

# Regional Economic Impacts of the Four Forests Restoration Initiative (4FRI) in Northern Arizona in 2023



The Nature Conservancy's Walker Hill Demo Project on the Coconino National Forest ©TNC

A regional economic contribution analysis of the Four Forest Restoration Initiative (4FRI) was conducted for 2023, illustrating regional employment and output from the 4FRI in five northern Arizona counties (Apache, Coconino, Gila, Greenlee, and Navajo Counties). Forest restoration in regions with high wildfire risk is done primarily through thinning and prescribed burning. The US Forest Service (USFS)

works with contractors to conduct forest restoration thinning for the 4FRI as well as implements most of the prescribed burns. These activities, along with subsequent wood utilization of thinned material, provide employment opportunities in rural forested communities and indirectly generate additional output in the form of goods and services needed to log and produce wood products.

**Table 1: Total 2023 4FRI Regional Economic Contributions (\$)**

Impact Type	Employment*	Labor Income	Value Added**	Output
Direct Effect	564.0	\$36,730,236	\$68,879,325	\$148,514,383
Indirect Effect <sup>1</sup>	298.6	\$11,538,978	\$23,289,877	\$44,479,098
Induced Effect <sup>2</sup>	141.5	\$6,543,597	\$13,826,822	\$23,821,145
<b>Total Effect</b>	<b>1,004.1</b>	<b>\$54,812,810</b>	<b>\$105,996,024</b>	<b>\$216,814,627</b>
<b>Multiplier Effect<sup>3</sup></b>	<b>1.78</b>	<b>1.49</b>	<b>1.54</b>	<b>1.46</b>

Source: IMPLAN, Northern Arizona Region 2022, Type SAM Multipliers

\*Includes full- and part-time jobs.

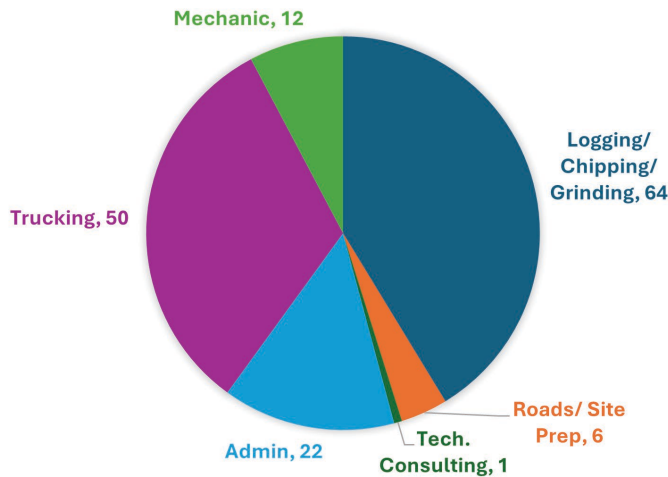
\*\* Value added is the difference between an industry's total output and its intermediate inputs. It includes employee compensation, taxes, and surplus.

<sup>1</sup> Business to business purchases in the supply chain

<sup>2</sup> The values stemming from household spending of Labor Income

<sup>3</sup> The amount of additional employment, income or output generated for every direct job or dollar

Figure 1: Detailed 4FRI Mechanical Thinning Employment for 2023



## Economic Highlights

- » 1,000 full and part-time jobs were sustained by the 4FRI activities in northern Arizona, with a **regional output of over \$216 million**
- » **Multiplier effects** ranged from **1.46 to 1.78**
- » Thus, the 4FRI activities have a substantial economic impact on the rural communities and residents that live adjacent to these national forests.

Table 2: Top Ten Regional Employment for 4FRI in 2023 (\$)

Industry Description	Total Employment*	Total Value Added**	Total Output
Commercial logging	230.00	\$30,469,758	\$39,608,697
Support activities for agriculture and forestry	98.01	\$2,344,751	\$2,842,250
Sawmills	90.23	\$4,920,017	\$37,434,907
Employment and payroll of federal govt, non-military	77.00	\$11,627,424	\$11,627,424
Truck transportation	60.04	\$6,464,205	\$13,659,149
All other crop farming	44.77	\$50,143	\$92,609
Maintenance and repair construction of highways, streets, bridges, and tunnels	39.00	\$3,230,073	\$9,025,946
Construction of new highways and streets	33.00	\$2,326,405	\$4,874,441
All other miscellaneous wood product manufacturing	29.34	\$2,066,586	\$7,845,318
Electric power generation – Restoration Residuals	24.74	\$13,197,126	\$33,477,418

Source: IMPLAN, Northern Arizona Region 2022, Type SAM Multipliers, Total Effects include Indirect and Induced Effects.

\*Includes full and part-time jobs.

\*\* Value added is the difference between an industry's total output and its intermediate inputs. It includes employee compensation, taxes, and surplus.

The survey and report were completed in November 2024 for The Nature Conservancy (TNC) by Conservation Economics Institute (Evan Hjerpe and Anne Mottek Lucas). Additional acknowledgments include 4FRI Operations Coordinator (Brett Cray), Campbell Global, and the Arizona Department of Forestry and Fire Management (DFFM).

### For more information contact TNC AZ Forest Program:

**Joel Jurgens**  
Program Director  
joel.jurgens@tnc.org

**Nicole Kennan**  
Project Manager  
nicole.kennan@tnc.org

**Kevin Dickinson**  
Spatial Data Manager  
kevin.dickinson@tnc.org

**Travis Woolley**  
Forest & Fire Ecologist  
twoolley@tnc.org

[nature.org/arizona](https://nature.org/arizona)  
[azconservation.org](https://azconservation.org)