

Jobs and Income

Economic Contributions in 2015

At a Glance Report



El Yunque National Forest



Why are Forests and Grasslands Economically Important?

National Forests and Grasslands contribute to economic activity in the areas surrounding them by providing recreational opportunities as well as timber, energy and minerals, and livestock grazing. Payments to states and counties from US Forest Service (FS) program revenues and royalties support schools, road maintenance, stewardship projects and county government operations. Additionally, FS investments in infrastructure, ecosystem restoration, forest health, and salaries further support jobs and income in local economies. This report shows estimates for these activities taking place on the El Yunque National Forest in 2015.

Why Report Jobs and Income?

There are many ways the National Forests and Grasslands benefit local communities and the nation: providing ecosystem services such as clean air and water, giving families and children a relationship with nature, preserving cultural and natural treasures for future generations, etc. The focus is on jobs and income in this report because many people, particularly in local communities, identify with how management of the National Forests and Grasslands affects their ability to work and earn income.

In 2015, the El Yunque National Forest supported:

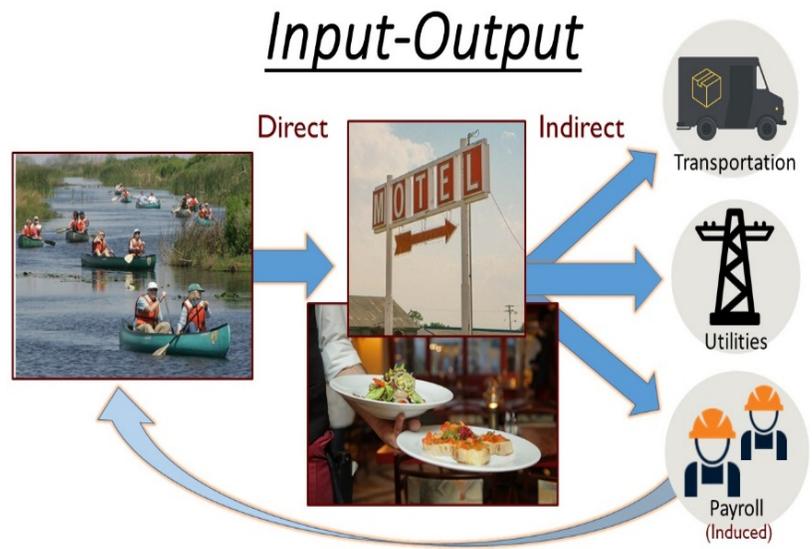
- An estimated 935 jobs annually in local communities, and
- Around \$36,137,000 of annual labor income.
 - 88% went to pay and benefits for wage earners in the area.
 - 12% went to local business sole proprietors and partnerships.

For more information:

<https://www.fs.fed.us/emc/economics/index.shtml>

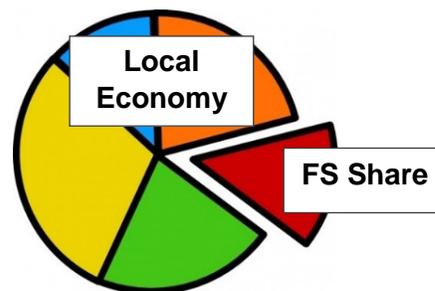
Analysis Methods: How a contribution analysis is constructed

- 1 A software and data package, IMPLAN (www.implan.com) is used to characterize the structure of the local economy and how the different pieces of the economy interact and are inter-related.



- 2 Agency natural resource management data for the National Forest or Grassland is added to the model for recreation, wildlife and fish, range, forest products, minerals, payments to states, and forest budgets.

- 3 A model is built and run for the area which estimates direct and secondary contribution links between FS resource management and the local economy. Secondary contributions include both Indirect and Induced effects, as referenced in the above diagram.



Resource Management Outputs

National Forests and Grasslands are managed for multiple uses. This report uses Forest Service datasets on outputs from natural resource management to estimate the quantitative tie between management actions and economic activity in economies around the national forests and grasslands.

Table 1: Resource outputs by Program in El Yunque National Forest during 2015

Program	Activity	Units of Measure	Output in 2015
Recreation Visits	Wildlife and Fish	Visits by Locals	10,434
		Visits by Non-Residents	59,128
	Downhill ski/snowboarding	Visits by Locals	0
		Visits by Non-Residents	0
	All Other Recreation Activities	Visits by Locals	79,974
		Visits by Non-Residents	390,464
Grazing		AUMs	0
Timber	Sawtimber	CCF	36,793
	Fuelwood	CCF	20,730
	Pulp, Poles All Other	CCF	20,113
Minerals & Energy Revenues	Energy (coal, oil, gas, geothermal)	Thous. 2015 dollars	\$0
	Minerals	Thous. 2015 dollars	\$0
Returns to States/Counties	25% fund, Secure Rural Schools, Royalties.	Thous. 2015 dollars	\$128
	Payments in Lieu of Taxes	Thous. 2015 dollars	\$9

The counties selected to form a National Forest and 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 values presented in this report are the best estimates to date, however they are subject to change as new data become available. The values reported here are the most recent estimates as of February 14, 2018

Economic Area of Influence

Each National Forest has a unique economic area of influence, some of which may overlap with other forests. To avoid double counting, the results for the individual forests in a region cannot be simply summed together to get meaningful regional or state contribution results.



The contributions of natural resource management on the National Forests and Grasslands ripple through the local economy, supporting jobs in many different sectors of the economy.

Note: The presentation of data by Resource Area provides a convenient way of displaying the economic contributions of FS activities associated with the production of specific resource outputs off of National Forests and Grasslands. It does not imply that the economic contributions can be fully attributed to individual program areas, nor that economic contributions can be meaningfully compared across programs. Joint cost and joint production issues complicate programmatic comparisons. For example, an increased timber harvest would show an increase in local economic contributions from logging and output from the forest products industry, however, there are associated fire mitigation, wildlife habitat restoration, recreation access effects, etc., that share production costs and are not fully captured in the calculation of economic contributions.

Employment 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 2015, the El Yunque National Forest supported an estimated 935 jobs in the local area. Direct contributions come from economic activity associated with an FS program. Secondary contributions are the ripples of economic activity spurred by direct contributions. Total contributions are the sum of Direct and Secondary effects.

Table 2: Direct and Total employment supported by the El Yunque National Forest in 2015.

Program	Direct Employment (Avg Annual Jobs)	Total Employment (Avg Annual Jobs)
Recreation by Local Visitors	26	34
Recreation by Non-Local Visitors	493	627
Minerals and Energy	0	0
Forest Products	124	219
Livestock Grazing	0	0
FS Resource Mgt Investments	30	59
Payments to States/Countries	1	1



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.

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

The Payments to States/Countries estimates the jobs supported in local government, roads and schools by returns from programs such as Secure Rural Schools, Payments in Lieu of Taxes and minerals royalties.

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 sole business proprietors and partnerships. In 2015 El Yunque National Forest contributed an estimated \$36,137,000 in labor income to the local area.

Table 3: Direct and Total Labor Income supported by the El Yunque National Forest in 2015.

Program	Direct Labor Income (Annual 1,000 \$2015)	Total Labor Income (Annual 1,000 \$2015)
Recreation by Local Visitors	\$678	\$972
Recreation by Non-Local Visitors	\$13,056	\$18,273
Minerals and Energy	\$0	0
Forest Products	\$7,067	\$13,066
Livestock Grazing	\$0	0
FS Resource Mgt Investments	\$2,856	\$3,784
Payments to States/Counties	\$27	\$42



Employment and Labor Income Contributions by Major Economic Sector

Total (direct plus secondary) employment and labor income supported by management of 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.

Table 4: Total Employment and Labor Income supported by the El Yunque National Forest in 2015 with local economic area of influence totals for context.

Major Economic Sector	FS Supported Employment (Avg. annual)	FS Supported Labor Income (1,000 \$2015)	Area of Influence Employment	Area of Influence Labor Income
Total	902	\$35,165	902,841	\$36,752,023
FS Percent of Area of Influence	0.1%	0.1%		
Accommodation & Food Servs	416	\$10,555	76,462	\$1,706,978
Admin, Waste Mgt & Rem Servs	22	\$775	69,930	\$2,031,866
Agriculture	51	\$2,370	16,863	\$632,854
Arts, Entertainment, and Rec	40	\$1,027	3,760	\$119,783
Construction	3	\$174	24,791	\$1,069,049
Educational Services	19	\$705	30,956	\$1,131,656
Finance & Insurance	12	\$881	29,461	\$1,981,689
Health Care & Social Assistance	50	\$2,128	85,878	\$3,340,180
Information	8	\$457	19,841	\$1,264,893
Local, State, & National Gov't	21	\$2,169	224,137	\$7,274,854
Manufacturing	89	\$5,473	73,893	\$4,986,466
Mining	0	\$0	544	\$19,665
Mgt of Companies	3	\$298	12,136	\$905,399
Other Services	11	\$596	17,252	\$837,244
Prof, Scientific, & Tech Services	21	\$1,838	30,063	\$2,046,165
Real Estate & Rental & Leasing	8	\$477	12,826	\$700,002
Retail Trade	88	\$2,630	14,540	\$687,505
Transportation & Warehousing	14	\$697	128,812	\$3,967,279
Utilities	0	\$27	354	\$53,603
Wholesale Trade	24	\$1,889	30,343	\$1,994,893

Additional Information

Contact Us:

For general inquiries, contact Washington Office EMC social scientists and economists:
socioeconomics@fs.fed.us

For region-specific social science and economics inquiries, find your contact:
<http://fsweb.wo.fs.fed.us/economics/contactus.shtml>

Useful Links:

Additional Economic Contribution information is available on the FS 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. The Benefits to People Story Map is currently in development. If you would like more information about the Benefits to People Story Map please email Henry Eichman at henryeichman@fs.fed.us
- Frequently Asked Questions: <http://www.fs.fed.us/emc/economics/contributions/faqs.shtml>

The National Visitor Use Monitoring Program has info on recreation visitation:

<https://www.fs.fed.us/recreation/programs/nvum/>

"Headwaters Economics" maintains several useful reports including National Forest Socioeconomic 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:

www.headwaterseconomics.org

