From:	Simon, Benjamin
To:	Cline, Sarah
Cc:	Stern, Adam; Christian Crowley; Ann Miller
Subject:	Re: Telework today
Date:	Friday, May 19, 2017 8:50:15 AM
Attachments:	monuments demographic socio econ summay by county.xlsx Bears Ears san juan county.xlsx

---

Hi Sarah,

No worries. Nothing else really from the call, except that that it probably would be good to look at what Josh and Julie sent, especially for grazing. We can probably use some of it.

Randy's group also met yesterday (none of us went b/c of the staff meeting), and the one thing he passed along is that we may have more time to complete Grand Staircase. Not clear how much more time, but it could along the lines of all of the others...roughly the end of July. But my suggestion is that we try and put something together sooner, in case they change their minds.

I pulled the county-level socio-econ data for most (but not all) of the monuments down from the Headwaters site...in the attached spreadsheet. Kane and Garfield counties are the two for Grand Staircase. Also saved on google drive in the PPA folder. My thought was that we probably should present some of this data, in a standard way, for all of the monuments. If others have thoughts about this lets discuss.

Ben

On Fri, May 19, 2017 at 8:27 AM, Cline, Sarah <sarah_cline@ios.doi.gov> wrote:

> Hi Ben,
> I would like to telework today. Was there any information from the call with BLM yesterday that I need to add to the Grand Staircase document?
>
> Thanks,
> Sarah

--
Benjamin Simon, Ph.D., Chief DOI Economist
Office of Policy Analysis
U.S. Department of the Interior
1849 C St. NW
Washington DC
202 208 4916
benjamin_simon@ios.doi.gov

A Summary Profile

County Region

Selected Geographies:

Yavapai County, AZ; Montezuma County, CO; San Luis Obispo County, CA; Kern County, CA; Jackson County, OR; Blaine County, ID; Butte County, ID; Minidoka County, ID; Power County, ID; Fresno County, CA; Tulare County, CA; Mohave

Benchmark Geographies:

U.S.

Produced by

Economic Profile System

EPS

April 11, 2018

DOI-2019-03 00379

About the Economic Profile System (EPS)

EPS is a free, easy-to-use software application that produces detailed socioeconomic reports of counties, states, and regions, including custom aggregations.

EPS uses published statistics from federal data sources, including Bureau of Economic Analysis and Bureau of the Census, U.S. Department of Commerce; and Bureau of Labor Statistics, U.S. Department of Labor.

The Bureau of Land Management and Forest Service have made significant financial and intellectual contributions to the operation and content of EPS.

See headwaterseconomics.org/EPS for more information about the other tools and capabilities of EPS.

For technical questions, contact Patty Gude at eps@headwaterseconomics.org, or 406-599-7425.

HEADWATERS ECONOMICS

headwaterseconomics.org

Headwaters Economics is an independent, nonprofit research group. Our mission is to improve community development and land management decisions in the West.

NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

www.blm.gov

The Bureau of Land Management, an agency within the U.S. Department of the Interior, administers 249.8 million acres of America's public lands, located primarily in 12 Western States. It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE

www.fs.fed.us

The Forest Service, an agency of the U.S. Department of Agriculture, administers national forests and grasslands encompassing 193 million acres. The Forest Service's mission is to achieve quality land management under the "sustainable multiple-use management concept" to meet the diverse needs of people while protecting the resource. Significant intellectual, conceptual, and content contr butions were provided by the following individuals: Dr. Pat Reed, Dr. Jessica Montag, Doug Smith, M.S., Fred Clark, M.S., Dr. Susan A. Winter, and Dr. Ashley Goldhor-Wilcock.

DOI-2019-03 00380

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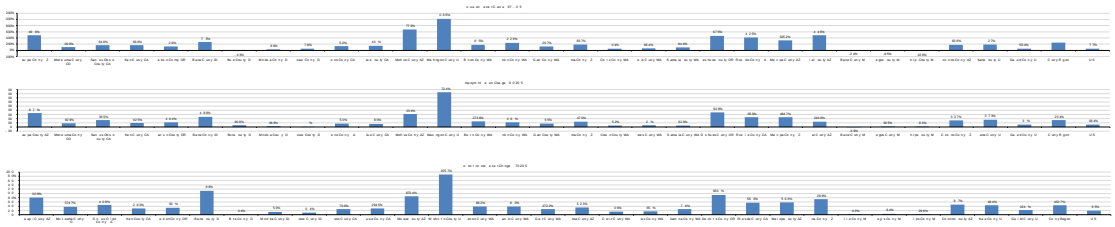
Note to Users:

This is one of fourteen reports that can be created and downloaded from EPS Web. You may want to run another EPS report for either a different geography or topic. Topics include land use, demographics, specific industry sectors, the role of non-labor income, the wildland-urban interface, the role of amenities in economic development, and payments to county governments from federal lands. Throughout the reports, references to online resources are indicated in parentheses. These resources are provided as hyperlinks on each report's final page. The EPS reports are downloadable as Excel, PDF, and Word documents. For further information and to download reports, go to:

headwaterseconomics.org/eps

DOI-2019-03 00381

DOI-2019-03 00382



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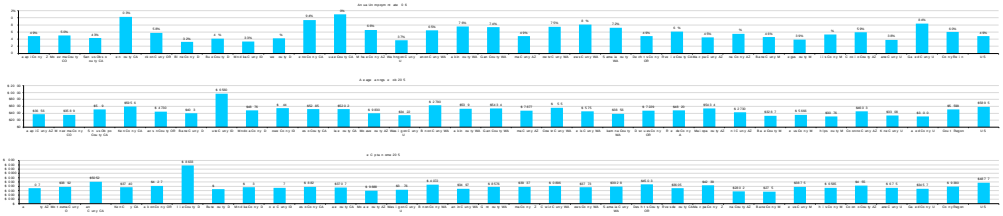

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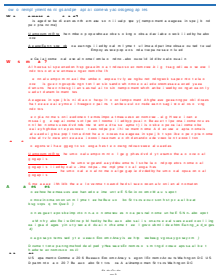

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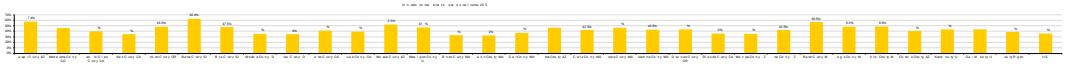

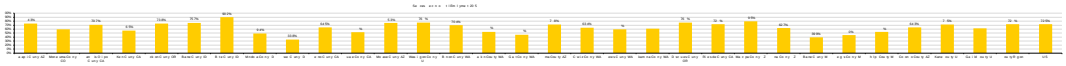

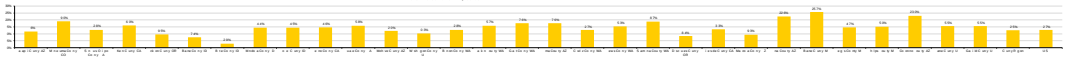

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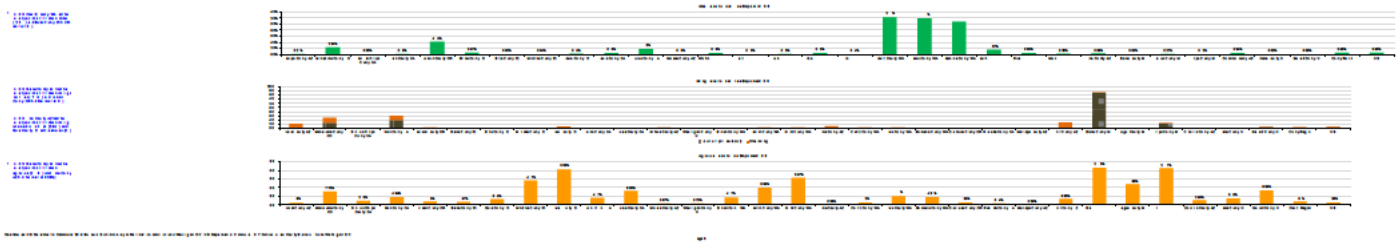

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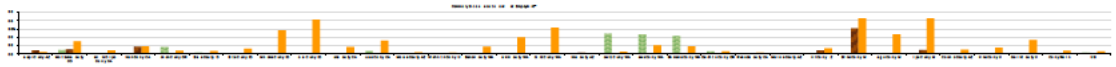

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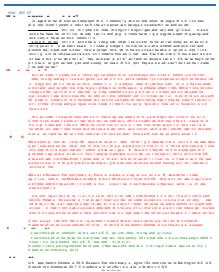

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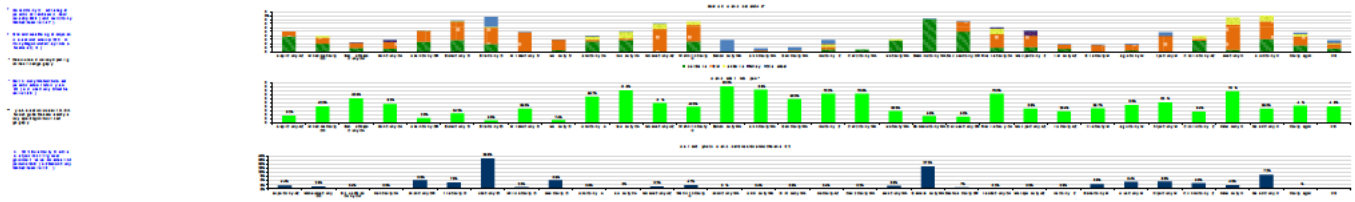

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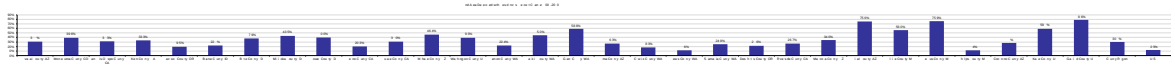

DOI-2019-03 00396

Data Sources

The EPS Services report uses published statistics from government sources that are available to the public and cover the entire country. All data used in EPS can be readily verified by going to the original source. The contact information for databases used in this profile is:

- **County Business Patterns**
  Census Bureau, U.S. Department of Commerce
  http://www.census.gov/epcd/cbp/view/cbpview.html
  Tel. 301-763-2580

- **Local Area Unemployment Statistics**
  Bureau of Labor Statistics, U.S. Department of Labor
  http://www.bls.gov/lau
  Tel. 202-691-6392

- **Regional Economic Information System**
  Bureau of Economic Analysis, U.S. Department of Commerce
  http://bea.gov/bea/regional/data.htm
  Tel. 202-606-9600

The EPS-HDT Summary report also Geographic Information Systems (GIS) derived data to show more accurate statistics for land ownership. The contact information of the GIS data sources follow:

- **TIGER/Line County Boundaries 2012**
  Bureau of the Census, U.S. Department of Commerce
  http://www.census.gov/geo/maps-data/data/tiger.html

- **Protected Areas Database v 1.3 2012**
  U.S. Geological Survey, Gap Analysis Program
  http://gapanalysis.usgs.gov/padus/

Methods

EPS core approaches

EPS is designed to focus on long-term trends across a range of important measures. Trend analysis provides a more comprehensive view of changes than spot data for select years. We encourage users to focus on major trends rather than absolute numbers.

EPS displays detailed industry-level data to show changes in the composition of the economy over time and the mix of industries at points in time.

EPS employs cross-sectional benchmarking, comparing smaller geographies such as counties to larger regions, states, and the nation, to give a sense of relative performance.

EPS allows users to aggregate data for multiple geographies, such as multi-county regions, to accommodate a flex ble range of user-defined areas of interest and to allow for more sophisticated cross-sectional comparisons.

Adjusting dollar figures for inflation

Because a dollar in the past was worth more than a dollar today, data reported in current dollar terms should be adjusted for inflation. The U.S. Department of Commerce reports personal income figures in terms of current dollars. All income data in EPS are adjusted to real (or constant) dollars using the Consumer Price Index. Figures are adjusted to the latest date for which the annual Consumer Price Index is available.

Data gaps and estimation

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses supplemental data from the U.S. Department of Commerce to estimate these data gaps. These are indicated in italics in tables. Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps.

DOI-2019-03 00398

Links to Additional Resources

For more information about EPS see:

headwaterseconomics.org/EPS

Web pages listed under Additional Resources include:

Throughout this report, references to on-line resources are indicated with italicized numbers in parentheses. These resources are provided as hyperlinks here.

1 headwaterseconomics.org/eps
2 www.bea.gov/regional/definitions
3 www.bls.gov/cps/faq.htm#Ques3
4 www.bls.gov/opub/mlr/indexe.htm#Earnings_and_wages
5 www.bea.gov/glossary/glossary.cfm
6 www.ers.usda.gov/publications/aer-agricultural-economic-report/aer781.aspx
7 headwaterseconomics.org/wildfire

DOI-2019-03 00399

A Summary Profile

Selected Geographies:

San Juan County, UT

Benchmark Geographies:

U.S.

Produced by

Economic Profile System

EPS

April 11, 2018

DOI-2019-03 00400

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U.S. DEPARTMENT OF THE INTERIOR
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DOI-2019-03 00401

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headwaterseconomics.org/eps

DOI-2019-03 00402

San Juan County, UT

Summary

How are geographies similar or different?

This page describes similarities and differences in key summary statistics from other EPS-HDT reports.

Summary

	San Juan County, UT	U.S.
Population, 2015	15,772	321,418,820
Trends		
Population % change, 1970-2015	62.3%	57.7%
Employment % change, 1970-2015	126.6%	108.4%
Personal Income % change, 1970-2015	185.0%	196.5%
Prosperity		
Unemployment rate, 2016	8.0%	4.9%
Average earnings per job, 2015 (2016 $s)	$37,336	$58,985
Per capita income, 2015 (2016 $s)	$23,703	$48,737
Economy		
Non-Labor % of total personal income, 2015	43.9%	36.1%
Services % of total employment, 2015	47.7%	72.5%
Government % of total employment, 2015	26.3%	12.7%
Use Sectors^		
Timber % of total private employment, 2015	~0.3%	0.7%
Mining % of total private employment, 2015	4.0%	0.6%
Fossil fuels (oil, gas, & coal), 2015	~3.3%	0.5%
Other mining, 2015	~2.4%	0.3%
Agriculture % of total employment, 2015	11.0%	1.4%
Travel & Tourism % of total private employment, 2	~35.1%	15.6%
Federal Land*		
Federal Land % total land ownership	61.4%	28.2%
Forest Service %	8.9%	8.4%
BLM %	40.9%	10.6%
Park Service %	11.6%	3.4%
Military %	0.0%	1.0%
Other %	0.0%	4.9%
Federal land % Type A**	23.2%	41.8%
Federal payments % of gov. revenue, FY2012	7.3%	
Development		
Residential land area % change, 2000-2010	73.1%	12.3%
Wildland-Urban Interface % developed, 2010	1.1%	16.3%

^Data for timber, mining, and travel and tourism-related are from County Business Patterns which excludes proprietors, and data for agriculture are from Bureau of Economic Analysis which includes proprietors.

* The land ownership data source and year vary depending on the selected geography. See following pages for specifics.

** Federal public lands that are managed primarily for natural, cultural, and recreational features. These lands include National Parks and Preserves (NPS), Wilderness (NPS, FWS, FS, BLM), National Conservation Areas (BLM), National Monuments (NPS, FS, BLM), National Recreation Areas (NPS, FS, BLM), National Wild and Scenic Rivers (NPS), Waterfowl Production Areas (FWS), Wildlife Management Areas (FWS), Research Natural Areas (FS, BLM), Areas of Critical Environmental Concern (BLM), and National Wildlife Refuges (FWS).

~ Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses data from the U.S. Department of Commerce to estimate these data gaps. These values are shown in gray & preceded with tildes (~).

Data Sources: Various; see following pages for specifics.

DOI-2019-03 00403

Study Guide and Supplemental Information

How are geographies similar or different?

What do we measure on this page?

This page descr bes similarities and differences in key summary statistics from other EPS reports.

Trends: Refers to general indicators of economic well-being (population, employment, and real personal income) measured over time.

Prosperity: Refers to common indicators of individual well-being or hardship (unemployment, average earnings per job, and per capita income).

Economy: Refers to three significant areas of the economy: non-labor income (e.g., government transfer payments, and investment and retirement income), and services and government employment.

Use Sectors: Refers to components of the economy (commodity sectors including timber, mining and agriculture, and industries that include travel and tourism) that have the potential for being associated with the use of public lands.

Federal Land: Refers to the amount and type of federal land ownership, and the dependence of county governments on payments related to federal lands. NPS = National Park Service; FS = Forest Service; BLM = Bureau of Land Management; FWS = Fish and Wildlife Service.

Development: Refers to the residential development of private lands, including the wildland-urban interface. The wildland-urban interface data are available and reported only for the 11 western public lands states (not including Alaska and Hawaii).

Why is it important?

Not all counties, regions, or states are the same. It is important to understand the differences and similarities between geographies because land management actions may affect areas differently, depending on demographics, the makeup of the economy, and land use characteristics.

This report allows the user to see a broad range of measures, compared across geographies, at a glance. Based on this reading, the user can refer to other EPS topic-specific reports for more details. For example, if a county shows unusually high unemployment rates, you may want to run a county-specific report (EPS Socioeconomic Measures) for that county. If another county shows a relatively high number of people employed in the timber industry, you may want to run the EPS Timber report for that county.

Another use of this report is to see whether the analysis area, if it consists of a group of counties, can be analyzed according to similarities. For example, the user may want to group together counties with a high proportion of government employment, and group other counties that have a significant amount of employment in mining.

Methods

Data sources used in this report are described in subsequent pages. We report the most recent published data by source. The date of reported variables vary according to the data release schedule of each source.

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses data from the U.S. Department of Commerce to estimate these data gaps. These values are indicated with tildes (~).

Additional Resources

This report uses information that appears in the following EPS reports: Socioeconomic Measures, Demographics, Agriculture, Mining, Service Sectors, Industries that Include Travel and Tourism, Government Employment, Non-Labor Income, Timber, Land Use, Amenities, Development and the Wildland-Urban Interface, Federal Land Payments. Consult these reports directly for more details and links to additional information.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps *(1)* .

Data Sources

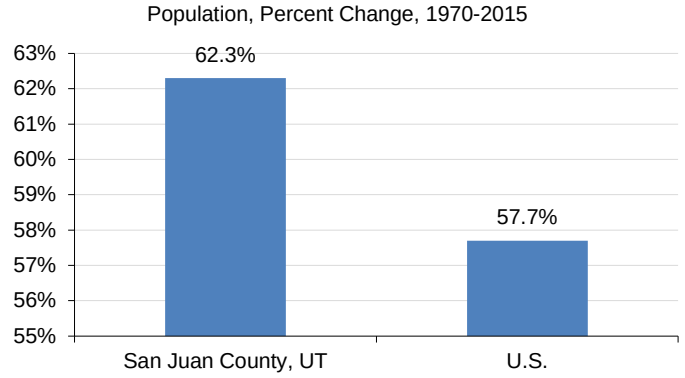
Various; see following pages for specifics.

DOI-2019-03 00404

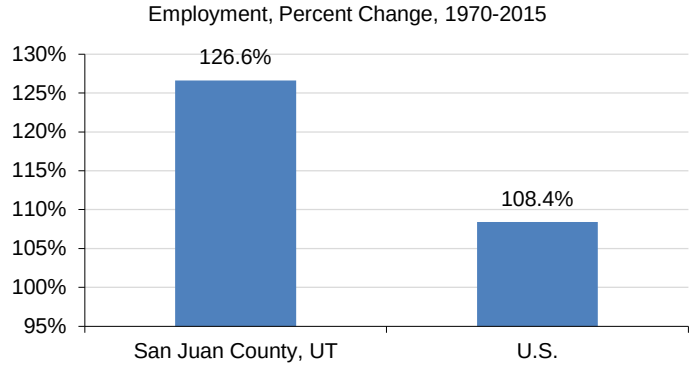
How have population, employment, and personal income changed?

This page describes percent change in population, employment, and real personal income.

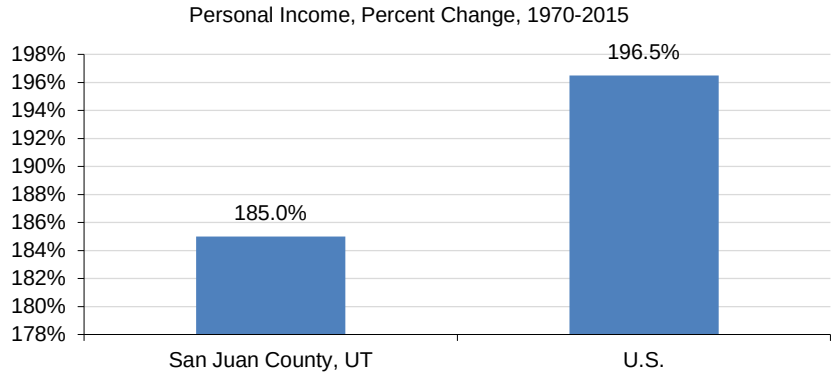
- Between 1970 and 2015, San Juan County, UT had the largest percent change in population (62.3%), and the U.S. had the smallest (57.7%).



- Between 1970 and 2015, San Juan County, UT had the largest percent change in employment (126.6%), and the U.S. had the smallest (108.4%).



- Between 1970 and 2015, the U.S. had the largest percent change in personal income (196.5%), and San Juan County, UT had the smallest (185%).



Data Sources: U.S. Department of Commerce. 2016. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

DOI-2019-03 00405

Study Guide and Supplemental Information

How have population, employment, and personal income changed?

What do we measure on this page?

This page descr bes percent change in population, employment, and real personal income.

Why is it important?

One measure of economic performance is whether a geography is growing or declining. Standard measures of growth and decline are population, employment, and real personal income.

The information on this page helps to understand whether geographies are growing or declining at different rates, and makes it easy to see if there are discrepancies between changes in population, employment, and real personal income. If population and employment are growing faster than real personal income, for example, it may be worthwhile to do further research on whether this because growth has been in low-wage industries and occupations. Alternatively, if personal income is growing faster than employment, it may be because of growth in high-wage industries and occupations and/or non-labor income sources.

Methods

The Bureau of Economic Analysis reports data either by place or residence or by place of work. Population and personal income data on this page are reported by place of residence, and employment data by place of work.

Additional Resources

The EPS Demographics report provides additional information on population dynamics.

The EPS Socioeconomic Measures report provides additional information on employment and personal income.

For details on Bureau of Economic Analysis terms, see: bea.gov/regional/definitions *(2)* .

Data Sources

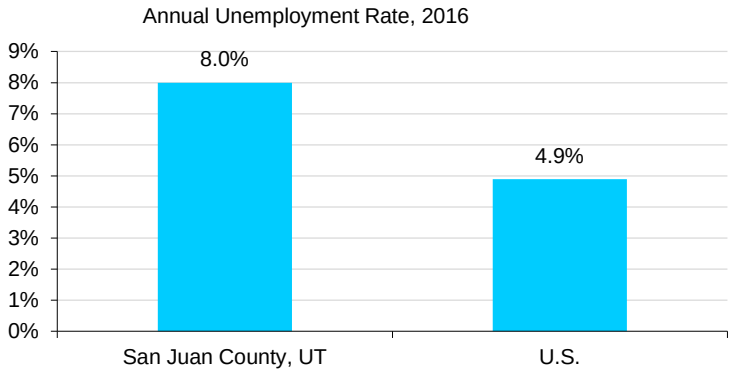
U.S. Department of Commerce. 2016. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

DOI-2019-03 00406

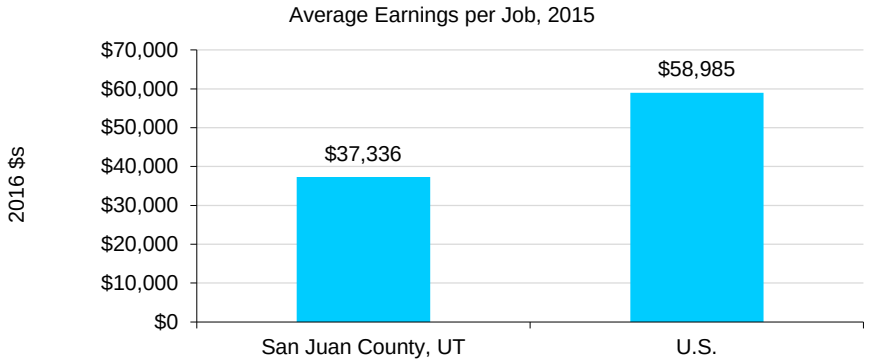
How do unemployment, earnings, and per capita income vary across geographies?

This page describes differences in three measures of individual prosperity (unemployment, average earnings per job, and per capita income).

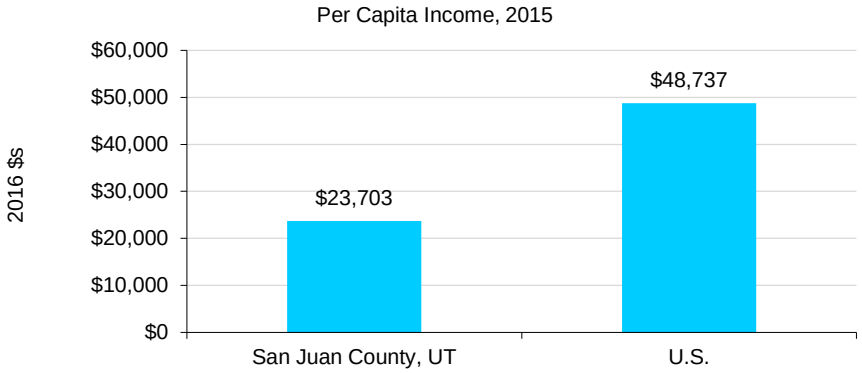
- In 2016, San Juan County, UT had the highest unemployment rate (8%), and the U.S. had the lowest (4.9%).



- In 2015, the U.S. had the highest average earnings per job ($58,985), and San Juan County, UT had the lowest ($37,336).



- In 2015, the U.S. had the highest per capita income ($48,737), and San Juan County, UT had the lowest ($23,703).



Data Sources: U.S. Department of Commerce. 2016. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.; U.S. Department of Labor. 2017. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C.

DOI-2019-03 00407

Study Guide and Supplemental Information

How do unemployment, earnings, and per capita income vary across geographies?

What do we measure on this page?

This page descr bes differences in three measures of individual prosperity (unemployment, average earnings per job, and per capita income).

Unemployment Rate: The number of people who are jobless, looking for jobs, and available for work divided by the labor force.

Average Earnings per Job: Total earnings divided by total employment. Full-time and part-time jobs are counted at equal weight. Employees, sole proprietors, and active partners are included.

Per Capita Income: Total personal income (from labor and non-labor sources) divided by total population.

Why is it important?

All three statistics presented on this page are important indicators of economic well-being. It's a good idea to use several indicators together when measuring economic health.

The annual unemployment rate is the number of people actively seeking but not finding work as a percent of the labor force. This figure can go up during national recessions and/or when more localized economies are affected by area downturns. There can be significant seasonal variations in unemployment, which can be viewed by looking at seasonally unadjusted unemployment rates.

Average earnings per job is an indicator of the quality of local employment. A higher average earning per job indicates that there are relatively more high-wage occupations. It can be useful to consider earnings against local cost of living indicators.

Per capita income is considered one of the most important measures of economic well-being. However, it can be misleading. Per capita income is total personal income divided by population. Because total personal income includes non-labor income sources (dividends, interest, rent, and transfer payments), it is poss ble for per capita income to be relatively high due to the presence of retirees and people with investment income. And because per capita income is calculated using total population and not the labor force as in average earnings per job, it is possible for per capita income to be relatively low when there are a disproportionate number of children and/or elderly people in the population.

Methods

For regions, which are aggregations of geographies, the following indicators were calculated as:

Unemployment Rate: The sum of total unemployment for all geographies, divided by the sum of the labor force for all geographies.
Average Earnings per Job: The sum of wage and salary disbursements plus other labor and proprietors' income for all geographies, divided by total full-time and part-time employment for all geographies.
Per Capita Income: The sum of total personal income for all geographies divided by the sum of total population for all geographies.

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses data from the U.S. Department of Commerce to estimate these data gaps.

Additional Resources

To see how these measures have changed over time, run the EPS Socioeconomic Measures report.

For more information on unemployment, see the Bureau of Labor Statistics resources on this topic, available at: bls.gov/cps/faq.htm#Ques3 *(3)* .

To investigate the possible impact of non-labor income sources on total personal income, run the EPS Non-Labor report.

The Monthly Labor Review Online, published by the Bureau of Labor statistics, contains several issues related to explaining earnings and wages, by industry, sex, and education achievement. See: bls.gov/opub/mlr/indexe.htm#Earnings_and_wages *(4)* .

For a glossary of terms used by the Bureau of Economic Analysis, see: http://www.bea.gov/glossary/glossary.cfm *(5)* .

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps *(1)* .

Data Sources

U.S. Department of Commerce. 2016. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.; U.S. Department of Labor. 2017. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C.

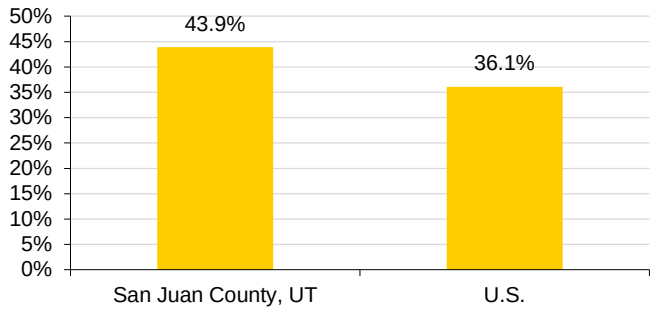
DOI-2019-03 00408

How do non-labor income and employment in services and government vary across geographies?

This page describes differences in non-labor income (e.g., government transfer payments, and investment and retirement income) and employment in services and government.

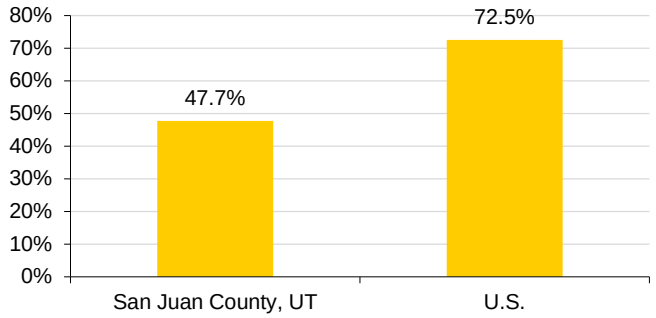
- In 2015, San Juan County, UT had the largest percent of total personal income from non-labor income sources (43.9%), and the U.S. had the smallest (36.1%).

Non-Labor Income, Percent of Total Personal Income, 2015



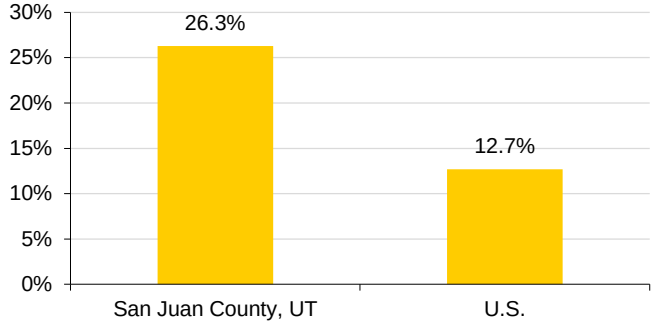
- In 2015, the U.S. had the largest percent of total jobs in services (72.5%), and San Juan County, UT had the smallest (47.7%).

Services, Percent of Total Employment, 2015



- In 2015, San Juan County, UT had the largest percent of total jobs in government (26.3%), and the U.S. had the smallest (12.7%).

Government, Percent of Total Employment, 2015



Data Sources: U.S. Department of Commerce. 2016. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

DOI-2019-03 00409

Study Guide and Supplemental Information

How do non-labor income and employment in services and government vary across geographies?

What do we measure on this page?

This page descr bes differences in non-labor income (e.g., government transfer payments, and investment and retirement income) and employment in services and government.

Non-Labor Income: Consists of dividends, interest and rent (money earned from investments), and transfer payments (includes government retirement and disability insurance benefits, medical payments such as mainly Medicare and Medicaid, income maintenance benefits, unemployment insurance benefits, etc.). Non-labor income is reported by place of residence.

Services: Consists of employment in the following sectors: Utilities, Wholesale Trade, Retail Trade, Transportation & Warehousing Information, Finance & Insurance, Real Estate & Rental & Leasing, Professional, Scientific, & Tech., Mgmt. of Companies & Enterprises, Administrative & Support Services, Educational Services, Health Care & Social Assistance, Arts, Entertainment, & Recreation, Accommodation & Food Services, and Other Services.

Government: Consists of all federal, state, and local government agencies and government enterprises.

Why is it important?

In many counties non-labor income (e.g., retirement and investment income, government transfer payments) can be more than a third of all personal income. As the baby boomer generation retires, this source of income will continue to grow. A high dependence on non-labor income can be an indication of an aging population and/or the attraction of people with investment income. Public lands activities may affect these constituents.

Nationally, services account for more than 99 percent of new jobs growth since 1990. If services are a large proportion of existing jobs, and also a large portion of new jobs, it may be worth looking into whether and how public lands relate to service industries. For example, public lands may play a role in creating a setting that attracts and retains service-related businesses. Or it may be that the recreational and environmental amenities of public lands serve to attract "footloose" service occupations (i.e., people who can work anywhere). A shift towards a service-based economy may be associated with a shift in values and expectations regarding how public lands should be managed and could place new demands on public land resources.

Government can be a major employer in some geographies, particularly in rural areas or where significant government facilities are located, such as Forest Service and Bureau of Land Management offices, military bases, prisons, or research facilities. Government jobs often pay high wages and offer good benefits. Federal employment related to public lands provide relatively stable and high wage jobs in many communities.

Methods

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses data from the U.S. Department of Commerce to estimate these data gaps.

Additional Resources

To learn more about the role of non-labor income, see the EPS Non-Labor report.
To learn more about the role of service industries, see the EPS Services report.
To learn more about the role of government employment, see the EPS Government report.

For a glossary of terms used by the Bureau of Economic Analysis, see: bea.gov/glossary/glossary.cfm *(5)* .

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps *(1)* .

Data Sources

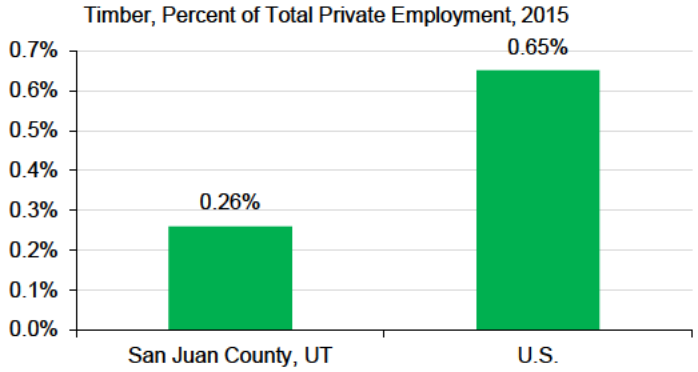
U.S. Department of Commerce. 2016. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

DOI-2019-03 00410

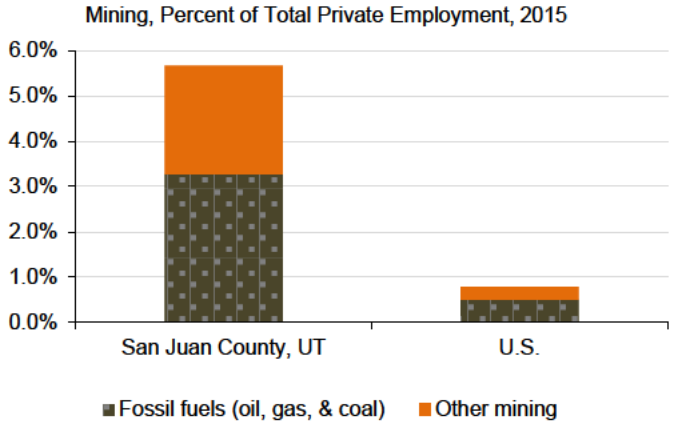
How does employment in commodity sectors vary across geographies?

This page describes employment in industries that have the potential for being associated with the commodity use of public lands: timber, mining (including oil, natural gas, and coal), and agriculture. We refer to these sectors combined as "commodity sectors."

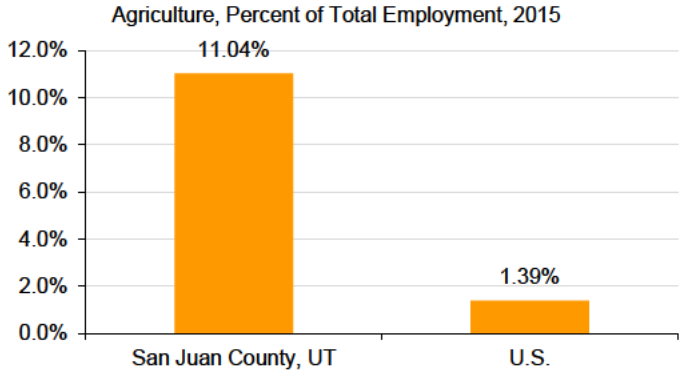
- In 2015, the U.S. had the largest percent o total jobs in timber (0.65%), and San Juan County, UT had the smallest (0.26%).



- In 2015, San Juan County, UT had the largest percent of total jobs in mining of fossil fuels (3.27%), and the U.S. had the smallest (0.5%).
- In 2015, San Juan County, UT had the largest percent of total jobs in mining unrelated to fossil fuels (2.4%), and the U.S. had the smallest (0.29%).



- In 2015, San Juan County, UT had the largest percent of total jobs in agriculture (11.04%), and the U.S. had the smallest (1.39%).



Data Sources: U.S. Department of Commerce. 2016. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.; U.S. Department of Commerce. 2017. Census Bureau, County Business Patterns, Washington, D.C.

DOI-2019-03 00411

Study Guide and Supplemental Information

How does employment in commodity sectors vary across geographies?

What do we measure on this page?

This page descr bes employment in industries that have the potential for being associated with the commodity use of public lands: timber, mining (including oil, natural gas, and coal), and agriculture. We refer to these sectors combined as "commodity sectors."

Commodity Sectors: Consists of employment in timber, mining (including oil, gas ,and coal), and agriculture. These are sectors of the economy that have the potential to use federal public lands (for example, for timber harvesting, energy development, and grazing) for the extraction of commodities.

Timber: Jobs associated with growing and harvesting, sawmills and paper mills, and wood products manufacturing.

Mining: Jobs associated with oil and gas extraction, coal mining, metals mining, and nonmetallic minerals mining.

Agriculture: Jobs associated with all forms of agriculture, including farming and ranching.

Why is it important?

Public lands can play a key role in stimulating local employment by providing opportunities for commodity extraction.

Timber industries have played an important role in some geographies, particularly those with significant Forest Service lands. The information on this page helps to answer if this is the case and whether there are differences between geographies. Further investigation may be needed to understand whether proposed activities on public lands could affect this sector.

In some parts of the country mining, including fossil fuel development (oil, natural gas, and coal), is a significant employer. Information on this page helps explain if that is the case in the geographies selected, and whether they differ from one another. Additional research is needed to understand whether proposed activities on public lands affect this sector.

Farming and ranching can be a significant component of employment in some geographies. Information on this page helps to explain which areas are more and less dependent on this sector. Further research is needed to understand how proposed activities on public lands could affect this sector.

Methods

We use County Business Patterns as a data source for timber and mining because, compared to other sources, it has fewer data gaps (instances when the federal government will not release information to protect confidentiality of individual businesses). It also includes both full and part-time employment. The disadvantage of County Business Patterns data is that they do not include employment in government, agriculture, railroads, or the self-employed and as a result under-count the size of industry sectors. Also, County Business Patters data are based on mid-March employment and do not take into account seasonal fluctuations. For these reasons, the data are most useful for showing long-term trends, displaying differences between geographies, and showing the relationship between sectors over time.

We use the Bureau of Economic Analysis as a data source for agriculture because County Business Patterns data do not include agriculture. However, the Bureau of Economic Analysis data include proprietors, which are not included in County Business Patterns data. As a result, the data for agriculture, and timber and mining are not strictly comparable. The latest year for each data source may vary due to different data release schedules.

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses data from the U.S. Department of Commerce to estimate these data gaps.

Additional Resources

To learn more about the role of timber employment, run the EPS Timber report.
To learn more about the role of mining and oil and gas employment, run the EPS Mining report.
To learn more about the role of agricultural employment, run the EPS Agriculture report.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps *(1)* .

Data Sources

U.S. Department of Commerce. 2016. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.; U.S. Department of Commerce. 2017. Census Bureau, County Business Patterns, Washington, D.C.

DOI-2019-03 00412

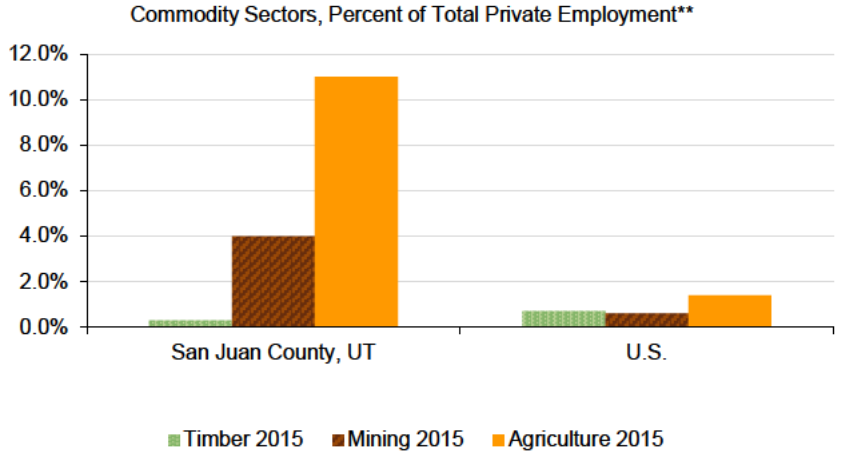
How does employment in commodity sectors and in industries that include travel and tourism, vary across geographies?

This page describes differences in employment for all commodity sectors combined across geographies. It also shows differences in employment for industries that have the potential of being associated with travel and tourism.

Commodity Sectors: Consist of employment in timber, mining (including oil, gas, and coal), and agriculture. These are sectors of the economy that have the potential to use federal public lands (for example, for timber harvesting, energy development, and grazing and recreation) for the extraction of commodities.

- San Juan County, UT had the largest percent of total jobs in commodity sectors (15.3%), and the U.S. had the smallest (2.7%).

- Agriculture was the largest component of commodity sector employment (11% of total jobs) in the San Juan County, UT, and timber was the smallest component (0.3% of total jobs).



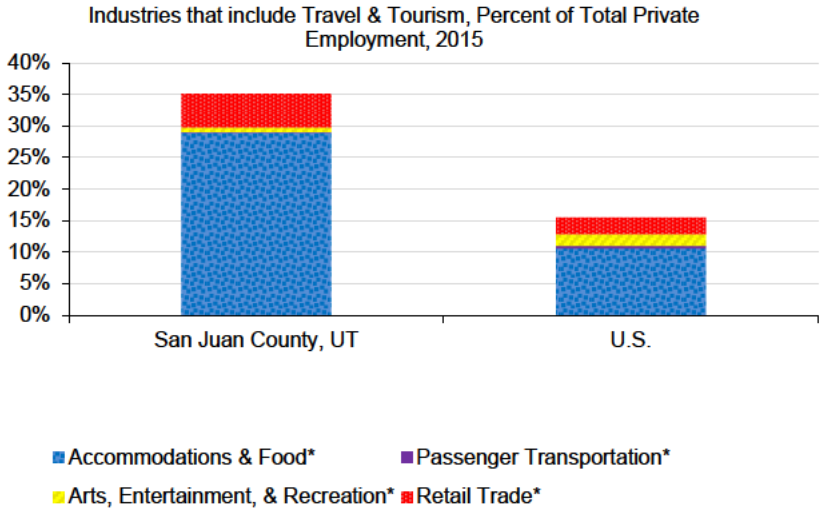
** Data for timber and mining are from County Business Patterns which excludes proprietors, government, agriculture, and railroad. Data for agriculture are from Bureau of Economic Analysis. The latest year for each data source may vary due to different data release schedules.

Travel and Tourism: Consists of sectors that provide goods and services to visitors to the local economy, as well as to the local population. These industries are: retail trade; passenger transportation; arts, entertainment and recreation; and accommodation and food services. It is not known, without additional research such as surveys, what exact proportion of the jobs in these sectors is attributable to expenditures by visitors, including business and pleasure travelers, versus by local residents. Some researchers refer to these sectors as "tourism-sensitive." They could also be called "travel and tourism-potential sectors" because they have the potential of being influenced by expenditures by non-locals.

- In 2015, San Juan County, UT had the largest percent of total jobs in industries that include travel and tourism (35.1%), and the U.S. had the smallest (15.5%).

- In 2015, accommodations & food* was the largest component of travel and tourism-related employment (28.9% of total jobs) in San Juan County, UT, and passenger transportation* was the smallest (0.1% of total jobs).

* Charted values do not represent the entirety of these sectors, rather their components typically related to travel & tourism.



Data Sources: U.S. Department of Commerce. 2016. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.; U.S. Department of Commerce. 2017. Census Bureau, County Business Patterns, Washington, D.C.

DOI-2019-03 00413

Study Guide and Supplemental Information

How does employment in commodity sectors and in industries that include travel and tourism, vary across geographies?

What do we measure on this page?

This page descr bes differences in employment for all commodity sectors combined across geographies. It also shows differences in employment for industries that have the potential of being associated with travel and tourism.

Commodity Sectors: Consists of employment in timber, mining (including oil, gas, and coal), and agriculture. These are sectors that have the potential to use federal public lands (e.g., for timber harvesting, energy development, grazing, and recreation) for the extraction of commodities.

Travel and Tourism: Consists of sectors that provide goods and services to visitors to the local economy, as well as to the local population. These industries are: retail trade; passenger transportation; arts, entertainment and recreation; and accommodation and food services. The exact proportion of jobs in these sectors attributable to expenditures by visitors, including business and pleasure travelers, is not known without additional research such as surveys. Some researchers refer to these sectors as “tourism-sensitive.” They could also be called “travel and tourism-potential sectors” because they have the potential of being influenced by expenditures by non-locals. In this report, they are referred to as "industries that include travel and tourism."

Why is it important?

Public lands can play a key role in stimulating local employment by providing opportunities for commodity extraction. Timber, mining, and agriculture are together referred to in this report as commodity sectors because they have the potential for using public lands for the extraction of commodities. For example, timber may be harvested from Forest Service lands, and oil and gas development and cattle grazing may occur on Bureau of Land Management lands. While it is not possible to measure the exact number of jobs that rely on the commodity use of public lands, it is important to understand the relative size of these sectors to put the economy related to commodity extraction in perspective. For example, a county with 90 percent of its employment in the commodity sectors has a higher chance of being impacted by decisions that permit (or restrict) timber, mining, and grazing activities on public lands than a county where only 10 percent of the workforce is in these sectors.

Public lands can also play an important role in stimulating local employment by providing opportunities for recreation. Communities adjacent to public lands can benefit economically from visitors who spend money in hotels, restaurants, ski resorts, gift shops, and elsewhere. While the information in this report is not an exact measure of the size of travel and tourism sectors, and it does not measure the type and amount of recreation on public lands, it can be used to understand whether travel and tourism-related economic activity is present and if there are differences between geographies.

Methods

We use County Business Patterns (CBP) as a data source for timber and mining. Compared to other sources, it has fewer data gaps (instances when the federal government will not release data to protect confidentiality of individual businesses). It also includes both full and part-time employment. A disadvantage of CBP data is that they do not include employment in government, agriculture, railroads, or the self-employed and as a result under-count the size of industry sectors. Also, CBP data are based on mid-March employment and do not take into account seasonal fluctuations. For these reasons, the data are most useful for showing long-term trends, displaying differences between places, and showing relationships between sectors over time.

We use the Bureau of Economic Analysis (BEA) as a data source for agriculture because CBP data do not include agriculture. However, the BEA data include proprietors, which are not included in CBP. As a result, the data for agriculture, and timber and mining are not strictly comparable. The latest year for each data source may vary due to different data release schedules.

There is no single industrial classification for travel and tourism under the North American Industrial Classification System (NAICS). However, there are sectors that, at least in part, provide goods and services to visitors to a local economy. These industries include: retail trade; passenger transportation; arts, entertainment and recreation; and accommodation and food services. To understand the absolute size of employment in travel and tourism would require detailed knowledge, obtained through surveys and other means, of the proportion of a sector's employment that is directly attributable to pleasure travelers.

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses supplemental data from the U.S. Department of Commerce to estimate these data gaps.

Additional Resources

To learn more about commodity sectors, see the EPS reports on timber, mining, and agriculture.

To learn more about the recreation-related components of the economy and the methods used to estimate employment in this portion of the economy, see the EPS Travel and Tourism report.

Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps *(1)* .

Data Sources

U.S. Department of Commerce. 2016. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.; U.S. Department of Commerce. 2017. Census Bureau, County Business Patterns, Washington, D.C.

DOI-2019-03 00414

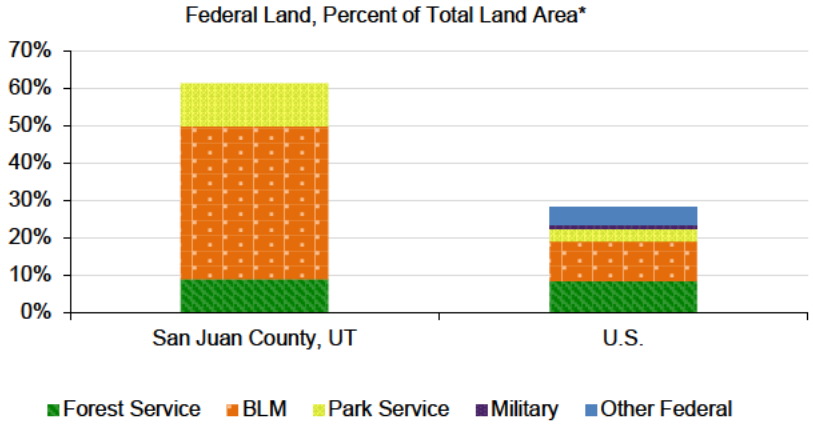
What is the extent and type of federal land, and how significant are federal land payments?

This page describes differences in the percent of federal land ownership by agency, the share of federal lands managed primarily for natural, cultural, and recreational features ("Type A"), and the percent of county revenue from payments related to federal lands.

- San Juan County, UT had the largest percent of total land area in federal ownership (61.4%), and the U.S. had the smallest (28.2%).

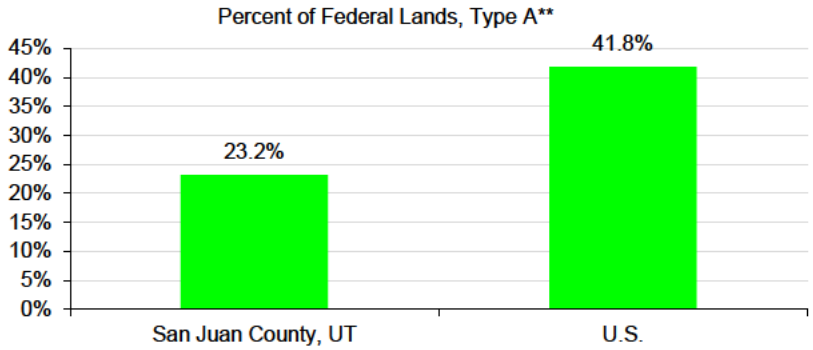
- BLM lands were the largest component of federal land ownership (40.9%) in San Juan County, UT, and Military lands were the smallest (0%).

* Data source and year vary depending on the selected geography.

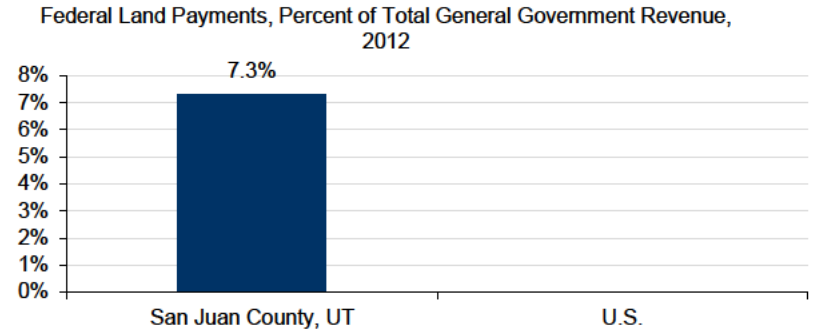


- The U.S. had the largest percent of federal lands in Type A (41.8%), and San Juan County, UT had the smallest (23.2%).

** Type A federal lands are explained in the study guide. Data source and year vary depending on the selected geography.



- In FY 2012, San Juan County, UT had the largest percent of total general government revenue from federal land payments (7.3%), and San Juan County, UT had the smallest (7.3%).



Data Sources: NASA MODIS Land Cover Type Yearly L3 Global 1km MOD12Q1, 2006; U.S. Geological Survey, Gap Analysis Program. 2016. Protected Areas Database of the United States (PADUS) version 1.4; U.S. Department of Commerce. 2014. Census Bureau, Governments Division, Washington, D.C.

DOI-2019-03 00415

Study Guide and Supplemental Information

What is the extent and type of federal land, and how significant are federal land payments?

What do we measure on this page?

This page descr bes differences in the percent of federal land ownership by agency, the share of federal lands managed primarily for natural, cultural, and recreational features ("Type A"), and the percent of county revenue from payments related to federal lands.

Type A : Federal public lands that are managed primarily for natural, cultural, and recreational features. There can be exceptions (e.g., oil and gas development in a particular National Monument), but generally these lands are less likely to be used for commodity production than other federal land types. These lands include National Parks and Preserves (NPS), Wilderness (NPS, FWS, FS, BLM), National Conservation Areas (BLM), National Monuments (NPS, FS, BLM), National Recreation Areas (NPS, FS, BLM), National Wild and Scenic Rivers (NPS), Waterfowl Production Areas (FWS), Wildlife Management Areas (FWS), Research Natural Areas (FS, BLM), Areas of Critical Environmental Concern (BLM), and National Wildlife Refuges (FWS). These definitions of land classifications are not legal or agency approved and adopted classifications, and are only provided for comparative purposes.
NPS = National Park Service; FS = Forest Service; BLM = Bureau of Land Management; FWS = Fish and Wildlife Service.

Why is it important?

In some geographies, particularly in the West, more than half of the land base can be federal public lands. Understanding the makeup of the land base in an area is important because some actions on federal lands may affect the local economy, particularly if federal lands are a large portion of the land base.

Some federal public lands prohibit most forms of commercial use and development. These include National Parks, Wilderness, and National Monuments, for example. Since these lands are managed primarily for their non-commercial values (i.e., scenery, wildlife, recreation) they potentially play a different economic role than public lands more commonly associated with commodity sectors.

Geographies with federal public lands receive payments from the federal government related to these lands (e.g., Payments in Lieu of Taxes [PILT], the 25% Fund, Secure Rural Schools, and others). If these payments are a significant portion of the local county's budget, then activities on public lands may have the potential to affect the fiscal well-being of a county. Depending on the type of payments a county receives, the fiscal health of the county may also be dependent on the level of appropriations from Congress.

Additional Resources

To learn more about land ownership and development patterns, see the EPS Land Use report.

To learn more about the role of environmental amenities in economic development, see the EPS Amenities report.

To learn more about the importance of federal payments to counties, see the EPS Federal Land Payments report.

For examples of literature on the economic role of environmental amenities, see:

Booth, D.E. 1999. "Spatial Patterns in the Economic Development of the Mountain West." Growth and Change 30(3): 384-405.

Duffy-Deno, K.T. 1998. "The Effect of Federal Wilderness on County Growth in the Intermountain Western United States." Journal of Regional Science 38(1): 109-136.
Lorah, P., R. Southwick. 2003. “Environmental Protection, Population Change, and Economic Development in the Rural Western United States." Population and Environment 24(3): 255-272.

McGranahan, D.A. 1999. Natural Amenities Drive Rural Population Change. Economic Research Service, U.S. Department of Agriculture, Food and Rural Economics Division. Washington, D.C. ers.usda.gov/publications/aer-agricultural-economic-report/aer781.aspx *(6)* .

Rasker, R. 2006. "An Exploration Into the Economic Impact of Industrial Development Versus Conservation on Western Public Lands." Society & Natural Resources 19(3): 191-207.
Rudzitis, G., H.E. Johansen. 1991. "How Important is Wilderness? Results from a United States Survey." Environmental Management 15(2): 227-233.

Data Sources

NASA MODIS Land Cover Type Yearly L3 Global 1km MOD12Q1, 2006; U.S. Geological Survey, Gap Analysis Program. 2016. Protected Areas Database of the United States (PADUS) version 1.4; U.S. Department of Commerce. 2014. Census Bureau, Governments Division, Washington, D.C.

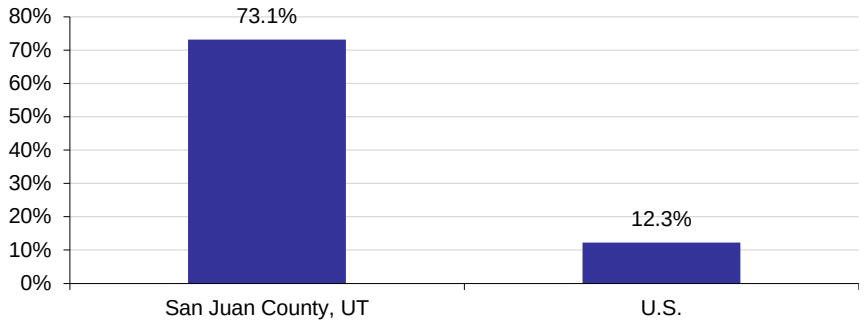
DOI-2019-03 00416

How much private land has been developed, including in the wildland-urban interface (WUI)?

This page describes differences in the change in residential development on private lands, and the proportion of the wildland-urban interface (WUI) that is developed with homes.

- Between 2000 and 2010, San Juan County, UT had the largest percent change in residential land area developed (73.1%), and the U.S. had the smallest (12.3%).

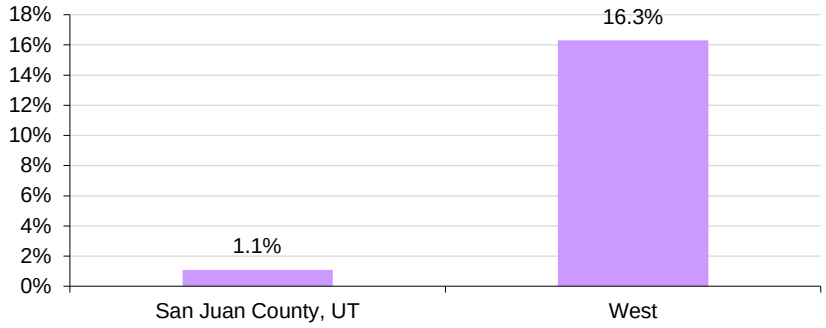
Land Area Developed with Residences, Percent Change, 2000-2010



Wildland-Urban Interface (WUI): This information is available only for the 11 western public lands states (not including Alaska and Hawaii). WUI is defined as private forestlands that are within 500 meters of public forestlands. We use the threshold of 500 meters to identify both existing and potential WUI since guidelines for the amount of defensible space necessary to protect homes from wildfire range from 40 to 500 meters around a home. We focus on adjacency to public forests since roughly 70 percent of western forests are publicly owned and since wildfire is a natural disturbance in many of these forests, creating a potential risk to adjacent private lands.

- In 2010, the west had the largest proportion of the wildland-urban interface that is developed (16.3%), and San Juan County, UT had the smallest (1.1%).

Wildland-Urban Interface (WUI), Percent Developed, 2010



Data Sources: Theobald, DM. 2013. Land use classes for ICLUS/SERGoM v2013. Unpublished report, Colorado State University; Gude, P.H., Rasker, R., and van den Noort, J. 2008. Potential for Future Development on Fire-Prone Lands. Journal of Forestry 106(4):198-205; U.S. Department of Commerce. 2011. TIGER/Line 2010 Census Blocks and 2010 Summary File 1, Washington, D.C.

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How much private land has been developed, including in the wildland-urban interface (WUI)?

What do we measure on this page?

This page descr bes differences in the change in residential development on private lands, and the proportion of the wildland-urban interface (WUI) that is developed with homes.

This information is available only for the 11 western public lands states (not including Alaska and Hawaii).

Wildland-Urban Interface (WUI): Defined as private forestlands that are within 500 meters of public forestlands. We use the threshold of 500 meters to identify both existing and potential WUI since guidelines for the amount of defens ble space necessary to protect homes from wildfire range from 40 to 500 meters around a home. We focus on adjacency to public forests since roughly 70 percent of western forests are publicly owned and since wildfire is a natural disturbance in many of these forests, creating a potential risk to adjacent private lands.

Why is it important?

Public lands are influenced by land management actions on private land, particularly by the development of lands within the wildland-urban interface.

Development of homes adjacent to fire-prone federal public lands poses several challenges to land management agencies. These include: the rising cost of protecting homes from wildland fire; the opportunity cost of spending a significant portion of the agency's budget on firefighting, which means fewer funds are available for restoration, recreation, research, and other activities; and increased danger to wildland firefighters. When protecting homes is a priority, this also means that it is sometimes not possible for the agencies to allow otherwise beneficial fires to burn, even those that could reduce fuel loads.

Additional Resources

For additional information on land ownership, management, cover, and development, see the EPS Land Use report.

For online resources related to the wildland-urban interface (WUI) and a paper on proposed solutions to the rising cost of firefighting (including a review of literature on the subject), see: headwaterseconomics.org/wildfire *(7)* .

For a description of the methods used to define and measure the wildland-urban interface, see: Gude, P., R. Rasker and van den Noort, J. 2008. “Potential for Future Development on Fire-Prone Lands.” Journal of Forestry. June: 198-205.

Data Sources

Theobald, DM. 2013. Land use classes for ICLUS/SERGoM v2013. Unpublished report, Colorado State University; Gude, P.H., Rasker, R., and van den Noort, J. 2008. Potential for Future Development on Fire-Prone Lands. Journal of Forestry 106(4):198-205; U.S. Department of Commerce. 2011. TIGER/Line 2010 Census Blocks and 2010 Summary File 1, Washington, D.C.

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Data Sources

The EPS Services report uses published statistics from government sources that are available to the public and cover the entire country. All data used in EPS can be readily verified by going to the original source. The contact information for databases used in this profile is:

- **County Business Patterns**
  Census Bureau, U.S. Department of Commerce
  http://www.census.gov/epcd/cbp/view/cbpview.html
  Tel. 301-763-2580

- **Local Area Unemployment Statistics**
  Bureau of Labor Statistics, U.S. Department of Labor
  http://www.bls.gov/lau
  Tel. 202-691-6392

- **Regional Economic Information System**
  Bureau of Economic Analysis, U.S. Department of Commerce
  http://bea.gov/bea/regional/data.htm
  Tel. 202-606-9600

The EPS-HDT Summary report also Geographic Information Systems (GIS) derived data to show more accurate statistics for land ownership. The contact information of the GIS data sources follow:

- **TIGER/Line County Boundaries 2012**
  Bureau of the Census, U.S. Department of Commerce
  http://www.census.gov/geo/maps-data/data/tiger.html

- **Protected Areas Database v 1.3 2012**
  U.S. Geological Survey, Gap Analysis Program
  http://gapanalysis.usgs.gov/padus/

Methods

EPS core approaches

EPS is designed to focus on long-term trends across a range of important measures. Trend analysis provides a more comprehensive view of changes than spot data for select years. We encourage users to focus on major trends rather than absolute numbers.

EPS displays detailed industry-level data to show changes in the composition of the economy over time and the mix of industries at points in time.

EPS employs cross-sectional benchmarking, comparing smaller geographies such as counties to larger regions, states, and the nation, to give a sense of relative performance.

EPS allows users to aggregate data for multiple geographies, such as multi-county regions, to accommodate a flex ble range of user-defined areas of interest and to allow for more sophisticated cross-sectional comparisons.

Adjusting dollar figures for inflation

Because a dollar in the past was worth more than a dollar today, data reported in current dollar terms should be adjusted for inflation. The U.S. Department of Commerce reports personal income figures in terms of current dollars. All income data in EPS are adjusted to real (or constant) dollars using the Consumer Price Index. Figures are adjusted to the latest date for which the annual Consumer Price Index is available.

Data gaps and estimation

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses supplemental data from the U.S. Department of Commerce to estimate these data gaps. These are indicated in italics in tables. Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at headwaterseconomics.org/eps.

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Links to Additional Resources

For more information about EPS see:

headwaterseconomics.org/EPS

Web pages listed under Additional Resources include:

Throughout this report, references to on-line resources are indicated with italicized numbers in parentheses. These resources are provided as hyperlinks here.

1 headwaterseconomics.org/eps
2 www.bea.gov/regional/definitions
3 www.bls.gov/cps/faq.htm#Ques3
4 www.bls.gov/opub/mlr/indexe.htm#Earnings_and_wages
5 www.bea.gov/glossary/glossary.cfm
6 www.ers.usda.gov/publications/aer-agricultural-economic-report/aer781.aspx
7 headwaterseconomics.org/wildfire

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