the Monument contains some coal resources in the Eastern portion of the Anton-Kanab Coal Field, which are generally of lower quality than the coal in the Kaiparowits Plateau.
- The Kaiparowits Plateau coal resources in the GSENM are estimated to make up 59% of the potential recoverable coal in Utah, as of 2015.

Utah Coal Market:

- In 2015, the vast majority of coal consumed in Utah (96%) was used at electric power plants. The remaining coal (3.9%) was consumed by the industrial sector at cement/mercury plants and Kennecott Utah Copper's power plant (182 MW capacity) which provides electricity for copper smelting.
- The majority of Utah coal, 80% in 2015, was used in state, where 17% was shipped out of state (up to 60% of Utah coal was shipped to other states in the early 2000s), and 3% was shipped to other countries. Domestic exports have significantly decreased in recent years as several electric plants and industrial users in California and Nevada have switched to natural gas. California, which historically was Utah's largest coal customer, is in the process of eliminating coal use. Nevada was the next largest domestic consumer of Utah's coal, but Nevada also has decided to phase out coal use in electricity generation.
- Utah's electricity portfolio is dominated by coal-fired power plants. However, several natural gas plants have been built in the past 15 years, decreasing Utah's reliance on coal generation. There are currently 5 coal-fired power plants in Utah. All of these plants are in the central part of the state.
- About half of the coal burned in-state is delivered by truck to power plants and industrial users, and the other half is delivered by rail. Transportation costs can contribute a large share of the costs associated with using coal

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as an energy resource, and can be a factor in determining the extent to which a given coal resource is economically developable.

Oil & Gas.

47 wells have been drilled within the monument (24 in Garfield County and 23 in Kane County). Oil production is concentrated in the Upper Valley (UV) field; 5 of the 22 wells in the UV field within the National Monument. In addition to the producing wells, there are also 2 water injected wells in the monument. There are no oil and gas pipelines in the region, all of the oil is trucked 300 miles to refineries in Salt Lake City.

- The Upper Valley Oil Field was a production prior to designation; no other oil and gas production existed in Kane and Garfield Counties. From 1992 until 1996, 336,313 barrels of oil were produced in the GSENM. No natural gas was produced during that time.

Four wells within the GSENM are currently producing oil and a small amount of gas. The UVU was approved in 1962 and production from the wells peaked in 1972 at 183,133 barrels. In the last 20 years (1997-2016) production has slowed from about 65,828 barrels of oil and no gas annually to 45,538 barrels of oil and 2,357 thousand cubic feet (mcf) of gas. There is no other oil and gas production in GSENM, or Kane and Garfield Counties.

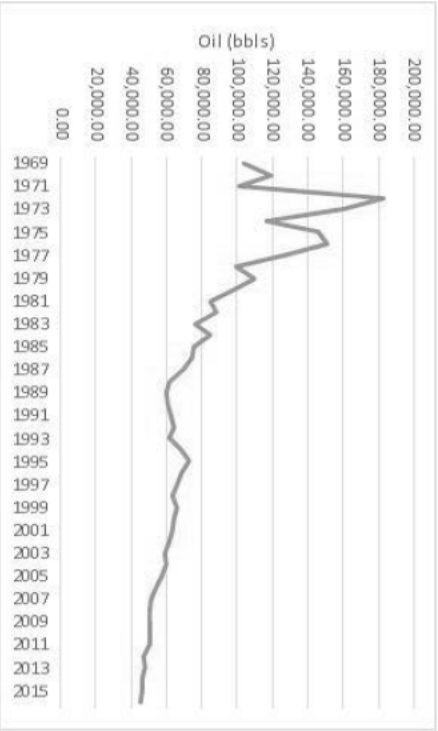


Figure 3. Oil Production on Grand Staircase-Escalante National Monument

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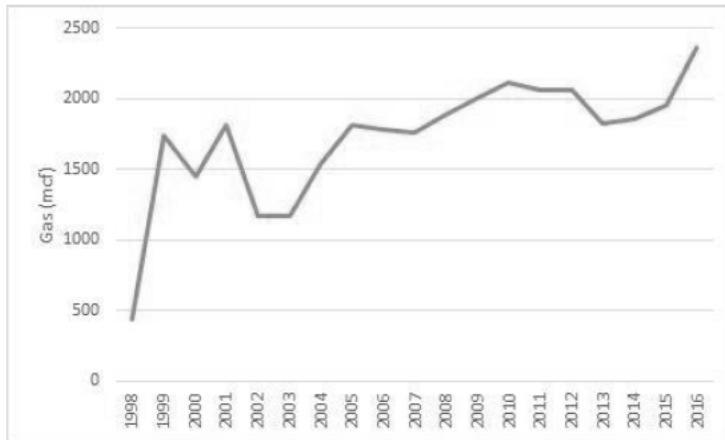


Figure 4. Gas Production on Grand Staircase Escalante National Monument

- Non-Energy Minerals:** Five small mining operations are permitted within the Monument. Four are active quarries for alabaster, and the fifth is a suspended operation for petrified wood. These claimants failed to pay the required annual filings and therefore, the claims were terminated. The BLM's decision to close the claims was upheld by Interior Board for Land Appeals in March 2008. Since that time, there have been no mining law operations within the monument. Valid existing permits, including those in Title 23 (3 Federal Highway Rights of Way), continue to be recognized until permit expiration. Significant quantities of gravel and riprap from existing pits continue to be provided for Federal Highways projects, primarily to Utah Department of Transportation.
- Grazing:** Grazing is allowed within Grand Staircase Escalante National Monument. When the Monument was designated, there were 77,824 permitted Animal Unit Months (AUMs).¹ Today, there are 76,957 permitted AUMs. The number of permitted AUMs represents the most AUMs that may be used under ideal conditions. No reductions have occurred as a result of Monument designation, though small reductions within limited areas have taken place under normal BLM procedures to protect riparian resources and to address other issues. Grazing use levels vary from year to year depending on factors such as drought. Total AUMs billed were 41,567 in 2016, with an average of 41,246 AUMs billed annually since 1996. Figure 5 shows the number of AUMs permitted and billed annually from 1991 through 2016. Billed AUMs represent an average of 52% of permitted AUMs over the period.

¹ 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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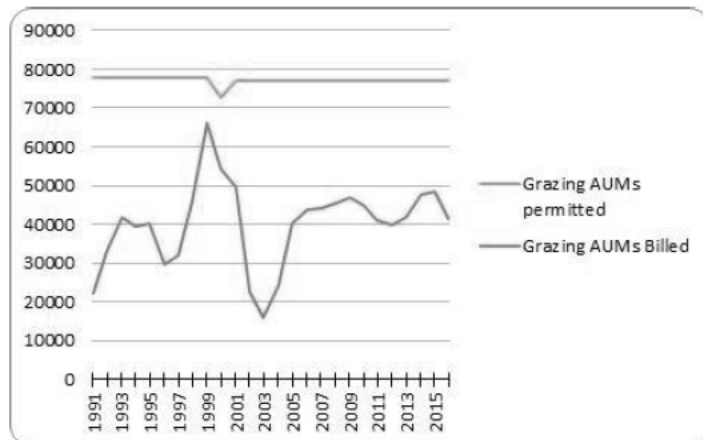


Figure 5. AUMs Permitted and Billed on Grand Staircase Escalante National Monument

- Timber:** No commercial timber harvest is allowed within Grand Staircase Escalante National Monument. Firewood harvest is allowed in two forestry product areas.
- Cultural/Archeological:** 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 substitutes. Recognizing this is a critical consideration in land management because it may affect consideration of tradeoffs.

Archaeological surveys carried out to date show extensive use of places within the monument by ancient Native American cultures and a contact point for Anasazi and Fremont cultures. Hundreds of recorded sites include rock art panels, occupation sites, campsites and granaries. Cultural sites include historic and prehistoric sites, Traditional Cultural Properties, Native American Sacred Sites and cultural landscapes.

According to the Utah State Historic Preservation Office (SHPO), as of March 6, 2017, there are 3,985 recorded archaeological sites within GSENM. However, the GSENM staff estimates that there are more likely around 6,000 recorded archaeological sites within the GSENM, due to a records backlog. This is with only five to seven percent of the Monument surveyed.

Prehistoric archaeological sites in the GSENM include pottery and stone tool (lithic) scatters, the remains of cooking features (hearths), storage features such as adobe granaries and subsurface stone lined granaries, prehistoric roads, petroglyphs, pictographs and cliff dwellings. Historic sites include historic debris scatters, roads, trails, fences, inscriptions, and structures. Following the designation of GSENM, consultations were initiated with the Native American tribes associated with the GSENM area, including the Hopi, the Kaibab Paiute, the San Juan Paiute, the Paiute Indian Tribes of Utah, the Zuni, and the Ute, and the Navajo. Over the past 20 years, the Hopi

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and the Kaibab Paiute have been most closely associated with the Monument and most responsive to continued consultations, as the GSENM area is central to the historic and prehistoric territories of these two tribes.

- **Scientific/Paleontological:** Approximately six percent of the area has been surveyed (120,000 acres), with 3,350 documented paleontological sites. Several new discoveries have been made including: 12 new dinosaurs (including four in 2017); 11 new mammal species; 3 new species of marine reptile; 2 new crocodile species; 3 new turtle species; 1 new lizard species; and several new shark and bony fish species. A Paleontological Traveling Exhibit Program annually provides opportunities to more than 12,000 people to see real fossils and related reconstructed specimens of dinosaurs excavated on GSENM.

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. 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 in 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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