ECONOMIC REPORT

RANGE OF LIGHT
NATIONAL MONUMENT

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JUNE 2023

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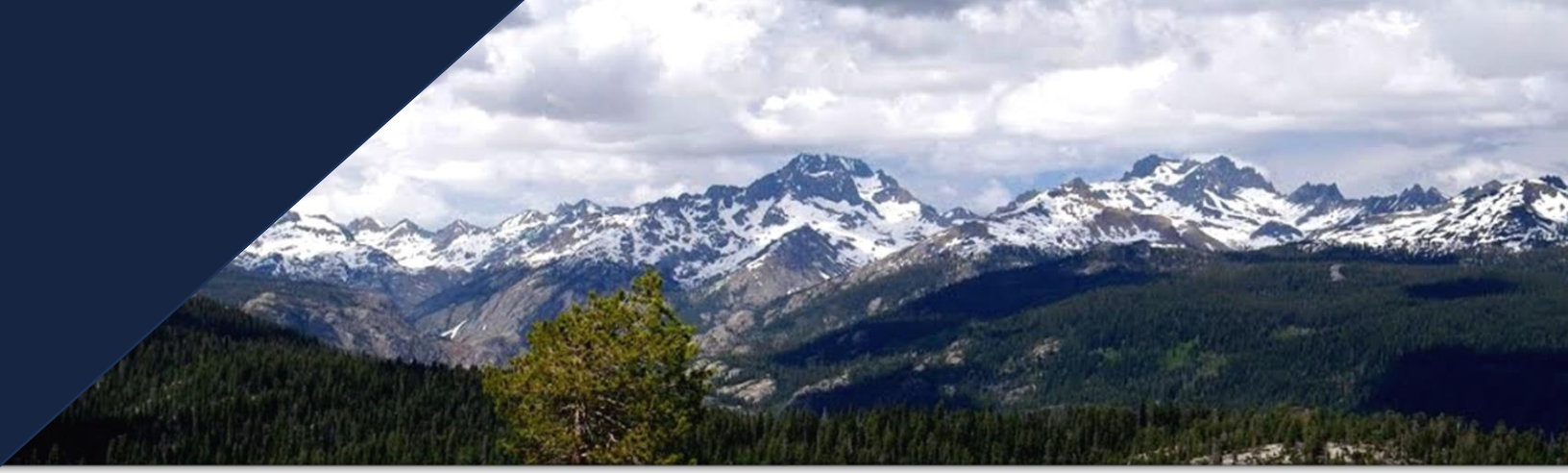
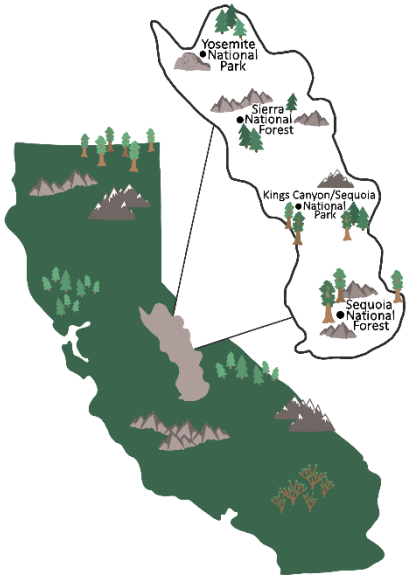


Executive Summary – Economic Report for the Range of Light National Monument

H.R. 9600, introduced in the U.S. House of Representatives in December 2022, would convert the Sierra National Forest, currently managed by the U.S. Forest Service, into the Range of Light National Monument managed by the U.S. National Park Service. A principal effect of this action would be to change the focus of the Forest's 1.4 million acres from "multiple uses" including logging, grazing, and mining, to recreation, restoration, and conservation. This paper calculates the likely economic effects of this proposed action on employment activity in the "Range of Light Region" consisting of the four California counties (Fresno, Mariposa, Merced, and Tulare) near the Sierra National Forest.



Range of Light Region

Key Findings

According to analysis methods developed by the U.S. National Park Service, the proposed national monument would drive substantial economic activity in the Range of Light region.

- The proposed monument would:
  - Attract 2.7 million visits per year.
  - Support 2,839 jobs.
  - Generate $287 million in annual local economic activity.
- For every job potentially displaced by the proposed monument, more than 40 jobs would likely to be created.
- Together, the monument and its adjacent National Park Service units, would generate more than one billion dollars in local economic activity annually and support 10,000 jobs.
- The national monument would also enhance recreation for Central Valley residents in the four-county region, which is 57% Hispanic plus 16% Additional Persons of Color – and this would advance the National Park Service's priority of expanding services to diverse groups.

These positive outcomes would arise with very limited displacement of current employment and economic activity in the national forest, estimated to total 65 jobs, including 57 in logging, 8 in livestock grazing, 0 in mining, and 0 in commercial recreation. The monument legislation mandates priority hiring for displaced workers. In addition, workers seeking alternative employment locally could do so in a growing regional economy that, even without the 2,839 jobs anticipated from the national monument itself, generates 11,000 new jobs per year.

Confirming Experience

These positive conclusions are consistent with the experience of multiple local economies in the rural Western United States following designation of national monuments and similar policy actions. For instance:

- Researchers at the non-profit Resources for the Future studied 14 new national monuments in the Mountain West designated between 1991 and 2014, including Utah's Grand Staircase-Escalante (1.7 million acres) and Arizona's Grand Canyon-Parashant (1 million acres). They found that these designations on average increased local business establishments by 10 percent and local jobs by 8 percent; had little or no negative effects on the number of jobs on public lands in forestry, grazing, and mining; and had no pattern of replacing high-wage jobs with lower-wage jobs.
- Researchers at the University of Houston studied the economic impacts of changes since 1970 in the status of National Park Service units nation-wide. They determined that four years after a site first came under the National Park Service (for example, by designation of a new national monument), employment in the local area increased 4% and income increased 5%. These outcomes were driven primarily by growth in visits, which increased an average of 21% over the first years after designation.
- Under the 1994 Pacific Northwest Forest Plan, 11 million acres of forest land in Oregon were withdrawn from extractive uses such as mining and logging in favor of "park-like" preservation of natural amenities and wildlife habitat. Studying the effects on nearby communities, researchers at Oregon State University found positive impacts on population, household income, and property values.
- Researchers at the Conservation Economics Institute and U.S. Forest Service examined the effect of designating wilderness areas and national monuments on attraction of new residents. They documented increased arrivals of footloose entrepreneurs, retirees, and workers willing to trade income for a higher quality of life. Since that time, another group of amenity-seeking future residents – persons working remotely via internet technology – has dramatically expanded, further increasing likely new residents.
- A subset of federal lands managed by the National Park Service, Forest Service, Bureau of Land Management, or the Fish and Wildlife Service is protected and primarily managed for conservation. Multiple researchers have studied the effect on surrounding local economies of implementing wilderness protection in areas formerly open to agriculture and mining. The consensus of these studies is that the economic benefits of the wilderness substantially exceed displaced commercial activities. These researchers documented growth in population, employment, self-employment, per-capita income, business establishments, business investment, property values, and local tax bases.

Introduction

The west central slopes of California's Sierra Nevada mountains contain three large national parks – Yosemite (747,956 acres), Kings Canyon (461,901 acres), and Sequoia (404,063 acres).[1] These areas are managed by the National Park Service of the U.S. Department of the Interior. The Sierra National Forest, which occupies approximately 150 miles between these parks, encompasses 1,427,750 acres currently managed by the Forest Service under the U.S. Department of Agriculture.

On December 15, 2022, H.R. 9600, "to designate the Range of Light National Monument in the State of California," was introduced in the U.S. House of Representatives. Under that proposed legislation, the Sierra National Forest, along with the 7,000-acre San Joaquin Gorge currently managed by the Department of the Interior's Bureau of Land Management, would be transformed into the Range of Light National Monument managed by the National Park Service. Combining this national monument with its neighboring national parks would result in a contiguous area of 3,041,670 acres under Park Service management.[2]

The present report analyzes the likely consequences of this proposed action on employment and economic activity in the local area containing and surrounding the proposed national monument. Throughout this report, that local area is defined as four California counties – Fresno, Madera, Mariposa, and Tulare. The Sierra National Forest is partially located in Fresno, Madera, and Mariposa counties. Yosemite National Park is in Mariposa and Madera counties, Sequoia National Park is in Tulare County, and Kings Canyon National Park is in Tulare and Fresno counties. This report refers to this four-county area as the Range of Light Region.

Section I of this paper estimates the employment and economic activity likely to be supported by the proposed national monument. It projects these economic contributions to be substantial, including 2,849 jobs and $287 million in annual regional economic activity.

Section 2 discusses the effect of the proposed designation on current economic activity in the Sierra National Forest. While generating at least 2,849 jobs, the proposed monument is likely to displace no more than 65 full-time-equivalent positions, including 57 in logging and lumber processing, 8 in livestock grazing, 0 in mining, and 0 in commercial recreation. Under the proposed legislation, displaced workers would be given priority in hiring within the monument itself. In addition, their re-employment would be facilitated by a growing regional economy that, even without the proposed monument, has been expanding by more than 11,000 jobs annually.

Finally, Section 3 discusses the recreational services likely to be generated by the proposed designation, especially for the diverse local population historically underserved by the National Park Service.

Section 1. Local Economic Contributions

Analysis Methodology

The National Park Service has a well-established methodology for computing the economic contributions to the gateway communities surrounding national parks, national monuments, and other units under the agency's management. The methodology measures three components of local economic contributions:[3]

- Direct effects consist of the jobs, business sales, and resident income supported by the dollars visitors and new residents spend locally while visiting or living near the National Park Service unit being analyzed.
- Indirect effects consist of additional jobs, business sales, and resident income supported when the businesses experiencing those direct effects in turn purchase supplies and services locally to use in servicing these visitors and new residents.
- Induced effects consist of the further jobs, business sales, and resident income supported when the employees and owners supported by the direct and indirect effects spend locally for their own living expenses.

In the National Park Service units already in the Range of Light Region, direct effects account for about 62% of these local economic contributions, while indirect and induced effects account for the remaining 38%.[4]

The business sectors in which these direct effects would concentrate include retail (including gas, camping supplies, and souvenirs), hospitality (hotels, restaurants, and campgrounds), and recreational services. However, the indirect effects begin to spread the effects more widely to, for example, wholesalers of food and merchandise, business services such as accounting and law firms, and construction firms which build or maintain tourist-serving facilities. Finally, induced local effects ripple across the entire local economy, generating employment and income wherever local workers and business owners spend their incomes, including retail stores, grocery stores, health care providers, and, via taxes, local government agencies. Thus, the entire local economy shares in the economic contributions of National Park Services units, not just workers and owners in businesses that are explicitly visitor-oriented.

Applying this Analysis

To apply this analysis to the proposed national monument, this report assumes that, once the proposed transfer of the Sierra National Forest to the National Park Service is complete, the new unit would generate economic contributions to the local economy similar to its adjacent, long-established national parks. Thereby, the analysis reflects important differences between areas under Forest Service management and Park Service management. The latter provides substantially more services and amenities attractive to recreational visitors and new residents – for example, more campgrounds with more developed facilities, more hiking trails, more wildlife, and more visitor activities and interpretive programs.[5] An increased number of employees would be required to support these more extensive, more intensive visitor services.

One approximate measure of these differences can be based on nation-wide staffing levels per acre for the two agencies. Currently, the Forest Service manages about 193 million acres nation-wide with a staff of 30,671 full-time-equivalent employees, or 6,293 acres per employee. The counterpart figures for the National Park Service are 85 million acres and 20,813 employees, or 4,090 acres per employee.[6] Dividing 6,293 by 4,090 yields a ratio of 1.54, suggesting that the proposed national monument would add more than one additional employee for each two persons currently employed in managing the Sierra National Forest.[7]

Table 1 shows how figures generated by the National Park Service analysis for the region's three existing National Park Service units can be applied to the proposed national monument as an added fourth unit. The average acre in the three existing units attracts 4.0 park visitors per year, thereby supporting .004 jobs per acre and generating direct, indirect, and induced economic contributions totaling $481 per acre per year.

These rates include Yosemite National Park which, as Table 1 documents, generates economic benefits at four times the per-acre rate of Sequoia and King Canyon. This difference reflects Yosemite's status as one of the nation's most well-known, "superstar" national parks, along with favorites such as the Grand Canyon and Yellowstone; its 3.3 million visitors in 2021 ranking it eighth among national parks nation-wide.[8] To be conservative,[9] the present paper assumes that the proposed national monument would contribute at the rate observed not in Yosemite but in the other two, less prominent parks. As Table 1 (Row 5) shows, Sequoia and Kings Canyon parks together generate local economic benefits at the rate of $201 per acre and support .002 jobs per acre. Multiplying those rates by the 1.4 million acres of the proposed national monument indicates that the monument would attract about 2.7 million visitors per year, support 2,849 jobs within the four-county region, and generate $287 million in local economic activity each year.

In addition to excluding Yosemite, these estimates should be considered conservative[10] because they do not take account of ways in which creation of the national monument might synergistically increase the current local economic contributions of its neighboring parks. If the three million contiguous acres were all coordinated under the same recreation- and conservation-oriented management approaches of the National Park Service, the new monument might be leveraged to improve the attractiveness to visitors, and thereby the potential economic contributions of areas outside its own boundaries.

One example of this potential synergy involves the proposed monument's northern neighbor. Yosemite has long grappled with problems of over-crowding and over-use, leading to decreased quality of the visiting experience and triggering visitor reservation requirements in several recent summer seasons.[11] If the proposed monument were developed to relieve pressure on the visitor attractions and facilities available in Yosemite, the quality of visitor experience in Yosemite, and consequently the volume, duration, and spending of Yosemite visitors might well expand.[12]

Even without such synergies, the combined local economic contributions that would be generated by adding the proposed national monument to its adjacent three national parks would be very large. The four National Park Service units together would bring 9.2 million visitors to the region each year, support 9,956 jobs, and generate $1,063,487,243 in income in the four-county region. In other words, a contiguous area of 3 million acres under the National Park Service would be an economic engine for the Range of Light Region generating more than *one billion dollars* in local economic activity annually.

Table 1: Contributions to the Local Economy by Existing and Proposed National Park Service Units in the Range of Light Region

	National Park Service Unit		Total Benefits to the Local Economy			Benefits Per Acre		
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	National Park Unit	Total Acres	Annual Park Visitors	Local Jobs	Annual Local Economic Activity	Annual Park Visitors	Local Jobs	Annual Local Economic Activity
(1)	Yosemite	747,956	4,910,061	5,395	$602,564,000	6.6	0.007	$806
(2)	Sequoia	404,063	1,059,548	1,059	$107,376,000	2.6	0.003	$266
(3)	Kings Canyon	461,901	562,918	663	$66,640,000	1.2	0.001	$144
(4)	**TOTAL FOR 3 UNITS**	1,613,920	6,532,527	7,117	$776,580,000	4.0	0.004	$481
(5)	Subtotal Sequoia/ Kings Canyon	865,964	1,622,466	1,722	$174,016,000	1.9	0.002	$201
(6)	Range of Light National Monument	1,427,750	2,675,026	2,839	$286,907,243	1.9	0.002	$201
(7)	TOTAL FOR 4 UNITS	3,041,670	9,207,553	9,956	$1,063,487,243	3.0	0.003	$401

Sources and Notes:

Rows (1) to (3): *Column (b): National Park Service, Foundation Document Overview, Yosemite National Park, and Sequoia & Kings Canyon National Parks California, downloaded March 10, 2023 from nps.gov. Columns (c), (d), and (e): Thomas C. Cullinane, M. Flyr, and L. Kootz, 2022. 2021 National Park Service Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation. Natural Resource Report NPS/NRSS/EQD/NRR-2022/2395. NPS, Fort Collins CO. https://doi.org/10.36967/nrr-229346. Columns (f), (g), and (h): Corresponding entries in Columns (c) to (e) divided by Column (b).*

Row (4) *Rows (b), (c), (d), and (e): Sum of Rows (1) to (3). Columns (f), (g), and (h): average of rows (1) to (3) weighted by their entries in column (b).*

Row (5): *Rows (b), (c), (d), and (e): row (2) + row (3). Columns (f), (g), and (h): average of rows (2) + row (3) weighted by their entries in column (b).*

Row (6): *Column (b): H.R. 9600, The Range of Light National Monument Act, introduced in the House of Representatives 12/15/2022. Columns (c), (d) and (e): Corresponding entries in Columns (f), (g), and (h) multiplied by Column (b). Columns (f), (g), and (h): Corresponding entries in row (5).*

Row (7): *Columns (b), (c), (d) and (e): Row (4) + Row (6). Columns (f), (g), and (h): average of rows (4) and (6) weighted by their entries in column (b).*

Consistency with Experience Elsewhere

Should the proposed national monument designation go forward, the Range of Light Region would by no means be unique in experiencing a major shift in the use of public land within its local area. Reduced reliance on agricultural and extractive activities and increased focus on resource conservation and activities based on resource amenities is a long-standing pattern in the history of the National Park system.[13] The economic effects of such changes has been studied by multiple researchers, especially as in the current proposal where changes have involved large areas of land in the rural western United States.

Unanimously, these studies lend strong support to the positive economic conclusions presented in the prior section. In the locations examined, this sort of evolution has consistently generated substantially more economic benefits than economic losses for the local economy. The following are brief summaries of selected relevant studies:

- Researchers at the non-profit Resources for the Future examined the economic impact of designation of 14 new national monuments in the Mountain West Region between 1991 and 2014.[14] These monuments included some very large land areas, including Grand Staircase-Escalante NM in Utah (1,700,000 acres), Grand Canyon-Parashant NM in Arizona (1,000,000 acres), Craters of the Moon NM in Idaho (661,000 acres), and Organ Mountains-Desert Peaks NM in New Mexico (496,000 acres).

  These researchers found that designation of these national monuments on average:

  - Increased the number of business establishments in the areas near the monuments by 10 percent;
  - Increased the average number of jobs in those areas by 8 percent;
  - Increased the average establishment growth rate;
  - Had little effect, positive or negative, on the number of jobs in natural resources industries – mining, forestry, and livestock grazing – relying on public lands; and
  - Had no effect on average wages in the area and no pattern of replacing high-wage jobs with lower-wage jobs.
- Researchers at the University of Houston measured the economic impacts of changes since 1970 of the status of sites in the continental U.S. managed by the National Park Service.[15] They determined that, four years after a site first came under the control of the National Park Service (for example, by designation of a new national monument), employment in the local area had increased 4% and income had increased 5%. Similarly, four years after a site was "upgraded" (for example, from a national monument to a national park), employment in the local area had increased 4% and income by 6%. These outcomes were driven primarily by growth in site visitation, which increased an average of 21% over the first years after designation.
- Under the 1994 Pacific Northwest Forest Plan, 11 million acres of forest land in Oregon were withdrawn from resource extraction uses such as mining and lumbering in favor of "park-like" preservation of natural amenities, standing trees, and wildlife habitat. Studying the impact of this plan on small communities close to affected areas, researchers at Oregon State University found positive impacts on population, household income, and property values.[16]

- Researchers at the Conservation Economics Institute and U.S. Forest Service examined the effect of designating wilderness areas and national monuments on the attraction of new residents. They found new residents typically drawn from footloose entrepreneurs, retirees, and persons willing to trade income for a higher quality of life, and their choice of destination was highly influenced by local amenities including public recreation land.[17]
- Since that time, another group of potential amenity-seeking residents has become significant – persons working remotely via internet technology. The explosion of remote work during the Covid pandemic demonstrated the viability of this arrangements for many workers, and it is widely expected that remote work will remain well above its pre-pandemic levels even after the effects of the pandemic have faded.[18] Because of the recency of this phenomenon, research has not yet quantified its potential to accelerate amenity-based movement to rural areas. However, several characteristics of the Range of Light Region suggest that such movement is likely to be significant locally. One is the high rating of the four-county region, even prior to the designation of a new national monument, on measures of natural resource-based amenities likely to attract amenities-focused residents.[19] Another is the relative accessibility of the region to major centers of population and employment for employees combining remote work with occasional travel to their employers' location.[20]
- Researchers at Utah State University[21] studied the economic effects on per-capita income in counties surrounding nine newly-designated large-scale national monuments in the American west. They concluded that these designations in essence had no effect on per-capita incomes in the surrounding counties, particularly including no significant negative effects.
- A subset of federal lands managed by the National Park Service, Forest Service, Bureau of Land Management, or the Fish and Wildlife Service is protected and primarily managed for conservation. Multiple researchers have studied the effect on surrounding local economies of implementing wilderness protection in areas formerly open to agriculture and mining. The consensus of these studies is that the economic benefits of the wilderness substantially exceed that of displaced economic activity, through both increased visitation and amenity-seeking new residents. These researchers have documented growth in population, employment, self-employment, per-capita income, business establishments, business investment, property values, and local tax bases.[22]
- In 2000, some 353,000 acres within the Sequoia National Forest were designated as Giant Sequoia National Monument. During a slow process of changes in land management since that time, according to researchers at the non-profit Headwaters Economics,[23] this designation has continued and strengthened strong growth in the economy of the surrounding communities in Fresno and Tulare Counties. From 2002 to 2015, that local area experienced 21% growth in population, 20% growth in jobs, and 24% growth in real income per capita. Over that period, the services sectors – including those serving park visitors – grew by 106,481 jobs, more than offsetting a decrease of 5,418 jobs in non-service employment

Section 2. Impacts on Existing Economic Activity

Under the U.S. Forest Service's mandate to manage national forests for multiple uses, the Sierra National Forest permits several types of economic activity potentially subject to restriction in the proposed national monument. This section examines the extent to which reductions in these activities would offset the employment and income generation described in Section 2. It focuses on four economic sectors – logging, grazing, mining, and commercial recreation.[24]

Current Regional Economy

It is useful to begin by considering the role of these sectors in the overall U.S. economy today. In the 21st Century, the industries in which most workers are employed and most income is generated are not those engaged in production of goods – whether in factories, farms, or forests – but in the provision of services. For example, in 2021, only 14% of all U.S. workers were employed in producing tangible goods through manufacturing (7.8%), construction (4.7%), agriculture and forestry (1.4%), and mining (0.3%). The remaining 86% made their living in service-producing sectors such as government (13.9%), business and professional services (13.7%), health care (12.7%), retail trade (9.7%), and leisure and hospitality (8.9%).[25] Economic activity in the four-counties in the Range of Light Region parallels these national patterns, with important implications for the economic consequences of the proposed national monument.

Table 2 examines the extent to which the region's economy is currently dependent on five sectors. Three of these sectors – agriculture (including grazing), timber and wood products (including logging), and mining – would potentially be restricted or reduced by creation of the proposed national monument. The other two sectors – travel and tourism and "transfer income" (including potentially-mobile income, such as pensions and investment income not based on employment) – would potentially expand.

According to Table 2, the three sectors that would potentially shrink following designation of the national monument together account for 7 % of current economic activity in the four-county region. In contrast, the two sectors that would potentially expand together contribute 31.5% of local economic activity – more than *quadruple* the contribution of the other three sectors.

Table 2 (Part A): Current Economic Role of Selected Sectors the Range of Light Region

A. Sectors Likely to Expand in Response to the Proposed National Monument

Sector	Current Role in the Economy	Fresno	Madera	Mariposa	Tulare	Total for the 4-County Region
Travel & Tourism	Total Regional Employment	392,496	51,698	5,145	163,133	612,472
	Employment in this Sector	40,225	5,620	2,078	16,134	64,057
	Total					10.5%
Sector	**Current Role in the Economy**	**Fresno**	**Madera**	**Mariposa**	**Tulare**	**Total for the 4-County Region**
Age-Related Payments + Dividend, Interest & Rents + Veterans' Benefits	Total Regional Income	$56,289,716	$7,877,717	$1,135,993	$24,723,338	$90,026,764
	Income in this Sector	$11,890,600	$1,809,236	$365,482	$4,867,898	$18,933,216
	Total					21.0%
Total for 2 Sectors	Total					31.5%

***Sources and Notes**:*

Computed from the Economic Profile System (EPS) of Headwaters Economics, Inc., downloaded 4/18/2023 from https://headwaterseconomics.org/eps.

Moreover, nationwide, for the upcoming decade, the projected annual rate of growth of revenues in goods-producing sectors is 0.1% per year, while that of the service-producing sectors is 0.6%,[26] *six times* that of the good-based sectors. Employment opportunities are even more dependent on the service sector than revenues, because in the production of services, a higher proportion of revenues typically goes to wages and other worker compensation than in the production of goods.[27]

The point of these comparisons is that the industries likely to be enhanced by designation of the national monument are ones on which the four-county region is *already* heavily dependent and where *future growth* in employment and income is predicted to concentrate. In contrast, the industries which designation of a national monument might restrict or reduce are ones where the four-region economy already has limited dependence and where prospects for future growth are limited. Thus, the employment and income consequences of the proposed national monument would align with the directions in which, along with the rest of the national economy, the economy in the Range of Light Region is already moving.

Table 2 (Part B): Current Economic Role of Selected Sectors the Range of Light Region

B. Sectors Potentially Reduced by the Proposed National Monument

Sector	Current Role in the Economy	Fresno	Madera	Mariposa	Tulare	Total for the 4-County Region
Agriculture	Total Regional Employment	392,496	51,698	5,145	163,133	612,472
	Employment in this Sector	17,758	3,912	291	15,748	37,709
	Total					6.2%
Mining, including Oil & Gas	Total Regional Employment	392,496	51,698	5,145	163,133	612,472
	Employment in this Sector	275	94	17	67	453
	Total					0.1%
Timber & Wood Products	Total Regional Employment	392,496	51,698	5,145	163,133	612,472
	Employment in this Sector	2,430	398	9	1,787	4,624
	Total					0.8%
Total All	**Total**					**7.0%**

***Sources and Notes**:*

Computed from the Economic Profile System (EPS) of Headwaters Economics, Inc., downloaded 4/18/2023 from https://headwaterseconomics.org/eps.

Another important element is the overall current state and expected future growth of the economy in the four-county region. In some cases, new national monuments are in rural areas experiencing long-term economic stagnation and serious decline. In these circumstances, local unemployment, business closures, low or negative job growth, and population loss all signal that workers losing their jobs would have very limited opportunities to replace them.[28] This is not the circumstance in the Range of Light Region, where local economic trends reflect substantial, sustained growth. As Table 3 indicates, according to analyses by the state of California:[29]

- In 2023, the unemployment rate in all four counties is below the county's target for full employment of the local workforce.
- Over the 2023-207 period, in all four counties, jobs are projected to increase annually, with some 11,717 net new jobs expected to be created in the region each year.
- Over the 2023-2027 period, in the four-county region, some 4,590 net new residents are expected through attraction from other locations in California and beyond.

These figures do not include the 2,839 jobs and $287 million in annual income estimated in Section 2 to be created by the proposed national monument. Their purpose is to remind us that, while the new monument itself would create significant employment opportunities for any workers displaced, it would not be the only source of alternative jobs, or even the largest one. A healthy and growing local economy, which exists Range of Light Region, would serve that function.

Table 3: Selected Current Economic Indicators in the Range of Light Region

	County	Forecast Job Growth 2023-2027		Unemployment 2023		Forecast Annual Net Migration 2022-2027
		Annual Growth Rate	Annual Net New Jobs*	Unemployment Rate	Rate Compared to Full Employment	
(1)	Fresno	2.1%	8,242	5.7%	2.3% lower than 8.0% full employment goal	4,000
(2)	Madera	2.5%	1,292	5.7%	1.3% lower than 7.0% full employment goal	475
(3)	Mariposa	1.2%	62	5.0%	1.0% lower than 6.0% full employment goal	-25
(4)	Tulare	1.3%	2,121	6.8%	3.2% lower than 10.0% full employment goal	140
(5)	The 4-County Region		11,717			4,590

***Sources and Notes**:*

Computed from Caltrans, Long-Term Socio-Economic Forecasts by County (downloaded 4/25/2023 from dot.ca.gov/-/media/programs/transportation-planning/documents/data-analytics-services/.

** Annual growth rate * total employment reported in Table 2.*

Within this context, we turn to logging, grazing, mining, and recreation in the region.

Logging and Timber Processing

Section 7(f) of H.R. 9600 specifies that, following designation of the proposed national monument, cutting, sale, harvest, or removal of timber and other vegetative material for commercial purposes, commercial logging, or biomass energy production would be prohibited. Only limited logging would be allowed for purposes such as protection of wildlife and scenic resources.

That reduction would accelerate a decades-long downward trend in logging activity and employment in the region.[30] Currently, timber production in the Sierra National Forest is about 40 million board feet annually, down from previous levels of

more than 80 million board feet.[31] Over the two decades from 2001 to 2021, employment in the four-county region in logging declined 7.3% and in sawmills 7.6%.

By 2021, that decline left 240 persons employed in logging and 508 persons employed in lumber processing in the four-county region. However, in localities with heavy winter snowfall, these jobs are predominantly seasonal.[32] Assuming that the seasonality of logging in the Sierra National Forest reduces these positions to half of full-year employment, these figures correspond to 120 full-time-equivalent jobs in logging and 254 full-time-equivalent jobs in lumber processing.

Many of the workers holding these positions presumably work on logs from land in private ownership, as well as from federally-owned lands other than the Sierra National Forest; the latter includes the Sequoia National Forest of 1.1 million acres, which is not included in the proposed national monument. The Sierra National Forest accounts for 15.4% of the total area of the four-county region.[33] Assuming that 15.4% of timber harvesting and sawmills in the region is based there, elimination of commercial logging in the proposed national monument might reduce local logging and lumber processing jobs by 15.4%. This final adjustment leaves 57 jobs in the region dependent on logging in the Sierra National Forest today – 18 in logging and 39 in timber processing.

Livestock Grazing

Another of the "multiple uses" of the Sierra National Forest is grazing of livestock, under permits from the U.S. Forest Service or the U.S. Bureau of Land Management. Section 7(c) of H.R. 9600 specifies that all leases and permits for grazing livestock within the proposed national monument are to be phased out over a ten-year period.

Little information is available concerning the extent of this activity in the Forest today, so only rough estimates can be made of their local employment. The best information currently available is that, as of 2015, a maximum of 3,455 head of livestock could be permitted for grazing in the Sierra National Forest.[34] Conservatively assuming that this maximum is fully utilized, that this grazing is available about one-third of each year, and that a minimum of 150 beef cattle are required to employ one rancher full-time,[35] this number translates into full-time-equivalent employment for 8 ranchers.[36] Further conservatively assuming that these ranchers would not maintain any of this grazing activity by switching to land outside the Sierra National Forest, that means that designation of the proposed national could result in a loss of about 8 ranching jobs.

Mining

Especially because of California's famous Gold Rush starting in 1849, mining has long been associated with the history of the Sierra Nevada Mountains. However, that mining activity was concentrated in the northern part of the mountain range rather than the central part, its foothills rather than its higher elevations, and the 19th and early 20th

Century rather than the 21st.[37] Mining is no longer a significant economic presence in the Sierra National Forest today.

The Economic Research Service of the US Department of Agriculture defines a rural local economy as significantly dependent on mining and other natural resource extraction if more than 8% of local employment or 13% or local earnings come from this activity. Under this definition, none of the four counties in the Range of Light Region is classified as "mining dependent."[38]

According to the U.S. Bureau of Land Management, a total of 2,608 mining claims have ever been registered within the Sierra National Forest. Of these, 2,608 – 93.8% – are now closed.[39] That leaves 161 claims still registered as open. Most of these claims appear to be located along the rivers in the region,[40] and their average size is less than 35 acres, suggesting that they are typically placer mining sites left over from mining activity of earlier eras. Moreover, "open" simply represents the claims' legal status rather than actual mining activities, and the Forest Service recently confirmed that currently "there are no active mines with an approved plan of operations."[41]

In any case, should any significant mining activity be identified within the geographic area of the proposed national monument, Section 10(b) of H.R. 9600 specifies that valid existing mining claims are not to be affected by the proposed creation of the national monument. Accordingly, reductions in mining-based employment and economic activity that would be triggered by the proposed national monument can reasonably be estimated at either exactly or approximately zero.

Commercial Recreation

The USDA describes current recreational uses of the Sierra National Forest in the following terms:[42] "Recreation in the Sierra National Forest spans all seasons. People visit the forest for camping, horseback riding, swimming, picnicking, biking, and hiking opportunities. Visitors also enjoy fishing, hunting, wildlife viewing, fall-colors, skiing, snowshoeing, and off-highway vehicles, motorcycles, and snowmobile riding."

Most of these activities are undertaken by visitors on their own without hiring commercial guides or outfitters. As of 2012, only seven guide/outfitter permits were active in the Sierra National Forest for non-wilderness activities and eight for wilderness activities.[43] Therefore, the number of persons employed as commercial guides and outfitters who could conceivably lose employment in response to creation of the national monument is necessarily very limited.

Moreover, it is reasonable to assume that jobs would increase in commercial recreation, rather than decrease. Section 7(d) of H.R. 9600 specifies that commercial recreational activities of the type permitted within existing national park units shall be allowed within the proposed national monument, so long as they are compatible with the conservation and other mandates under which the National Park Service operates. In that circumstance, as additional visitors are attracted to the new national

monument[44] and some of them hire guides, outfitters, or other suppliers, the number of persons employed in commercial recreation should be higher than before, not lower. Accordingly, the likely number of job losses in commercial recreation can reasonably be estimated at zero.

Reemploying Displaced Workers

Section I of this report indicates that new national monument would support 2,839 jobs. In contrast, the analyses in this section concludes that the potential loss of jobs triggered by designation of the proposed national monument would be limited to about 65 jobs – 57 in logging and related work, 8 in livestock grazing, zero in mining, and zero in commercial recreation. In other words, for every job potentially displaced by the proposed national monument, more than 40 jobs are likely to be created.

Where transition to alternative employment is needed for workers currently holding the potentially-displaced jobs, the process would be facilitated by the phasing of job loss over a number of years.[45] It would be further facilitated by the requirement, in Section 11(3)(j) of H.R. 9600, that workers displaced from jobs in commercial logging be given priority for visitor service jobs in the monument.

In any case, the extremely modest number of displaced workers would be absorbable in a local economy which, as estimated earlier in this report, is predicted to include 2,839 jobs supported by the new national monument itself,[46] within the broader context of a growing regional economy that is adding 11,717 new jobs annually.[47]

Section 3. Access to Recreation for Underserved Local Residents

In analyzing the economic contributions to a local area of a national park service unit, the analysis reported the Section I does not include an assessment of the economic value of park-supported recreation activities, wildlife conservation, or wilderness preservation *per se*.[49] These subjects are beyond the scope of this report, whose focus is the practical economic consequences of the proposed national monument on local jobs and income.

However, the proposed national monument would enhance recreational services for residents of the Range of Light Region and especially for residents who are historically under-served by the National Park Service.

Traditionally, National Park Service units – especially the large parks in the rural Western United States – have primarily served visitors who are affluent and white.[50] In recent years, its failure to attract proportionate numbers of non-white visitors has become an increasing issue for the Park Service.[51] As part of this concern, in recent designations of national monuments, the accessibility of the unit to race/ethnic minorities has been an increasing consideration. For example, when the Castner Range National Monument in El Paso, Texas was declared in March 2023, one analysis preceding that declaration focused on the fact that 9 out of 10 Latino residents and 93% of low-income communities in the area surrounding the proposed monument were "nature deprived."[52]

In relation to such concerns, Table 4 reports the racial/ethnic composition of the residents of the Range of Light Region. According to the table, 57.2% of local residents self-identify as Hispanic/Latino, and an additional 15.2% self-identify in some other category of Persons of Color (Asian, African American, mixed race, Native American, Pacific Islander, or other races). Thus, 72.3% are non-white, making the region strongly "majority minority."

Among the three existing National Park Service units in the Range of Light Region, local residents of all races account for about 2.9% of park visitors.[53] Applying this rate to the proposed national monument forecasts that the new unit would serve approximately 77,576 local visitors per year. This circumstance would offer the Park Service an opportunity to provide a substantial volume of new outdoor recreational opportunities to the nearly three out of four local residents whom the Park Service has traditionally not extensively served.

Table 4: Racial/Ethnic Composition of the Population of the Range of Light Region

	Characteristic	Fresno	Madera	Mariposa	Tulare	Four-County Region
(1)	Total Population	1,008,654	156,255	17,131	473,117	1,655,157
(2)	White Non-Hispanic	271,889	48,399	12,838	125,022	458,148
(3)	Other Persons of Color*	196,022	14,678	2,153	38,200	251,053
(4)	All BIPOC**	736,765	107,856	4,293	348,095	1,197,009
(5)	Hispanic or Latino	540,743	93,178	2,140	309,895	945,956
(6)	Asian	109,665	3,581	287	15,997	129,530
(7)	Black or African American	44,295	4,131	105	5,332	53,863
(8)	Mixed Race/Multiracial	29,546	4,383	1,222	10,770	45,921
(9)	Native Americans	6,074	1,738	410	3,458	11,680
(10)	Some Other Race	5,209	723	114	2,132	8,178
(11)	Pacific Islander	1,233	122	15	511	1,881
(12)	Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
(13)	White Non-Hispanic	27.0%	31.0%	74.9%	26.4%	27.7%
(14)	Other Persons of Color*	19.4%	9.4%	12.6%	8.1%	15.2%
(15)	All BIPOC**	73.0%	69.0%	25.1%	73.6%	72.3%
(16)	Hispanic or Latino	53.6%	59.6%	12.5%	65.5%	57.2%
(17)	Asian	10.9%	2.3%	1.7%	3.4%	7.8%
(18)	Black or African American	4.4%	2.6%	0.6%	1.1%	3.3%
(19)	Mixed Race/Multiracial	2.9%	2.8%	7.1%	2.3%	2.8%
(20)	Native Americans	0.6%	1.1%	2.4%	0.7%	0.7%
(21)	Some Other Race	0.5%	0.5%	0.7%	0.5%	0.5%
(22)	Pacific Islander	0.1%	0.1%	0.1%	0.1%	0.1%

***Sources and Notes**:*

Rows (1)-(11): U.S. Census, 2020. Rows (12)-(22): calculated from Rows (1)-(11).
**All rows except (2) and (5). **Black, Indigenous, and People of Color; All rows except (2).*

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References

[1] National Park Service, *Foundation Document Overview, Yosemite National Park and National Park Service, Sequoia & Kings Canyon National Parks California*, downloaded March 10, 2023 from nps.gov.

[2] Similar multiple-unit, contiguous areas already managed by the National Park Service include:

- 5.4 million acres: Grand Staircase-Escalante National Monument (1.9 million acres) + Bears Ears National Monument (1.4 million acres) + Glen Canyon National Recreation Area (1.3 million acres) + Canyonlands National Park (.3 million acres) + Vermillion Cliffs National Park (.3 million acres) + Capitol Reef National Park (.2 million acres);

- 3.9 million acres: Mojave Trails National Monument (1.6 million acres) + Mojave National Preserve (1.5 million acres) + and Joshua Tree National Park (.8 million acres);

- 3.7 million acres: Grand Canyon National Park (1.2 million acres) + Grand Canyon-Parashant National Monument (1.0 million acres) + Gold Butte National Monument (.3 million acres);

- 2.5 million acres: Yellowstone National Park (2.2 million acres) + Grand Tetons National Park (.3 million acres).

(Calculated from National Park Foundation, *The Size of the Largest National Parks Will Blow Your Mind*, downloaded 4/17/2023 from national parks.org.; *National Monuments Facts and Figures,* downloaded 6/2/2023 from nps/gov/subjects/archaeology); and *417 US National Parks, Historical Sites, Preserves, Seashores, and More*, downloaded 6/2/2023 from parkrangerjohn.com/wp-content/uploads/2017.)

[3] This methodology, including its use of "economic multipliers" derived with a well-established economic analysis technique called "input-output analysis, is documented in Thomas C. Cullinane, M. Flyer, and L. Koontz, *2021 National Park Visitor Spending Effects, Economic Contributions to Local Communities, States, and the Nation.* Natural Resource Report NPS/NRS/EQD/NRR-2022/2395 (National Park Service, Fort Collins, CO, June 2022, downloaded 3/20/2023 from www.nps.gov/subjects/socialscience/vse.htm.

[4] Calculated by the author from the source in endnote 3. A similar analysis of state parks in a rural state produced a similar estimate of the direct component, 70% [*South Dakota State Parks: Economic Contributions of Visitation* (Fernandina Beach, FL: Southwick Associates, June 2022)].

[5] The current facilities and services to attract visitors to the Sierra National Forest today suggests a large scope of expanded and improved facilities in the proposed national monument. For example the forest's 1.4 million acres currently include only 39 fully-operational recreational sites -- such as picnic areas, hiking trails, boat launches, and interpretive centers -- to attract recreation-seeking visitors (www.fs.usda.gov/recmain/sierra/recreation, downloaded 5/16/2023).

[6] U.S. Forest Service, *Fiscal year 2024 Budget Justification*, *March 2023,* downloaded 4/27/2023 from https://www.fs.usda.gov and U.S. National Park Service, *Budget Justifications and Performance Information, Fiscal year* 2024, downloaded 4/27/2023 from https://www.doi.gov.

[7] An approximate comparison of summer employment in the local national parks to that in the Sierra National Forest suggests an even higher rate of job expansion, about one additional job for each current employee. The Sierra National Forest employed 358 employees during summer 2017 or .00025 employees per acre. The most comparable available data for Sequoia-Kings Canyon National Parks showed 440 summer employees in 2021 or .0005 per acre, double the Sierra National Forest rate.

[8] *10 Most Visited US National Parks, 2022* (downloaded 4/30/2023 from morethanjustparks.com)

[9] Throughout this paper, "conservative" refers to assumptions and analyses that minimize expected positive effects of the proposed national monument or maximize expected negative effects. Thus, should assumptions or analyses become refined in the future, any changes are likely to increase, rather than reduce, this report's positive findings.

[10] A further reason to consider these estimates conservative is that the National Park Service analysis applied here is based on park visitor numbers in 2021, when travel volume nation-wide, including to the national parks, had only partially recovered from Covid-related downturns. With the strong rebound in travel since that time, it is likely that the volume of visits in the near future, and therefore the local economic contributions of all four National Park Service units, would be higher than are estimated here.

[11] *Yosemite Visitor Access Management Plan* (downloaded 4/30/2023 from https://www..nps.gov/yose/getinvolved/visitoraccessmanagment.html).

[12] In technical terms, the National Park Service's methodology provides what economists refer to as a "comparative statics analysis" and a "partial equilibrium analysis. [See, for example, Walter Nicholson and Christopher Snyder, *Intermediate Microeconomics and its Applications* (Cengage Learning, 2021), especially chapter 11.] In plain language, that means that it compares a "before" snapshot of local economic activities to an "after" snapshot without forecasting the pace of transition from the former to the latter or predicting ways in which the local economy might eventually adjust to the new arrangements. As the Yosemite example illustrates, such further adjustments tend to amplify, rather than decrease, the economic contributions estimated here, making the present estimates conservative.

[13] See *National Park Service Timeline (Annotated)* (downloaded 4/29/2023 from nps.gov/parkhistory/hisnps/).

[14] Margaret Walls, Patrick Lee, and Matthew Ashenfarb, "National Monuments and Economic Growth in the American West," *Science Advances* 6 (12, 18 March 2020).

[15] Andrea Szabo and Gergely Ujhelyi, *National Parks and Economic Development* (Economics Department, University of Houston, February 8, 2023).

[16] Y. Chen, D. Lewis, and B. Weber, "Conservation Land Economies and Regional Economics: A Post-Matching Difference in Difference Analysis of the Northwest Forest Plan," *Journal of Regional Science* 56 (2016), pp. 373-394; Y. Chen, D. Lewis, and B. Weber, "Natural Amenities and Skill Sorting in Rural Communities: A Case Study of Land Conservation Policy," *Annals of Regional Science* 67 (2021), pp. 649-669.

[17] E. Hjerpe, A. Hussaein, and T. Holmes, "Amenity Migration and Public Lands: Rise of the Protected Areas," *Environmental Management* 66 (April 2020), and E. Hjerpe, C. Armatas, and M. Haefele, "Amenity-Based Development and Protected Areas in the American West," *Land Use Policy* 116 (May 2022).

[18] Ben Wigert and Sangeeta Agrawal, *Returning to the Office: the Current, Preferred, and Future State of Remote Work* (downloaded 3/19/2023 from www.gallup.com), and Bryan Robinson, "Remote Work is Here to Stay and Will Increase into 2023, Experts Say," *Forbes* Feb. 1, 2022 (downloaded 3/19/2023 from forbes.com). According to these sources, more than 70 million U.S. workers can potentially perform their jobs partially or completely remotely, including 25% of all professional jobs.

[19] Researchers at the U.S. Forest Service have developed a scale measuring localities' ability to attract new residents based on natural amenities such as mild temperatures, low humidity, ample sun, varied topography, and access to water for recreation. This scale rates rural counties from 1 (lowest) to 7 (highest). On this scale, Fresno, Madera, and Tulare counties are rated 6, and Mariposa is rated 7 (*Natural Amenities Scale*, downloaded 3/18/2023from ers.usda.gov/data-products/natural-amenities-scale.aspx).

[20] For example, according to www.distance-cities.com, driving times from the Silver Lake community in the Sierra National Forest to the major metropolitan areas of San Jose, San Francisco, and Sacramento range between 3.5 and 4.0 hours.

[21] P. Jakus and S. Akhundjanov, "The Antiquities Act, National Monuments, and the Regional Economy," *Journal of Environmental Economics and Management* 1 (May 2019); P.M. Jakus and S. Akhundjanov, "Neither Boon Nor Bane: The Economic Effects of a Landscape-Scale National Monument," *Land Economics* 94 (2018), pp. 3232-339.

[22] Thomas P. Holmes, et al., "A Synthesis of Economic Values of Wilderness," *Journal of Forestry* 113 (June 2015); N. Christenson, "Local Economic Importance of Designated Wilderness," *International Journal of Wilderness* 17 (December 2011); and R. Reeder and D. Brown, *Recreation, Tourism, and Rural Well-Being,* Economic Research Service, U.S. Department of Agriculture, Economic Research Report 7, August 2005.

[23] *Giant Sequoia National Monument, A Summary of Economic Performance in the Surrounding Counties*, Spring 2017 (downloaded 4/28/2023 from www.headwaterseconomics.org).

[24] Hydroelectric power generation in the San Joaquin Gorge area is a fifth current economic activity within the proposed national monument. However, Section 9(b) of H.R. 9600 specifies that this activity would continue.

[25] U.S. Bureau of Labor Statistics, *Table 2.1, Employment by Major Industry Sector, 2021* (downloaded April 24, 2023 from bls.gov/emp/tables/employment-by-major-sector.html).

[26] Compound annual rate of change, 2021-2031, in U.S. Bureau of Labor Statistics, *Table 2.1, Employment by Major Industry Sector, 2021* (downloaded April 24, 2023 from bls.gov/emp/tables/employment-by-major-sector.html).

[27] For example, for each dollar of revenues in the mining sector, $.22 goes to workers' earnings. In the sectors reported as "arts, entertainment, recreation, accommodations, and food services," the comparable figure is $.59 per each dollar of revenue (M. Giandrea and S. Sprague, "Estimating the U.S. Labor Share," *Monthly Labor Review*, U.S. Bureau of Labor Statistics, February 2017).

[28] See Mark D. Partridge, *Rural America's Stagnant Economic Performance: What's the Role of Declining Dynamism* (Washington: American Enterprise Institute, February 2020, downloaded 4/25/2023 from aei.org/wp-contents/uploads/2020/02). For example, in 2016, 88,000 woodland acres in northern Maine were designated as a Katahdin Woods and Waters National Monument. This occurred in a sparsely-populated region with few employment alternatives in which the forest products industry, and consequently the entire local economy, had long been in steep decline. Since 1990, intense foreign competition, labor-saving technological change, and declining demand for pulp and paper had combined to eliminate 13,000 of that area's 17,000 logging-related jobs, or 76%. (George Wuerthner, "Why is Logging Dying? Blame the Market," *High Country News,* June 15, 2016, downloaded 4/24/2023 from hcn.org/articles).

[29] Caltrans, *Long-Term Socio-Economic Forecasts by County*, downloaded 4/25/2023 from dot.ca.gov/-/media/programs/transportation-planning/documents/data-analytics-services.

[30] Logging and timber processing in the region dates back to California's Gold Rush era, with the first sawmill constructed in 1854 and with more than 100 sawmills operating at various time prior to 1940. However, only a handful of mills, mostly small, operate today. See Eastern Fresno County Historical Society, *A Sawmill History of the Sierra National Forest* (downloaded 6/2/2023 from efchs.com/the-history-of-sawmills) and *Sawmills in Fresno County* (downloaded 6/2/2023 from www.yellowpages.com/fresno-ca/sawmills).

[31] *Fresno County General Plan Update, 4.10 Forestry Resources* (downloaded 4/24/2023 from www2.co.fresno.ca.us/4510/4360/General_Plan/PP_Final/EIR/EIR/Forestry410A.pdf).

[32] U.S. Bureau of Labor Statistics, "Logging Workers," in *Occupational Outlook Handbook* (downloaded 6/3/2023 from www.bls.gov/ooh/farming-fishing-and-forestry).

[33] Computed from "Living Near Public Lands" reports for the four counties in the Economic Profile System (EPS) of Headwaters Economics, Inc., (downloaded 4/18/2023 from https://headwaterseconomics.org/eps).

[34] Email communication from the U.S. Forest Service, circa 2015.

[35] *How Many Cows Does it Take to Make a Living as a Farmer?* (downloaded 4/26/2023 from faunafacts.com/cows/). Consistent with the latter assumption, the most recent U.S. Census of Agriculture nation-wide reported that 53% of the U.S. beef herd is owned by beef operations with 100 or more cows, a threshold sometimes used to differentiate part-time and full-time cattle ranching (David Widmer, *How Big? A Look at the Size of Beef Operations in the U.S.* (downloaded 4/26/2023 from https://aei.ag/2017/08/21/).

[36] This figure is consistent with other information provided in the source in endnote 34, namely, that at that time, permits had been issued to 22 permittees.

[37] See www.westernmininghistory.com and *The Sierra Nevada Mines Database, California Gold Rush History* at www.web-centric.net/mines.

[38] Economic Research Service, *County Typology Codes, Mining Dependence,* downloaded 4/23/2023 from https://www.ers.usda.gov/data-products/.

[39] Data in this paragraph is from thedigging.com/usa/California/lands, downloaded on 3/12/2023. The 35-acre figure is derived by dividing 5,618 claimed acres reported in this source by 161 claims.

[40] A map of claims is available at https://www.fs.gov/internet/FSE_DOCUMENTS/stelprod3801577.pdf.

[41] "*The Range of Light National Monument Would Link Yosemite and Sequoia-Kings Canyon National Parks*," downloaded 3/4/2023 from https://outsideonline.com/adenture-travel/news-analysis.

[42] U.S. Forest Service, *Recreation in the Sierra National Forest*, downloaded 5/16/2023 from www.fs.usda.gov/recmain/sierra/recreation.

[43] *Sierra National Forest Recreation Fee Program Accomplishments Highlights 2021* (downloaded 5/16/2023 from www.fs/usda.gov/internet/FSE_DOCUMENTS/fseprd1063786.pdf).

[44] See Table 1.

[45] For example, Section 6 (a) of H.R. 9600 allows up to three years for initial development of a management plan for the new national monument, and Section 6(c) allows up to ten years for phasing out of livestock grazing.

[46] See Table 1, Row 6.

[47] See Table 3, Row 5

[49] On this type of analysis, see, for example, Julien Claes et al., *Valuing Nature Conservation* (Mckinsey & Co, 2020); C. Perring & A. Kinzig (eds.), *Conservation: Economics, Science, and Policy* (Oxford *University Press, 2021);* or B. Norton, "Valuing Ecosystems," *Nature Education Knowledge 3 (10, 2012).*

[50] See, for example, X. Xiao, "Who Visits the National Parks (and Who Doesn't)? A National Study of Perceived Constraints and Vacation Preferences Across Diverse Populations," *Journal of Leisure Research* 53(3, 2022); D. H. Kyrmkowski, R.E. Manning, and W. A. Valliere, "Race, Ethnicity, and Visitation to the National Parks," *Journal of Outdoor Recreation* (7-8, 2014); and J. Weber, S. Sultana, "Why Do So Few Minority People Visit National Parks? Visitation and the Accessibility of 'America's Best Idea,'" *Annals of the Association of American Geographers* 103 (3, 2013). National Park Service visitor surveys in 2018 reported that Latinos and Asian American each made up less than 5% of visitors to national park sites, and African Americans less than 2% (Marissa Melton, "US Rangers on a Mission to Attract More African Americans to National Parks," *VOA,* March 30, 2021).

[51] See, for example, Stephanie Ebbs and Devin Dwyer, "America's National Parks Face Existential Crisis over Race," *ABC News*, July 1, 2020; Reyna Askew and Margaret Walls, *Diversity in the Great Outdoors: Is Everyone Welcome in America's Parks and Public Lands?* downloaded 4/15/2023 from www.resources.org; Emily Mott, "Mind the Gap: How to promote Racial Diversity Among National Park Visitors," *Vermont Journal of Environmental Law* 17 (2015-2016); and Amy Ando et al., *Looking at Environmental and Natural Resource Economics through the Lens of Racial Equity,* downloaded 3/30/2023 from www.resources.org.

[52] *New Report Highlights 12 Latino Heritage Landmarks in Need of Protection*, December 2022, downloaded 4/15/2023 from hispanicaccess.org/news-resources.

[53] Computed by the author from Table 2 of the source cited in endnote 3.