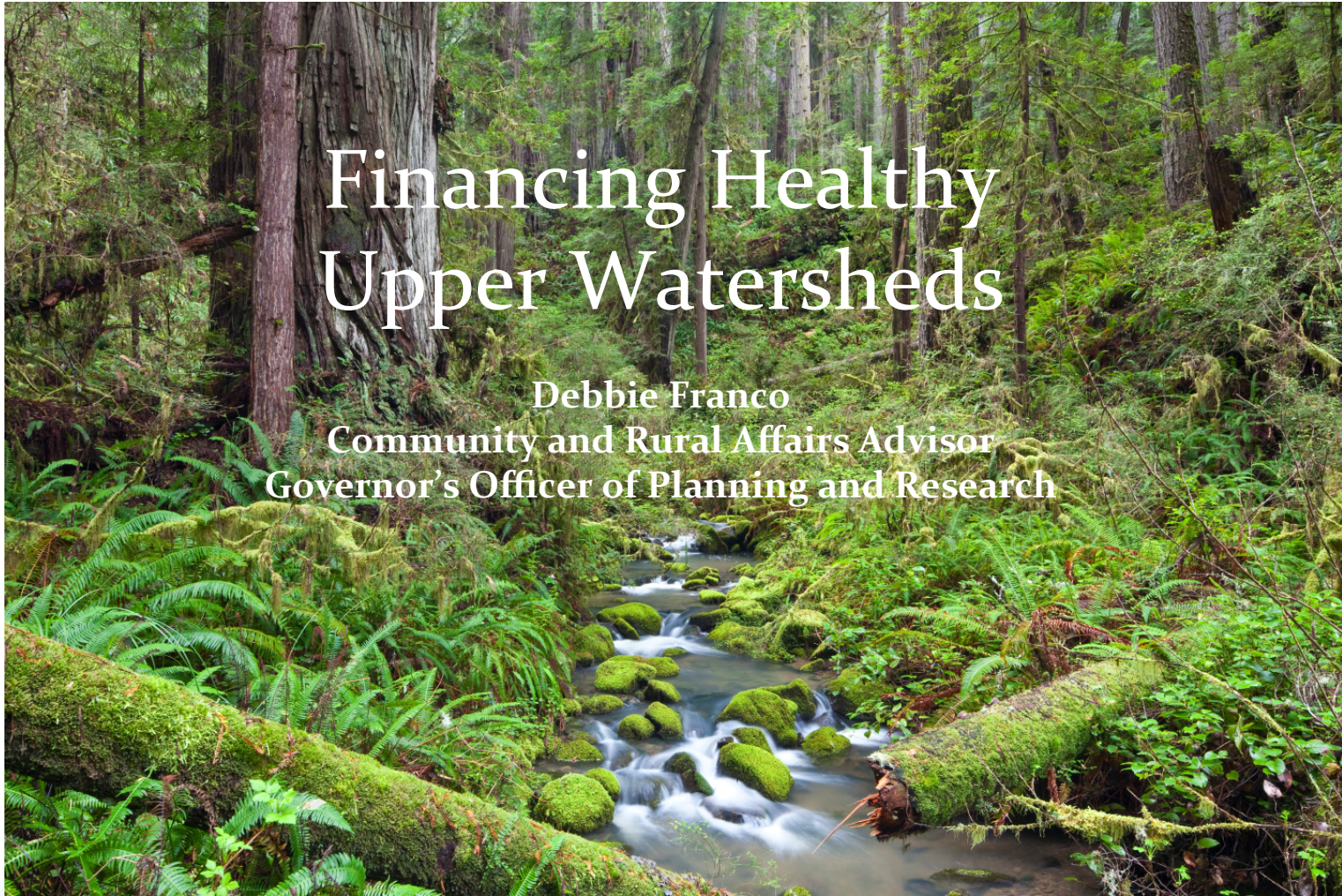




# Financing Healthy Upper Watersheds

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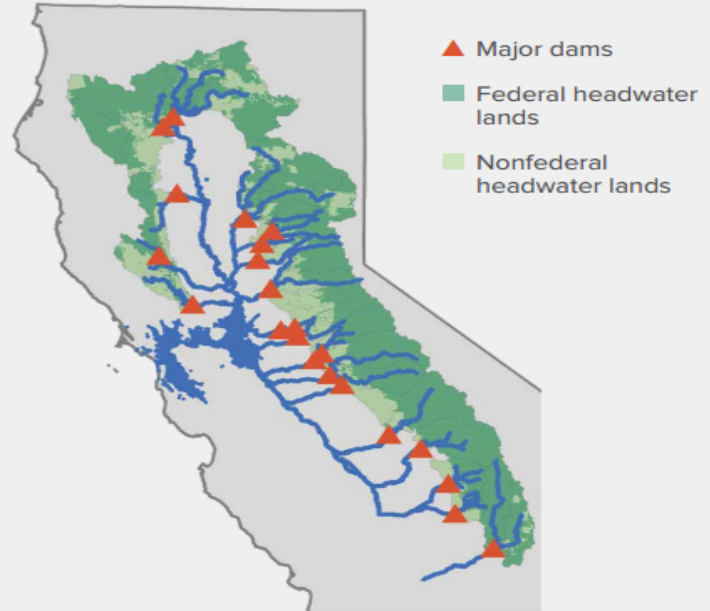
# California's Upper Watersheds



CALIFORNIA



THE FEDERAL GOVERNMENT OWNS MOST OF THE LAND ABOVE THE STATE'S MAJOR RESERVOIRS



SOURCE: Compiled by the authors using data from the California Department of Water Resources and the US Geological Survey.

NOTE: The figure depicts ownership of lands that drain into the major water supply reservoirs of the Central Valley. The federal government owns more than 70 percent of these lands and more than half of all forestland in California.

PPIC report: [http://www.ppic.org/content/pubs/report/R\\_1016J4M4R.pdf](http://www.ppic.org/content/pubs/report/R_1016J4M4R.pdf)



## Actions to Improve Forest Health

1. Reintroduce Fire
2. Mechanical Thinning
3. Rebuilt California's Forest Products Industry
4. Improve Forest Structure for Wildlife Habitat
5. Ecological Restoration
6. Legislative and Administrative Reforms (reduce burdens/protect environment for small, non-industrial harvests)
7. Biomass Removal
8. Monitoring and Adaptive Management



*Nighttime burn operations illuminate the starry sky deep in the Klamath Mountains during the 2015 Klamath River Prescribed Fire Training Exchange. Photo by Adam Shumaker*

# How Much Will Forest Restoration Cost?

\$?



# Economic Summary of Headwater Communities: Trinity County



Prosperity	Trinity County, CA	California	U.S.
Unemployment rate, 2016	7.1%	5.4%	4.9%
Average earnings per job, 2015 (2016 \$s)	\$38,601	\$68,134	\$58,985
Per capita income, 2015 (2016 \$s)	<b>\$36,090</b>	\$54,439	\$48,737
Economy			
Non-Labor % of total personal income, 2015	<b>64.0%</b>	35.2%	36.1%
Services % of total employment, 2015	46.8%	74.8%	72.5%
Government % of total employment, 2015	22.2%	11.9%	12.7%
Use Sectors^			
Timber % of total private employment, 2015	10.5%	0.3%	0.7%
Mining % of total private employment, 2015	0.0%	0.2%	0.6%
Fossil fuels (oil, gas, & coal), 2015	0.0%	0.1%	0.5%
Other mining, 2015	0.0%	0.1%	0.3%
Agriculture % of total employment, 2015	4.9%	1.1%	1.4%
Travel & Tourism % of total private employment, 2015	19.0%	16.6%	15.6%
Federal Land*			
Federal Land % total land ownership	<b>77.0%</b>	48.1%	28.2%
Forest Service %	73.9%	20.8%	8.4%
BLM %	3.1%	15.4%	10.6%
Park Service %	0.0%	7.6%	3.4%
Military %	0.0%	3.8%	1.0%
Other %	0.0%	0.6%	4.9%
Federal land % Type A**	41.1%	49.5%	41.8%
Federal payments % of gov. revenue, FY2012	25.4%	0.1%	

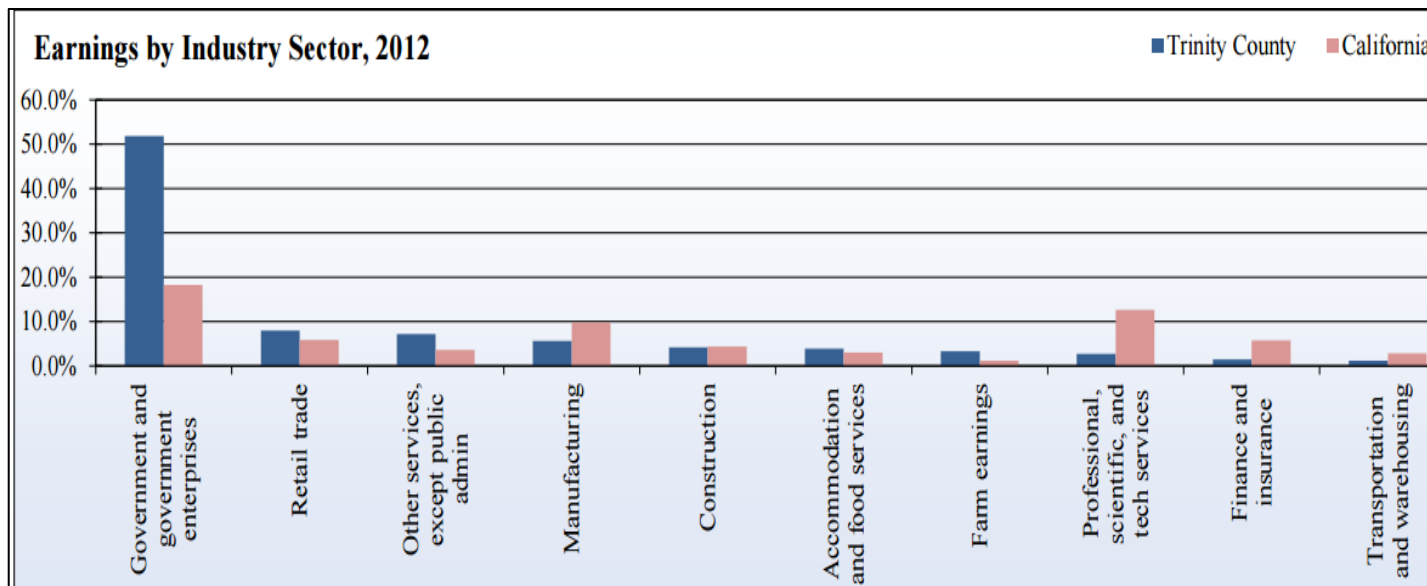
Headwaters Economics: <https://headwaterseconomics.org/tools/economic-profile-system/>



# Economic Summary of Headwater Communities: Trinity County



- In 2013, \$7,314 (24%) of total PCI was explained by presence of protected lands
- Total 2013 PCI=\$30,411
- 635,387 acres of protected lands



CED: <http://www.trinitycounty.org/modules/showdocument.aspx?documentid=2380>



# Economic Summary of Headwater Communities: Inyo County



## Prosperity

	Inyo County, CA	California	U.S.
Unemployment rate, 2016	5.4%	5.2%	4.9%
Average earnings per job, 2015 (2016 \$s)	\$68,134	\$63,820	\$58,985
Per capita income, 2015 (2016 \$s)	<b>\$54,439</b>	\$53,353	\$48,737

## Economy

Non-Labor % of total personal income, 2015	<b>40.1%</b>	35.2%	36.1%
Services % of total employment, 2015	74.8%	60.8%	72.5%
Government % of total employment, 2015	11.9%	29.1%	12.7%

## Use Sectors<sup>^</sup>

Timber % of total private employment, 2015	0.3%	0.3%	0.7%
Mining % of total private employment, 2015	0.2%	3.4%	0.6%
Fossil fuels (oil, gas, & coal), 2015	0.1%	0.0%	0.5%
Other mining, 2015	0.1%	3.3%	0.3%
Agriculture % of total employment, 2015	1.1%	1.2%	1.4%
Travel & Tourism % of total private employment, 2015	16.6%	36.0%	15.6%

## Federal Land\*

Federal Land % total land ownership	<b>92.4%</b>	48.1%	28.2%
Forest Service %	20.8%	12.1%	8.4%
BLM %	15.4%	27.0%	10.6%
Park Service %	7.6%	46.3%	3.4%
Military %	3.8%	7.0%	1.0%
Other %	0.6%	0.0%	4.9%
Federal land % Type A**	49.5%	76.1%	41.8%
Federal payments % of gov. revenue, FY2012	0.1%	4.7%	

Headwaters Economics: <https://headwaterseconomics.org/tools/economic-profile-system/>

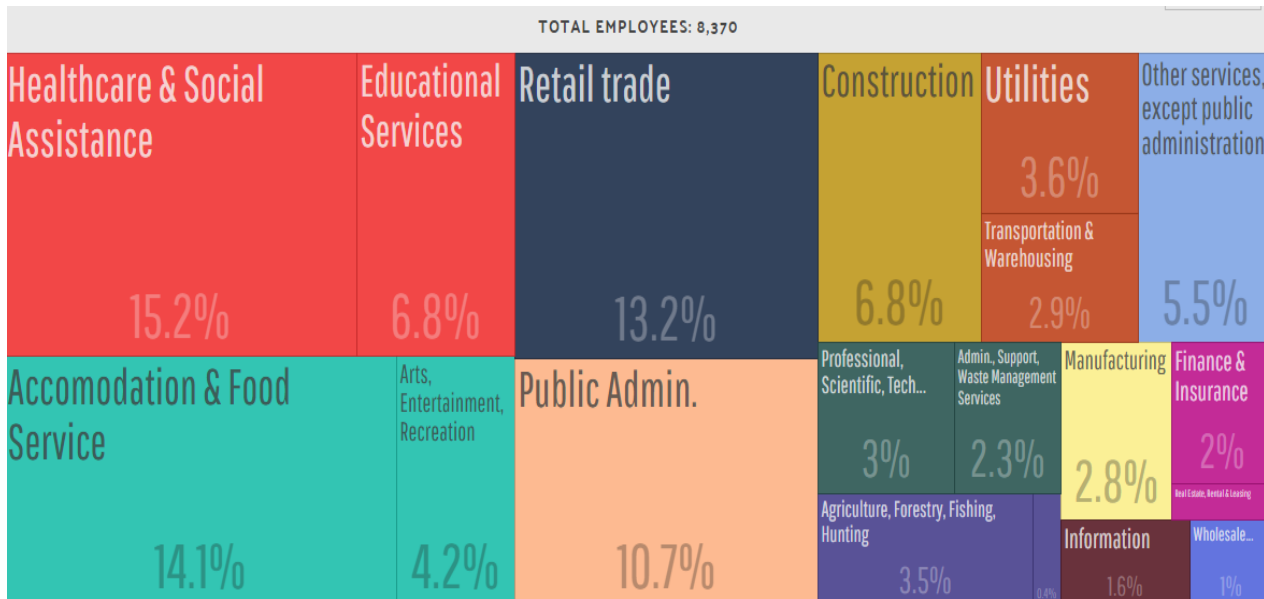


# Economic Conditions of Headwater Communities: Inyo County



- In 2013, \$15,795 (41%) of total PCI was explained by presence of protected
- Total 2013 PCI = \$38,296
- 4,174,250 acres protected lands

## Industries by Share



Census Bureau: <https://datausa.io/profile/geo/inyo-county-ca/#industries>





## Protecting Headwaters



*California is behind in investing in upper watersheds leading to crowded and vulnerable forest lands. **Every Californian has something to lose.***

**A well functioning upper watershed system** will benefit California because it will:

**Assure high quality water supply reliability:** optimizes the upper watershed's capacity to store and release water in a measured way and to filter and limit sedimentation

**Reduce incidence of catastrophic fire:** fire resilient forests thrive under a prescribed burn regime that helps reduce biomass, reduces pest infestation, etc.

**Provide air quality and GHG reduction benefits:** well functioning forested ecosystems clean the air and act as a GHG sink



# References

PPIC report: [http://www.ppic.org/content/pubs/report/R\\_1016JM4R.pdf](http://www.ppic.org/content/pubs/report/R_1016JM4R.pdf)

Headwaters Economics: <https://headwaterseconomics.org/economic-development/trends-performance/federal-lands-performance>

Headwaters Economics: <https://headwaterseconomics.org/tools/economic-profile-system/>

Center for Economic Development: <http://www.trinitycounty.org/modules/showdocument.aspx?documentid=2380>

U.S. Census Bureau ACS 5-Year Estimate: : <https://datausa.io/profile/geo/inyo-county-ca/#industries>

Rasker, R., P.H. Gude, M. Delorey. 2013. The effect of protected federal lands on economic prosperity in the non-metropolitan West. *Journal of Regional Analysis and Policy*.

