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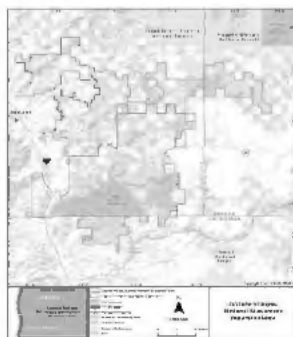
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Cascade-Siskiyou National Monument

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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 Cascade-Siskiyou National Monument (CSNM or Monument). A brief economic profile of Jackson and Klamath Counties, OR, and Siskiyou County, CA, are also provided.

Background

The CSNM was established on June 9, 2000, by President Clinton (Proclamation 7318). The 65,000-acre Monument was the first such area to be established primarily to protect biodiversity. To date, BLM has acquired 13,355 acres of private inholdings within the original Monument boundary. Acquisitions have been by purchase (primarily through Land & Water Conservation Funds) or exchange (primarily legislated exchanges). President Obama issued Proclamation 9564 on January 12, 2017, expanding the Monument boundary by almost 48,000 acres to provide “habitat connectivity, watershed protection, and landscape-level resilience” for the area’s ecological and other values. Expansion of the Monument includes areas identified for their ecological contribution to the purposes of the original designation.¹ Together, these areas represent approximately 48,000 acres 42,349 in OR, and 5,275 in CA.

CSNM’s 113,341 acres accommodate hunting, fishing, recreation, and grazing. Valid existing rights such as timber leases and rights-of-way, among other activities, are recognized. The historic and scientific resources identified in the Proclamation are protected, as well as providing opportunities for scientific study. The Monument contains rare and endemic plants such as Greene’s Mariposa lily, Gentner’s fritillary, and Bellinger’s meadowfoam. It also includes 38 miles of the Pacific Crest National Scenic Trail and the 24,707-acre Soda Mountain Wilderness within its borders. The CA portion of the expansion area is co-mingled with state lands managed by the California Department of Fish & Wildlife. The BLM lands are managed in a manner consistent with the state Wildlife Management Area. Activities are subject to decisions made in current and future BLM resource management plans (RMP), which include public participation. The CSNM lies entirely within the recognized aboriginal territory of the Klamath Tribes (Klamath, Modoc and Yahooskin Paiute). Traditional cultural plants and spiritual places, such as Pilot Rock, are important to the Shasta tribes. The CA portion of the expansion area includes the 320-acre Jenny Creek Area of Critical Environmental Concern (ACEC), which is associated with tribal spiritual values.

¹The expansion area includes the Horseshoe Ranch and Jenny Creek areas in Siskiyou County, CA; the upper Jenny Creek Watershed, the Grizzly Peak area, Lost Lake, the Rogue Valley foothills, the Southern Cascades area (including Moon Prairie and Hoxie Creek), all in Jackson County, OR; and some of the area surrounding Surveyor Mountain, including Old Baldy and Tunnel Creek wetland in Klamath County, OR.

Cascade-Siskiyou National Monument
<p>Location: Jackson County, OR (original and expanded); Klamath County, OR, and Siskiyou County, CA (expansion area)</p> <p>Managing agencies: BLM</p> <p>Adjacent cities/counties/reservations:</p> <ul style="list-style-type: none"> • Natural and cultural resources of Klamath and Shasta Tribes (potentially other tribes) • City of Ashland, OR • Contains facilities owned and managed by the Bureau of Reclamation <p>Resource Areas:</p> <p><input checked="" type="checkbox"/> Recreation <input type="checkbox"/> Energy <input type="checkbox"/> Minerals</p> <p><input checked="" type="checkbox"/> Grazing <input checked="" type="checkbox"/> Timber <input checked="" type="checkbox"/> Scientific Discovery</p> <p><input checked="" type="checkbox"/> Tribal Cultural</p>

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A substantial number of acres within both the original Monument and the expansion area are designated as Oregon and California Railroad Revested (O&C) Lands. These lands are covered by the O&C Act of 1937, which mandates that those lands determined to be suitable for timber production shall be managed for,

“permanent forest production and the timber shall be sold, cut and removed in conformity with the principal [stet] of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing the economic stability of local communities and industry, and providing recreational facilities.” Further, the O&C Act provides: “The annual productive capacity for such lands shall be determined and declared as promptly as possible after the passage of this Act, but until such determination and declaration are made the average annual cut therefrom shall not exceed one-half billion feet board measure: Provided, That timber from said lands in an amount not less than one-half billion feet board measure, or not less than the annual sustained yield capacity when the same has been determined and declared, shall be sold annually, or so much thereof as can be sold at reasonable prices on a normal market.”

There are currently three lawsuits pending on the designation of the CSNM expansion area related to O&C lands (Association of O&C Counties. v. Trump, No. 1:17-cv-00280-RJL (D.D.C. filed on February 13, 2017); Murphy Co. v. Trump, No. 1:17-cv-00285-CL (D. Or. filed on February 17, 2017); AFRC v. United States, No. 1:17-cv-00441-RJL (D.D.C. filed on March 10, 2017)). The Klamath County Portion of the CSNM expansion area is 99 percent O&C lands.

Public Outreach Prior to Designation

Prior to Monument designation, the area was designated as the Cascade Siskiyou Ecological Emphasis Area (CSEEA). The CSEEA was established in the 1994 Northwest Forest Plan and the 1995 Medford District RMP primarily because of its unique, diverse ecological and biological characteristics. In developing the CSEEA RMP, BLM conducted five field tours and held one meeting in 1999, covering both OR and Northern CA. During the scoping period, the agency received 427 letters, cards, and e-mails, and recorded 153 comments from the public meeting. The majority of comments fell into two groups: those supporting the special ecological emphasis designation (218) and those against further restriction of public land uses (128). Some letters supported a more middle-ground approach (29), while others requested more information without voicing an opinion (47). After coding and analyzing the letters and comments, BLM identified 54 issues, including ecological concerns, land use, and government control, among others. The comments supporting the CSEEA designation generally emphasized preservation and restoration of ecological values. Those against the designation generally raised concerns about restrictions on access to public resources and increased Federal control over public and private lands. The CSEEA Draft Management Plan/Environmental Impact Statement distribution included seven tribes: Confederated Tribes of Siletz, Quartz Valley Indian Reservation (Shasta Tribes), Shasta Nation, Confederated Bands [Shasta] Shasta Upper Klamath Indians, Confederated Tribes of the Rogue-Table Rock and Associated Tribes, Confederated Tribes of Grand Ronde, and the Klamath Tribes. Proclamation 7318 drew heavily from the most-protective alternatives in the CSEEA Draft Plan.

Five studies/reports from the scientific community were provided to Interior from 2011 to 2015. Following these publications, 85 scientists sent a letter to former Secretary Sally Jewell requesting consideration of monument expansion in order to adequately protect the resources, objects, and values for which the original monument was designated. Senators Ron Wyden (D-OR) and Jeff Merkley (D-OR) introduced the *Oregon and California Land Grant Act of 2015* (S. 132), which would have protected most of the areas in the proposed Monument expansion through conservation and recreation designations. A

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public meeting was held in October 2016 in Ashland, OR, to hear public opinions about the CSNM expansion proposal. Approximately 500 people attended the meeting; a majority of speakers supported the expansion proposal. Attendees referenced the science-based rationale for expanding the Monument, including threats to the area's fragile natural resources, as well as benefits to the local tourism industry. The counties of Jackson (OR), Klamath (OR), and Siskiyou (CA) also hosted additional public meetings to allow for public input into the monument expansion. Collectively, approximately 600 people attended these county meetings.

A written comment period was sponsored by Senators Wyden and Merkley. A total of 5,488 comments were received with approximately three-fourths in favor of the expansion for scientific, recreational, environmental and economic reasons, among others. Opponents expressed concern that a larger Monument would hurt the region's economy with limits on logging and grazing. State Representatives Peter Buckley and Kevin Talbert, and the late State Senator Alan Bates, publicly endorsed the expansion. The two closest cities in OR, Ashland and Talent (City Councils, Mayors, and Chambers of Commerce), all formally endorsed expanding the Monument. The Klamath Tribes submitted a letter of support, noting that the expansion area is "critical to provide for more appropriate watershed scale management..." (November 2016). The Jackson County Board of Commissioners, Klamath County Board of Commissioners, Medford/Jackson County Chamber of Commerce, and Siskiyou County Supervisors expressed opposition to expansion. The objections included legal and economic impacts, as well as a lack of consensus on the scientific merits.

Local Economy and Economic Impacts

The CSNM is in Jackson and Klamath Counties, OR, and Siskiyou County, CA. As summarized in Table 1, Jackson and Klamath Counties account for 7% of the State of OR's population. Klamath County has a higher Native American population (6.3%) than the state and national levels. Siskiyou County has 0.1% of the population in CA with a higher Native American population (7.4%) than in the state and nation. All of the counties in the CSNM have higher unemployment rates and lower median household incomes than for the states. Although Klamath County's unemployment rate of 5.1% is higher than the state and national averages, the state of OR highlighted that this level is at or ties the historic low unemployment rate. The populations of Siskiyou and Klamath Counties have remained flat to a low increase over the past 20 years, while Jackson County has increased by over 42%.

The USDA Economic Research Service (ERS) has developed a set of county-level typology codes that captures a range of economic and social characteristics. The CSNM counties are classified as follows:

- Low Employment Klamath and Siskiyou Counties (less than 65% of residents age 25-64 were employed in 2008-2012)
- Retirement Destination Jackson County (number of resident 60 and older grew by 15 percent or more between 2000 and 2010)
- No dependence on farming, mining, or recreation, and no persistent poverty

Two reports reveal a growing economy in Jackson County since the original Monument designation, continuing previous growth trends. Non-service jobs, which were becoming an overall smaller share of the Jackson County economy before Monument designation, declined only 4% from 2001 to 2015.

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https://docs.google.com/document/d/1UIXECrpPrSZ2lt6N97EX4GmBBxuHkCPOeMmV7M4_2yo/edit# I think it was adapted from Headwaters' doc, which used "non-service jobs." I edited to be a little more accurate.

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Activities and Resources Associated With CSNM

Activities taking place at CSNM include:

- **Recreation:** There were 198,213 visits to CSNM in 2016. This reflects average annual growth of 4.6% over 15 years. As summarized in Table 2, CSNM visitors spent approximately \$11.8 million in 2016, supporting 200 jobs and \$9.3M in value added in the local communities. This amounts to over \$24 of economic output per \$1 of the Monument's Fiscal Year 2015 budget. Table 3 compares pre- and post-designation average annual visits for select recreation activities and sites in both the original and expanded area. Hunting and fishing is regulated by the Oregon Department of Fish and Wildlife, which has data available on the numbers of licenses issued.
- **Energy:** There has been no production of coal, oil, gas, and renewables in the Monument since designation. The potential for these energy resources within the Monument is low to non-existent. The Bureau of Reclamation is producing hydropower and has critical infrastructure within the CSNM at Keene Reservoir. While the Green Springs Powerplant was not in the original Monument boundary, there are supporting facilities within the original boundary. The Green Springs Powerplant is in the CSNM expansion area. Information is not available at this time on whether Reclamation's facilities are impacted, either positively or negatively, by the CSNM expansion area. USGS [reported](#) that CSNM is adjacent (immediate east) to area of high geothermal favorability.
- **Energy Transmission.** There are 17.78 miles of electrical transmission lines in the original Monument. There are 17.82 miles of electrical transmission lines and 7.67 miles of gas line in the expanded Monument.
- **Non-Energy Minerals:** Since designation, no mineral materials has been commercially sold from within the CSNM. Mineral materials from CSNM quarries has been used to maintain Monument roads since designation, as described in the RMP/ROD for the Monument. There are no mining claims in the Monument. There were no mining claims in the expansion area during the five years prior to the Monument expansion.
- **Grazing:** BLM does not currently have data on the actual use of forage within and outside of the CSNM; the AUM numbers reported are for the entire allotment. Table 4 provides the permitted and billed AUMs for the original and extension areas of the Monument. As summarized in Table 2, about 6 jobs were supported by 974 AUMs related to the original Monument, generating about \$0.3 million in economic output in 2016. For the expansion area allotment, about 20 jobs were supported by 2,945 AUMs, generating about \$0.8 million in economic output in 2016.
- **Timber:** The Monument Proclamation states, "[t]he commercial harvest of timber or other vegetative material is prohibited, except when part of an authorized science-based ecological restoration project aimed at meeting protection and old growth enhancement objectives. Any such project must be consistent with the purposes of this proclamation. No portion of the monument shall be considered to be suited for timber production, and no part of the monument shall be used in a calculation or provision of a sustained yield of timber. Removal of trees from within the monument area may take place only if clearly needed for ecological restoration and maintenance or public safety."
 - **Within Original CSNM Designation.** 36 thousand board feet have been harvested; timber was removed only for the purposes of public safety.
 - **CSNM Expansion Area.** Since Monument expansion, approximately 310,000 board feet have been harvested from within the OR portion of the expansion area under timber sale contracts that were entered into prior to January 12, 2017. These timber sales generated about \$200,000 in value added and supported an estimated 4 jobs. The contracts are considered valid existing rights and will be completed, including the approximately 2.9 million board feet of timber that remain to be harvested. Harvesting this timber, when and if it occurs, would general economic contribution and support employment. The site conditions

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- of the CA portion of the expansion area do not support commercial-grade timber resources.
- **Scientific Investigation:** The original Monument supports studies of ecology, evolutionary biology, wildlife biology, entomology, and botany. Proclamation 9564 notes that

"[s]ince 2000, scientific studies of the area have reinforced that the environmental processes supporting the biodiversity of the monument require habitat connectivity corridors for species migration and dispersal. Additionally, they require a range of habitats that can be resistant and resilient to large-scale disturbance such as fire, insects and disease, invasive species, drought, or floods..."

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A May 2017 [publication](#) describes how big data and fine-scaled modeling were used to (1) evaluate an existing network of protected areas in the Klamath Siskiyou Bioregion of southern OR and northern CA (includes CSNM), and (2) to identify and prioritize new areas for protection. The study, funded by BLM and NPS, builds on the work of a number of state and federal partners, including USFS, USGS, and the Corps of Engineers. The authors used 16 Partners in Flight focal bird species as indicators of priority habitats and habitat conditions. They hypothesized that current protected area allocations do not have adequate abundance of some conservation focal species and their habitats. This hypothesis was tested using models to evaluate the region's network of federally managed lands and protected areas. Senator Merkley is quoted in several press releases: "This study offers robust scientific evidence that expanding the Cascade-Siskiyou National Monument provides critical protection to an amazing ecosystem found nowhere else in the world, and will serve Oregonians well for decades to come."

- **Tribal Cultural Resources and Subsistence Living:** CSNM provides for the collection of certain natural materials by Native Americans under BLM permit. Dead and down wood is allowed to be collected for campfires within the CSNM, and the noncommercial gathering of fruits, nuts, berries, and mushrooms is also allowed. No data are available on the quantities harvested. The Klamath Tribe has cited the *American Indian Religious Freedom Act* (AIRFA) as the foundation for their support of the Maka Oyate Sundance ceremony, which is held annually within the Monument. However, AIRFA does not guide BLM management of the ceremony site. As already discussed above, the Klamath and Shasta tribes (potentially others) have natural, cultural, and spiritual values associated with the original and expanded areas.

"But for" the CSNM Designation

If the Monument had not been designated:

- **Recreation.** Annual visitation trends would likely not have substantially changed.
- **Energy.** There would still be no production of oil, gas and renewables, because the potential for these energy resources is low to non-existent.
- **Non-Energy Minerals.** It is likely that gravel production would have continued from the quarries had the Monument not been designated. Although speculative, it is possible that the pre-Monument expansion average of 342 cubic yards of rock would have continued to have been sold annually from quarries.
- **Grazing:** It is likely that grazing would have continued within the original CSNM, as the legislated grazing buyout would likely not have occurred. Grazing would likely have continued at a similar level to the pre-designation utilization, as well as to post-designation levels in the expansion area. The two allotments that were vacant for the five years preceding original Monument designation (the Agate and Siskiyou allotments) likely would not have been utilized had the Monument not been designated, as outside factors appear to have led to their vacant status.

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- **Timber:** In the absence of the original Monument and OR portion of the expansion area, additional timber production would be expected, as described below. The site conditions of the CA portion of the expansion area do not support commercial-grade timber resources.

Within Original CSNM Designation. Under the 1995 Medford District RMP, approximately 19,400 acres of BLM-administered lands were allocated to Southern General Forest Management Area with a primary objective of providing a sustainable supply of timber and other forest products. However, no current information is readily available regarding the amount of volume that may have been produced from these acres since Monument designation in 2000. It is well known that this part of the Ashland Resource Area is characterized by low site capabilities, and relative to other areas in the Medford District, is considered a low timber production area. Some timber harvest would have occurred for improving forest stand survival and growth, fuels reduction, pine site restoration, and regeneration harvest; however, it would be overly-speculative to estimate actual timber volumes that may have been produced.

CSNM Expansion Area. Based on preliminary analysis, the OR portion of the expansion likely reduces sustained yield timber production opportunities by 4-6 million board feet per year, and commercial harvest in reserved land use allocations by 400 thousand board feet per year. Over a 50-year period, annual sustained-yield timber harvest is projected to be 200-300 million board feet less than it would have been without the designation. This is due to explicit restrictions in the proclamation prohibiting sustainable timber harvest. Commercial harvesting in reserved land use allocations would likely be reduced by 20 million board feet over the same 50-year time period.

- **Scientific Investigation:** Scientific studies/reports and the 2015 open letter from 85 scientists² provided scientific evidence and best professional judgment that the original boundaries were too small to ensure persistence of the many biological and macro-scale “Objects of Scientific Interest” that the Monument was originally established to protect. The interdisciplinary scientific group concluded that population pressures, adjacent land uses, and climate trends made the current boundaries inadequate. The expansion area is asserted to improve landscape and watershed connectivity with nearby federal lands, which help sustain populations of wide-ranging species.
- **Tribal Cultural Resources and Subsistence Living:** The sites, uses, and special designations would still exist. BLM does not have sufficient information to predict whether designation has impacted cultural uses of the monument. However, the proclamation requires BLM to provide

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²Alexander, J. D. et al. 2017. Using regional bird density distribution models to evaluate protected area networks and inform conservation planning. *Ecosphere* 8(5):e01799.

Frost, E., P. Trail and D. Odion. 2016. The ecological need to expand the Cascade-Siskiyou National Monument: Evidence from landscape-scale conservation assessments. Unpublished report, 12 pp. + maps.

Frost, E. and P. Trail. 2016. Objects of Interest in areas proposed for expansion of the Cascade-Siskiyou National Monument. Unpublished report, 81 pp.

Open letter from scientists, 2015. Recommended expansion of the Cascade-Siskiyou National Monument, signed by 85 natural resource scientists and submitted to Secretary of Interior Sally Jewell. May 28, 2015.

Trail, P. and E. Frost. 2015. Protecting the Cascade-Siskiyou National Monument from climate change: The ecological need for Monument expansion. Unpublished report, 14 pp.

Frost, E., D. Odion, P. Trail, J. Williams, J. Alexander, B. Barr, R. Brock, D. DellaSala, P. Hosten, S. Jessup, F. Lang, M. Parker, J. Rossa, D. Sarr and D. Southworth. 2011. Cascade-Siskiyou National Monument boundary study: Identification of priority areas for Monument expansion. Unpublished report, 14 pp.

DellaSala, D. A., et al. 1999. A global perspective on the biodiversity of the Klamath-Siskiyou ecoregion. *Natural Areas Journal* 19:300-319.

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access by members of Indian tribes for traditional cultural and customary uses, consistent with the American Indian Religious Freedom Act (42 U.S.C. 1996) and Executive Order 13007 of May 24, 1996 (Indian Sacred Sites). The Klamath Tribes commented on the need to protect Jenny Creek as part of their commitment to restoring anadromous fish to the Upper Klamath River Basin, and to protecting and restoring resident species. They wrote, "Maintaining and improving the health and water quality of tributary streams to the Klamath River, such as Jenny creek, is vital to future anadromous fish restoration efforts and to provide for future viability of the unique species that currently the streams. Species of particular concern are the Jenny Creek redband trout and Jenny Creek suckers" (November 2016).

Table 1. State and County Economic Snapshot

Measure	Jackson County, OR	Klamath County, OR	State of OR	Siskiyou County, CA	State of CA
Population, 2016 ^a	208,363	65,972	3,939,233	43,895	38,421,464
American Indian and Alaska Native (alone or in combination) population as a percent of the total ^a	2.9%	6.3%	3%	7.4%	1.9%
Unemployment Rate, April 2017 ^b	4.3%	5.1% ^c	3.7%	7.4%	4.5%
Median Household Income, 2015 ^a	\$44,028	\$40,336	\$51,243	\$37,170	\$61,818

^aU.S. Census Bureau, 2011-2015 American Community Survey; Native American population alone or in combination with one or more other races.

^bhttps://www.bls.gov/eag/eag_or.htm

^cThe State of OR reports that this is at or ties the historic low unemployment rate.

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Table 2. Estimated Economic Contributions, 2016

Activities	Economic Output, \$ millions	Value added (net additions to GDP), \$ millions	Employment supported (number of jobs)
Recreation*	16.6	\$9.3M	200
Grazing	1.1	Grazing value- added is not available	26
Timber	0.6	0.2	3
Cultural resources	Unquantifiable; some values would be included in recreation		

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Table 3. CSNM Average Annual Visits per Select Recreation Activities and Sites

Recreational Activities & Sites	Prior to Original Designation (1998-2000) ^{a,b}	Original Designation (2000-2017)	Prior to Expansion (2012-2017)	Expansion (2017-2017)
Backpacking	N/A ^c	2,839	N/A	N/A
Camping	57,625	17,658	81,018	N/A
Fishing	2,088	7,856	3,240	N/A
Hiking/Running	29,090	255,736	81,021	N/A
Hunting, Big Game	23,001	114,981	48,611	N/A
Skiing XC	N/A	37,026	N/A	N/A
Snowmobiling	N/A	6,061	N/A	N/A
Hyatt Lake CG	13,928	19,976	7,206	N/A
Hyatt Lake Day-Use	N/A	284	966	N/A
BuckPrairie Winter Trails	Not in Original Monument	Not in Original Monument	23,966	N/A
Wildcat CG	2,224	6,056	1,130	N/A
Pacific Crest Trail	1,921	17,812	17,812	N/A
Grizzly Peak Trails	Not in Original Monument	Not in Original Monument	5,526	N/A
Table Mt. Tubing Hill	Not in Original Monument	Not in Original Monument	2,496	N/A

^aAll data are derived from the Recreation Management Information System (RMIS).^bRMIS data are not available prior to 1998, so data prior to original Monument designation cover only a 2-year period.^cN/A -- data are not available or were not collected.

Table 4. AUMs Permitted and Billed, CSNM, 1995-2016

Year	Original CSNM Designation			CSNM Expansion Area		
	Permitted Use	AUMs Billed	% Billed	Permitted Use	Sold AUMS	% Billed
1995	6,002	3,406	56.70%	N/A	N/A	N/A
1996	6,002	4,180	69.60%	N/A	N/A	N/A
1997	6,002	4,158	69.30%	N/A	N/A	N/A
1998	6,002	4,333	72.20%	N/A	N/A	N/A
1999	6,002	4,537	75.60%	N/A	N/A	N/A
2000	6,002	4,190	69.80%	N/A	N/A	N/A
2001	5,793	3,661	63.20%	N/A	N/A	N/A
2002	5,350	3,348	62.60%	N/A	N/A	N/A
2003	5,350	3,690	69.00%	N/A	N/A	N/A
2004	5,350	3,967	74.10%	N/A	N/A	N/A
2005	5,350	4,746	88.70%	N/A	N/A	N/A
2006	5,350	3,418	63.90%	N/A	N/A	N/A

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2007	5,350	3,264	61.00%	N/A	N/A	N/A
2008	5,350	2,026	37.90%	N/A	N/A	N/A
2009	1,437	763	53.10%	N/A	N/A	N/A
2010	1,317	1,009	76.60%	N/A	N/A	N/A
2011	1,317	1,074	81.50%	N/A	N/A	N/A
2012	1,317	1,217	92.40%	2,833	2,691	95.00%
2013	1,317	1,217	92.40%	2,833	2,659	93.90%
2014	1,317	1,217	92.40%	2,833	3,067	108.30%
2015	1,317	974	74.00%	2,833	2,851	100.60%
2016	1,317	974	74.00%	2,833	2,945	104.00%

Source: BLM.

[illegible]

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 Comment This is a very small file and does not contain any sensitive information.
 No action taken.

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 No action taken.

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 No action taken.

Col 10
 Comment This is a very small file and does not contain any sensitive information.
 No action taken.

Col 11
 Comment This is a very small file and does not contain any sensitive information.
 No action taken.

FY2016 Contribution (Cattle)

Unit	State	Employment			Labor Income			Output			Gracing
		Direct	Indirect & induced	Total	Direct	Indirect & induced	Total	Direct	Indirect & induced	Total	
Grand Canyon Parashant	Arizona	157	39	197	\$42,335	\$1,507,087	\$1,549,422	\$2,892,171	\$4,616,469	\$7,508,640	36,808
Inwood Forest	Arizona	33	8	42	\$88,574	\$130,375	\$218,949	\$572,118	\$984,137	\$1,556,255	7,844
Sonoran Desert	Arizona	8	2	10	\$20,658	\$79,886	\$100,544	\$311,989	\$226,332	\$538,321	1,800
Vermilion Cliffs	Arizona	22	5	27	\$58,673	\$208,863	\$267,536	\$374,881	\$642,837	\$1,017,719	5,138
Benryessa Snow Mountain	California	1	0	1	\$2,548	\$20,250	\$22,798	\$32,047	\$61,134	\$93,181	126
Cardoso Pinnacles	California	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	0
Glenn Sequoia	California	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	0
Mojave Trails	California	15	12	26	\$64,551	\$512,988	\$577,539	\$811,859	\$1,548,722	\$2,360,580	3,192
San Gabriel Mountains	California	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	0
Saint to Snow	California	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	0
Canyons of the Ancients	Colorado	15	8	23	\$111,580	\$333,016	\$444,596	\$637,789	\$966,284	\$1,604,073	4,332
Cresters of the Moon	Idaho	200	129	329	\$1,438,246	\$4,489,124	\$5,927,369	\$9,976,142	\$14,626,644	\$24,602,786	51,386
Katahdin Woods and Waters	Maine	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0
Upper Missouri River Breaks	Montana	58	46	105	\$1,444,177	\$1,720,894	\$3,165,071	\$4,528,801	\$5,501,659	\$10,030,460	39,950
Basin and Range	Nevada	16	10	27	\$250,889	\$377,536	\$628,425	\$953,717	\$1,380,219	\$2,133,936	30,171
Gold Butte	Nevada	0	0	1	\$5,106	\$7,484	\$12,590	\$19,410	\$24,020	\$43,430	207
Organ Mountains Desert Peaks	New Mexico	188	62	250	\$934,098	\$2,090,947	\$3,025,045	\$5,091,407	\$6,629,065	\$11,720,472	40,361
Rio Grande del Norte	New Mexico	31	10	42	\$136,540	\$350,488	\$487,028	\$853,350	\$1,111,071	\$1,964,421	8,367
Cascade Siskiyou	Oregon	16	5	22	\$44,953	\$190,299	\$235,252	\$366,499	\$575,936	\$942,435	3,228 2017 AUMs
Cascade Siskiyou original area	Oregon			6						\$284,396	974 2015 AUMs
Cascade Siskiyou expansion area	Oregon			20						\$24,883.88	2,345 2015 AUMs
Cascade Siskiyou total	Oregon			26.34						\$1,209,249.49	3,919.00
Grand Staircase-Escalante	Utah	138	46	184	\$342,577	\$1,544,791	\$1,887,367	\$3,363,419	\$4,914,796	\$8,278,215	41,567
Hamford Ranch	Washington	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	0

NOTE: job estimates included unpaid labor.

State	Livestock	Direct	Indirect & induced	Total	Labor Income (2013 US\$)			Output (2013 US\$)		
					Direct	Indirect & induced	Total	Direct	Indirect & induced	Total
Arizona	Cattle	43	1.1	5.3	\$30,956.56	\$89,384.17	\$120,340.73	\$69,398.57	\$170,031.84	\$139,420.41
California	Cattle	47	3.6	8.3	\$10,401.12	\$54,382.05	\$173,583.18	\$244,209.58	\$465,478.82	\$709,688.40
Colorado	Cattle	35	1.9	5.3	\$24,710.92	\$69,321.38	\$94,032.30	\$141,246.62	\$213,995.95	\$355,242.57
Idaho	Cattle	39	2.5	6.4	\$26,862.08	\$83,811.99	\$110,674.07	\$186,254.69	\$273,079.63	\$459,334.32
Montana	Cattle	15	1.2	2.6	\$34,686.92	\$41,327.27	\$76,014.19	\$108,756.66	\$132,119.31	\$240,875.96
Nevada	Cattle	16	1.0	2.6	\$23,680.34	\$35,610.95	\$59,291.29	\$89,959.13	\$113,323.85	\$203,282.97
New Mexico	Cattle	38	1.3	5.0	\$17,972.18	\$40,200.07	\$58,172.25	\$92,963.94	\$127,550.07	\$220,514.01
Oregon	Cattle	5.0	1.7	6.7	\$13,360.20	\$36,357.77	\$49,717.97	\$78,935.28	\$111,171.11	\$190,106.40
Utah	Cattle	33	1.1	4.4	\$7,906.76	\$15,854.17	\$23,760.94	\$37,628.58	\$114,434.79	\$152,063.37
Washington	Cattle	10.2	1.9	12.1	\$10,046.03	\$78,094.41	\$88,140.44	\$123,054.77	\$213,036.63	\$334,091.40

Calendar Year	GDP Deflator	Index	Multi (2016)
2013		105.9	1.04
2014		105.8	1.02
2015		110.0	1.01
2016		111.4	1.00

Cell M20
Comment: These are billed ALUMs not permitted FY1
Adam Stern

Cell M22
Comment: 3,228 is 2017, not 2016 2016 original CSNM area 974 2016 expanded CSNM area 2,945 Suggest running separately
Kristin Skrabble

Table 4.
AUMs
Permitted
and Billed,
CSNM,
1995-2016

Year	Original CSNM Designation			CSNM Expansion Area		
	Permitted Use	AUMs Billed	% Billed	Permitted Use	Sold AUMs	% Billed
1995		6,002	3,406 56.70%	N/A	N/A	N/A
1996		6,002	4,180 69.60%	N/A	N/A	N/A
1997		6,002	4,158 69.30%	N/A	N/A	N/A
1998		6,002	4,333 72.20%	N/A	N/A	N/A
1999		6,002	4,537 75.60%	N/A	N/A	N/A
2000		6,002	4,190 69.80%	N/A	N/A	N/A
2001		5,793	3,661 63.20%	N/A	N/A	N/A
2002		5,350	3,348 62.60%	N/A	N/A	N/A
2003		5,350	3,690 69.00%	N/A	N/A	N/A
2004		5,350	3,967 74.10%	N/A	N/A	N/A
2005		5,350	4,746 88.70%	N/A	N/A	N/A
2006		5,350	3,418 63.90%	N/A	N/A	N/A
2007		5,350	3,264 61.00%	N/A	N/A	N/A
2008		5,350	2,026 37.90%	N/A	N/A	N/A
2009		1,437	763 53.10%	N/A	N/A	N/A
2010		1,317	1,009 76.60%	N/A	N/A	N/A
2011		1,317	1,074 81.50%	N/A	N/A	N/A
2012		1,317	1,217 92.40%		2,833 2,691	95.00%
2013		1,317	1,217 92.40%		2,833 2,659	93.90%
2014		1,317	1,217 92.40%		2,833 3,067	108.30%
2015		1,317	974 74.00%		2,833 2,851	100.60%
2016		1,317	974 74.00%		2,833 2,945	104.00%

Employment # in Job			Laborinc (\$)			Total Value Added (\$)			Total Output (\$)		
Total	Direct	Indirect & Induced	Total	Direct	Indirect & Induced	Total	Direct	Indirect & Induced	Total	Direct	Indirect & Induced
4	3		3	535,900	4130,800	534,306	5,665,080	4167,618	5089,316	5,434,158	6265,056

Timber Management M & E Survey

NOTES:

In amount in gene at rec CS value
5.5.45

4 165 871
4 211 555