

To: Simon, Benjamin[benjamin_simon@ios.doi.gov];
Christian.Crowley@ios.doi.gov[Christian.Crowley@ios.doi.gov]
From: Crowley, Christian
Sent: 2017-06-26T04:37:18-04:00
Importance: Normal
Subject: Re: Rio Grande del Norte
Received: 2017-06-26T04:40:06-04:00
Riio Grande Del Norte Review 06 25 17.docx

Greetings,

Thanks for pulling all this information together and sending it along for me to look at. I've made some suggested edits to the attached version.

I'll be heading to San Diego on Tuesday if you'd like me to do some more work on Rio Grande.

Bye for now,
Christian

On Sat, Jun 24, 2017 at 7:29 PM, Simon, Benjamin <benjamin_simon@ios.doi.gov> wrote:

Hey Christian,

Here is the Rio Grande del Norte paper. I would appreciate it if you could have a look. I've also included the spreadsheets with the data/graphs that I included in the paper.

Thanks for helping with this.

Ben

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Rio Grande del Norte National Monument

Economic Values and Economic Contributions

DRAFT



Rio Grande del
Norte 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 Rio Grande del Norte National Monument (RGDNM) as well as to provide a brief economic profile of Counties.¹

Background

Rio Grande del Norte National Monument encompasses 242,455 acres in Taos County, NM and was established by Presidential Proclamation on March 25, 2013. The resources identified in the Proclamation include cultural and historic resources, ecological diversity, wildlife, and geology. Prior to designation, the area was managed by the BLM. Post designation, BLM continues to manage the area

The Rio Grande Wild and Scenic River (designated in 1968, extended in 1994) is a key component of the monument, including 68 miles south of the Colorado border, covering 15,000 acres in the monument, managed to protect Outstandingly Remarkable Values of cultural, fish and wildlife habitat, riparian and scenic values, geologic features, and recreation.²

Several legislative proposals have been introduced into the House and/or Senate to establish a National Conservation Area in areas covered by the current monument designation. S.432, the Cerros del Norte Conservation Act, introduced in the Senate 02/16/2017, designates the Cerro del Yuta Wilderness (13,420 acres) and Rio San Antonio Wilderness (8,120 acres) within the Rio Grande del Norte National Monument in New Mexico as wilderness and as components of the National Wilderness Preservation System. The San Antonio Wilderness Study Area (7,050 acres) was established by Congress; other areas managed for wilderness characteristics include the unit adjacent to the San Antonio WSA (9,859 acres) and the unit within Ute Mountain (13,190 acres).

The National Historic Preservation Act (NHPA) requires cultural resources to be evaluated by the National Register of Historic Places (NRHP). The NRHP does not recognize all of the categories of cultural resources named in the 2013 Presidential Proclamation, which likely provides more "protection" than the NHPA.

The BLM manages the Monument for multiple use (hunting, fishing, recreation, grazing, woodcutting, and collection of herbs, pine nuts, and other traditional uses), while protecting the historic and scientific resources identified in the Proclamation, and providing opportunities for scientific study of those

Rio Grande del Norte National Monument

Managing agencies: BLM
County: Taos
Gateway communities: Taos, NM; Questa, NM
Tribes: Taos and Picuris Pueblos; Jicarilla, Apache and Ute Tribes

Resource Areas:

☒ Recreation ☐ Energy ☐ Minerals
☒ Grazing ☐ Timber ☒ Scientific
Discovery ☒ Tribal Cultural

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¹ The BLM provided data used in this paper.

² National Wild and Scenic Rivers System. <https://www.rivers.gov/rivers/rio-grande-nm.php>

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resources. Taos and Rio Arriba County have claims under RS 2477, but none are contested or challenged.³

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The BLM Taos Field Office is in the process of preparing a monument management plan. Until this plan is complete, the Taos Resource Management Plan (RMP-May 2012) remains the current land use plan for the Monument.⁴

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Public outreach prior to designation

Congressional delegations and community groups held multiple public meetings from 2007 to 2013 regarding the proposed national monument prior to designation. The BLM participated in these meetings as subject matter experts, and did not keep records of dates, attendees or content of these meetings. A coalition of sportsmen, ranchers, land grant members, water right holders, outfitters and guides, local business groups, local government bodies and others was formed in 2007. The coalition held public meetings, shared information, and created a website that describes this effort:

www.riograndedelnorte.org/monument-review

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During formal scoping from 2014 to 2014 the BLM received approximately 1,200 public comments (126 unique comments), as published in the 2014 scoping report.

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Local Economy and Economic Impacts

Table 1. Taos County and State of New Mexico
Economic Snapshot

Measure	Taos County	State of New Mexico
Population, 2015 ^a	32,943	2.1 million
Native American population as a % of the total	7.6	10.3
Employment, December 2015 ^c	8,741	626,284
Unemployment rate, March 2017	8.6	6.2
Median Household Income, 2015 ^a	36,582	44,963

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³ Revised Statute 2477 is an 1866 law allowing construction of public access roads across public lands, repealed in 1976 under the Federal Land Policy and Management Act (FLPMA). RS 2477 claims are court cases about continuing use of these roads.

⁴ The Taos RMP is available here:
[https://eplanning.blm.gov/epl-front-office/projects/lup/68121/86167/103325/Approved_Taos_RMP_-_5.16.12_\(print_version\).pdf](https://eplanning.blm.gov/epl-front-office/projects/lup/68121/86167/103325/Approved_Taos_RMP_-_5.16.12_(print_version).pdf)

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⁴ U.S. Census Bureau, 2011-2015 American Community Survey

⁵ <https://www.census.gov/quickfacts/fact/map/taoscountynewmexicob/ZAZA110215#viewtop>

Table 1 presents socio-economic information for Taos County. The population of Taos County increased about 43% from 1990 to 2015. For comparison, during the same period the population of New Mexico grew about 38%, and the U.S. population grew about 29%. About 8% of the County population is Native American, lower than the New Mexico State average. Over the last eight years, the unemployment rate in Taos County rose to about 10.7% in 2010 and has since declined to about 8.6% which is above the state average of 6.2%. Median household income is about 88% of the state average.

Figure 1 shows percentage employment by sector in Taos County for 2015.⁵ The largest sectors are accommodations and food service (22%), retail trade (18%), and health care (16%).

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. Table 2 provides estimates of the economic contribution of activities associated with MTNM. It is estimated that recreation activities in the MTNM area supported about 460 jobs and provided about \$23 million in value added in FY 2016.

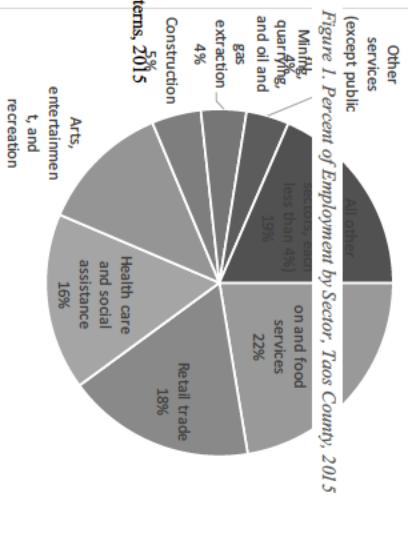
Definitions

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.

Taos County 2015 employment by Sector (County Business Patterns)



⁵ U.S. Census Bureau County Business Patterns, 2015

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US 2015 321.4 M 1990 249.6 M

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Table 3 along with information on the timing and drivers of future activity. For commodities bought and sold in markets (e.g., oil, gas, etc.), the economic values are closely related to the market prices of the commodities. For goods and services typically not bought and sold in markets the values are estimated based on surveys, for estimating values individuals have beyond direct expenditures. The economic value in associated with 195,948 recreational visits in FY 2016 (at \$54.19 per visit, see Table 3) is estimated to be about \$10.6 million.

Activities and Resources Associated with RGDNNM

Since designation, few changes have occurred to livestock grazing AUMs, rights-of-way restrictions, and forestry and wildlife activities.⁶ Details on the activities occurring at RGDNNM are provided below.

- **Recreation:** Hunting, fishing, hiking, and general recreation all occur on the Monument. Annual visitation is shown in Figure 2. Average visitation has been about 162,000 over 2008-2016. While trends in the data are difficult to discern, with the

Table 2. Rio Grande del Norte Estimated Economic Contributions, 2016

Activities	Value added (net additions to GDP), \$ millions	Employment supported (number of jobs)
Recreation	7.4	169
Non-energy Minerals		
Grazing		

exception of 2014, visitation in recent years has generally been higher than pre-designation years. BLM indicates that there has been an increase of use at developed recreation sites. Recreation staff managing these developed sites in the lower part of the monument have reported that use increased at an average annual yearly rate of 20% since designation. Camp and day-use sites that were filled only a few times each year are now being used at capacity every weekend from May through mid-September. The Taos Plateau area west of the Rio Grande has also had a noticeable increase in visitation.

According to a 2016 report by BBC Research and Consulting, since the 2013 monument designation the town of Taos has seen a 21% increase in lodgers' tax collections during the summer months; a moderate boost in business from visits to the area; and an increase in sales of 20 percent per year for businesses such as bike shops and outdoor retailers.

Anecdotal information also suggests that:

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⁶ The 2012 Taos RMP established the Taos Plateau Area of Critical Environmental Concern (ACEC) which limited commercial or surface disturbing activities that had been occurring.

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- Fishing is an everyday occurrence along the Rio Grande in the monument, and accounts for about 13% of total visitor use each year. The New Mexico Department of Game and Fish conducts a creel survey every five years. Information from the survey indicates that the Monument receives about 80,000 fishing visits per year. Hunting

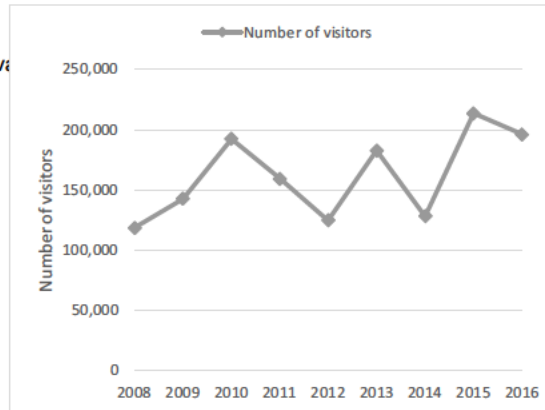


Figure 2. Annual Visitation to Rio Grande del Norte, 2008-2016

- licenses are issued by the New Mexico Game and Fish Department for elk, mule deer, antelope, and bighorn. In 2016-2017, a total of 3,569 permits were issued for the three game management units covering the National Monument.⁷
- 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. These contributions affect the regional and state economies.
- Recreation activities based on visitation to the Monument are estimated to contribute about \$7.4 million in value added (net economic contributions) and support 169 jobs.⁸

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- **Energy:** There is no oil, gas, coal or renewable energy production within the monument. The volcanic history of the area eliminated the potential for hydrocarbons, so there is no oil and gas potential within the monument. There is no renewable energy production within the Monument (the 2012 Taos Resource Management Plan excludes wind and solar energy development). A BLM Solar Energy Zone (~16,000 acres) lies immediately north of the Monument in Colorado, east of US 285.
- **Energy transmission:** There are four transmission line rights-of-way for electricity (managed by BLM) and 12 distribution lines to end-users. There are no gas pipelines and no applications pending for new or upgraded lines.
- **Non-fuel minerals.** Mineral sales are allowed within the monument under the current management plan. However, there were no mining claims or operations at the time of designation so there are no valid existing rights for mining claims or mining operations in the RGDNNM.⁹ There are no mineral developments or process facilities adjacent to or impacted by the monument designation. There are large scale perlite mining operations on private lands adjacent to or near the monument boundary. These are considered world-class perlite deposits in the No Agua Mining District. These operations include some on-site processing facilities. These operations are on private/patented land and are

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⁷ The New Mexico Game and Fish Department has continued to keep 10,903 acres, within the monuments 242,455 acres, closed to hunting, in coordination with the BLM, in a developed recreation area with high density use.

⁸ BLM data.

⁹ The 2012 Taos Resource Management Plan designated the Taos Plateau Area of Critical Environmental Concern (ACEC) that covers most of the Rio Grande del Norte National Monument. The ACEC and the Rio Grande Wild and Scenic River were closed to salable mineral disposal and all leasable mineral entry. Locatable mineral entry was allowed in most of the area, with the exception of the San Antonio WSA (7,050 acres), the Ute Mountain area (13,190 acres), and the Wild Rivers zone of the Rio Grande Gorge Recreation Area (about 10,000 acres).

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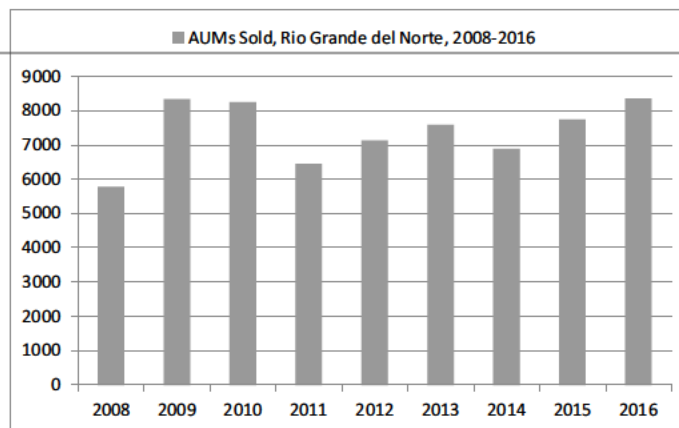
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subject to the State of New Mexico, Mining and Mineral Division regulations. These existing perlite operations are minimally affected by the monument, if at all. Taos Gravel is an existing large-scale sand and gravel operation on BLM land adjacent to the monument boundary. Their operations might be minimally affected by the monument if noise and VRM issues apply to their existing operation.

- **Timber.** The Rio Grande del Norte National Monument is not available for large scale timber harvesting or for commercial fuelwood harvest. All removal of fuelwood is for personal harvest; from 2008-2016 sales varied between about 200 and 800 CCF of green fuelwood. Since 2013 several hazardous fuels reduction and forest health treatments were completed by BLM, in partnership with other agencies (federal, state, and non-profit). In 2016 BLM began to permit the removal of dead and down fuelwood. It is anticipated in the future new areas will be available for green fuelwood cutting and removal.

- **Grazing.** There are 71 grazing allotments within the monument; 62 are active grazing allotments and 9 were closed to grazing before the designation. Within the monument there are currently 13,759 permitted AUMs. Figure 3 shows the number of AUMs used annually since 2008. Actual use

Figure 3. AUMs Sold, Rio Grande del Norte, 2008-2016



fluctuates due to a combination of grazing permittee's herd sizes, weather conditions, etc. The amount of permitted grazing use has not changed since the designation of the monument.

- **Cultural, archeological, and historic resources.** Indigenous communities may utilize natural resources in ways and to an extent 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. 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, as well as transmitting knowledge and culture related to these resources and activities.
- The Ojo Caliente Area of Critical Environmental Concern (ACEC) (66,150 acres) contains relevant and important cultural resources, as well as scenic quality, sensitive ecological processes, riparian areas, and special status species and other critical wildlife habitat values. This ACEC includes some

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Since the Monument designation in 2013, the following numbers of cords of fuelwood have been sold.
2008 - 314 cords = 402.5 CCF
2009 - 300 cords = 384 CCF
2010 - 210 cords = 270 CCF
2011 - 150.5 cords = 193 CCF
2012 - 271 cords = 347 CCF
2013 - 622 cords = 797 CCF
2014 - 464.5 cords = 595.5 CCF
2015 - 343 cords = 440 CCF
2016 - 431.5 cords = 553 CCF

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of the largest (200-to-2000 rooms) prehistoric and early historic period pueblo ruins in the Southwest. These individual sites and the attendant landscapes are important to the Tiwa and Tewa Pueblo people of the upper Rio Grande region and contain important religious and sacred sites. This BLM site is currently managed specifically for visitation and enhanced visitor experiences.

- Also within the Ojo Caliente ACEC is Mesa Prieta, a 6,500-acre tract of private land currently under consideration for acquisition by the BLM. Mesa Prieta contains over 80,000 petroglyph sites and other archaeological remains associated with prehistoric Tewa and Spanish Colonial cultures. It is unique to the region and exceeds the numbers of petroglyphs recorded to date within the Petroglyph National Monument near Albuquerque. The Ojo Caliente ACEC boundaries were expanded in the 2012 Taos Resource Management Plan (RMP) to include Mesa Prieta as a potential acquisition and addition to this management unit.
- Cultural landscapes extend beyond the confines of the current management boundary. Potential acquisition of adjacent lands from willing owners through purchase, exchange, or donation, or expansion of the monument boundaries to include adjacent BLM lands containing critical cultural resources and cultural landscape elements, would further provide management of the cultural resources within the contexts of its landscape.

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Multiple Use and Tradeoffs Among Resource Uses

This section presents some information to help understand land management tradeoffs. Designating the monument closed lands to certain types of development, so within the context of the Monument Designation, some tradeoffs are not relevant. There will be management costs for any activities permitted on public lands.

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Decision-making often involves multiple objectives and the need to make tradeoffs among those objectives. 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 and thus tradeoffs are typically limited. A particularly challenging component of any tradeoff analysis is estimating the nonmarket values associated with relevant resources, particularly cultural resources.

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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 so as to allow permitted activities that do not impair monument objects. In some cases, certain areas of the Monument may be appropriate for more than one use, and 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, 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

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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. Likewise, the values associated with the natural and cultural resources could continue indefinitely provided they are not degraded by other activities. Grazing could also continue indefinitely as long as the forage resource is sustainably managed and remains consistent with the protection of monument objects. Fuelwood 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. Management costs would also be a consideration over the same time period as the activities continue.

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The RGDNNM Proclamation contains specific provisions for the protection of heritage objects and values extending beyond specific resources concerns. Alternative options available for protection of resources include authorities such as the Native American Graves Protection and Repatriation Act, Paleontological Resources Preservation Act, Archaeological Resources Protection Act, Historic Preservation Act and agency-specific laws and regulations. These could provide some options to protect specific resources found in the RGDNNM. Protection would likely occur on a site-by-site or resource-by-resource basis and also would take a significant amount of time to accomplish under these various laws. These laws may not provide a mechanism to protect all cultural or tribal resources in Monument.

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The available information is insufficient to allow a full understanding of management tradeoffs, such as how expanding mineral development would affect recreational visitation and cultural resources. A comprehensive evaluation of trade-offs would require a significant amount of research and additional analysis.

Mineral and archeological surveys could be updated and completed for the entire Monument. However, it is clear that: significant cultural resource values are present; there are no known resources of oil and gas or coal; and recreation use has been increasing.

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

Activities	Level of annual activity	Economic Value	Timing	Drivers of current and future levels of activity
Recreation	FY 2016: 195,948 visitors (BLM)	\$54.19/visitor day ^d	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	n/a	n/a	n/a	n/a
Non energy Minerals	n/a	n/a	n/a	n/a
Grazing	2016 billed AUMs: 8,357 AUMs	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 or no substitutes. Recognizing this is a critical consideration in land management because it may affect consideration of tradeoffs. MTNM contains substantial cultural resources that have not been fully surveyed. Tribes use the sacred sites within MTNM 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 MTNM 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 This value represents the estimated consumer surplus associated with general recreation for the Intermountain region from the USGS Benefit Transfer Toolkit (<https://my.usgs.gov/benefit-transfer/>). Consume surplus represents values individuals hold for goods and services over and above expenditures on those goods and services.

^b All prices are from EIA.gov.

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crude oil (WTI) \$41.34/bbl¶
natural gas \$2.29/mcf¶
coal (subbituminous) \$12.08/ton

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