

Jobs and Income

Economic Contributions in 2016

At A Glance



Sierra National Forest

In 2016, the Sierra National Forest supported:

- An estimated **1,770 jobs** (annual average of part time, full time, temporary and seasonal), and
- Around **\$95,362,000** of **labor income** in local communities.



For More Information:

[Economics for Planning website](https://www.fs.fed.us/emc/economics/index.shtml)
(<https://www.fs.fed.us/emc/economics/index.shtml>)



How do National Forests and Grasslands Contribute to Economies?

National Forests and Grasslands provide multiple benefits to the American people and to local communities. They provide clean air and water, preserve cultural resources, and conserve lands for the enjoyment of present and future generations.

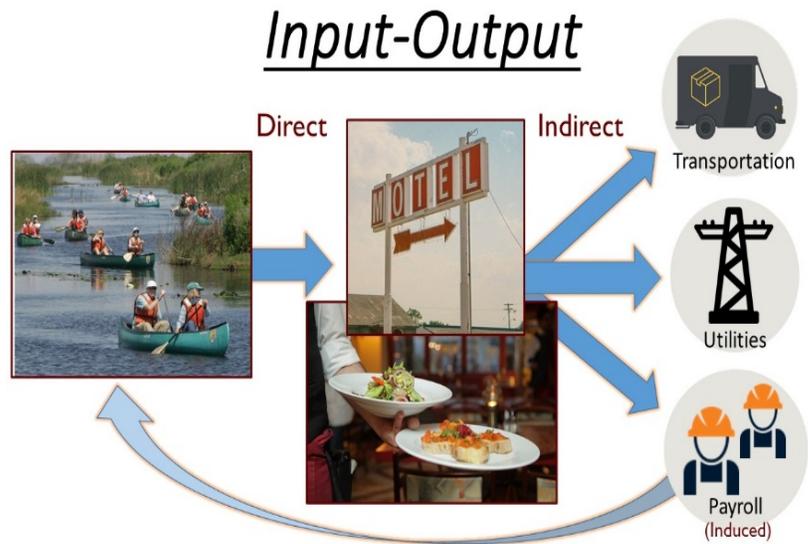
They also support local economies through recreation, timber, energy, minerals, and livestock grazing. In addition, counties with national forests or grasslands receive funds to support schools, road maintenance, and stewardship projects. The Forest Service also invests in such things as the construction and maintenance of infrastructure, environmental restoration, and forest health. In 2016, the sum of these activities on the Sierra National Forest supported approximately 1,770 local jobs and \$95,362,000 in local labor income.

Why Report Jobs and Income?

Residents and local government officials in surrounding communities have interest in how management of the National Forests and Grasslands affects local economies.

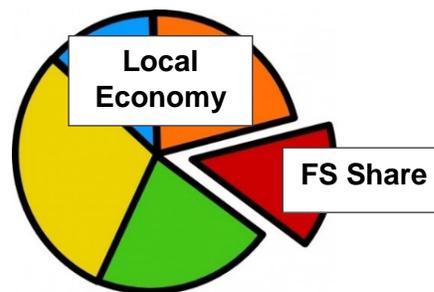
Analysis Methods: How a contribution analysis is constructed

1 A software and data package called [IMPLAN](http://www.implan.com) (www.implan.com) is used to characterize the structure of the local economy and how the different pieces of the economy interact (an "Input-Output" model).



2 Forest Service data for Program outputs from the Sierra National Forest is added to the model: recreation (including fish and wildlife related), livestock grazing, forest products, energy, minerals, payments to states, and the Forest Service budget.

3 The model then estimates the economic links between natural resource management on the Sierra National Forest and local jobs and income.



Resource Management Outputs from Forest Service Lands

National Forests and Grasslands are managed for multiple uses. Table 1 shows the Program outputs which were used to estimate the tie between management actions and economic activity in communities around the Sierra National Forest.

Table 1: Forest Service Resource Outputs by Program for the Sierra National Forest during 2016 (for data sources, see page 8).

Program	Activity	Units of Measure	Output in 2016	
Recreation	Wildlife and Fish - Locals	Visits	24,329	
		Expenditures (Thousands of \$2016)	\$478	
	Non-residents	Visits	16,906	
		Expenditures (Thousands of \$2016)	\$1,271	
	Downhill ski/snowboarding - Locals	Visits	26,837	
		Expenditures (Thousands of \$2016)	\$1,044	
	Non-residents	Visits	30,264	
		Expenditures (Thousands of \$2016)	\$3,708	
	All Other Rec Activities - Locals	Visits	327,465	
		Expenditures (Thousands of \$2016)	\$5,055	
	Non-residents	Visits	184,199	
		Expenditures (Thousands of \$2016)	\$15,178	
	Grazing	Cattle, Horses, Sheep, Goats	AUMs	20,141
	Timber	Sawtimber	CCF	17,147
		Fuelwood	CCF	4,399
		Pulp, Poles, All Other	CCF	306
Value of Minerals & Energy Produced	Energy (coal, oil, gas, geothermal)	(Thousands of \$2016)	\$0	
	Minerals	(Thousands of \$2016)	\$0	
Payments to States/Counties	25% fund, Secure Rural Schools, Royalties.	(Thousands of \$2016)	\$1,704	
	Payments in Lieu of [property] Taxes	(Thousands of \$2016)	\$2,605	

Job Contributions by Program

Jobs supported by the National Forests and Grasslands are often in small, rural communities and are therefore an important contribution to economic and social sustainability. Employment is the estimate of average annual full-time, part-time, temporary, and seasonal jobs. In 2016, the Sierra National Forest supported an estimated 1,770 jobs in the local area. Direct job contributions come from economic activity associated with a Forest Service Program. Secondary job contributions are the ripples of economic activity stimulated by the direct economic activity. Total job contributions are the sum of direct and secondary contributions.

Table 2: Direct and Total jobs supported by the Sierra National Forest in 2016.

Program	Direct Jobs (Avg Annual)	Total Jobs (Avg Annual)
Recreation by Local Visitors	60	80
Recreation by Non-Local Visitors	180	240
Minerals and Energy	0	0
Forest Products	70	130
Livestock Grazing	20	80
FS Resource Mgt Investments	860	1,170
Payments to States/Counties	50	70



The estimates for Recreation (including wildlife related), Minerals & Energy, Forest Products, and Livestock Grazing estimates include the jobs supported by these programs in the private sector. Non-local recreation visitors bring new money into the economy. Local recreationists spend money that is already counted in the economic statistics for the area so they are tracked independently.

Forest Service Resource Management Investments capture the spending of the National Forest or Grassland’s budget on such things as infrastructure construction and maintenance, ecosystem restoration, fuels treatments, salaries, etc.

The Payments to States/Counties estimates the jobs supported by local government investment in such things as roads and schools via funding from programs like the 25% Fund, Payments in Lieu of Taxes and minerals royalties.

NOTE: What is a “job”? **One “job” does not always equal one person.** The job estimates reported here represent the average annual SUM of portions of jobs - part time, full time, seasonal and temporary – that are supported by management of the Sierra National Forest.

Keeping the Focus Local

Labor Income is directly associated with local jobs and business owners. Other measures of income such as Household Income and Total Income include things like investments, rents, and transfer payments that are not tied to Forest Service management decisions so they are not reported here.

As direct and secondary contributions ripple through the economy, Labor Income is supported in a wide variety of sectors not directly affected by resource management decisions.

Labor Income Contributions by Major Program

Labor income is the value of wages, salaries and benefits for wage earners plus income to local business owners. In 2016 Sierra National Forest contributed an estimated \$95,362,000 in labor income to the local area, with 87% going to wages and benefits for local wage earners and 13% going to local business proprietors and partnerships.

Table 3: Direct and Total Labor Income supported by the Sierra National Forest in 2016.

Program	Direct Labor Income (Annual, 1,000 \$2016)	Total Labor Income (Annual, 1,000 \$2016)
Recreation by Local Visitors	\$1,751	\$2,557
Recreation by Non-Local Visitors	\$5,249	\$7,760
Minerals and Energy	\$0	\$0
Forest Products	\$3,856	\$6,565
Livestock Grazing	\$119	\$2,810
FS Resource Mgt Investments	\$57,691	\$71,083
Payments to States/Counties	\$3,650	\$4,587



Job and Labor Income Contributions by Major Economic Sector

Jobs and labor income supported by the National Forests and Grasslands are spread across many local economic sectors. Note that sectors that have the highest employment may not generate the highest labor income and vice versa. Jobs and income are important, but there is a range of other benefits from the national forests and grasslands.

Table 4: Total Jobs and Labor Income supported by the Sierra National Forest in 2016 with local economic area of influence totals for context.

Major Economic Sector	FS Supported Jobs (Avg. annual)	FS Supported Labor Income (1,000 \$2016)	Area of Influence Jobs (Avg. annual)	Area of Influence Labor Income (1,000 \$2016)
Total	1,770	\$95,362	1,666,470	\$89,413,766
FS Percent of Area of Influence	0.1%	0.1%		
Accommodation & Food Servs	230	\$5,911	115,115	\$2,777,522
Admin, Waste Mgt & Rem Servs	50	\$1,404	86,269	\$2,450,566
Agriculture	100	\$3,820	240,315	\$13,033,783
Arts, Entertainment, and Rec	40	\$724	19,525	\$381,109
Construction	10	\$626	76,467	\$4,159,029
Private Educational Services	10	\$320	13,341	\$340,083
Finance & Insurance	30	\$1,224	46,982	\$2,132,237
Health Care & Social Assistance	90	\$5,238	185,819	\$10,152,765
Information	10	\$522	10,835	\$848,684
Local, State, & National Gov't	670	\$53,181	260,074	\$21,957,192
Manufacturing	40	\$2,392	105,151	\$6,896,984
Mining	0	\$182	17,776	\$1,905,419
Mgt of Companies	10	\$408	10,467	\$837,101
Other Services	60	\$2,977	83,033	\$3,868,851
Prof, Scientific, & Tech Services	210	\$7,283	66,359	\$3,649,474
Real Estate & Rental & Leasing	30	\$956	54,413	\$1,459,017
Retail Trade	130	\$4,543	57,120	\$3,270,805
Transportation & Warehousing	30	\$1,823	156,619	\$5,352,863
Utilities	0	\$166	5,428	\$827,926
Wholesale Trade	30	\$1,658	55,363	\$3,112,357

Additional Information

Contact Us:

For general inquiries, [contact the Washington Office EMC social scientists and economists: \(socioeconomics@fs.fed.us\)](mailto:socioeconomics@fs.fed.us).

For local inquiries, please see the [list of regional social science and economics contacts](https://www.fs.fed.us/emc/economics/contactus.shtml) (<https://www.fs.fed.us/emc/economics/contactus.shtml>).

Useful Links:

Additional information on economic contributions and benefits to people is available on the [Economics for Planning website](http://www.fs.fed.us/emc/economics/index.shtml) (<http://www.fs.fed.us/emc/economics/index.shtml>).

- General information about the use of economics in the Forest Service.
- At a Glance reports and Story Maps for all national forests and grasslands covering Jobs and Income and Benefits to People.
- [Frequently Asked Questions](#) and a [Glossary](#) are also available.

[The National Visitor Use Monitoring Program](https://www.fs.fed.us/recreation/programs/nvum/) has detailed information on recreation visitation (<https://www.fs.fed.us/recreation/programs/nvum/>).

[The “Headwaters Economics” website](http://www.headwaterseconomics.org/) (<http://www.headwaterseconomics.org/>) maintains several useful reports including [National Forest Socioeconomic Indicators](http://www.headwaterseconomics.org/tools/forest-indicators) (www.headwaterseconomics.org/tools/forest-indicators) - area profiles that can be consulted for a deeper dive into the social and economic characteristics of the area. There are also reports which include important information for consideration of outreach and effects to Environmental Justice populations.

Data Sources:

- Recreation data are from the [National Visitor Use Monitoring Survey](https://www.fs.fed.us/recreation/programs/nvum/) (<https://www.fs.fed.us/recreation/programs/nvum/>), Round 4.
- Grazing Animal Unit Months (AUM) data are found in the [Rangeland Management Reports](https://www.fs.fed.us/rangeland-management/reports/index.shtml) (<https://www.fs.fed.us/rangeland-management/reports/index.shtml>)
- Timber Harvest data are found in the [Forest Service Forest Management Cut and Sold Reports](https://www.fs.fed.us/forestmanagement/products/cut-sold/index.shtml) (<https://www.fs.fed.us/forestmanagement/products/cut-sold/index.shtml>)
- Minerals and Energy Revenues are reported by the [Office of Natural Resources Revenue](https://www.onrr.gov/) (<https://www.onrr.gov/>)
- Federal Revenues which are returned to the States and Counties are found on the [Payments to States website](https://www.fs.usda.gov/pts) (<https://www.fs.usda.gov/pts>) and [Payments in Lieu of Taxes website](https://www.doi.gov/pilt/) (<https://www.doi.gov/pilt/>)