Jobs and Income

Economic Contributions in 2016
At A Glance

Inyo National Forest

In 2016, the Inyo National Forest supported:

- An estimated **4,910 jobs** (annual average of part time, full time, temporary and seasonal), and
- Around **$169,322,000** of **labor income** in local communities.

For More Information:

Economics for Planning website (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.

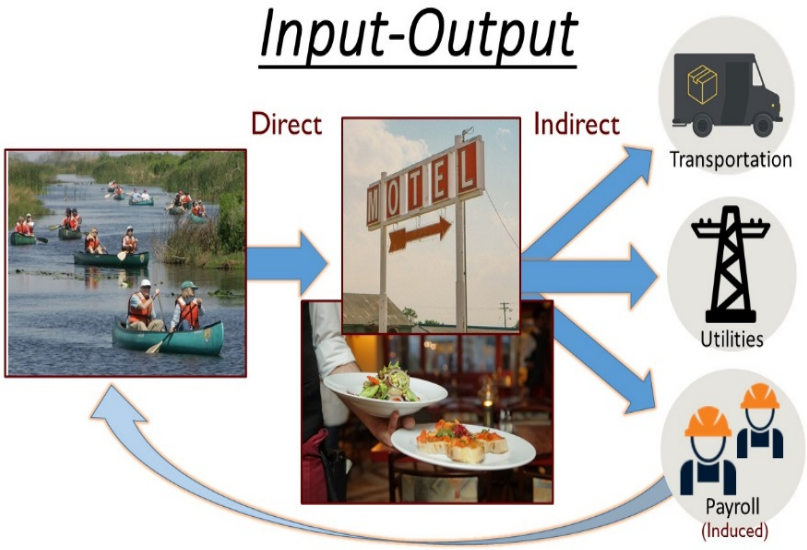
They also support local economies through recreation, timber, energy, minerals, and livestock grazing. In addition, counties with national forests or grasslands receive funds to support schools, road maintenance, and stewardship projects. The Forest Service also invests in such things as the construction and maintenance of infrastructure, environmental restoration, and forest health. In 2016, the sum of these activities on the Inyo National Forest supported approximately 4,910 local jobs and $169,322,000 in local labor income.

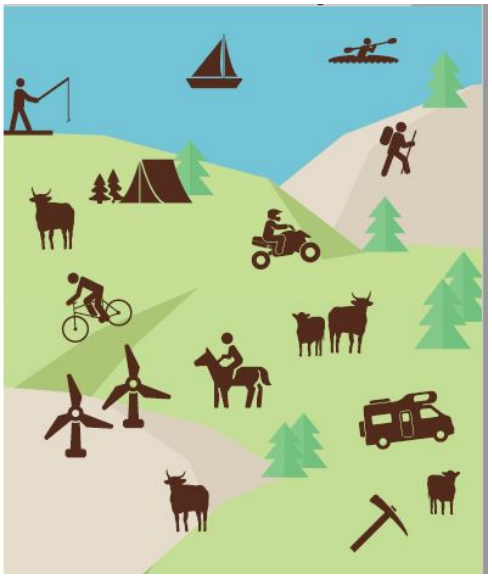
Why Report Jobs and Income?

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

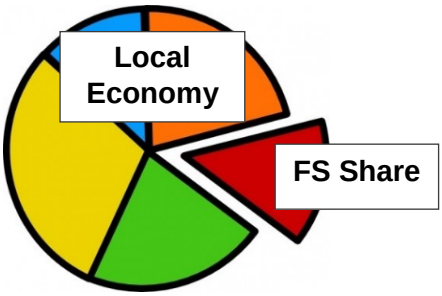
1 A software and data package called IMPLAN (www.implan.com) is used to characterize the structure of the local economy and how the different pieces of the economy interact (an "Input-Output" model).





2 Forest Service data for Program outputs from the Inyo 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 Inyo National Forest and local jobs and income.



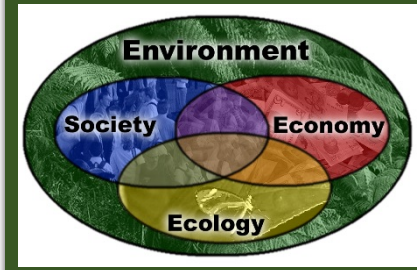
Resource Management Outputs from Forest Service Lands

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 Inyo National Forest.

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

Program	Activity	Units of Measure	Output in 2016
Recreation	Wildlife and Fish - Locals	Visits	51,144
		Expenditures (Thousands of $2016)	$970
	Non-residents	Visits	108,681
		Expenditures (Thousands of $2016)	$20,517
	Downhill ski/snowboarding - Locals	Visits	164,158
		Expenditures (Thousands of $2016)	$3,450
	Non-residents	Visits	582,014
		Expenditures (Thousands of $2016)	$143,056
	All Other Rec Activities - Locals	Visits	702,002
		Expenditures (Thousands of $2016)	$4,998
	Non-residents	Visits	702,002
		Expenditures (Thousands of $2016)	$160,164
Grazing	Cattle, Horses, Sheep, Goats	AUMs	20,110
Timber	Sawtimber	CCF	0
	Fuelwood	CCF	4,230
	Pulp, Poles, All Other	CCF	0
Value of Minerals & Energy Produced	Energy (coal, oil, gas, geothermal)	(Thousands of $2016)	$13,972
	Minerals	(Thousands of $2016)	$2
Payments to States/Counties	25% fund, Secure Rural Schools, Royalties.	(Thousands of $2016)	$242
	Payments in Lieu of [property] Taxes	(Thousands of $2016)	$1,347

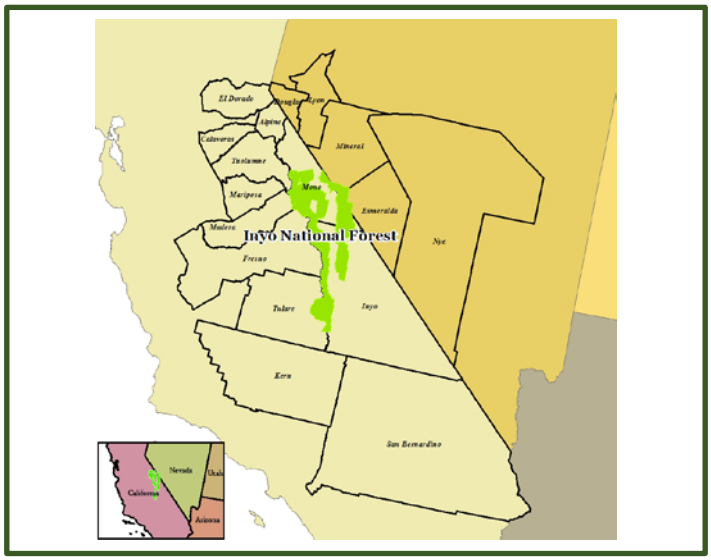
The counties selected to form a National Forest or Grassland's economic area of influence are chosen based on where FS management decisions have a direct effect on economic activity. This group of counties is also referred to as the "study area" or "impact area." The contributions of natural resource management on the National Forests and Grasslands ripple through the local economy, supporting jobs and income in many different sectors of the economy.



The values presented in this report are the best estimates to date, however they are subject to change as new data become available. The estimates for 2016 were last revised in September, 2018.

Economic Area of Influence

Economic areas of influence oftentimes differ by the resource under investigation, surrounding geography, and overall analysis objectives. The estimates in this report are generated for the area around the Inyo National Forest where direct Forest Service related expenditures occur. Other objectives, i.e. for forest planning, NEPA project analysis, etc. often focus on a different geography. The map below shows where Forest Service related direct expenditures occur, including: recreation and wildlife visitor spending, the location of grazing permit holders, the location of logging and restoration firms, mills processing FS wood products, the counties receiving returns to states funds and payments in lieu of taxes, the location of Forest Service budget expenditures, and the salary spending by Forest Service employees.



Note: To avoid double counting, the results for individual forests and grasslands in an area cannot simply be summed together to get meaningful regional or state contribution results because of overlapping economic areas of influence.

The presentation of data by Program (recreation, timber, etc.) provides a convenient way of displaying the economic contributions of Forest Service activities. It does not mean that the economic contributions can be fully attributed to individual program areas, nor that economic contributions can be compared across programs. Joint cost and joint production complicate programmatic comparisons. For example, an increase in timber harvest would support an increase in local economic contributions from logging and the forest products industry. However, there are associated effects such as fire mitigation, wildlife habitat restoration, recreation access, and so on that share production costs and are not individually captured in the calculation of economic contributions.

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 Inyo National Forest supported an estimated 4,910 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 Inyo National Forest in 2016.**

Program	Direct Jobs (Avg Annual)	Total Jobs (Avg Annual)
Recreation by Local Visitors	140	180
Recreation by Non-Local Visitors	3,120	4,100
Minerals and Energy	40	80
Forest Products	10	10
Livestock Grazing	40	90
FS Resource Mgt Investments	310	420
Payments to States/Counties	20	30

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 Inyo 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 Inyo National Forest contributed an estimated $169,322,000 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 Inyo National Forest in 2016.**

Program	Direct Labor Income (Annual, 1,000 $2016)	Total Labor Income (Annual, 1,000 $2016)
Recreation by Local Visitors	$4,046	$5,812
Recreation by Non-Local Visitors	$89,181	$129,655
Minerals and Energy	$4,076	$5,802
Forest Products	$397	$534
Livestock Grazing	$176	$2,199
FS Resource Mgt Investments	$18,826	$23,353
Payments to States/Counties	$1,584	$1,968

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 Inyo 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	4,910	$169,322	2,358,838	$122,963,897
FS Percent of Area of Influence	0.2%	0.1%		
Accommodation & Food Servs	2,370	$65,556	173,505	$4,270,266
Admin, Waste Mgt & Rem Servs	170	$4,661	156,486	$4,546,411
Agriculture	80	$2,299	197,656	$9,973,152
Arts, Entertainment, and Rec	490	$9,842	34,013	$721,010
Construction	30	$1,680	121,937	$6,570,147
Private Educational Services	130	$3,165	26,748	$846,958
Finance & Insurance	60	$2,884	75,311	$3,455,049
Health Care & Social Assistance	150	$8,519	271,887	$14,122,107
Information	20	$1,795	18,462	$1,420,765
Local, State, & National Gov't	290	$20,293	345,807	$29,766,535
Manufacturing	20	$1,608	130,509	$8,602,487
Mining	10	$735	20,137	$2,093,553
Mgt of Companies	20	$1,202	15,186	$1,179,029
Other Services	110	$5,500	136,309	$6,203,822
Prof, Scientific, & Tech Services	130	$5,291	106,769	$5,778,767
Real Estate & Rental & Leasing	100	$2,648	85,315	$2,089,216
Retail Trade	510	$17,529	120,818	$6,792,538
Transportation & Warehousing	100	$5,229	232,734	$7,809,560
Utilities	50	$4,624	8,341	$1,201,387
Wholesale Trade	60	$4,263	80,907	$5,521,140

Additional Information

Contact Us:

For general inquiries, contact the Washington Office EMC social scientists and economists: (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).

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).

- 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 has detailed information on recreation visitation (https://www.fs.fed.us/recreation/programs/nvum/).

The "Headwaters Economics" website (http://www.headwaterseconomics.org/) maintains several useful reports including National Forest Socioeconomic 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/), 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)
- 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)
- Minerals and Energy Revenues are reported by the Office of Natural Resources Revenue (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) and Payments in Lieu of Taxes website (https://www.doi.gov/pilt/)