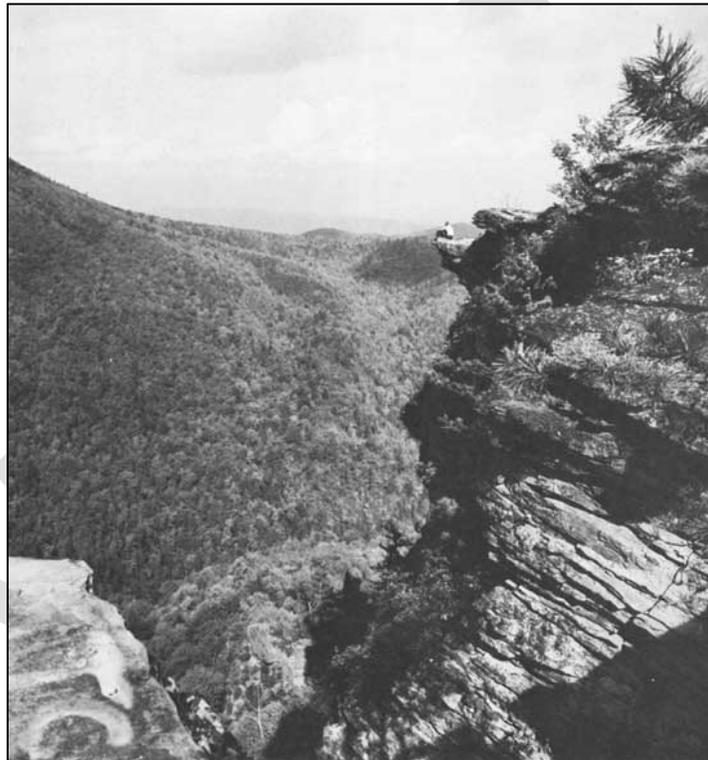

Draft Nantahala and Pisgah National Forests Forest Plan Assessment



6.0 Economic Conditions and Trends

August 30, 2013

Information presented in this draft report is considered under development. An updated version of this report will be posted when it becomes available.

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6. Social and Economic Conditions and Trends

Information presented in this draft report is considered under development. An updated version of this report will be posted when it becomes available.

INTRODUCTION

This report presents many of the socioeconomic conditions and trends for the Nantahala and Pisgah National Forests of North Carolina as part of the Forest Plan revision assessment. The information provided in this report is intended as a descriptive and comparative baseline about the various councils of government (groups of counties) in the western North Carolina area of influence and includes information up through the year 2011 for most variables (2012 in select cases). This report is best considered along with information recently collected in six informational public meetings held during the spring of 2013. Collectively, this information is being used to help assess changes that may have occurred in the economic and social environment since the original signing of the most Forest Plan for the Nantahala and Pisgah National Forest during 1987 and during the period of amendments from 1987 to 2012.

There are four questions we address to describe conditions:

- a. What are the recent demographic, social and economic trends?
- b. What are the important sectors of the economy for employment and income?
- c. What are the direct, indirect and total economic contributions from Forest Service expenditures and program output from the plan unit?
- d. How are federal payments to states calculated, and what have payments to counties been over time?

The following information is used to address the contributions to local, council of government, regional (western North Carolina), and National economies.

- We emphasize one key finding of the Western North Carolina Economic Index from a report produced in 2012 by the Center for Economic Research and Policy Analysis at Appalachian State University.
- We rely heavily on information on the 18 counties in the 4 councils of government regions compiled through the Economic Profile System – Human Dimensions Toolkit (EPS-HDT 2013), a Microsoft Excel Add-In that allows users to produce detailed socioeconomic profiles at a variety of geographic scales. EPS-HDT was designed and funded by Headwaters Economics in partnership with the Bureau of Land Management and the US Forest Service. The socioeconomic data from EPS-HDT provided in this report includes information on commodity sectors influenced by federal land management, such as agriculture, timber, mining, and tourism and travel, as well as additional information on federal land payments, natural resource amenities, land use, and wildland urban interface (WUI) development.
- We use corporate data on Forest Service programs, salary and non-salary expenditures, and employment to analyze the contribution of the Nantahala and Pisgah NF programs and expenditures on jobs and labor income for the 18-county region.

- We borrow a summary of agricultural contributions to the state economy from the Western North Carolina Economic Vitality Index.

We attempt to highlight the contribution of outdoor recreation, hunting and fishing, timber, and non-timber forest products with the following resources.

- To provide some historic context we reproduce timber supply and demand information from the Southern Appalachian Assessment completed in 1996.
- We rely on the final report of the 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation which has detailed information on the number of U.S. residents 16 years of age and older who fished, hunted or wildlife watched (fed, observed, or photographed wildlife) in 2011.
- We include statistics from Sport fishing in America, An Economic Force for Conservation written by the American Sport Fishing Association.
- We incorporate information on forest products industry in the Southeastern United States (includes North Carolina and 10 other states) developed by the Bureau of Business and Economic Research (Brandt et al. 2012, Morgan et al. 2004).
- We report some results produced by North Carolina's Department of Commerce using the Travel Economic Impact model, and surveying recreation visitors in the 2012 North Carolina Visitor Profile.
- The Visitor Use Report for the Nantahala-Pisgah NFs (National Forests in North Carolina), produced by the USDA Forest Service, Region 8 National Visitor Use Monitoring with data collected during Fiscal year 2008 provides monitoring information specific to the national forest system lands.
- Several highlights are provided from the Southern Region's 2012 Recreation Fee Accomplishment Report.
- We include data from the 2006 report Expanding the Natural Products Economy in Western North Carolina.
- We use 2003 information from N.C. State University, Department of Horticultural Science in Raleigh, NC entitled Collection to Commerce: Western North Carolina Non-Timber Forest Products and Their Markets.
- We reveal results from the 2008 report entitled, The Economic Impact of the Craft Industry in Western North Carolina.
- We address heritage tourism with the 2011 report, Measuring Economic Impacts of Historic Preservation: A Report to the Advisory Council on Historic Preservation, University of Pennsylvania School of Design, Historic Preservation Program.
We also reference ideas presented in the western North Carolina forest report card of Forest Sustainability which is a collaboration between the US Forest Service's Southern Research Station (SRS) and UNC Asheville's National Environmental Modeling and Analysis Center (NEMAC).
- We provide information on natural resource amenity counties and amenity-driven development (Cordell et al. 2011, Harris et al. 2003, McGranahan 1999).

6.1 ANALYSIS AREAS

6.1.1 *Description of National Forest Settings*

This forest lies in the mountains and valleys of southwestern North Carolina. “Nantahala” is a Cherokee word meaning “land of the noon day sun,” a fitting name for the Nantahala Gorge, where the sun only reaches to the valley floor at midday. With over a half million acres, the Nantahala is the largest of the four national forests in North Carolina. The largest of North Carolina's four National Forests, the Nantahala encompasses 531,148 acres with elevations ranging from 5,800 feet at Lone Bald in Jackson County to 1,200 feet in Cherokee County along Hiwassee River below Appalachian Lake Dam. The Forest is divided into three Districts, Cheoah in Robbinsville, NC, Tusquitee in Murphy, NC, and the Nantahala in Franklin, NC. All district names come from the Cherokee language. The Nantahala National Forest was established in 1920 under authority of the 1911 Weeks Act. This act provided authority to acquire lands for national forests to protect watersheds, to provide timber, and to regulate the flow of navigable streams. In the Nantahala National Forest, visitors enjoy a wide variety of recreational activities from whitewater rafting to camping. With over 600 miles of trails, opportunities exist for hikers, mountain bikers, horse-back riders and off-highway vehicle riders.

The Pisgah National Forest is a land of mile-high peaks, cascading waterfalls, and heavily forested slopes. Comprised of over 500,000 acres, the Pisgah is primarily a hardwood forest with whitewater rivers, waterfalls and hundreds of miles of trails. This national forest is home of the first tract of land purchased under the Weeks Act of 1911 which led to the creation of the national forests in the eastern United States. It is also home of the first school of forestry in the United States, now preserved at the Cradle of Forestry in America historic site, and boasts two of the first designated wilderness areas in the east. The Pisgah, Grandfather and Appalachian Ranger Districts are scattered along the eastern edge of the mountains of western North Carolina and offer visitors a variety of opportunities for outdoor recreation and enjoying the natural beauty of the mountains.

These national forests contain diverse resources used for recreational, commercial, and related purposes. The commercial uses include timber harvesting, grazing, guided hunting and fishing, and other uses of forests products. Recreational uses of the Forests include scenic driving, bicycling, camping and cabins, climbing, fishing, hiking, backpacking, horse riding and horse camping, whitewater rafting, kayaking, canoeing and other water activities, outdoor learning, viewing nature and wildlife, hunting, off road vehicle use, and wildlife viewing. These forests have diverse species of wildlife such as elk, deer, bear, wild boar. Additionally, there are abundant historic and scenic resources such as Nantahala, Cheoah and Rapid River. The users of these Forests are residents of nearby communities as well as those from more distant locations in the United States and abroad.

Figure 1 shows the extent of all national Forests of North Carolina, showing the Nantahala and Pisgah units for which this assessment covers. The analysis area (except when noted) for this report consists of 18 counties in western North Carolina that are adjacent to, or in the immediate vicinity of the Nantahala and Pisgah National Forests (NFs). These 18 counties are Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, Mitchell, McDowell, Swain, Transylvania, Watauga, and Yancey.

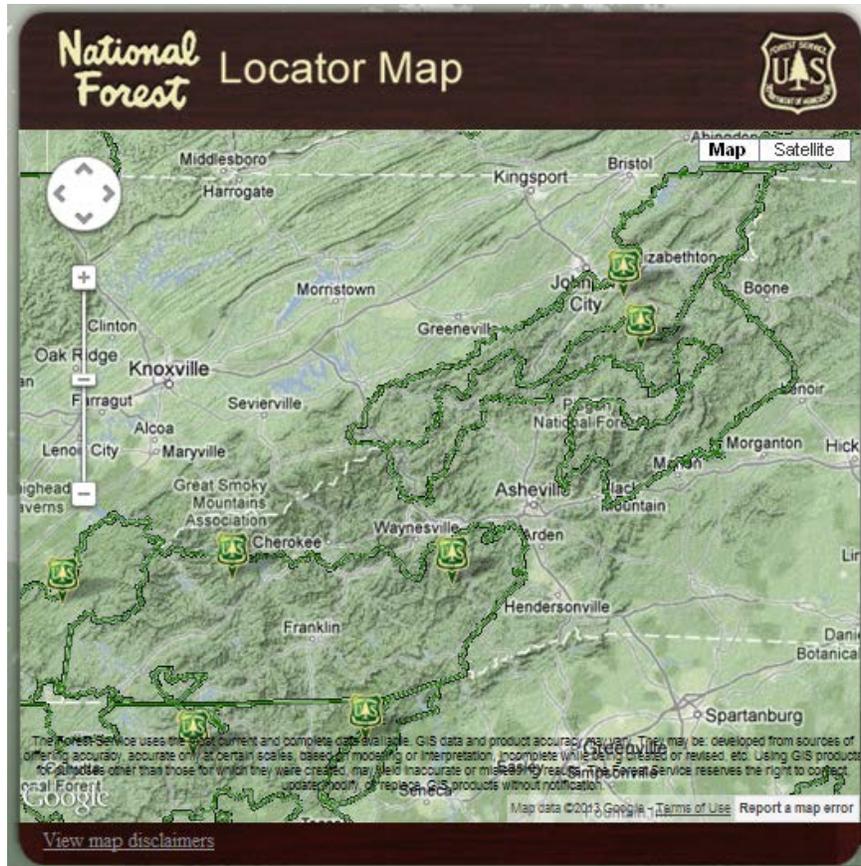


Figure 6-1. Nantahala and Pisgah National Forest in western North Carolina.

Collectively, these counties are represented by five councils of government. We use four groupings of counties to organize our reporting. The geographical relationship of the Nantahala NF and Pisgah NF to these counties and the councils of government regions we use here is depicted in **Error! Reference source not found.. Error! Reference source not found.** 2a through 6-2d shows the differences in total population, population density, total land area, and Forest Service (FS) managed acreage for the analysis area counties. These counties differ substantially in land area, population, and economy as is discussed throughout this report. Tables 6-3a through 6-3d show the land cover across the analysis area is dominated by forests.

Moving from east to west, the easternmost grouping combines the *Isothermal Planning and Development Commission and the Western Piedmont Council of Governments*. We refer to the counties in this areas as the **Isothermal and Western Piedmont Region**. This region includes McDowell County from the Isothermal plus Burke and Caldwell Counties from the Western Piedmont Region. The most populous counties and those with the highest population density are Buncombe, Burke, Caldwell, Haywood, and Henderson, all with 2010 populations of more than 50,000. The largest counties, in terms of land area, are Buncombe, Burke, Haywood, Macon, Swain County all with more than 500 square miles. Cherokee, Graham, Jackson, Macon, McDowell, and Transylvania Counties, have the greatest number of National Forest System acres.

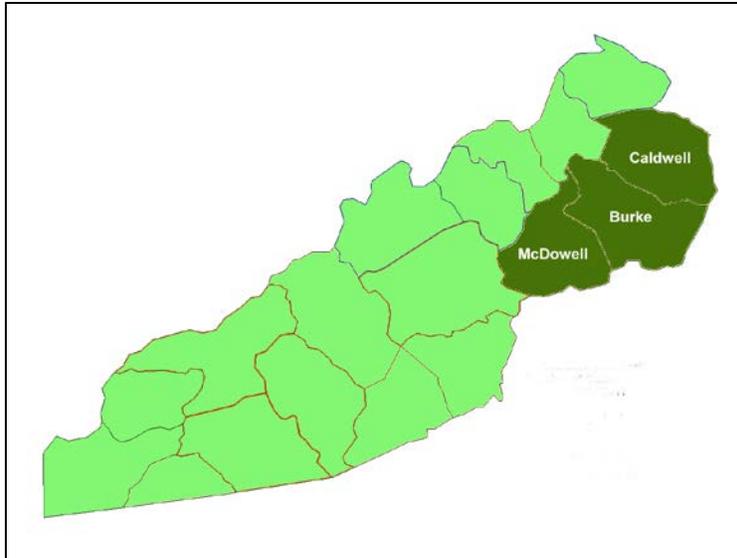


Figure 2a. Isothermal and Western Piedmont Region in western North Carolina.

Table 6-2a through 6-2d show the differences in total population, population density, total land area, and Forest Service (FS) managed acreage for the **Isothermal and Western Piedmont Region**. The most populous county and that with the highest population density is Burke County which is also the largest county, in terms of land area, with 507 square miles.

Table 6-2a. Population, Population Density and Land Area in the Isothermal and Western Piedmont Region

Analysis Area Counties	Population 2000	Population 2010	Total Square Miles	Population Density Per Square Mile 2010	National Forest System Acres
Burke	89,148	90,912	507.1	179.3	48,794
Caldwell	77,415	83,029	471.6	176.1	49,734
McDowell	42,151	44,996	440.6	102.1	73,728
North Carolina	8,049,313	9,535,483	48,617.9	196.1	1,256,014
USA	281,421,906	308,745,538	3,531,905.4	87.4	192,976,743

Source: U.S. Census Bureau, Census 2000 and 2010 Summary File 1 (accessed through EPS-HDT 2013) and 2012 Land Areas Report, Table 6 - NFS Acreage by State, Congressional District and County

North of this is the **High Country Region**, which includes Avery, Mitchell, Watauga and Yancey Counties, which comprise the western portion of the High Country Council of Governments.

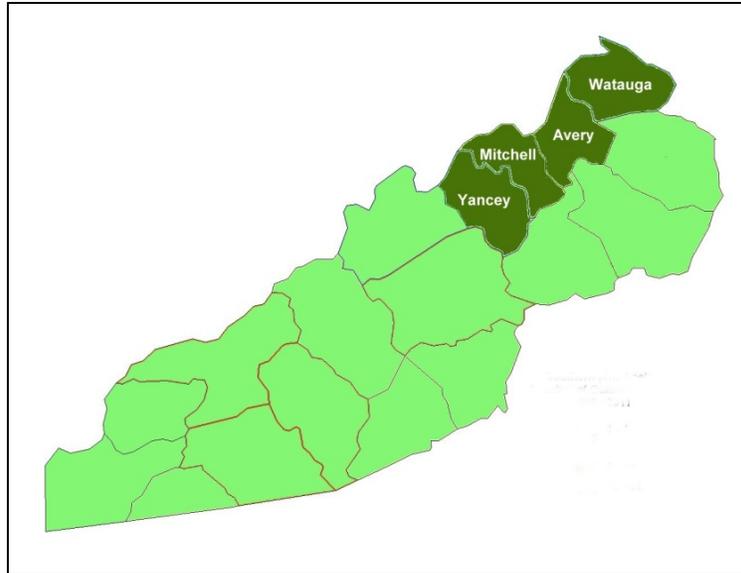


Figure 2b. High Country Region in western North Carolina.

Table 6-2b. Population, Population Density and Land Area in the High Country Region

Analysis Area Counties	Population 2000	Population 2010	Total Square Miles	Population Density Per Square Mile 2010	National Forest System Acres
Avery	17,167	17,797	247.1	72.0	28,369
Mitchell	15,687	15,579	221.4	70.4	18,916
Watauga	42,695	51,079	312.6	163.4	393
Yancey	17,774	17,818	312.6	57.0	38,272
North Carolina	8,049,313	9,535,483	48,617.9	196.1	1,256,014
USA	281,421,906	308,745,538	3,531,905.4	87.4	192,976,743

Source: U.S. Census Bureau, Census 2000 and 2010 Summary File 1 (accessed through EPS-HDT 2013) and 2012 Land Areas Report, Table 6 - NFS Acreage by State, Congressional District and County

West of these is the **Land-of-Sky Region**, which encompasses Buncombe, Henderson, Madison, and Transylvania Counties, the entire Land-of-Sky Regional Council in North Carolina.

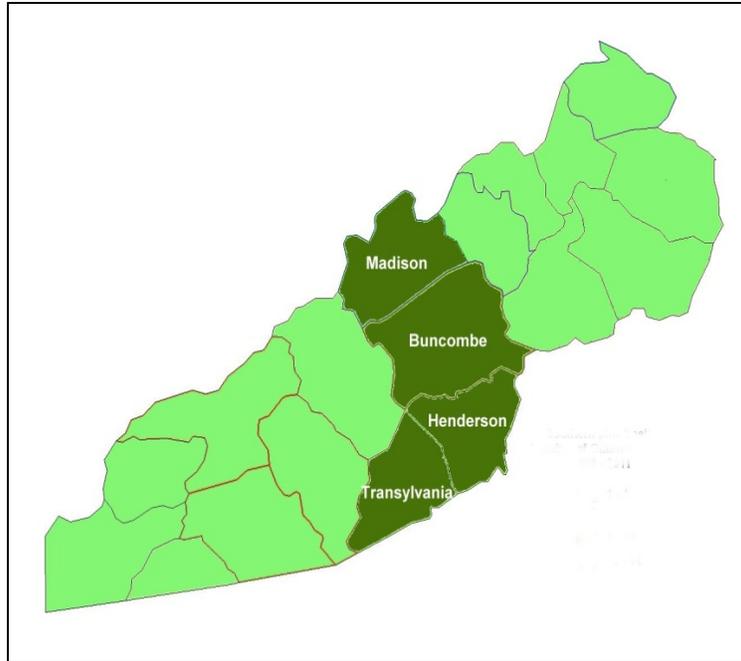


Figure 2c. Land-of--Sky Region in western North Carolina.

Table 6-1c. Population, Population Density and Land Area in the Land-of-Sky Region

Analysis Area Counties	Population 2000	Population 2010	Total Square Miles	Population Density Per Square Mile 2010	National Forest System Acres
Buncombe	206,330	238,318	656.7	362.9	31,464
Henderson	89,173	106,740	373.1	268.1	17,295
Madison	19,635	20,764	449.6	46.2	55,278
Transylvania	29,334	33,090	378.5	87.4	88,300
North Carolina	8,049,313	9,535,483	48,617.9	196.1	1,256,014
USA	281,421,906	308,745,538	3,531,905.4	87.4	192,976,743

Source: U.S. Census Bureau, Census 2000 and 2010 Summary File 1 (accessed through EPS-HDT 2013) and 2012 Land Areas Report, Table 6 - NFS Acreage by State, Congressional District and County

In the westernmost portion of the state, the **Southwestern Region** includes Cherokee, Clay, Graham, Haywood, Jackson, Macon, and Swain, which collectively represent the Southwestern Planning Commission of North Carolina.

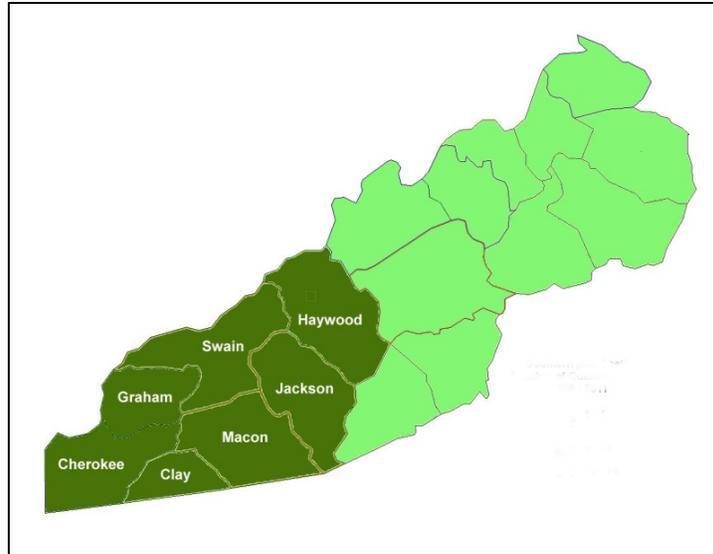


Figure 2d. Southwestern Region in western North Carolina.

Table 6-1d. Population, Population Density and Land Area in the Southwestern Region

Analysis Area Counties	Population 2000	Population 2010	Total Square Miles	Population Density Per Square Mile 2010	National Forest System Acres
Cherokee	24,298	27,444	455.4	60.3	93,422
Clay	8,775	10,587	214.8	49.3	65,987
Graham	7,993	8,861	292.1	30.3	113,447
Haywood	54,033	59,036	533.7	106.6	68,886
Jackson	33,121	40,271	490.8	82.1	77,222
Macon	29,811	33,922	515.6	65.8	153,207
Swain	12,968	13,981	528.0	26.5	22,416
North Carolina	8,049,313	9,535,483	48,617.9	196.1	1,256,014
USA	281,421,906	308,745,538	3,531,905.4	87.4	192,976,743

Source: U.S. Census Bureau, Census 2000 and 2010 Summary File 1 (accessed through EPS-HDT 2013) and 2012 Land Areas Report, Table 6 - NFS Acreage by State, Congressional District and County

6.1.2 Overview of Land Types

Table 6-3a. Land Cover in the Isothermal and Western Piedmont Region

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total Area	329,648	303,103	284,895	31,304,462	917,646	2,286,279,509
Forest	224,161	209,141	230,765	13,147,874	666,823	571,569,877
Grassland	19,779	18,186	14,245	1,878,268	52,000	388,667,517
Shrubland	59,337	45,465	34,187	4,695,669	137,647	274,353,541
Mixed Cropland	9,889	18,186	2,849	9,078,294	30,588	891,649,009
Water	3,296	1,475	246	313,045	4,812	22,862,795
Urban	3,296	1,721	493	626,089	5,325	68,588,385
Other	247	1,721	0	151,157	1,966	14,549,391
Percent of Total						
Forest	68.0%	69.0%	81.0%	42.0%	72.7%	25.0%
Grassland	6.0%	6.0%	5.0%	6.0%	5.7%	17.0%
Shrubland	18.0%	15.0%	12.0%	15.0%	15.0%	12.0%
Mixed Cropland	3.0%	6.0%	1.0%	29.0%	3.3%	39.0%
Water	1.0%	0.5%	0.1%	1.0%	0.5%	1.0%
Urban	1.0%	0.6%	0.2%	2.0%	0.6%	3.0%
Other	0.1%	0.6%	0.0%	0.5%	0.2%	0.6%

Table 6-3b. Land Cover in the High Country Region

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Area	155,851	142,136	197,895	190,306	31,304,462	686,188	2,286,279,509
Forest	135,590	125,080	156,337	167,469	13,147,874	586,691	571,569,877
Grassland	3,117	5,685	17,811	3,806	1,878,268	29,163	388,667,517
Shrubland	14,027	8,528	15,832	15,224	4,695,669	53,180	274,353,541
Mixed Cropland	242	987	1,979	1,181	9,078,294	4,238	891,649,009
Water	0	0	0	0	313,045	0	22,862,795
Urban	0	0	1,223	0	626,089	1,060	68,588,385
Other	242	0	1,223	0	151,157	1,327	14,549,391
Percent of Total							
Forest	87.0%	88.0%	79.0%	88.0%	42.0%	85.5%	25.0%
Grassland	2.0%	4.0%	9.0%	2.0%	6.0%	4.3%	17.0%
Shrubland	9.0%	6.0%	8.0%	8.0%	15.0%	7.8%	12.0%
Mixed Cropland	0.2%	0.7%	1.0%	0.6%	29.0%	0.6%	39.0%
Water	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	1.0%
Urban	0.0%	0.0%	0.6%	0.0%	2.0%	0.2%	3.0%
Other	0.2%	0.0%	0.6%	0.0%	0.5%	0.2%	0.6%

Table 6-3c. Land Cover in the Land-of-Sky Region

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Area	394,593	237,926	287,874	241,824	31,304,462	1,162,217	2,286,279,509
Forest	284,107	152,273	238,935	212,805	13,147,874	892,002	571,569,877
Grassland	23,676	11,896	11,515	7,255	1,878,268	52,300	388,667,517
Shrubland	55,243	38,068	28,787	14,509	4,695,669	133,655	274,353,541
Mixed Cropland	11,838	26,172	2,879	2,418	9,078,294	46,489	891,649,009
Water	0	0	0	493	313,045	592	22,862,795
Urban	11,838	2,203	0	0	626,089	11,407	68,588,385
Other	463	734	245	0	151,157	1,485	14,549,391

Percent of Total

Forest	72.0%	64.0%	83.0%	88.0%	42.0%	76.8%	25.0%
Grassland	6.0%	5.0%	4.0%	3.0%	6.0%	4.5%	17.0%
Shrubland	14.0%	16.0%	10.0%	6.0%	15.0%	11.5%	12.0%
Mixed Cropland	3.0%	11.0%	1.0%	1.0%	29.0%	4.0%	39.0%
Water	0.0%	0.0%	0.0%	0.2%	1.0%	0.1%	1.0%
Urban	3.0%	0.9%	0.0%	0.0%	2.0%	1.0%	3.0%
Other	0.1%	0.3%	0.1%	0.0%	0.5%	0.1%	0.6%

Table 6-3d. Land Cover in the Southwestern Region

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total Area	297,797	141,116	192,125	344,155	305,735	330,718	345,965	31,304,462	1,957,611	2,286,279,509
Forest	259,083	103,015	178,676	289,090	275,162	277,803	328,667	13,147,874	1,694,732	571,569,877
Grassland	2,978	11,289	1,921	17,208	9,172	16,536	2,718	1,878,268	66,519	388,667,517
Shrubland	20,846	12,700	1,921	24,091	15,287	23,150	3,460	4,695,669	103,474	274,353,541
Mixed Crop	2,206	5,645	246	6,883	717	6,614	0	9,078,294	25,458	891,649,009
Water	5,956	2,822	5,764	0	1,194	736	6,919	313,045	26,884	22,862,795
Urban	0	0	0	239	0	0	0	626,089	195	68,588,385
Other	490	246	0	718	0	245	0	151,157	1,740	14,549,391

Percent of Total

Forest	87.0%	73.0%	93.0%	84.0%	90.0%	84.0%	95.0%	42.0%	86.6%	25.0%
Grassland	1.0%	8.0%	1.0%	5.0%	3.0%	5.0%	0.8%	6.0%	3.4%	17.0%
Shrubland	7.0%	9.0%	1.0%	7.0%	5.0%	7.0%	1.0%	15.0%	5.3%	12.0%
Mixed Crop	0.7%	4.0%	0.1%	2.0%	0.2%	2.0%	0.0%	29.0%	1.3%	39.0%
Water	2.0%	2.0%	3.0%	0.0%	0.4%	0.2%	2.0%	1.0%	1.4%	1.0%
Urban	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	2.0%	0.0%	3.0%
Other	0.2%	0.2%	0.0%	0.2%	0.0%	0.1%	0.0%	0.5%	0.1%	0.6%

6.1.3 Overview of Land Ownership

Approximately 7.4 percent of all land owned by the Federal Government. Approximately 2.9 percent of all North Carolina lands are owned by the state, about 89.5 percent is in private ownership, and one fifth of one percent is in municipal ownership. There are approximately 1.12 million acres of federal lands managed by the Forest Service in North Carolina, accounting for about 3.6 percent of the state's land area. North Carolina is ranked eleventh in the percentage of National Forest System land ownership. Tables 6-4a through 6-4d show land ownership for the four regions. Tables 6-5a through 6-5d show acreages and percentages of special designation within the National Forest System lands for the four council of government regions. The amount of Federal lands in each of the counties has direct fiscal implications related to federal payments such as Payments in Lieu of Taxes and Payments to States (revenue-sharing payments and payments made to the state that are distributed to the counties under the Secure Rural Schools and Community Self-Determination Act of 2000). For Isothermal and Western Piedmont counties listed here, McDowell has the largest federal lands acreage (68,547 acres), representing more than 24% of all lands; nearly all of which are National Forest System lands. In the High Country Region counties listed here, Avery County (29,563 acres) and Yancey County (38,125 acres) also have more than 20% of National Forest System lands. Watauga County host only 400 acres of NFS lands, but does host 10,713 of National Park, the most of any of these four counties which all have some NPS land, totaling 14,623 for this region. Land-of-Sky counties have the largest acreages of Nantahala and Pisgah National Forests. Transylvania County hosts 118,516 acres of NFS lands representing 49% of all lands. Madison, Buncombe and Henderson all have smaller percentages of their land base in NFS management, but collectively, this region has 236,053 or 20.3% of land in the NFS and a small percent of land (0.7%) in NPS. The Southwestern Region's seven counties collectively have 584,795 acres of NFS lands, representing 29.9% of all lands in addition to 287,475 acres or 14.7% in NPS. Collectively, federal lands are 44.6% of all land in these this region. Macon with 150,573 (45.5%) acres and Graham with 113,432 (58.8%) have the most NFS land in this region, whereas Swain with 218,857 (63.3%) and Haywood with 64,844 acres (18.8%) have the most NPS lands. Considering all 18 counties, there are 1,032,487 acres of NFS lands (21.5%), 308,424 of NPS lands, for a total of 1,345,536 acres of federal lands. There are also 47,500 of state lands, 19,249 of city, county, other, all compared to 3,382,814 of private lands.

Table 6-4a. Land Ownership (Acres) and Percent of Total in the Isothermal and Western Piedmont Region

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	Isothermal and Western Piedmont Region	U.S.
Total Area	329,648	303,103	284,895	31,304,462	917,646	2,286,279,509
Private Lands	256,482	253,257	215,323	28,012,272	725,062	1,341,224,948
Conservation Easement	na	457	542	233,007	999	14,841,267
Federal Lands	49,704	43,287	68,547	2,314,642	161,538	658,155,051
Forest Service	48,856	43,069	66,843	1,119,336	158,768	193,059,372
BLM	na	na	na	na	na	253,918,202
National Park Service	848	218	1,704	368,968	2,770	78,818,664
Military	na	na	na	390,953	na	25,028,820
Other Federal	na	na	na	435,385	na	107,329,993
State Lands	23,463	6,559	1,025	918,253	31,047	192,517,204
State Trust Lands*	na	na	na	na	na	42,498,598
Other State	23,463	6,559	1,025	918,253	31,047	150,018,606
Tribal Lands	na	na	na	48,430	na	90,323,859
City, County, Other	na	na	na	10,873	na	4,058,428

Percent of Total

Private Lands	77.8%	83.6%	75.6%	89.5%	79.0%	58.7%
Conservation Easement	na	0.2%	0.2%	0.7%	0.1%	0.6%
Federal Lands	15.1%	14.3%	24.1%	7.4%	17.6%	28.8%
Forest Service	14.8%	14.2%	23.5%	3.6%	17.3%	8.4%
BLM	na	na	na	na	na	11.1%
National Park Service	0.3%	0.1%	0.6%	1.2%	0.3%	3.4%
Military	na	na	na	1.2%	na	1.1%
Other Federal	na	na	na	1.4%	na	4.7%
State Lands	7.1%	2.2%	0.4%	2.9%	3.4%	8.4%
State Trust Lands*	na	na	na	na	na	1.9%
Other State	7.1%	2.2%	0.4%	2.9%	3.4%	6.6%
Tribal Lands	na	na	na	0.2%	na	4.0%
City, County, Other	na	na	na	0.0%	na	0.2%

Table 6-4b. Land Ownership (Acres) and Percent of Total in the High Country Council of Governments Region

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Area	155,851	142,136	197,895	190,306	31,304,462	686,188	2,286,279,509
Private Lands	122,900	122,318	185,803	149,267	28,012,272	580,288	1,341,224,948
Conservation Easement	2,375	na	2,715	10,127	233,007	15,217	14,841,267
Federal Lands	31,800	19,817	10,713	39,432	2,314,642	101,762	658,155,051
Forest Service	29,563	19,051	400	38,125	1,119,336	87,139	193,059,372
BLM	na	na	na	na	na	na	253,918,202
National Park Service	2,237	766	10,313	1,307	368,968	14,623	78,818,664
Military	na	na	na	na	390,953	na	25,028,820
Other Federal	na	na	na	na	435,385	na	107,329,993
State Lands	1,151	na	1,379	1,607	918,253	4,137	192,517,204
State Trust Lands*	na	na	na	na	na	na	42,498,598
Other State	1,151	na	1,379	1,607	918,253	4,137	150,018,606
Tribal Lands	na	na	na	na	48,430	na	90,323,859
City, County, Other	na	na	na	na	10,873	na	4,058,428

Percent of Total

Private Lands	78.9%	86.1%	93.9%	78.4%	89.5%	84.6%	58.7%
Conservation Easement	1.5%	na	1.4%	5.3%	0.7%	2.2%	0.6%
Federal Lands	20.4%	13.9%	5.4%	20.7%	7.4%	14.8%	28.8%
Forest Service	19.0%	13.4%	0.2%	20.0%	3.6%	12.7%	8.4%
BLM	na	na	na	na	na	na	11.1%
National Park Service	1.4%	0.5%	5.2%	0.7%	1.2%	2.1%	3.4%
Military	na	na	na	na	1.2%	na	1.1%
Other Federal	na	na	na	na	1.4%	na	4.7%
State Lands	0.7%	na	0.7%	0.8%	2.9%	0.6%	8.4%
State Trust Lands*	na	na	na	na	na	na	1.9%
Other State	0.7%	na	0.7%	0.8%	2.9%	0.6%	6.6%
Tribal Lands	na	na	na	na	0.2%	na	4.0%
City, County, Other	na	na	na	na	0.0%	na	0.2%

Table 6-4c. Land Ownership (Acres) and Percent of Total in the Land-of-Sky Regional Council Region

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Area	394,593	237,926	287,874	241,824	31,304,462	1,162,217	2,286,279,509
Private Lands	353,416	200,408	232,587	108,417	28,012,272	894,828	1,341,224,948
Conservation Easement	27,897	2,222	1,015	1,704	233,007	32,838	14,841,267
Federal Lands	39,069	30,307	54,707	119,756	2,314,642	243,839	658,155,051
Forest Service	33,251	29,579	54,707	118,516	1,119,336	236,053	193,059,372
BLM	na	na	na	na	na	na	253,918,202
National Park Service	5,818	728	na	1,240	368,968	7,786	78,818,664
Military	na	na	na	na	390,953	na	25,028,820
Other Federal	na	na	na	na	435,385	na	107,329,993
State Lands	2,107	7,211	580	13,651	918,253	23,549	192,517,204
State Trust Lands*	na	na	na	na	na	na	42,498,598
Other State	2,107	7,211	580	13,651	918,253	23,549	150,018,606
Tribal Lands	na	na	na	na	48,430	na	90,323,859
City, County, Other	na	na	na	na	10,873	na	4,058,428

Percent of Total

Private Lands	89.6%	84.2%	80.8%	44.8%	89.5%	77.0%	58.7%
Conservation Easement	7.1%	0.9%	0.4%	0.7%	0.7%	2.8%	0.6%
Federal Lands	9.9%	12.7%	19.0%	49.5%	7.4%	21.0%	28.8%
Forest Service	8.4%	12.4%	19.0%	49.0%	3.6%	20.3%	8.4%
BLM	na	na	na	na	na	na	11.1%
National Park Service	1.5%	0.3%	na	0.5%	1.2%	0.7%	3.4%
Military	na	na	na	na	1.2%	na	1.1%
Other Federal	na	na	na	na	1.4%	na	4.7%
State Lands	0.5%	3.0%	0.2%	5.6%	2.9%	2.0%	8.4%
State Trust Lands*	na	na	na	na	na	na	1.9%
Other State	0.5%	3.0%	0.2%	5.6%	2.9%	2.0%	6.6%
Tribal Lands	na	na	na	na	0.2%	na	4.0%
City, County, Other	na	na	na	na	0.0%	na	0.2%

Table 6-4d. Land Ownership (Acres) and Percent of Total in the Southwestern Region

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total Area	297,797	141,116	192,125	344,155	305,735	330,718	345,965	31,304,462	1,957,611	2,286,279,509
Private Lands	205,368	74,794	78,694	208,070	207,729	180,145	78,801	28,012,272	1,033,601	1,341,224,948
Conservation Easement	909	78	929	10,804	10,773	1,894	28	233,007	25,415	14,841,267
Federal Lands	92,430	66,323	113,432	132,648	77,561	150,573	239,303	2,314,642	872,270	658,155,051
Forest Service	92,430	66,323	113,045	67,804	74,174	150,573	20,446	1,119,336	584,795	193,059,372
BLM	na	na	na	na	na	na	na	na	na	253,918,202
National Park Service	na	na	387	64,844	3,387	na	218,857	368,968	287,475	78,818,664
Military	na	na	na	na	na	na	na	390,953	na	25,028,820
Other Federal	na	na	na	na	na	na	na	435,385	na	107,329,993
State Lands	na	na	na	3,314	na	na	na	918,253	3,314	192,517,204

State Trust Lands*	na	na	na	na	na	na	na	na	na	42,498,598
Other State	na	na	na	3,314	na	na	na	918,253	3,314	150,018,606
Tribal Lands	na	na	na	123	20,446	na	27,861	48,430	48,430	90,323,859
City, County, Other	na	na	na	na	na	na	na	10,873	na	4,058,428

Percent of Total

Private Lands	69.0%	53.0%	41.0%	60.5%	67.9%	54.5%	22.8%	89.5%	52.8%	58.7%
Conservation Easement	0.3%	0.1%	0.5%	3.1%	3.5%	0.6%	0.0%	0.7%	1.3%	0.6%
Federal Lands	31.0%	47.0%	59.0%	38.5%	25.4%	45.5%	69.2%	7.4%	44.6%	28.8%
Forest Service	31.0%	47.0%	58.8%	19.7%	24.3%	45.5%	5.9%	3.6%	29.9%	8.4%
BLM	na	11.1%								
National Park Service	na	na	0.2%	18.8%	1.1%	na	63.3%	1.2%	14.7%	3.4%
Military	na	1.2%	na	1.1%						
Other Federal	na	1.4%	na	4.7%						
State Lands	na	na	na	1.0%	na	na	na	2.9%	0.2%	8.4%
State Trust Lands*	na	1.9%								
Other State	na	na	na	1.0%	na	na	na	2.9%	0.2%	6.6%
Tribal Lands	na	na	na	0.0%	6.7%	na	8.1%	0.2%	2.5%	4.0%
City, County, Other	na	0.0%	na	0.2%						

6.2 SOCIAL AND CULTURAL CONDITIONS – REMOVED FROM ECONOMIC CONDITIONS AND TRENDS - SEE DRAFT ASSESSMENT REPORT

6.3 DEMOGRAPHICS – QUESTION A - WHAT ARE THE SOCIAL DEMOGRAPHICS OF THE COUNCILS OF GOVERNMENT, THE EIGHTEEN-COUNTY AREA, WESTERN NORTH CAROLINA AND HOW HAVE THEY CHANGED RECENTLY COMPARED TO NORTH CAROLINA AND THE NATION?

6.3.1 Population

As seen above in Tables 6-1a through 6-1d, population increased in all counties between 2000 and 2011, with the exception of Mitchell County in the High Country Region. This section takes a closer look at the age and gender, race and ethnicity of the residents.

6.3.2 Age and Gender

Table 6.3.1.1a. Age Distribution and Change in the Isothermal and Western Piedmont Region, 2000-2011*

	2000	2011*
Total Population	208,714	218,042
Under 18	49,139	48,991
18-34	47,456	41,803
35-44	32,539	30,873
45-64	51,326	62,261
65 and over	28,254	34,114
Percent of Total		
Under 18	23.5%	22.5%
18-34	22.7%	19.2%
35-44	15.6%	14.2%
45-64	24.6%	28.6%
65 and over	13.5%	15.6%

Table 6.3.1.1b. Age Distribution and Change in the High Country Region, 2000-2011*

	2000	2011*
Total Population	93,323	101,781
Under 18	17,389	16,765
18-34	27,286	31,286
35-44	12,681	11,395
45-64	22,432	26,308
65 and over	13,535	16,027
Percent of Total		
Under 18	18.6%	16.5%
18-34	29.2%	30.7%

35-44	13.6%	11.2%
45-64	24.0%	25.8%
65 and over	14.5%	15.7%

Table 6.3.1.c. Age Distribution and Change in the Land-of-Sky Region, 2000-2011*

	2000	2011*
Total Population	344,472	395,014
Under 18	73,825	80,294
18-34	71,929	79,200
35-44	51,664	50,841
45-64	86,525	112,121
65 and over	60,529	72,558

Percent of Total

Under 18	21.4%	20.3%
18-34	20.9%	20.0%
35-44	15.0%	12.9%
45-64	25.1%	28.4%
65 and over	17.6%	18.4%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

Table 6.3.1.d. Age Distribution and Change in the Southwestern Region, 2000-2011*

	2000	2011*
Total Population	170,999	192,699
Under 18	35,115	37,193
18-34	34,498	37,845
35-44	23,354	22,373
45-64	46,341	56,620
65 and over	31,691	38,668

Percent of Total

Under 18	20.5%	19.3%
18-34	20.2%	19.6%
35-44	13.7%	11.6%
45-64	27.1%	29.4%
65 and over	18.5%	20.1%

Table 6.4.1a Age & Gender Distribution in the Isothermal and Western Piedmont Region, 2011

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total Population	90,753	82,464	44,825	9,418,736	218,042	306,603,772
Total Female	45,368	41,902	22,413	4,830,157	109,683	155,863,556
Total Male	45,385	40,562	22,412	4,588,579	108,359	150,740,216

Change in Median Age, 2000-2011*

Median Age^ (2011*)	41.0	40.8	41.5	37.3	na	37.0
Median Age^ (2000)	36.9	37.5	38.0	35.3	na	35.3
Median Age % Change	11.1%	8.8%	9.2%	5.7%	na	4.8%

This page describes the change in age and gender distribution over time, and the change in age distribution, with age categories separated into five age groups.

Table 6.3.1.1b. Age & Gender Distribution and Change in the High Country Region, 2000-2011*

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Population	17,844	15,631	50,421	17,885	9,418,736	101,781	306,603,772
Total Female	8,100	7,974	25,155	9,259	4,830,157	50,488	155,863,556
Total Male	9,744	7,657	25,266	8,626	4,588,579	51,293	150,740,216

Change in Median Age, 2000-2011*

Median Age^ (2011*)	41.7	45.1	28.2	45.3	37.3	na	37.0
Median Age^ (2000)	38.4	42.0	29.9	41.9	35.3	na	35.3
Median Age % Change	8.6%	7.4%	-5.7%	8.1%	5.7%	na	4.8%

Table 6.3.1.1c. Age & Gender Distribution and Change in the Land-of-Sky Region, 2000-2011*

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Population	236,230	105,453	20,661	32,670	9,418,736	395,014	306,603,772
Total Female	122,771	54,503	10,341	16,780	4,830,157	204,395	155,863,556
Total Male	113,459	50,950	10,320	15,890	4,588,579	190,619	150,740,216

Change in Median Age, 2000-2011*

Median Age^ (2011*)	40.6	45.1	43.3	48.9	37.3	na	37.0
Median Age^ (2000)	38.9	42.7	39.3	43.9	35.3	na	35.3
Median Age % Change	4.4%	5.6%	10.2%	11.4%	5.7%	na	4.8%

Table 6.3.1.1d Age & Gender Distribution and Change in the Southwestern Region, 2000-2011*

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Madison County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total Population	27,380	10,506	8,752	58,836	39,574	33,719	13,932	9,418,736	192,699	306,603,772
Total Female	14,065	5,312	4,408	30,520	20,093	17,413	7,064	4,830,157	98,875	155,863,556
Total Male	13,315	5,194	4,344	28,316	19,481	16,306	6,868	4,588,579	93,824	150,740,216

Change in Median Age, 2000-2011*

Median Age^ (2011*)	47.9	49.2	42.7	45.4	36.4	48.1	40.9	37.3	na	37.0
Median Age^ (2000)	44.0	46.7	41.5	42.3	36.2	45.2	38.8	35.3	na	35.3

Median Age % Change	8.9%	5.4%	2.9%	7.3%	0.6%	6.4%	5.4%	5.7%	na	4.8%
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6.3.3 Race/Ethnicity/ Tribes

Table 6.3.3a Population by Race in the Isothermal and Western Piedmont Region, 2011

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total Population	90,753	82,464	44,825	9,418,736	218,042	306,603,772
White alone	77,715	74,135	41,429	6,560,948	193,279	227,167,013
Black or African American alone	6,055	3,934	1,575	2,016,228	11,564	38,395,857
American Indian alone	350	213	147	108,960	710	2,502,653
Asian alone	3,063	443	413	202,815	3,919	14,497,185
Native Hawaiian & Other Pacific Is. alone	29	88	14	4,725	131	500,592
Some other race alone	1,970	2,565	652	336,670	5,187	15,723,818
Two or more races	1,571	1,086	595	188,390	3,252	7,816,654

Percent of Total

White alone	85.6%	89.9%	92.4%	69.7%	88.6%	74.1%
Black or African American alone	6.7%	4.8%	3.5%	21.4%	5.3%	12.5%
American Indian alone	0.4%	0.3%	0.3%	1.2%	0.3%	0.8%
Asian alone	3.4%	0.5%	0.9%	2.2%	1.8%	4.7%
Native Hawaiian & Other Pacific Is. alone	0.0%	0.1%	0.0%	0.1%	0.1%	0.2%
Some other race alone	2.2%	3.1%	1.5%	3.6%	2.4%	5.1%
Two or more races	1.7%	1.3%	1.3%	2.0%	1.5%	2.5%

Table 6.3.3b Population by Race in High Country Region, 2011

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Population	17,844	15,631	50,421	17,885	9,418,736	101,781	306,603,772
White alone	15,383	15,089	47,768	17,317	6,560,948	95,557	227,167,013
Black or African American alone	749	144	592	93	2,016,228	1,578	38,395,857
American Indian alone	152	27	94	70	108,960	343	2,502,653
Asian alone	140	47	496	57	202,815	740	14,497,185
Native Hawaiian & Other Pacific Is. alone	60	0	0	19	4,725	79	500,592
Some other race alone	207	216	392	76	336,670	891	15,723,818
Two or more races	1,153	108	1,079	253	188,390	2,593	7,816,654

Percent of Total

White alone	86.2%	96.5%	94.7%	96.8%	69.7%	93.9%	74.1%
Black or African American alone	4.2%	0.9%	1.2%	0.5%	21.4%	1.6%	12.5%
American Indian alone	0.9%	0.2%	0.2%	0.4%	1.2%	0.3%	0.8%
Asian alone	0.8%	0.3%	1.0%	0.3%	2.2%	0.7%	4.7%
Native Hawaiian & Other Pacific Is. alone	0.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%
Some other race alone	1.2%	1.4%	0.8%	0.4%	3.6%	0.9%	5.1%
Two or more races	6.5%	0.7%	2.1%	1.4%	2.0%	2.5%	2.5%

Table 6.3.3c Population by Race in Land-of-Sky Region, 2011

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Population	236,230	105,453	20,661	32,670	9,418,736	395,014	306,603,772
White alone	209,442	93,917	19,879	30,207	6,560,948	353,445	227,167,013
Black or African American alone	15,458	3,620	226	1,049	2,016,228	20,353	38,395,857
American Indian alone	1,009	600	64	115	108,960	1,788	2,502,653
Asian alone	2,372	1,038	83	477	202,815	3,970	14,497,185
Native Hawaiian & Other Pacific Is. alone	181	0	0	0	4,725	181	500,592
Some other race alone	2,688	4,266	182	377	336,670	7,513	15,723,818
Two or more races	5,080	2,012	227	445	188,390	7,764	7,816,654
Percent of Total							
White alone	88.7%	89.1%	96.2%	92.5%	69.7%	89.5%	74.1%
Black or African American alone	6.5%	3.4%	1.1%	3.2%	21.4%	5.2%	12.5%
American Indian alone	0.4%	0.6%	0.3%	0.4%	1.2%	0.5%	0.8%
Asian alone	1.0%	1.0%	0.4%	1.5%	2.2%	1.0%	4.7%
Native Hawaiian & Other Pacific Is. alone	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.2%
Some other race alone	1.1%	4.0%	0.9%	1.2%	3.6%	1.9%	5.1%
Two or more races	2.2%	1.9%	1.1%	1.4%	2.0%	2.0%	2.5%

Table 6.3.3.d Population by Race in the Southwestern Region, 2011

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total Population	27,380	10,506	8,752	58,836	39,574	33,719	13,932	9,418,736	192,699	306,603,772
White alone	25,534	10,197	7,904	56,323	33,234	31,551	9,472	6,560,948	174,215	227,167,013
Black or African American alone	297	72	28	556	786	326	226	2,016,228	2,291	38,395,857
American Indian alone	385	37	496	323	3,612	133	3,586	108,960	8,572	2,502,653
Asian alone	181	0	143	211	234	239	72	202,815	1,080	14,497,185
Native Hawaiian & Other Pacific Is. alone	10	0	12	11	54	8	0	4,725	95	500,592
Some other race alone	340	145	26	633	769	1,264	225	336,670	3,402	15,723,818
Two or more races	633	55	143	779	885	198	351	188,390	3,044	7,816,654
Percent of Total										
White alone	93.3%	97.1%	90.3%	95.7%	84.0%	93.6%	68.0%	69.7%	90.4%	74.1%
Black or African American alone	1.1%	0.7%	0.3%	0.9%	2.0%	1.0%	1.6%	21.4%	1.2%	12.5%
American Indian alone	1.4%	0.4%	5.7%	0.5%	9.1%	0.4%	25.7%	1.2%	4.4%	0.8%
Asian alone	0.7%	0.0%	1.6%	0.4%	0.6%	0.7%	0.5%	2.2%	0.6%	4.7%
Native Hawaiian & Other	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.2%

Pacific Is. alone										
Some other race alone	1.2%	1.4%	0.3%	1.1%	1.9%	3.7%	1.6%	3.6%	1.8%	5.1%
Two or more races	2.3%	0.5%	1.6%	1.3%	2.2%	0.6%	2.5%	2.0%	1.6%	2.5%

Table 6.3.3e Hispanic Population in the Isothermal and Western Piedmont Region, 2011

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total Population	90,753	82,464	44,825	9,418,736	218,042	306,603,772
Hispanic or Latino (of any race)	4,602	3,701	2,299	764,707	10,602	49,215,563
Not Hispanic or Latino	86,151	78,763	42,526	8,654,029	207,440	257,388,209
White alone	75,329	73,078	39,857	6,183,777	188,264	196,730,055
Black or African American alone	5,928	3,852	1,563	1,992,921	11,343	37,449,666
American Indian alone	336	157	147	103,156	640	2,049,094
Asian alone	3,047	443	413	200,617	3,903	14,333,034
Native Hawaiian & Oth.Pacific Is. alone	29	88	14	4,344	131	469,242
Some other race	94	113	35	17,065	242	654,541
Two or more races	1,388	1,032	497	152,149	2,917	5,702,577

Percent of Total

Hispanic or Latino (of any race)	5.1%	4.5%	5.1%	8.1%	4.9%	16.1%
Not Hispanic or Latino	94.9%	95.5%	94.9%	91.9%	95.1%	83.9%
White alone	83.0%	88.6%	88.9%	65.7%	86.3%	64.2%
Black or African American alone	6.5%	4.7%	3.5%	21.2%	5.2%	12.2%
American Indian alone	0.4%	0.2%	0.3%	1.1%	0.3%	0.7%
Asian alone	3.4%	0.5%	0.9%	2.1%	1.8%	4.7%
Native Hawaiian & Oth.Pacific Is. alone	0.0%	0.1%	0.0%	0.0%	0.1%	0.2%
Some other race	0.1%	0.1%	0.1%	0.2%	0.1%	0.2%
Two or more races	1.5%	1.3%	1.1%	1.6%	1.3%	1.9%

Table 6.3.3f. Hispanic Population in the High Country Region, 2011

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Population	17,844	15,631	50,421	17,885	9,418,736	101,781	306,603,772
Hispanic or Latino (of any race)	758	584	1,612	770	764,707	3,724	49,215,563
Not Hispanic or Latino	17,086	15,047	48,809	17,115	8,654,029	98,057	257,388,209
White alone	14,945	14,737	46,806	16,748	6,183,777	93,236	196,730,055
Black or African American alone	733	144	591	93	1,992,921	1,561	37,449,666
American Indian alone	152	27	94	70	103,156	343	2,049,094
Asian alone	140	47	485	57	200,617	729	14,333,034
Native Hawaiian & Oth.Pacific Is. alone	10	0	0	19	4,344	29	469,242
Some other race	54	0	0	0	17,065	54	654,541
Two or more races	1,052	92	833	128	152,149	2,105	5,702,577

Percent of Total

Hispanic or Latino (of any race)	4.2%	3.7%	3.2%	4.3%	8.1%	3.7%	16.1%
Not Hispanic or Latino	95.8%	96.3%	96.8%	95.7%	91.9%	96.3%	83.9%
White alone	83.8%	94.3%	92.8%	93.6%	65.7%	91.6%	64.2%

Black or African American alone	4.1%	0.9%	1.2%	0.5%	21.2%	1.5%	12.2%
American Indian alone	0.9%	0.2%	0.2%	0.4%	1.1%	0.3%	0.7%
Asian alone	0.8%	0.3%	1.0%	0.3%	2.1%	0.7%	4.7%
Native Hawaiian & Oth.Pacific Is. alone	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%
Some other race	0.3%	0.0%	0.0%	0.0%	0.2%	0.1%	0.2%
Two or more races	5.9%	0.6%	1.7%	0.7%	1.6%	2.1%	1.9%

Table 6.3.3g. Hispanic Population in the Land-of-Sky Region, 2011

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Population	236,230	105,453	20,661	32,670	9,418,736	395,014	306,603,772
Hispanic or Latino (of any race)	13,566	10,042	420	920	764,707	24,948	49,215,563
Not Hispanic or Latino	222,664	95,411	20,241	31,750	8,654,029	370,066	257,388,209
White alone	200,153	89,330	19,657	29,645	6,183,777	338,785	196,730,055
Black or African American alone	15,055	3,547	226	1,008	1,992,921	19,836	37,449,666
American Indian alone	876	491	64	115	103,156	1,546	2,049,094
Asian alone	2,350	1,029	83	477	200,617	3,939	14,333,034
Native Hawaiian & Oth.Pacific Is. alone	163	0	0	0	4,344	163	469,242
Some other race	148	129	10	90	17,065	377	654,541
Two or more races	3,919	885	201	415	152,149	5,420	5,702,577

Percent of Total

Hispanic or Latino (of any race)	5.7%	9.5%	2.0%	2.8%	8.1%	6.3%	16.1%
Not Hispanic or Latino	94.3%	90.5%	98.0%	97.2%	91.9%	93.7%	83.9%
White alone	84.7%	84.7%	95.1%	90.7%	65.7%	85.8%	64.2%
Black or African American alone	6.4%	3.4%	1.1%	3.1%	21.2%	5.0%	12.2%
American Indian alone	0.4%	0.5%	0.3%	0.4%	1.1%	0.4%	0.7%
Asian alone	1.0%	1.0%	0.4%	1.5%	2.1%	1.0%	4.7%
Native Hawaiian & Oth.Pacific Is. alone	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Some other race	0.1%	0.1%	0.0%	0.3%	0.2%	0.1%	0.2%
Two or more races	1.7%	0.8%	1.0%	1.3%	1.6%	1.4%	1.9%

Table 6.3.3h. Hispanic Population in the Southwestern Region, 2011

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total Population	27,380	10,506	8,752	58,836	39,574	33,719	13,932	9,418,736	192,699	306,603,772
Hispanic or Latino (of any race)	684	229	175	1,909	1,876	2,043	530	764,707	7,446	49,215,563
Not Hispanic or Latino	26,696	10,277	8,577	56,927	37,698	31,676	13,402	8,654,029	185,253	257,388,209
White alone	25,275	10,113	7,850	55,327	32,388	30,642	9,167	6,183,777	170,762	196,730,055
Black or African American alone	217	72	28	556	735	326	226	1,992,921	2,160	37,449,666
American Indian alone	385	37	432	269	3,528	120	3,586	103,156	8,357	2,049,094

Asian alone	181	0	143	211	234	239	72	200,617	1,080	14,333,034
Native Hawaiian & Oth.Pacific Is. alone	10	0	12	11	54	8	0	4,344	95	469,242
Some other race	34	0	8	0	44	156	0	17,065	242	654,541
Two or more races	594	55	104	553	715	185	351	152,149	2,557	5,702,577

Percent of Total

Hispanic or Latino (of any race)	2.5%	2.2%	2.0%	3.2%	4.7%	6.1%	3.8%	8.1%	3.9%	16.1%
Not Hispanic or Latino	97.5%	97.8%	98.0%	96.8%	95.3%	93.9%	96.2%	91.9%	96.1%	83.9%
White alone	92.3%	96.3%	89.7%	94.0%	81.8%	90.9%	65.8%	65.7%	88.6%	64.2%
Black or African American alone	0.8%	0.7%	0.3%	0.9%	1.9%	1.0%	1.6%	21.2%	1.1%	12.2%
American Indian alone	1.4%	0.4%	4.9%	0.5%	8.9%	0.4%	25.7%	1.1%	4.3%	0.7%
Asian alone	0.7%	0.0%	1.6%	0.4%	0.6%	0.7%	0.5%	2.1%	0.6%	4.7%
Native Hawaiian & Oth.Pacific Is. alone	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%
Some other race	0.1%	0.0%	0.1%	0.0%	0.1%	0.5%	0.0%	0.2%	0.1%	0.2%
Two or more races	2.2%	0.5%	1.2%	0.9%	1.8%	0.5%	2.5%	1.6%	1.3%	1.9%

People in the Isothermal and Western Piedmont Region self-identified themselves as Apache, Cherokee, Choctaw, Creek, Lumbee, Sioux and “not specified.”

Table 6.3.3i. American Indian & Alaska Native Population in the Isothermal and Western Piedmont Region, 2011*

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total Population	90,753	82,464	44,825	9,418,736	218,042	306,603,772
Total Native American	350	213	147	108,960	710	2,502,653
American Indian Tribes	221	196	118	90,842	535	1,976,358
Alaska Native Tribes	0	0	0	349	0	104,908
Non-Specified Tribes	129	7	29	15,369	165	355,701

Percent of Total

Total Native American	0.4%	0.3%	0.3%	1.2%	0.3%	0.8%
American Indian Tribes	0.2%	0.2%	0.3%	1.0%	0.2%	0.6%
Alaska Native Tribes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Specified Tribes	0.1%	0.0%	0.1%	0.2%	0.1%	0.1%

In the High Country Region, Specified Tribes include Cherokee, Chippewa, Lumbee, and Sioux.

Table 6.3.3j. American Indian & Alaska Native Population in the High Country Region, 2011*

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Population	17,844	15,631	50,421	17,885	9,418,736	101,781	306,603,772
Total Native American	152	27	94	70	108,960	343	2,502,653
American Indian Tribes	109	27	72	70	90,842	278	1,976,358
Alaska Native Tribes	0	0	0	0	349	0	104,908
Non-Specified Tribes	43	0	22	0	15,369	65	355,701

Percent of Total

Total Native American	0.9%	0.2%	0.2%	0.4%	1.2%	0.3%	0.8%
American Indian Tribes	0.6%	0.2%	0.1%	0.4%	1.0%	0.3%	0.6%
Alaska Native Tribes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Specified Tribes	0.2%	0.0%	0.0%	0.0%	0.2%	0.1%	0.1%

In the Land-of-Sky Region, specified Tribes include Cherokee, Lumbee, Creek and others.

Table 6.3.3k. American Indian & Alaska Native Population in the Land-of-Sky Region, 2011*

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Population	236,230	105,453	20,661	32,670	9,418,736	395,014	306,603,772
Total Native American	1,009	600	64	115	108,960	1,788	2,502,653
American Indian Tribes	796	549	58	115	90,842	1,518	1,976,358
Alaska Native Tribes	0	0	0	0	349	0	104,908
Non-Specified Tribes	196	51	6	0	15,369	253	355,701

Percent of Total

Total Native American	0.4%	0.6%	0.3%	0.4%	1.2%	0.5%	0.8%
American Indian Tribes	0.3%	0.5%	0.3%	0.4%	1.0%	0.4%	0.6%
Alaska Native Tribes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Specified Tribes	0.1%	0.0%	0.0%	0.0%	0.2%	0.1%	0.1%

In the Southwestern Region, specified Tribes include Cherokee, Lumbee, Shoshone and others.

Table 6.3.3l. American Indian & Alaska Native Population in the Southwestern Region, 2011*

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
	27,380	10,506	8,752	58,836	39,574	33,719	13,932	9,418,736	192,699	306,603,772
	385	37	496	323	3,612	133	3,586	108,960	8,572	2,502,653
	328	10	371	213	3,269	133	1,891	90,842	6,215	1,976,358
	0	0	0	43	0	0	0	349	43	104,908
	57	27	125	31	343	0	1,651	15,369	2,234	355,701

	1.4%	0.4%	5.7%	0.5%	9.1%	0.4%	25.7%	1.2%	4.4%	0.8%
	1.2%	0.1%	4.2%	0.4%	8.3%	0.4%	13.6%	1.0%	3.2%	0.6%
	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	0.2%	0.3%	1.4%	0.1%	0.9%	0.0%	11.9%	0.2%	1.2%	0.1%

6.3.4 Additional Demographic Characteristics.

6.3.4.1 Dwellings and Second home ownership

Across the United States, 87.6% of all homes are occupied, and of these 66.1% are owner occupied and 33.9% are renter occupied. Across North Carolina, 67.8% of housing units are owner occupied whereas 32.2% are renter occupied. Tables 6.3.4a through 6.3.4d provide this

information for individual counties, as well as the amount of homes using wood as the primary heating source.

Table 6.3.4a. Housing Characteristics in the Isothermal and Western Piedmont Region 2007-2011.

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	US
Total Housing Units	40,757	37,463	20,655	4,286,863.00	131,034,946
Percent Occupied Housing Units	85.9	84.1	84.6	85.5	87.6
Percent Owner Occupied	73.7	75.4	71.3	67.8	66.1
Percent Renter Occupied	26.3	24.6	28.7	32.2	33.9
Percent of homes using wood for heat	4.8	5.1	5.9	2.1	2.0
Source: U.S. Census Bureau, 2007-2011 American Community Survey					

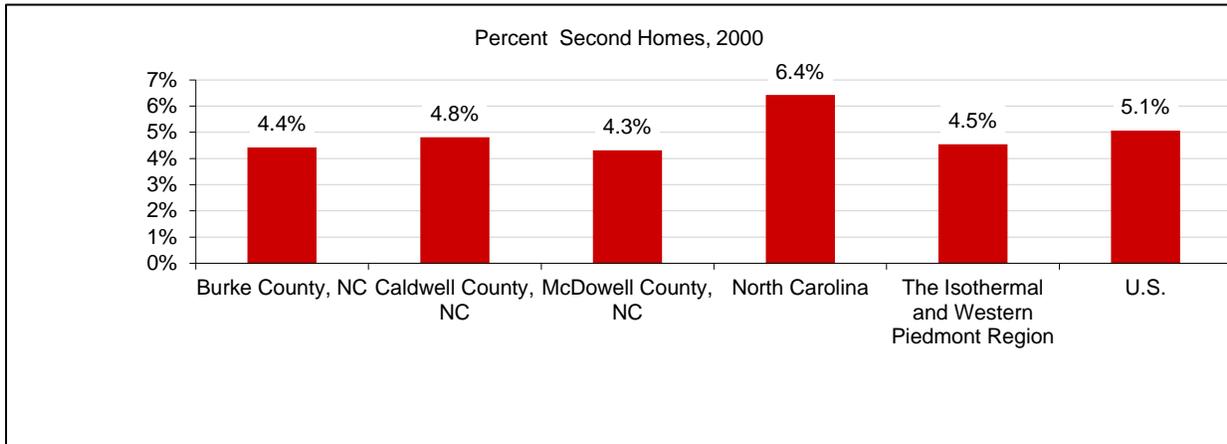


Figure 6.3.4a. Percent of Second Homes in the Isothermal and Western Piedmont Region, 2000.

Table 6.3.5b. Housing Characteristics in the High Country Region 2007-2011.

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	US
Total Housing Units	13,813	8,673	31,536	10,980	4,286,863	131,034,946
Percent Occupied Housing Units	51.3	75.6	65.5	65.5	85.5	87.6
Percent Owner Occupied	71.8	74.6	54.7	76.7	67.8	66.1
Percent Renter Occupied	28.2	25.4	45.3	23.3	32.2	33.9
Percent of homes using wood for heat	14.2	13.0	5.8	18.3	2.1	2.0
Source: U.S. Census Bureau, 2007-2011 American Community Survey						

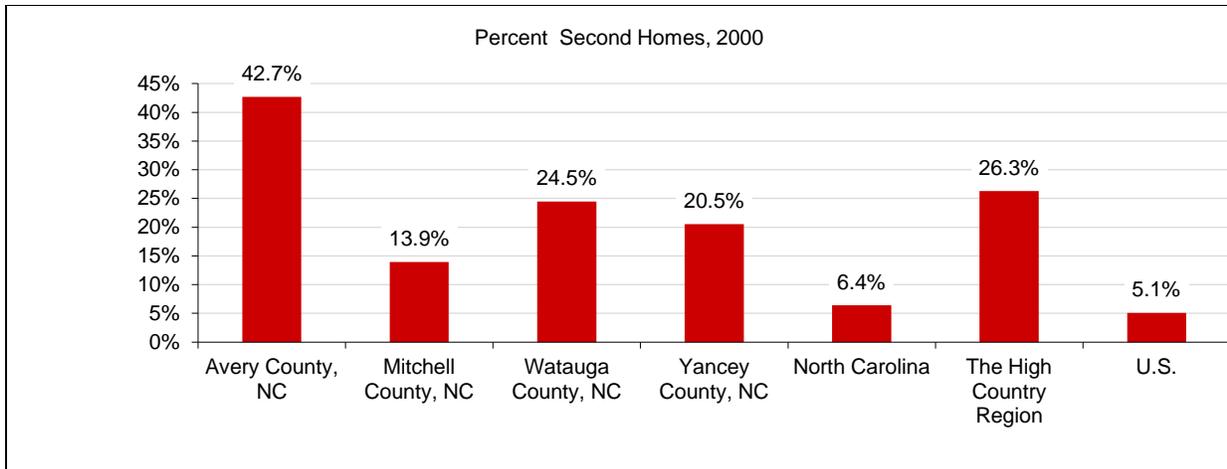


Figure 6.3.4b. Percent of Second Homes in the High Country Region, 2000.

Table 6.3.4c. Housing Characteristics in the Land-of-Sky Region 2007-2011.

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	US
Total Housing Units	112,247	54,053	10,591	18,949	4,286,863.00	131,034,946
Percent Occupied Housing Units	89.9	83.6	76.3	73.4	85.5	87.6
Percent Owner Occupied	66.2	76.9	76.6	78.3	67.8	66.1
Percent Renter Occupied	33.8	23.1	23.4	21.7	32.2	33.9
Percent of homes using wood for heat	4.1	3.7	17.9	7.3	2.1	2.0

Source: U.S. Census Bureau, 2007-2011 American Community Survey

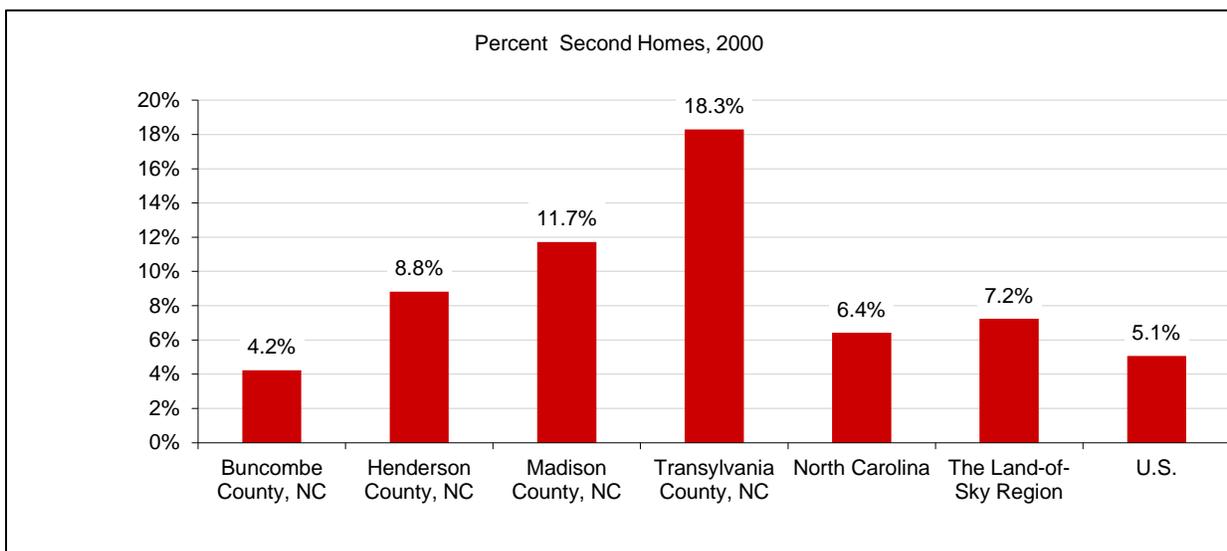


Figure 6.3.4c. Percent of Second Homes in the Land-of-Sky Region, 2000.

Table 6.3.4d. Housing Characteristics in the Southwestern Region 2007-2011.

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	US
Total Housing Units	17,360	1,600	5,889	34,589	25,631	24,969	8,656	4,286,863	131,034,946
Percent Occupied Housing Units	65.7	63.1	62.2	77.1	61.5	64.2	63	85.5	87.6
Percent Owner Occupied	83.1	83.5	79.7	74.9	66.6	74.2	81.4	67.8	66.1
Percent Renter Occupied	16.9	16.5	20.3	25.1	33.4	25.8	18.6	32.2	33.9
Percent of homes using wood for heat	8.6	10.1	7.8	9.7	7.4	7.2	11.6	2.1	2.0
Source: U.S. Census Bureau, 2007-2011 American Community Survey									

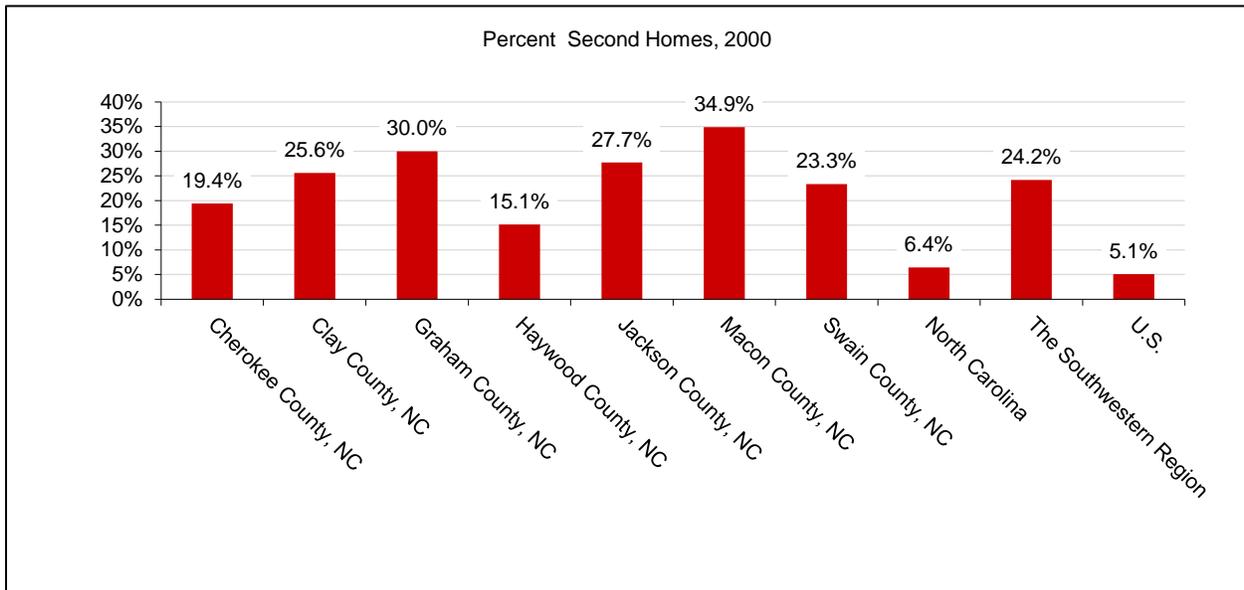


Figure 6.3.4d. Percent of Second Homes in the Southwestern Region, 2000.

6.3.4.2 Educational Attainment

Table 6.3.4.2a Educational Attainment in the Isothermal and Western Piedmont Region, 2011

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total Population 25 yrs or older	62,102	57,194	31,690	6,229,136	150,986	202,048,123
No high school degree	14,970	13,907	6,702	990,635	35,579	29,518,935
High school graduate	47,132	43,287	24,988	5,238,501	115,407	172,529,188
Associates degree	6,180	5,031	3,315	529,121	14,526	15,344,048
Bachelor's degree or higher	9,661	7,790	4,401	1,652,789	21,852	56,973,624
Bachelor's degree	5,967	5,393	2,879	1,099,631	14,239	35,852,277

Graduate or professional	3,694	2,397	1,522	553,158	7,613	21,121,347
Percent of Total						
No high school degree	24.1%	24.3%	21.1%	15.9%	23.6%	14.6%
High school graduate	75.9%	75.7%	78.9%	84.1%	76.4%	85.4%
Associates degree	10.0%	8.8%	10.5%	8.5%	9.6%	7.6%
Bachelor's degree or higher	15.6%	13.6%	13.9%	26.5%	14.5%	28.2%
Bachelor's degree	9.6%	9.4%	9.1%	17.7%	9.4%	17.7%
Graduate or professional	5.9%	4.2%	4.8%	8.9%	5.0%	10.5%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

Table 6.3.4.2b Educational Attainment in the High Country Region, 2011

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Population 25 yrs or older	12,983	11,400	27,313	13,029	6,229,136	64,725	202,048,123
No high school degree	2,403	2,386	3,191	2,511	990,635	10,491	29,518,935
High school graduate	10,580	9,014	24,122	10,518	5,238,501	54,234	172,529,188
Associates degree	1,343	980	2,239	940	529,121	5,502	15,344,048
Bachelor's degree or higher	2,501	1,559	10,742	2,449	1,652,789	17,251	56,973,624
Bachelor's degree	1,737	1,039	5,978	1,549	1,099,631	10,303	35,852,277
Graduate or professional	764	520	4,764	900	553,158	6,948	21,121,347

Percent of Total

No high school degree	18.5%	20.9%	11.7%	19.3%	15.9%	16.2%	14.6%
High school graduate	81.5%	79.1%	88.3%	80.7%	84.1%	83.8%	85.4%
Associates degree	10.3%	8.6%	8.2%	7.2%	8.5%	8.5%	7.6%
Bachelor's degree or higher	19.3%	13.7%	39.3%	18.8%	26.5%	26.7%	28.2%
Bachelor's degree	13.4%	9.1%	21.9%	11.9%	17.7%	15.9%	17.7%
Graduate or professional	5.9%	4.6%	17.4%	6.9%	8.9%	10.7%	10.5%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

Table 6.3.4.2c Educational Attainment in the Land-of-Sky Region, 2011

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Population 25 yrs or older	167,318	76,980	14,490	24,215	6,229,136	283,003	202,048,123
No high school degree	20,176	9,818	3,017	3,178	990,635	36,189	29,518,935
High school graduate	147,142	67,162	11,473	21,037	5,238,501	246,814	172,529,188
Associates degree	14,527	7,163	1,310	2,374	529,121	25,374	15,344,048
Bachelor's degree or higher	53,690	21,182	2,401	6,618	1,652,789	83,891	56,973,624
Bachelor's degree	34,698	13,358	1,613	4,008	1,099,631	53,677	35,852,277
Graduate or professional	18,992	7,824	788	2,610	553,158	30,214	21,121,347

Percent of Total

No high school degree	12.1%	12.8%	20.8%	13.1%	15.9%	12.8%	14.6%
High school graduate	87.9%	87.2%	79.2%	86.9%	84.1%	87.2%	85.4%
Associates degree	8.7%	9.3%	9.0%	9.8%	8.5%	9.0%	7.6%
Bachelor's degree or higher	32.1%	27.5%	16.6%	27.3%	26.5%	29.6%	28.2%
Bachelor's degree	20.7%	17.4%	11.1%	16.6%	17.7%	19.0%	17.7%
Graduate or professional	11.4%	10.2%	5.4%	10.8%	8.9%	10.7%	10.5%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

Table 6.3.4.2d Educational Attainment in the Southwestern Region, 2011

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total Population 25 yrs or older	20,424	7,899	6,033	43,141	24,958	24,988	9,503	6,229,136	136,946	202,048,123
No high school degree	3,747	1,281	1,210	6,721	4,128	3,925	1,875	990,635	22,887	29,518,935
High school graduate	16,677	6,618	4,823	36,420	20,830	21,063	7,628	5,238,501	114,059	172,529,188
Associates degree	2,197	660	466	4,391	2,091	2,047	1,144	529,121	12,996	15,344,048
Bachelor's degree or higher	3,100	1,530	728	9,626	6,775	4,945	1,682	1,652,789	28,386	56,973,624
Bachelor's degree	1,898	954	484	6,442	4,180	2,998	1,061	1,099,631	18,017	35,852,277
Graduate or professional	1,202	576	244	3,184	2,595	1,947	621	553,158	10,369	21,121,347
Percent of Total										
No high school degree	18.3%	16.2%	20.1%	15.6%	16.5%	15.7%	19.7%	15.9%	16.7%	14.6%
High school graduate	81.7%	83.8%	79.9%	84.4%	83.5%	84.3%	80.3%	84.1%	83.3%	85.4%
Associates degree	10.8%	8.4%	7.7%	10.2%	8.4%	8.2%	12.0%	8.5%	9.5%	7.6%
Bachelor's degree or higher	15.2%	19.4%	12.1%	22.3%	27.1%	19.8%	17.7%	26.5%	20.7%	28.2%
Bachelor's degree	9.3%	12.1%	8.0%	14.9%	16.7%	12.0%	11.2%	17.7%	13.2%	17.7%
Graduate or professional	5.9%	7.3%	4.0%	7.4%	10.4%	7.8%	6.5%	8.9%	7.6%	10.5%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

6.3.4.3 School Enrollment

The following tables show the number of students enrolled in each county. A portion of the funding used to educate these students comes from the Forest Service payments to states, which is highlighted in a section found later in this report.

Table 6.3.4.3a School Enrollment in the Isothermal and Western Piedmont Region, 2011

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total Population over 3 years old:	87,608	79,650	43,157	9,045,474	210,415	294,655,633
Enrolled in school:	21,885	20,034	9,736	2,471,140	51,655	81,677,036
Enrolled in nursery school, preschool	1,003	939	522	144,651	2,464	4,972,287
Enrolled in kindergarten	1,053	1,179	531	126,945	2,763	4,143,438
Enrolled in grade 1 to grade 4	4,707	3,742	2,298	504,934	10,747	16,175,441
Enrolled in grade 5 to grade 8	4,581	4,867	2,088	501,965	11,536	16,479,059
Enrolled in grade 9 to grade 12	5,785	4,712	2,219	511,706	12,716	17,431,218
Enrolled in college, undergraduate years	4,434	4,326	1,825	574,630	10,585	18,485,591
Graduate or professional school	322	269	253	106,309	844	3,990,002
Not enrolled in school	65,723	59,616	33,421	6,574,334	158,760	212,978,597

Percent of Total

Enrolled in school:	25.0%	25.2%	22.6%	27.3%	24.5%	27.7%
Enrolled in nursery school, preschool	1.1%	1.2%	1.2%	1.6%	1.2%	1.7%
Enrolled in kindergarten	1.2%	1.5%	1.2%	1.4%	1.3%	1.4%
Enrolled in grade 1 to grade 4	5.4%	4.7%	5.3%	5.6%	5.1%	5.5%
Enrolled in grade 5 to grade 8	5.2%	6.1%	4.8%	5.5%	5.5%	5.6%
Enrolled in grade 9 to grade 12	6.6%	5.9%	5.1%	5.7%	6.0%	5.9%
Enrolled in college, undergraduate years	5.1%	5.4%	4.2%	6.4%	5.0%	6.3%
Graduate or professional school	0.4%	0.3%	0.6%	1.2%	0.4%	1.4%
Not enrolled in school	75.0%	74.8%	77.4%	72.7%	75.5%	72.3%

Data Sources: U.S. Department of Commerce. 2012. Census Bureau, American Community Survey Office, Washington, D.C.

Table 6.3.4.3b School Enrollment in the High Country Region, 2011

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Population over 3 years old:	17,362	15,285	49,249	17,376	9,045,474	99,272	294,655,633
Enrolled in school:	3,827	3,322	20,848	3,579	2,471,140	31,576	81,677,036
Enrolled in nursery school, preschool	86	256	558	97	144,651	997	4,972,287
Enrolled in kindergarten	56	278	488	234	126,945	1,056	4,143,438
Enrolled in grade 1 to grade 4	738	770	1,522	1,094	504,934	4,124	16,175,441
Enrolled in grade 5 to grade 8	842	568	1,474	844	501,965	3,728	16,479,059
Enrolled in grade 9 to grade 12	804	719	1,562	745	511,706	3,830	17,431,218
Enrolled in college, undergraduate years	1,124	673	14,091	511	574,630	16,399	18,485,591
Graduate or professional school	177	58	1,153	54	106,309	1,442	3,990,002
Not enrolled in school	13,535	11,963	28,401	13,797	6,574,334	67,696	212,978,597

Percent of Total

Enrolled in school:	22.0%	21.7%	42.3%	20.6%	27.3%	31.8%	27.7%
Enrolled in nursery school, preschool	0.5%	1.7%	1.1%	0.6%	1.6%	1.0%	1.7%
Enrolled in kindergarten	0.3%	1.8%	1.0%	1.3%	1.4%	1.1%	1.4%
Enrolled in grade 1 to grade 4	4.3%	5.0%	3.1%	6.3%	5.6%	4.2%	5.5%
Enrolled in grade 5 to grade 8	4.8%	3.7%	3.0%	4.9%	5.5%	3.8%	5.6%
Enrolled in grade 9 to grade 12	4.6%	4.7%	3.2%	4.3%	5.7%	3.9%	5.9%
Enrolled in college, undergraduate years	6.5%	4.4%	28.6%	2.9%	6.4%	16.5%	6.3%
Graduate or professional school	1.0%	0.4%	2.3%	0.3%	1.2%	1.5%	1.4%
Not enrolled in school	78.0%	78.3%	57.7%	79.4%	72.7%	68.2%	72.3%

Data Sources: U.S. Department of Commerce. 2012. Census Bureau, American Community Survey Office, Washington, D.C.

Table 6.3.4.3c School Enrollment in the Land-of-Sky Region, 2011

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Population over 3 years old:	227,848	101,954	20,181	31,968	9,045,474	381,951	294,655,633
Enrolled in school:	53,236	21,228	4,875	6,811	2,471,140	86,150	81,677,036
Enrolled in nursery school, preschool	3,077	1,829	167	493	144,651	5,566	4,972,287
Enrolled in kindergarten	2,782	1,369	287	366	126,945	4,804	4,143,438
Enrolled in grade 1 to grade 4	10,833	4,650	809	1,175	504,934	17,467	16,175,441
Enrolled in grade 5 to grade 8	10,827	4,551	1,106	1,516	501,965	18,000	16,479,059
Enrolled in grade 9 to grade 12	10,688	4,579	1,026	1,315	511,706	17,608	17,431,218
Enrolled in college, undergraduate years	13,142	3,673	1,365	1,844	574,630	20,024	18,485,591
Graduate or professional school	1,887	577	115	102	106,309	2,681	3,990,002
Not enrolled in school	174,612	80,726	15,306	25,157	6,574,334	295,801	212,978,597

Percent of Total

Enrolled in school:	23.4%	20.8%	24.2%	21.3%	27.3%	22.6%	27.7%
Enrolled in nursery school, preschool	1.4%	1.8%	0.8%	1.5%	1.6%	1.5%	1.7%
Enrolled in kindergarten	1.2%	1.3%	1.4%	1.1%	1.4%	1.3%	1.4%
Enrolled in grade 1 to grade 4	4.8%	4.6%	4.0%	3.7%	5.6%	4.6%	5.5%
Enrolled in grade 5 to grade 8	4.8%	4.5%	5.5%	4.7%	5.5%	4.7%	5.6%
Enrolled in grade 9 to grade 12	4.7%	4.5%	5.1%	4.1%	5.7%	4.6%	5.9%
Enrolled in college, undergraduate years	5.8%	3.6%	6.8%	5.8%	6.4%	5.2%	6.3%
Graduate or professional school	0.8%	0.6%	0.6%	0.3%	1.2%	0.7%	1.4%
Not enrolled in school	76.6%	79.2%	75.8%	78.7%	72.7%	77.4%	72.3%

Data Sources: U.S. Department of Commerce. 2012. Census Bureau, American Community Survey Office, Washington, D.C.

Table 6.3.4.3 School Enrollment in the Southwestern Region, 2011

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total Population over 3 years old:	26,442	10,309	8,477	57,216	38,491	32,660	13,454	9,045,474	187,049	294,655,633
Enrolled in school:	5,221	2,376	1,897	11,717	12,107	5,921	3,368	2,471,140	42,607	81,677,036
Enrolled in nursery school, preschool	175	221	107	599	594	255	202	144,651	2,153	4,972,287
Enrolled in kindergarten	152	54	36	638	450	235	332	126,945	1,897	4,143,438
Enrolled in grade 1 to grade 4	1,248	384	491	2,239	1,739	1,266	666	504,934	8,033	16,175,441
Enrolled in grade 5 to grade 8	1,313	604	584	2,914	1,567	1,451	743	501,965	9,176	16,479,059
Enrolled in grade 9 to grade 12	1,286	446	422	2,767	1,100	1,457	597	511,706	8,075	17,431,218
Enrolled in college, undergraduate years	966	623	203	2,437	6,113	1,022	647	574,630	12,011	18,485,591
Graduate or professional school	81	44	54	123	544	235	181	106,309	1,262	3,990,002
Not enrolled in school	21,221	7,933	6,580	45,499	26,384	26,739	10,086	6,574,334	144,442	212,978,597

Percent of Total										
Enrolled in school:	19.7%	23.0%	22.4%	20.5%	31.5%	18.1%	25.0%	27.3%	22.8%	27.7%
Enrolled in nursery school, preschool	0.7%	2.1%	1.3%	1.0%	1.5%	0.8%	1.5%	1.6%	1.2%	1.7%
Enrolled in kindergarten	0.6%	0.5%	0.4%	1.1%	1.2%	0.7%	2.5%	1.4%	1.0%	1.4%
Enrolled in grade 1 to grade 4	4.7%	3.7%	5.8%	3.9%	4.5%	3.9%	5.0%	5.6%	4.3%	5.5%
Enrolled in grade 5 to grade 8	5.0%	5.9%	6.9%	5.1%	4.1%	4.4%	5.5%	5.5%	4.9%	5.6%
Enrolled in grade 9 to grade 12	4.9%	4.3%	5.0%	4.8%	2.9%	4.5%	4.4%	5.7%	4.3%	5.9%
Enrolled in college, undergraduate years	3.7%	6.0%	2.4%	4.3%	15.9%	3.1%	4.8%	6.4%	6.4%	6.3%
Graduate or professional school	0.3%	0.4%	0.6%	0.2%	1.4%	0.7%	1.3%	1.2%	0.7%	1.4%
Not enrolled in school	80.3%	77.0%	77.6%	79.5%	68.5%	81.9%	75.0%	72.7%	77.2%	72.3%

Data Sources: U.S. Department of Commerce. 2012. Census Bureau, American Community Survey Office, Washington, D.C.

The following is a list of Western North Carolina colleges and universities with enrollment during 2012:

- Appalachian State University, located in Boone, NC had 17,589 students enrolled in the High Country Region.
- Western Carolina University located in Cullowhee, NC had 9,608 students enrolled in the Southwestern Region.
- University of North Carolina at Asheville, NC had 3,751 students enrolled in the Land-of-Sky Region.
- Mars Hill University, located in Mars Hill, Madison County, NC had 1,396 students enrolled in the Land-of-Sky Region.
- Warren Wilson College, located in Swannanoa, Buncombe County, NC had 1,006 students enrolled in the Land-of-Sky Region.
- Brevard College, located in Brevard, Transylvania County, NC had just over 650 students enrolled in the Land-of-Sky Region.
- Montreat College, located in Montreat, Buncombe County, NC, had 1,203 students enrolled in the Land-of-Sky Region.

There are also more than 50 Community Colleges located in North Carolina. Appalachian State University and to a lesser degree Western Carolina University both represent notable portions of the populations in their regions, although many students are actually considered permanent residents in other counties and states. The presence of these students generally with low or no income elevates the poverty indicators in each of these regions.

6.3.4.4 Poverty

Table 6.3.4.4a. Poverty Rates in the Isothermal and Western Piedmont Region, 2011

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
People	87,832	81,249	43,761	9,162,147	212,842	298,787,998
Families	24,178	21,513	11,549	2,448,907	57,240	76,507,230
People Below Poverty	15,685	14,160	8,097	1,473,556	37,942	42,739,924
Families below poverty	3,230	2,912	1,561	289,154	7,703	8,000,077

Percent of Total

People Below Poverty	17.9%	17.4%	18.5%	16.1%	17.8%	14.3%
Families below poverty	13.4%	13.5%	13.5%	11.8%	13.5%	10.5%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

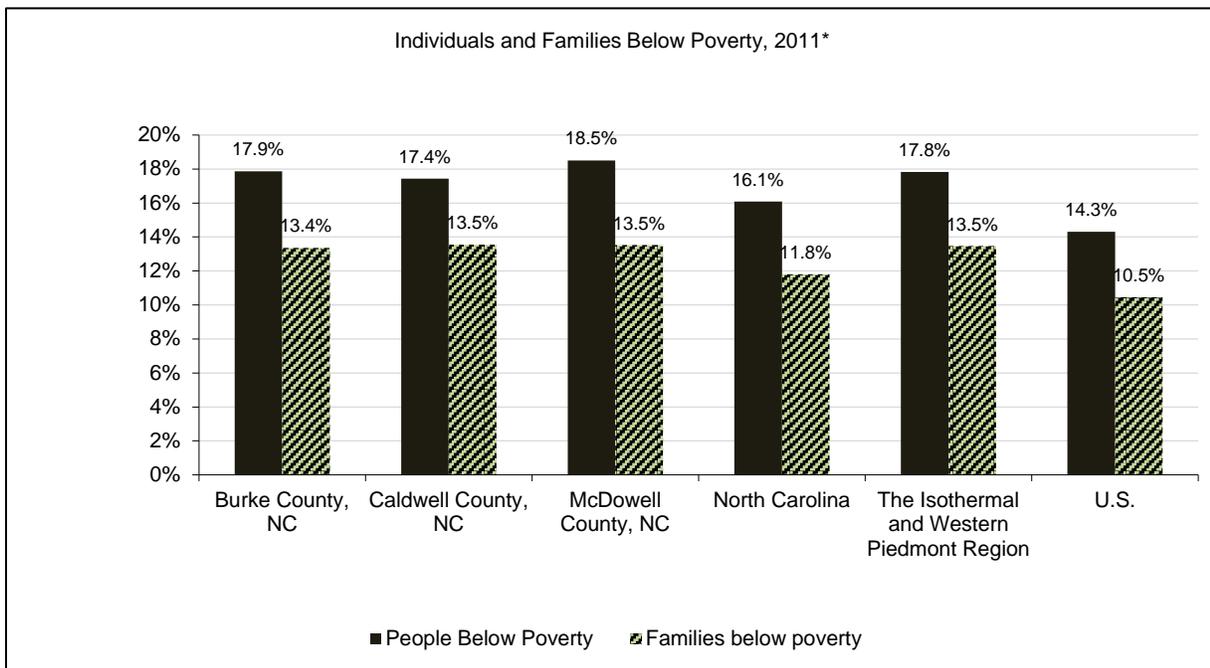


Figure 6.3.4.4a. Poverty in the Isothermal and Western Piedmont Region, 2011.

In the 2007-2011 period, Watauga County, NC which hosts Appalachian State University had the highest estimated percent of individuals living below poverty (26.3%), and Mitchell County had the lowest (17.4%). In the 2007-2011 period, Avery County, NC had the highest estimated percent of families living below poverty (14.0%), and Watauga County, NC had the lowest (10.4%).

Table 6.3.4.4b. Poverty Rates in the High Country Region, 2011

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
People	15,575	15,232	44,791	17,696	9,162,147	93,294	298,787,998
Families	4,673	4,632	11,080	5,231	2,448,907	25,616	76,507,230
People Below Poverty	2,819	2,652	11,782	3,162	1,473,556	20,415	42,739,924
Families below poverty	656	588	1,151	676	289,154	3,071	8,000,077

Percent of Total

People Below Poverty	18.1%	17.4%	26.3%	17.9%	16.1%	21.9%	14.3%
Families below poverty	14.0%	12.7%	10.4%	12.9%	11.8%	12.0%	10.5%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

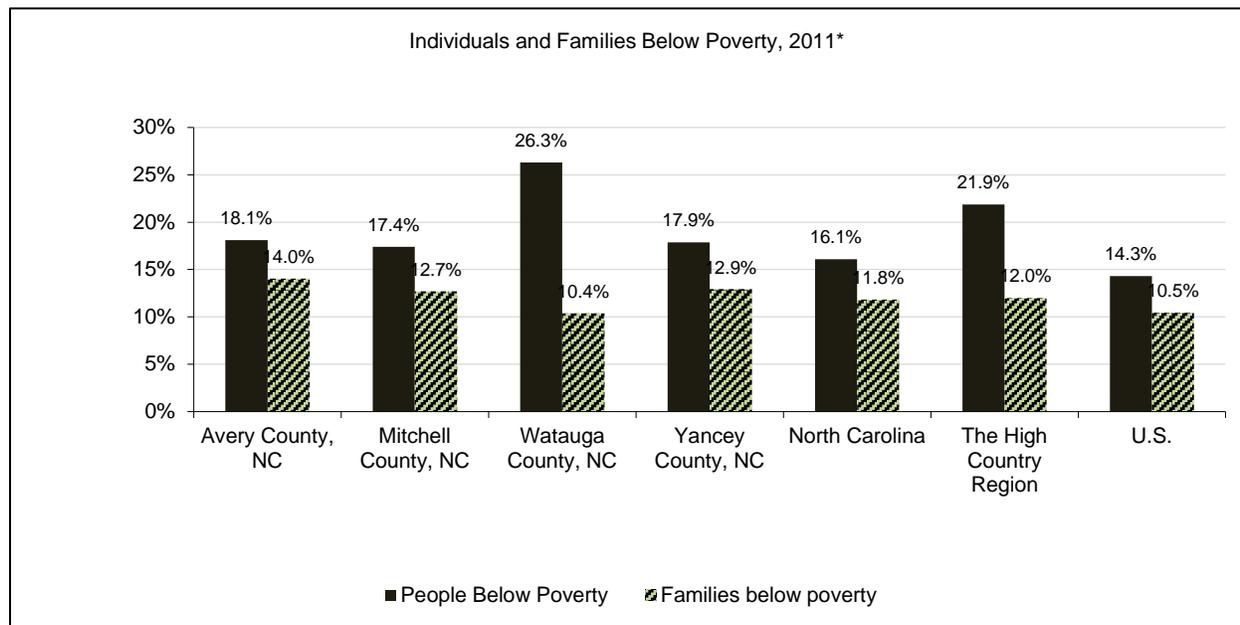


Figure 6.3.4.4b. Poverty in the High Country Region, 2011.

Table 6.3.4.4c. Poverty Rates in the Land-of-Sky Region, 2011.

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
People	230,123	103,994	19,664	31,826	9,162,147	385,607	298,787,998
Families	61,079	30,162	5,660	9,171	2,448,907	106,072	76,507,230
People Below Poverty	35,952	13,116	3,566	4,163	1,473,556	56,797	42,739,924
Families below poverty	6,340	2,665	706	814	289,154	10,525	8,000,077

Percent of Total

People Below Poverty	15.6%	12.6%	18.1%	13.1%	16.1%	14.7%	14.3%
Families below poverty	10.4%	8.8%	12.5%	8.9%	11.8%	9.9%	10.5%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

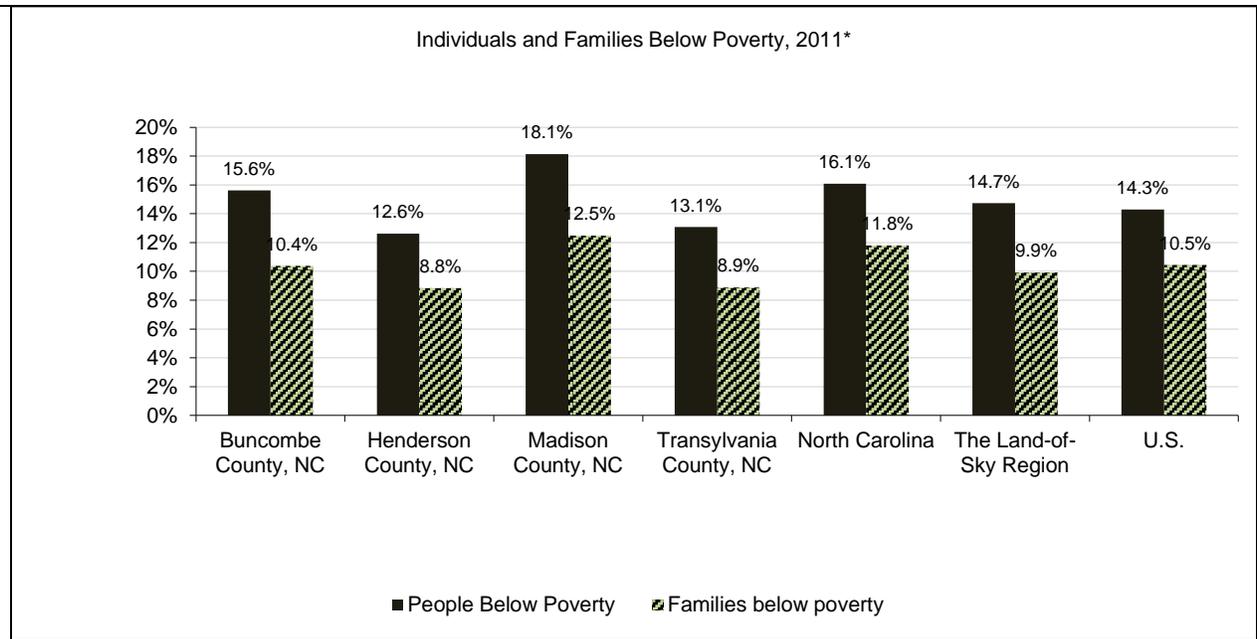


Figure 6.3.4.c. Poverty in the Land-of-Sky Region, 2011.

Table 6.3.4.d. Poverty Rates in the Southwestern Region, 2011.

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
People	27,002	10,380	8,622	57,839	35,995	33,265	13,682	9,162,147	186,785	298,787,998
Families	8,303	3,020	2,445	18,028	9,378	10,464	3,757	2,448,907	55,395	76,507,230
People Below Poverty	3,631	2,262	1,487	8,248	7,028	6,104	3,072	1,473,556	31,832	42,739,924
Families below poverty	887	422	367	1,741	1,024	1,343	626	289,154	6,410	8,000,077
Percent of Total										
People Below Poverty	13.4%	21.8%	17.2%	14.3%	19.5%	18.3%	22.5%	16.1%	17.0%	14.3%
Families below poverty	10.7%	14.0%	15.0%	9.7%	10.9%	12.8%	16.7%	11.8%	11.6%	10.5%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

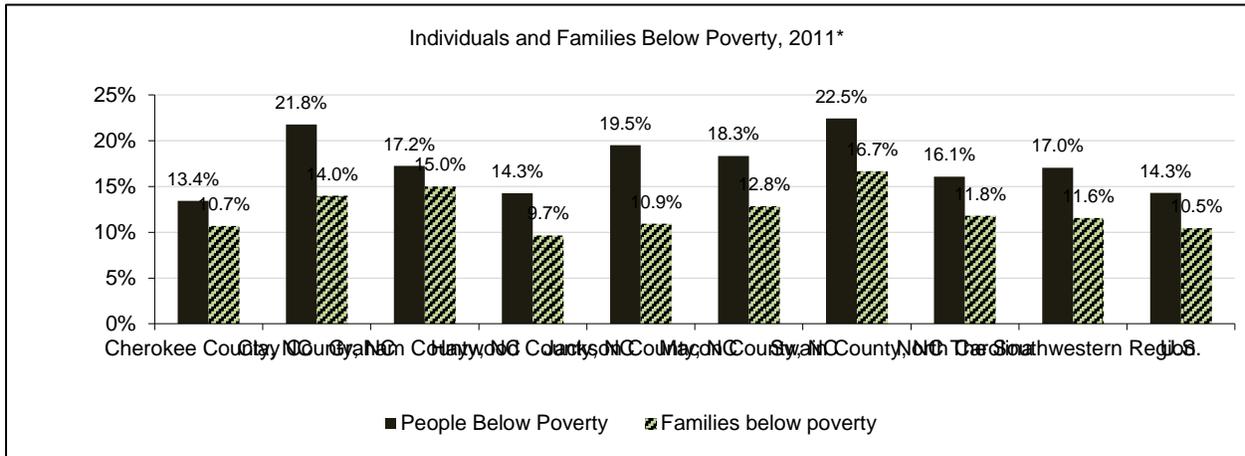


Figure 6.3.4.4d. Poverty in the Southwestern Region, 2011.

6.3.4.5 Languages spoken - Limited English proficiency levels

Table 6.3.4.5.a. Languages Spoken in the Home, Isothermal and Western Piedmont Region, 2011

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Population 5 yrs or older	85,719	77,782	42,206	8,791,977	205,707	286,433,395
Speak only English	78,866	74,397	40,001	7,862,319	193,264	228,216,716
Speak a language other than English	6,853	3,385	2,205	929,658	12,443	58,216,679
Spanish or Spanish Creole	3,731	2,760	1,968	624,448	8,459	36,170,544
Other Indo-European languages	436	376	135	143,786	947	10,529,052
Asian and Pacific Island languages	2,510	179	87	123,104	2,776	9,111,546
Other languages	176	70	15	38,320	261	2,405,537
Speak English less than "very well"	3,074	1,552	774	429,297	5,400	24,950,788
Percent of Total						
Speak only English	92.0%	95.6%	94.8%	89.4%	94.0%	79.7%
Speak a language other than English	8.0%	4.4%	5.2%	10.6%	6.0%	20.3%
Spanish or Spanish Creole	4.4%	3.5%	4.7%	7.1%	4.1%	12.6%
Other Indo-European languages	0.5%	0.5%	0.3%	1.6%	0.5%	3.7%
Asian and Pacific Island languages	2.9%	0.2%	0.2%	1.4%	1.3%	3.2%
Other languages	0.2%	0.1%	0.0%	0.4%	0.1%	0.8%
Speak English less than "very well"	3.6%	2.0%	1.8%	4.9%	2.6%	8.7%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

Table 6.3.4.5b. Languages Spoken in the Home, High Country Region, 2011

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Population 5 yrs or older	17,084	14,872	48,541	17,095	8,791,977	97,592	286,433,395
Speak only English	16,077	14,211	45,992	16,239	7,862,319	92,519	228,216,716
Speak a language other than English	1,007	661	2,549	856	929,658	5,073	58,216,679
Spanish or Spanish Creole	664	518	1,470	696	624,448	3,348	36,170,544
Other Indo-European languages	182	130	727	157	143,786	1,196	10,529,052
Asian and Pacific Island languages	119	13	303	3	123,104	438	9,111,546
Other languages	42	0	49	0	38,320	91	2,405,537
Speak English less than "very well"	438	196	736	336	429,297	1,706	24,950,788

Percent of Total

Speak only English	94.1%	95.6%	94.7%	95.0%	89.4%	94.8%	79.7%
Speak a language other than English	5.9%	4.4%	5.3%	5.0%	10.6%	5.2%	20.3%
Spanish or Spanish Creole	3.9%	3.5%	3.0%	4.1%	7.1%	3.4%	12.6%
Other Indo-European languages	1.1%	0.9%	1.5%	0.9%	1.6%	1.2%	3.7%
Asian and Pacific Island languages	0.7%	0.1%	0.6%	0.0%	1.4%	0.4%	3.2%
Other languages	0.2%	0.0%	0.1%	0.0%	0.4%	0.1%	0.8%
Speak English less than "very well"	2.6%	1.3%	1.5%	2.0%	4.9%	1.7%	8.7%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

Table 6.3.4.5c. Languages Spoken in the Home, Land-of-Sky Region, 2011

	4.5	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Population 5 yrs or older		222,959	99,527	19,731	31,328	8,791,977	373,545	286,433,395
Speak only English		205,320	89,057	19,161	29,566	7,862,319	343,104	228,216,716
Speak a language other than English		17,639	10,470	570	1,762	929,658	30,441	58,216,679
Spanish or Spanish Creole		10,931	8,173	400	973	624,448	20,477	36,170,544
Other Indo-European languages		5,112	1,545	105	391	143,786	7,153	10,529,052
Asian and Pacific Island languages		1,216	689	65	398	123,104	2,368	9,111,546
Other languages		380	63	0	0	38,320	443	2,405,537
Speak English less than "very well"		8,728	6,086	214	704	429,297	15,732	24,950,788

Percent of Total

Speak only English	92.1%	89.5%	97.1%	94.4%	89.4%	91.9%	79.7%
Speak a language other than English	7.9%	10.5%	2.9%	5.6%	10.6%	8.1%	20.3%
Spanish or Spanish Creole	4.9%	8.2%	2.0%	3.1%	7.1%	5.5%	12.6%
Other Indo-European languages	2.3%	1.6%	0.5%	1.2%	1.6%	1.9%	3.7%
Asian and Pacific Island languages	0.5%	0.7%	0.3%	1.3%	1.4%	0.6%	3.2%
Other languages	0.2%	0.1%	0.0%	0.0%	0.4%	0.1%	0.8%
Speak English less than "very well"	3.9%	6.1%	1.1%	2.2%	4.9%	4.2%	8.7%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

Table 6.3.4.5d. Languages Spoken in the Home, Southwestern Region, 2011

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Population 5 yrs or older	26,049	9,961	8,388	55,961	37,622	32,063	13,072	8,791,977	183,116	286,433,395
Speak only English	24,897	9,721	8,007	53,770	34,595	30,011	12,527	7,862,319	173,528	228,216,716
Speak a language other than English	1,152	240	381	2,191	3,027	2,052	545	929,658	9,588	58,216,679
Spanish or Spanish Creole	669	211	234	1,499	1,757	1,705	426	624,448	6,501	36,170,544
Other Indo-European languages	301	29	66	493	686	133	17	143,786	1,725	10,529,052
Asian and Pacific Island languages	83	0	3	155	140	211	43	123,104	635	9,111,546
Other languages	99	0	78	44	444	3	59	38,320	727	2,405,537
Speak English less than "very well"	382	108	208	864	941	1,259	234	429,297	3,996	24,950,788
Percent of Total										
Speak only English	95.6%	97.6%	95.5%	96.1%	92.0%	93.6%	95.8%	89.4%	94.8%	79.7%
Speak a language other than English	4.4%	2.4%	4.5%	3.9%	8.0%	6.4%	4.2%	10.6%	5.2%	20.3%
Spanish or Spanish Creole	2.6%	2.1%	2.8%	2.7%	4.7%	5.3%	3.3%	7.1%	3.6%	12.6%
Other Indo-European languages	1.2%	0.3%	0.8%	0.9%	1.8%	0.4%	0.1%	1.6%	0.9%	3.7%
Asian and Pacific Island languages	0.3%	0.0%	0.0%	0.3%	0.4%	0.7%	0.3%	1.4%	0.3%	3.2%
Other languages	0.4%	0.0%	0.9%	0.1%	1.2%	0.0%	0.5%	0.4%	0.4%	0.8%
Speak English less than "very well"	1.5%	1.1%	2.5%	1.5%	2.5%	3.9%	1.8%	4.9%	2.2%	8.7%

* The data in this table are calculated by ACS using annual surveys conducted during 2007-2011 and are representative of average characteristics during this period.

6.4 QUESTION A - WHAT ARE THE RECENT ECONOMIC TRENDS?

The 2012 Western North Carolina Economic index, which the Center for Economic Research and Policy Analysis at Appalachian State University used to track the level of economic activity in 25 western NC counties suggests that economic activity had returned to pre-recession levels during 2012. The following section explores the economic trends in detail. This section begins with general employment trends before moving to trends in income and wages and then profiles for several important sectors of the economy to which the Nantahala and Pisgah National Forest are relevant.

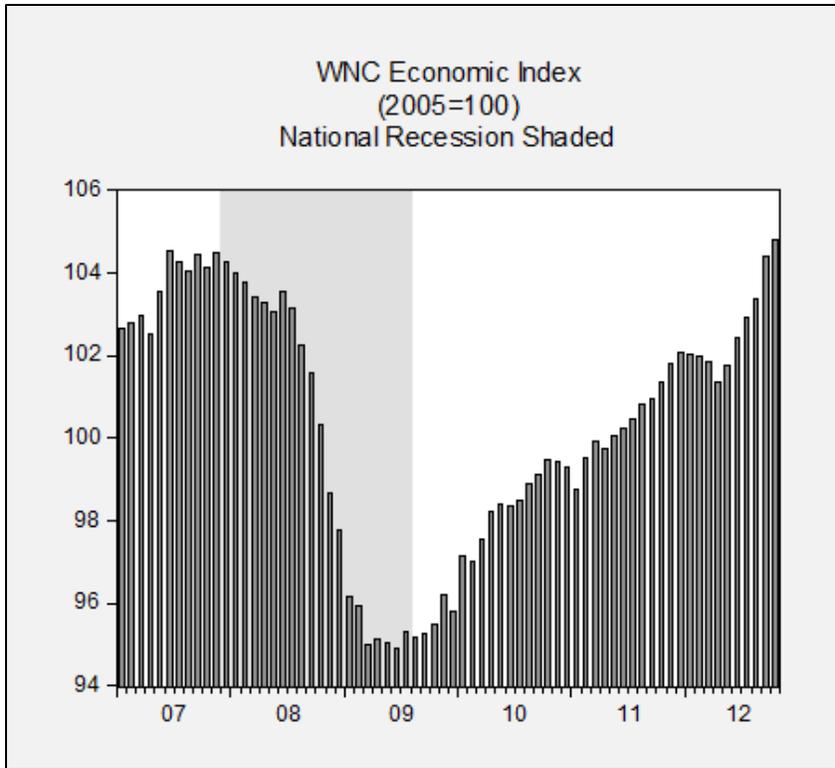


Figure 6.4. Western North Carolina Economic Index, October 2012.

6.4.1 Employment Trends

6.4.1.1 Total Employment

Total employment shows the number of all full and part-time workers, wage and salary jobs (employees), and proprietors (the self-employed) reported by place of work jobs in each Council of Government region (Figure 6.6.1.1a – 6.6.1.1d).

Total employment in the Isothermal and Western Piedmont Region from 1970 to 2011 grew from 67,168 to 99,285 jobs, a 48% increase. Figure 6.6.1.1a shows total employment peaked during 2001 with 113,701 jobs. By looking at employment details, such as weeks worked per year and average hours worked per week, a more complete picture of each county's employment picture emerges. In 2000, 16.9 percent of workers in Isothermal and Western Piedmont Region worked less than 40 weeks over the course of the year, compared to 20.9 percent for the nation. and 15.3 percent of workers worked less than 35 hours per week on average, compared to 21 percent for the nation.

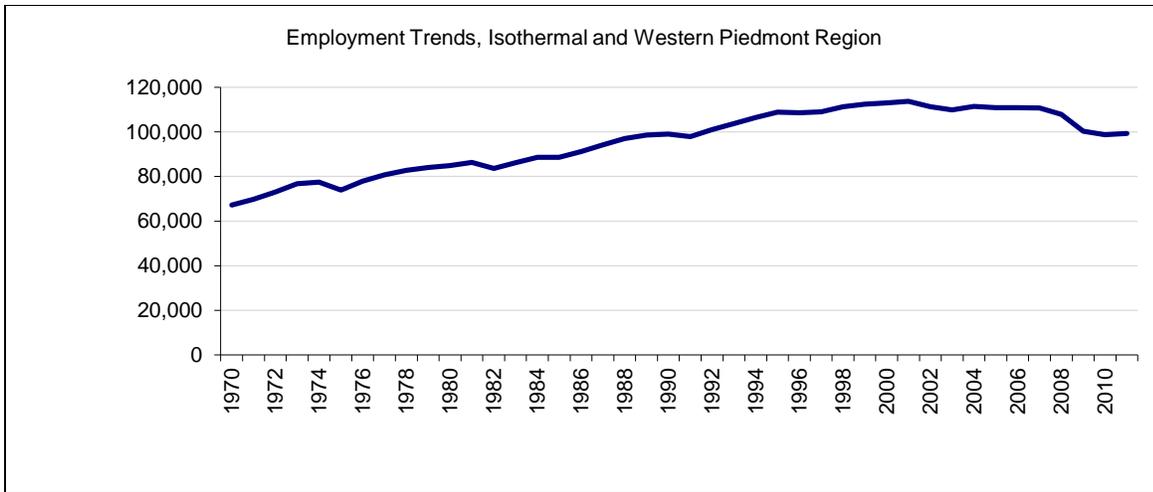


Figure 6.6.1a Total employment in the Isothermal and Western Piedmont Region, 1970-2011.

Total employment in the High Country Region from 1970 to 2011, grew from 23,163 to 55,642 jobs, a 140% increase. Figure 6.6.1.1b shows total employment peaked during 2007 with 59,827 jobs. By looking at employment details, such as weeks worked per year and average hours worked per week, a more complete picture of each county’s employment picture emerges In 2000, 27.7 percent of workers in High Country Region worked less than 40 weeks over the course of the year, compared to 20.9 percent for the nation and 27.4 percent of workers in High Country Region worked less than 35 hours per week on average, compared to 21 percent for the nation.

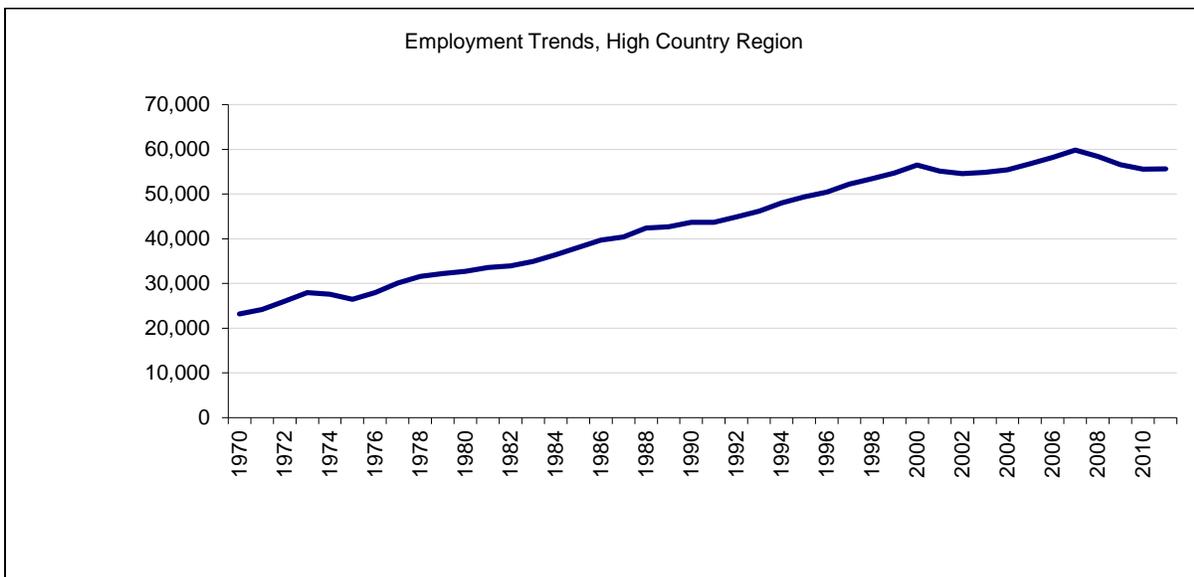


Figure 6.6.1b Total employment in the High Country Region, 1970-2011.

Total employment in the Land-of-Sky Region, employment grew from 99,553 to 226,101 jobs, a 127% increase. Figure 6.6.1.1c shows total employment peaked during 2007 with 235,413 jobs. By looking at employment details, such as weeks worked per year and average hours worked per week, a more complete picture of each county’s employment picture emerges In 2000, 20.5

percent of workers in Land-of-Sky Region worked less than 40 weeks over the course of the year, compared to 20.9 percent for the nation and 21.5 percent of workers in Land-of-Sky Region worked less than 35 hours per week on average, similar to 21 percent for the nation.

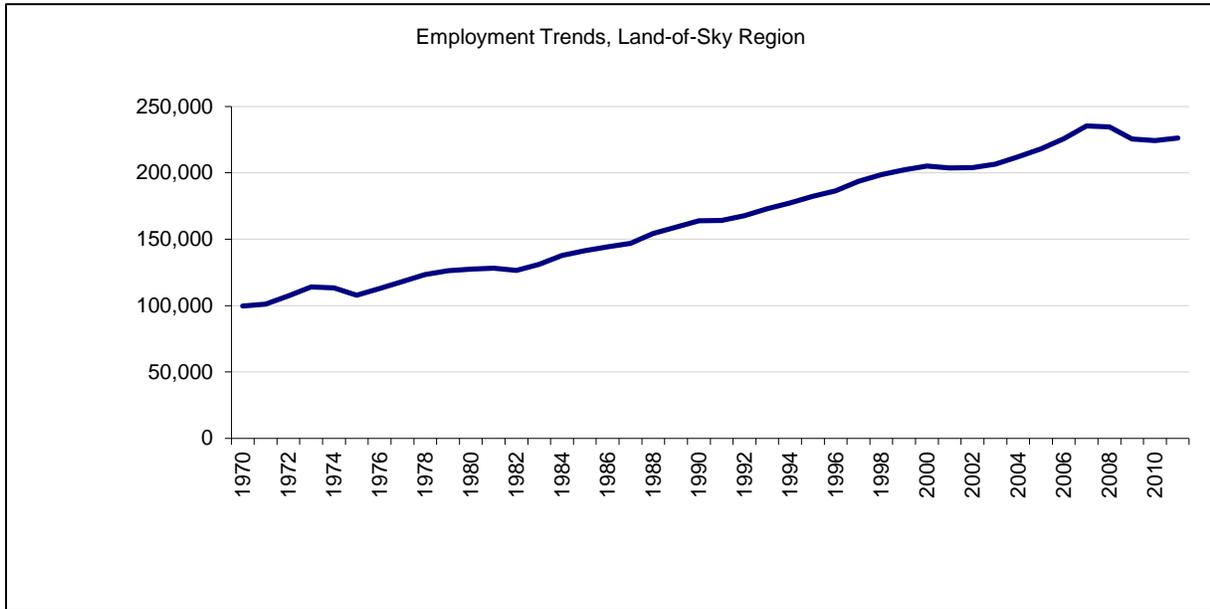


Figure 6.6.1c Total employment in the Land-of-Sky Region, 1970-2011.

Total employment in the Southwestern Region grew consistently from 1970 until the great recession of 2007. Figure 6.6.1.1d shows total employment grew from 42,131 jobs in 1970, rising through the period, reaching 98,707 jobs by 2007 but falling to 90,018 by 2011, which was a 114% increase for the entire period.

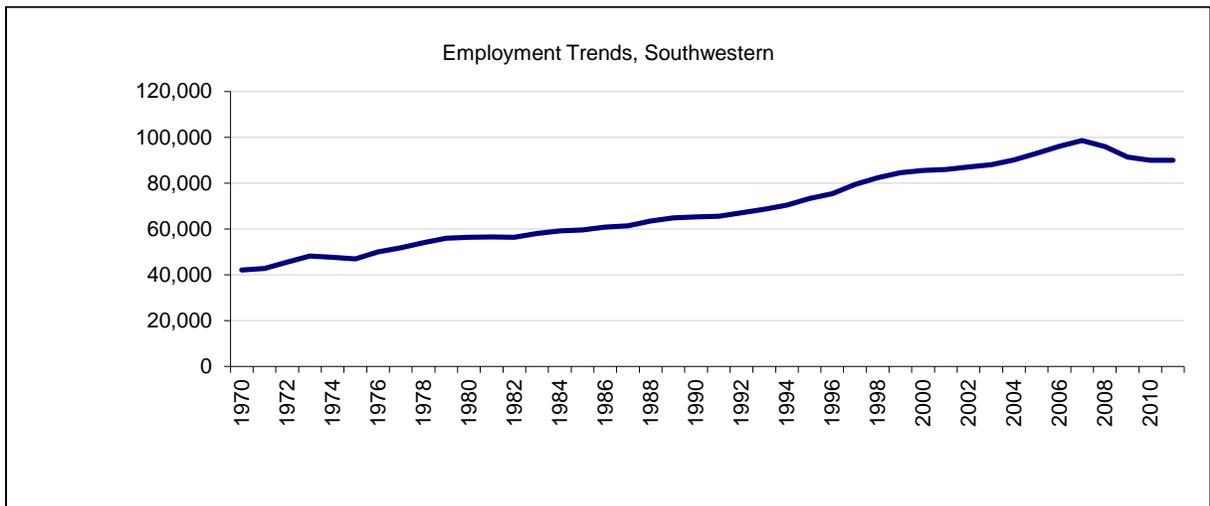


Figure 6.6.1d Total employment in the Southwestern Region, 1970-2011.

By looking at employment details, such as weeks worked per year and average hours worked per week, a more complete picture of each county’s employment picture emerges. In 2000, 23.4 percent of workers in Southwestern worked less than 40 weeks over the course of the year,

compared to 20.9 percent for the nation and 21.5 percent of workers in Southwestern worked less than 35 hours per week on average, compared to 21 percent for the nation.

6.4.1.2 Average annual unemployment

While total employment has risen substantially since 1990 across most of the 18 counties, looking at the average annual unemployment rates reveals the number of people actively searching for work that did not have jobs. Figure 6.6.1.2a to 6.6.1.2d shows how average annual unemployment has changed during the last 30 years.

Since 1990 in the Isothermal and Western Piedmont Region, the annual unemployment rate ranged from a low of 2.6% in 1999 to a high of 14.5% in 2009.

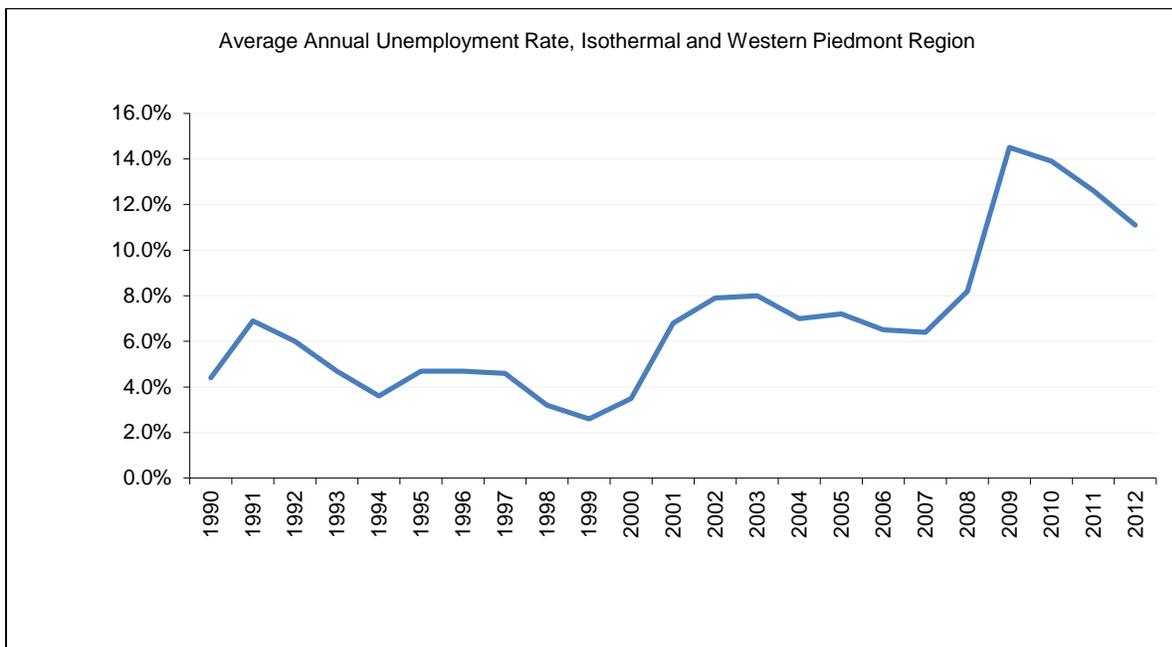


Figure 6.6.1.2a Average annual unemployment in the Isothermal and Western Piedmont Region, 1990-2011.

Since 1990 in the High Country Region, the annual unemployment rate ranged from a low of 3.2% in 1999 to a high of 10.1% in 2010.

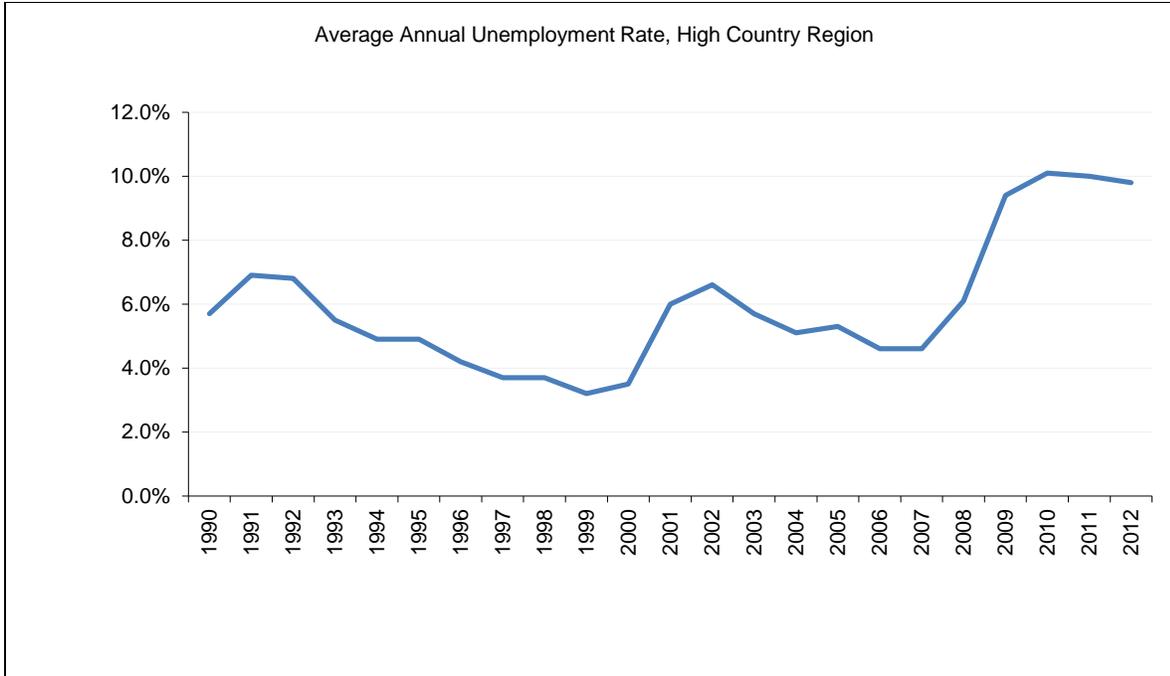


Figure 6.6.1.2b Average annual unemployment in the High Country Region, 1990-2011.

Since 1990 in the High Country Region, the annual unemployment rate ranged from a low of 4.4% in 2006 to a high of 11.2% in 2010.

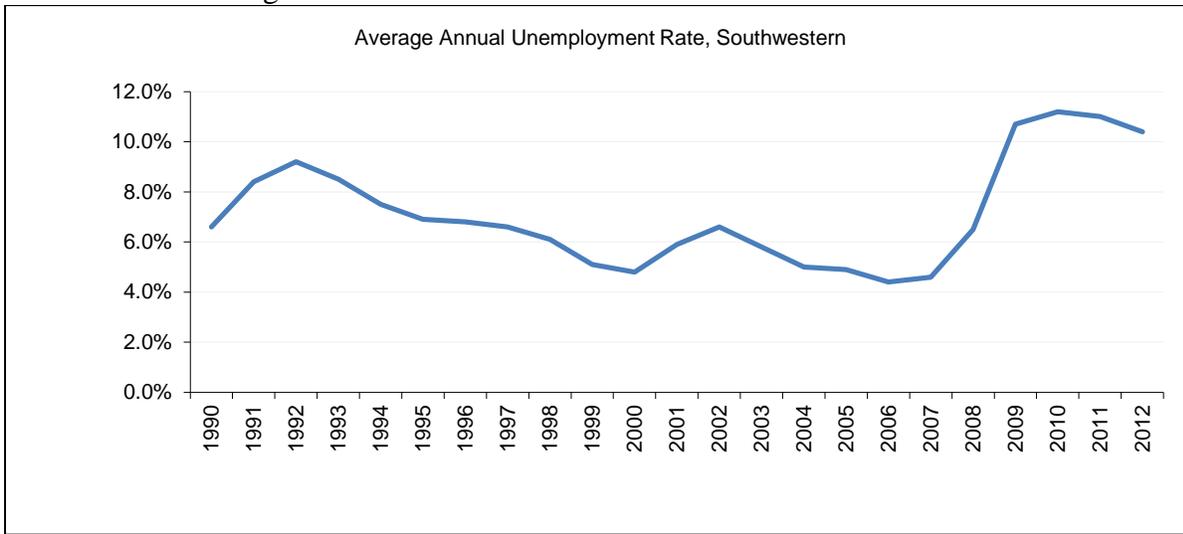


Figure 6.6.1.2d Average annual unemployment in the Southwestern Region, 1990-2011.

Since 1990 in the Land-of-Sky Region, the annual unemployment rate ranged from a low of 2.3% in 1999 to a high of 8.8% in 2010.

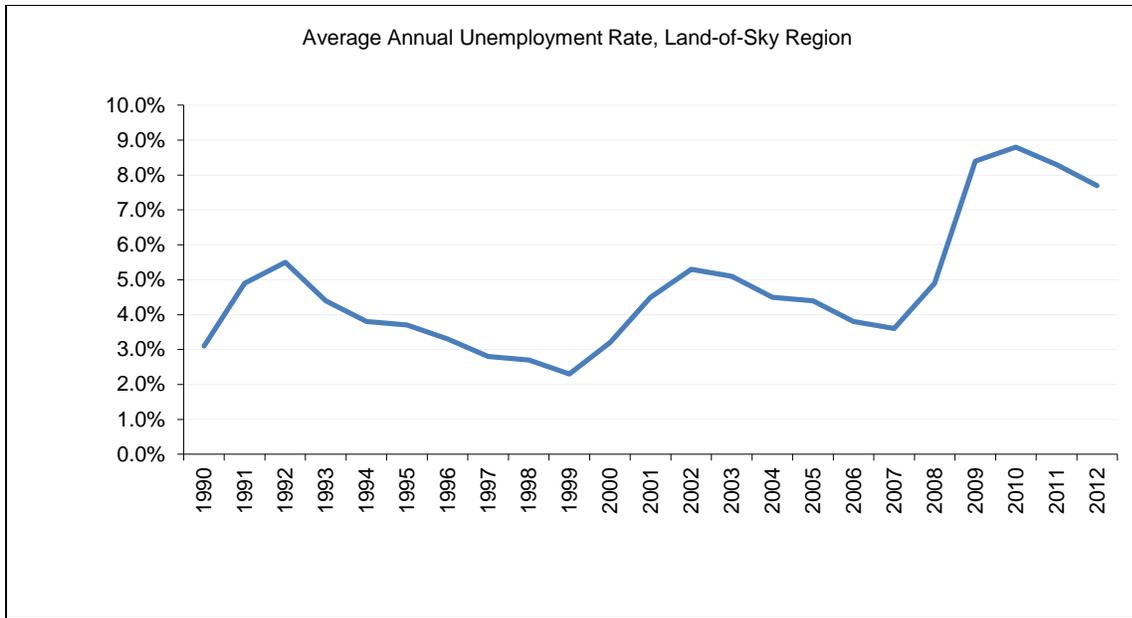


Figure 6.6.1.2c Average annual unemployment in the Land-of-Sky Region, 1990-2011.

In addition to annual trends, there are seasonal trends in unemployment. These can be especially pronounced when work is dependent on travel and tourism, that tends to follow weather cycles. Figure 6.6.1.2.1a -6.6.1.2.1d show seasonal patterns of unemployment for 2009-2013.

In the Isothermal and Western Piedmont Region, The lowest seasonal unemployment rate was September of 2012. The highest seasonal unemployment rate was January of 2010.

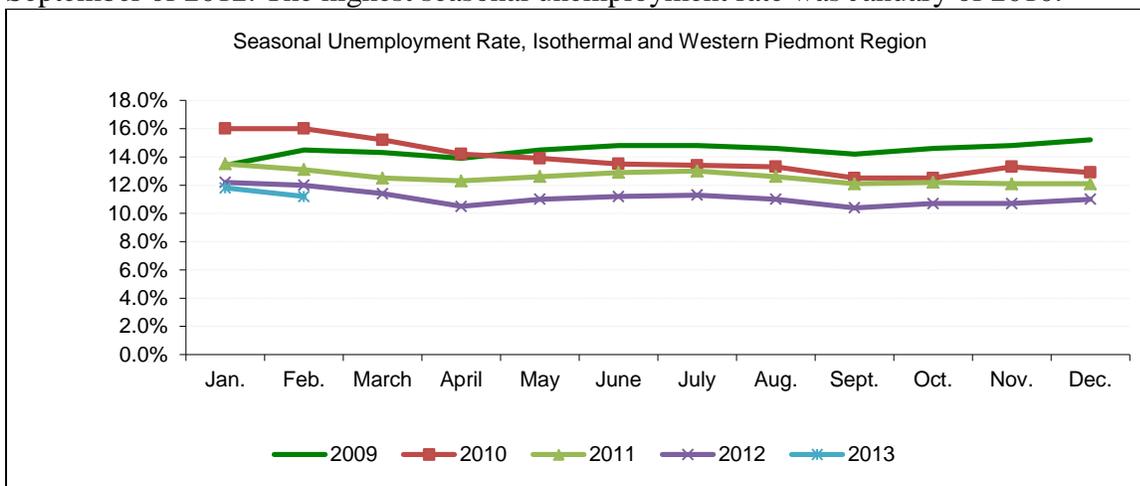


Figure 6.6.1.2a Monthly unemployment in the Isothermal and Western Piedmont Region, 2009-2011.

In the High Country Region, the lowest seasonal unemployment rate was September of 2009. The highest seasonal unemployment rate was February of 2010.

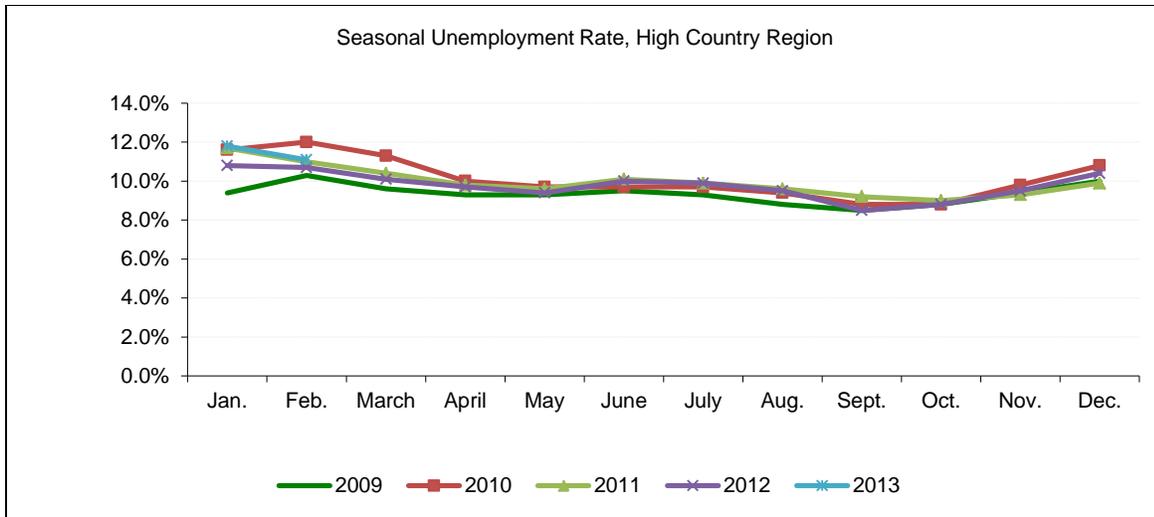


Figure 6.6.1.2b Monthly unemployment in the High Country Region, 2009-2011.

In the Land-of-Sky Region, the lowest seasonal unemployment rate was October of 2012. The highest seasonal unemployment rate was January of 2010.

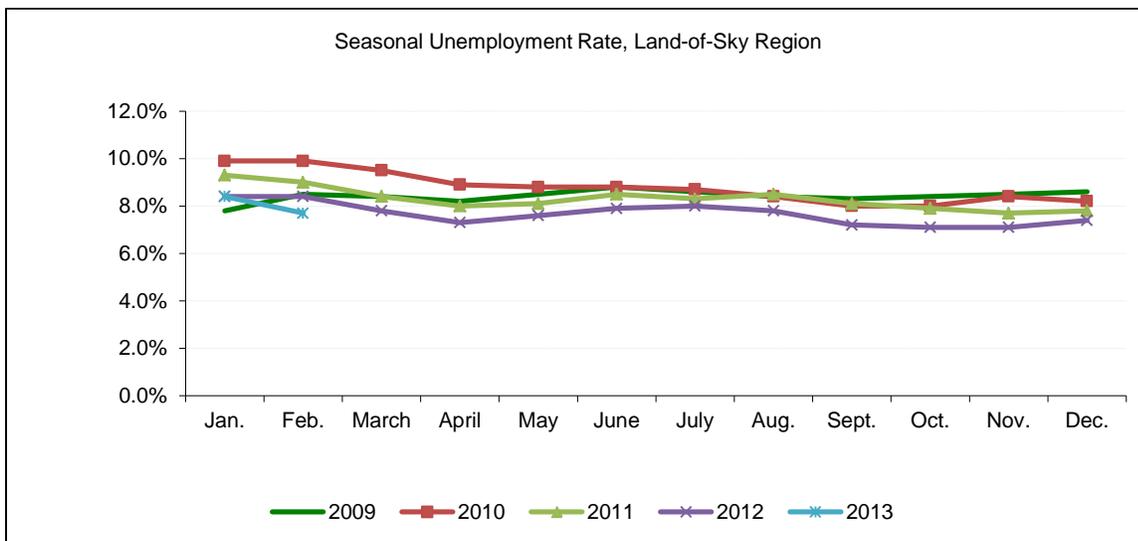


Figure 6.6.1.2c Monthly unemployment in the Land of Sky Region, 2009-2011.

In the Southwestern Region, the lowest seasonal unemployment rate was September of 2012. The highest seasonal unemployment rate was February of 2010.

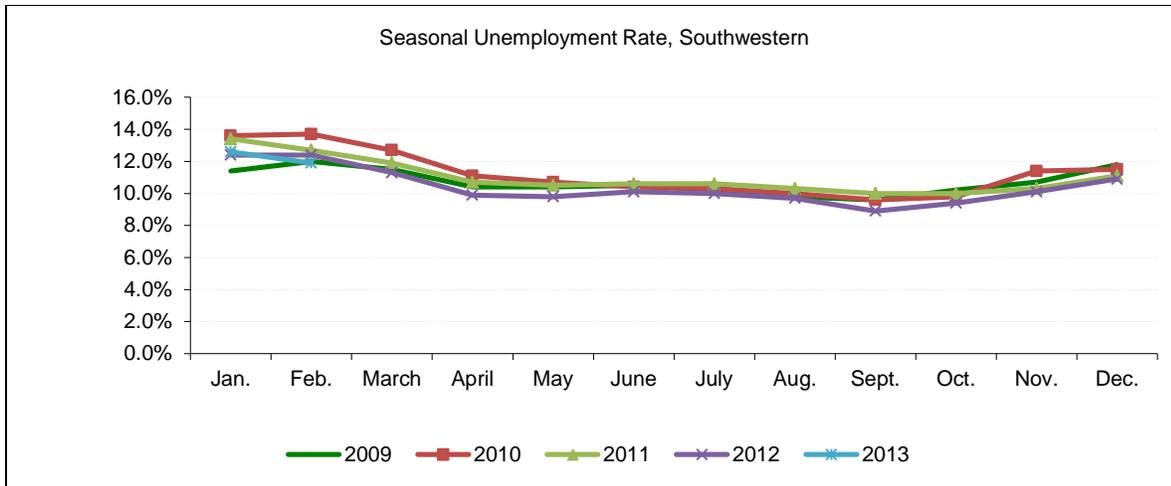


Figure 6.6.1.2d Monthly unemployment in the Southwestern Region, 2009-2011.

6.4.1.3 Wage and Salary Workers Compared to Proprietors

The total employment is broken into two types, wage and salary workers, working for others and proprietors, people working for themselves. Figure 6.6.1.3a – 6.6.1.3d show the breakdown between these two types of workers since 1970.

From 1970 to 2011 in the Isothermal and Western Piedmont Region, wage and salary employment (people who work for someone else) grew from 60,433 to 72,020, a 19% increase and, proprietors (the self-employed) grew from 6,735 to 27,265, a 305% increase.

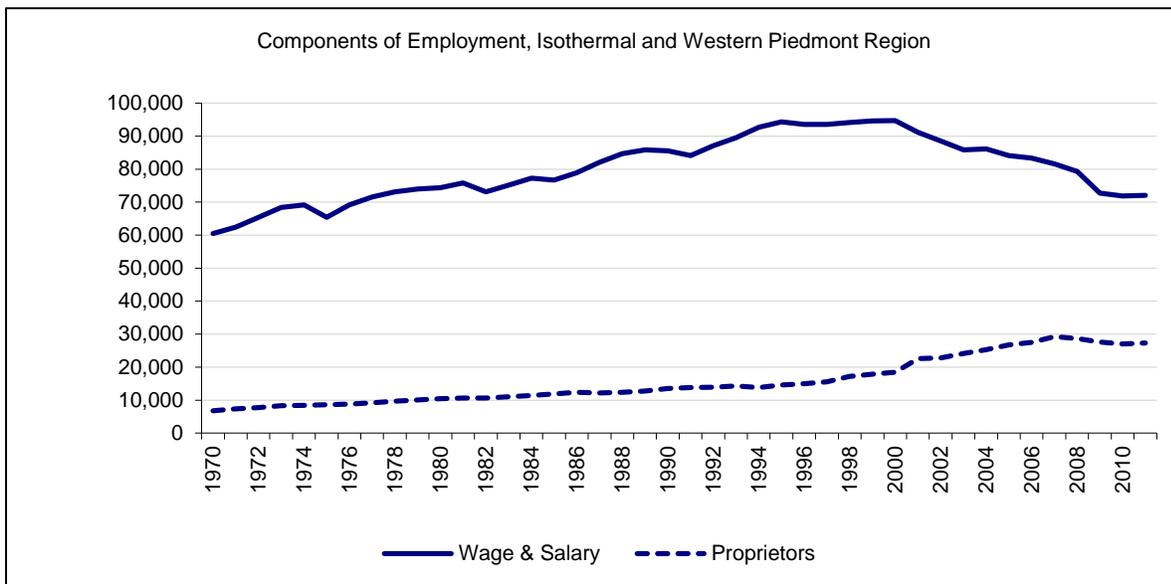


Figure 6.6.1.3a Employment Types in the Isothermal and Western Piedmont Region, 1970-2011.

From 1970 to 2011 in the High Country Region, wage and salary employment (people who work for someone else) grew from 17,996 to 40,614, a 126% increase. and proprietors (the self-employed) grew from 5,167 to 15,028, a 191% increase.

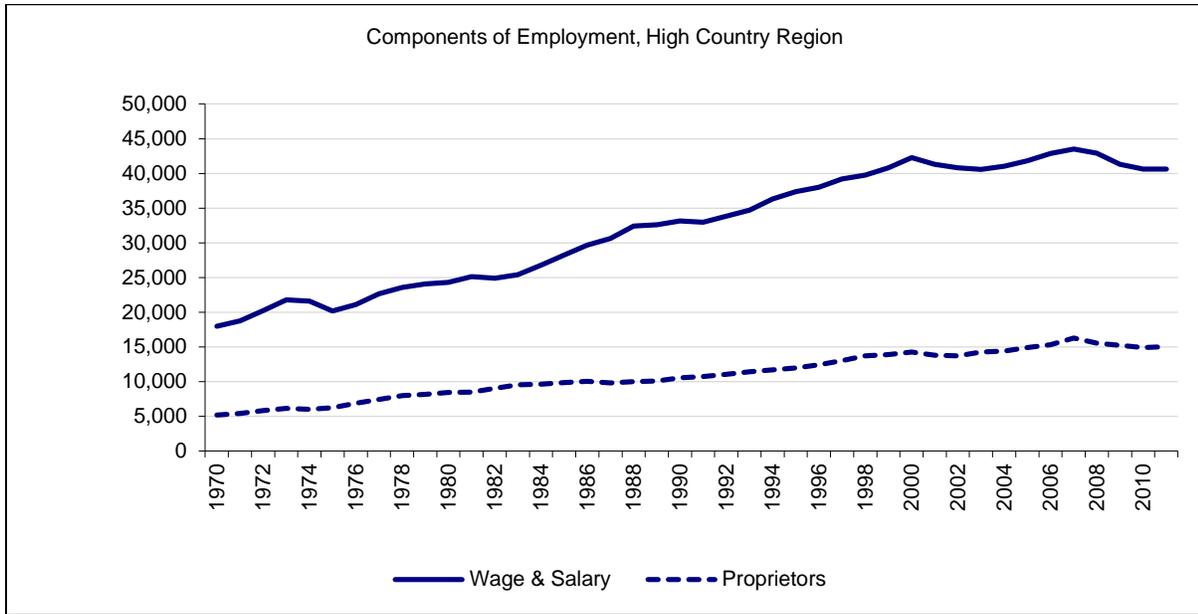


Figure 6.6.1.3b Employment Types in the High Country Region, 1970-2011.

From 1970 to 2011 in the Land-of-Sky Region, From 1970 to 2011, wage and salary employment (people who work for someone else) grew from 85,329 to 169,572, a 99% increase and proprietors (the self-employed) grew from 14,224 to 56,529, a 297% increase.

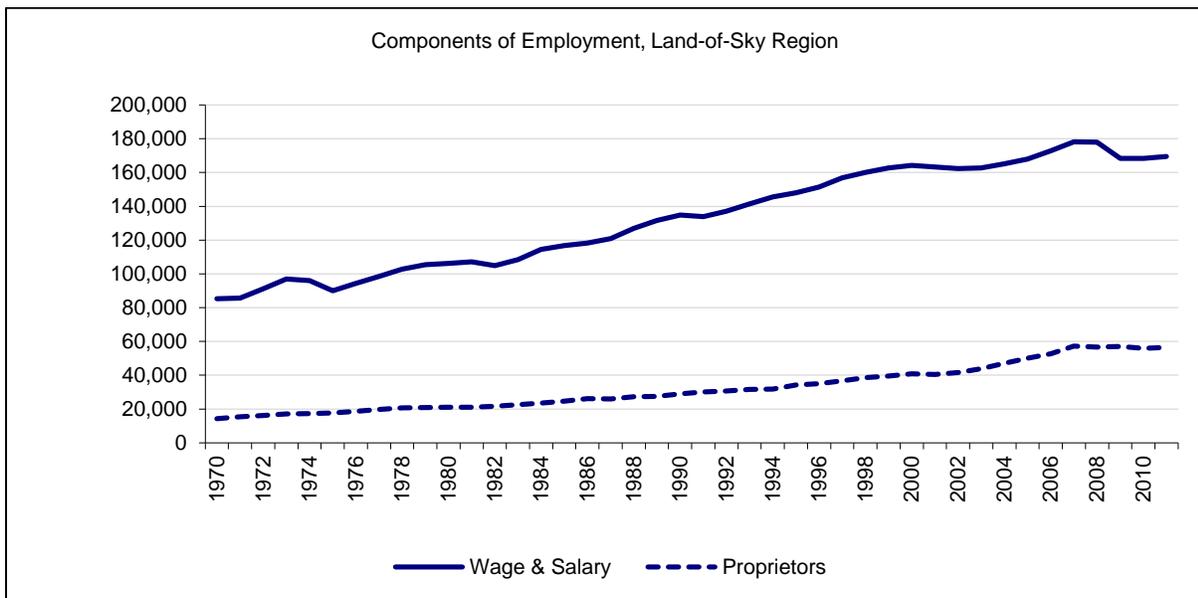


Figure 6.6.1.3c Employment Types in the Land-of-Sky Region, 1970-2011.

From 1970 to 2011 in the Southwestern Region, wage and salary employment (people who work for someone else) grew from 34,889 to 64,189, a 84% increase and proprietors (the self-employed) grew from 7,242 to 25,829, a 257% increase.

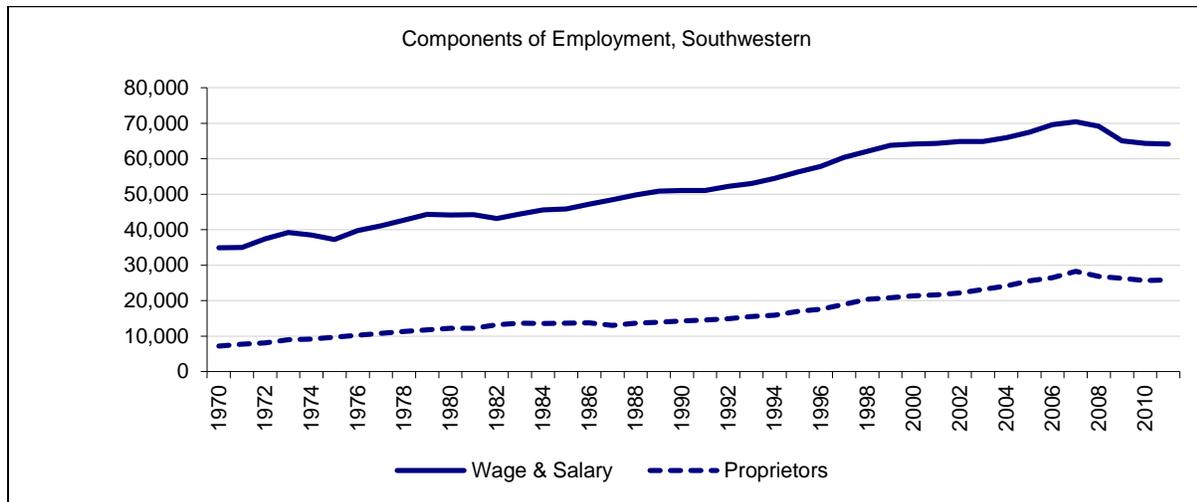


Figure 6.6.1.3d Employment Types in the Southwestern Region, 1970-2011.

6.4.1.4 Important Sectors of the Economy for Employment

This section describes historical employment change by industry. Industries are organized according to three major categories: non-services related, services related, and government. Employment includes wage and salary jobs and proprietors. The employment data presented in Table 6.6.2a – 6.6.2d show how has employment by industry changed historically using the Standard Industrial Classification (SIC) system, reported by place of work.

In the Isothermal and Western Piedmont Region from 1970 to 2000, jobs in services related industries grew from 17,244 to 47,798, a 177% increase, jobs in non-services related industries grew from 41,588 to 49,953, a 20% increase, and jobs in government jobs grew from 8,338 to 15,526, a 86% increase.

Table 6.6.2a Historical Employment by Sector in the Isothermal and Western Piedmont Region.

	1970	1980	1990	2000	Change 1990-2000
Total Employment (number of jobs)	67,168	84,859	99,062	113,105	14,043
Non-services related	41,588	48,876	51,512	49,953	-1,559
Farm	909	1,681	1,374	1,688	314
Agricultural services, forestry, fishing & other	203	222	516	853	337
Mining (including fossil fuels)	15	21	82	76	-6
Construction	2,200	3,131	4,494	6,157	1,663
Manufacturing (including forest products)	38,261	43,821	45,046	41,179	-3,867
Services related	17,244	24,723	34,637	47,798	13,161
Transportation & public utilities	1,285	2,191	2,832	3,340	508
Wholesale trade	1,654	1,180	1,441	2,538	1,097
Retail trade	6,288	8,841	12,601	15,763	3,162
Finance, insurance & real estate	1,599	2,388	2,791	3,363	572

Services	6,418	10,123	14,972	22,794	7,822
Government	8,338	11,260	12,913	15,526	2,613
Percent of Total					% Change 1990-2000
Total Employment					14.2%
Non-services related	61.9%	57.6%	52.0%	44.2%	-3.0%
Farm	1.4%	2.0%	1.4%	1.5%	22.9%
Agricultural services, forestry, fishing & other	0.3%	0.3%	0.5%	0.8%	65.3%
Mining (including fossil fuels)	0.0%	0.0%	0.1%	0.1%	-7.5%
Construction	3.3%	3.7%	4.5%	5.4%	37.0%
Manufacturing (including forest products)	57.0%	51.6%	45.5%	36.4%	-8.6%
Services related	25.7%	29.1%	35.0%	42.3%	38.0%
Transportation & public utilities	1.9%	2.6%	2.9%	3.0%	17.9%
Wholesale trade	2.5%	1.4%	1.5%	2.2%	76.1%
Retail trade	9.4%	10.4%	12.7%	13.9%	25.1%
Finance, insurance & real estate	2.4%	2.8%	2.8%	3.0%	20.5%
Services	9.6%	11.9%	15.1%	20.2%	52.2%
Government	12.4%	13.3%	13.0%	13.7%	20.2%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

The employment data above are organized according to the Standard Industrial Classification (SIC) system. The data end in 2000 because in 2001 the Bureau of Economic Analysis switched to organizing industry-level data according to the newer North American Industrial Classification System (NAICS). More recent employment trends, organized by NAICS, are shown in subsequent sections of this report.

In the High Country Region from 1970 to 2000, From 1970 to 2000, jobs in services related industries grew from 9,150 to 32,888, a 259% increase, jobs in non-services related industries grew from 10,067 to 14,915, a 48% increase and jobs in government jobs grew from 3,720 to 8,874, a 139% increase.

Table 6.6.2b Historical Employment by Sector in the High Country Region.

	1970	1980	1990	2000	Change 1990-2000
Total Employment (number of jobs)	23,163	32,712	43,719	56,518	12,799
Non-services related	10,067	12,140	13,800	14,915	1,115
Farm	2,162	3,361	2,710	2,779	69
Agricultural services, forestry, fishing & other	112	208	849	1,170	321
Mining (including fossil fuels)	283	434	364	513	149
Construction	1,627	2,298	3,111	4,541	1,430
Manufacturing (including forest products)	5,883	5,839	6,766	5,912	-854
Services related	9,150	14,637	22,587	32,888	10,301
Transportation & public utilities	512	709	1,167	1,362	195
Wholesale trade	526	889	1,088	1,350	262
Retail trade	2,713	4,785	8,260	11,230	2,970
Finance, insurance & real estate	1,325	1,898	2,156	3,132	976
Services	4,074	6,356	9,916	15,814	5,898
Government	3,720	5,627	7,333	8,874	1,541
Percent of Total					% Change 1990-2000
Total Employment					29.3%
Non-services related	43.5%	37.1%	31.6%	26.4%	8.1%
Farm	9.3%	10.3%	6.2%	4.9%	2.5%
Agricultural services, forestry, fishing & other	0.5%	0.6%	1.9%	2.1%	37.8%
Mining (including fossil fuels)	1.2%	1.3%	0.8%	0.9%	40.9%

Construction	7.0%	7.0%	7.1%	8.0%	46.0%
Manufacturing (including forest products)	25.4%	17.8%	15.5%	10.5%	-12.6%
Services related	39.5%	44.7%	51.7%	58.2%	45.6%
Transportation & public utilities	2.2%	2.2%	2.7%	2.4%	16.7%
Wholesale trade	2.3%	2.7%	2.5%	2.4%	24.1%
Retail trade	11.7%	14.6%	18.9%	19.9%	36.0%
Finance, insurance & real estate	5.7%	5.8%	4.9%	5.5%	45.3%
Services	17.6%	19.4%	22.7%	28.0%	59.5%
Government	16.1%	17.2%	16.8%	15.7%	21.0%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

The employment data above are organized according to the Standard Industrial Classification (SIC) system. The data end in 2000 because in 2001 the Bureau of Economic Analysis switched to organizing industry-level data according to the newer North American Industrial Classification System (NAICS). More recent employment trends, organized by NAICS, are shown in subsequent sections of this report.

In the Land-of-Sky Region from 1970 to 2000, jobs in services related industries grew from 46,379 to 128,127, a 176% increase, jobs in non-services related industries grew from 41,143 to 53,446, a 30% increase and jobs in government jobs grew from 12,039 to 23,637, a 96% increase.

Table 6.6.2c Historical Employment by Sector in the Land-of-Sky Region.

	1970	1980	1990	2000	Change 1990-2000
Total Employment (number of jobs)	99,553	127,341	163,783	204,997	41,214
Non-services related	41,143	49,111	51,253	53,446	2,193
Farm	4,905	6,054	4,791	4,311	-480
Agricultural services, forestry, fishing & other	334	920	1,410	2,260	850
Mining (including fossil fuels)	124	125	195	164	-31
Construction	6,243	7,604	11,271	16,657	5,386
Manufacturing (including forest products)	29,537	34,408	33,586	30,054	-3,532
Services related	46,379	61,313	92,245	128,127	35,882
Transportation & public utilities	4,479	5,253	6,862	7,994	1,132
Wholesale trade	3,525	4,131	5,899	7,470	1,571
Retail trade	13,627	19,651	29,626	36,873	7,247
Finance, insurance & real estate	5,033	7,512	8,337	11,731	3,394
Services	19,715	24,766	41,521	64,059	22,538
Government	12,039	16,917	20,286	23,637	3,351
Percent of Total					% Change 1990-2000
Total Employment					25.2%
Non-services related	41.3%	38.6%	31.3%	26.1%	4.3%
Farm	4.9%	4.8%	2.9%	2.1%	-10.0%
Agricultural services, forestry, fishing & other	0.3%	0.7%	0.9%	1.1%	60.3%
Mining (including fossil fuels)	0.1%	0.1%	0.1%	0.1%	-15.9%
Construction	6.3%	6.0%	6.9%	8.1%	47.8%
Manufacturing (including forest products)	29.7%	27.0%	20.5%	14.7%	-10.5%
Services related	46.6%	48.1%	56.3%	62.5%	38.9%
Transportation & public utilities	4.5%	4.1%	4.2%	3.9%	16.5%
Wholesale trade	3.5%	3.2%	3.6%	3.6%	26.6%
Retail trade	13.7%	15.4%	18.1%	18.0%	24.5%
Finance, insurance & real estate	5.1%	5.9%	5.1%	5.7%	40.7%
Services	19.8%	19.4%	25.4%	31.2%	54.3%
Government	12.1%	13.3%	12.4%	11.5%	16.5%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

The employment data above are organized according to the Standard Industrial Classification (SIC) system. The data end in 2000 because in 2001 the Bureau of Economic Analysis switched to organizing industry-level data according to the newer North American Industrial Classification System (NAICS). More recent employment trends, organized by NAICS, are shown in subsequent sections of this report.

In the Southwestern Region, from 1970 to 2000, jobs in services related industries grew from 16,987 to 48,072, a 183% increase, jobs in non-services related industries grew from 18,286 to 21,823, a 19% increase, and jobs in government jobs grew from 6,842 to 15,576, a 128% increase.

Table 6.6.2d. Historical Employment by Sector in the Southwestern Region.

	1970	1980	1990	2000	Change 1990-2000
Total Employment (number of jobs)	42,131	56,465	65,343	85,556	20,213
Non-services related	18,286	22,609	21,717	21,823	106
Farm	2,643	3,696	2,779	2,624	-155
Agricultural services, forestry, fishing & other	172	383	699	1,087	388
Mining (including fossil fuels)	275	212	182	178	-4
Construction	1,953	3,876	5,409	8,926	3,517
Manufacturing (including forest products)	13,243	14,442	12,648	9,009	-3,639
Services related	16,987	23,084	31,571	48,072	16,501
Transportation & public utilities	1,060	1,432	1,559	1,719	160
Wholesale trade	805	796	657	1,538	881
Retail trade	5,335	8,154	12,290	16,515	4,225
Finance, insurance & real estate	1,638	2,889	2,965	4,947	1,982
Services	8,149	9,813	14,100	23,353	9,253
Government	6,842	10,752	12,057	15,576	3,519
Percent of Total					% Change 1990-2000
Total Employment					30.9%
Non-services related	43.4%	40.0%	33.2%	25.5%	0.5%
Farm	6.3%	6.5%	4.3%	3.1%	-5.6%
Agricultural services, forestry, fishing & other	0.4%	0.7%	1.1%	1.3%	55.5%
Mining (including fossil fuels)	0.7%	0.4%	0.3%	0.2%	-2.4%
Construction	4.6%	6.9%	8.3%	10.4%	65.0%
Manufacturing (including forest products)	31.4%	25.6%	19.4%	10.5%	-28.8%
Services related	40.3%	40.9%	48.3%	56.2%	52.3%
Transportation & public utilities	2.5%	2.5%	2.4%	2.0%	10.3%
Wholesale trade	1.9%	1.4%	1.0%	1.8%	134.1%
Retail trade	12.7%	14.4%	18.8%	19.3%	34.4%
Finance, insurance & real estate	3.9%	5.1%	4.5%	5.8%	66.8%
Services	19.3%	17.4%	21.6%	27.3%	65.6%
Government	16.2%	19.0%	18.5%	18.2%	29.2%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

The employment data above are organized according to the Standard Industrial Classification (SIC) system. The data end in 2000 because in 2001 the Bureau of Economic Analysis switched to organizing industry-level data according to the newer North American Industrial Classification System (NAICS). More recent employment trends, organized by NAICS, are shown in subsequent sections of this report.

The next set of graphics (Figures 6.6.2.0a – 6.6.2.0d show how has employment by industry changed recently (2001 – 2011) using the North American Industrial Classification System (NAICS) and reported by place of work.

In the Isothermal and Western Piedmont Region from 2001 to 2011, jobs in services related industries grew from 52,500 to 57,587, a 10% increase, jobs in non-services related industries shrank from 44,893 to 25,804, a -43% decrease, and jobs in government jobs shrank from 15,609 to 15,240, a -2% decrease.

Table 6.6.2.0a. Recent Employment by Sector in the Isothermal and Western Piedmont Region.

	2001	2011	Change 2001-2011
Total Employment (number of jobs)	113,701	99,285	-14,416
Non-services related	44,893	25,804	-19,089
Farm	1,698	1,529	-169
Forestry, fishing, & related activities	216	216	0
Mining (including fossil fuels)	125	164	39
Construction	6,694	5,201	-1,493
Manufacturing	36,160	18,694	-17,466
Services related	52,500	57,587	5,087
Utilities	205	177	-28
Wholesale trade	3,705	3,347	-358
Retail trade	11,082	9,807	-1,275
Transportation and warehousing	2,685	2,220	-465
Information	734	549	-185
Finance and insurance	1,952	3,022	1,070
Real estate and rental and leasing	2,469	3,845	1,376
Professional and technical services	2,515	2,723	208
Management of companies and enterprises	990	652	-338
Administrative and waste services	3,571	5,557	1,986
Educational services	522	829	307
Health care and social assistance	10,125	11,981	1,856
Arts, entertainment, and recreation	1,078	1,283	205
Accommodation and food services	5,069	5,275	206
Other services, except public administration	5,799	6,320	521
Government	15,609	15,240	-369
Percent of Total			% Change 2001-2011
Total Employment			-12.7%
Non-services related	39.5%	26.0%	-42.5%
Farm	1.5%	1.5%	-10.0%
Forestry, fishing, & related activities	0.2%	0.2%	-0.1%
Mining (including fossil fuels)	0.1%	0.2%	31.7%
Construction	5.9%	5.2%	-22.3%
Manufacturing	31.8%	18.8%	-48.3%
Services related	46.2%	58.0%	9.7%
Utilities	0.2%	0.2%	-13.7%
Wholesale trade	3.3%	3.4%	-9.7%
Retail trade	9.7%	9.9%	-11.5%
Transportation and warehousing	2.4%	2.2%	-17.3%
Information	0.6%	0.6%	-25.2%
Finance and insurance	1.7%	3.0%	54.8%
Real estate and rental and leasing	2.2%	3.9%	55.7%
Professional and technical services	2.2%	2.7%	8.3%
Management of companies and enterprises	0.9%	0.7%	-34.1%

Administrative and waste services	3.1%	5.6%	55.6%
Educational services	0.5%	0.8%	58.9%
Health care and social assistance	8.9%	12.1%	18.3%
Arts, entertainment, and recreation	0.9%	1.3%	19.0%
Accommodation and food services	4.5%	5.3%	4.1%
Other services, except public administration	5.1%	6.4%	9.0%
Government	13.7%	15.3%	-2.4%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25N.

In the High Country Region from 2001 to 2011, From 2001 to 2011, jobs in services related industries grew from 31,024 to 34,809, a 12% increase, jobs in non-services related industries shrank from 12,727 to 8,843, a -31% decrease and jobs in government jobs grew from 9,157 to 10,262, a 12% increase.

Table 6.6.2.0b. Recent Employment by Sector in the High Country Region.

	2001	2011	Change 2001-2011
Total Employment (number of jobs)	55,149	55,642	493
Non-services related	12,727	8,843	-3,884
Farm	2,682	1,851	-831
Forestry, fishing, & related activities	148	169	21
Mining (including fossil fuels)	550	581	30
Construction	4,661	4,202	-459
Manufacturing	4,686	2,041	-2,645
Services related	31,024	34,809	3,784
Utilities	5	57	52
Wholesale trade	1,099	1,393	295
Retail trade	7,092	6,602	-490
Transportation and warehousing	699	770	71
Information	612	445	-167
Finance and insurance	1,166	1,397	231
Real estate and rental and leasing	2,050	3,132	1,082
Professional and technical services	1,708	1,474	-234
Management of companies and enterprises	63	321	258
Administrative and waste services	1,791	2,416	625
Educational services	611	1,018	407
Health care and social assistance	4,302	5,354	1,052
Arts, entertainment, and recreation	1,765	2,086	321
Accommodation and food services	4,856	5,014	157
Other services, except public administration	3,205	3,330	125
Government	9,157	10,262	1,105
Percent of Total			% Change 2001-2011
Total Employment			0.9%
Non-services related	23.1%	15.9%	-30.5%
Farm	4.9%	3.3%	-31.0%
Forestry, fishing, & related activities	0.3%	0.3%	14.1%
Mining (including fossil fuels)	1.0%	1.0%	5.5%
Construction	8.5%	7.6%	-9.8%

Manufacturing	8.5%	3.7%	-56.4%
Services related	56.3%	62.6%	12.2%
Utilities	0.0%	0.1%	1031.1%
Wholesale trade	2.0%	2.5%	26.8%
Retail trade	12.9%	11.9%	-6.9%
Transportation and warehousing	1.3%	1.4%	10.2%
Information	1.1%	0.8%	-27.3%
Finance and insurance	2.1%	2.5%	19.8%
Real estate and rental and leasing	3.7%	5.6%	52.8%
Professional and technical services	3.1%	2.6%	-13.7%
Management of companies and enterprises	0.1%	0.6%	406.8%
Administrative and waste services	3.2%	4.3%	34.9%
Educational services	1.1%	1.8%	66.6%
Health care and social assistance	7.8%	9.6%	24.5%
Arts, entertainment, and recreation	3.2%	3.7%	18.2%
Accommodation and food services	8.8%	9.0%	3.2%
Other services, except public administration	5.8%	6.0%	3.9%
Government	16.6%	18.4%	12.1%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (-).

Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25N.

In the Land-of-Sky Region from 2001 to 2011 jobs in services related industries grew from 129,169 to 160,945, a 25% increase, jobs in non-services related industries shrank from 48,058 to 36,383, a 24% decrease and jobs in government jobs grew from 23,643 to 25,908, a 10% increase.

Table 6.6.2.0c. Recent Employment by Sector in the Land-of-Sky Region.

	2001	2011	Change 2001-2011
Total Employment (number of jobs)	203,667	226,101	22,434
Non-services related	48,058	36,383	-11,675
Farm	4,244	3,773	-471
Forestry, fishing, & related activities	293	1,285	992
Mining (including fossil fuels)	177	256	79
Construction	16,924	14,193	-2,731
Manufacturing	26,420	16,876	-9,544
Services related	129,169	160,945	31,776
Utilities	374	361	-13
Wholesale trade	6,020	5,770	-249
Retail trade	24,970	25,660	690
Transportation and warehousing	5,116	4,485	-631
Information	3,060	2,818	-242
Finance and insurance	5,303	7,550	2,247
Real estate and rental and leasing	6,844	11,958	5,114
Professional and technical services	7,865	11,464	3,599
Management of companies and enterprises	899	1,203	304
Administrative and waste services	10,741	14,475	3,734
Educational services	2,773	4,405	1,632
Health care and social assistance	22,535	30,598	8,063

Arts, entertainment, and recreation	4,853	6,840	1,987
Accommodation and food services	15,887	19,860	3,973
Other services, except public administration	11,929	13,498	1,569
Government	23,643	25,908	2,265
Percent of Total			% Change 2001-2011
Total Employment			11.0%
Non-services related	23.6%	16.1%	-24.3%
Farm	2.1%	1.7%	-11.1%
Forestry, fishing, & related activities	0.1%	0.6%	338.6%
Mining (including fossil fuels)	0.1%	0.1%	44.6%
Construction	8.3%	6.3%	-16.1%
Manufacturing	13.0%	7.5%	-36.1%
Services related	63.4%	71.2%	24.6%
Utilities	0.2%	0.2%	-3.5%
Wholesale trade	3.0%	2.6%	-4.1%
Retail trade	12.3%	11.3%	2.8%
Transportation and warehousing	2.5%	2.0%	-12.3%
Information	1.5%	1.2%	-7.9%
Finance and insurance	2.6%	3.3%	42.4%
Real estate and rental and leasing	3.4%	5.3%	74.7%
Professional and technical services	3.9%	5.1%	45.8%
Management of companies and enterprises	0.4%	0.5%	33.8%
Administrative and waste services	5.3%	6.4%	34.8%
Educational services	1.4%	1.9%	58.9%
Health care and social assistance	11.1%	13.5%	35.8%
Arts, entertainment, and recreation	2.4%	3.0%	41.0%
Accommodation and food services	7.8%	8.8%	25.0%
Other services, except public administration	5.9%	6.0%	13.2%
Government	11.6%	11.5%	9.6%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25N.

In the Southwestern Region, From 2001 to 2011, jobs in services related industries grew from 48,178 to 54,500, a 13% increase, jobs in non-services related industries shrank from 19,555 to 15,043, a -23% decrease, and jobs in government jobs grew from 15,666 to 17,986, a 15% increase. In 2011 the three industry sectors with the largest number of jobs were government (17,991 jobs), retail trade (11,728 jobs), and construction (11,476 jobs). From 2001 to 2011, the three industry sectors that added the most new jobs were government (2,320 new jobs), real estate, rental, leasing (1,968 new jobs), and professional, scientific, tech. (1,312 new jobs).

Table 6.6.2.0d. Recent Employment by Sector in the Southwestern Region.

	2001	2011	Change 2001-2011
Total Employment (number of jobs)	86,067	90,018	3,951
Non-services related	19,555	15,043	-4,512
Farm	2,563	1,936	-627
Forestry, fishing, & related activities	225	66	-159
Mining (including fossil fuels)	60	107	47

Construction	9,633	8,144	-1,489
Manufacturing	7,074	4,790	-2,284
Services related	48,178	54,500	6,322
Utilities	na	5	na
Wholesale trade	803	795	-8
Retail trade	11,230	10,664	-566
Transportation and warehousing	691	513	-178
Information	803	720	-83
Finance and insurance	1,879	2,328	449
Real estate and rental and leasing	3,438	5,406	1,968
Professional and technical services	3,112	4,425	1,312
Management of companies and enterprises	148	156	8
Administrative and waste services	3,375	4,585	1,210
Educational services	412	726	314
Health care and social assistance	7,512	7,953	441
Arts, entertainment, and recreation	1,759	2,405	646
Accommodation and food services	7,677	7,968	291
Other services, except public administration	5,338	5,851	513
Government	15,666	17,986	2,320

Percent of Total	% Change 2001-2011		
Total Employment			4.6%
Non-services related	22.7%	16.7%	-23.1%
Farm	3.0%	2.2%	-24.5%
Forestry, fishing, & related activities	0.3%	0.1%	-70.5%
Mining (including fossil fuels)	0.1%	0.1%	77.3%
Construction	11.2%	9.0%	-15.5%
Manufacturing	8.2%	5.3%	-32.3%
Services related	56.0%	60.5%	13.1%
Utilities	na	0.0%	na
Wholesale trade	0.9%	0.9%	-1.0%
Retail trade	13.0%	11.8%	-5.0%
Transportation and warehousing	0.8%	0.6%	-25.8%
Information	0.9%	0.8%	-10.3%
Finance and insurance	2.2%	2.6%	23.9%
Real estate and rental and leasing	4.0%	6.0%	57.2%
Professional and technical services	3.6%	4.9%	42.2%
Management of companies and enterprises	0.2%	0.2%	5.6%
Administrative and waste services	3.9%	5.1%	35.8%
Educational services	0.5%	0.8%	76.3%
Health care and social assistance	8.7%	8.8%	5.9%
Arts, entertainment, and recreation	2.0%	2.7%	36.7%
Accommodation and food services	8.9%	8.9%	3.8%
Other services, except public administration	6.2%	6.5%	9.6%
Government	18.2%	20.0%	14.8%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25N.

6.4.2 Income trends

6.4.2.1 Total Personal Income

Total personal income is income from wage and salary employment and proprietors' income (labor earnings), as well as income from non-labor sources (dividends, interest, and rent, and

transfer payments) reported by place of residence. All income figures in this report are shown in real terms (i.e., adjusted for inflation). We first report trends in the totals then we take a closer look at the trend in components. Figures 6.6.3.1a - 6.6.3.1d show the long-term trend in total personal income for each of the councils of government.

For the Isothermal and Western Piedmont Region from 1970 to 2011, personal income grew from \$2.688 billion/year to \$6.288 billion/year (in real terms), a 134% increase. Figure 6.6.3.1a shows that total personal income grew steadily during the 32-year period, peaking during 2007 at \$6.547 billion. From 1970 to 2000, personal income in services related industries grew from \$550.4 million to \$1,515.6 million (in real terms), a 175% increase, personal income in non-services related industries grew from \$550.4 million to \$2,242.7 million (in real terms), a 56% increase, and personal income in government jobs grew from \$311.8 million to \$698.1 million (in real terms), a 124% increase.

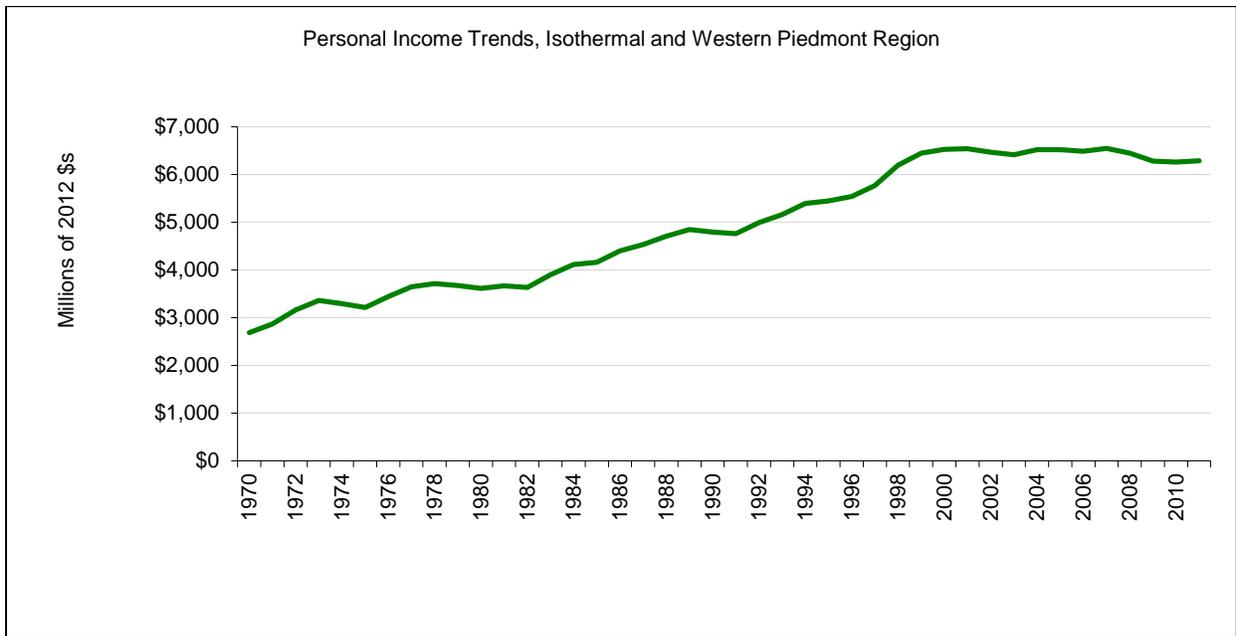


Figure 6.6.3.1a. Total Personal Income in the Isothermal and Western Piedmont Region, 1970-2011.

For the High Country Region from 1970 to 2011, personal income grew from \$863.2 million/year to \$2.9821 billion/year (in real terms), a 246% increase. Figure 6.6.3.1b shows that total personal income grew steadily during the 32-year period, peaking during 2008 at \$3.06 billion. From 1970 to 2000, personal income in services related industries grew from \$261.1 million to \$910.9 million (in real terms), a 249% increase. From 1970 to 2000, personal income in non-services related industries grew from \$261.1 million to \$552.9 million (in real terms), a 107% increase. From 1970 to 2000, personal income in government jobs grew from \$140.5 million to \$407.2 million (in real terms), a 190% increase.



Figure 6.6.3.1b. Total Personal Income in High Country Region, 1970-2011.

For the Land-of-Sky Region from 1970 to 2011, personal income grew from \$4,137.7 million to \$14,082.6 million (in real terms), a 240% increase. Figure 6.6.3.1c shows that total personal income grew steadily during the 32-year period, peaking during 2008 at \$1.45 billion. From 1970 to 2000, personal income in services related industries grew from \$1,402.5 million to \$4,723.2 million (in real terms), a 237% increase, personal income in non-services related industries grew from \$1,402.5 million to \$2,645.4 million (in real terms), a 71% increase, and personal income in government jobs grew from \$483.4 million to \$1,238.4 million (in real terms), a 156% increase.

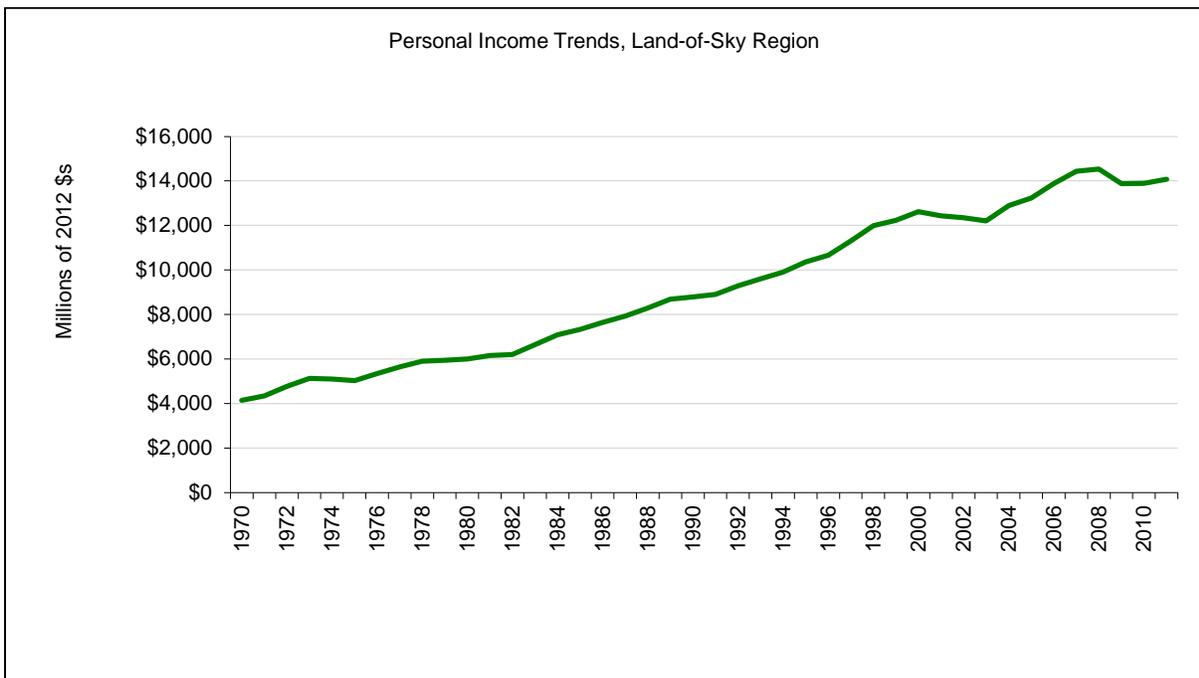


Figure 6.6.3.1c. Total Personal Income in Land-of-Sky Region, 1970-2011.

For the Southwestern Region from 1970 to 2011, personal income grew from \$1.7385 billion/year to \$5.747.6 billion/year (in real terms), a 231% increase. Figure 6.6.3.1d shows that total personal income grew steadily during the 32-year period, peaking during 2007 at 5.922 billion. From 1970 to 2000, personal income in services related industries grew from \$445.5 million to \$1,464.4 million (in real terms), a 229% increase, personal income in non-services related industries grew from \$445.5 million to \$801.0 million (in real terms), a 27% increase, and personal income in government jobs grew from \$245.1 million to \$700.1 million (in real terms), a 186% increase.

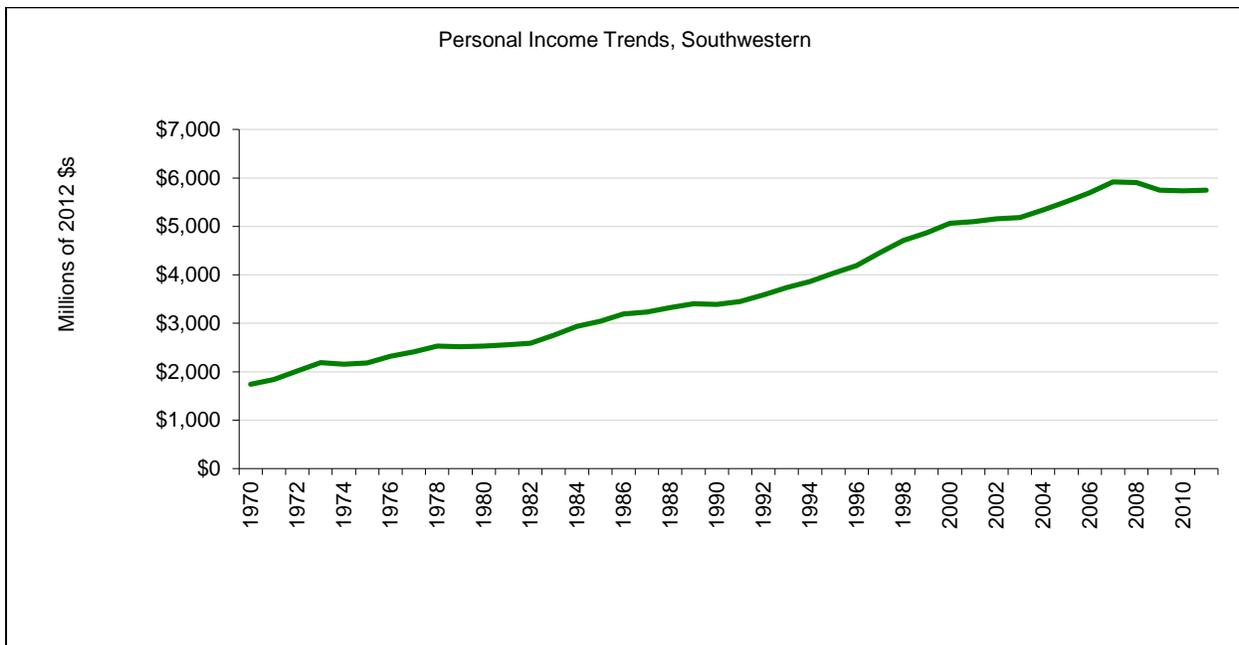


Figure 6.6.3.1d. Total Personal Income in the Southwestern Region, 1970-2011.

Although total personal income trends indicate consistent growth for the aggregate of counties in the Isothermal and Western Piedmont Region, Figure 6.6.3.2a shows rates of change by county. Between 1970 and 2011, McDowell County had the largest percent change in personal income (152.3%), and Caldwell County, NC had the smallest (115.7%).

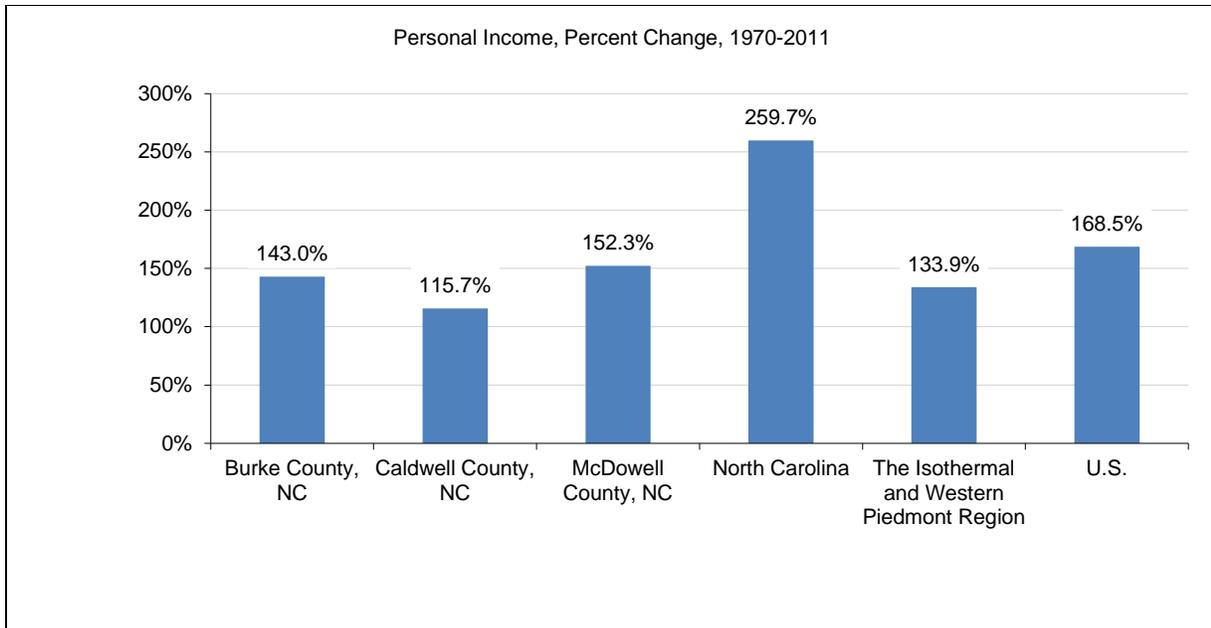


Figure 6.6.3.2a. Total Personal Income Growth Rates across the Counties of the Isothermal and Western Piedmont Region, 1970-2011.

Although total personal income trends indicate consistent growth for the aggregate of counties in the High Country Region, Figure 6.6.3.2b shows rates of change by county. Between 1970 and 2011, Watauga County had the largest percent change in personal income (333.9%), and Mitchell County, NC had the smallest (124%).

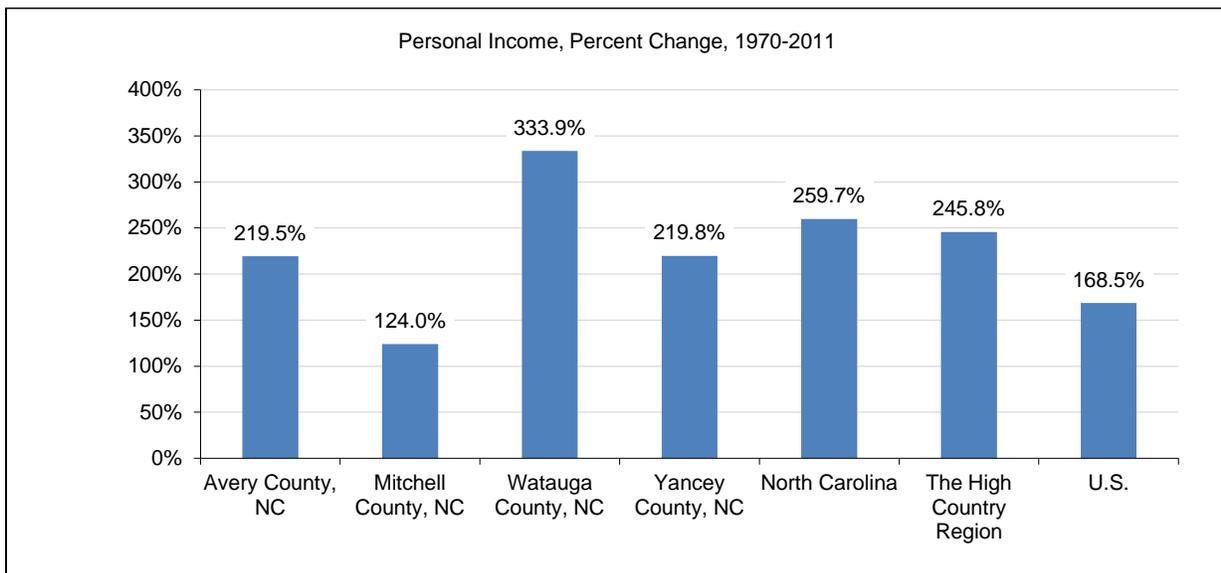


Figure 6.6.3.2b. Total Personal Income Growth Rates across the Counties of the High Country Region, 1970-2011.

Although total personal income trends indicate consistent growth for the aggregate of counties in the Land-of-Sky Region, Figure 6.6.3.2c shows rates of change by county. Between 1970 and

2011, Henderson County had the largest percent change in personal income (372.4%), and Madison County, NC had the smallest (192.2%).

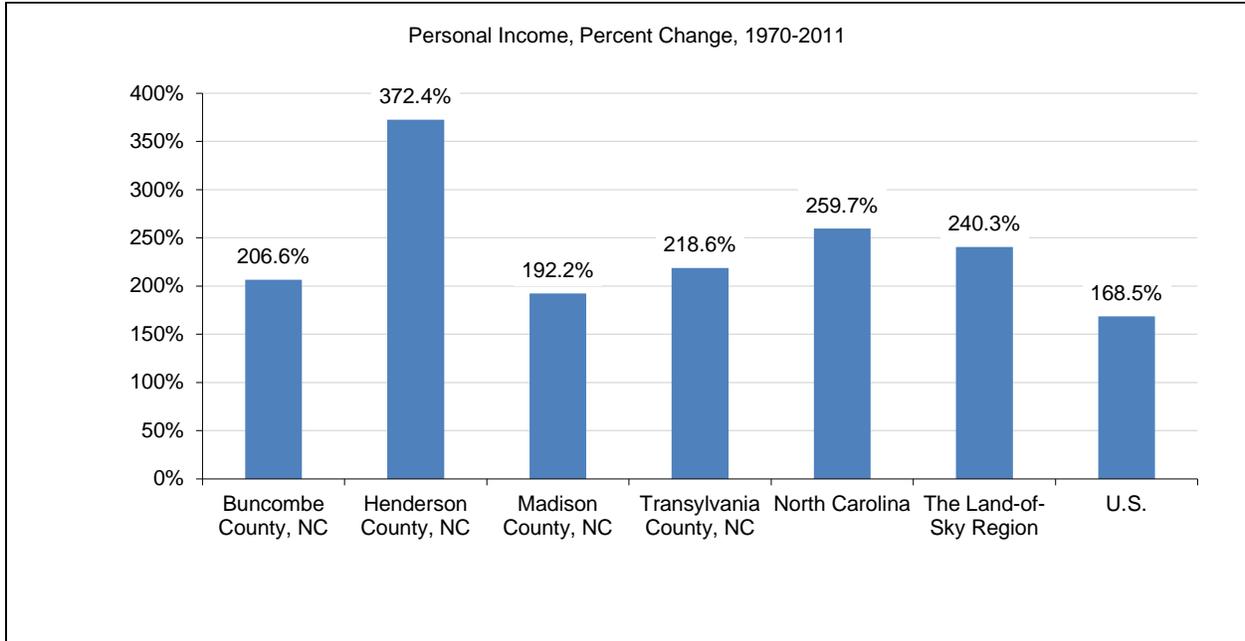


Figure 6.6.3.2c. Total Personal Income Growth Rates across the Counties of the Land-of-Sky Region, 1970-2011.

Although total personal income trends indicate consistent growth for the aggregate of counties in the Southwestern Region, Figure 6.6.3.2d shows rates of change by county. Between 1970 and 2011, Macon County, NC had the largest percent change in personal income (370.5%), and Haywood County, NC had the smallest (158.9%).

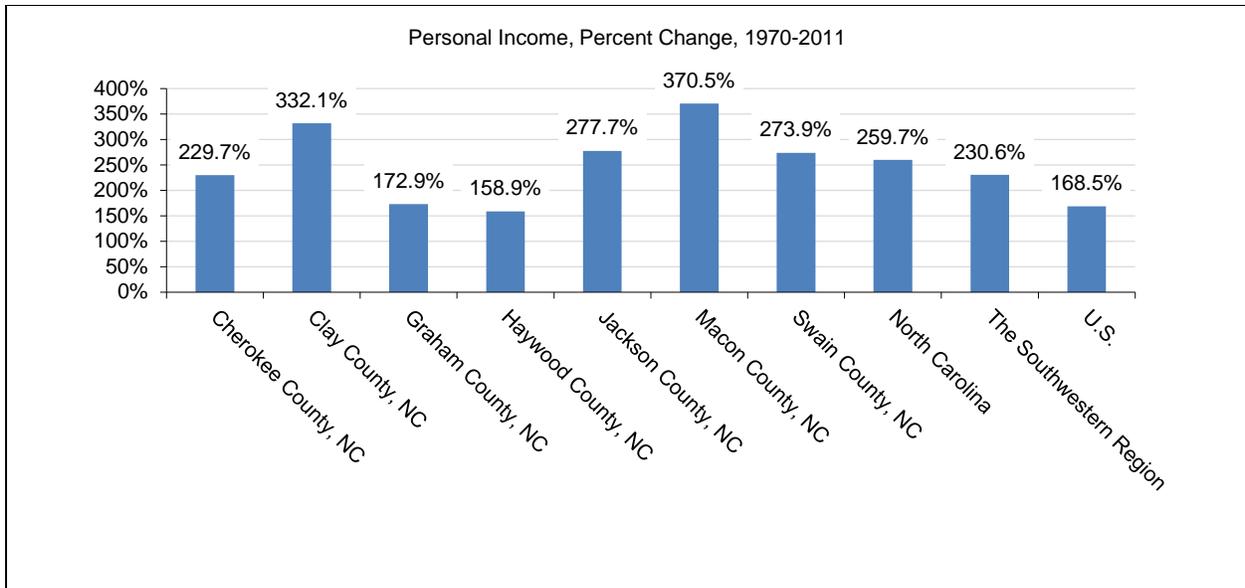


Figure 6.6.3.2d. Total Personal Income Growth Rates across the Counties of the Southwestern Region, 1970-2011.

6.4.2.2 Per Capita Personal Income

Per Capita Personal Income is the sum of total personal income for all geographies divided by the sum of total population for all geographies.

In 2011, Burke County had the highest per capita income (\$30,716), and McDowell County, NC had the lowest (\$26,662).

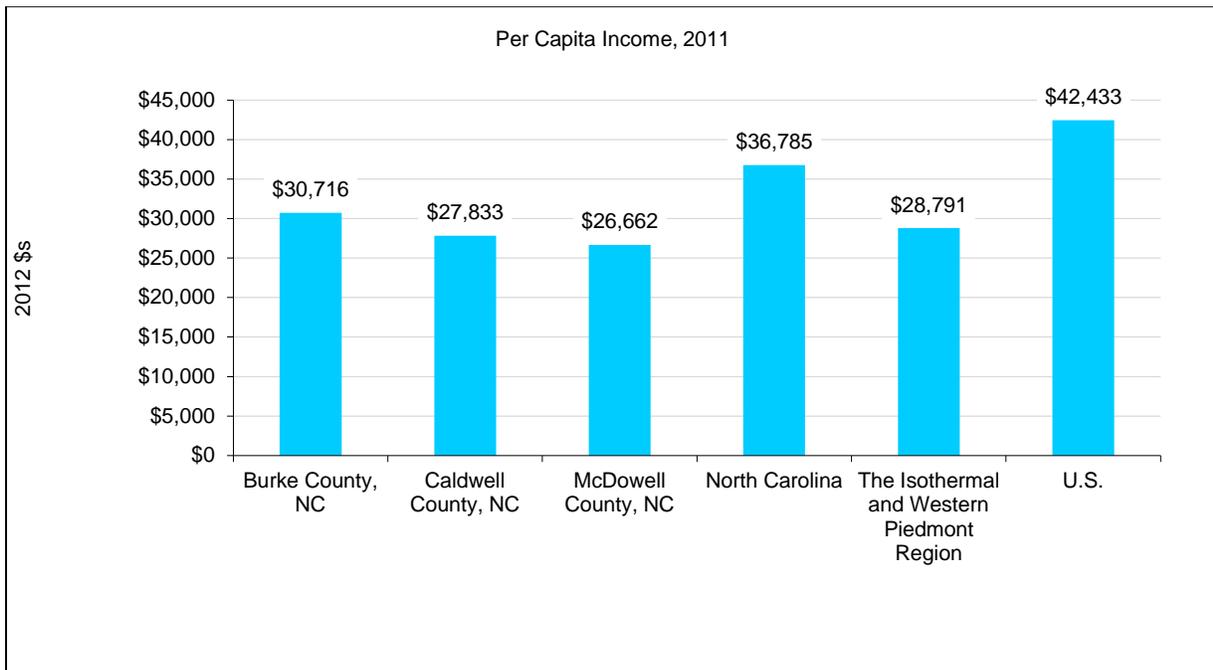


Figure 6.6.3.1a. Per Capita Personal Income, Isothermal and Western Piedmont Region, 1970-2011.

In 2011, Watauga County had the highest per capita income (\$30,721), and Yancey County, NC had the lowest (\$26,958).

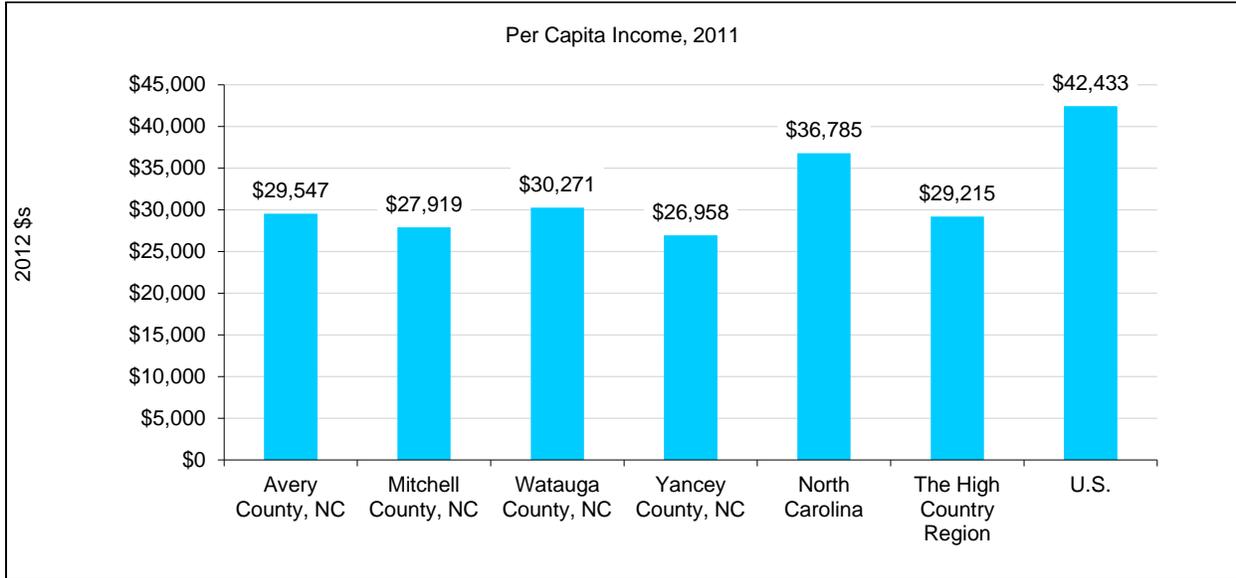


Figure 6.6.3.1b. Per Capita Personal Income, High Country Region, 1970-2011.

In 2011, Henderson County had the highest per capita income (\$36,606), and Madison County, NC had the lowest (\$29,179).

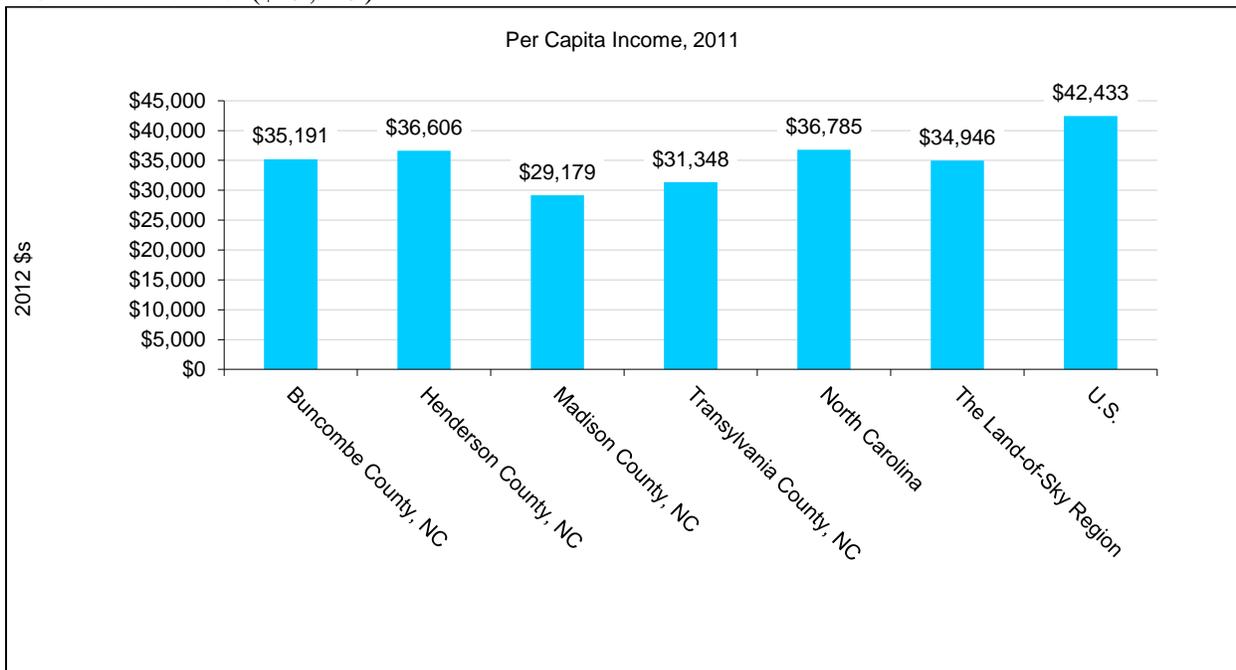


Figure 6.6.3.1c. Per Capita Personal Income, Land-of-Sky Region, 1970-2011.

In the Southwestern Region in 2011, Haywood County had the highest per capita personal income (\$32,152), and Graham County had the lowest (\$25,626).

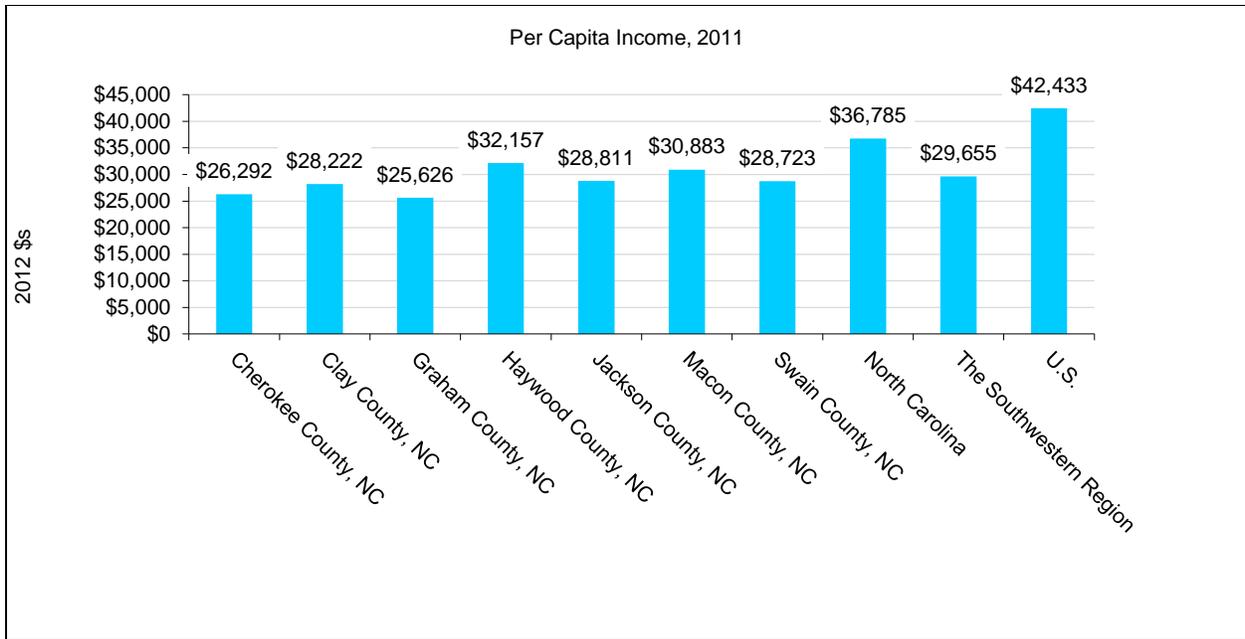


Figure 6.6.3.1d. Per Capita Personal Income in the Southwestern Region, 1970-2011.

6.4.2.3 Wage and Salary Compared to Proprietors

One major component of total personal income is labor earnings. These earnings come from both wage and salary workers and proprietors. Similar to the look at employment, Figure 6.6.3.2d shows a comparison of total earnings between these workers.

From 1970 to 2011 in the Isothermal and Western Piedmont Region, labor earnings from wage and salary employment grew from \$1.885 billion to \$2.405 billion (in real terms), a 28% increase, whereas labor earnings from proprietors' employment grew from \$218.8 million to \$489.6 million (in real terms), a 124% increase.

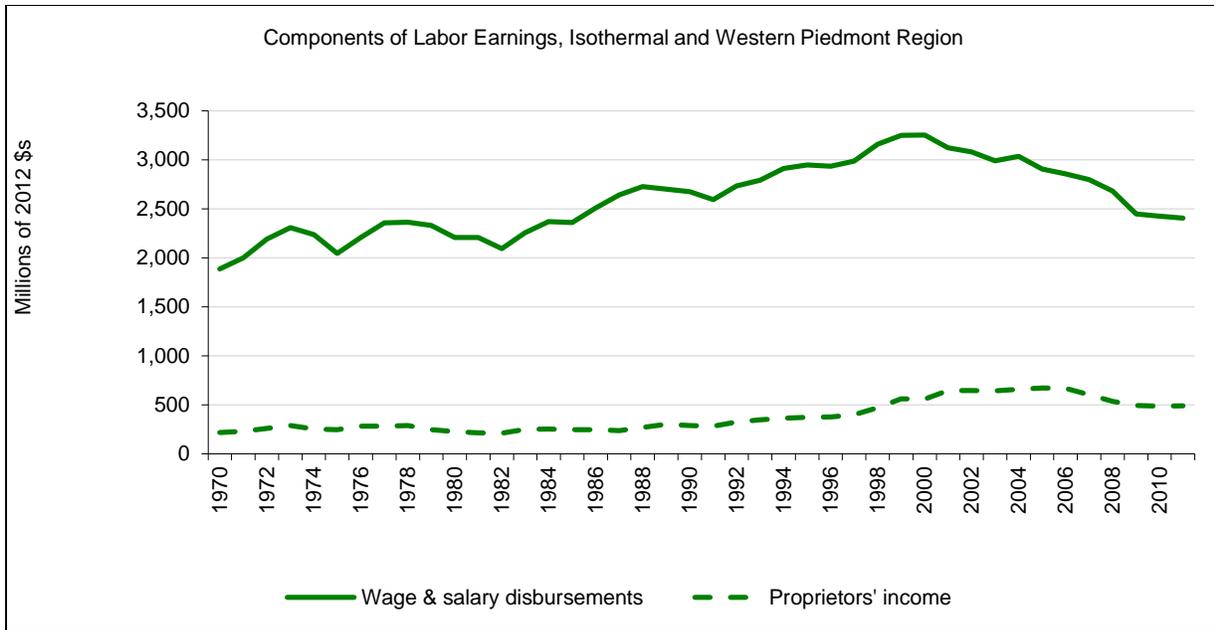


Figure 6.6.3.1a. Total Personal Income in the Isothermal and Western Piedmont Region, 1970-2011.

From 1970 to 2011 in the High Country Region, labor earnings from wage and salary employment grew from \$486.3 million to \$1.2951 billion (in real terms), a 166% increase, whereas labor earnings from proprietors' employment grew from \$139.2 million to \$208.7 million (in real terms), a 50% increase.

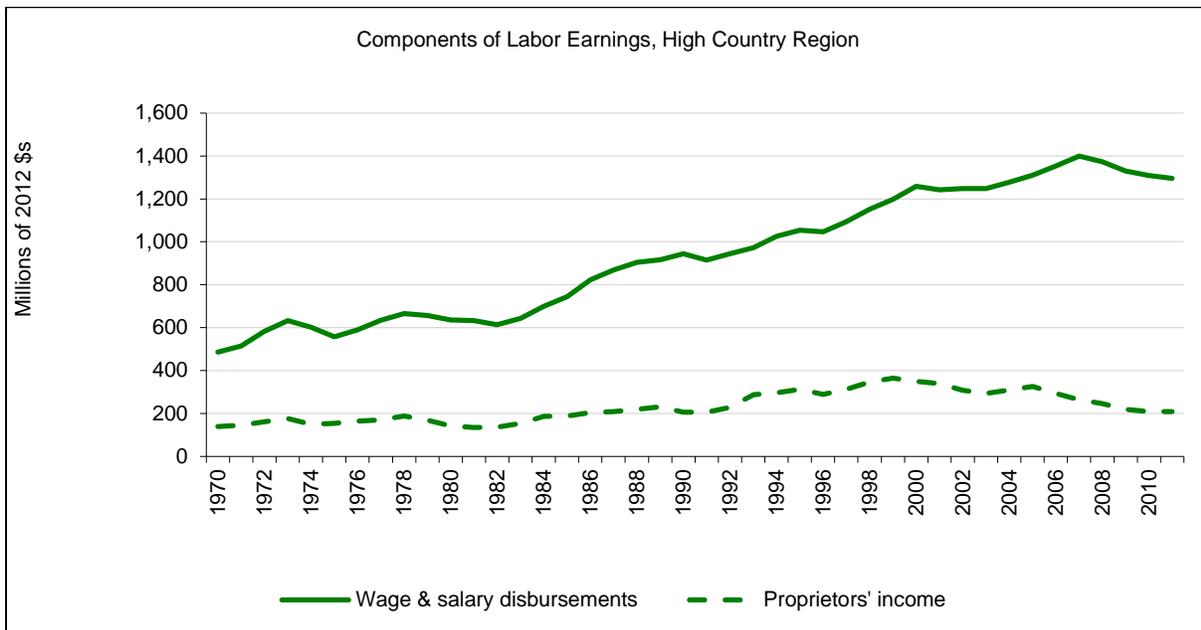


Figure 6.6.3.1b. Total Personal Income in the High Country Region, 1970-2011.

From 1970 to 2011 in the Land-of-Sky Region, labor earnings from wage and salary employment grew from \$2,760.9 million to \$6,252.1 million (in real terms), a 126% increase.

whereas, labor earnings from proprietors' employment grew from \$383.7 million to \$875.2 million (in real terms), a 128% increase.

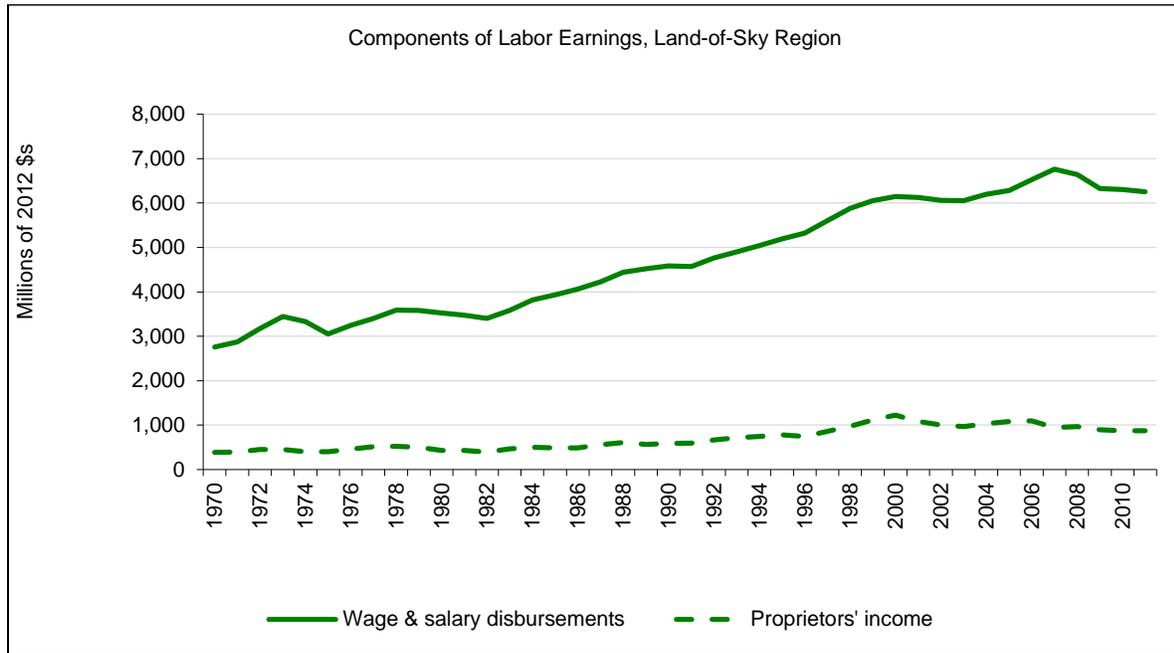


Figure 6.6.3.1c. Total Personal Income in the Land-of-Sky Region, 1970-2011.

From 1970 to 2011 in the Southwestern Region, labor earnings from wage and salary employment grew from \$990.3 million to \$2.077 billion (in real terms), a 110% increase whereas labor earnings from proprietors' employment grew from \$222.7 million to \$370.4 million (in real terms), a 66% increase.

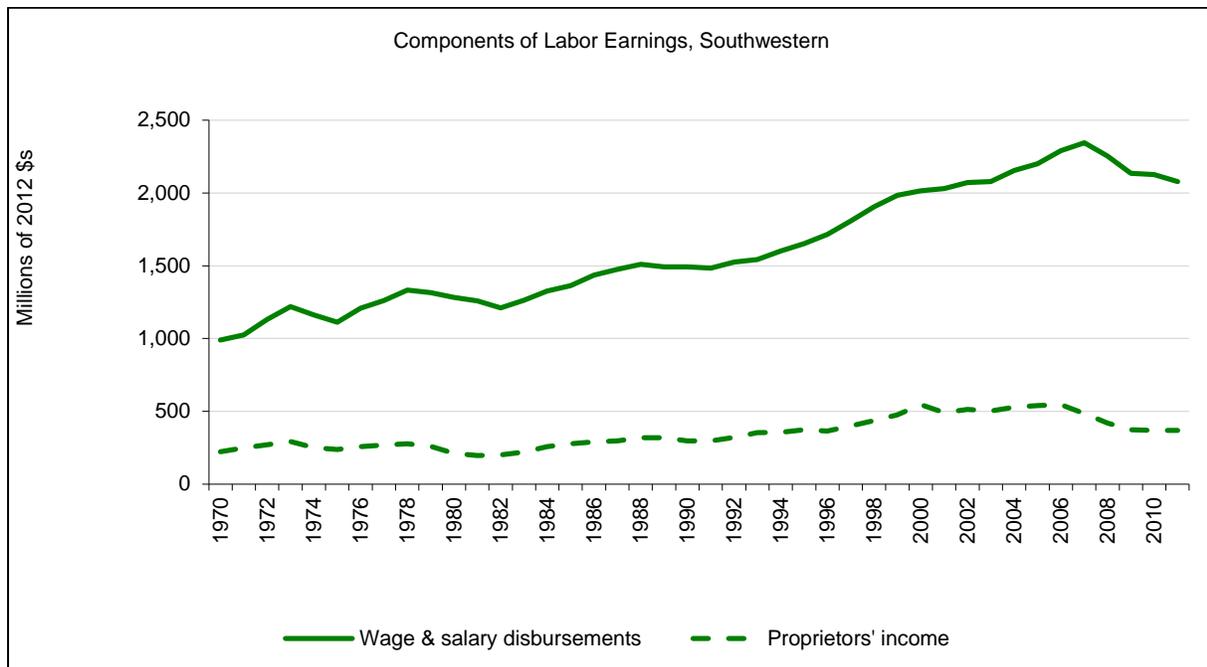


Figure 6.6.3.1d. Total Personal Income in the Southwestern Region, 1970-2011.

6.4.2.4 Wage Trends

Average wages during 2011 also varied between counties in each of the counties in each Region. Figure 6.6.3.4.1a 6.6.3.4.1d show the average across all sectors, whereas Table 6.6.3.5.2a - 6.6.3.5.2d show the breakdown of wages by sector from 1970-2000 and Table 6.6.3.6a – 6.6.3.6d show the more recent breakdown of wages by sector from 2001-2011.

In the Isothermal and Western Piedmont Region during 2011, McDowell County had the highest average earnings per job (\$36,810), and Burke County, NC had the lowest (\$35,203).

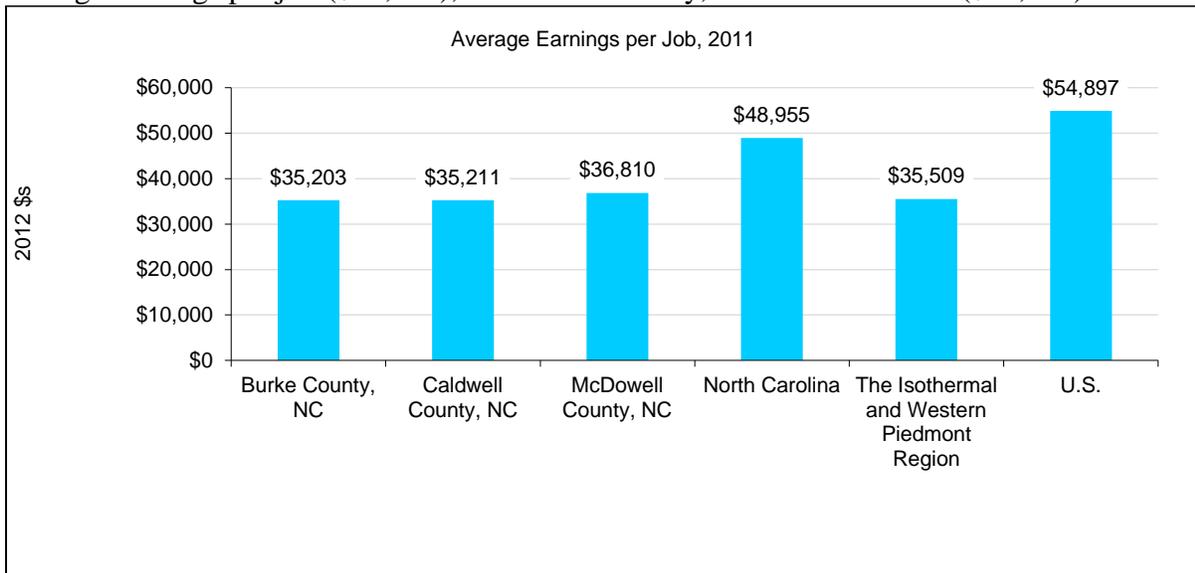


Figure 6.6.3.2a. Average Earning in the Isothermal and Western Piedmont Region, by County 1970-2011.

In the High Country Region during 2011, Watauga County had the highest average earnings per job (\$36,955), and Avery County, NC had the lowest (\$26,512).

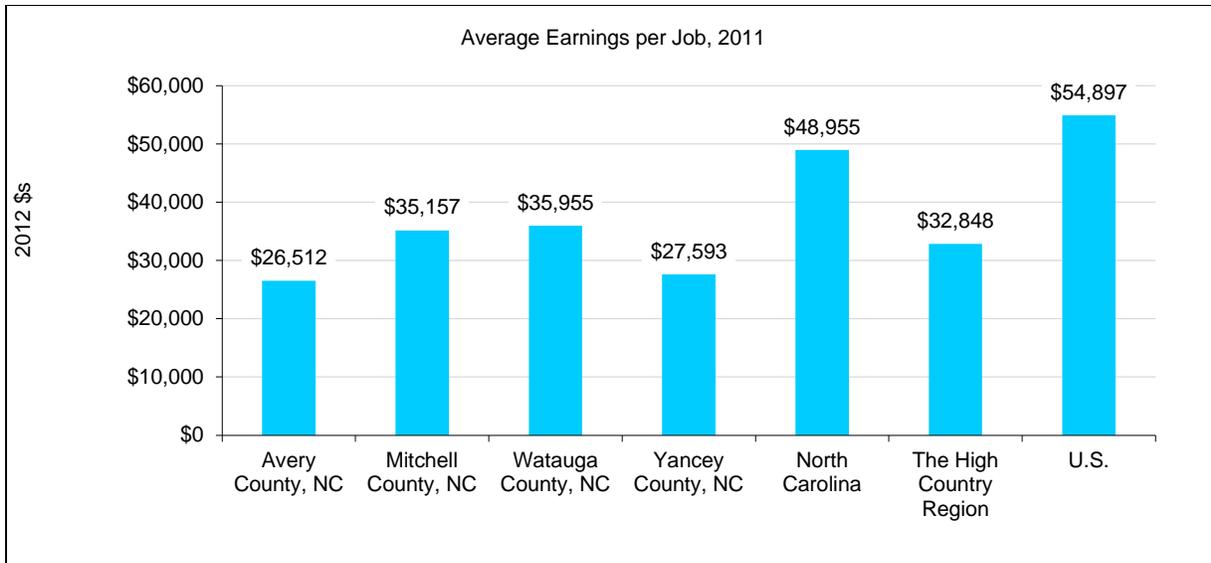


Figure 6.6.3.2b. Average Earning in the High Country Region, by County 1970-2011.

In the Land-of-Sky Region during 2011, Buncombe County had the highest average earnings per job (\$36,679), and Madison County, NC had the lowest (\$25,489).

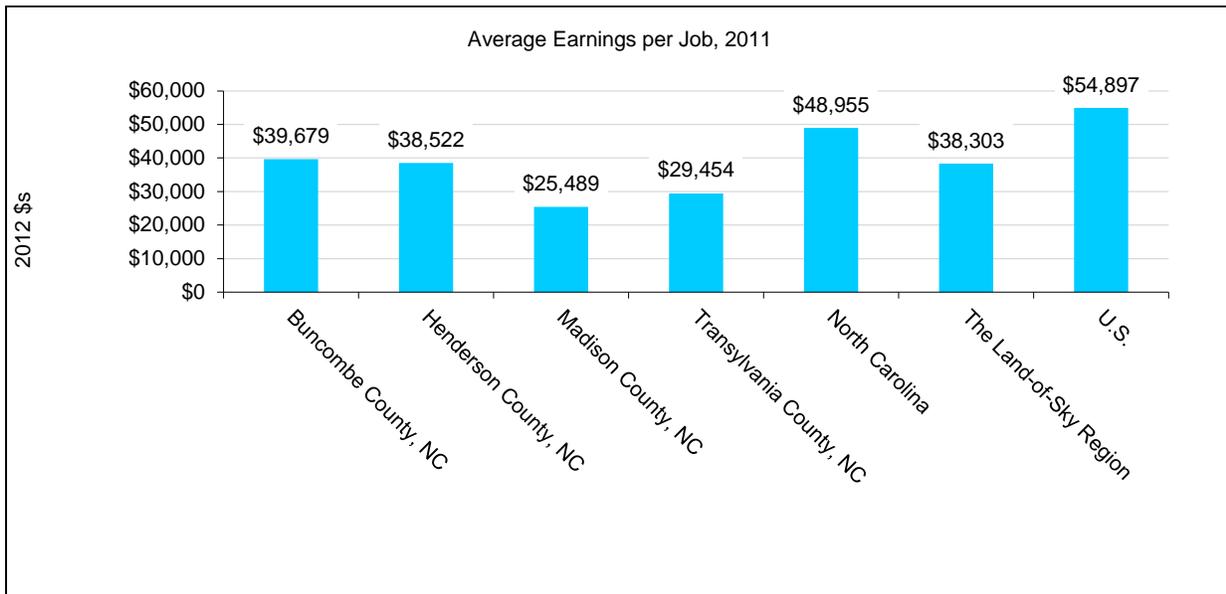


Figure 6.6.3.2c. Average Earning in the Land-of-Sky Region, by County 1970-2011.

In the Southwestern Region during 2011, Swain County had the highest average earnings per job (\$36,491) and Clay County, NC had the lowest (\$24,400).



Figure 6.6.3.2d. Average Earning in the Southwestern Region, by County 1970-2011.

6.4.2.5 Trends in Historic Labor Earnings by Sector

In the Isothermal and Western Piedmont Region from 1970 to 2011, average earnings per job grew from \$34,246 to \$35,509 (in real terms), a 4% increase. From 1998 to 2011, the three service sectors that had the fastest increase in average annual wages were information (from \$34,411 to \$39,186, an increase of 13.9%), professional and business (from \$33,840 to \$36,645 an increase of 8.3%), and trade, transportation, utilities (from \$28,766 to \$31,006, an increase of 7.8%).

Table 6.6.3.5a. Historic Sector Earning in the Isothermal and Western Piedmont Region, by County 1970-2000.

	1970	1980	1990	2000	Change 1990-2000
Labor Earnings	2,300,216	2,820,379	3,510,226	4,454,128	943,902
Non-services related	1,438,062	1,725,258	1,997,785	2,242,747	244,962
Farm	15,396	17,719	65,218	105,659	40,441
Agricultural services, forestry, fishing & other	4,325	4,644	7,921	17,233	9,312
Mining (including fossil fuels)	1,024	6,675	2,397	4,324	1,928
Construction	80,672	111,214	154,667	238,854	84,187
Manufacturing (including forest products)	1,336,644	1,585,006	1,767,582	1,876,677	109,095
Services related	550,364	687,005	941,390	1,515,648	574,258
Transportation & public utilities	59,975	101,469	133,711	152,478	18,767
Wholesale trade	85,418	53,151	62,352	128,393	66,041
Retail trade	183,463	205,072	266,714	396,337	129,623
Finance, insurance & real estate	36,496	44,172	43,872	112,440	68,568
Services	185,013	283,141	434,740	726,000	291,260
Government	311,820	408,116	571,051	698,116	127,065

Percent of Total					% Change 1990-2000
Labor Earnings					26.9%
Non-services related	62.5%	61.2%	56.9%	50.4%	12.3%
Farm	0.7%	0.6%	1.9%	2.4%	62.0%
Agricultural services, forestry, fishing & other	0.2%	0.2%	0.2%	0.4%	117.6%
Mining (including fossil fuels)	0.0%	0.2%	0.1%	0.1%	80.4%
Construction	3.5%	3.9%	4.4%	5.4%	54.4%
Manufacturing (including forest products)	58.1%	56.2%	50.4%	42.1%	6.2%
Services related	23.9%	24.4%	26.8%	34.0%	61.0%
Transportation & public utilities	2.6%	3.6%	3.8%	3.4%	14.0%
Wholesale trade	3.7%	1.9%	1.8%	2.9%	105.9%
Retail trade	8.0%	7.3%	7.6%	8.9%	48.6%
Finance, insurance & real estate	1.6%	1.6%	1.2%	2.5%	156.3%
Services	8.0%	10.0%	12.4%	16.3%	67.0%
Government	13.6%	14.5%	16.3%	15.7%	22.3%

In the High Country Region from 1970 to 2011, average earnings per job grew from \$29,194 to \$32,848 (in real terms), a 13% increase. From 1998 to 2012, the three service sectors that had the fastest increase in average annual wages were trade, transportation, utilities (from \$24,487 to \$27,777, an increase of 13.4%), professional and business (from \$28,433 to \$31,207 an increase of 9.8%), and education and health (from \$32,496 to \$35,312, an increase of 8.7%).

Table 6.6.3.5b. Historic Sector Earning in High Country Region, by County 1970-2000.

	1970	1980	1990	2000	Change 1990-2000
Labor Earnings	676,218	886,207	1,344,332	1,861,728	517,396
Non-services related	267,283	307,006	414,938	552,929	137,991
Farm	39,526	31,666	45,234	88,211	42,977
Agricultural services, forestry, fishing & other	3,639	4,081	12,796	18,847	6,051
Mining (including fossil fuels)	8,307	19,775	19,907	32,228	12,321
Construction	52,247	77,312	95,384	163,679	68,295
Manufacturing (including forest products)	163,564	174,172	241,617	249,964	8,347
Services related	261,129	360,703	582,375	910,871	328,496
Transportation & public utilities	19,644	27,606	45,102	63,493	18,391
Wholesale trade	22,828	38,316	42,331	61,783	19,452
Retail trade	81,081	108,080	157,121	241,961	84,839
Finance, insurance & real estate	31,893	27,645	51,399	89,798	38,398
Services	105,684	159,056	286,421	453,836	167,415
Government	140,493	206,939	347,018	407,168	60,149

Percent of Total					% Change 1990-2000
Labor Earnings					38.5%
Non-services related	39.5%	34.6%	30.9%	29.7%	33.3%
Farm	5.8%	3.6%	3.4%	4.7%	95.0%
Agricultural services, forestry, fishing & other	0.5%	0.5%	1.0%	1.0%	47.3%
Mining (including fossil fuels)	1.2%	2.2%	1.5%	1.7%	61.9%
Construction	7.7%	8.7%	7.1%	8.8%	71.6%
Manufacturing (including forest products)	24.2%	19.7%	18.0%	13.4%	3.5%
Services related	38.6%	40.7%	43.3%	48.9%	56.4%
Transportation & public utilities	2.9%	3.1%	3.4%	3.4%	40.8%
Wholesale trade	3.4%	4.3%	3.1%	3.3%	46.0%
Retail trade	12.0%	12.2%	11.7%	13.0%	54.0%

Finance, insurance & real estate	4.7%	3.1%	3.8%	4.8%	74.7%
Services	15.6%	17.9%	21.3%	24.4%	58.5%
Government	20.8%	23.4%	25.8%	21.9%	17.3%

All income data are reported by place of work. Industry categories may not add to total because of adjustments made by the Bureau of Economic Analysis. Estimates for data that were not disclosed are indicated with tildes (~).

In the Land-of-Sky Region from 1970 to 2011, average earnings per job grew from \$34,484 to \$38,303 (in real terms), a 11% increase. From 1998 to 2012, the three service sectors that had the fastest increase in average annual wages were financial activities (from \$47,589 to \$49,891, an increase of 4.8%), professional and business (from \$33,925 to \$35,444 an increase of 4.5%), and information (from \$44,726 to \$46,715, an increase of 4.4%).

Table 6.6.3.5c. Historic Sector Earning in the Land-of-Sky Region, by County 1970-2000.

	1970	1980	1990	2000	Change 1990-2000
Labor Earnings	3,432,996	4,571,631	6,068,618	8,590,661	2,522,043
Non-services related	1,547,325	2,049,649	2,257,752	2,645,382	387,630
Farm	102,766	83,154	126,435	157,988	31,553
Agricultural services, forestry, fishing & other	8,479	17,621	26,399	48,129	21,730
Mining (including fossil fuels)	7,106	27,593	8,105	9,392	1,287
Construction	245,774	286,362	387,984	766,671	378,687
Manufacturing (including forest products)	1,183,199	1,634,920	1,708,828	1,663,201	-45,627
Services related	1,402,453	1,857,011	2,895,680	4,723,163	1,827,483
Transportation & public utilities	226,089	298,762	352,749	417,544	64,794
Wholesale trade	152,428	190,381	279,620	364,874	85,255
Retail trade	386,995	479,863	666,010	946,930	280,920
Finance, insurance & real estate	118,458	131,558	184,921	449,798	264,877
Services	518,483	756,446	1,412,380	2,544,017	1,131,637
Government	483,372	664,971	915,186	1,238,384	323,198
Percent of Total					% Change 1990-2000
Labor Earnings					41.6%
Non-services related	45.1%	44.8%	37.2%	30.8%	17.2%
Farm	3.0%	1.8%	2.1%	1.8%	25.0%
Agricultural services, forestry, fishing & other	0.2%	0.4%	0.4%	0.6%	82.3%
Mining (including fossil fuels)	0.2%	0.6%	0.1%	0.1%	15.9%
Construction	7.2%	6.3%	6.4%	8.9%	97.6%
Manufacturing (including forest products)	34.5%	35.8%	28.2%	19.4%	-2.7%
Services related	40.9%	40.6%	47.7%	55.0%	63.1%
Transportation & public utilities	6.6%	6.5%	5.8%	4.9%	18.4%
Wholesale trade	4.4%	4.2%	4.6%	4.2%	30.5%
Retail trade	11.3%	10.5%	11.0%	11.0%	42.2%
Finance, insurance & real estate	3.5%	2.9%	3.0%	5.2%	143.2%
Services	15.1%	16.5%	23.3%	29.6%	80.1%
Government	14.1%	14.5%	15.1%	14.4%	35.3%

All income data are reported by place of work. Industry categories may not add to total because of adjustments made by the Bureau of Economic Analysis. Estimates for data that were not disclosed are indicated with tildes (~).

In the Southwestern Region from 1970 to 2011, average earnings per job grew from \$31,362 to \$33,130 (in real terms), a 6% increase. From 1998 to 2012, the three service sectors that had the fastest increase in average annual wages were professional and business (from \$31,088 to \$32,739, an increase of 5.3%), professional and business (from \$31,088 to \$32,739 an increase of 5.3%), and other services (from \$23,448 to \$24,154, an increase of 3%). In the Southwestern

Region during 2012, the three service sectors that paid the highest wages were information (\$38,919), financial activities (\$37,321), and education and health (\$36,421) U.S. Department of Labor, 2012. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Washington, D.C.).

Table 6.6.3.5d. Historic Sector Earning in the Southwestern Region, by County 1970-2000.

	1970	1980	1990	2000	Change 1990-2000
Labor Earnings	1,321,331	1,721,801	2,090,883	2,973,384	882,502
Non-services related	630,403	781,763	798,832	801,030	2,198
Farm	45,898	26,227	48,219	48,664	445
Agricultural services, forestry, fishing & other	3,509	7,402	11,905	20,998	9,093
Mining (including fossil fuels)	8,887	10,425	5,824	5,679	-145
Construction	78,187	133,948	171,383	319,952	148,569
Manufacturing (including forest products)	493,922	603,760	561,500	405,736	-155,764
Services related	445,509	569,575	796,227	1,464,420	668,193
Transportation & public utilities	44,662	73,369	74,860	77,822	2,961
Wholesale trade	30,041	27,885	22,699	50,902	28,203
Retail trade	145,665	187,005	264,156	402,113	137,957
Finance, insurance & real estate	26,260	34,895	61,017	142,907	81,890
Services	198,882	246,422	373,494	790,677	417,183
Government	245,118	371,159	495,836	700,132	204,296
Percent of Total					% Change 1990-2000
Labor Earnings					42.2%
Non-services related	47.7%	45.4%	38.2%	26.9%	0.3%
Farm	3.5%	1.5%	2.3%	1.6%	0.9%
Agricultural services, forestry, fishing & other	0.3%	0.4%	0.6%	0.7%	76.4%
Mining (including fossil fuels)	0.7%	0.6%	0.3%	0.2%	-2.5%
Construction	5.9%	7.8%	8.2%	10.8%	86.7%
Manufacturing (including forest products)	37.4%	35.1%	26.9%	13.6%	-27.7%
Services related	33.7%	33.1%	38.1%	49.3%	83.9%
Transportation & public utilities	3.4%	4.3%	3.6%	2.6%	4.0%
Wholesale trade	2.3%	1.6%	1.1%	1.7%	124.3%
Retail trade	11.0%	10.9%	12.6%	13.5%	52.2%
Finance, insurance & real estate	2.0%	2.0%	2.9%	4.8%	134.2%
Services	15.1%	14.3%	17.9%	26.6%	111.7%
Government	18.6%	21.6%	23.7%	23.5%	41.2%

The personal income data above are organized according to the Standard Industrial Classification (SIC) system. The data end in 2000 because in 2001 the U.S. Department of Commerce switched to organizing industry-level information according to the newer North American Industrial Classification System (NAICS). More recent personal income trends, organized by NAICS, are shown in subsequent pages of this report.

6.4.2.6 Recent Labor Earnings by Sector

In the Isothermal and Western Piedmont Region from 2001 to 2011, personal income from services related industries grew from \$1,706 million to \$1,713 million (in real terms), a % increase. From 2001 to 2011, personal income from non-services related industries shrank from \$1.978 billion to \$1.098 billion (in real terms), a 44% decrease, while personal income from government jobs grew from \$703 million to \$711 million (in real terms), a 1% increase. From 2001 to 2011, the three industry sectors that added the most new personal income (in real terms) were health care, social assistance (\$101.8 million), finance, insurance (\$40.4 million), and

administration, waste services (\$33.9 million). In 2011, the three industry sectors with the largest personal income were manufacturing (including forest products) (\$1,061.0 million), government (\$782.2 million), and health care, social assistance (\$464.5 million).

In the Isothermal and Western Piedmont Region during 2011, non-services related jobs paid the highest wages (\$36,904), and services related jobs paid the lowest (\$28,542). In 2012, the three service sectors that paid the highest wages were information (\$39,090), financial activities (\$38,743), and education and health (\$33,492).

Table 6.6.3.6a. Sector Earning in the Isothermal and Western Piedmont Region, by County 2001-2011.

	2001	2011	Change 2001-2011
Labor Earnings	4,412,162	3,525,484	-886,678
Non-services related	1,978,254	1,098,279	-879,975
Farm	90,760	20,058	-70,703
Forestry, fishing, & related activities	5,088	4,533	-555
Mining (including fossil fuels)	5,524	3,857	-1,667
Construction	241,765	148,758	-93,007
Manufacturing	1,635,117	921,074	-714,043
Services related	1,705,848	1,713,178	7,330
Utilities	15,297	16,753	1,456
Wholesale trade	190,020	186,902	-3,117
Retail trade	305,583	258,060	-47,523
Transportation and warehousing	112,293	93,648	-18,645
Information	23,678	17,654	-6,024
Finance and insurance	67,156	107,531	40,375
Real estate and rental and leasing	101,386	29,712	-71,674
Professional and technical services	75,392	77,312	1,920
Management of companies and enterprises	84,923	50,485	-34,438
Administrative and waste services	57,396	91,285	33,889
Educational services	8,966	12,198	3,232
Health care and social assistance	388,754	490,576	101,822
Arts, entertainment, and recreation	12,298	8,143	-4,154
Accommodation and food services	89,208	88,970	-238
Other services, except public administration	173,499	183,949	10,450
Government	702,525	711,310	8,785
Percent of Total			% Change 2001-2011
Labor Earnings			-20.1%
Non-services related	44.8%	31.2%	-44.5%
Farm	2.1%	0.6%	-77.9%
Forestry, fishing, & related activities	0.1%	0.1%	-10.9%
Mining (including fossil fuels)	0.1%	0.1%	-30.2%
Construction	5.5%	4.2%	-38.5%
Manufacturing	37.1%	26.1%	-43.7%
Services related	38.7%	48.6%	0.4%
Utilities	0.3%	0.5%	9.5%
Wholesale trade	4.3%	5.3%	-1.6%
Retail trade	6.9%	7.3%	-15.6%
Transportation and warehousing	2.5%	2.7%	-16.6%
Information	0.5%	0.5%	-25.4%
Finance and insurance	1.5%	3.1%	60.1%
Real estate and rental and leasing	2.3%	0.8%	-70.7%

Professional and technical services	1.7%	2.2%	2.5%
Management of companies and enterprises	1.9%	1.4%	-40.6%
Administrative and waste services	1.3%	2.6%	59.0%
Educational services	0.2%	0.3%	36.0%
Health care and social assistance	8.8%	13.9%	26.2%
Arts, entertainment, and recreation	0.3%	0.2%	-33.8%
Accommodation and food services	2.0%	2.5%	-0.3%
Other services, except public administration	3.9%	5.2%	6.0%
Government	15.9%	20.2%	1.3%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA05N.

In the High Country Region from 2001 to 2011, personal income from services related industries shrank from \$898 million to \$1,008 million (in real terms), a 12% decrease, personal income from non-services related industries shrank from \$432 million to \$244 million (in real terms), a -44% decrease and personal income from government jobs grew from \$420 million to \$517 million (in real terms), a 23% increase. From 2001 to 2011, the three industry sectors that added the most new personal income (in real terms) were government (\$96.5 million), health care, social assistance (\$60.7 million), and wholesale trade (\$36.1 million). In 2011, the three industry sectors with the largest personal income were government (\$495.5 million), health care, social assistance (\$273.5 million), and construction (\$186.1 million).

In High Country Region during 2011, non-services related jobs paid the highest wages (\$34,915), and services related jobs paid the lowest (\$27,605). In 2012, the three service sectors that paid the highest wages were education and health (\$36,792), financial activities (\$34,927), and information (\$34,302).

Table 6.6.3.6b. Sector Earning in the High Country Region, by County 2001-2011.

	2001	2011	Change 2001-2011
Labor Earnings	1,829,513	1,827,749	-1,763
Non-services related	431,876	244,288	-187,588
Farm	79,819	14,311	-65,508
Forestry, fishing, & related activities	3,121	3,680	560
Mining (including fossil fuels)	30,911	21,279	-9,632
Construction	148,800	126,682	-22,119
Manufacturing	169,225	78,336	-90,889
Services related	897,748	1,008,175	110,427
Utilities	140	4,460	4,320
Wholesale trade	41,447	77,556	36,109
Retail trade	181,756	165,771	-15,986
Transportation and warehousing	26,031	26,930	899
Information	22,180	14,238	-7,942
Finance and insurance	45,777	54,394	8,616
Real estate and rental and leasing	51,292	31,581	-19,711
Professional and technical services	53,018	50,929	-2,090
Management of companies and enterprises	2,076	17,089	15,013
Administrative and waste services	32,643	41,416	8,773

Educational services	15,861	20,527	4,666
Health care and social assistance	197,310	258,017	60,707
Arts, entertainment, and recreation	38,439	45,292	6,853
Accommodation and food services	101,633	106,075	4,441
Other services, except public administration	88,144	93,901	5,758
Government	420,372	516,862	96,490

Percent of Total

% Change
2001-2011

Labor Earnings			-0.1%
Non-services related	23.6%	13.4%	-43.4%
Farm	4.4%	0.8%	-82.1%
Forestry, fishing, & related activities	0.2%	0.2%	17.9%
Mining (including fossil fuels)	1.7%	1.2%	-31.2%
Construction	8.1%	6.9%	-14.9%
Manufacturing	9.2%	4.3%	-53.7%
Services related	49.1%	55.2%	12.3%
Utilities	0.0%	0.2%	3086.2%
Wholesale trade	2.3%	4.2%	87.1%
Retail trade	9.9%	9.1%	-8.8%
Transportation and warehousing	1.4%	1.5%	3.5%
Information	1.2%	0.8%	-35.8%
Finance and insurance	2.5%	3.0%	18.8%
Real estate and rental and leasing	2.8%	1.7%	-38.4%
Professional and technical services	2.9%	2.8%	-3.9%
Management of companies and enterprises	0.1%	0.9%	723.0%
Administrative and waste services	1.8%	2.3%	26.9%
Educational services	0.9%	1.1%	29.4%
Health care and social assistance	10.8%	14.1%	30.8%
Arts, entertainment, and recreation	2.1%	2.5%	17.8%
Accommodation and food services	5.6%	5.8%	4.4%
Other services, except public administration	4.8%	5.1%	6.5%
Government	23.0%	28.3%	23.0%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (-).

In the Land-of-Sky Region from 2001 to 2011, personal income from services related industries grew from \$4,660 million to \$5,381 million (in real terms), a 15% increase, personal income from non-services related industries shrank from \$2,444 million to \$1,685 million (in real terms), a -31% decrease, and, personal income from government jobs grew from \$1,249 million to \$1,500 million (in real terms), a 20% increase. From 2001 to 2011, the three industry sectors that added the most new personal income (in real terms) were health care, social assistance (\$455.5 million), government (\$251.2 million), and admin., waste services (\$95.9 million). In 2011, the three industry sectors with the largest personal income were health care, social assistance (\$1,537.8 million), government (\$1,482.3 million), and manufacturing (including forest products) (\$1,188.3 million).

In Land-of-Sky Region during 2011, non-services related jobs paid the highest wages (\$43,956), and services related jobs paid the lowest (\$32,740). In 2012, the three service sectors that paid the highest wages were Federal government (\$67,112), Manufacturing (\$48,574), and Financial activities (\$48,112).

Table 6.6.3.6c. Sector Earning in the Land-of-Sky Region, by County 2001-2011.

	2001	2011	Change 2001-2011
Labor Earnings	8,459,561	8,660,364	200,803
Non-services related	2,444,359	1,684,625	-759,734
Farm	124,587	58,342	-66,245
Forestry, fishing, & related activities	4,585	33,889	29,304
Mining (including fossil fuels)	7,033	7,997	964
Construction	796,633	511,664	-284,969
Manufacturing	1,511,520	1,072,732	-438,788
Services related	4,660,479	5,381,496	721,017
Utilities	36,673	39,638	2,965
Wholesale trade	297,873	301,109	3,236
Retail trade	723,755	727,951	4,195
Transportation and warehousing	226,529	195,228	-31,301
Information	130,138	128,895	-1,243
Finance and insurance	272,164	347,767	75,603
Real estate and rental and leasing	163,632	122,130	-41,502
Professional and technical services	409,811	421,985	12,174
Management of companies and enterprises	79,292	69,612	-9,680
Administrative and waste services	255,594	351,463	95,869
Educational services	82,032	105,935	23,903
Health care and social assistance	1,178,715	1,634,202	455,488
Arts, entertainment, and recreation	99,601	98,488	-1,113
Accommodation and food services	354,589	435,723	81,134
Other services, except public administration	350,082	401,371	51,289
Government	1,248,890	1,500,055	251,165
Percent of Total			% Change 2001-2011
Labor Earnings			2.4%
Non-services related	28.9%	19.5%	-31.1%
Farm	1.5%	0.7%	-53.2%
Forestry, fishing, & related activities	0.1%	0.4%	639.1%
Mining (including fossil fuels)	0.1%	0.1%	13.7%
Construction	9.4%	5.9%	-35.8%
Manufacturing	17.9%	12.4%	-29.0%
Services related	55.1%	62.1%	15.5%
Utilities	0.4%	0.5%	8.1%
Wholesale trade	3.5%	3.5%	1.1%
Retail trade	8.6%	8.4%	0.6%
Transportation and warehousing	2.7%	2.3%	-13.8%
Information	1.5%	1.5%	-1.0%
Finance and insurance	3.2%	4.0%	27.8%
Real estate and rental and leasing	1.9%	1.4%	-25.4%
Professional and technical services	4.8%	4.9%	3.0%
Management of companies and enterprises	0.9%	0.8%	-12.2%
Administrative and waste services	3.0%	4.1%	37.5%
Educational services	1.0%	1.2%	29.1%
Health care and social assistance	13.9%	18.9%	38.6%
Arts, entertainment, and recreation	1.2%	1.1%	-1.1%
Accommodation and food services	4.2%	5.0%	22.9%

Other services, except public administration	4.1%	4.6%	14.7%
Government	14.8%	17.3%	20.1%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

From 2001 to 2011 in the Southwestern Region, personal income from services related industries grew very slightly from \$1,448 million to \$1,450 million (in real terms), personal income from non-services related industries shrank from \$764 million to \$601 million (in real terms), a 21% decrease while personal income from government jobs grew from \$707 million to \$873 million (in real terms), a 23% increase. From 2001 to 2011, the three industry sectors that added the most new personal income (in real terms) were government (\$165.9 million), professional, scientific, tech. (\$43.1 million), and other services (excl. public admin.) (\$20.9 million). In 2011, the three industry sectors with the largest personal income were government (\$870.7 million), construction (\$376.6 million), and health care, social assistance (\$347.0 million).

In 2011, non-services related jobs paid the highest wages (\$37,753), and services related jobs paid the lowest (\$27,390). In 2011, the three service sectors that paid the highest wages were information (\$40,918), education and health (\$36,102), and financial activities (\$36,057).

Table 6.6.3.6d. Sector Earning in the Southwestern Region, by County 2001-2011.

	2001	2011	Change 2001-2011
Labor Earnings	2,941,422	2,982,313	40,891
Non-services related	763,698	601,351	-162,346
Farm	38,807	28,465	-10,342
Forestry, fishing, & related activities	5,543	1,536	-4,007
Mining (including fossil fuels)	55,716	51,641	-4,075
Construction	340,686	254,723	-85,962
Manufacturing	322,945	264,985	-57,960
Services related	1,447,669	1,449,773	2,104
Utilities	32,400	69	-32,331
Wholesale trade	29,312	34,522	5,211
Retail trade	321,900	287,647	-34,253
Transportation and warehousing	23,292	17,607	-5,685
Information	37,878	28,315	-9,563
Finance and insurance	75,931	94,856	18,925
Real estate and rental and leasing	79,740	35,167	-44,573
Professional and technical services	108,648	151,767	43,118
Management of companies and enterprises	7,922	10,559	2,637
Administrative and waste services	70,594	78,381	7,786
Educational services	7,554	11,476	3,921
Health care and social assistance	311,799	332,218	20,419
Arts, entertainment, and recreation	37,272	55,310	18,038
Accommodation and food services	162,978	150,515	-12,464
Other services, except public administration	140,446	161,364	20,918
Government	706,709	872,625	165,916
Percent of Total			% Change 2001-2011
Labor Earnings			1.4%
Non-services related	26.0%	20.2%	-21.3%
Farm	1.3%	1.0%	-26.6%
Forestry, fishing, & related activities	0.2%	0.1%	-72.3%
Mining (including fossil fuels)	1.9%	1.7%	-7.3%

Construction	11.6%	8.5%	-25.2%
Manufacturing	11.0%	8.9%	-17.9%
Services related	49.2%	48.6%	0.1%
Utilities	1.1%	0.0%	-99.8%
Wholesale trade	1.0%	1.2%	17.8%
Retail trade	10.9%	9.6%	-10.6%
Transportation and warehousing	0.8%	0.6%	-24.4%
Information	1.3%	0.9%	-25.2%
Finance and insurance	2.6%	3.2%	24.9%
Real estate and rental and leasing	2.7%	1.2%	-55.9%
Professional and technical services	3.7%	5.1%	39.7%
Management of companies and enterprises	0.3%	0.4%	33.3%
Administrative and waste services	2.4%	2.6%	11.0%
Educational services	0.3%	0.4%	51.9%
Health care and social assistance	10.6%	11.1%	6.5%
Arts, entertainment, and recreation	1.3%	1.9%	48.4%
Accommodation and food services	5.5%	5.0%	-7.6%
Other services, except public administration	4.8%	5.4%	14.9%
Government	24.0%	29.3%	23.5%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~).

Data Sources: U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA05N.

6.4.2.7 Labor v Non labor income

The counties surrounding the Nantahala and Pisgah National Forest have considerably higher proportion of total income derived from non-labor income. Whereas North Carolina residents and US residents on average get about 35% of all income from non-labor sources, the four regions shown here get between 42.8 and 50.7 of all income from non-labor sources.

Consistent with most of the nation, the percent of non-labor sources have grown substantially since 1970 in the Isothermal and Western Piedmont Region. From 1970 to 2011, labor income grew from \$2,228.0 million to \$3,596.2 million (in real terms), a 61% increase whereas non-labor income grew from \$460.6 million to \$2,691.8 million (in real terms), a 484% increase. From 1970 to 2011, dividends, interest, and rent grew from \$245 million to \$790 million, an increase of 223 percent, transfer payments grew from \$216 million to \$1,902 million, an increase of 780 percent. In 1970, non-labor income represented 17% of total personal income. From 1970 to 2011, labor earnings accounted for 38% of growth in total personal income and non-labor income for 62%. By 2011 non-labor income represented 43% of total personal income.

Figure 6.6.3.0a shows the non-labor components of total personal income from 1970 to 2011 in the Isothermal and Western Piedmont Region. In 1970, dividends, interest, and rent represented 9.1 percent of total personal income. By 2011, dividends, interest, and rent had increased to 12.6 percent of total personal income. In 1970, transfer payments represented 8 percent of total personal income. By 2011, transfer payments had increased to 30.2 percent of total personal income.

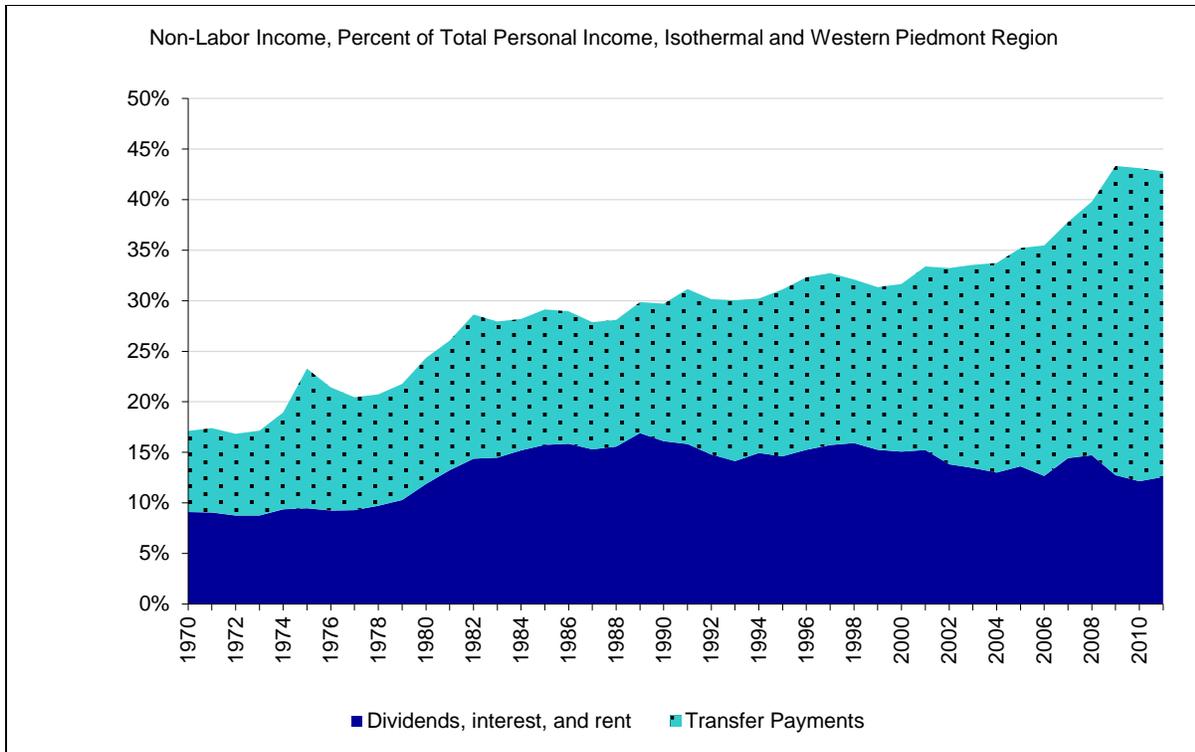


Figure 6.6.3.1.0a. Non-Labor Components of Total Personal Income in the Isothermal and Western Piedmont Region, 1970-2011.

Figure 6.6.3.2a shows how large is non-labor income relative to total personal income during 2011 in the Isothermal and Western Piedmont Region. It is notable that in 2011 McDowell County, NC had the largest percent of total personal income from non-labor sources (44.9%), and Burke County had the smallest (40.5%).

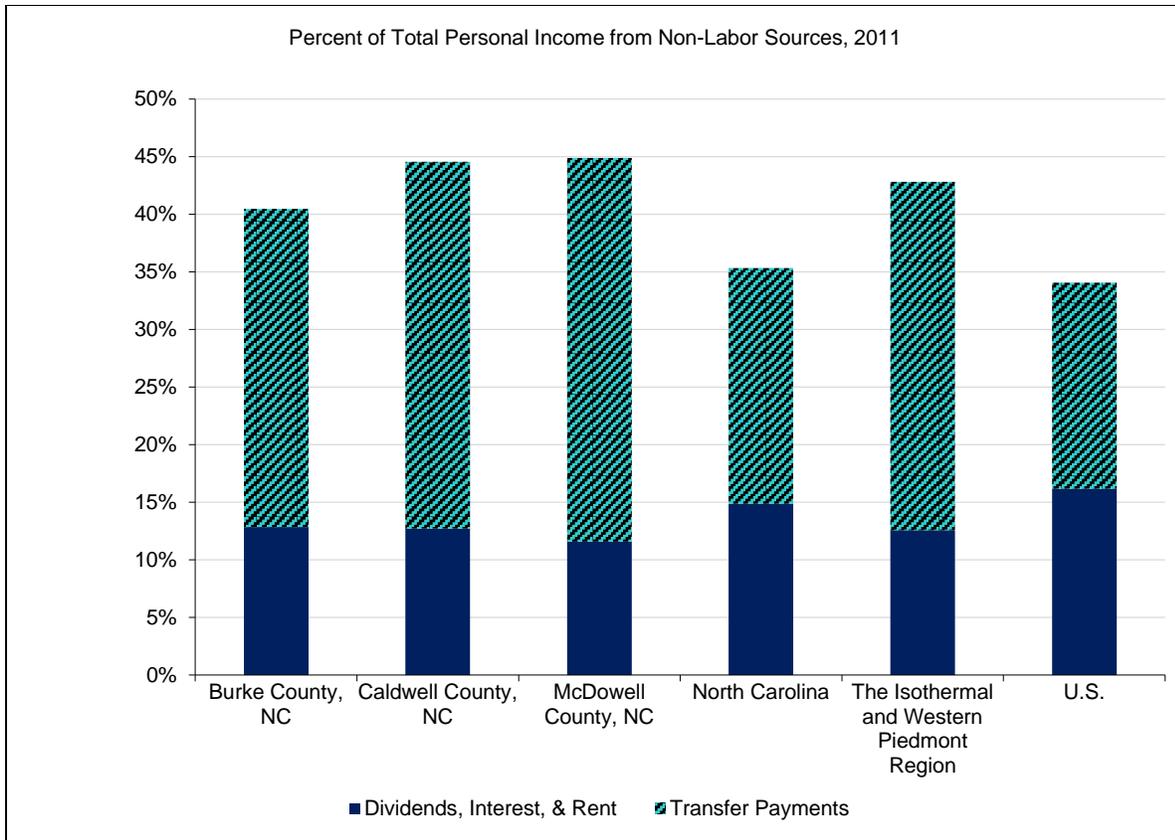


Figure 6.6.3.1.1a. Non-Labor Components of Total Personal Income in the Isothermal and Western Piedmont Region, 1970-2011.

Consistent with most of the nation, the percent of non-labor sources have grown substantially since 1970 in the High Country Region. From 1970 to 2011, labor income grew from \$667.1 million to \$1,634.9 million (in real terms), a 145% increase, whereas, non-labor income grew from \$195.2 million to \$1,346.5 million (in real terms), a 590% increase. From 1970 to 2011, dividends, interest, and rent grew from \$88 million to \$577 million, an increase of 554 percent, transfer payments grew from \$107 million to \$769 million, an increase of 619 percent. In 1970, non-labor income represented 23% of total personal income. From 1970 to 2011, labor earnings accounted for 46% of growth in total personal income and non-labor income for 54%. By 2011 non-labor income represented 45% of total personal income.

Figure 6.6.3.0b shows the non-labor components of total personal income from 1970 to 2011 in the High Country Region. In 1970, dividends, interest, and rent represented 9.1 percent of total personal income. By 2011, dividends, interest, and rent had increased to 12.6 percent of total personal income. In 1970, transfer payments represented 8 percent of total personal income. By 2011, transfer payments had increased to 30.2 percent of total personal income.

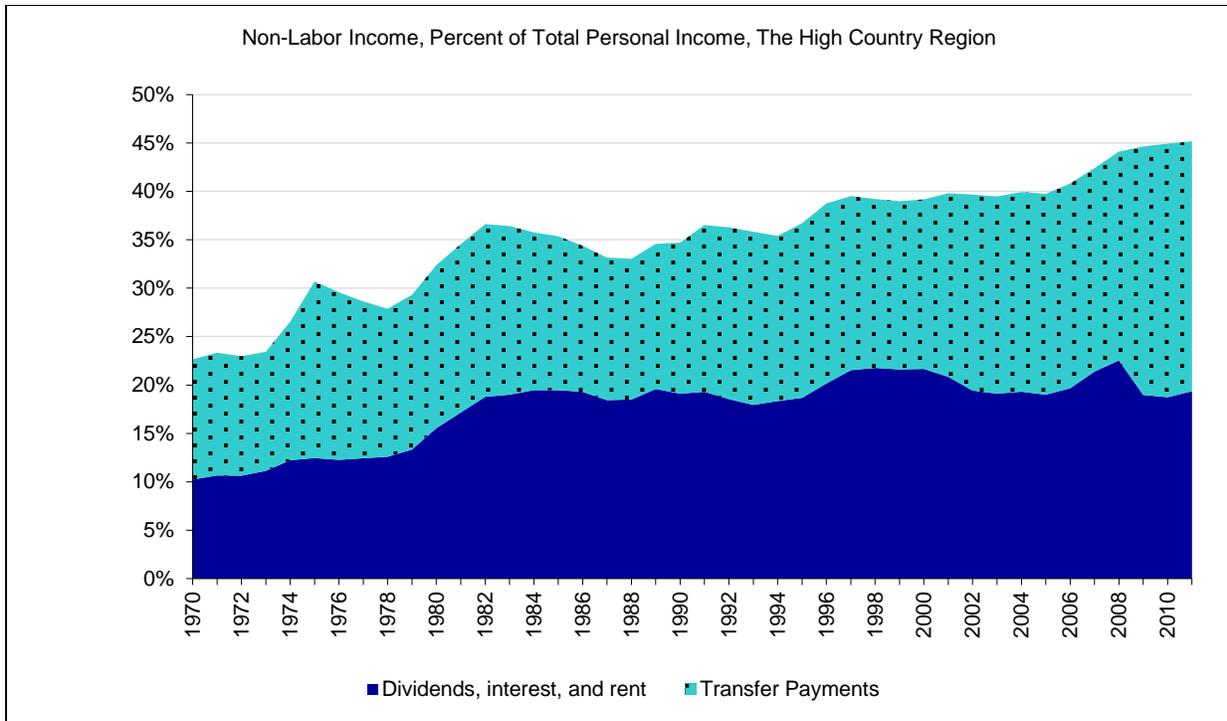


Figure 6.6.3.1.0b. Non-Labor Components of Total Personal Income in the High Country, 1970-2011.

Figure 6.6.3.2b shows how large is non-labor income relative to total personal income during 2011 in the High Country Region. It is notable that in 2011 Yancey County, NC had the largest percent of total personal income from non-labor sources (54.7%), and Watuaga County had the smallest (39.3%).

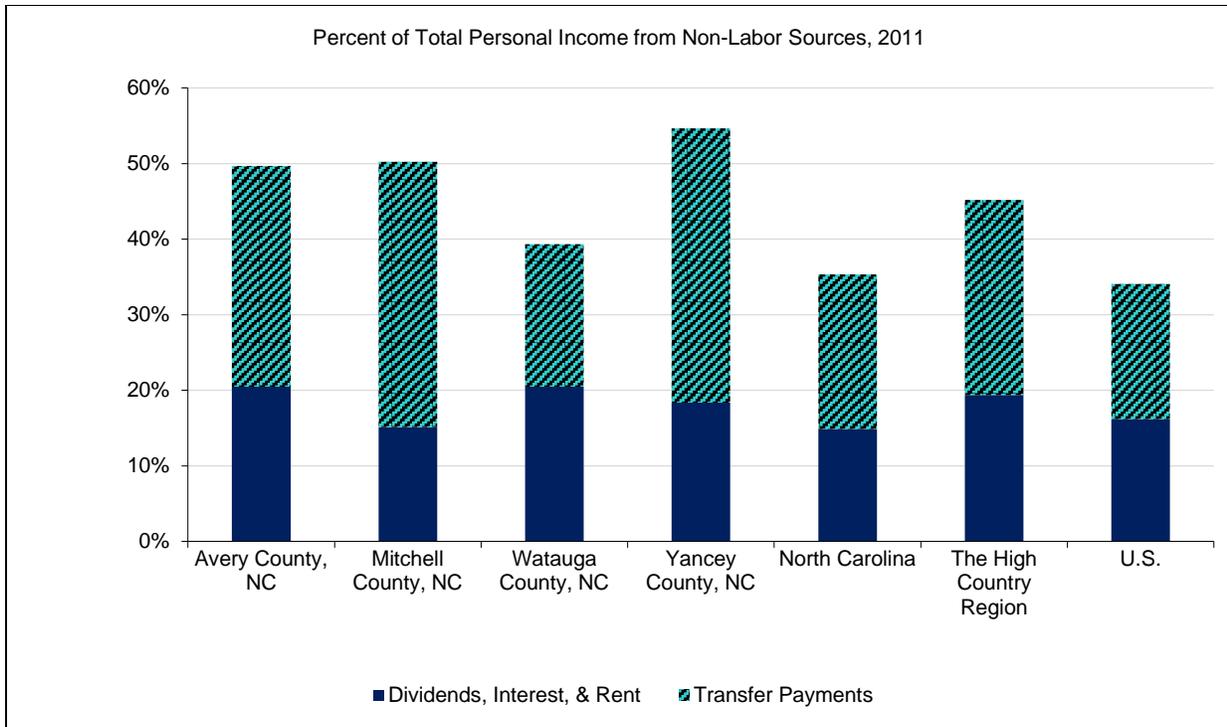


Figure 6.6.3.1.b. Non-Labor Components of Total Personal Income in High Country Region, 1970-2011.

Consistent with most of the nation, the percent of non-labor sources have grown substantially since 1970 in the Land-of-Sky Region. From 1970 to 2011, labor income grew from \$3,122.5 million to \$7,516.9 million (in real terms), a 141% increase, whereas, non-labor income grew from \$1,015.2 million to \$6,565.7 million (in real terms), a 547% increase. From 1970 to 2011, dividends, interest, and rent grew from \$596 million to \$3,117 million, an increase of 423 percent, and transfer payments grew from \$420 million to \$3,449 million, an increase of 722 percent. In 1970, non-labor income represented 24.5 percent of total personal income. From 1970 to 2011, labor earnings accounted for 44% of growth in total personal income and non-labor income for 56%. By 2011, non-labor income had increased to 46.6 percent of total personal income.

Figure 6.6.3.0c shows the non-labor components of total personal income from 1970 to 2011 in the Land-of-Sky Region. In 1970, dividends, interest, and rent represented 14.4 percent of total personal income. By 2011, dividends, interest, and rent had increased to 22.1 percent of total personal income, and transfer payments represented 10.1 percent of total personal income. By 2011, transfer payments had increased to 24.5 percent of total personal income.

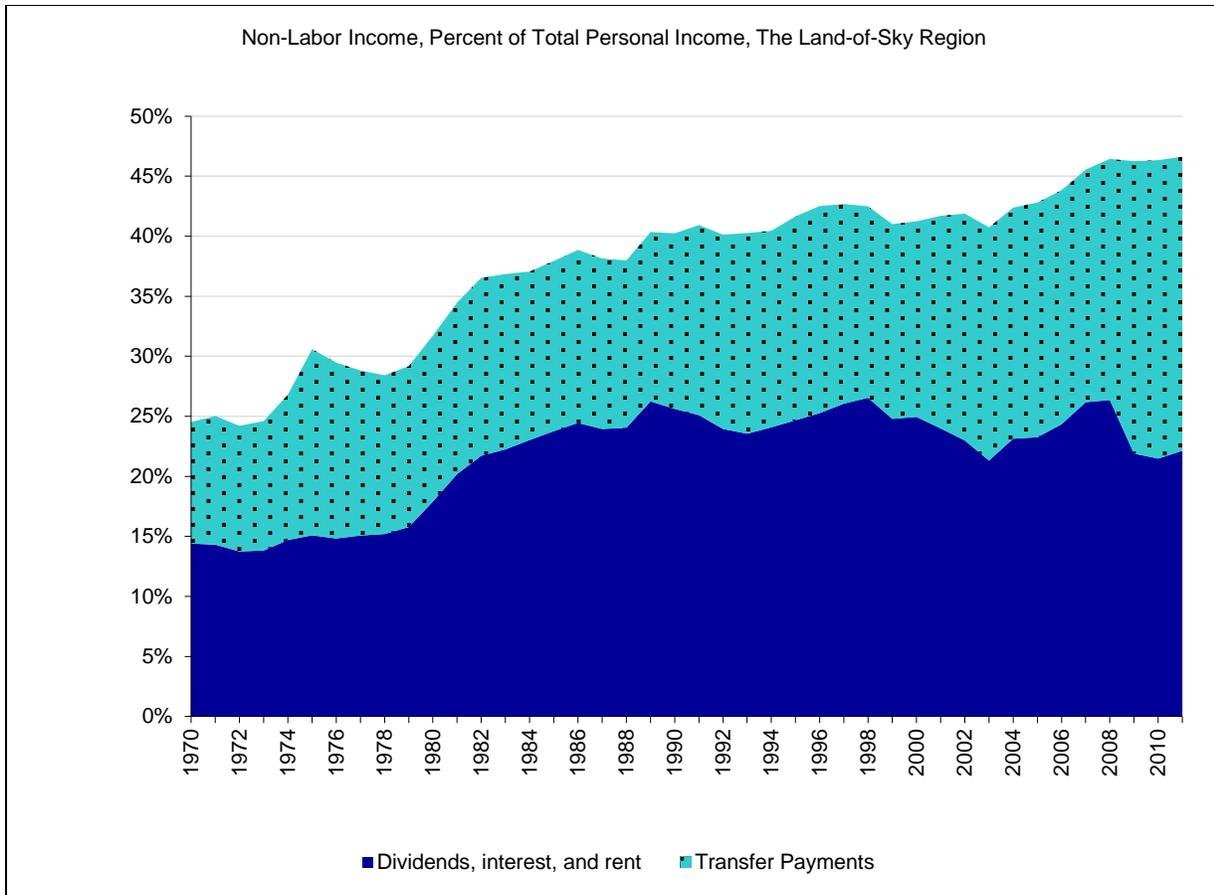


Figure 6.6.3.1.0c. Non-Labor Components of Total Personal Income in the Land-of-Sky Region, 1970-2011.

Figure 6.6.3.2c shows how large is non-labor income relative to total personal income during 2011 in the Land-of-Sky Region. It is notable that in 2011 Transylvania County, NC had the largest percent of total personal income from non-labor sources (61.1%), and Buncombe County had the smallest (44.5%).

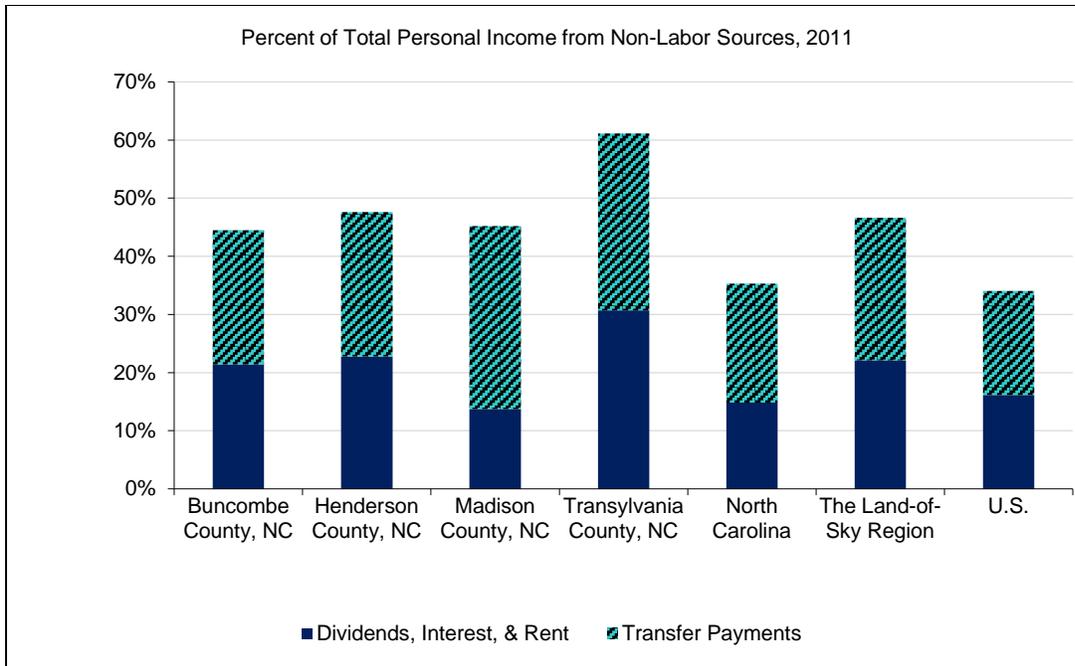


Figure 6.6.3.1.1b. Non-Labor Components of Total Personal Income in Land-of-Sky Region, 1970-2011.

Consistent with most of the nation, the percent of non-labor sources have grown substantially since 1970 in the Southwestern Region. From 1970 to 2011, labor income grew from \$1.33 billion to \$2.834 billion (in real terms), a 113% increase whereas non-labor income grew from \$408.9 million to \$2.914 billion (in real terms), a 613% increase. From 1970 to 2011, labor earnings accounted for 38% of growth in total personal income and non-labor income for 62%. In 1970, non-labor income represented 24% of total personal income. By 2011 non-labor income represented 51% of total personal income.

Figure 6.6.3.0d shows the non-labor components of total personal income from 1970 to 2011 in the Southwestern Region. In 1970, dividends, interest, and rent represented 10.9 percent of total personal income and transfer payments represented 12.6 percent of total personal income. By 2011, dividends, interest, and rent had increased to 18.6 percent of total personal income and transfer payments had increased to 32.1 percent of total personal income. In 1970, non-labor income represented 23.5 percent of total personal income. By 2011, non-labor income had increased to 50.7 percent of total personal income.

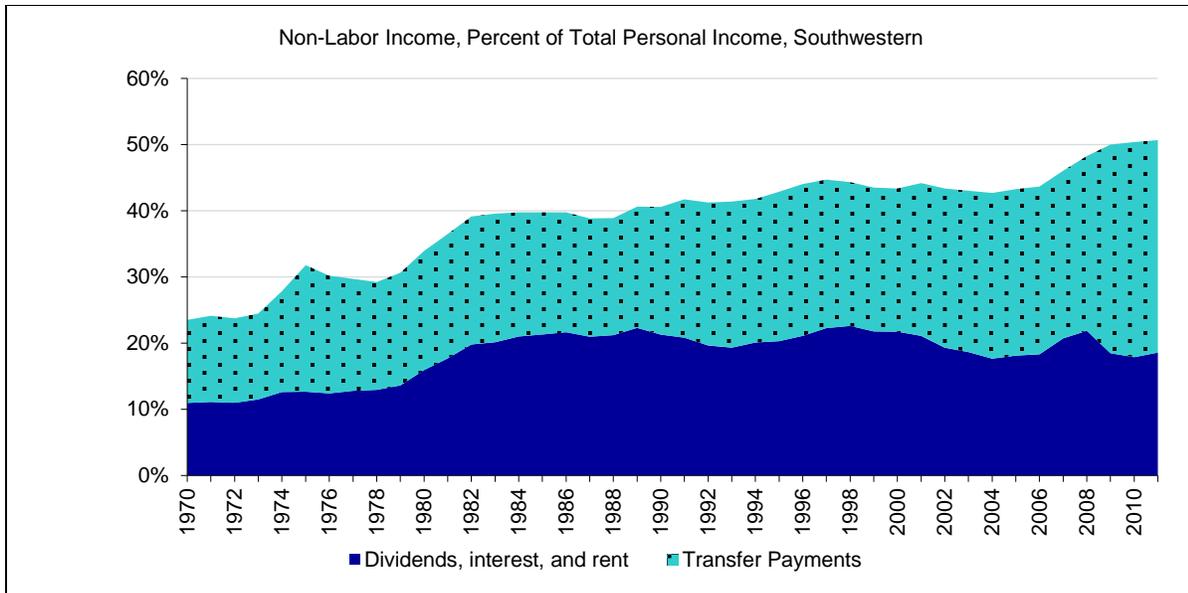


Figure 6.6.3.1.0d. Non-Labor Components of Total Personal Income in the Southwestern Region, 1970-2011.

Figure 6.6.3.2d shows how large is non-labor income relative to total personal income during 2011. It is notable that in 2011, Cherokee County, NC had the largest percent of total personal income from non-labor sources (57.5%), and the Jackson had the smallest (43.2%). In 2011, transfer payments was the largest source of non-labor income in the Southwestern (32.1%), and dividends, interest, & rent was the smallest (18.6%).

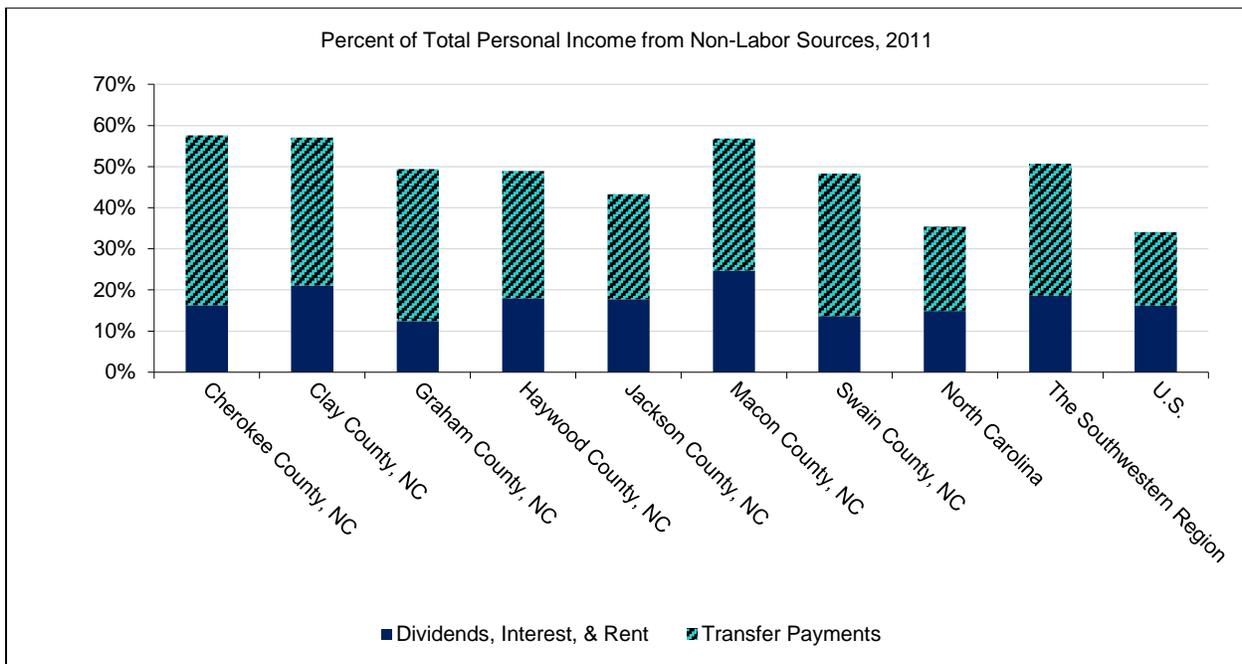


Figure 6.6.3.1.1d. Non-Labor Components of Total Personal Income in the Southwestern Region, 1970-2011.

6.5 QUESTION E - SECTOR PROFILES, TOTAL EMPLOYMENT, INCOME, WAGES FOR SECTOR BREAKDOWNS

Now that general trends have been developed for the overall economies, this next section highlights some of the sectors directly and indirectly affected by Forest Service management of national forests. However, it is important to remember that national forest system lands are only one component of these sectors, which generally operate across multiple public jurisdictions and private lands. After describing each sector, another section highlights the modeled annual contributions of forest service programs and personnel to jobs and labor income in these sectors.

6.5.1 Travel, Tourism and Recreation

Travel and tourism represent a tremendous contribution to the economy of Western North Carolina. Table 6.5.1 shows data from the 2012 Economic Impact of Travel on North Carolina Counties, prepared for the North Carolina Division of Tourism, Film and Sports Development by the U.S. Travel Association. The data suggests that roughly 12.4 percent of all expenditures made in North Carolina that year were made in these 18 counties. More data from the Travel Economic Impact Model can be located at: <http://www.nccommerce.com/tourism/research/economic-impact/teim>

Table 6.5.1. Recent Tourism Contributions to the 18 counties in the Nantahala and Pisgah National Forest Economic Impact Area, 2012.

County	Expenditures (\$ Millions)	Percent Change 2011/12	Payroll (\$ Millions)	Employment (Thousands)	State Tax Receipts (\$ Millions)	Local Tax Receipts (\$ Millions)
AVERY	103.73	5.4%	22.78	1.19	5.08	4.46
BUNCOMBE	834.24	6.5%	174.71	9.36	41.59	27.41
BURKE	80.46	2.5%	11.21	0.62	4.36	2.26
CALDWELL	46.54	3.8%	6.72	0.33	2.47	1.40
CHEROKEE	35.33	4.2%	5.17	0.29	1.64	2.07
CLAY	12.29	5.5%	1.29	0.06	0.50	1.32
GRAHAM	24.84	4.7%	4.12	0.26	1.14	1.59
HAYWOOD	126.35	4.9%	23.71	1.31	6.35	5.04
HENDERSON	218.44	4.3%	37.81	1.96	9.72	9.42
JACKSON	69.55	4.1%	11.04	0.58	3.07	5.31
MACON	135.76	7.6%	22.63	1.15	5.97	10.72
MADISON	32.22	5.3%	6.01	0.31	1.62	1.44
MCDOWELL	49.06	3.2%	7.05	0.39	2.52	1.73
MITCHELL	20.96	2.3%	3.06	0.16	0.90	0.88
SWAIN	293.06	4.5%	79.75	3.34	16.73	6.12
TRANSYLVANIA	80.92	4.7%	14.08	0.72	3.07	3.63
WATAUGA	210.99	6.8%	44.71	2.49	10.33	8.08
YANCEY	31.69	2.1%	4.94	0.23	1.39	2.20
STATE TOTALS	\$19,409.81	5.4%	\$4,391.25	193.61	\$970.41	\$579.38

The North American Industrial Classification System does not specifically contain sectors for travel and tourism. The economic profile system attempts to isolate the contributions that travel

and tourism make by compiling portions of several sectors that are logically associated with these activities from U.S. Department of Commerce. 2012. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA25N and U.S. Department of Commerce. 2013. Census Bureau, County Business Patterns, Washington, D.C. 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. 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 this report, they are referred to as "industries that include travel and tourism." In other words, charted values found in Table 6.6.2.1.1a – 6.6.2.1.1d and Figure 6.6.2.1.1.1a – 6.6.2.1.1d do not represent the entirety of these sectors, rather their components typically related to travel & tourism.

Collectively, there were 48,173 jobs associated with travel and tourism during 2011 across all 18 counties, representing 18.5% of all private sector employment, and the majority of this (13.4 percent) coming from food and accommodation employment (includes ski resorts, hotels, casino hotels, campgrounds, guest ranches], food services and drinking places).

Table 6.6.2.1.1a shows the number of jobs and the portion of total private employment in each of the travel and tourism sectors for the Isothermal and Western Piedmont Region, where all counties have between 10 and 15 percent of total private employment in travel and tourism.

Table 6.6.2.1.1a – Employment in Isothermal and Western Piedmont Region Travel and Tourism, 2011.

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total Private Employment	21,782	18,997	12,021	3,284,592	52,800	113,425,965
Travel & Tourism Related	3,125	2,076	1,369	502,342	6,570	17,231,816
Retail Trade	392	435	240	92,588	1,067	3,224,078
Gasoline Stations	175	231	180	27,580	586	847,516
Clothing & Accessory Stores	133	134	45	44,967	312	1,659,696
Misc. Store Retailers	84	70	15	20,041	169	716,866
Passenger Transportation	0	0	0	10,193	0	448,324
Air Transportation	0	0	0	10,000	0	425,787
Scenic & Sightseeing Transport	0	0	0	193	0	22,537
Arts, Entertainment, & Recreation	145	117	59	54,240	321	2,003,129
Performing Arts & Spectator Sports	33	4	0	10,345	37	427,663
Museums, Parks, & Historic Sites	5	0	31	2,666	36	128,780
Amusement, Gambling, & Rec.	107	113	28	41,229	248	1,446,686
Accommodation & Food	2,588	1,524	1,070	345,321	5,182	11,556,285
Accommodation	70	70	79	38,312	219	1,864,708
Food Services & Drinking Places	2,518	1,454	991	307,009	4,963	9,691,577

Non-Travel & Tourism	18,657	16,921	10,652	2,782,250	46,230	96,194,149
Percent of Total						
Travel & Tourism Related	14.3%	10.9%	11.4%	15.3%	12.4%	15.2%
Retail Trade	1.8%	2.3%	2.0%	2.8%	2.0%	2.8%
Gasoline Stations	0.8%	1.2%	1.5%	0.8%	1.1%	0.7%
Clothing & Accessory Stores	0.6%	0.7%	0.4%	1.4%	0.6%	1.5%
Misc. Store Retailers	0.4%	0.4%	0.1%	0.6%	0.3%	0.6%
Passenger Transportation	0.0%	0.0%	0.0%	0.3%	0.0%	0.4%
Air Transportation	0.0%	0.0%	0.0%	0.3%	0.0%	0.4%
Scenic & Sightseeing Transport	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Arts, Entertainment, & Recreation	0.7%	0.6%	0.5%	1.7%	0.6%	1.8%
Performing Arts & Spectator	0.2%	0.0%	0.0%	0.3%	0.1%	0.4%
Sports						
Museums, Parks, & Historic Sites	0.0%	0.0%	0.3%	0.1%	0.1%	0.1%
Amusement, Gambling, & Rec.	0.5%	0.6%	0.2%	1.3%	0.5%	1.3%
Accommodation & Food	11.9%	8.0%	8.9%	10.5%	9.8%	10.2%
Accommodation	0.3%	0.4%	0.7%	1.2%	0.4%	1.6%
Food Services & Drinking	11.6%	7.7%	8.2%	9.3%	9.4%	8.5%
Places						
Non-Travel & Tourism	85.7%	89.1%	88.6%	84.7%	87.6%	84.8%

In the Isothermal and Western Piedmont Region during 1998, travel & tourism represented 8.73% of total employment. By 2011, travel & tourism represented 12.44% of total employment. From 1998 to 2011, travel & tourism employment grew from 6,509 to 6,570 jobs, a 0.9% increase. From 1998 to 2011, non-travel & tourism employment shrank from 68,073 to 46,230 jobs, a 32.1% decrease, whereas travel & tourism employment grew by 61 jobs, non-travel & tourism employment shrank by 21,843 jobs. From 1998 to 2011 retail trade shrank from 1,574 to 1,067 jobs, a 32.2% decrease. From 1998 to 2011, arts, entertainment, & recreation grew from 289 to 321 jobs, a 11.1% increase. From 1998 to 2011, accommodation & food services grew from 4,646 to 5,182 jobs, a 11.5% increase. Figure 6.6.2.1.1a shows that in 2011, Burke County had the largest percent of total travel & tourism employment whereas Caldwell County, NC had the smallest (10.9%).

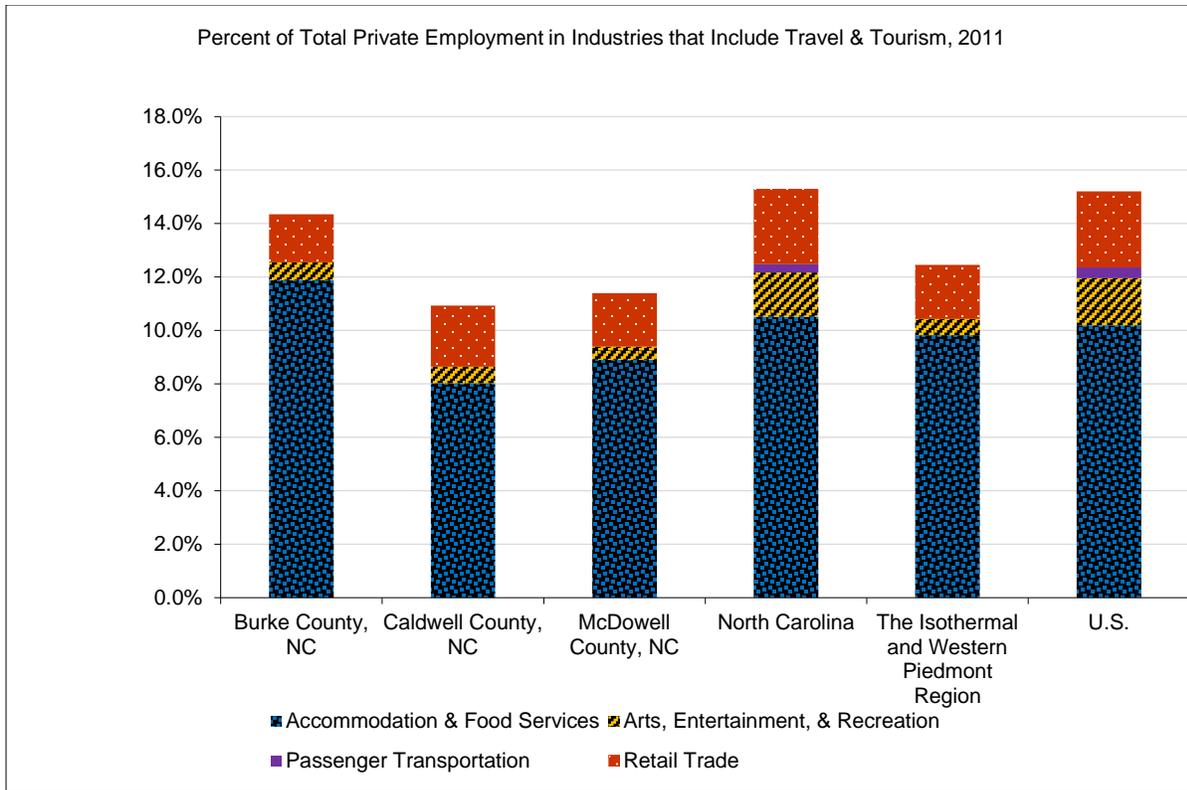


Figure 6.6.2.1.1a. Travel and Tourism Contributions to Total Employment in the Isothermal and Western Piedmont Region.

Table 6.6.2.1.1b shows the number of jobs and the portion of total private employment in each of the travel and tourism sectors for the High Country Region, where two counties have contributions in the low teens and three have contributions in the mid to high teens as the percent of all private employment.

Table 6.6.2.1.1d – Employment in High Country Region Travel and Tourism, 2011.

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Private Employment	4,317	3,886	15,982	3,250	3,284,592	27,435	113,425,965
Travel & Tourism Related	1,279	482	4,601	373	502,342	6,735	17,231,816
Retail Trade	160	79	755	82	92,588	1,076	3,224,078
Gasoline Stations	63	48	117	46	27,580	274	847,516
Clothing & Accessory Stores	80	11	518	19	44,967	628	1,659,696
Misc. Store Retailers	17	20	120	17	20,041	174	716,866
Passenger Transportation	1	0	0	0	10,193	1	448,324
Air Transportation	0	0	0	0	10,000	0	425,787
Scenic & Sightseeing	1	0	0	0	193	1	22,537
Arts, Entertainment, & Recreation	428	38	803	62	54,240	1,331	2,003,129
Performing Arts & Spectator	0	1	11	8	10,345	20	427,663
Museums, Parks, & Historic	72	4	12	0	2,666	88	128,780
Amusement, Gambling, & Rec.	356	33	780	54	41,229	1,223	1,446,686

Accommodation & Food	690	365	3,043	229	345,321	4,327	11,556,285
Accommodation	151	17	485	17	38,312	670	1,864,708
Food Services & Drinking Places	539	348	2,558	212	307,009	3,657	9,691,577
Non-Travel & Tourism	3,038	3,404	11,381	2,877	2,782,250	20,700	96,194,149

Percent of Total

Travel & Tourism Related	29.6%	12.4%	28.8%	11.5%	15.3%	24.5%	15.2%
Retail Trade	3.7%	2.0%	4.7%	2.5%	2.8%	3.9%	2.8%
Gasoline Stations	1.5%	1.2%	0.7%	1.4%	0.8%	1.0%	0.7%
Clothing & Accessory Stores	1.9%	0.3%	3.2%	0.6%	1.4%	2.3%	1.5%
Misc. Store Retailers	0.4%	0.5%	0.8%	0.5%	0.6%	0.6%	0.6%
Passenger Transportation	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.4%
Air Transportation	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.4%
Scenic & Sightseeing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Arts, Entertainment, & Recreation	9.9%	1.0%	5.0%	1.9%	1.7%	4.9%	1.8%
Performing Arts & Spectator	0.0%	0.0%	0.1%	0.2%	0.3%	0.1%	0.4%
Museums, Parks, & Historic Sites	1.7%	0.1%	0.1%	0.0%	0.1%	0.3%	0.1%
Amusement, Gambling, & Rec.	8.2%	0.8%	4.9%	1.7%	1.3%	4.5%	1.3%
Accommodation & Food	16.0%	9.4%	19.0%	7.0%	10.5%	15.8%	10.2%
Accommodation	3.5%	0.4%	3.0%	0.5%	1.2%	2.4%	1.6%
Food Services & Drinking Places	12.5%	9.0%	16.0%	6.5%	9.3%	13.3%	8.5%
Non-Travel & Tourism	70.4%	87.6%	71.2%	88.5%	84.7%	75.5%	84.8%

In the High Country Region during 1998, travel & tourism represented 22.64% of total employment. By 2011, travel & tourism represented 24.55% of total employment. From 1998 to 2011, travel & tourism employment grew from 6,697 to 6,735 jobs, a 0.6% increase whereas non-travel & tourism employment shrank from 22,882 to 20,700 jobs, a 9.5% decrease. In, 2011, Avery County, NC had the largest percent of total travel & tourism employment (29.6%), and Yancey County, NC had the smallest (11.5%). From 1998 to 2011, travel & tourism employment grew by 38 jobs. From 1998 to 2011, non-travel & tourism employment shrank by 2,182 jobs. From 1998 to 2011, retail trade shrank from 1,102 to 1,076 jobs, a 2.4% decrease, arts, entertainment, & recreation shrank from 1,391 to 1,331 jobs, a 4.3% decrease, and accommodation & food services grew from 4,204 to 4,327 jobs, a 2.9% increase.

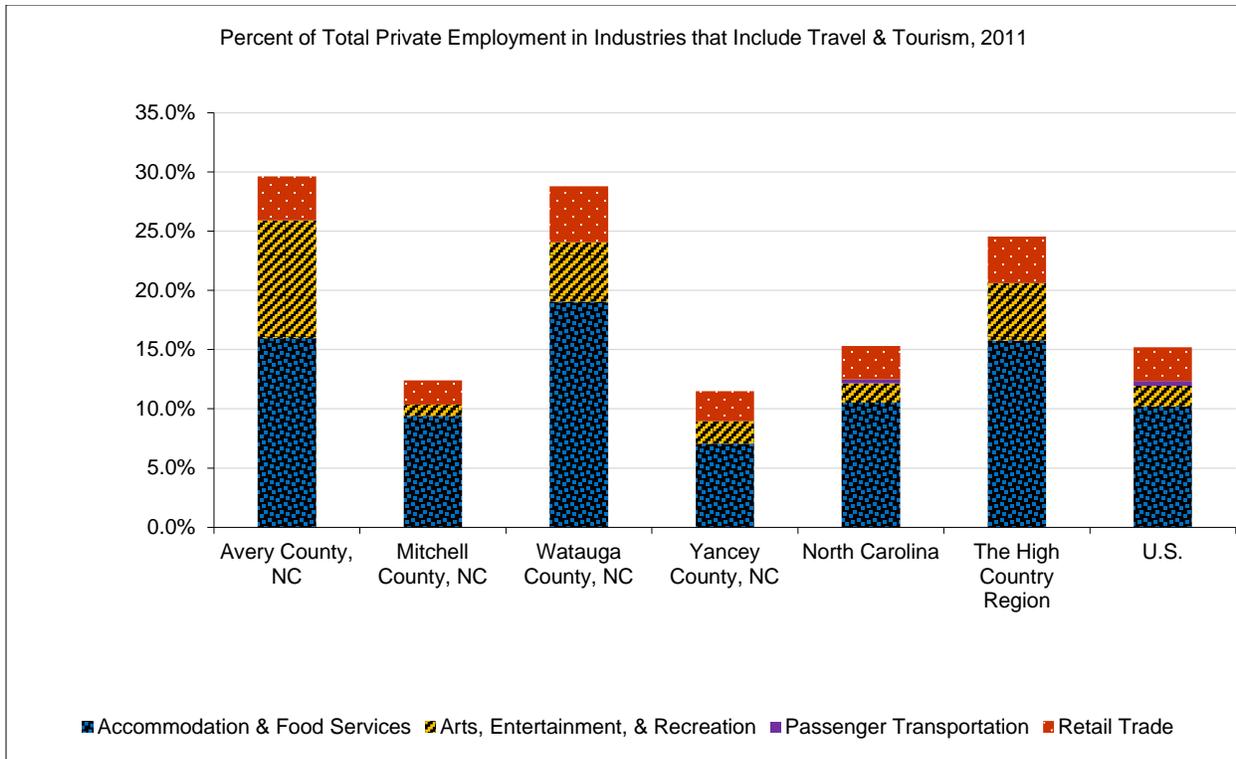


Figure 6.6.2.1b. Travel and Tourism Contributions to Total Employment in the High Country Region.

Table 6.6.2.1.c shows the number of jobs and the portion of total private employment in each of the travel and tourism sectors for the Land-of-Sky Region, where most counties have between 14 and 20 percent of total private employment in travel and tourism.

Table 6.6.2.1.c – Employment in Land-of-Sky Region Travel and Tourism, 2011.

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Private Employment	97,718	29,509	2,908	6,876	3,284,592	137,011	113,425,965
Travel & Tourism Related	18,907	4,197	429	1,319	502,342	24,852	17,231,816
Retail Trade	3,317	709	39	195	92,588	4,260	3,224,078
Gasoline Stations	805	276	34	82	27,580	1,197	847,516
Clothing & Accessory Stores	1,642	235	0	52	44,967	1,929	1,659,696
Misc. Store Retailers	870	198	5	61	20,041	1,134	716,866
Passenger Transportation	46	94	0	0	10,193	140	448,324
Air Transportation	31	87	0	0	10,000	118	425,787
Scenic & Sightseeing	15	7	0	0	193	22	22,537
Arts, Entertainment, & Recreation	1,922	405	97	119	54,240	2,543	2,003,129
Performing Arts & Spectator Sports	274	45	1	4	10,345	324	427,663
Museums, Parks, & Historic Sites	667	10	0	2	2,666	679	128,780
Amusement, Gambling, &	981	350	96	113	41,229	1,540	1,446,686

Rec.								
	Accommodation & Food	13,622	2,989	293	1,005	345,321	17,909	11,556,285
	Accommodation	2,618	509	85	286	38,312	3,498	1,864,708
	Food Services & Drinking							
Places		11,004	2,480	208	719	307,009	14,411	9,691,577
	Non-Travel & Tourism	78,811	25,312	2,479	5,557	2,782,250	112,159	96,194,149

Percent of Total

	Travel & Tourism Related	19.3%	14.2%	14.8%	19.2%	15.3%	18.1%	15.2%
	Retail Trade	3.4%	2.4%	1.3%	2.8%	2.8%	3.1%	2.8%
	Gasoline Stations	0.8%	0.9%	1.2%	1.2%	0.8%	0.9%	0.7%
	Clothing & Accessory Stores	1.7%	0.8%	0.0%	0.8%	1.4%	1.4%	1.5%
	Misc. Store Retailers	0.9%	0.7%	0.2%	0.9%	0.6%	0.8%	0.6%
	Passenger Transportation	0.0%	0.3%	0.0%	0.0%	0.3%	0.1%	0.4%
	Air Transportation	0.0%	0.3%	0.0%	0.0%	0.3%	0.1%	0.4%
	Scenic & Sightseeing							
Transport		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Arts, Entertainment, & Recreation	2.0%	1.4%	3.3%	1.7%	1.7%	1.9%	1.8%
	Performing Arts & Spectator							
Sports		0.3%	0.2%	0.0%	0.1%	0.3%	0.2%	0.4%
	Museums, Parks, & Historic							
Sites		0.7%	0.0%	0.0%	0.0%	0.1%	0.5%	0.1%
	Amusement, Gambling, &							
Rec.		1.0%	1.2%	3.3%	1.6%	1.3%	1.1%	1.3%
	Accommodation & Food	13.9%	10.1%	10.1%	14.6%	10.5%	13.1%	10.2%
	Accommodation	2.7%	1.7%	2.9%	4.2%	1.2%	2.6%	1.6%
	Food Services & Drinking							
Places		11.3%	8.4%	7.2%	10.5%	9.3%	10.5%	8.5%
	Non-Travel & Tourism	80.7%	85.8%	85.2%	80.8%	84.7%	81.9%	84.8%

In 1998, travel & tourism represented 14.81% of total employment. By 2011, travel & tourism represented 18.14% of total employment. From 1998 to 2011, travel & tourism employment grew from 19,807 to 24,852 jobs, a 25.5% increase whereas non-travel & tourism employment shrank from 113,946 to 112,159 jobs, a 1.6% decrease. In, 2011, Buncombe County, NC had the largest percent of total travel & tourism employment (19.3%), and Henderson County, NC had the smallest (14.2%). From 1998 to 2011, travel & tourism employment grew by 5,045 jobs and non-travel & tourism employment shrank by 1,787 jobs. From 1998 to 2011, retail trade grew from 4,242 to 4,260 jobs, a 0.4% increase, passenger transportation grew from 48 to 140 jobs, a 191.7% increase, arts, entertainment, & recreation grew from 2,256 to 2,543 jobs, a 12.7% increase and accommodation & food services grew from 13,261 to 17,909 jobs, a 35.1% increase.

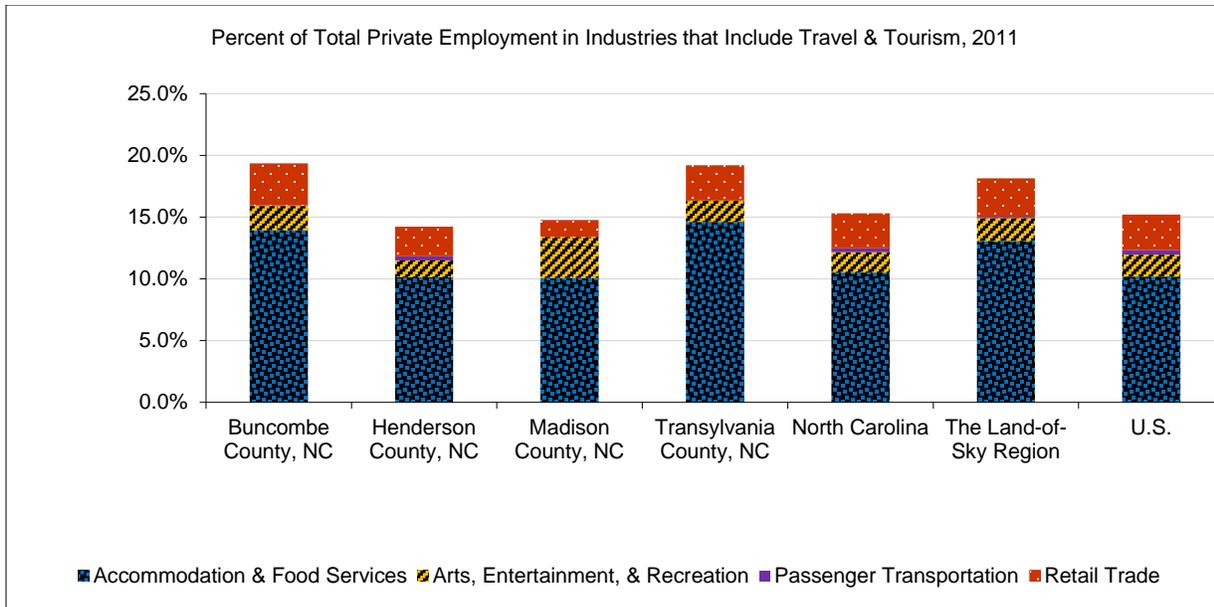


Figure 6.6.2.1c. Travel and Tourism Contributions to Total Employment in the Land-of-Sky Region.

Table 6.6.2.1d shows the number of jobs and the portion of total private employment in each of the travel and tourism sectors for the Southwestern Region, where most counties have between 14 and 25 percent of total private employment in travel and tourism, whereas Swain County has 58.9 percent of all private employment in these sectors.

Table 6.6.2.1d – Employment in Southwestern Region Travel and Tourism, 2011.

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total Private Employment	6,274	1,414	1,899	13,912	7,749	9,162	5,322	3,284,592	45,732	113,425,965
Travel & Tourism Related	881	198	286	2,582	1,890	2,090	3,134	502,342	11,061	17,231,816
Retail Trade	184	35	27	446	201	439	187	92,588	1,519	3,224,078
Gasoline Stations	70	19	25	246	118	170	90	27,580	738	847,516
Clothing & Accessory Stores	60	2	0	100	43	140	6	44,967	351	1,659,696
Misc. Store Retailers	54	14	2	100	40	129	91	20,041	430	716,866
Passenger Transportation	0	0	0	0	0	0	1	10,193	1	448,324
Air Transportation	0	0	0	0	0	0	0	10,000	0	425,787
Scenic & Sightseeing Transport	0	0	0	0	0	0	1	193	1	22,537
Arts, Entertainment, & Recreation	21	17	22	318	151	458	197	54,240	1,184	2,003,129
Performing Arts & Spectator Sports	3	3	6	9	0	54	13	10,345	88	427,663
Museums, Parks, & Historic Sites	0	0	0	2	2	16	27	2,666	47	128,780
Amusement, Gambling, & Rec.	18	14	16	307	149	388	157	41,229	1,049	1,446,686
Accommodation & Food	676	146	237	1,818	1,538	1,193	2,749	345,321	8,357	11,556,285

Accommodation	82	16	104	245	184	264	2,245	38,312	3,140	1,864,708
Food Services & Drinking Places	594	130	133	1,573	1,354	929	504	307,009	5,217	9,691,577
Non-Travel & Tourism	5,393	1,216	1,613	11,330	5,859	7,072	2,188	2,782,250	34,671	96,194,149

Percent of Total

Travel & Tourism Related	14.0%	14.0%	15.1%	18.6%	24.4%	22.8%	58.9%	15.3%	24.2%	15.2%
Retail Trade	2.9%	2.5%	1.4%	3.2%	2.6%	4.8%	3.5%	2.8%	3.3%	2.8%
Gasoline Stations	1.1%	1.3%	1.3%	1.8%	1.5%	1.9%	1.7%	0.8%	1.6%	0.7%
Clothing & Accessory Stores	1.0%	0.1%	0.0%	0.7%	0.6%	1.5%	0.1%	1.4%	0.8%	1.5%
Misc. Store Retailers	0.9%	1.0%	0.1%	0.7%	0.5%	1.4%	1.7%	0.6%	0.9%	0.6%
Passenger Transportation	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.4%
Air Transportation	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.4%
Scenic & Sighting Transport	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Arts, Entertainment, & Recreation	0.3%	1.2%	1.2%	2.3%	1.9%	5.0%	3.7%	1.7%	2.6%	1.8%
Performing Arts & Spectator Sports	0.0%	0.2%	0.3%	0.1%	0.0%	0.6%	0.2%	0.3%	0.2%	0.4%
Museums, Parks, & Historic Sites	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.5%	0.1%	0.1%	0.1%
Amusement, Gambling, & Rec.	0.3%	1.0%	0.8%	2.2%	1.9%	4.2%	3.0%	1.3%	2.3%	1.3%
Accommodation & Food	10.8%	10.3%	12.5%	13.1%	19.8%	13.0%	51.7%	10.5%	18.3%	10.2%
Accommodation	1.3%	1.1%	5.5%	1.8%	2.4%	2.9%	42.2%	1.2%	6.9%	1.6%
Food Services & Drinking Places	9.5%	9.2%	7.0%	11.3%	17.5%	10.1%	9.5%	9.3%	11.4%	8.5%
Non-Travel & Tourism	86.0%	86.0%	84.9%	81.4%	75.6%	77.2%	41.1%	84.7%	75.8%	84.8%

In 1998, travel & tourism represented 20.35% of total employment. By 2011, travel & tourism represented 24.19% of total employment. From 1998 to 2011, travel & tourism employment grew from 9,243 to 11,061 jobs, a 19.7% increase, whereas non-travel & tourism employment shrank from 36,183 to 34,671 jobs, a 4.2% decrease. In 2011, Swain County, NC had the largest percent of total travel & tourism employment (58.9%), and Clay County, NC had the smallest (14%). From 1998 to 2011, travel & tourism employment grew by 1,818 jobs.

From 1998 to 2011, non-travel & tourism employment shrank by 1,512 jobs, retail trade shrank from 1,702 to 1,519 jobs, a 10.8% decrease, passenger transportation shrank from 69 to 1 jobs, a 98.6% decrease, arts, entertainment, & recreation shrank from 2,279 to 1,184 jobs, a 48% decrease, accommodation & food services grew from 5,193 to 8,357 jobs, a 60.9% increase.

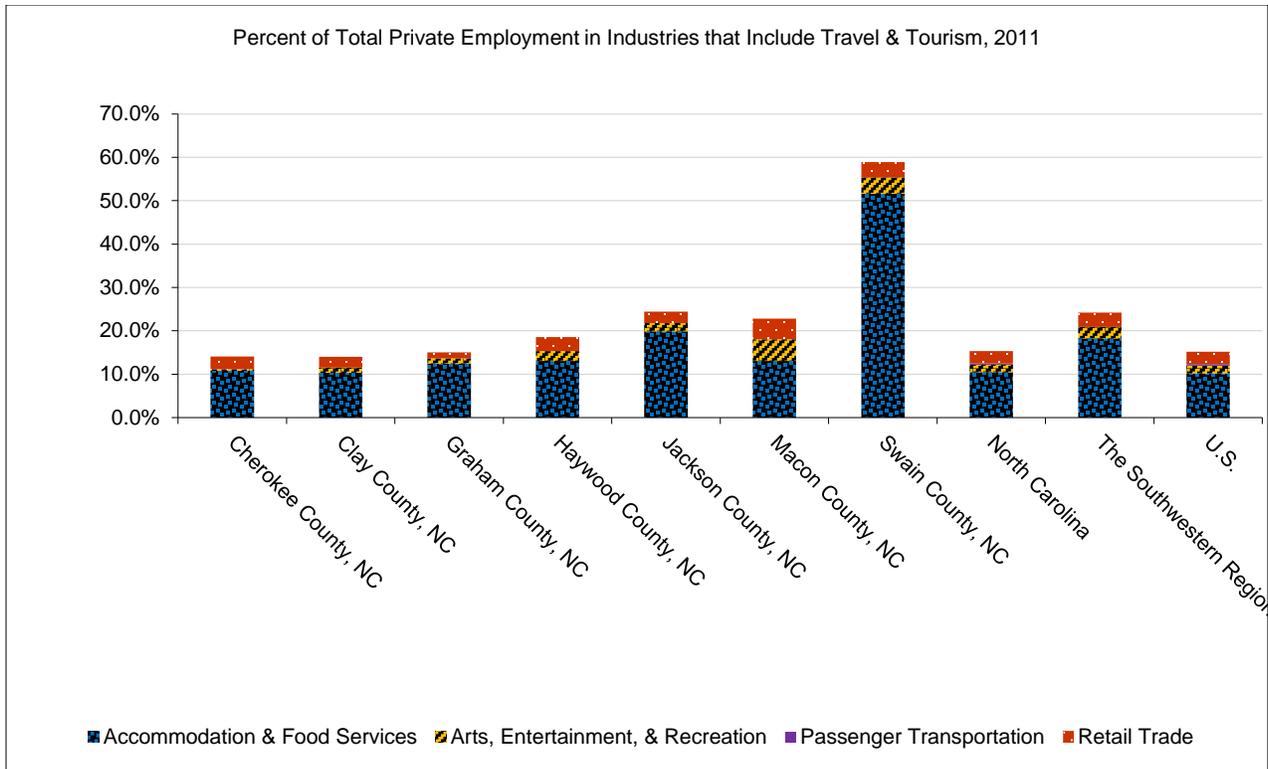


Figure 6.6.2.1.d. Travel and Tourism contributions to total employment in the Southwestern Region.

The 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation indicates that statewide, wildlife watches represent a larger groups of participants than anglers and hunters combined. Wildlife watchers however spent more than hunters but less than anglers in North Carolina. That report is available at <http://www.census.gov/prod/2013pubs/fhw11-nc.pdf>

Activities in North Carolina by Residents and Nonresidents

Fishing

Anglers	1,525,000
Days of fishing.	23,472,000
Average days per angler	15
Total expenditures	\$1,523,131,000
Trip-related	\$1,020,156,000
Equipment and other	\$502,975,000
Average per angler	\$995
Average trip expenditure per day	\$43

Hunting

Hunters	335,000
Days of hunting	7,608,000

Average days per hunter	23
Total expenditures	\$525,281,000
Trip-related	\$224,555,000
Equipment and other	\$300,726,000
Average per hunter	\$1507
Average trip expenditure per day	\$30

Wildlife Watching

Total Wildlife-watching participants	2,432,000
Away-from-home participants	703,000
Around-the-home participants	2,110,000
Days of participation away from home	9,275,000
Average days of participation away from home	13
Total expenditures	\$929,662,000
Trip-related	\$367,309,000
Equipment and other	\$562,353,000
Average per participant	\$362
Average trip expenditure per day	\$40

A short section excerpted from the Southern Appalachian Assessment (1996) helps explain the recreation backdrop in this part of the nation. To view figures described please see: http://sunsite.utk.edu/samab/saa/reports/summary_html/sum_toc.html

“Settings – The Context for Recreation Experiences

If a person chooses to spend leisure time outdoors pursuing nature-based activities, then the type of recreation setting is important. Outdoor recreation supply is defined as the opportunity to participate in a desired recreation activity in a preferred setting. The setting creates the context for the experience a person can expect. For example, hiking along a trail in a setting far from the sights or sounds of humans creates a different experience than hiking in a farm pasture. In both cases, hiking is the activity, but the difference in settings creates a different experience. Thus, determining the type, amount, distribution, and ownership of settings across the landscape is central to understanding recreation supply (fig. 24).

About 18 percent of the Southern Appalachians are highly developed settings with 2 percent in urban, 4 percent in suburban, and 12 percent in transition or emerging development settings. About 45 percent of the Southern Appalachians are rural (fig. 25), 24 percent are natural-appearing forests, and 8 percent are remote (fig. 26). Only one primitive setting (0.2 percent) occurs in the Southern Appalachians and it lies in the Great Smoky Mountains National Park.

Trends in Recreation Activities

Perhaps the most significant change in recreationists in the Southern Appalachians in the last 15 years has been an increase in their number and diversity. For all activities, the percentage of population that participates has grown or remained stable (fig. 27). Since the population has increased, demands for specific recreation opportunities have risen.

The most active one-fourth of recreation participants account for about two-thirds of recreation activity (fig. 28). These people are predominately white, male, and under the age of 60. In the last 10 years, increasing numbers of females have become avid recreators, however.

Spatial Patterns of Recreation Uses

A high proportion of recreation use on federally owned land occurs at the outer edges of the Appalachian chain, particularly in the southern portion of the Blue Ridge Mountain section. Many users of recreation facilities live in Charlotte, NC; Atlanta, GA; Chattanooga and Knoxville, TN, and around the edges of the Appalachian Mountains. One result is high density use of the public forests and parks. As these population centers grow, use patterns will creep toward the center of the mountain ranges (fig. 29).

Congestion tends to also occur on the shores of lakes and streams, because the settings are in high demand for fishing and camping. High use occurs where trails are well developed and interconnected to allow travel in loops. Due to limited sources of supply, settings and facilities for mountain biking, horseback riding, off-highway vehicle driving, and whitewater rafting often are congested.”

6.5.1.1 National Forest Recreation

This NVUM data is useful for forest planning and decision making. The description of visitor characteristics (age, race, zip code, activity participation) can help forest staff identify their recreation niche. Satisfaction information can help management decide where best to place limited resources that would result in improved visitor satisfaction. Economic expenditure information can help forests show local communities the employment and income effects of tourism from forest visitors.

To define the sampling frame, staff on each forest classify all recreation sites and areas into five basic categories called “site types”: Day Use Developed Sites (DUDS), Overnight Use Developed Sites (OUDS), Designated Wilderness Areas (Wilderness), General Forest Areas (GFA), and View Corridors (VC). Only the first four categories are counted as national forest recreation visits and are included in the visit estimates. The last category is used to track the volume of people who view national forests from nearby roads; since they do not get onto agency lands, they cannot be counted as visits. For the entire sampling year, each day on each site was given a rating of very high, high, medium, low, or no use according to the expected level of recreational visitors who would be observed leaving that location for the last time (last exiting recreation use) on that day.

The combination of a calendar day and a site or area is called a site day. Site days are the basic sampling unit for the NVUM protocol. In essence, visitation is estimated through a combination of traffic counts and surveys of exiting visitors. Both are obtained on a random sample of locations and days distributed over an entire forest for a year. All of the surveyed recreation visitors are asked about their visit duration, activities, demographics, travel distance, and annual usage. About one-third were also asked to provide information about their income, spending while on their trip, and the next best substitute for the visit. There were 377 economic surveys completed.

The spending that occurs on a recreation trip is greatly influenced by the type of recreation trip taken. For example, visitors on overnight trips away from home typically have to pay for some form of lodging (e.g., hotel/motel rooms, fees in a developed campground, etc.) while those on day trips do not. In addition, visitors on overnight trips will generally have to purchase more food during their trip (in restaurants or grocery stores) than visitors on day trips. Visitors who have not traveled far from home to the recreation location usually spend less than visitors traveling longer distances, especially on items such as fuel and food. Analysis of spending patterns has shown that a good way to construct segments of the visitor market with consistent spending patterns is the following seven groupings:

1. local visitors on day trips,
2. local visitors on overnight trips staying in lodging on the national forest,
3. local visitors on overnight trips staying in lodging off the national forest, and
4. non-local visitors on day trips,
5. non-local visitors on overnight trips staying in lodging on the national forest,
6. non-local visitors on overnight trips staying in lodging off the forest,
7. non-primary visitors.

Local visitors are those who travel less than 50 road miles from home to the recreation site visited and non-local visitors are those who travel greater than 50 road miles to the recreation site visited. Non-primary visitors are those for whom the primary purpose of their trip is something other than recreating on that national forest.

Spending profiles for each segment for this forest can be found in the Stynes and White, "Spending Profiles of National Forest Visitors: NVUM four-year report," available at <http://www.fs.fed.us/recreation/programs/nvum/NVUM4YrSpending.pdf>. Analysis of spending data for the 2005 - 2009 data collection periods was completed in summer of 2010. Appendix Table A-1 in that report identifies that the Nantahala and Pisgah National Forests have an average spending profile.⁸ It is essential to note that these spending profiles are in dollars spent per party. Obtaining per-visit spending is accomplished by dividing the spending for each segment by the average people per party for the forest and segment found in Appendix Table A-3 of that report.

Total direct spending made within 50 miles of the forest and associated with national forest recreation is calculated by combining estimates of per-visit spending averages from the spending profiles with estimates of the number of national forest visits in the segment. The number of visits in the segment equals the Distribution of National Forest Visits by Market Segment times the number of National Forest visits.

NVUM methodology and analysis is explained in detail in the research paper entitled: Forest Service National Visitor Use Monitoring Process: Research Method Documentation; English, Kocis, Zarnoch, and Arnold; Southern Research Station; May 2002 (<http://www.fs.fed.us/recreation/programs/nvum>).

The estimate for total site visits to the Nantahala and Pisgah National forests during 2008 was 5.467 million, with a 90% confidence interval ranging from 5.445 to 5.489 million site visits.

The purposes for the visits ranged from recreation (71.2%), passing through (11.7%), some other reason (7.1%), work or commuting (6.8%), and to use the bathroom (3.1%). A Site Visit is the entry of one person onto a National Forest site or area to participate in recreation activities for an unspecified period of time. Total estimated National Forest visits during FY2008, a subset of total visits, were 4.612 million with a 90% confidence interval ranging from 4.588 to 4.635.4 million visits. These Forests serves a mostly local client base. Nearly 47 percent of visits come from people who live within 25 miles of the forest, and another 14 percent come from distances between 25 and 50 miles. However, nearly 20 percent of visits come from people who live more than 200 miles away.

Table X. x Percent of National Forest Visits* by Distance Traveled

Miles from Survey Respondent's National Forest Visits (%)	Forest Visits (%)
0 - 25 Miles	47.0%
26 – 50 Miles	13.8%
51 - 75 Miles	5.1%
76 - 100 Miles	3.2%
101 – 200 Miles	10.9%
201 – 500 Miles	11.0%
Over 500 Miles	8.9%

Table X.x shows the most common zip codes for survey respondents. This information about the residency of visitors is important because local visitors (0-50 miles from home) have different spending patterns than non-local visitors, which is an input into the contribution modeling found later in this report. About 63 percent of the visits to this forest are people on day trips away from home. Almost 15 percent of the visits have some other location as their primary destination, and are on a side trip when they come to the Nantahala/Pisgah. Over 28 percent of the visits include an overnight stay away from home while on their trip. Almost 27 percent spend the night within 50 miles of the forest.

Most that spend the night in the area do so in a rented home, condo, cabin, lodge or hotel not on this forest. About half of the visiting parties spend \$40 or less per party per visit. Just over 29 percent of the visiting population comes from households in the \$50,000 to \$74,999 range; just over 21 percent come from households in the \$25,000 to \$49,999 range. Average total trip spending per party was estimated at \$362, whereas, median total trip spending per party was \$40.

Table. X. x Zip Codes for Nantahala and Pisgah National Forest Recreation Visitors, FY 2008.

Zip Code	State	County	Percent of Respondents	Survey Respondents
28806	North Carolina	Buncombe County	12.1	31
28734	North Carolina	Macon County	11.3	29
28906	North Carolina	Cherokee County	10.5	27
28771	North Carolina	Graham County	9.0	23
28712	North Carolina	Transylvania County	6.6	17
28805	North Carolina	Buncombe County	6.3	16

28803	North Carolina	Buncombe County	5.9	15
Foreign Country			5.5	14
28801	North Carolina	Buncombe County	5.5	14
28739	North Carolina	Henderson County	5.1	13
28768	North Carolina	Transylvania County	5.1	13
28741	North Carolina	Macon County	4.3	11
Unknown Origin*			4.3	11
28715	North Carolina	Buncombe County	4.3	11
28732	North Carolina	Henderson County	4.3	11

Results of the 2008 National Visitor Use Monitoring Survey (NVUM) suggest there were showed most visits to the Nantahala and Pisgah NFs were day visits. The average visit lasted less than 10 hours and over half of the visits lasted less than four hours. Visitors to the Nantahala and Pisgah NFs participated in a variety of recreation activities (see Table X.X). To connect National Forest visits with economic survey responses, we apportion total recreational visits by using the percent of survey respondents that identify their primary activity participation. Table X.x shows the activity participation and the main activity percentages for FY2008 in the Nantahala and Pisgah National Forests.

Table X.x Activity Participation for Nantahala and Pisgah National Forest Recreation Visitors, FY 2008.

Activity	% Participation	% Main Activity	Average Hours Doing Main Activity
Hiking / Walking	60.4	38.5	2.4
Viewing Natural Features	55.0	15.0	4.0
Relaxing	37.9	4.0	10.8
Driving for Pleasure	32.0	6.9	2.2
Viewing Wildlife	30.9	0.9	2.9
Nature Center Activities	11.2	0.8	1.8
Bicycling	10.1	8.6	2.0
Picnicking	10.0	1.6	1.6
Fishing	8.4	5.8	3.7
Nature Study	7.0	0.5	2.4
Other Non-motorized	5.9	3.0	2.6
Visiting Historic Sites	4.8	0.5	1.7
Gathering Forest Products	3.7	-	-
Some Other Activity	3.6	3.5	4.1
Developed Camping	3.2	1.2	25.0
Non-motorized Water	2.8	2.1	3.8
Hunting	2.5	2.5	6.8
Motorized Trail Activity	2.3	0.1	3.0
Backpacking	2.2	1.1	28.8
OHV Use	2.1	1.1	28.8
Primitive Camping	1.1	0.5	62.5
Horseback Riding	1.0	1.1	4.0
Resort Use	0.4	-	56.7
Motorized Water Activities	0.3	0.2	3.8
Other Motorized Activity	0.2	0.1	1.8
Snowmobiling	-	-	-
Downhill Skiing	-	-	-
Cross-country Skiing	-	-	-
No Activity Reported	-	-	-

Several highlights of developed recreation occurring on the Nantahala and Pisgah National Forests that contribute to economic activity come from the Recreation Program Fee Accomplishment report of 2012, http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5422864.pdf

- At Roan Mountain: Staffed the site during peak season; repaired trails to two overlooks; painted the visitor center; graded and striped two parking areas; and installed a new propane generator for the water distribution system
- At the Cradle of Forestry: Hosted nearly 12,000 participants in events, special programming and guided interpretive/education programs.

- Provided two SCA Conservation Education interns and co-funded an Interpretive Specialist in partnership with Cradle of Forestry in America Interpretive Association.
- Provided on-site hosts, along with facilities and utilities, at Wayehutta OHV Trail Complex, Whitewater Falls day use area, Balsam Lake Lodge and at 13 campgrounds forest-wide.
- Constructed and rehabilitated three sites at Mortimer Campground.
- Rehabilitated sites at Appletree Group Campground with help from a local probation crew; and installed eight new bear-proof trash cans, replaced tables, grills, fire rings and other site furnishings and removed hazard trees throughout the forest.
- Replaced furnishings at Balsam Lake Lodge, including living room furniture, bedroom reading chairs, and TV; provided housing for contractor during dam repair work.
- Provided matching funds for state Recreation Trail Program grants for trail maintenance, reroutes, resource protection and other improvements at OHV complexes, and replaced trail signs and blazes at Brown Mountain and Wayehutta OHV Trail Complexes.
- Worked with Nantahala Area Southern Off-Road Bicycle Association volunteers on projects at Tsali Bike Trail Complex.
- Revised and printed full-color brochures for Whitewater Falls and Whiteside Mountain.
- Installed a new destination sign and split-rail fencing at Wash Creek Horse Camp.
- Provided additional law enforcement support at fee recreation areas during peak use days and holidays.

6.5.2 Commodities

Figures 6.6a – 6.6d show the percent of total employment in 2011 accounted for by the commodity sectors (timber, mining, and agriculture) for each of the analysis area counties and the nation. Data for timber and mining are from County Business Patterns which excludes proprietors, government, 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. (Accessed via EPS-HDT) Mitchell County, NC had the largest percent of total jobs in commodity sectors (11.03%), and Buncombe County, NC had the smallest (1.47%). Agriculture was the largest component of commodity sector employment (1.93% of total jobs) in the Pisgah-Nantahala EIA, and mining was the smallest component (0.25% of total jobs).

Figure 6-6a shows that in the Isothermal and Western Piedmont Region, McDowell County, NC had the largest percent of total jobs in commodity sectors (8.67%), and the U.S. had the smallest (2.77%). Timber was the largest component of commodity sector employment (3.97% of total jobs) in the Isothermal and Western Piedmont Region, and mining was the smallest component (0.13% of total jobs).

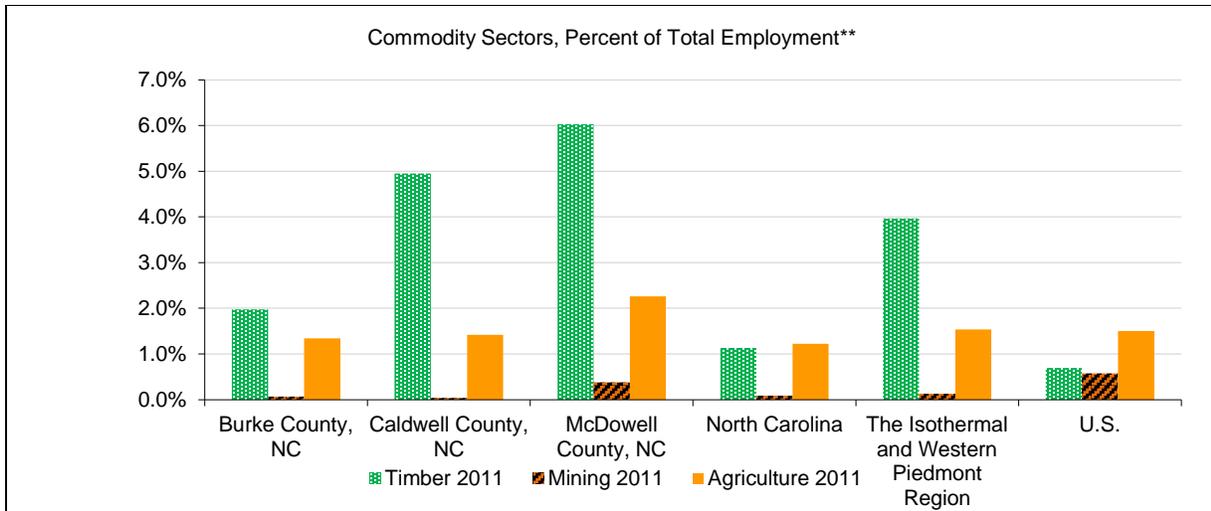


Figure 6-6a. Commodity contributions to total employment in the Isothermal and Western Piedmont Region.

In the High Country Region, Mitchell County, NC had the largest percent of total jobs in commodity sectors (13.8%), and Watauga County, NC had the smallest (2.38%). Agriculture was the largest component of commodity sector employment (3.33% of total jobs) in the High Country Region, and timber was the smallest component (0.48% of total jobs).

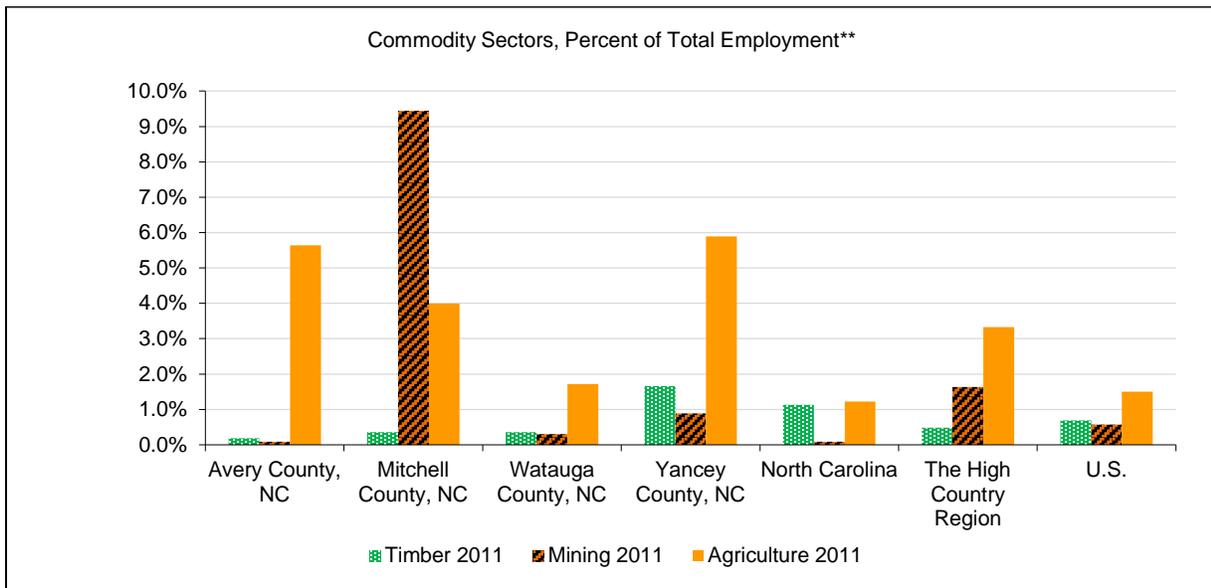


Figure 6-6b. Commodity contributions to total employment in the High Country Region.

In the Land-of-Sky Region, Madison County, NC had the largest percent of total jobs in commodity sectors (9.34%), and Buncombe County, NC had the smallest (1.45%). Agriculture was the largest component of commodity sector employment (1.67% of total jobs) in the Land-of-Sky Region, and mining was the smallest component (0.1% of total jobs).

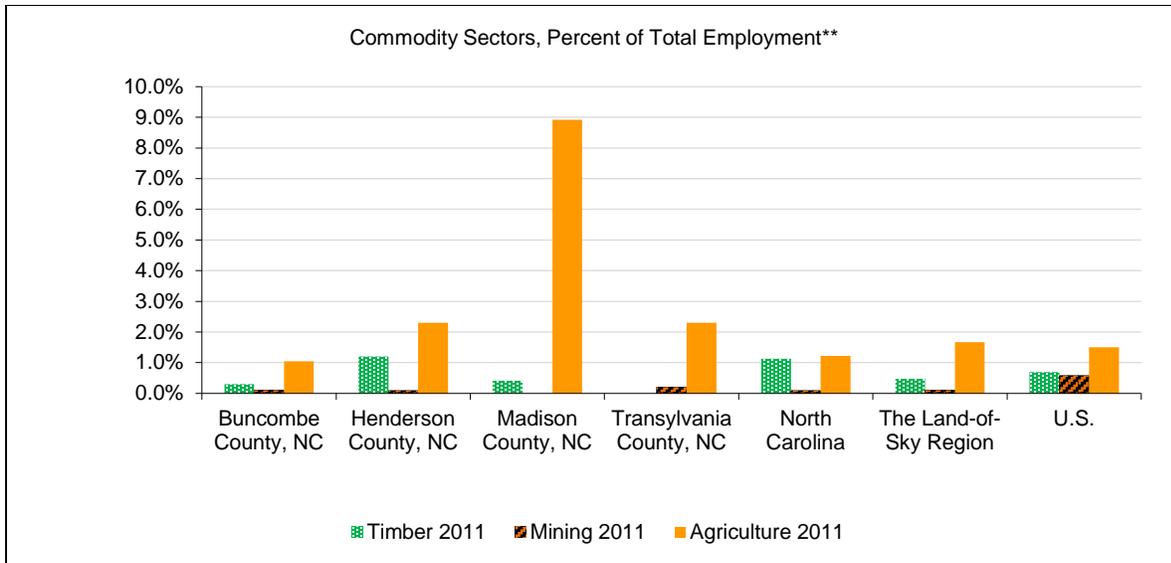


Figure 6-6c. Commodity contributions to total employment in the Land-of-Sky Region.

In the Southwestern Region, Haywood County, NC had the largest percent of total jobs in commodity sectors (9.69%), and Swain County, NC had the smallest (2.41%). Timber was the largest component of commodity sector employment (3.28% of total jobs) in the Southwestern, and mining was the smallest component (0.29% of total jobs).

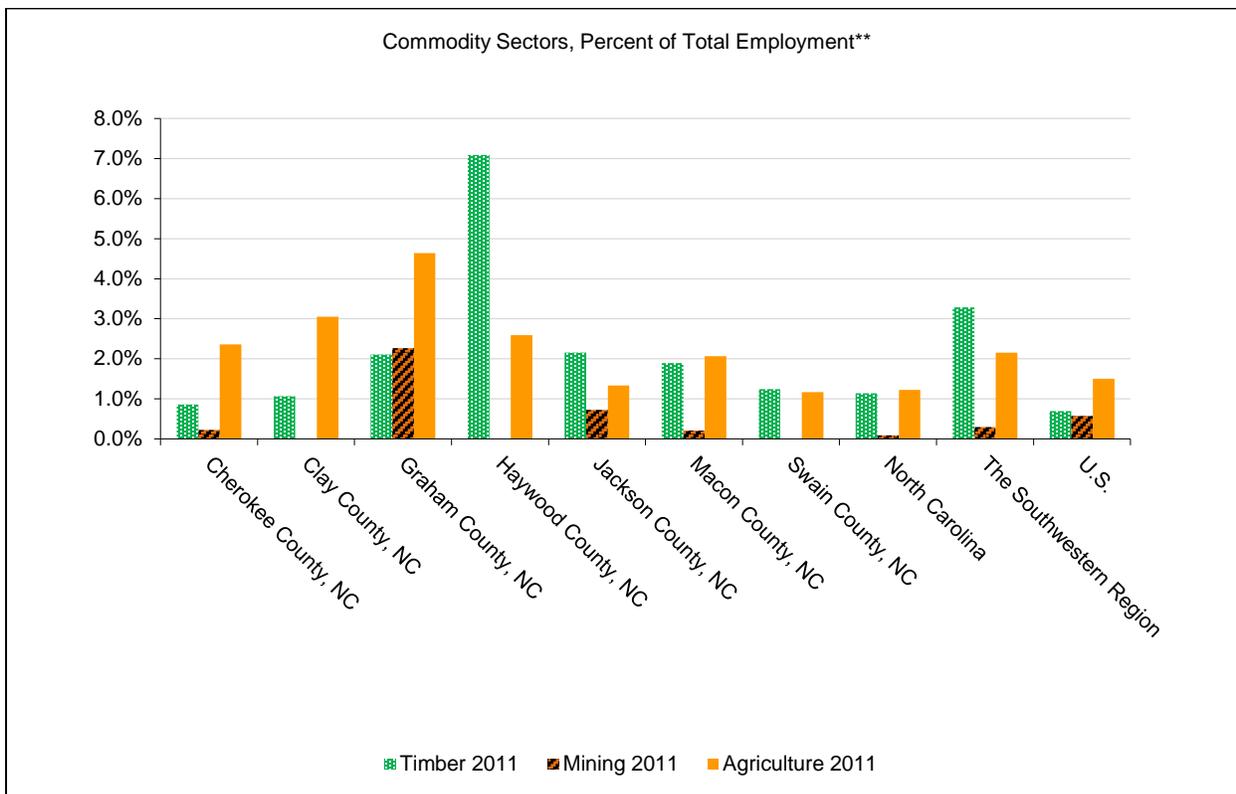


Figure 6-6d. Commodity contributions to total employment in the Southwestern Region.

Of all 18 counties, In 2010, Swain County, NC had the largest percent of total jobs in industries that include travel and tourism (51.7%), and McDowell County, NC had the smallest (11.5%). In 2010, accommodations & food* was the largest component of travel and tourism-related employment (13.4% of total jobs) in Pisgah-Nantahala EIA, and passenger transportation* was the smallest (0% of total jobs). Charted values do not represent the entirety of these sectors, rather their components typically related to travel & tourism.

6.5.2.1 Timber

A short section excerpted from the Southern Appalachian Assessment (1996) helps explain the timber backdrop in this part of the nation. To view figures described please see: http://sunsite.utk.edu/samab/saa/reports/summary_html/sum_toc.html

“The Setting

Forests cover more than 26 million acres of the assessment area. The forests of the study area are extremely diverse. More species of trees are native to the Southern Appalachians than to any other northern temperate region of the globe. In addition, the nature of the region’s forests change as one moves from north to south and with elevation.

The high degree of tree species diversity complicates the region’s timber markets. A single stand of trees often contains a wide variety of potential forest products. Depending on the species, size, and quality of logs, sawtimber values can range from less than \$100 to more than \$800 per thousand board feet.

The individuals, corporations, and government agencies that manage land differ in their goals and approaches to forest management. Government agencies manage a little over 20 percent of the timberland in the Southern Appalachians. That is a small amount compared to that in the western United States, but this is the largest concentration of public lands within the eastern United States. The federal share of timber land in individual counties ranges up to 69 percent. The decisions made by federal agencies, therefore, can influence local timber production and the economy in certain parts of the region.

Supply and Demand

The region’s markets for timber over the last 20 years have been strong. Roughly equal volumes of sawlogs and pulpwood were produced ranging from 403 to 435 million cubic feet during the last decade. Markets for all major products have remained stable or increased (fig. 18). High-quality sawlogs are becoming increasingly scarce in the region, and the prices for them have risen sharply. In contrast, lower quality material has been relatively abundant and prices have been level or declining (fig. 19). As a result, producers are utilizing increasing amounts of low-quality timber. Private lands produce about 90 percent of the region’s timber harvest. Increasing population and low-density residential development are important factors affecting timber availability in some areas and sale levels from national forests are important in other areas. For sawlog demand, the most critical issue is how willing consumers will be to accept substitution of lower quality material for prized high quality hardwood timber. There is no doubt that supplies of readily accessible high quality hardwood trees are diminishing and prices for these trees are rising. Recent price increases indicate that opportunities are limited to substitute other materials for high quality logs in appearance uses such as furniture manufacture.

Markets are expanding for the lowest quality timber as well. Pulpwood production has recently expanded in the southern quarter of the Southern Appalachians (fig. 20) and timber production for use in composite boards is the most significant new wood products industry in the region.

The Role of National Forests

About 17 percent of the region's timberland is in national forests. In individual counties, however, the USDA Forest Service manages up to 69 percent of timberland. In these areas, USDA Forest Service decisions strongly influence the local wood processing industry.

On average, USDA Forest Service timber is larger and older than privately held timber and the national forests hold a larger share of high grade oak sawtimber (fig. 22). Since this is the kind of timber that is in shortest supply and greatest demand, national forest timber sales can affect the markets for high quality oak.

National forest management differs from private land management and results in different forests and patterns of timber production. The terrain is usually more rugged and there are fewer roads, making these lands more expensive to harvest. National forests have more timber, less harvesting, less growth, and slightly higher mortality than private forests in the area.

Since 1980, national forests have provided 10 to 12 percent of Southern Appalachian timber production. National forest harvests increased from the late 1970s through the mid-1980s. Production peaked in 1985 and fell rapidly after 1991 (fig. 23). Current sale levels are comparable with those of the late 1970s and current policies could decrease harvest levels further.

In some locations within the Southern Appalachians, national forest timber harvests have a significant impact on timber markets. One area is centered in the southwestern corner of North Carolina and includes parts of southeastern Tennessee and northern Georgia. The other extends from the northeastern corner of Tennessee north to the West Virginia border. In these locations the national forest share of timber production has been between 35 and 52 percent.”

The recently released report called *Southern Forest for the Future* (World Resources Institute 2010) begins with a section outlining the evolution and predicted future of Southern Forests. It also contains a detailed account of the history of the forests in this region of the country and is available at: <http://www.seesouthernforests.org/>. The following excerpts are relevant to timber production from the Nantahala and Pisgah National Forests.

“Southern forests are forests of continual change. Prior to European settlement, these forests were shaped by natural disturbances such as climatic warming after the last ice age, hurricanes, and natural fires, as well as by fires set by Native Americans. At the dawn of European settlement in the region in the early 1600s, southern forests covered an estimated 350 million acres or more. Over the next four centuries, greater than 99 percent of this acreage was cut at one time or another for agriculture, timber, or settlements (Trani 2002b). A testament to the renewability and resiliency of forests, much of the land regenerated over time as secondary forest. Nonetheless, approximately 40 percent of the pre-European settlement forest acreage has been converted to other uses. Only the northern forests—from Maine to Minnesota—have experienced a comparable decline in forest cover in the United States over this time period (Figure 1.5).

Several drivers of change continue to affect the quantity (extent and distribution) and quality (composition and health) of southern forests. “Direct drivers” are factors—of natural or human

origin—that cause changes in an ecosystem and thereby increase or decrease its ability to provide certain ecosystem services. Some drivers increase forest quantity or quality while others decrease them. Prominent drivers include:

- Suburban encroachment. Suburban residential and commercial development is the driver of change most likely to decrease southern forest extent over the coming decades.

The U.S. Forest Service forecasts that 12 million acres of southern forest could be converted to suburban development between 1992 and 2020. Another 19 million acres could be converted between 2020 and 2040 as the region’s population grows (Wear 2002). These combined 31 million acres are equivalent to about 15 percent of current southern forest acreage. Besides decreasing southern forest extent, suburban development also fragments these forests into smaller contiguous tracts, which can have implications for species distribution, economies of scale for timber harvesting, and the availability of hunting and recreational opportunities.

- Reversion of agricultural land. In some areas of the South, particularly in the western part of the region, forest extent is expanding as agricultural land reverts to forest. Much of this forest growth is occurring due to active tree planting in response to market prices for timber, tree planting subsidy programs, and natural reversion on marginal farmland (Connor and Hartsell 2002).
- Climate change. Climate change may have a number of impacts, including shifting the distribution of some species, inundating low-lying coastal forests, increasing instances of saltwater intrusion, and stressing drought intolerant species. Furthermore, climate change may exacerbate other direct drivers such as fire and pest and pathogen outbreaks.
- Wildfire. The suppression of natural, low-intensity forest fires during much of the 20th century has led to a buildup of fuel, increasing the risk of high-intensity wildfires in some areas and altering the species composition of fire-adapted forests.
- Pests and pathogens. Outbreaks of native insects such as the southern pine beetle, non-native insects such as gypsy moths and the hemlock woolly adelgid, native pathogens such as oak wilt, and non-native pathogens such as dogwood anthracnose and butternut canker are affecting a variety of tree species and may affect southern forest species composition and health. In addition, non-native invasive species such as cogon grass increase the risk that low-intensity fires turn into high-intensity forest fires.

Going forward, these drivers of change will likely impact the ability of southern forests to continue to provide a full range of ecosystem services. How private landowners, businesses, conservation organizations, governments, and citizens respond and adapt to these and other drivers ultimately will shape southern forests for the future.”

The following is excerpted from the Western North Carolina Report Card on Forest Sustainability The Report Card is a cooperative effort between UNC Asheville’s National Environmental Modeling and Analysis Center (NEMAC) and the Forest Service (USDA 2011):

Please see page 49 of the report, http://www.srs.fs.usda.gov/pubs/gtr/gtr_srs142.pdf for a figure showing Volume of Growth and Removals.

“Net growth on timberlands is defined as gross growth minus mortality. Removals include trees removed from the inventory by harvesting, cultural operations such as timber-stand

improvement, land clearing, or changes in land use. While comparing net growth to removals conveys no information about quality, biodiversity, other attributes of ecology, or management objectives, it does allow us to look at implications of forestry operations over time.

From 1984 to 2006, average annual net growth almost doubled, increasing from 174.3 million cubic feet to 324.3 million cubic feet. In this same period, total average annual removals doubled from 38.8 million cubic feet to 76.7 million cubic feet. To put this in perspective, just 24 percent of growth was removed annually on average. Moreover, average annual removals drained less than 1 percent of the total inventory of growing stock trees, while average annual net growth contributed 3.9 percent to the total growing stock inventory. From a timber supply standpoint, therefore, the region's forests are managed sustainably.

There has been a net increase in growth and removals for hardwoods and softwoods over the study period. The decrease in hardwood average annual net growth from 1984 to 1990 is almost certainly due to the effects of the longest and most severe drought in the last century (see Precipitation Patterns). Many large trees, particularly oaks, died from a scarcity of water, while other drought-stressed trees succumbed to various diseases and wind damage. The sharp decline in softwood growth from 1990-2002 reflects the devastating effects of the southern pine beetle on yellow pines, especially in the southwestern counties.”

The following description is excerpted from the Grandfather Collaborative Forest Landscape Program Proposal, and described the wood processing infrastructure in western North Carolina.

“While this region still maintains some primary and secondary mills, a great deal of the region's manufacturing industry has moved overseas or become concentrated within a smaller number of businesses. As a result, growth in local employment in wood products has become somewhat stagnated even as timber harvests have increased. From the early 1980's to early 2000's, timber harvesting in North Carolina increased 60% by volume, but employment in the mill sector increased by only 5%, and the state lost 49% of its primary sawmills, veneer mills, pulp mills, and composite panel mills. There were 168 U.S. furniture plant closures between 2000 and 2003 with closures focused in NC (43%).

The region is also home to many small enterprises, such as woodworkers and portable mills, which provide forestry services and manufacture value-added wood products. Smaller enterprises are often better positioned to create value-added and niche market opportunities for small diameter and low-quality timber, alternative species, “character” woods, and underutilized materials.”

In fact, Weir and Greis (2012) highlight reductions in all components of roundwood harvest from the Southern United States in recent years on page 11 of the Southern Forest Futures Project: Summary Report, available at http://www.srs.fs.fed.us/pubs/gtr/gtr_srs168.pdf

“Forest Production and Products

The South's timber harvesting expanded faster than the Nation's from the 1950s to 1990s (fig. 10), more than doubling as new technologies developed, national policies changed, and private landowners invested in timber production (chapter 9). This expansion was fueled by a technology-driven shift toward outdoor use of treated southern pine lumber along with growth in paper manufacturing during the 1970s and 1980s, and sustained through the 1990s by harvest

reductions from public lands in the West (chapter 9). New production technologies also shifted demand from larger to smaller diameter trees, with the shift from plywood to oriented strand board perhaps being the best example (chapter 9). The increased comparative advantage for southern forests, combined with declining western forest timber production shifted the region's share of national timber (figs. 10 and 11). U.S. timber production peaked in the late 1990s, after which a combination of factors leveled and then decreased total output through 2007—harvesting in 2007 was about 91 percent of 1996 levels. Historic declines in the construction sector since 2008 have depressed timber production levels even further. Even so, since 1986, if the South were compared with any other country, none would produce more timber than this region of the United States. The wood-related sectors of the South's economy contributed more than 1 million jobs and more than \$51 billion of employee compensation in 2009 (chapter 12).

Expanding demand for timber in the South encouraged forest landowners to increase their investments in timber production thereby expanding timber supply (chapter 5). The area of planted pine has grown strongly over the past 50 years, from nearly none in 1952 to about 39 million acres (or 19 percent of forests) by 2010, with a near doubling of planted pine acres from 1990 to 2010 alone (fig. 12)."

Their report shows several interesting figures tracking forest area trends by species as well as standing biomass measured as volumes of growing stock inventory.

“Timber markets

The South contains the most intensively managed forests in the United States. Over the last 50 years timber production more than doubled and the area of planted pine grew from virtually nonexistent to 39 million acres, or about 19 percent of forests (chapter 9). Forest landowners have shown a strong propensity to convert naturally regenerated forests to planted pines after harvesting, especially in the Coastal Plain, an investment response that is strongly linked to the condition of forest product markets. For example, with a forecast of timber harvesting (fig. 24) driven by a return to 2006 demand relationships, harvesting increases as a result of supply growth, which in turn is readily accommodated by the increased area of planted pine since the 1990s (the area of planted pine essentially doubled between 1990 and 2010). Future timber markets could affect the forests of the South in two important ways. First, strong timber markets encourage retaining forests rather than converting them to other land uses, so high timber prices can help delay or even reverse forest losses in areas where forest management is still feasible. Secondly, strong timber markets encourage continued investment in forest management, and forecasts suggest that the area of planted pine could increase from the current 19 percent to between 24 and 36 percent by 2060. Strong growth in market demand could result from the emergence of markets for bioenergy, but appears less likely to emerge from markets for traditional forest products. As a result, timber market growth would likely be centered on small diameter pines with strong market interactions between paper and bioenergy industries (chapter 10)."

Table 6.5.2.1.1 shows the Forest Service records of the volumes sold and cut each of the past three fiscal years from the Nantahala and Pisgah National Forests.

Table 6.5.2.1.1 Cut Volumes from the Nantahala and Pisgah National Forest from 2010 – 2012.

Timber Products	Units	2010	2011	2012	3 - year Average
Harvest-Softwood Sawtimber	CCF	2,396	6,774	5,392	4,854
Harvest-Softwood Pulp	CCF	642	497	500	546
Harvest-Hardwood Sawtimber	CCF	12,875	13,304	11,246	12,475
Harvest-Hardwood Pulp	CCF	3,702	4,014	3,159	3,625
Poles	CCF	0	0	0	0
Posts	CCF	38	41	36	38
Fuelwood	CCF	2,776	2,569	2,442	2,596
All Other Products	CCF	0	0	0	0
		24,439	29,210	24,787	24,134

Table 6.5.2.1.2 shows the estimated proportions for various wood manufacturing types from wood harvested from the Nantahala and Pisgah National Forest from 2010 – 2012. These proportions are used to help estimate the contributions wood product harvest and manufacturing make the 18-county economic impact area.

Table 6.5.2.1.2. Estimated proportions of wood product manufacturing of wood harvested from the Nantahala and Pisgah National Forest from 2010 – 2012

Description	Products Shipped	Softwood		Hardwood		Poles	Posts	Fuelwood
		Sawtimber	Pulp	Sawtimber	Pulp			
Sawmills and wood preservation	lumber, bolts, woodchips, pallets, pressure and creosote treated lumber	30%		50%		100%	100%	100%
Veneer and plywood manufacturing	veneer, plywood			20%				
Engineered wood member and truss manufacturing	various engineered products, trusses	40%						
Wood windows and doors and millwork manufacturing	doors, windows, frames, etc.	20%		20%				
Wood container and pallet manufacturing	wood boxes, flats, baskets, casks, crates and pallets			10%				
Prefabricated wood building manufacturing	residential/ farm bldgs, sections, & panels	10%						
Pulp Mills	pulp only		20%					
Paper Mills	paper of all types				50%			
Paperboard Mills					25%			

Paperboard Container Manufacturing	paper boxes, containers, cartons, tubes		80%		25%			
Totals -- must be less than or equal to 100%		100%	100%	100%	100%	100%	100%	100%

Tables 6.5.2.1.3a – 6.5.2.1.3d show the number of jobs (full and part-time) and the share of total jobs in the timber industry, broken out by three major categories: growing and harvesting, sawmills and paper mills, and wood products manufacturing.

Growing and Harvesting: These are jobs associated with growing and harvesting of trees on a long production cycle. It includes people employed in forest nurseries, as well as those involved in the cutting of trees and transportation of timber.

Sawmills and Paper Mills: These are jobs associated with converting logs into lumber, boards, poles, shingles, and similar milled products. It includes those involved in the conversion of logs and chips into pulp and paper as well as the creation of veneer and plywood.

Wood Products Manufacturing: These are jobs associated with manufacturing. It includes the production of corrugated boxes, gum and wood chemical products, cabinets, furniture, and other wood manufactured products.

Figure 6.5.2.1.3a shows how the contributions from the various components of the industry changed since 1998 in the Isothermal and Western Piedmont Region. From 1998 to 2011, growing & harvesting shrank from 49 to 17 jobs, a 65.3% decrease, sawmills & paper mills shrank from 1,447 to 886 jobs, a 38.8% decrease, and, wood products manufacturing shrank from 1,213 to 1,192 jobs, a 1.7% decrease (U.S. Department of Commerce. 2013. Census Bureau, County Business Patterns, Washington, D.C.)

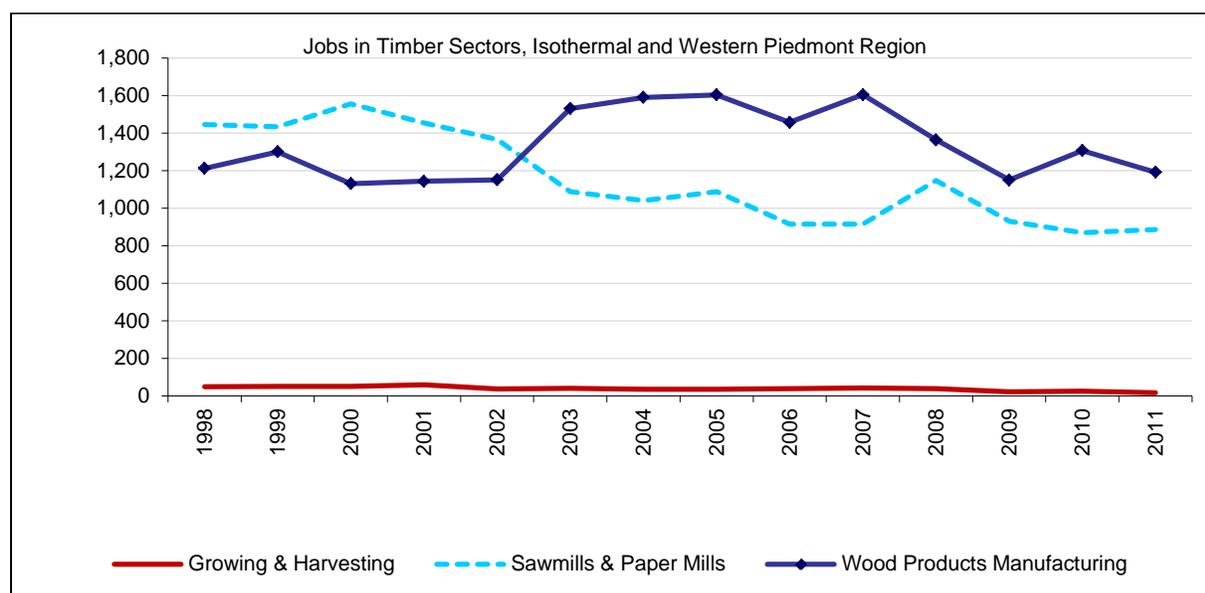


Figure 6.5.2.1.3a Types of Timber Jobs in the Isothermal and Western Piedmont Region, 1998-2011.

Figure 6.5.2.1.3b shows how the contributions from the various components of the industry changed since 1998 in the High Country Region. From 1998 to 2011, growing & harvesting shrank from 54 to 43 jobs, a 20.4% decrease, sawmills & paper mills shrank from 135 to 56 jobs, a 58.5% decrease, and wood products manufacturing shrank from 148 to 34 jobs, a 77% decrease (U.S. Department of Commerce. 2013. Census Bureau, County Business Patterns, Washington, D.C.).

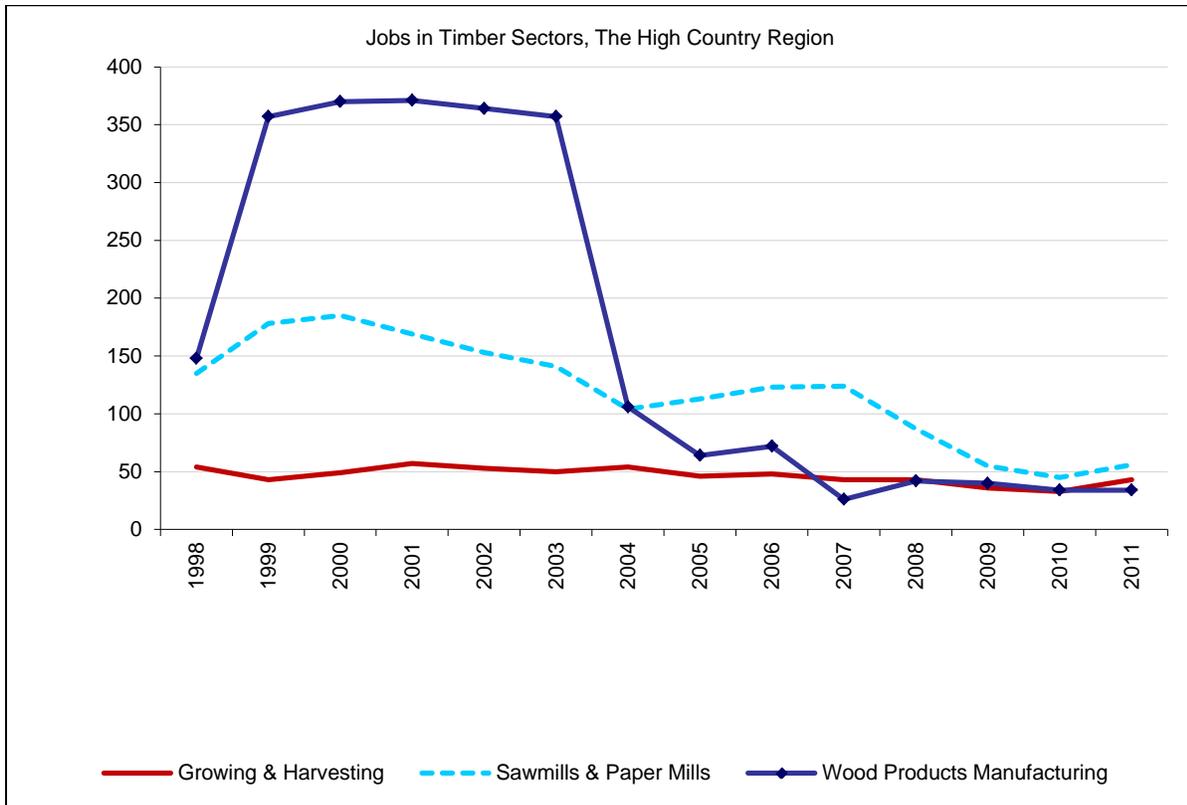


Figure 6.5.2.1.3b Types of Timber Jobs in the High Country Region, 1998-2011.

Figure 6.5.2.1.3b shows how the contributions from the various components of the industry changed since 1998 in the Land-of-Sky Region. From 1998 to 2011, growing & harvesting shrank from 44 to 18 jobs, a 59.1% decrease, sawmills & paper mills shrank from 1,327 to 17 jobs, a 98.7% decrease, and wood products manufacturing shrank from 1,684 to 622 jobs, a 63.1% decrease (U.S. Department of Commerce. 2013. Census Bureau, County Business Patterns, Washington, D.C.).

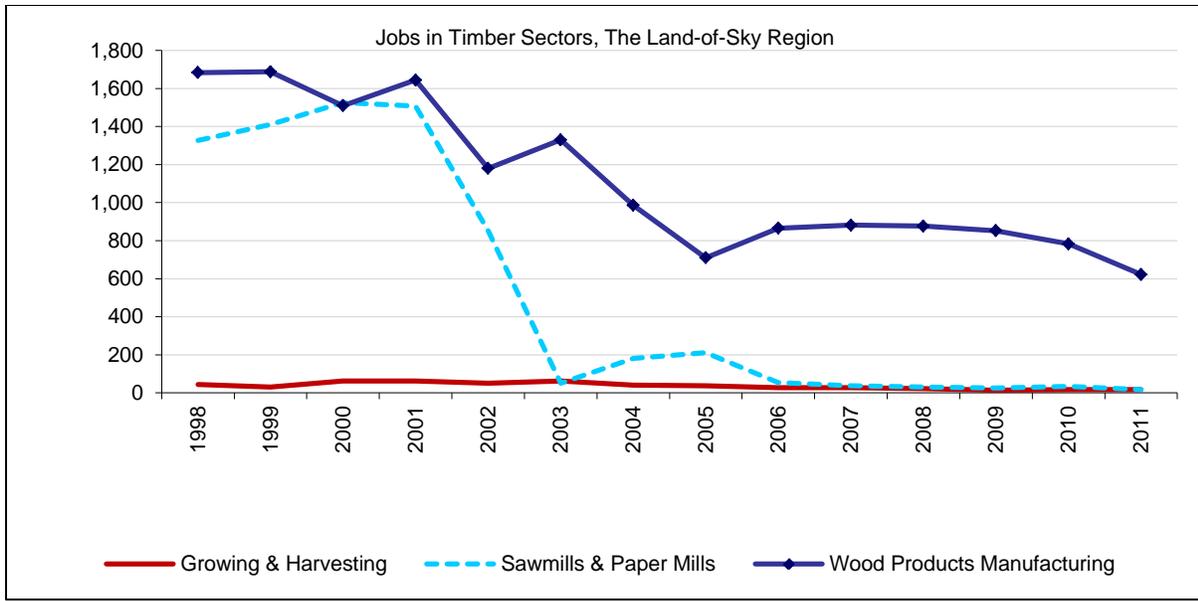


Figure 6.5.2.1.3b Types of Timber Jobs in the Land-of-Sky Region, 1998-2011.

Figure 6.5.2.1.3b shows how the contributions from the various components of the industry changed since 1998 in the Southwestern Region. From 1998 to 2011, growing & harvesting shrank from 63 to 30 jobs, a 52.4% decrease, sawmills & paper mills shrank from 1,809 to 1,049 jobs, a 42% decrease, and wood products manufacturing shrank from 672 to 422 jobs, a 37.2% decrease (U.S. Department of Commerce. 2013. Census Bureau, County Business Patterns, Washington, D.C.).

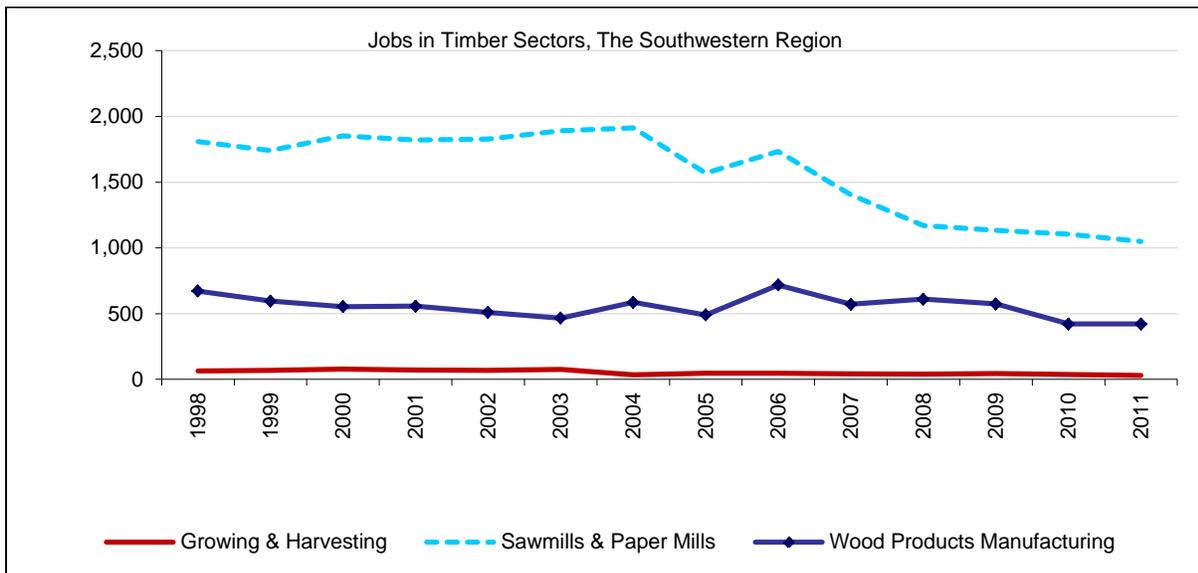


Figure 6.5.2.1.3b Types of Timber Jobs in the Southwestern Region, 1998-2011.

For the Isothermal and Western Piedmont Region in 1998, timber represented 3.63 percent of total employment. From 1998 to 2011, timber employment shrank from 2,709 to 2,095 jobs, a

22.7 percent decrease compared to non-timber employment which shrank from 71,873 to 50,705 jobs, a 29.5 percent decrease. By 2011, timber represented 3.97 percent of total employment.

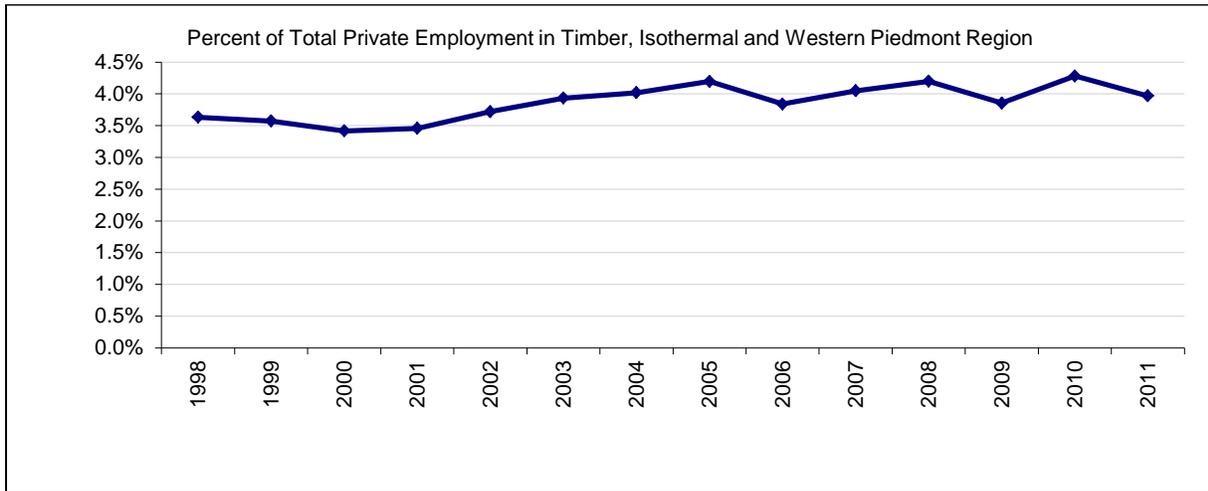


Figure 6.5.2.1.2a Percent of Private Jobs in Timber in the Isothermal and Western Piedmont Region, 1998-2011.

For the High Country Region, in 1998, timber represented 1.14 percent of total employment. From 1998 to 2011, timber employment shrank from 337 to 133 jobs, a 60.5 percent decrease, and non-timber employment shrank from 29,242 to 27,302 jobs, a 6.6 percent decrease. By 2011, timber represented 0.48 percent of total employment.

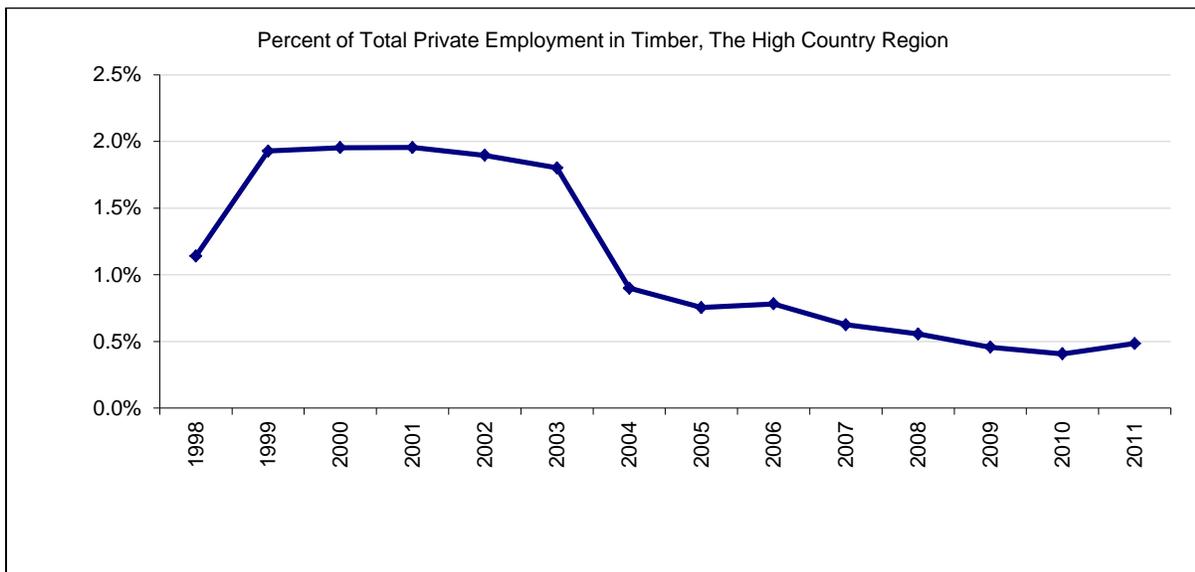


Figure 6.5.2.1.2b Percent of Private Jobs in Timber in the High Country Region, 1998-2011.

For the Land-of-Sky Region in 1998, timber represented 2.28 percent of total employment. From 1998 to 2011, timber employment shrank from 3,055 to 657 jobs, a 78.5 percent decrease. By 2011, timber represented 0.48 percent of total employment.

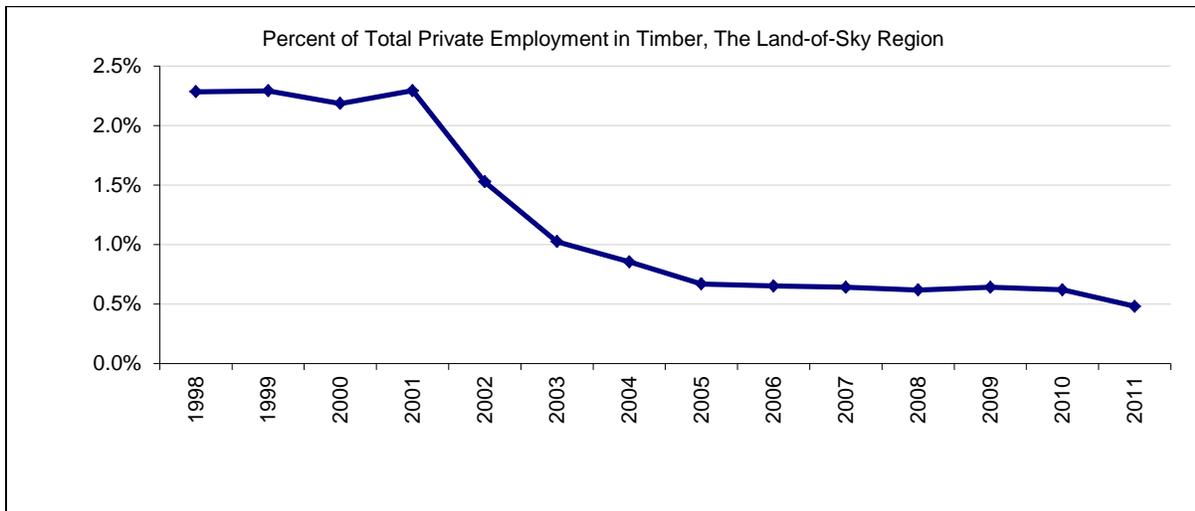


Figure 6.5.2.1.2c Percent of Private Jobs in Timber in the Land-of-Sky Region, 1998-2011.

For the Southwestern Region in 1998, timber represented 5.6 percent of total employment. From 1998 to 2011, timber employment shrank from 2,544 to 1,501 jobs, a 41 percent decrease. By 2011, timber represented 3.28 percent of total employment.

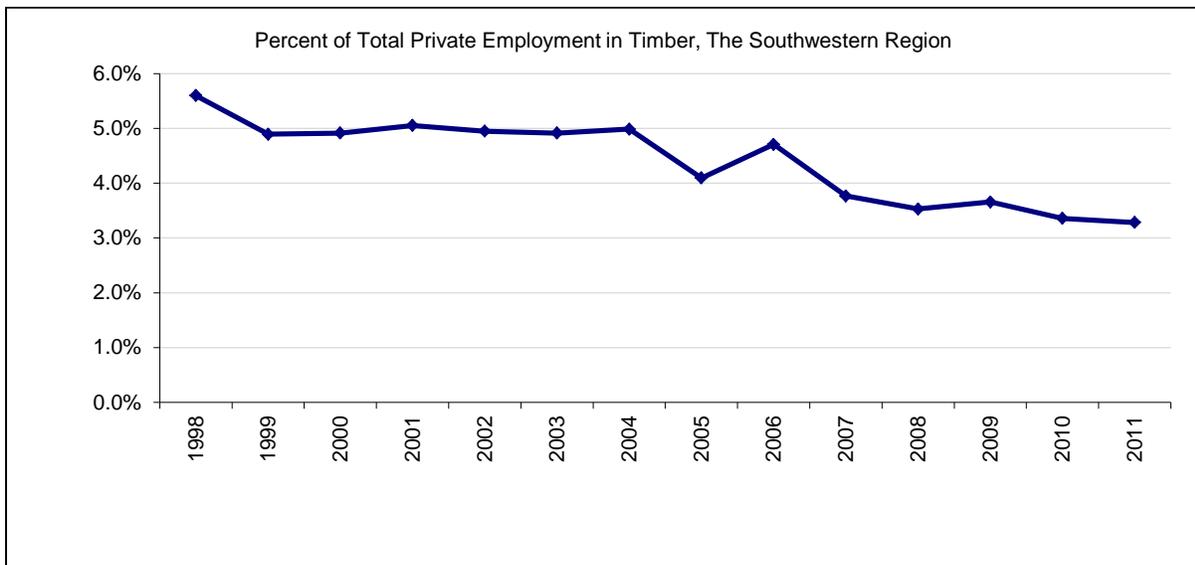


Figure 6.5.2.1.2d Percent of Private Jobs in Timber in Southwestern Region, 1998-2011.

Many jobs in the timber industry are proprietors. Figures 6.5.2.1.4a shows the total number of timber proprietors in the Isothermal and Western Piedmont Region between 1998 and 2011. From 1998 to 2010, timber proprietors in the Isothermal and Western Piedmont Region grew

from 149 to 156, a 4.7% increase. In 2011, Caldwell had the largest number of timber proprietors (65), and McDowell County, NC had the smallest (39).

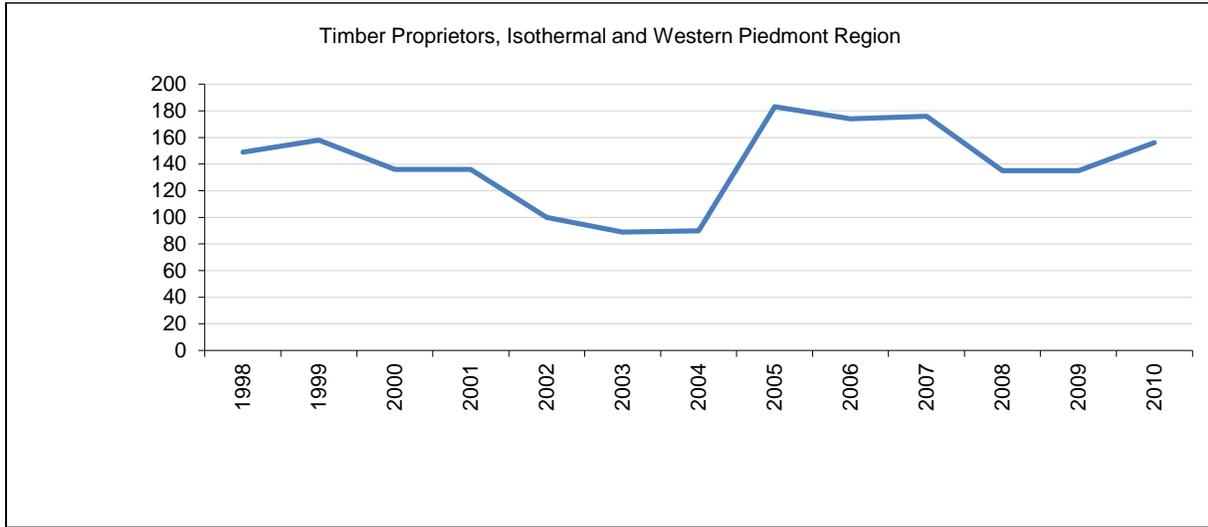


Figure 6.5.2.1.4a Timber Proprietors in the Isothermal and Western Piedmont Region, 1998-2011.

Many jobs in the timber industry are proprietors. Figures 6.5.2.1.4b shows the total number of timber proprietors in the High Country Region between 1998 and 2011 which shrank from 172 to 154, a 10.5% decrease. In 2011, Watauga and Yancey Counties had the largest number of timber proprietors (45 and 46 respectively), and Avery County, NC had the smallest (27).

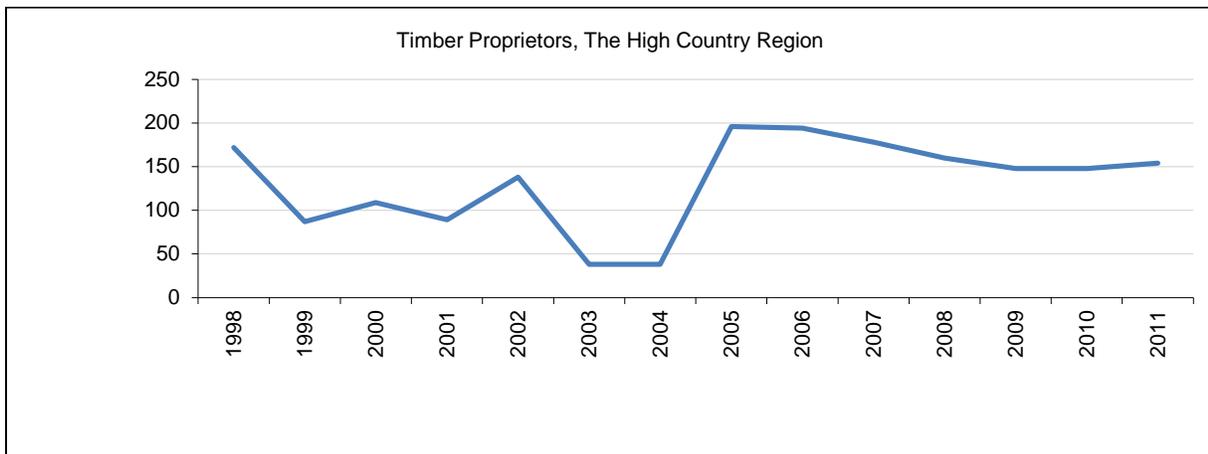


Figure 6.5.2.1.4b Timber Proprietors in the High Country Region, 1998-2011.

Many jobs in the timber industry are proprietors. Figures 6.5.2.1.4c shows the total number of timber proprietors in the Land-of-Sky Region between 1998 and 2011 which grew from 86 to 191, a 122.1% increase. In 2011, Buncombe County had the largest number of timber proprietors (89), and Transylvania County, NC had the smallest (22).

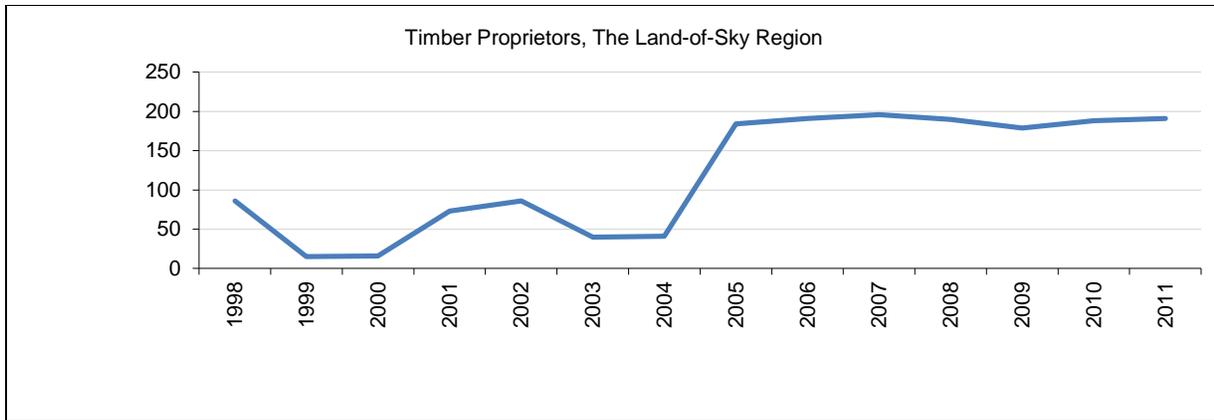


Figure 6.5.2.1.4c Timber Proprietors in the Land-of-Sky Region, 1998-2011.

Many jobs in the timber industry are proprietors. Figure 6.5.2.1.4d shows the total number of timber proprietors in the Southwestern Region between 1998 and 2011 which grew from 148 to 158, a 6.8% increase. In 2011, Haywood County had the largest number of timber proprietors (37), and Clay County, NC had none.

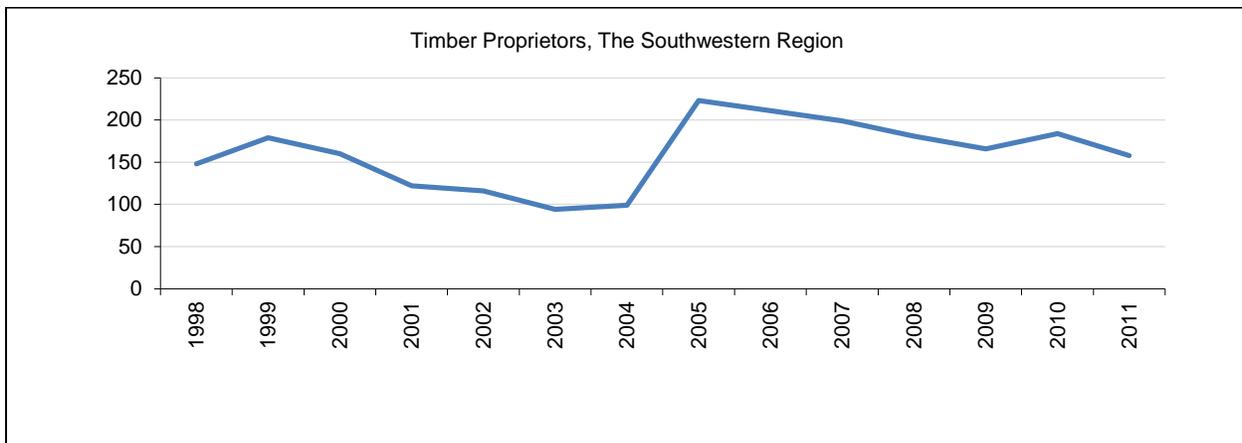


Figure 6.5.2.1.4b Timber Proprietors in the Southwestern Region, 1998-2011.

Table 6.6.3.10a show the employment in the Isothermal and Western Piedmont Region during 2011. In 2011, McDowell County, NC had the largest percent of total timber employment (6.03%), and Burke County had the smallest (1.97%).

Table 6.5.2.2a Timber Industry Employment in the Isothermal and Western Piedmont Region, 2011.

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total Private Employment	21,782	18,997	12,021	3,284,592	52,800	113,425,965
Timber	430	940	725	37,212	2,095	788,310
Growing & Harvesting	9	2	6	3,153	17	63,592
Forestry & Logging	9	2	6	2,882	17	53,034

Support Activities for Forestry	0	0	0	271	0	10,558
Sawmills & Paper Mills	169	232	485	11,732	886	252,163
Sawmills & Wood Preservation	25	46	63	4,330	134	79,400
Pulp, Paper, & Paperboard Mills	0	0	0	3,303	0	111,006
Veneer, Plywood, & Engineered	144	186	422	4,099	752	61,757
Wood						
Wood Products Manufacturing	252	706	234	22,327	1,192	472,555
Other Wood Product Mfg.	123	311	89	9,071	523	203,184
Converted Paper Product Mfg.	129	395	145	11,685	669	252,008
Gum & Wood Chemical Mfg.	0	0	0	0	0	2,665
Wood Cabinet Mfg.	0	0	0	3	0	1,091
Wood Office Furniture Mfg.	0	0	0	1,568	0	13,607
Non-Timber	21,352	18,057	11,296	3,247,380	50,705	112,637,655

Percent of Total

Timber	2.0%	4.9%	6.0%	1.1%	4.0%	0.7%
Growing & Harvesting	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
Forestry & Logging	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
Support Activities for Forestry	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sawmills & Paper Mills	0.8%	1.2%	4.0%	0.4%	1.7%	0.2%
Sawmills & Wood Preservation	0.1%	0.2%	0.5%	0.1%	0.3%	0.1%
Pulp, Paper, & Paperboard Mills	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
Veneer, Plywood, & Engineered	0.7%	1.0%	3.5%	0.1%	1.4%	0.1%
Wood						
Wood Products Manufacturing	1.2%	3.7%	1.9%	0.7%	2.3%	0.4%
Other Wood Product Mfg.	0.6%	1.6%	0.7%	0.3%	1.0%	0.2%
Converted Paper Product Mfg.	0.6%	2.1%	1.2%	0.4%	1.3%	0.2%
Gum & Wood Chemical Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wood Cabinet Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wood Office Furniture Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Timber	98.0%	95.1%	94.0%	98.9%	96.0%	99.3%

Table 6.6.3.10b show the employment in the High Country Region during 2011. In 2011, Yancey County, NC had the largest percent of total timber employment (1.7%), and Avery County had the smallest (0.2%).

Table 6.5.2.2b Timber Industry Employment in the High Country Region, 2011.

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Private Employment	4,317	3,886	15,982	3,250	3,284,592	27,435	113,425,965
Timber	8	14	57	54	37,212	133	788,310
Growing & Harvesting	8	3	9	23	3,153	43	63,592
Forestry & Logging	0	2	9	23	2,882	34	53,034
Support Activities for Forestry	8	1	0	0	271	9	10,558
Sawmills & Paper Mills	0	9	16	31	11,732	56	252,163
Sawmills & Wood Preservation	0	9	16	31	4,330	56	79,400
Pulp, Paper, & Paperboard	0	0	0	0	3,303	0	111,006
Mills							
Veneer, Plywood, & Engineered Wood	0	0	0	0	4,099	0	61,757
Wood Products Manufacturing	0	2	32	0	22,327	34	472,555
Other Wood Product Mfg.	0	2	32	0	9,071	34	203,184
Converted Paper Product Mfg.	0	0	0	0	11,685	0	252,008
Gum & Wood Chemical Mfg.	0	0	0	0	0	0	2,665
Wood Cabinet Mfg.	0	0	0	0	3	0	1,091
Wood Office Furniture Mfg.	0	0	0	0	1,568	0	13,607

Non-Timber	4,309	3,872	15,925	3,196	3,247,380	27,302	112,637,655
Percent of Total							
Timber	0.2%	0.4%	0.4%	1.7%	1.1%	0.5%	0.7%
Growing & Harvesting	0.2%	0.1%	0.1%	0.7%	0.1%	0.2%	0.1%
Forestry & Logging	0.0%	0.1%	0.1%	0.7%	0.1%	0.1%	0.0%
Support Activities for Forestry	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sawmills & Paper Mills	0.0%	0.2%	0.1%	1.0%	0.4%	0.2%	0.2%
Sawmills & Wood Preservation	0.0%	0.2%	0.1%	1.0%	0.1%	0.2%	0.1%
Pulp, Paper, & Paperboard Mills	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
Veneer, Plywood, & Engineered Wood	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
Wood Products Manufacturing	0.0%	0.1%	0.2%	0.0%	0.7%	0.1%	0.4%
Other Wood Product Mfg.	0.0%	0.1%	0.2%	0.0%	0.3%	0.1%	0.2%
Converted Paper Product Mfg.	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.2%
Gum & Wood Chemical Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wood Cabinet Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wood Office Furniture Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Timber	99.8%	99.6%	99.6%	98.3%	98.9%	99.5%	99.3%

Table 6.6.3.10c show the employment in the Land-of-Sky Region during 2011. In 2011, Henderson County, NC had the largest percent of total timber employment (1.2%), and Transylvania County had the smallest (0%).

Table 6.5.2.2c Timber Industry Employment in the Land-of-Sky Region, 2011.

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Private Employment	97,718	29,509	2,908	6,876	3,284,592	137,011	113,425,965
Timber	292	353	12	0	37,212	657	788,310
Growing & Harvesting	3	13	2	0	3,153	18	63,592
Forestry & Logging	0	13	2	0	2,882	15	53,034
Support Activities for Forestry	3	0	0	0	271	3	10,558
Sawmills & Paper Mills	2	9	6	0	11,732	17	252,163
Sawmills & Wood Preservation	2	2	6	0	4,330	10	79,400
Pulp, Paper, & Paperboard Mills	0	0	0	0	3,303	0	111,006
Veneer, Plywood, & Engineered Wood	0	7	0	0	4,099	7	61,757
Wood Products Manufacturing	287	331	4	0	22,327	622	472,555
Other Wood Product Mfg.	155	11	4	0	9,071	170	203,184
Converted Paper Product Mfg.	132	320	0	0	11,685	452	252,008
Gum & Wood Chemical Mfg.	0	0	0	0	0	0	2,665
Wood Cabinet Mfg.	0	0	0	0	3	0	1,091
Wood Office Furniture Mfg.	0	0	0	0	1,568	0	13,607
Non-Timber	97,426	29,156	2,896	6,876	3,247,380	136,354	112,637,655
Percent of Total							
Timber	0.3%	1.2%	0.4%	0.0%	1.1%	0.5%	0.7%
Growing & Harvesting	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%
Forestry & Logging	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%
Support Activities for Forestry	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sawmills & Paper Mills	0.0%	0.0%	0.2%	0.0%	0.4%	0.0%	0.2%
Sawmills & Wood Preservation	0.0%	0.0%	0.2%	0.0%	0.1%	0.0%	0.1%

Pulp, Paper, & Paperboard Mills	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
Veneer, Plywood, & Engineered Wood	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
Wood Products Manufacturing	0.3%	1.1%	0.1%	0.0%	0.7%	0.5%	0.4%	
Other Wood Product Mfg.	0.2%	0.0%	0.1%	0.0%	0.3%	0.1%	0.2%	
Converted Paper Product Mfg.	0.1%	1.1%	0.0%	0.0%	0.4%	0.3%	0.2%	
Gum & Wood Chemical Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Wood Cabinet Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Wood Office Furniture Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Non-Timber	99.7%	98.8%	99.6%	100.0%	98.9%	99.5%	99.3%	

Table 6.6.3.10d show the employment in the Southwestern Region during 2011. In 2011, Haywood County, NC had the largest percent of total timber employment (7.1%), and Cherokee County had the smallest (0.9%).

Table 6.5.2.2d Timber Industry Employment in the Southwestern Region, 2011.

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total Private Employment	6,274	1,414	1,899	13,912	7,749	9,162	5,322	3,284,592	45,732	113,425,965
Timber	54	15	40	986	167	173	66	37,212	1,501	788,310
Growing & Harvesting	7	0	4	4	4	9	2	3,153	30	63,592
Forestry & Logging	7	0	4	4	4	9	2	2,882	30	53,034
Support Activities for Forestry	0	0	0	0	0	0	0	271	0	10,558
Sawmills & Paper Mills	47	15	4	809	159	15	0	11,732	1,049	252,163
Sawmills & Wood Preservation	15	15	4	93	2	15	0	4,330	144	79,400
Pulp, Paper, & Paperboard Mills	0	0	0	716	157	0	0	3,303	873	111,006
Veneer, Plywood, & Engineered Wood	32	0	0	0	0	0	0	4,099	32	61,757
Wood Products Manufacturing	0	0	32	173	4	149	64	22,327	422	472,555
Other Wood Product Mfg.	0	0	32	28	4	149	64	9,071	277	203,184
Converted Paper Product Mfg.	0	0	0	145	0	0	0	11,685	145	252,008
Gum & Wood Chemical Mfg.	0	0	0	0	0	0	0	0	0	2,665
Wood Cabinet Mfg.	0	0	0	0	0	0	0	3	0	1,091
Wood Office Furniture Mfg.	0	0	0	0	0	0	0	1,568	0	13,607
Non-Timber	6,220	1,399	1,859	12,926	7,582	8,989	5,256	3,247,380	44,231	112,637,655

Percent of Total

Timber	0.9%	1.1%	2.1%	7.1%	2.2%	1.9%	1.2%	1.1%	3.3%	0.7%
Growing & Harvesting	0.1%	0.0%	0.2%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%
Forestry & Logging	0.1%	0.0%	0.2%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%
Support Activities for Forestry	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sawmills & Paper Mills	0.7%	1.1%	0.2%	5.8%	2.1%	0.2%	0.0%	0.4%	2.3%	0.2%
Sawmills & Wood Preservation	0.2%	1.1%	0.2%	0.7%	0.0%	0.2%	0.0%	0.1%	0.3%	0.1%

Pulp, Paper, & Paperboard Mills	0.0%	0.0%	0.0%	5.1%	2.0%	0.0%	0.0%	0.1%	1.9%	0.1%
Veneer, Plywood, & Engineered Wood	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
Wood Products Manufacturing	0.0%	0.0%	1.7%	1.2%	0.1%	1.6%	1.2%	0.7%	0.9%	0.4%
Other Wood Product Mfg.	0.0%	0.0%	1.7%	0.2%	0.1%	1.6%	1.2%	0.3%	0.6%	0.2%
Converted Paper Product Mfg.	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.4%	0.3%	0.2%
Gum & Wood Chemical Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wood Cabinet Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wood Office Furniture Mfg.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Timber	99.1%	98.9%	97.9%	92.9%	97.8%	98.1%	98.8%	98.9%	96.7%	99.3%

Table 6.5.2.3a shows average wages in the Timber industry operating in the Isothermal and Western Piedmont Region. From 1998 to 2011, average wages in wood products manufacturing shrank (in real terms) from \$36,810 to \$33,068, a 10.2% decrease.

Table 6.5.2.3a Average Timber Industry Wages in the Isothermal and Western Piedmont Region, 2011.

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
All Sectors	\$33,357	\$31,637	\$30,203	\$43,111	\$32,057	\$49,289
Private	\$32,739	\$31,299	\$30,381	\$43,039	\$31,674	\$49,200
Timber	\$29,642	\$29,961	\$36,573	\$45,582	\$32,957	\$49,381
Forestry & Logging	\$24,595	na	\$20,190	\$33,416	\$22,480	\$39,882
Wood Products Manufacturing	\$29,960	\$30,003	\$36,913	\$36,858	\$33,195	\$37,750
Paper Manufacturing	na	na	na	\$56,418	na	\$61,159
Non-Timber	\$32,566	\$31,172	\$24,717	\$43,002	\$30,634	\$49,199
Government	\$35,195	\$33,164	\$29,413	\$43,451	\$33,484	\$49,755

Table 6.5.2.3b shows average wages in the Timber industry operating in the High Country Region. From 1998 to 2012, average wages in wood products manufacturing shrank (in real terms) from \$32,818 to \$27,200, a 17.1% decrease.

Table 6.5.2.3b Average Timber Industry Wages in the High Country Region, 2011.

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
All Sectors	\$27,653	\$30,896	\$32,612	\$28,317	\$43,111	\$31,048	\$49,289
Private	\$26,253	\$30,859	\$28,972	\$27,295	\$43,039	\$28,565	\$49,200
Timber	na	\$17,643	\$29,888	\$19,014	\$45,582	\$24,427	\$49,381
Forestry & Logging	na	na	na	\$19,478	\$33,416	\$19,014	\$39,882
Wood Products Manufacturing	na	\$16,862	\$30,123	na	\$36,858	\$27,200	\$37,750

Paper Manufacturing	na	na	na	na	\$56,418	na	\$61,159
Non-Timber	\$24,483	\$26,492	\$27,663	\$26,731	\$43,002	\$26,907	\$49,199
Government	\$32,097	\$31,023	\$45,158	\$31,792	\$43,451	\$32,060	\$49,755

This table shows wage data from the Bureau of Labor Statistics, which does not report data for proprietors or the value of benefits and uses slightly different industry categories than those shown on previous pages of this report.

Table 6.5.2.3c shows average wages in the Timber industry operating in the Land-of-Sky Region. From 1998 to 2012, average wages in wood products manufacturing stagnated (in real terms) from \$34,440 to \$34,386, a 0.2% decrease.

Table 6.5.2.3c Average Timber Industry Wages in the Land-of-Sky Region, 2011.

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
All Sectors	\$36,990	\$34,760	\$28,321	\$30,671	\$43,111	\$35,982	\$49,289
Private	\$35,614	\$34,023	\$28,060	\$29,761	\$43,039	\$34,830	\$49,200
Timber	\$43,468	\$55,125	\$20,648	na	\$45,582	\$51,478	\$49,381
Forestry & Logging	na	na	na	na	\$33,416	na	\$39,882
Wood Products Manufacturing	\$37,240	\$26,859	\$19,710	na	\$36,858	\$34,386	\$37,750
Paper Manufacturing	\$48,589	\$56,411	na	na	\$56,418	\$54,946	\$61,159
Non-Timber	\$34,760	\$32,277	\$24,180	\$27,992	\$43,002	\$33,796	\$49,199
Government	\$45,410	\$38,768	\$29,050	\$34,855	\$43,451	\$42,595	\$49,755

This table shows wage data from the Bureau of Labor Statistics, which does not report data for proprietors or the value of benefits and uses slightly different industry categories than those shown on previous pages of this report.

Table 6.5.2.3d shows average wages in the Timber industry operating in the Southwestern Region. From 1998 to 2012, average wages in wood products manufacturing stagnated (in real terms) from \$35,101 to \$31,002, an 11.6% decrease.

Table 6.5.2.3b Average Timber Industry Wages in the Southwestern Region, 2011.

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
All Sectors	\$29,382	\$27,158	\$30,841	\$32,920	\$32,073	\$30,329	\$30,814	\$43,111	\$31,264	\$49,289
Private	\$28,243	\$25,625	\$30,487	\$32,299	\$28,077	\$29,307	\$26,880	\$43,039	\$29,511	\$49,200
Timber	na	na	na	\$30,297	7	na	na	\$45,582	\$30,297	\$49,381
Forestry & Logging	na	na	na	\$20,489	na	na	na	\$33,416	\$20,977	\$39,882
Wood Products Manufacturing	na	na	na	\$31,051	1	na	na	\$36,858	\$31,022	\$37,750
Paper Manufacturing	na	na	na	na	na	na	na	\$56,418	na	\$61,159
Non-Timber	\$25,307	\$25,953	\$33,123	\$28,818	\$24,393	\$26,543	\$24,782	\$43,002	\$26,686	\$49,199
Government	\$33,908	\$31,168	\$32,041	\$34,912	\$40,582	\$35,339	\$34,020	\$43,451	\$35,715	\$49,755

This table shows wage data from the Bureau of Labor Statistics, which does not report data for proprietors or the value of benefits and uses slightly different industry categories than those shown on previous pages of this report.

6.5.3 Mining and Minerals

There was very little mining activity operating on the Nantahala and Pisgah National forests from 2010-2012, consisting of crushed stone production; there were just under 10,000 short tons produced each year with a market value of \$0.20/short ton.

6.5.4 Agriculture

This summary from the Western North Carolina Vitality Index is a reminder that agriculture is a dominant aspect of the North Carolina economy, and offers some perspective on the role that the Nantahala and Pisgah National Forest resources play in the state economy. For more information please see: <http://www.wncvitalityindex.org/agriculture/agriculture-overview>

“North Carolina ranks third in the nation for agricultural diversity. Agriculture accounts for 20 percent of total income in North Carolina, with \$74 billion in total economic impact. Agriculture is North Carolina’s number one industry.

The region represented by the Mountain Resources Commission (MRC) is recognized nationally as a leader in agriculture, with a product line that ranges from trout to Christmas trees, poultry and livestock to turf farms, greenhouse and nursery crops to dairy, and fresh vegetables to fruits of all kinds. North Carolina farm gate receipts totaled over \$9 billion in 2009, with receipts of \$900 million in the 27 counties of the MRC region. The MRC region counties account for only about 10 percent of the state’s total farm gate receipts. In fact, in 2007, five of the MRC region counties reported losses.”

6.5.4.1 Non-Timber Forest Products

Permit records seen in Table 6.5.4.1 show official annual harvest from the Nantahala and Pisgah National Forests from 2010-2012.

Table 6.5.4.1. Official annual harvest by Ranger District, Nantahala and Pisgah National Forest

	Per year Average 2010-2012						Forest Average
	Cheoah	Tusquitte	Nantahala	Appalachian	Grandfather	Pisgah	
Annuals/Perennials	0	0	0	0	0	0	0
Florist Products (lbs.)	133	0	400	533	67	1,000	2,133
Galax (lbs.)	0	0	1,733	55,200	13,267	26,967	97,167
Ginseng (lbs.)	51	34	257	96	27	35	500
Medicinal (lbs.)	933	667	1,600	2,033	1,767	733	7,733
Black Cohosh (lbs.)	500	233	833	400	0	100	2,067
Bloodroot (lbs.)	0	0	0	67	33	0	100
Ramps (Commercial Use - lbs.)	110	195	220	507	0	27	1,058
Pine Cones (bushel)	0	0	0	0	0	0	0
Rhododendron/Laurel Plants (ea.)	27	0	482	147	1,447	389	2,492
Laurel and Maple (ea.)	0	300	4,733	500	2,067	3,745	11,345
Seedlings (hemlock Pine – ea.)	0	200	0	0	67	0	267

Shrubs/trees (ea.)	0	0	0	0	0	0	0
Trees (ea.)	0	0	7	0	0	3	10
Vines (lbs.)	0	0	1,667	0	0	1,167	2,833
Annuals/Perennials & micsc.	0	0	0	0	0	0	0

Figure 6.5.4.1 indicates the approximate market values of these products harvested over this three-year period. Galax, ginseng and Rhododendron/ Laurel Plants appear to be the most valuable products harvested in this group, which totaled more than \$242,523 in market value from 2010-2012.

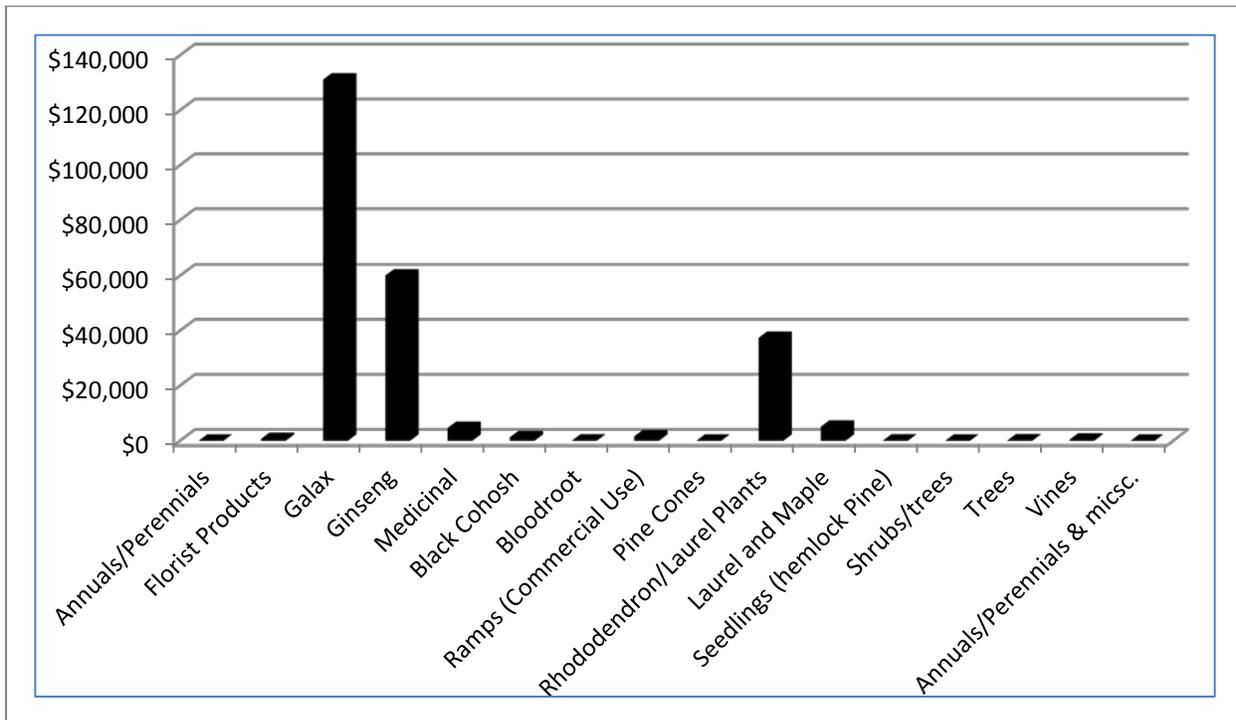


Figure 6.5.4.1. Special (Non-timber) forest products harvested under permit from the Nantahala and Pisgah National Forests from 2010-2012

The following is excerpted from a 2003 slideshow developed by Jackie Greenfield and Jeanine M. Davis, N.C. State University, Department of Horticultural Science, Raleigh, NC called Collection to Commerce: Western North Carolina Non-Timber Forest Products and Their Markets.

Galax harvest information was reported by NC dealers for 2001, 82.5% was harvested from public lands; 17.5% private lands, 99.75% of the galax harvested was from the wild; 0.25% was cultivated. All buyers responding purchased galax in the fall, winter, and spring; 50% also purchased in the summer. The distribution network generally saw a wholesaler moving product to Texas, Florida or Holland with final product destinations in the United States but also extending to Europe and Asia.

Prices paid for fresh galax as reported by NC dealers for 2001:

Highest price paid in 2001: \$80.00/box
Lowest price paid in 2001: \$20.00/box
Highest price paid last 5 years: \$100.00/box
Lowest price paid last 5 years: \$20.00/box

2001 Demand, prices, and volumes of galax based on information from buyers, researchers, and specialists.

Estimated 1–2 billion leaves of galax harvested in 2001.
Prices paid to harvesters ranged from \$35.00 - \$100.00 per box (5,000 count) for 2001 season.
Estimated value for fresh leaves in 2001 was \$10–\$26 million.

Estimated demand was increasing.

Pricing Difficulties

USFS permits issued by weight --- \$0.25/lb.

Collectors sell by pounds of leaves variable by selected grades (size & leaf color)

Please see page 18, <http://www.ces.ncsu.edu/fletcher/programs/herbs/pdf/ntfpfinal17.pdf> for a pie chart showing the 2001 Ethnic Background of North Carolina harvesters, with 77% Caucasian, 18% Latino, 2% African American and 3% others.

The following is excerpted from the Western North Carolina Report Card on Forest Sustainability. The Report Card is a cooperative effort between UNC Asheville's National Environmental Modeling and Analysis Center (NEMAC) and the Forest Service (USDA 2011): available at <http://www.srs.fs.usda.gov/pubs/39419>

“Non-Timber Forest Products

The forests of Western North Carolina provide many non-timber products. They include plants, parts of plants, and other biological material as well as fungi, mosses, lichens, herbs, vines, shrubs, and trees. Many different parts of plants are harvested, including roots, tubers, leaves, bark, twigs and branches, fruit, sap and resin, as well as wood. The most important edible forest product in Western North Carolina is ramps, a mainstay of many festivals. The collection of ramps in early spring generates significant revenue for local civic groups. Other culinary products include mushrooms, fiddlehead ferns, black walnuts, blueberries, raspberries, persimmons, and acorns. Floral and horticultural products include grapevines, Galax, azaleas, log mosses, other annual and perennial plants, cones, shrubs, and trees. Medicinal products include American ginseng, false unicorn, black cohosh, bloodroot, and many others.”

Please see page 55 of this link (http://www.srs.fs.usda.gov/pubs/gtr/gtr_srs142.pdf) to the Non-timber forest products pie chart.

“People harvest non-timber forest products for both market and non-market reasons. Before the European settlers entered the mountains, Native Americans traded these products among themselves. Early European settlers gathered the products for subsistence as well as income. Over time, ecological knowledge, built through generations of gathering, tending, using, and trading, has been preserved and shared.

As demand for these products increases, it is important to monitor their removal and the impact that harvest has on their long-term viability. Recognizing the need to monitor the consumption of non-timber forest products, the USDA Forest Service has developed a permitting process that sets a unit price for each product and provides guidelines for gatherers, ensuring a sustainable harvest.

The USDA Forest Service has tracked the total value of non-timber forest products sold in the Pisgah and Nantahala National Forests since 2005. The total annual value varies, averaging about \$73,000 per year, with the highest income producers being Galax, ginseng, rhododendron and laurel, and firewood. Using 'value sold' to express non-timber forest products may indicate trends, but the actual dollar amount can be a misleading measure of real value and could trivialize the social benefits of these products. The quantity and value of non-timber forest products collected on private lands is not currently monitored.”

There is growing demand for locally sourced timber and non-timber forest products for a diverse forest-based economy. Herbalists, forest food producers and harvesters – including mushroom growers, artisans, handcrafters, woodworkers, furniture manufacturers, and architectural designers are all looking to locally sourced wood products for materials to expand their businesses. Please visit the WNC Forest Products website for more information on this project: www.wncforestproducts.wordpress.com.

The following sections are excerpted from Expanding the Natural Products Economy in Western North Carolina, Prepared by Sam Leaman and Nicholas H. Oberlies, Ph.D. from RTI International and Annice Brown from Small Business and Technology Development Center and Lindsay Benedict, dated December 2006.

“The Role of Natural Products in U.S. and North Carolina Economies

Combined U.S. sales for the range of natural products, including herbals, vitamins, and other supplements; organic and functional foods; and personal care products, were approximately \$68 billion in 2004. Sales of herbals and vitamins alone were over \$10 billion. Major businesses in the natural products sector include Whole Foods Market, with sales of almost \$500 million in 2004, and General Nutrition Centers, Inc. (GNC), with herbal/vitamin sales of \$1.2 billion in 2004. Tonnage data from the American Herbal Products Association highlight the fluctuations in demand for various herbals with peak harvests for many herbals in 1998 and 1999, followed by a fall off in demand, and then increasing sales in 2002–2003.

Natural product sales data are generally not available at the state level. North Carolina does collect data on ginseng sales. Between 1995 and 2004, North Carolina growers/harvesters sold 77,834 pound of ginseng to registered dealers for a total sales volume of \$19.5 million. Both the AdvantageWest Vision Plan and the Hub Project Plan in Asheville indicate the strong potential for the natural products sector in western North Carolina. Four of the 10 clusters

of innovation in AdvantageWest’s Vision Plan have components related to the natural products sector including organic foods and nutraceuticals. Two of the strategies in the Hub Project Plan are directly related to the natural products sector based on the goal to establish Asheville as a national center for integrative medicine that combines conventional therapies with complementary and alternative techniques.

State Data on Ginseng Sales

While natural product sales are generally not available at the state level, the North Carolina Department of Agriculture & Consumer Services (NCDA&CS) collects data on ginseng sales. Between 1995 and 2004, North Carolina growers/harvesters sold 77,834 pounds of ginseng to registered dealers. The 10-year sales total was \$19.5 million. Figure 2-3 shows the trend in ginseng sales by pound and dollar values in western North Carolina counties covered by the AdvantageWest regional economic development agency, and Table 2-3 shows the detailed sales data by county in North Carolina over the last 10 years. Annual dollar sales vary from slightly under \$2.5 million in 1996, to slightly under \$1 million in 2004. Sales have declined over the last several years; however, the sales total in 2002 was very close to the sales total in 1997, so the decline in sales over the last 3 years does not necessarily indicate a trend.

See page 2-4: http://www.advantagegreen.org/wp-content/uploads/2011/02/Expanding-Natural-Prod-WNC_FINAL.pdf

Table 2-3. Ginseng Harvest in North Carolina, 2004–1995.

Year	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	10-Year Total
State Totals (lbs)	4,271	6,548	8,790	6,788	8,415	7,710	6,496	9,182	10,970	8,664	77,834
State Total (\$)	1,921,950	2,946,600	3,955,500	3,054,600	3,786,750	3,469,500	2,923,200	4,131,900	4,936,500	3,898,800	35,025,300
Counties	Pounds										
Haywood	484	685	948	615	707	602	580	656	1,030	779	7,086
Jackson	397	460	839	562	826	747	872	1,017	1,212	865	7,797
Macon	351	368	591	341	691	663	604	1,002	901	574	6,086
Cherokee	338	304	386	268	415	336	220	359	427	530	3,583
Buncombe	255	743	1,073	916	895	787	625	869	1,089	707	7,959
Clay	251	307	324	237	419	406	134	276	262	116	2,732
Swain	251	252	340	273	451	355	271	408	388	409	3,398
Madison	239	844	1,035	865	896	721	717	768	1,019	779	7,883
Ashe	227	282	303	251	332	334	262	374	539	603	3,507
Yancey	224	568	676	568	536	493	376	685	848	556	5,530
Mitchell	222	334	456	420	387	276	278	418	496	426	3,713
McDowell	167	180	182	230	331	342	246	244	447	334	2,703
Watauga	147	240	262	167	156	249	217	364	423	387	2,612
Graham	144	274	391	372	517	453	223	514	498	503	3,889
Avery	132	220	191	208	202	150	119	152	226	185	1,785
Caldwell	86	103	108	78	47	114	105	149	210	139	1,139

Henderson	77	45	211	92	171	129	86	161	179	179	1,330
Polk	57	46	61	15	88	28	27	41	34	53	450
Wilkes	44	50	77	70	52	192	137	317	226	213	1,378
Transylvania	44	60	77	68	73	88	92	103	111	86	802
Alleghany	37	55	57	70	27	43	141	106	155	79	770
Surry	29	27	65	22	62	88	47	49	64	69	522
Burke	28	56	57	50	26	16	18	12	33	31	327
Rutherford	12	29	47	3	70	10	31	67	50	17	336
Alexander	5	10	5	4	7	17	9	9	12	12	90
Lincoln	5	0	1	0	2	5	6	0	0	0	19
Forsyth	4	0	6	1	0	0	0	13	20	2	46
Stokes	3	2	12	11	4	41	17	14	33	2	139
Catawba	2	2	0	4	0	4	8	30	3	11	64
Iredell	2	0	2	2	4	4	3	29	12	11	69
Guilford	1	0	0	0	0	0	2	2	0	0	5
Davidson	0	0	0	0	0	5	10	1	5	0	21
Yadkin	0	1	7	2	2	0	2	1	2	2	19
Cleveland	0	0	0	0	19	8	11	4	7	3	52
Mecklenburg	0	0	0	0	0	0	0	0	2	0	2
Davie	0	0	0	0	0	6	0	1	0	0	7
Gaston	0	0	0	0	0	0	0	7	0	1	8
Alamance	0	0	0	0	0	0	0	1	0	0	1
Rockingham	0	0	0	3	1	0	0	1	5	0	10

Source: North Carolina Department of Agriculture & Consumer Services

A \$20-million business focused in rural areas of western North Carolina makes a significant economic impact and it is particularly important for lower income families that tend to harvest ginseng. Research aimed at identifying steps to expand ginseng harvests at sustainable levels will pay dividends for rural western North Carolina residents.

There were 19 states that recorded harvests of wild ginseng root in 2002 with the U.S. Fish and Wildlife Service. North Carolina was the second largest producer of wild ginseng root with 8,790 pounds. Kentucky was the national leader with 15,085 pounds. North Carolina consistently ranks in the top group of states, which include Indiana, Kentucky, Tennessee, Virginia, and West Virginia.

One of the problems for the natural products sector in North Carolina is the lack of sales

data, aside from ginseng. A recent master's thesis on medicinal herbs completed at UNC-CH stated: "Making the case through technical analysis such as [Impact Analysis for Planning] (IMPLAN) is all but impossible for lack of data. Advocacy of the industry is made difficult without a comprehensive data set and increased transparency..... Much of the continued success of the present efforts to organize the state's industry will be dependent on information which is not easily available, such as market trends for different species and the demand for different products." (St. Clair, C. 2006. Medicinal Herbs of Western North Carolina, Master's Project at UNC-CH. March.)

Initiating a study on the annual sales volume of medicinal herbs, in addition to ginseng, in western North Carolina would be a useful task for NCNPA. Aggregated data on sales and jobs would enhance the NCNPA's ability to garner support from state and federal governments and foundations; however, obtaining data from herb harvesters is difficult. One study from NCSU noted that the industry "is by nature, secretive, and suspicious of anyone asking 'too many questions.'" The authors added: "What became clear for the whole interview process to be successful was to build trust with those being interviewed." (Greenfield, J., and J.M. Davis. 2003. Collection to Commerce: Western North Carolina Non-Timber Forest Products and Their Markets. NCSU, Department of Horticultural Science.)

While proving to be difficult, the objective of this type of economic impact would not be to get a precise calculation of all sales and related jobs, but to get a reasonable estimate. To build the trust of local people, it should be done by researchers based in western North Carolina, such as the Mountain Horticultural Crops Research & Extension Center of NCSU, which completed the study cited above.

Western North Carolina Assets and Liabilities

Western North Carolina has a wide range of assets for natural products development and expansion. These extensive and unique assets make a strong case for the NCNPA to focus on expanding the natural products economy in western North Carolina. These assets include a long list of organizations such as the North Carolina Arboretum, the Mountain Horticultural Crops Research & Extension Center, Gaia Herbs, the Small Business and Technology Development Center (SBTDC), the Western Office of the North Carolina Biotechnology Center, Advantage West, Blue Ridge Food Ventures, Memorial Mission Hospital, and the universities

and colleges in the region. Other unique advantages are the history and heritage of herbs and medicinal plants in western North Carolina, the biodiversity of the region, herb growers, buyers and customers concentrated in the region, the micro-climates that favor herbal agriculture, and the strong tourism industry.

There is a much shorter list of important liabilities for the region. There is limited data on the economic effect of herbs and medicinals on the region, a lack of both an analytical laboratory for herb growers and a basic research facility on botanicals, and a lack of branding or branding strategy of herbs and medicinals from western North Carolina. For the most part, economic developers in the region are not focused on the potential for attracting natural product companies to the region, and there is a dearth of funding for investments in new start-up natural product companies. The NCNPA does not have a full-time staff member to work on the objectives of the Board of Directors, there is some among members on the Board of Directors regarding basic research on plants in the region, and the NCNPA Board does not have any link with the Cherokee Tribe, NC Wine, or with some local natural product companies such as Earth Fare, Inc. There is also no licensure of naturopathic doctors in North Carolina, and these types of doctors tend to open broad-based demand for natural products.

With sufficient funding and focus, many of these liabilities can be changed. None of the liabilities is a sufficient reason for the NCNPA's Board of Directors to forego the opportunity to work toward the expansion of the natural products economy in western North Carolina.

6.5.5 Forest Service Employment

Figure 6.5.3.1 shows breakdown of employment on the districts of the Nantahala National Forest during 2013.

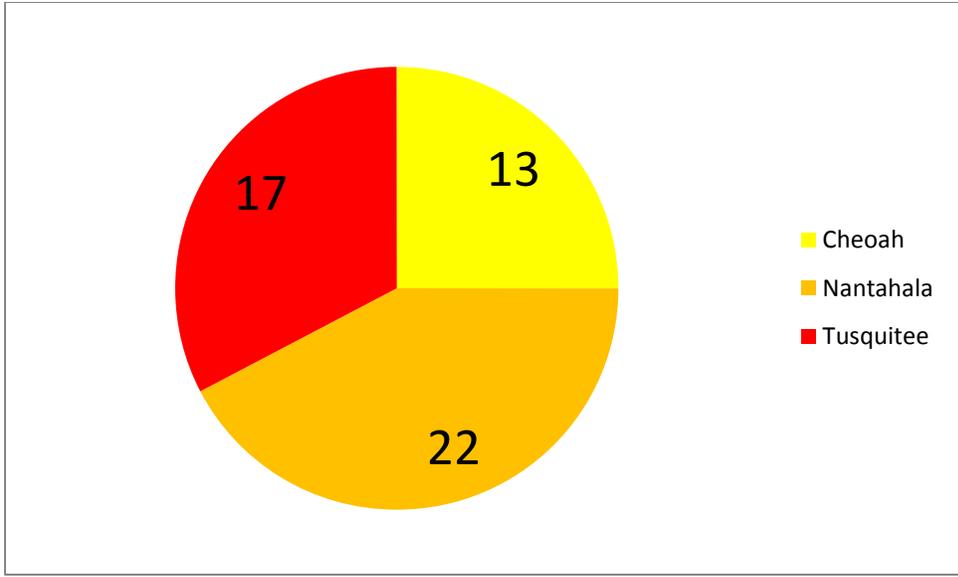


Figure 6.5.3.1. Forest Service Employment on the Nantahala National Forest

Figure 6.5.3.2 shows breakdown of employment on the districts of the Pisgah National Forest during 2013.

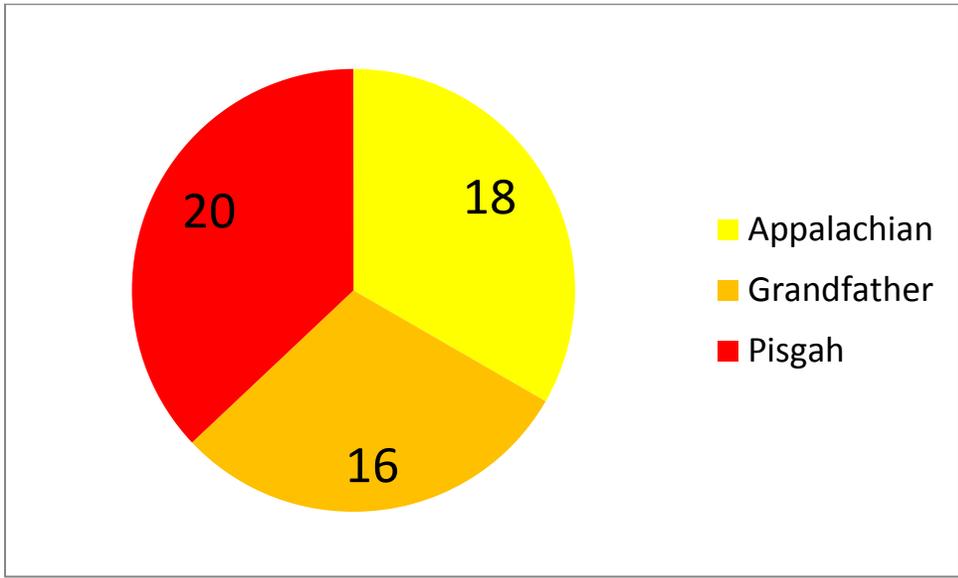


Figure 6.5.3.1. Forest Service Employment on the Pisgah National Forest

Table 6.5.3.3 shows average employment by permanent and temporary classifications for FY 2010 through 2012.

FS Employment		2010	2011	2012	3 - year Average
Permanent	FTEs	102	103	107	104
Other than permanent	FTEs	11	11	16	13
Total Employment	FTEs	113	114	123	117

Figure 6.5.3.3 shows a comparison of employment on the districts of the Nantahala and Pisgah National Forest with employment at the Supervisors Office for the Four National Forests of North Carolina. There are also 17 temporary positions on the Nantahala and Pisgah National Forests. Normally, all district and supervisor office personnel are included in the economic contribution modeling. Given that the Nantahala and Pisgah represent about 84.4 percent of the permanent workforce for the National Forests of North Carolina, 85 percent of the 52 supervisor's office (44 employees) we also considered part of the Nantahala and Pisgah National Forests for economic impact modeling purposes. Collectively, we estimate there were 150 employees managing these two national forests.

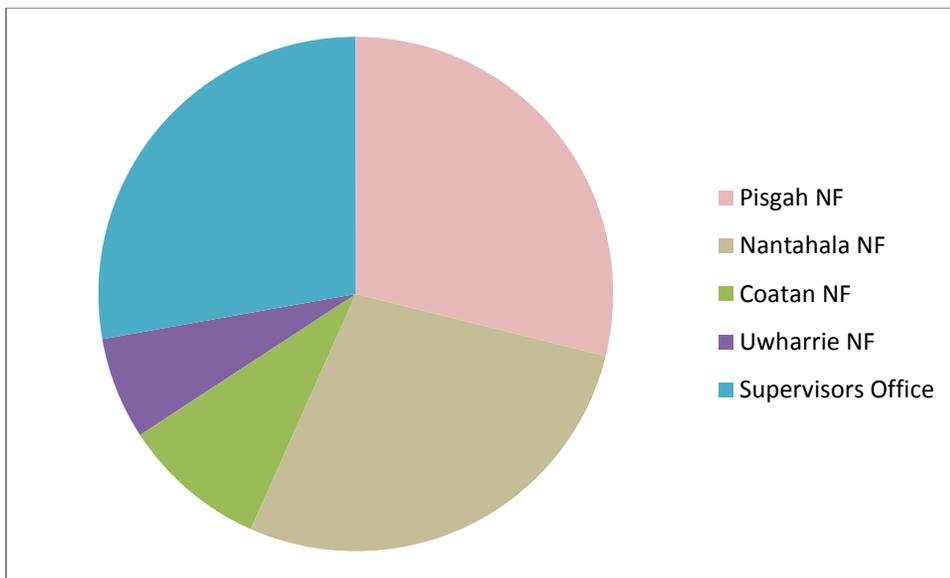


Figure 6.5.3.3. Forest Service Employment on the National Forests of North Carolina.

6.5.6 Forest Service expenditures

Salary and non-salary expenditures with fire suppression funds (there was little difference with or without fire suppression) for FY 2009 through 2011 averaged 33, 234,925 for all National Forests of North Carolina. This was first scaled down to reflect the portion spent by the Nantahala and Pisgah National Forests, using the proportion of employment (84.37 percent) as a basis. This reduced the budget expenditures to 28,039,160 per year. This was further broken into salary and non-salary expenditures based on budget object code date, with salaries representing 53 percent of annual expenditures (14,939,265) and non-salary expenditures representing 47 percent (\$13,099,896).

6.6 QUESTION F – WHAT CONTRIBUTION DO MULTIPLE USES MAKE TO LOCAL, REGIONAL, AND NATIONAL ECONOMIES –FEAST / IMPLAN MODELING.

Up to this point the most of the discussion has focused on the overall economic setting of the 18-county analysis area. This section focuses on the specific contribution of the Nantahala and Pisgah National Forests to the economy of the analysis area. The National Forests contribute to the local economies by the products (e.g., timber) that is produced by the National Forest and processed in the local economy, by the uses (e.g., recreation visits, etc.) that occur on the National Forests, by the expenditures of the forests on supplies, equipment, and contracted activities, and by the spending by Forest Service employees in the local economy. This analysis is similar to the wildland dependency analysis with the exception that only Forest Service related products, uses and services are considered. The results of this analysis are presented by the North American Industrial Classification System (NAICS) two-digit display. There are 20 industry sectors in the two-digit display.

The forests' economic contribution to the counties in the analysis area were estimated with input-output analysis using the IMPLAN (IMpact analysis for PLANning) modeling system (MIG 2003) and FEAST (Forest Economic Analysis Spreadsheet Tool) (Alward et al. 2010). The IMPLAN modeling system allows the user to build regional economic models of one or more counties for a particular year. The model for this analysis used the 2010 IMPLAN data. FEAST is a spreadsheet modeling tool that serves as an interface between user inputs and imported data from an existing IMPLAN model.

Input-output analysis is a means of examining relationships within an economy, both between businesses and between businesses and final consumers. It captures all monetary market transactions for consumption in a given time period. Economic contribution analysis is defined as “the gross change in economic activity associated with an industry, event, or policy in an existing regional economy” (Watson et al. 2007). By using FS expenditure data, resource output data, and other economic information, IMPLAN can describe, among other things, the jobs and income that are supported by NFS management activities. The direct employment and labor income benefit employees and their families and therefore directly affect the local economy. Additional indirect and induced, multiplier effects (ripple effects) are generated by the direct activities. Together the direct and multiplier effects comprise the total economic contribution to the local economy. The data used to estimate the direct effects from timber harvest are information provided by University of Montana's Bureau of Business and Economic Research. The economic effects tied to other forest service programs and the multiplier effects were estimated using IMPLAN. Resource specific data (recreation visits, timber volume harvested, etc.) were collected and input into FEAST. For current management levels, a 3-year average using 2010 – 2012 data was calculated for resources to eliminate the year to year variability inherent in the data. **Note that Non-forest timber products vary widely in their composition and economic contributions across all national forests and therefore are not built into the FEAST model.**

A job (as defined in IMPLAN) is an annual average of monthly jobs. Thus, one job lasting 12 months = two jobs lasting six months each = three jobs lasting four months each. Each of those examples would appear as one job. The one job lasting 12 months can be either full-time or part-time; but it does last for 12 months. When jobs are counted this way, one cannot tell from the data the number of hours worked or the proportion that are full or part-time or anything about seasonality; only that they are yearlong. These jobs are different than full time equivalent (FTE) jobs. However, they can be converted to average FTE jobs by using industry-specific FTE to Employment ratios (number of FTE jobs in an industry divided by total employment in the

industry). These ratios are all less than one because Employment contains part-time jobs (so there are more jobs than there are FTEs).

The results of the contribution analysis are displayed in Table 6.6.1, which displays employment and labor income for the analysis area (Area Totals) and the employment and labor income attributable to Forest Service related activities (FS-Related). There were approximately 466,514 full- and part-time jobs and \$16.8 billion (2012\$) in labor income in the economy of the eighteen-county analysis area (see Area totals in Columns in Table 6.1). From the standpoint of the analysis area economy, the Government sector is the largest employer with approximately 68,217 jobs (approximately 14.6 percent of the total employment) and approximately \$3.4 billion in labor income (approximately 31 percent of total labor income). The top five industrial sectors in the analysis area in terms of employment are: 1) Government, 2) Health Care & Social Assistance, 3) Retail Trade, 4) Manufacturing and 5) Accommodation & Food Service. The top five industrial sectors in terms of labor income are: 1) Government, 2) Health Care & Social Assistance, 3) Manufacturing, 4) Retail Trade, and 5) Construction. The change in ranking is attributable to the higher paying jobs in the manufacturing sector relative to other industrial sectors.

The results indicate that there are approximately 1,890 full- and part-time jobs and \$63.5 million in labor income attributable to annual Nantahala and Pisgah National Forest activities (see FS-Related columns in Table X-x). This is 0.41 percent of the employment and 0.38 percent of the labor income of the analysis area economy. The products, uses and services of the two forests have their largest effect in three sectors: the Accommodation & Food Service sector with approximately 575 (30.4 percent) of the 1,890 jobs and \$10 million (15.7 percent) of the \$63.5 million of the labor income; and, the Government sector with approximately 244 (12.9 percent) of the 1,890 jobs and \$20.6 million (32.4 percent) of the \$63.5 million of the labor income; and the Retail sector with approximately 301 (15.9 percent) of the 1,890 jobs and \$7.2 million (11.3 percent) of the \$63.5 million of the labor income.

Table 6.6.1.a. Current Role of Forest Service-Related Contributions to the Area Economy

(Non-local only)

Industry	Employment (jobs)		Labor Income (Thousands of 2012)		Value Added (Thousands of 2012)		Output (Thousands of 2012 dollars)	
	Area Totals	FS-Related	Area Totals	FS-Related	Area Totals	FS-Related	Area Totals	FS-Related
Agriculture	6,981	30	\$408,111	\$1,230	\$313,424	\$1,205	\$687,174	\$3,273
Mining	1,085	0	\$45,999	\$1	\$168,026	\$2	\$299,531	\$4
Utilities	1,500	4	\$135,756	\$397	\$589,640	\$1,756	\$854,832	\$2,641
Construction	35,711	13	\$1,016,215	\$384	\$1,348,694	\$534	\$3,993,831	\$1,379
Manufacturing	41,281	77	\$2,321,727	\$3,885	\$4,558,063	\$5,711	\$15,227,290	\$20,476
Wholesale Trade	11,359	49	\$639,561	\$2,826	\$1,265,636	\$5,600	\$1,674,560	\$7,608
Transportation & Warehousing	13,236	45	\$382,893	\$1,359	\$567,735	\$1,979	\$1,137,407	\$4,112
Retail Trade	53,383	301	\$1,395,851	\$7,214	\$2,073,730	\$11,191	\$3,206,925	\$17,155
Information	4,387	11	\$178,909	\$441	\$567,896	\$1,275	\$1,141,804	\$2,706
Finance & Insurance	16,551	32	\$665,441	\$1,324	\$1,315,033	\$2,655	\$3,110,567	\$6,701
Real Estate & Rental &	24,585	67	\$231,636	\$613	\$4,488,185	\$10,799	\$5,389,301	\$13,471
Prof. Scientific, & Tech	20,809	49	\$829,517	\$1,998	\$1,102,979	\$3,901	\$1,731,520	\$5,475
Mnqt of Companies	1,910	3	\$125,493	\$192	\$155,698	\$240	\$288,689	\$475
Admin. Waste Mnqt & Rem	24,645	55	\$492,718	\$1,112	\$658,844	\$1,454	\$1,193,005	\$2,776

Educational Services	7,003	11	\$196,592	\$320	\$172,615	\$282	\$379,983	\$652
Health Care & Social	58,257	93	\$2,705,636	\$4,461	\$2,913,909	\$4,825	\$4,904,418	\$8,678
Arts, Entertainment, and Rec	10,677	181	\$178,684	\$3,670	\$282,331	\$5,616	\$526,985	\$9,302
Accommodation & Food	36,171	575	\$668,411	\$10,031	\$1,073,860	\$15,737	\$2,050,426	\$30,363
Other Services	28,764	48	\$823,312	\$1,477	\$877,547	\$1,595	\$1,781,988	\$3,370
Government	68,217	244	\$3,401,524	\$20,573	\$4,067,884	\$21,066	\$4,705,354	\$24,222
Total	466,514	1,890	16,843,987	63,507	28,561,730	97,421	54,285,589	164,838
FS as Percent of Total	---	0.41%	---	0.38%	---	0.34%	---	0.30%

Table 6.6.2.a shows the contribution (jobs and labor income) of FS activities on the Nantahala and Pisgah National Forests by FS program, rather than by sector of the economy. The largest contribution in terms of both employment (1,086 part and full-time jobs) and labor income (\$26.4 million/year) is recreational visitation which includes both the impacts of visitors expenditures in the area as well as all directly and indirectly affected employees spending their income in the local economy. FS expenditures (both labor and non-labor) account for 371 (19.6 percent) of the estimated 1,890 full- and part-time jobs. The next largest contribution comes from wildlife related recreation, which accounts for an estimated 11.9 percent (225 jobs) of the total employment contribution and nearly 9.1 percent of the \$63.5 million in labor income. The timber program contributes 152 part and full time jobs and 6.9 million per year. Payments to states, which in this case are the Secure Rural School Act payments received by the counties, account for another 56 jobs and \$2.3 million in labor income.

In addition to the contributions of non-local recreation, hunting, and fishing described above, expenditures by local residents also create economic activity, although the contribution is not as easy to assess. Both locals and tourists enjoy outdoor activities on the Forest and spend money in the area as part of the experience. Money spent by tourists is a type of export that brings outside dollars to the area and therefore is usually the type of recreation accounted for in economic impact or contribution analysis (that shown in Tables 6.6.1 and 6.6.2 (Non-local Visitation Only). Money spent by locals, however, includes a mix of outside and “inside” dollars. Since locals receive a portion of their income from outside sources - like Social Security - that portion of their spending drives economic activity. But locals also spend money earned at jobs located within the area. Table 6.6.1.b, 6.6.2.a and 6.6.3a (Local / Non-local Visitation) show the results of the analysis when this money is spent on recreational activities within the local area, rather than spent for recreation or other purposes outside of the local area, the money stays in the local economy for longer, thereby producing a larger multiplier effect. Recreation spending by local residents is associated with another 526 jobs and \$13.6million in labor income each year. Wildlife related recreation by local people including hunting, fishing, and wildlife watching contributes another 116 jobs and 3.2 million in labor income each year.

Table 6.6.2. Employment by Program by Alternative (Average Annual, Decade 1)

Resource	Total Number of Jobs Contributed	
	Non-local Visitation Only	Local/Non-Local Visitation
Recreation: non-local only	1,086	1,612
Wildlife and Fish: non-local only	225	341

Grazing	0	0
Timber	152	152
Minerals	0	0
Ecosystem Restoration	0	0
Payments to States/Counties	56	56
Forest Service Expenditures	371	371
Total Forest Management	1,890	2,532

Table 6.6.1.b Current Role of Forest Service-Related Contributions to the Area Economy

(Non-local PLUS Local)

Industry	Employment (jobs)		Labor Income (Thousands of 2012)		Value Added (Thousands of 2012)		Output (Thousands of 2012 dollars)	
	Area Totals	FS-Related	Area Totals	FS-Related	Area Totals	FS-Related	Area Totals	FS-Related
Agriculture	6,981	32	\$408,111	\$1,327	\$313,424	\$1,286	\$687,174	\$3,444
Mining	1,085	0	\$45,999	\$1	\$168,026	\$2	\$299,531	\$5
Utilities	1,500	5	\$135,756	\$494	\$589,640	\$2,189	\$854,832	\$3,222
Construction	35,711	17	\$1,016,215	\$486	\$1,348,694	\$674	\$3,993,831	\$1,720
Manufacturing	41,281	81	\$2,321,727	\$4,061	\$4,558,063	\$5,987	\$15,227,290	\$21,830
Wholesale Trade	11,359	81	\$639,561	\$4,634	\$1,265,636	\$9,178	\$1,674,560	\$12,343
Transportation & Warehousing	13,236	65	\$382,893	\$1,942	\$567,735	\$2,819	\$1,137,407	\$5,812
Retail Trade	53,383	475	\$1,395,851	\$11,528	\$2,073,730	\$17,943	\$3,206,925	\$26,973
Information	4,387	15	\$178,909	\$583	\$567,896	\$1,666	\$1,141,804	\$3,523
Finance & Insurance	16,551	42	\$665,441	\$1,719	\$1,315,033	\$3,437	\$3,110,567	\$8,553
Real Estate & Rental &	24,585	87	\$231,636	\$790	\$4,488,185	\$13,894	\$5,389,301	\$17,133
Prof. Scientific, & Tech	20,809	62	\$829,517	\$2,477	\$1,102,979	\$4,602	\$1,731,520	\$6,494
Mngt of Companies	1,910	4	\$125,493	\$252	\$155,698	\$314	\$288,689	\$613
Admin. Waste Mngt & Rem	24,645	74	\$492,718	\$1,473	\$658,844	\$1,926	\$1,193,005	\$3,627
Educational Services	7,003	15	\$196,592	\$406	\$172,615	\$356	\$379,983	\$815
Health Care & Social	58,257	116	\$2,705,636	\$5,561	\$2,913,909	\$6,013	\$4,904,418	\$10,696
Arts, Entertainment, and Rec	10,677	269	\$178,684	\$5,479	\$282,331	\$8,389	\$526,985	\$13,833
Accommodation & Food	36,171	768	\$668,411	\$13,374	\$1,073,860	\$20,979	\$2,050,426	\$40,424
Other Services	28,764	62	\$823,312	\$1,874	\$877,547	\$2,022	\$1,781,988	\$4,221
Government	68,217	264	\$3,401,524	\$21,896	\$4,067,884	\$22,477	\$4,705,354	\$26,744
Total	466,514	2,532	16,843,987	80,358	28,561,730	126,153	54,285,589	212,024
FS as Percent of Total	---	0.54%	---	0.48%	---	0.44%	---	0.39%

Table 6.6.3. Labor Income by Program by Alternative (Average Annual, Decade 1; \$1,000)

Resource	Thousands of 2012 dollars	
	Non-local Visitation Only	Local/Non-Local Visitation
Recreation: non-local only	\$26,384	\$40,028

Wildlife and Fish: non-local only	\$5,808	\$9,015
Grazing	\$0	\$0
Timber	\$6,896	\$6,896
Minerals	\$0	\$0
Ecosystem Restoration	\$0	\$0
Payments to States/Counties	\$2,291	\$2,291
Forest Service Expenditures	\$22,128	\$22,128
Total Forest Management	\$63,507	\$80,358

6.6.1 Context for the the Nantahala and Pisgah NF's to the Regional economy using Contribution Estimates from Industry Reports

Several other studies provide estimates of economic contributions from activities that take place in North Carolina, with some of that activity occurring on the Nantahala and Pisgah National Forests. For example, according to a study commissioned by collaborating partner Wild South, tourism that is dependent on outdoor recreation such as hunting, fishing, hiking, mountain biking, and scenic driving accounted for over \$312 million of economic activity and 4,190 jobs in the portion of the economic impact area including Avery, Caldwell, and Watauga counties (Reference). A 2006 study by the North Carolina Wildlife Resources Commission reinforces these findings, noting that 19% of hunters and 52% of trout anglers which use public lands in North Carolina frequent the Pisgah National Forest. According to the survey report “The 2006 Economic Benefits of Hunting, Fishing and Wildlife Watching in NC” published by the North Carolina Wildlife Resources Commission in 2008, 3.4 million residents and non-residents participated in some form of fish and wildlife related recreation in North Carolina and spent \$2.62 billion in retail sales. These activities also created 45,224 jobs in the state and generated \$1.26 billion in salaries and wages, having a total economic effect on the state estimated at \$4.3 billion. Of that \$4.3 billion, over \$856 million was generated solely through hunting. Trout fishing and wildlife viewing were also included in “The 2006 Economic Benefits of Hunting, Fishing and Wildlife Watching in NC” report. Trout fishing in the state generated a total economic output of \$224,990,738 and wildlife viewing contributing to a total of \$1,525,765,137.

6.6.1.1 Contribution of Sport fishing to the State Economy

Another example of travel tourism and recreation is fishing, a popular activity in North Carolina. A recent American Sportfishing Association reports found that North Carolina ranked eight in total angler expenditures (1.52 million anglers and \$1.655 billion in expenditures, This includedd 328,810 non-resident anglers expending more than \$260 million, ranking fourth in the nation. http://asafishing.org/uploads/2011_ASASportfishing_in_America_Report_January_2013.pdf This report suggests there were 25,712 jobs contributed to North Carolina by all anglers, with 11,193 jobs contributed by Freshwater fishing. Collectively, there were 15.8 million (67 percent) of all days spent freshwater fishing, with some of that use occurring on the Nantahala and Pisgah National Forests.

6.6.1.2 Contribution of non-timber forest products from the Nantahala and Pisgah NF's to the Regional economy

There are many existing small businesses in Western North Carolina (WNC) that utilize and depend upon small diameter wood products, invasive species, and non-timber forest products. For example, the WNC Forest Products Cooperative Marketing Project (WNC Forest Products) is currently assisting fourteen of these businesses expand and diversify to further develop the regional forest-based industry. WNC Forest Products resulted from a \$1.974 million ARRA grant through the USDA Forest Service's Southern Research Station. From December 3, 2009 to January 1, 2011, \$700,000 has been spent to **create or sustain over 110 jobs in WNC**, resulting in 37.5 full-time equivalent (FTE) positions. Please visit the WNC Forest Products website for more information about this estimate: www.wncforestproducts.wordpress.com.

6.6.1.3 Contribution of the Craft Industry in Western North Carolina to the State Economy

[Stoddard et al \(2008\) produced The Economic Impact of the Craft Industry in Western North Carolina, http://www.craftcreativitydesign.org/wp-content/uploads/2012/03/2008EconomicImpact.pdf](http://www.craftcreativitydesign.org/wp-content/uploads/2012/03/2008EconomicImpact.pdf). That report found the following: The average travel party size was 2.72 people. Fifty-six percent of the respondents reported that they were overnight visitors. The overnight visitors spent an average of 3.71 nights in Western North Carolina.

Craft consumers reported \$164.09 total craft spending at the event where they were surveyed and annual craft spending of \$908.61. This is a 46% increase over the 1995 study. Craft consumers visiting the area reported spending \$146.86 per day compared to \$95.94 per day for the 2006 BRNHA visitor. They spent a total of \$642.03 on their trip to Western North Carolina, of which \$245.94 was spent on craft purchases and \$396.09 on lodging, transportation, meals, and other purchases.

The craft artisan sample included both full-time (56%) and part-time (44%) professional craft artisans. The full-time craft artisans reported an average work week of almost 50 hours, with an average of 10.66 hours working on the business of craft and an average of 38.39 hours designing and creating their work.

One third of WNC craft artisans reported having employees. Six percent of the sample reported having both full- and part-time employees, while 6% had only full-time employees and 22% had only part-time employees. For the 12% of the sample reporting full-time employees, the average number of full-time employees was 1.38. For the 28% of the sample reporting part-time employees, the average number of part-time employees was 1.68. Finally, almost one-third of craft artisans reported subcontracting some portion of their craft business, incurring a wide range of expenses from \$50 per year to \$25,000 per year.

The 2007 survey found that the previous year's sales revenue of full-time professional craft artists was \$62,181.67 and their average net income was \$24,339.46. The net income can be compared to the WNC per capita income of \$24,339 and the North Carolina annual wage estimates for craft artists of \$24,790. The sales revenue of the part-time craft artist was reported to be \$9,928.71 with an average net income of \$4,821.68. The median household income for the craft artisans surveyed in 2007 was \$48,065. The median household income for the population of

WNC in 2003 was \$32,861 while the median household income for the state of North Carolina was \$37,315. A higher percentage of WNC craft artisans represented middle to upper middle incomes compared to state household incomes, with a lower portion of households in the lower and highest incomes.

6.7 QUESTION G – HOW ARE PAYMENTS TO COUNTIES CALCULATED AND WHAT IS THERE TREND OVER TIME

In recognition that states cannot tax federal lands within their boundaries and that these lands create a fiscal burden on the states, policies provide for funding from federal lands to local governments through two programs: Payments in Lieu of Taxes (PILT) and what is commonly termed “Payments to States”, “Revenue-Sharing Payments” or “Secure Schools and Roads” funding. In rural counties these funds can be an important source of funding to maintain roads and provide support for schools.

6.7.1 Payments to States

6.7.1.1 25% Fund

In addition to PILT payments the Forest Service has used revenue sharing from activities generating revenue. Between the first forest plans and 1999, the Forest Service was operating under the 25% fund. Under this act, Counties could share national forest receipts from timber, grazing, land use, recreation, special uses & user fees, and minerals including oil, gas, coal. The purposes of this act were to stabilize and transition payments to county schools and roads Invest in the land and create employment opportunities and improve cooperative relationships among the people that use and care for Federal lands. However by the late 1900s, the payments began to decline and fluctuate widely.

6.7.1.2 Secure Rural Schools

During 2000, under the Secure Rural Schools and Community Self Determination Act, all counties hosting any Forest Service lands were able to select a new option which was also based on and funded by national forest receipts. It includes provisions to stabilize and transition payments, supplemented with some funding from Treasury. It included four titles.

Title I Secure payments for states and counties containing federal land to help fund schools and roads

- Distribution and expenditure of title I and 25% funds is governed by individual state statutes for funding schools and roads
- If projected share is less than \$100,000 county can leave it all in title I, OR may allocate 15% to 20% to title II and/or title III.
- If projected share is \$100,000 or greater county must allocate 15% to 20% to title II and/or title III, OR return the funds to U.S. Treasury

- If projected share is \$350,000 or greater county must allocate 15% to 20% to title II and/or up to 7% title III, OR return the remaining funds to U.S. Treasury
- Allocations are made by September 30 each year for the coming fiscal year

Title II Special projects on federal land

Title III County funds for specific purposes

Title IV – Miscellaneous provisions including new calculation for 25% payment

Electing this option allowed counties to select and a stable payment which was the average of the three highest payments that occurred during the last 14 years, or continue to take a fluctuating payment. Electing 25% payment was a 2 year decision. Electing State payment was a 4 year decision.

SRS Reauthorizations

This was initially authorized for 5 years, then extended for a year, and reauthorized during 2008. Under this reauthorization, Title I differs significantly from previous act. 4-year. It had a new formula, included transition payments for certain states. It left Title II largely unchanged but significantly narrowed uses of funds in Title III. New election had to be made by August 1, 2010. Specific definitions; complex formula determines each county's share of the full funding amount

Formula factors for each county

- Acres of national forest land in county
- Average high 3 years 25% payment between 1986 and 1999
- Per capita personal income
-

6.7.1.3 Payments to States Rules and Formulae

Section 101(a) requires the calculation of the State payment as follows:

(a) STATE PAYMENT.—For each of fiscal years 2008 through 2011, the Secretary of Agriculture shall calculate for each eligible State an amount equal to the sum of the products obtained by multiplying—

(1) the adjusted share for each eligible county within the eligible State; by

(2) the full funding amount for the fiscal year.

The mathematical equation for each eligible county's adjusted share in section 3(1) is:

State Payment = Σ (Full Funding Amount \times Adjusted Share for each eligible county)

Section 3(1) defines —adjusted share|| to mean:

(1) ADJUSTED SHARE.—The term —adjusted share|| means the number equal to the quotient obtained by dividing—

(A) the number equal to the quotient obtained by dividing—

(i) the base share for the eligible county; by

(ii) the income adjustment for the eligible county; by

(B) the number equal to the sum of the quotients obtained under subparagraph (A) and paragraph (8)(A) for all eligible counties.

The mathematical equation for each eligible county's adjusted share in section 3(1) is:

$$\frac{\text{Base Share}}{\text{Income Adjustment}} = \frac{(\sum \text{Base Share} + \sum 50\% \text{ Base Share})}{\text{Income Adjustment}}$$

Additional explanation of the components of the equation:

The numerator:

$\frac{(\text{Base Share})}{\text{Income Adjustment}}$ is calculated for each eligible county.

The denominator:

$$\frac{(\sum \text{Base Share} + \sum 50\% \text{ Base Share})}{\text{Income Adjustment}}$$

is the sum (\sum) of adjusted shares for all eligible counties.

Section 3(2) defines —base share|| to mean:

(2) BASE SHARE.—The term —base share|| means the number equal to the average of—

(A) the quotient obtained by dividing—

(i) the number of acres of Federal land described in paragraph (7)(A) in each eligible county; by

(ii) the total number acres of Federal land in all eligible counties in all eligible States; and

(B) the quotient obtained by dividing—

(i) the amount equal to the average of the 3 highest 25-percent payments and safety net payments made to each eligible State for each eligible county during the eligibility period; by

(ii) the amount equal to the sum of the amounts calculated under clause (i) and paragraph (9)(B)(i) for all eligible counties in all eligible States during the eligibility period.

Section 3(7) defines —Federal land|| to mean:

(7) FEDERAL LAND.—The term —Federal land' means—

(A) land within the National Forest System, as defined in section 11(a) of the Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1609(a)) exclusive of the National Grasslands and land utilization projects designated as National Grasslands administered pursuant to the Act of July 22, 1937 (7 U.S.C. 1010–1012); and (B) such portions of the revested Oregon and California Railroad and reconveyed Coos Bay Wagon Road grant land as are or may hereafter come under the jurisdiction of the Department of the Interior, which have heretofore or may hereafter be classified as timberlands, and power-site land valuable for timber, that shall be managed, except as provided in the former section 3 of the Act of August 28, 1937 (50 Stat. 875; 43 U.S.C. 1181c), for permanent forest production.

The mathematical equation for each eligible county's base share in section 3(2) is:

$$\left(\frac{\text{NF Acres} + \text{BLM Acres}}{2} + \frac{\text{Average High 3 25\% Payments} + \text{Average High 3 50\% Payments}}{2} \right)$$

Additional explanation of the components of the equation:

Σ NF Acres + BLM Acres = sum of (Σ) acres of NF and BLM land for all eligible counties

Average —high 3|| 25% payments = each eligible county’s potential share of the State’s full payment amount under section 101(a)(1) of P.L. 106-393, based on its historical percentage share of the State’s 25-percent payments and safety net payments during the eligibility period (i.e. for one or more fiscal years from 1986 to 1999). These

amounts are shown in the far right column of the table titled —Determination of States’ Full Payment Amount, P.L. 106-393, Secure Rural Schools and Community Self-Determination Act|| revised March 26, 2007.

Average —high 3|| 50% payments = each BLM county full payment amount under section 101(a)(2) of P.L. 106-393. This amount is calculated only for eligible O&C and Coos Bay Wagon Road counties, which are located only in Oregon.

The denominator:

$$\frac{\text{Average High 3 25\% Payments} + \text{Average High 3 50\% Payments}}{2}$$

is the sum (Σ) of the potential shares of the State’s full payment amount and BLM county full payment amounts for all eligible counties.

Section 3(12) defines —income adjustment|| to mean:

(12) INCOME ADJUSTMENT.—The term —income adjustment|| means the square of the quotient obtained by dividing—

(A) the per capita personal income for each eligible county; by

(B) the median per capita personal income of all eligible counties.

The mathematical equation for each eligible income adjustment in section 3(12) is:

$$\frac{\text{County PCPI}}{\left(\text{Median PCPI of all Eligible Counties} \right)} * \frac{\text{County PCPI}}{\left(\text{Median PCPI of all Eligible Counties} \right)}$$

Additional explanation of the components of the equation:

Per capita personal income (PCPI) as reported by the Bureau of Economic Analysis (BEA.) PCPI is reported in BEA Table CA1-3 which is updated annually in May. The data is usually 2 years older than the year for which the calculation is made. For example, in calculating the fiscal year 2008 payment, the most recent available PCPI data was for 2006. BEA website: <http://www.bea.gov/regional/reis>

In addition to the changes, under the 2008 reauthorization, “Full funding” amount declined each year:

- 2008 \$500 million

- 2009 \$450 million
- 2010 \$405 million
- 2011 \$364.5 million
- Payments generally will be made in December for the fiscal year ending September 30. Title I and title III funds are paid to states to be distributed to counties Title II funds are held in a Forest Service account to pay for approved projects. Title II funds unobligated in one fiscal year shall be available in the following year. Authority to initiate title II and title III projects ends September 30, 2011. Finally, Title II and III funds not obligated by September 30, 2012 shall be returned to U.S. Treasury.

For Title II, approved projects must comply with laws and regulations, be consistent with Forest Plan(s), be properly submitted and recommended by RAC, and meet purposes of the Act and title II:

- road, trail, and infrastructure maintenance or obliteration;
- soil productivity improvement;
- improvements in forest ecosystem health;
- watershed restoration and maintenance;
- the restoration, maintenance, and improvement of wildlife and fish habitat;
- the control of noxious and exotic weeds; and
- the re-establishment of native species

where at least 50% of title II funds are for

- road maintenance, decommissioning or obliteration
- restoration of streams and watersheds

Projects may be proposed by:

- Resource advisory committee
- Counties
- Fire Safe Councils, Firewise communities
- Fish and wildlife interest groups
- Other national forest stakeholders
- Forest Service

Project must be implemented thru cooperative agreements

- federal agencies
- state and local governments
- private and nonprofit agencies
- landowners

Or be implemented by

- Contractor or by Forest Service personnel

The Secretary (Forest Service) has sole discretion to approve project

- Disapprovals are not subject to appeal or judicial review
- RAC will be notified of disapproval within 30 days with explanation

The Resource Advisory Councils were developed to improve collaboration and provide advice to Forest Service. RACs are organized and formed to advise the National Forest, The Secretary may establish resource advisory committees for part of, or for one or more national forests. Projects recommended by the RAC must be approved by the Forest Service The RACs also have special requirements for groups A, B and C.

Category A: 5 persons representing--

- (i) organized labor or non-timber forest product harvester groups
- (ii) developed outdoor recreation, off highway vehicle users, or commercial recreation activities;
- (iii) (I) energy and mineral development interests; or (II) commercial or recreational fishing interests;
- (iv) commercial timber industry; or
- (v) hold Federal grazing or other land use permits, or represent nonindustrial private forest land owners, within the area for which the committee is organized

Category B: 5 persons representing

- (i) nationally recognized environmental organizations;
- (ii) regionally or locally recognized environmental organizations;
- (iii) dispersed recreational activities;
- (iv) archaeological and historical interests; or
- (v) nationally or regionally recognized wild horse and burro interest groups, wildlife or hunting organizations, or watershed associations.

Category C: 5 persons that--

- (i) hold State elected office (or a designee);
- (ii) hold county or local elected office;
- (iii) represent American Indian tribes within or adjacent to the area for which the committee is organized;
- (iv) are school officials or teachers; or
- (v) represent the affected public at large.

One replacement member will be appointed for each of the 3 categories. Members serve a 4 year term. Members will not receive compensation Forest Service, if funds are available, may reimburse members for travel related expenses. Each RAC is included on a charter approved by the Secretary of Agriculture. Each RAC may develop and maintain its own by-laws or operating principles consistent with the Act and charter. RAC members will select a chairperson. A quorum is required for meetings. A majority is required for project approval. Meetings are open to the public. Each RAC must publish meetings at least 15 days in advance in Federal Register, publicize meetings at least 7 days in advance in local newspaper of record and I maintain meeting records. There is a designated Federal Official (DFO) from Forest Service will work with the RAC, the Forest Service may provide additional staff support or request RAC to agree to use title II funds for environmental review of a project. RAC operations must conform to the Federal

Advisory Committee Act (See USDA Directive 1041.001, www.ocio.usda.gov/directives/doc/DR1041-001.htm).

The Reauthorized Act changes title III narrows the activities eligible for funding, adds a certification requirement, and requires county to return unobligated funds by September 30, 2012, to U.S.Treasury. Funds may be used only for 3 purposes:

- Firewise Communities program
- Reimbursement for emergency services on federal land paid for by the county
- Develop community wildfire protection plans (CWPPs)

Each County must publish proposed use of title III funds in newspaper of record, provide a 45-day public comment period, notify the appropriate RAC(s) of its proposed use of title III funds and certify authorized use of funds to Secretary by February 1 each year.

Finally, Title IV of the reauthorized Act amends the 1908 law to calculate 25% payments 7 year rolling average of receipts. This formula will continue after the Secure Rural Schools Act expires. The following two websites provide additional information:

Secure Rural Schools website (www.fs.fed.us/srs); and
Resource advisory committee website (https://wwwnotes.fs.fed.us/wo/secure_rural_schools.nsf)

6.7.2 PILT

The Department of the Interior makes the PILT payments to local governments to help offset losses in property taxes due to non-taxable Federal lands within their boundaries. More information about PILT is on the Department of the Interior web site, <http://www.doi.gov/pilt/index.cfm>

The PILT payments are made annually for tax-exempt Federal lands administered by the Bureau of Land Management (BLM), the National Park Service, the U.S. Fish and Wildlife Service (all bureaus of the Interior Department), the U.S. Forest Service (an agency in the U.S. Department of Agriculture), and for Federal water projects and some military installations.

The formula used to compute the payments is contained in the PILT Act (31 USC Chapter 69) and is based on population, receipt sharing payments, and the amount of Federal land within an affected county. PILT payments are in addition to other Federal revenues (such as oil and gas leasing, livestock grazing, and timber harvesting) that the Federal Government transfers to the States.

6.7.2.1 PILT Rules and Equations

Rules for PILT are outlined under 31 USC title 31--Money and Finance, Subtitle V--General Assistance Administration, Chapter 69--Payment for Entitlement Land:

Sec. 6901. Definitions

In this chapter--

(1) "entitlement land" means land owned by the United States Government--

(A) that is in the National Park System or the National Forest System, including wilderness areas and lands described in section 2 of the Act of June 22, 1948 (16 U.S.C. 577d), and section 1 of the Act of June 22, 1956 (16 U.S.C. 577d-1);

(B) the Secretary of the Interior administers through the Bureau of Land Management;

(C) dedicated to the use of the Government for water resource development projects;

(D) on which are located semi-active or inactive installations (except industrial installations) that the Secretary of the Army keeps for mobilization and for reserve component training;

(E) that is a dredge disposal area under the jurisdiction of the Secretary of the Army;

(F) that is located in the vicinity of Purgatory River Canyon and Pinon Canyon, Colorado, and acquired after December 23, 1981, by the United States Government to expand the Fort Carson military installation; or

(G) that is a reserve area (as defined in section 401(g)(3) of the Act of June 15, 1935 (16 U.S.C. 715s(g)(3))).

(2)(A) 'unit of general local government' means-

"(i) a county (or parish), township, borough, or city (other than in Alaska) where the city is independent of any other unit of general local government, that-

"(I) is within the class or classes of such political subdivisions in a State that the Secretary of the Interior, in his discretion, determines to be the principal provider or providers of governmental services within the State; and

"(II) is a unit of general government as determined by the Secretary of the Interior on the basis of the same principles as were used on January 1, 1983, for general statistical purposes;

"(ii) any area in Alaska that is within the boundaries of a census area used by the Secretary of Commerce in the decennial census, but that is not included within the boundary of a governmental entity described under clause (i);

"(iii) the District of Columbia;

"(iv) the Commonwealth of Puerto Rico;

"(v) Guam; and

"(vi) the Virgin Islands.

"(B) the term 'governmental services' includes, but is not limited to, those services that relate to public safety, the environment, housing, social services, transportation, and governmental administration."

Sec. 6902. Authority and Eligibility

(a) The Secretary of the Interior shall make a payment for each fiscal year to each unit of general local government in which entitlement land is located, as set forth in this chapter. A unit of general local government may use the payment for any governmental purpose.

(b) A unit of general local government may not receive a payment for land for which payment under this Act otherwise may be received if the land was owned or administered by a State or unit of general local government and was exempt from real estate taxes when the land was conveyed to the United States except that a unit of general local government may receive a payment for--

(1) land a State or unit of general local government acquires from a private party to donate to the United States within 8 years of acquisition;

(2) land acquired by a State through an exchange with the United States if such land was entitlement land as defined by this chapter;

or

(3) land in Utah acquired by the United States for Federal land, royalties, or other assets if, at the time of such acquisition, a unit of general local government was entitled under applicable State law to receive payments in lieu of taxes from the State of Utah for such land: Provided, however, That no payment under this paragraph shall exceed the payment that would have been made under State law if such land had not been acquired.

Sec. 6903. Payments

(a) In this section--

(1) "payment law" means--

(A) the Act of June 20, 1910 (ch. 310, 36 Stat. 557);

(B) section 33 of the Bankhead-Jones Farm Tenant Act (7 U.S.C. 1012);

(C) the Act of May 23, 1908 (16 U.S.C. 500);

- (D) section 5 of the Act of June 22, 1948 (16 U.S.C. 577g, 577g-1);
- (E) section 401(c)(2) of the Act of June 15, 1935 (16 U.S.C. 715s(c)(2));
- (F) section 17 of the Federal Power Act (16 U.S.C. 810);
- (G) section 35 of the Act of February 25, 1920 (30 U.S.C.191);
- (H) section 6 of the Mineral Leasing Act for Acquired Lands (30 U.S.C. 355);
- (I) section 3 of the Act of July 31, 1947 (30 U.S.C. 603); and
- (J) section 10 of the Act of June 28, 1934 (known as the Taylor Grazing Act) (43 U.S.C. 315i).

(2) population shall be determined on the same basis that the Secretary of Commerce determines resident population for general statistical purposes.

(3) a unit of general local government may not be credited with a population of more than 50,000.

(b)(1) A payment under section 6902 of this title is equal to the greater of--

(A) 93 cents during fiscal year 1995, \$1.11 during fiscal year 1996, \$1.29 during fiscal year 1997, \$1.47 during fiscal year 1998, and \$1.65 during fiscal year 1999 and thereafter, for each acre of entitlement land located within a unit of general local government (but not more than the limitation determined under subsection (c) of this section) reduced (but not below 0) by amounts the unit received in the prior fiscal year under a payment law; or

(B) 12 cents during fiscal year 1995, 15 cents during fiscal year 1996, 17 cents during fiscal year 1997, 20 cents during fiscal year 1998, and 22 cents during fiscal year 1999 and thereafter, for each acre of entitlement land located in the unit (but not more than the limitation determined under subsection (c) of this section).

(2) The chief executive officer of a State shall submit to the Secretary of the Interior a statement on the amounts of payments the State transfers to each unit of general local government in the State out of amounts received under a payment law.

(c)(1) The limitation for a unit of general local government with a population of not more than 4,999 is the highest dollar amount specified in paragraph (2).

(2) The limitation for a unit of general local government with a population of at least 5,000 is the following amount (rounding the population off to the nearest thousand):

If population equals-- the limitation is equal to the population times--

5,000..... \$110.00

6,000.....	103.00
7,000.....	97.00
8,000.....	90.00
9,000.....	84.00
10,000.....	77.00
11,000.....	75.00
12,000.....	73.00
13,000.....	70.00
14,000.....	68.00
15,000.....	66.00
16,000.....	65.00
17,000.....	64.00
18,000.....	63.00
19,000.....	62.00
20,000.....	61.00
21,000.....	60.00
22,000.....	59.00
23,000.....	59.00
24,000.....	58.00
25,000.....	57.00
26,000.....	56.00
27,000.....	56.00
28,000.....	56.00
29,000.....	55.00
30,000.....	55.00
31,000.....	54.00
32,000.....	54.00
33,000.....	53.00
34,000.....	53.00
35,000.....	52.00
36,000.....	52.00
37,000.....	51.00
38,000.....	51.00
39,000.....	50.00
40,000.....	50.00
41,000.....	49.00
42,000.....	48.00
43,000.....	48.00
44,000.....	47.00
45,000.....	47.00
46,000.....	46.00
47,000.....	46.00
48,000.....	45.00
49,000.....	45.00
50,000.....	44.00

(d) On October 1 of each year after the date of enactment of the Payment in Lieu of Taxes Act, the Secretary of the Interior shall adjust each dollar amount specified in subsections (b) and (c) to reflect changes in the Consumer Price Index published by the Bureau of Labor Statistics of the Department of Labor, for the 12 months ending the preceding June 30.

Sec. 6904. Additional payments

(a) In addition to payments the Secretary of the Interior makes under section 6902 of this title, the Secretary shall make a payment for each fiscal year to a unit of general local government collecting and distributing real property taxes (including a unit in Alaska outside the boundaries of an organized borough) in which is located an interest in land that--

(1) the United States Government acquires for--

(A) the National Park System; or

(B) the National Forest Wilderness Areas; and

(2) was subject to local real property taxes within the 5-year period before the interest is acquired.

(b) The Secretary shall make payments only for the 5 fiscal years after the fiscal year in which the interest in land is acquired. Under guidelines the Secretary prescribes, the unit of general local government receiving the payment from the Secretary shall distribute payments proportionally to units and school districts that lost real property taxes because of the acquisition of the interest. A unit receiving a distribution may use a payment for any governmental purpose.

(c) Each yearly payment by the Secretary under this section is equal to one percent of the fair market value of the interest in land on the date the Government acquires the interest. However, a payment may not be more than the amount of real property taxes levied on the property during the last fiscal year before the fiscal year in which the interest is acquired. A decision on fair market value under this section may not include an increase in the value of an interest because the land is rezoned when the rezoning causes the increase after the date of enactment of a law authorizing the acquisition of an interest under subsection (a) of this section.

(d) The Secretary may prescribe regulations under which payments may be made to units of general local government when subsections (a) and (b) of this section will not carry out the purpose of subsections (a) and (b).

Sec. 6905. Redwood National Park and the Lake Tahoe Basin

(a) The Secretary of the Interior shall make a payment for each fiscal year to each unit of general local government in which an interest in land owned by the United States Government in the Redwood National Park is located. A unit may use the payment for any governmental purpose. The payment shall be made as provided in section 6903 of this title and shall include an amount payable under section 6903.

(b)(1) In addition to payments the Secretary makes under subsection

(a) of this section, the Secretary shall make a payment for each fiscal year to each unit of general local government in which is located an interest in land--

(A) owned by the Government in the Redwood National Park; or

(B) acquired in the Lake Tahoe Basin under the Act of December 23, 1980 (Public Law 96-586, 94 Stat. 3383).

(2) The payment shall be made as provided in section 6904 of this title and shall include an amount payable under section 6904. However, an amount computed but not paid because of the first sentence of subsection (b) and the 2d sentence of subsection (c) of section 6904 shall be carried forward and applied to future years in which the payment would not otherwise equal the amount of real property taxes assessed and levied on the land during the last fiscal year before the fiscal year in which the interest was acquired until the amount is applied completely.

(3) The unit of general local government may use the payment for any governmental purpose.

(4) The Redwoods Community College District is a school district under section 6904(b) of this title.

Sec. 6906. Authorization of appropriations

Necessary amounts may be appropriated to the Secretary of the Interior to carry out this chapter. Amounts are available only as provided in appropriation laws.

Sec. 6907. State legislation requiring reallocation or redistribution of payments to smaller units of general purpose government

(a) Notwithstanding any other provision of this chapter, a State may enact legislation which requires that any payments which would be made to units of general local government pursuant to this chapter be reallocated and redistributed in whole or part to other smaller units of general purpose government which (1) are located within the boundaries of the larger unit of general local government, (2) provide general governmental services and (3) contain entitlement lands within their boundaries. Such reallocation or redistribution shall generally reflect the level of services provided by, and the number of entitlement acres within, the smaller unit of general local government.

(b) Upon enactment of legislation by a State, described in subsection (a), the Secretary shall make one payment to such State equaling the aggregate amount of payments which he otherwise would have made to units of general local government within such State pursuant to this chapter. It shall be the responsibility of such State to make any further distribution of the payment pursuant to subsection (a). Such redistribution shall be made within 30 days after receipt of such

payment. No payment, or portion thereof, made by the Secretary shall be used by any State for the administration of this subsection or subsection (a).

(c) Appropriations made for payments in lieu of taxes for a fiscal year may be used to correct underpayments in the previous fiscal year to achieve equity among all qualified recipients.

6.7.3 Relationship between Forest Service payments to States and PILT

A county that has been receiving PILT payments in addition to its 25-percent payment continues to receive a PILT payment. A county's PILT payment may be reduced if the county receives a share of the State payment that is larger than its share of the 25-percent payment would have been. The PILT payment formula considers other prior year Federal land payments in its calculation. Counties that receive increased funding under the Secure Rural Schools Act may find that their PILT payments are reduced. This will not affect counties already receiving mandatory minimum PILT payments (i.e., counties that already receive large Federal land payments). PILT payments for these counties would remain unchanged.

In general, only the roads portion of the schools and roads allocation (commonly called title I) and the title III allocation is considered in the PILT calculation. The portion of the State payment allocated for schools and the title II allocation are not considered in the PILT formula.

6.7.4 Federal Payment Trends and Profiles

Figure 6.7.4.1a- 6.7.4.1d show the trends in the various federal payments for each of the council of government regions from 1986 through 2012.

In the Isothermal and Western Piedmont Region, From FY 1986 to FY 2012, Forest Service revenue sharing payments grew from \$191,607 to \$292,778, an increase of 53 percent.

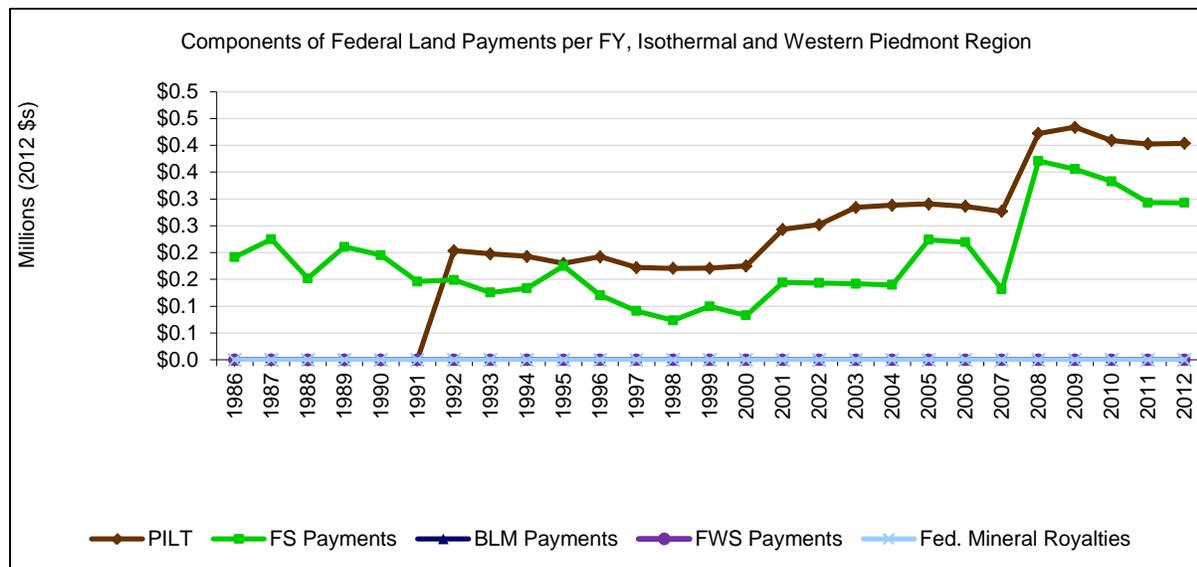


Figure 6.7.1a. Trends in Federal Payments to Counties in the Isothermal and Western Piedmont Region, 1986-2012.

In the High Country Region, from FY 1986 to FY 2012, Forest Service revenue sharing payments grew from \$94,717 to \$147,207, an increase of 55 percent..

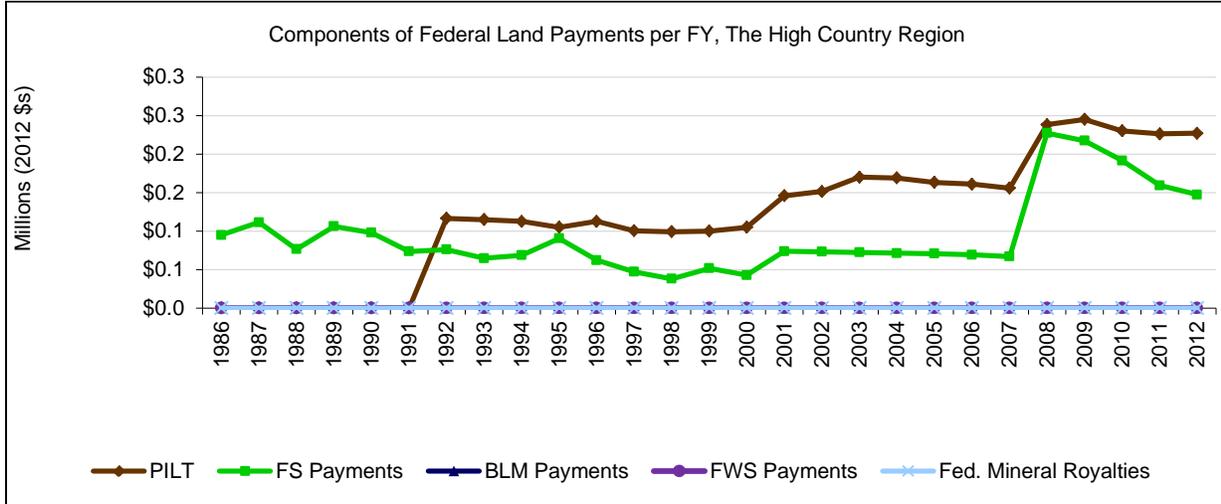


Figure 6.7.1b. Trends in Federal Payments to Counties in the High Country Region, 1986-2012.

In the Land-of-Sky Region, from FY 1986 to FY 2012, Forest Service revenue sharing payments grew from \$220,580 to \$261,258, an increase of 18 percent.

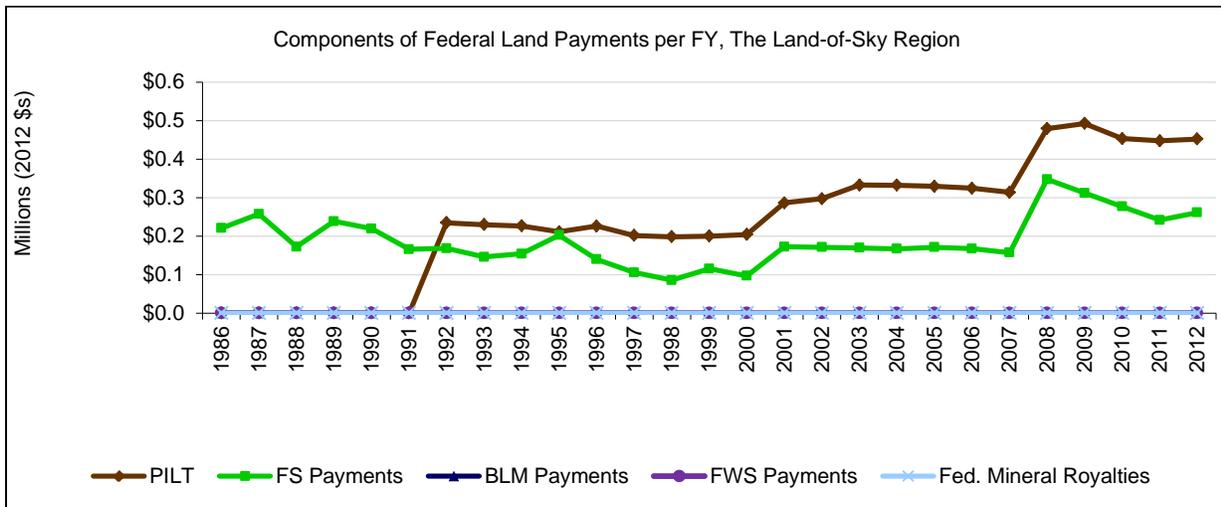


Figure 6.7.1c. Trends in Federal Payments to Counties in the Land-of-Sky Region, 1986-2012.

In the Southwestern Region, from FY 1986 to FY 2012, Forest Service revenue sharing payments shrank from \$1,001,733 to \$945,694, a decrease of 6 percent.

Forest Service revenue sharing payments grew from \$220,580 to \$261,258, an increase of 18 percent.

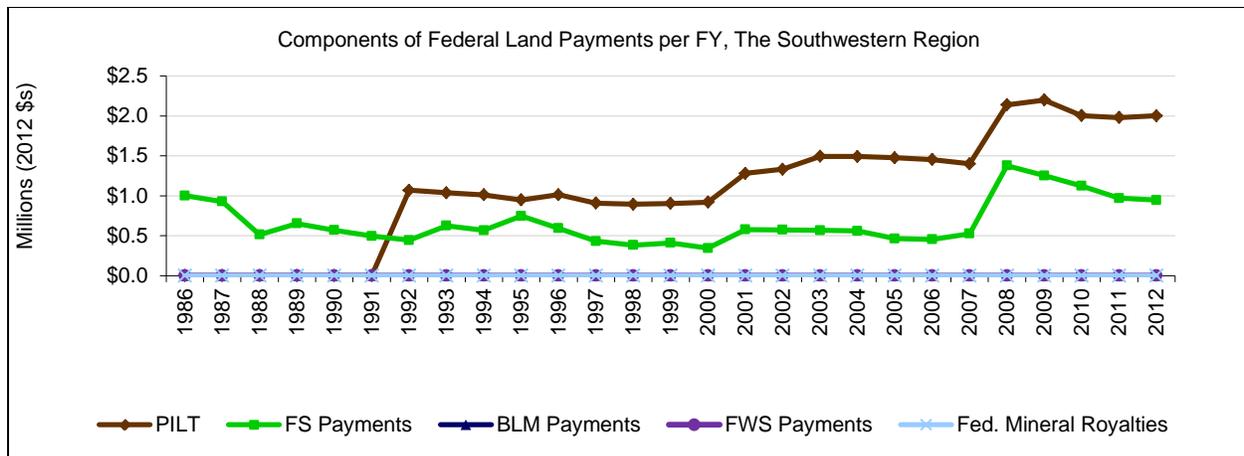


Figure 6.7.1d. Trends in Federal Payments to Counties in the Southwestern Region, 1986-2012.

In FY 2012, PILT made up the largest percent of federal land payments in the Isothermal and Western Piedmont Region (58%), and BLM Payments made up the smallest (0%). Table 6.7.1.1a 6.7.1.1d show the 2012 federal payments to each of the counties since 1998.

Table 6.7.1.1a. Federal Payments to Counties in the Isothermal and Western Piedmont Region, 2012.

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total Federal Land Payments by Geography of Origin (\$)	191,883	208,401	296,316	5,933,175	696,599	2,902,317,025
PILT	122,481	122,107	159,233	4,030,522	403,821	393,044,454
Forest Service Payments	69,402	86,294	137,083	1,902,474	292,778	323,195,391
BLM Payments	0	0	0	20	0	64,789,838
USFWS Refuge Payments	0	0	0	2,585,010	0	0
Federal Mineral Royalties	0	0	0	159	0	2,125,288,105
Percent of Total						
PILT	63.8%	58.6%	53.7%	67.9%	58.0%	13.5%
Forest Service Payments	36.2%	41.4%	46.3%	32.1%	42.0%	11.1%
BLM Payments	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%
USFWS Refuge Payments	0.0%	0.0%	0.0%	43.6%	0.0%	0.0%
Federal Mineral Royalties	0.0%	0.0%	0.0%	0.0%	0.0%	73.2%

In FY 2012, PILT made up the largest percent of federal land payments in the High Country Region (60.7%), and BLM Payments made up the smallest (0%).

Table 6.7.1.1b. Federal Payments to Counties in the High Country Region, 2012.

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Federal Land Payments by							

Geography of Origin (\$)	117,332	80,604	23,580	152,756	5,933,175	374,271	2,902,317,025
PILT	73,892	48,165	22,986	82,021	4,030,522	227,064	393,044,454
Forest Service Payments	43,440	32,439	594	70,735	1,902,474	147,207	323,195,391
BLM Payments	0	0	0	0	20	0	64,789,838
USFWS Refuge Payments	0	0	0	0	2,585,010	0	0
Federal Mineral Royalties	0	0	0	0	159	0	2,125,288,105

Percent of Total

PILT	63.0%	59.8%	97.5%	53.7%	67.9%	60.7%	13.5%
Forest Service Payments	37.0%	40.2%	2.5%	46.3%	32.1%	39.3%	11.1%
BLM Payments	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%
USFWS Refuge Payments	0.0%	0.0%	0.0%	0.0%	43.6%	0.0%	0.0%
Federal Mineral Royalties	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	73.2%

In FY 2012, PILT made up the largest percent of federal land payments in the Land-of-Sky Region (63.4%), and BLM Payments made up the smallest (0%).

Table 6.7.1.c. Federal Payments to Counties in the Land-of-Sky Region, 2012.

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Federal Land Payments by Geography of Origin (\$)	117,689	60,714	209,611	325,191	5,933,175	713,205	2,902,317,025
PILT	83,497	43,328	120,679	204,443	4,030,522	451,947	393,044,454
Forest Service Payments	34,192	17,386	88,932	120,748	1,902,474	261,258	323,195,391
BLM Payments	0	0	0	0	20	0	64,789,838
USFWS Refuge Payments	0	0	0	0	2,585,010	0	0
Federal Mineral Royalties	0	0	0	0	159	0	2,125,288,105

Percent of Total

PILT	70.9%	71.4%	57.6%	62.9%	67.9%	63.4%	13.5%
Forest Service Payments	29.1%	28.6%	42.4%	37.1%	32.1%	36.6%	11.1%
BLM Payments	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%
USFWS Refuge Payments	0.0%	0.0%	0.0%	0.0%	43.6%	0.0%	0.0%
Federal Mineral Royalties	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	73.2%

In FY 2012, PILT made up the largest percent of federal land payments in the Southwestern Region (67.9%), and BLM Payments made up the smallest (0%).

Table 6.7.1.d. Federal Payments to Counties in the Southwestern Region, 2012.

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total Federal Land Payments by Geography of Origin (\$)	384,954	258,664	474,310	331,458	307,076	562,674	628,896	5,933,175	2,948,033	2,902,317,025
PILT	197,820	143,968	235,107	312,376	179,476	342,060	591,532	4,030,522	2,002,339	393,044,454
Forest Service Payments	187,134	114,696	239,203	19,082	127,600	220,614	37,364	1,902,474	945,694	323,195,391

BLM Payments	0	0	0	0	0	0	0	20	0	64,789,838
USFWS Refuge Payments	0	0	0	0	0	0	0	2,585,010	0	0
Federal Mineral Royalties	0	0	0	0	0	0	0	159	0	2,125,288,105

Percent of Total

PILT	51.4%	55.7%	49.6%	94.2%	58.4%	60.8%	94.1%	67.9%	67.9%	13.5%
Forest Service Payments	48.6%	44.3%	50.4%	5.8%	41.6%	39.2%	5.9%	32.1%	32.1%	11.1%
BLM Payments	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%
USFWS Refuge Payments	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	43.6%	0.0%	0.0%
Federal Mineral Royalties	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	73.2%

In FY 2012, Title I payments were the greatest portion of Forest Service revenue sharing in Isothermal and Western Piedmont Region (93%), and Title III were the smaller (7%).

Table 6.7.1.2a Forest Service Revenue Sharing Payments in the Isothermal and Western Piedmont Region, FY 2012 (2012 \$s)

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Forest Service Total	69,402	86,294	137,083	1,902,474	292,778	323,195,391
Secure Rural Schools Total	69,402	86,294	137,083	1,883,312	292,778	305,792,128
Title I	69,402	86,294	116,520	1,699,290	272,216	259,777,009
Title II	0	0	0	0	0	31,939,953
Title III	0	0	20,562	184,022	20,562	14,075,166
25% Fund	0	0	0	19,162	0	11,240,438
Forest Grasslands	0	0	0	0	0	0
Special Acts	0	0	0	0	0	6,162,825

Percent of Total

Secure Rural Schools Total	100.0%	100.0%	100.0%	99.0%	100.0%	94.6%
Title I	100.0%	100.0%	85.0%	89.3%	93.0%	80.4%
Title II	0.0%	0.0%	0.0%	0.0%	0.0%	9.9%
Title III	0.0%	0.0%	15.0%	9.7%	7.0%	4.4%
25% Fund	0.0%	0.0%	0.0%	1.0%	0.0%	3.5%
Forest Grasslands	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Special Acts	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%

In FY 2012, Title I payments were the complete Forest Service revenue sharing in High Country Region (100%), and Title II and Title III were non-existent (0%).

Table 6.7.1.2b Forest Service Revenue Sharing Payments in the High Country Region, FY 2012 (2012 \$s)

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Forest Service Total	43,440	32,439	594	70,735	1,902,474	147,207	323,195,391
Secure Rural Schools Total	43,440	32,439	594	70,735	1,883,312	147,207	305,792,128
Title I	43,440	32,439	594	70,735	1,699,290	147,207	259,777,009
Title II	0	0	0	0	0	0	31,939,953
Title III	0	0	0	0	184,022	0	14,075,166

25% Fund	0	0	0	0	19,162	0	11,240,438
Forest Grasslands	0	0	0	0	0	0	0
Special Acts	0	0	0	0	0	0	6,162,825

Percent of Total

Secure Rural Schools Total	100.0%	100.0%	100.0%	100.0%	99.0%	100.0%	94.6%
Title I	100.0%	100.0%	100.0%	100.0%	89.3%	100.0%	80.4%
Title II	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.9%
Title III	0.0%	0.0%	0.0%	0.0%	9.7%	0.0%	4.4%
25% Fund	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	3.5%
Forest Grasslands	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Special Acts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%

In FY 2012, Title I payments were the greatest portion Forest Service revenue sharing in Land-of-Sky Region (93.1%), and Title III were non-existent (6.9%).

Table 6.7.1.2c Forest Service Revenue Sharing Payments in the Land-of-Sky Region, FY 2012 (2012 \$s)

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Forest Service Total	34,192	17,386	88,932	120,748	1,902,474	261,258	323,195,391
Secure Rural Schools Total	34,192	17,386	88,932	120,748	1,883,312	261,258	305,792,128
Title I	34,192	17,386	88,932	102,635	1,699,290	243,146	259,777,009
Title II	0	0	0	0	0	0	31,939,953
Title III	0	0	0	18,112	184,022	18,112	14,075,166
25% Fund	0	0	0	0	19,162	0	11,240,438
Forest Grasslands	0	0	0	0	0	0	0
Special Acts	0	0	0	0	0	0	6,162,825

Percent of Total

Secure Rural Schools Total	100.0%	100.0%	100.0%	100.0%	99.0%	100.0%	94.6%
Title I	100.0%	100.0%	100.0%	85.0%	89.3%	93.1%	80.4%
Title II	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.9%
Title III	0.0%	0.0%	0.0%	15.0%	9.7%	6.9%	4.4%
25% Fund	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	3.5%
Forest Grasslands	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Special Acts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%

In FY 2012, Title I payments were the greatest portion Forest Service revenue sharing in Southwestern Region (82.6%), and Title III were non-existent (15.4%).

Table 6.7.1.2d Forest Service Revenue Sharing Payments in the Southwestern Region, FY 2012 (2012 \$s)

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Forest Service Total	187,134	114,696	239,203	19,082	127,600	220,614	37,364	1,902,474	945,694	323,195,391

Secure Rural Schools Total	187,134	114,696	239,203	0	127,600	220,614	37,364	1,883,312	926,612	305,792,128
Title I	159,064	97,492	191,363	0	108,460	187,522	37,364	1,699,290	781,265	259,777,009
Title II	0	0	0	0	0	0	0	0	0	31,939,953
Title III	28,070	17,204	47,841	0	19,140	33,092	0	184,022	145,347	14,075,166
25% Fund	0	0	0	19,082	0	0	0	19,162	19,082	11,240,438
Forest Grasslands	0	0	0	0	0	0	0	0	0	0
Special Acts	0	0	0	0	0	0	0	0	0	6,162,825

Percent of Total

Secure Rural Schools Total	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	99.0%	98.0%	94.6%
Title I	85.0%	85.0%	80.0%	0.0%	85.0%	85.0%	100.0%	89.3%	82.6%	80.4%
Title II	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.9%
Title III	15.0%	15.0%	20.0%	0.0%	15.0%	15.0%	0.0%	9.7%	15.4%	4.4%
25% Fund	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	1.0%	2.0%	3.5%
Forest Grasslands	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Special Acts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%

Table 6.7.1.3a shows the distribution of these funds to different levels of government in the Isothermal and Western Piedmont Region during 2012. In FY 2012, County Government made up the largest percent of federal land (80.5%), and State Government made up the smallest (0%).

Table 6.7.1.3a. Distribution of Federal Land Payments to State and Local Governments by Geography of Origin, FY 2012 (2012 \$) in the Isothermal and Western Piedmont Region.

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total Federal Land Payments by Geography of Origin (\$)	191,883	208,401	296,316	5,933,175	696,599	2,902,317,025
State Government	0	0	0	179	0	2,126,066,386
County Government	157,182	165,254	238,055	5,073,770	560,491	604,077,390
Local School Districts	34,701	43,147	58,260	859,226	136,108	123,460,025
RACs	0	0	0	0	0	35,424,877
Grazing Districts	0	0	0	0	0	13,435,599

Percent of Total

State Government	0.0%	0.0%	0.0%	0.0%	0.0%	73.3%
County Government	81.9%	79.3%	80.3%	85.5%	80.5%	20.8%
Local School Districts	18.1%	20.7%	19.7%	14.5%	19.5%	4.3%
RACs	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%
Grazing Districts	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%

Table 6.7.1.3b shows the distribution of these funds to different levels of government in the High Country Region during 2012. In FY 2012, County Government made up the largest percent of federal land (80.3%), and Local Government made up a smaller amount (19.7%).

Table 6.7.1.3b. Distribution of Federal Land Payments to State and Local Governments by Geography of Origin, FY 2012 (2012 \$s) in the High Country Region.

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total Federal Land Payments by Geography of Origin (\$)	117,332	80,604	23,580	152,756	5,933,175	374,271	2,902,317,025
State Government	0	0	0	0	179	0	2,126,066,386
County Government	95,612	64,385	23,283	117,388	5,073,770	300,667	604,077,390
Local School Districts	21,720	16,220	297	35,367	859,226	73,603	123,460,025
RACs	0	0	0	0	0	0	35,424,877
Grazing Districts	0	0	0	0	0	0	13,435,599
Percent of Total							
State Government	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	73.3%
County Government	81.5%	79.9%	98.7%	76.8%	85.5%	80.3%	20.8%
Local School Districts	18.5%	20.1%	1.3%	23.2%	14.5%	19.7%	4.3%
RACs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%
Grazing Districts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%

Table 6.7.1.3c shows the distribution of these funds to different levels of government in the Land-of-Sky Region during 2012. In FY 2012, County Government made up the largest percent of federal land (83%), and Local Government made up a smallest amount (17%).

Table 6.7.1.3c. Distribution of Federal Land Payments to State and Local Governments by Geography of Origin, FY 2012 (2012 \$s) in the Land-of-Sky Region.

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total Federal Land Payments by Geography of Origin (\$)	117,689	60,714	209,611	325,191	5,933,175	713,205	2,902,317,025
State Government	0	0	0	0	179	0	2,126,066,386
County Government	100,593	52,021	165,145	273,873	5,073,770	591,632	604,077,390
Local School Districts	17,096	8,693	44,466	51,318	859,226	121,573	123,460,025
RACs	0	0	0	0	0	0	35,424,877
Grazing Districts	0	0	0	0	0	0	13,435,599
Percent of Total							
State Government	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	73.3%
County Government	85.5%	85.7%	78.8%	84.2%	85.5%	83.0%	20.8%
Local School Districts	14.5%	14.3%	21.2%	15.8%	14.5%	17.0%	4.3%
RACs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%
Grazing Districts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%

Table 6.7.1.3d shows the distribution of these funds to different levels of government in the Southwestern Region during 2012. In FY 2012, County Government made up the largest percent of federal land payments in The Southwestern Region (86.4%), and Local Government made up a smaller amount (13.6%).

Table 6.7.1.3d. Distribution of Federal Land Payments to State and Local Governments by Geography of Origin, FY 2012 (2012 \$s) in the Southwestern Region.

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total Federal Land Payments by Geography of Origin (\$)	384,954	258,664	474,310	331,458	307,076	562,674	628,896	5,933,175	2,948,033	2,902,317,025
State Government	0	0	0	0	0	0	0	179	0	2,126,066,386
County Government	305,422	209,918	378,629	321,917	252,846	468,913	610,214	5,073,770	2,547,859	604,077,390
Local School Districts	79,532	48,746	95,681	9,541	54,230	93,761	18,682	859,226	400,173	123,460,025
RACs	0	0	0	0	0	0	0	0	0	35,424,877
Grazing Districts	0	0	0	0	0	0	0	0	0	13,435,599
Percent of Total										
State Government	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	73.3%
County Government	79.3%	81.2%	79.8%	97.1%	82.3%	83.3%	97.0%	85.5%	86.4%	20.8%
Local School Districts	20.7%	18.8%	20.2%	2.9%	17.7%	16.7%	3.0%	14.5%	13.6%	4.3%
RACs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%
Grazing Districts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%

6.7.4.1 Contribution to County Budgets

In FY 2007, federal land payments as a percent of total general government revenue in Isothermal and Western Piedmont Region was 0.1%. For this figure:

- Taxes are all taxes collected by state and local governments, including property, sales, and income tax.
- Intergovernmental Revenue: Payments, grants, and distributions from other governments, including federal education, health care, and transportation assistance to state governments, and state assistance to local governments.
- Total Charges: Charges imposed for providing current services, including social services, library, and clerk and recorder charges.
- All Other (Miscellaneous): All other general government revenue from their own sources.

Table 6.7.4.1a Federal Land Payments as a Share of Total General Government Revenue in the Isothermal and Western Piedmont Region, Thousands of FY 2007 (2012 \$s)

	Burke County, NC	Caldwell County, NC	McDowell County, NC	North Carolina	The Isothermal and Western Piedmont Region	U.S.
Total General Revenue	234,653	203,566	103,576	46,870,903	541,796	na
Taxes	47,581	49,267	29,434	25,032,367	126,282	na
Intergovernmental Revenue	159,023	132,258	62,620	14,647,009	353,900	na
Total Charges	23,802	17,237	8,021	4,022,923	49,060	na
All Other (Miscellaneous)	4,248	4,804	3,501	3,168,603	12,553	na
Federal Land Payments (FY 2006)	118	119	254	4,822	491	3,178,970

Percent of Total

Taxes	20.3%	24.2%	28.4%	53.4%	23.3%	na
Intergovernmental Revenue	67.8%	65.0%	60.5%	31.2%	65.3%	na
Total Charges	10.1%	8.5%	7.7%	8.6%	9.1%	na
All Other (Miscellaneous)	1.8%	2.4%	3.4%	6.8%	2.3%	na
Federal Land Payments (FY 2006)	0.1%	0.1%	0.2%	0.0%	0.1%	na

In FY 2007, federal land payments as a percent of total general government revenue in Isothermal and Western Piedmont Region was 0.1%.

Table 6.7.4.1b Federal Land Payments as a Share of Total General Government Revenue in the High Country Region, Thousands of FY 2007 (2012 \$s)

	Avery County, NC	Mitchell County, NC	Watauga County, NC	Yancey County, NC	North Carolina	The High Country Region	U.S.
Total General Revenue	51,201	52,919	99,908	54,868	46,870,903	258,896	na
Taxes	22,508	11,606	44,764	14,073	25,032,367	92,950	na
Intergovernmental Revenue	25,047	37,082	40,366	28,689	14,647,009	131,184	na
Total Charges	2,332	3,100	10,797	8,470	4,022,923	24,698	na
All Other (Miscellaneous)	1,314	1,131	3,982	3,636	3,168,603	10,064	na
Federal Land Payments (FY 2006)	70	46	15	93	4,822	223	3,178,970

Percent of Total

Taxes	44.0%	21.9%	44.8%	25.6%	53.4%	35.9%	na
Intergovernmental Revenue	48.9%	70.1%	40.4%	52.3%	31.2%	50.7%	na
Total Charges	4.6%	5.9%	10.8%	15.4%	8.6%	9.5%	na
All Other (Miscellaneous)	2.6%	2.1%	4.0%	6.6%	6.8%	3.9%	na
Federal Land Payments (FY 2006)	0.1%	0.1%	0.0%	0.2%	0.0%	0.1%	na

In FY 2007, federal land payments as a percent of total general government revenue in Land-of-Sky Region was 0.04%.

Table 6.7.4.1c Federal Land Payments as a Share of Total General Government Revenue in the Land-of-Sky Region, Thousands of FY 2007 (2012 \$s)

	Buncombe County, NC	Henderson County, NC	Madison County, NC	Transylvania County, NC	North Carolina	The Land-of-Sky Region	U.S.
Total General Revenue	652,962	369,709	48,023	79,304	46,870,903	1,149,998	na

Taxes	265,212	92,974	14,319	36,177	25,032,367	408,681	na
Intergovernmental Revenue	315,781	121,463	28,281	33,961	14,647,009	499,485	na
Total Charges	53,246	143,442	3,054	6,063	4,022,923	205,805	na
All Other (Miscellaneous)	18,724	11,831	2,369	3,104	3,168,603	36,027	na
Federal Land Payments (FY 2006)	80	42	142	213	4,822	478	3,178,970
Percent of Total							
Taxes	40.6%	25.1%	29.8%	45.6%	53.4%	35.5%	na
Intergovernmental Revenue	48.4%	32.9%	58.9%	42.8%	31.2%	43.4%	na
Total Charges	8.2%	38.8%	6.4%	7.6%	8.6%	17.9%	na
All Other (Miscellaneous)	2.9%	3.2%	4.9%	3.9%	6.8%	3.1%	na
Federal Land Payments (FY 2006)	0.0%	0.0%	0.3%	0.3%	0.0%	0.0%	na

In FY 2007, federal land payments as a percent of total general government revenue in Southwestern Region was 0.3%.

Table 6.7.4.1b Federal Land Payments as a Share of Total General Government Revenue in the Southwestern Region, Thousands of FY 2007 (2012 \$s)

	Cherokee County, NC	Clay County, NC	Graham County, NC	Haywood County, NC	Jackson County, NC	Macon County, NC	Swain County, NC	North Carolina	The Southwestern Region	U.S.
Total General Revenue	84,055	28,221	30,745	202,790	103,903	92,058	36,262	46,870,903	578,033	na
Taxes	25,823	9,881	10,687	58,220	39,965	37,851	8,506	25,032,367	190,933	na
Intergovernmental Revenue	47,691	15,577	17,066	111,849	51,820	40,689	22,833	14,647,009	307,523	na
Total Charges	5,211	1,866	2,498	14,595	8,536	9,556	3,414	4,022,923	45,676	na
All Other (Miscellaneous)	5,330	897	494	18,126	3,582	3,963	1,509	3,168,603	33,901	na
Federal Land Payments (FY 2006)	235	166	286	270	196	294	405	4,822	1,852	3,178,970
Percent of Total										
Taxes	30.7%	35.0%	34.8%	28.7%	38.5%	41.1%	23.5%	53.4%	33.0%	na
Intergovernmental Revenue	56.7%	55.2%	55.5%	55.2%	49.9%	44.2%	63.0%	31.2%	53.2%	na
Total Charges	6.2%	6.6%	8.1%	7.2%	8.2%	10.4%	9.4%	8.6%	7.9%	na
All Other (Miscellaneous)	6.3%	3.2%	1.6%	8.9%	3.4%	4.3%	4.2%	6.8%	5.9%	na
Federal Land Payments (FY 2006)	0.3%	0.6%	0.9%	0.1%	0.2%	0.3%	1.1%	0.0%	0.3%	na

6.8 NATURAL AMENITIES, AESTHETICS AND THE ECONOMY

Public lands provide recreational, environmental, and lifestyle amenities that can stimulate growth. While amenities alone are typically not sufficient to foster growth, they have increasingly been shown to contribute to population growth and economic development. Many factors can contribute to economic growth, including access to raw materials, workforce quality, availability of investment capital, and transportation networks. In recent decades, amenities have also become increasingly important for people who can choose where to live and work, and for businesses that are not subject to location constraints. Employers now advertise public land amenities to attract and retain a talented workforce. Communities are taking advantage of nearby public lands to attract new businesses, as well as retirement and investment income. Thus, amenities provided by public lands can be considered an economic asset. For a public lands manager, this means proposed activities should be evaluated in the context of how they may impact public lands amenities and, in turn, an economy that may be dependent on these resources. [Excerpted from EPS-HDT].

In 1999, the USDA Economic Research Service (ERS) published their “natural amenity” scale (McGranahan 1999). According to the ERS and other sources (e.g, Cordell et al. 2011, Hunter et al. 2005, Harris et al. 2003, Rudzitis 1989), population change in rural counties is strongly related to their attractiveness as places to live. Factors that influence a county’s “attractiveness” include mild climate, varied topography, and proximity to surface water (ponds, lakes, and shoreline). More specifically, in the ERS study, natural amenities that were shown to make an area more attractive to live in included warm winters, more days of winter sun, a temperate summer climate, low summer humidity, topographic variation, and proximity to water. Such natural amenities make an area attractive to retirees and recreationists and can attract “footloose” workers, or those workers who can work virtually and are not tied to a particular location. Many of these jobs can be very high paying, as in software development or other high-tech service industries. Table 6-17 shows the “natural amenity” rank of counties (1=low amenities; 7=high) in Idaho with the counties ordered by their “raw” score (not shown).

Table 6.8. Natural Amenity Scale for Economic Impact Area Counties

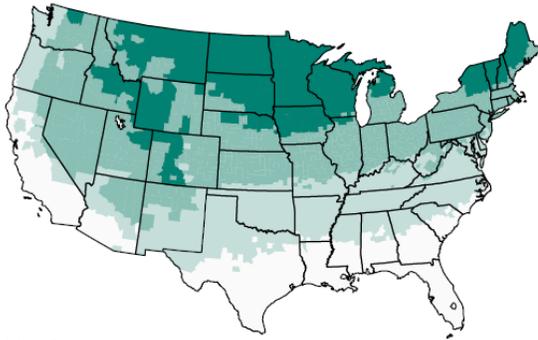
County name	Natural Amenity Rank (1=Low 7=High)
AVERY	4
BUNCOMBE	4
BURKE	4
CALDWELL	4
CHEROKEE	5
CLAY	5
GRAHAM	5
HAYWOOD	4
HENDERSON	4

JACKSON	5
MC DOWELL	4
MACON	5
MADISON	4
MITCHELL	4
SWAIN	5
TRANSYLVANIA	5
WATAUGA	4
YANCEY	4

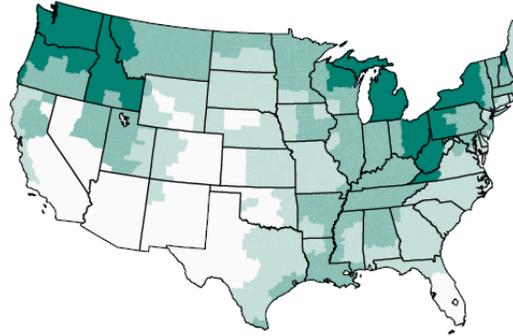
Source: USDA Economic Research Service

Of the 18 counties in the analysis area, seven Counties ranked with a score of 5 and 11 ranked with a score of 4. Figure 6 shows the maps of the characteristics used to rate counties, with darker colors being lower scores (less attractive). Counties in North Carolina rank high on summer temperature and topographic variation, but low on low summer humidity, winter sun, fairly low on water area, fairly high on temperate summers, and high on topographic variation and low summer humidity.

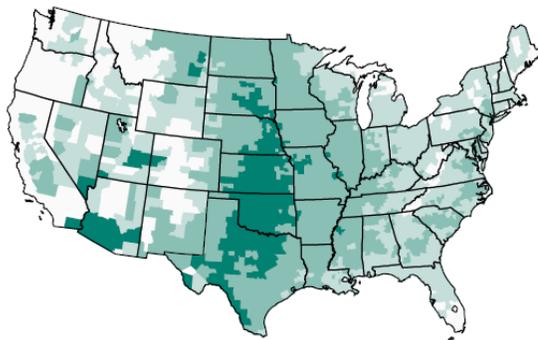
Map 1
Warm winter



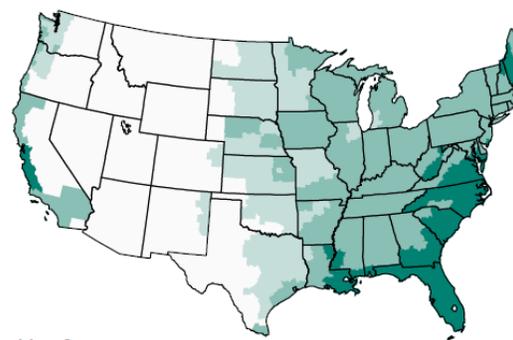
Map 2
Winter sun



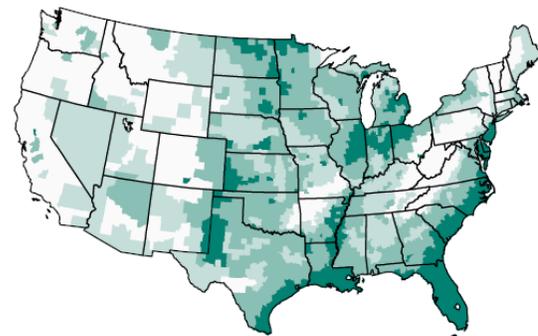
Map 3
Temperate summer



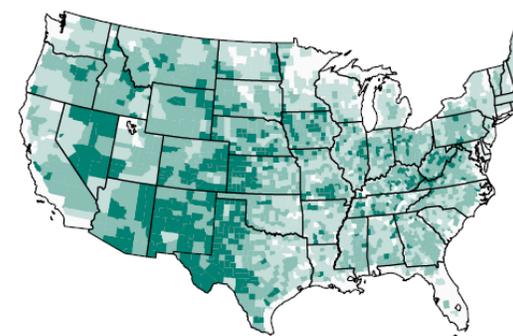
Map 4
Low summer humidity



Map 5
Topographic variation



Map 6
Water area



Low scores  High scores

Note: Maps are standard deviation (s.d.) units from mean, with darkest color over 1 s.d. below mean and lightest over 1 s.d. above. Lighter colors indicate higher scores.

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Figure 6.8. Maps of Amenity Characteristics (McGranahan 1999).

Another factor that can play into amenity-related growth in an economy is proximity to larger markets and commercially viable airline service. Studies have shown that natural amenities by themselves are generally not sufficient to lead to economic development in remote areas (Rasker et al. 2009).

Additional information on natural amenities and rural population change can be found in a recent RPA document entitled “Natural Amenities and Rural Population Migration: A Technical Document Supporting the Forest Service 2010 RPA Assessment” (Cordell et al. 2011). This study began with a review defining natural amenities and amenity migration:

“The National Geographic Society (2005) defines human migration as the movement of people from one place in the world to another for the purpose of taking up permanent or semi-permanent residence, usually across jurisdictional boundaries Domestic migration (also called internal migration) is defined as movement of people within a country International migration is defined as movement of people across country borders (Perry 2006) According to the International Organization for Migration (2004), no universally accepted definition of a migrant exists. It usually refers to the people who freely decide to migrate for reasons of “personal convenience ”

A natural amenity can be defined in many different ways. For example, Power (1988) defined an amenity to be a quality of a region that makes it an attractive area in which to live and work McGranahan (1999) takes this definition further by stating that an amenity is “an attribute that enhances a location as a place of residence” and that “natural amenities pertain to the physical rather than social or economic environment and are meant to exclude much of what is manmade, such as historical buildings or casinos (p 1) ” Although other amenity definitions exist in the literature (Stewart 2000), a majority of studies have opted to use the McGranahan (1999) definition, including Rasker and Hansen (2000) and Vias and Carruthers (2005).

So why are many Americans attracted to amenity-rich areas? The most widely cited reason is that they value the higher quality of life that natural amenities offer; yet this is not the only reason In a broad sense, reasons that people are migrating to amenity-rich areas include changes in retirement norms, technological advancements, and recreation and tourism experiences (Stewart 2000).

Natural amenities contribute to human well-being in a number of ways . For example, a beach, which is considered a natural amenity, provides sunbathing as a recreation-related amenity service. A beach can also drive household and business location decisions since being located in an amenity-rich area may provide some people with happiness or utility There are other forms of amenity services as well, all of which hold value For example, people may hold positive value for a whitewater rafting trip or a mountain view from their home (Dissart and Dellar 2000, English and Bowker 1996, Knapp and Graves 1989, McKean and others 2005, Peterson and others 1988, Song and Knapp 2003).

Many amenity-rich communities have become dependent on marketing their amenity services to potential visitors, residents, and businesses In some cases, communities have done a complete reversal regarding their economic development strategy, switching from historically resource-extractive sectors to retail- and service-based sectors (Green 2001).

Measuring Natural Amenities

In acknowledging that natural amenities play a role in where some individuals decide to live, McGranahan (1999) created an amenity scale (hereafter referred to as McGranahan’s natural amenity scale) which measures the relative appeal of a county in terms of its enduring physical characteristics. The scale consists of six key measures, including the average number of days of sun in January, moderate January (winter) temperatures, low average humidity in July, moderate July (summer) temperatures, topography, and water area. This scale is a popular natural amenity

index and has been used in several recent studies (Henderson and McDaniel 2005; Vias and Carruthers 2005) McGranahan (2008) extended his measures of natural amenities to include landscape features such as land use. Typically, natural amenities are measured at the county level as data are often collected and reported at this level County-level data are also likely to be less error prone compared to smaller areas such as census tracts or neighborhoods It is common for amenities to vary in quality and quantity within a county, such as in the Western United States where counties can be quite large and encompass a wide variety of ecosystems (Clark and Murphy 1996; Rasker and Hansen 2000).”

(Cordell et al. 2011)

This study then developed an econometric model that modeled the effects of natural amenities, such as climate and landscape variables, on rural population migration patterns in the United States between 1990 and 2007. This estimated model was then used to predict the effects of changes in these variables on rural county net migration and population growth to 2060 under alternative future climate and land use projections (also produced for RPA).

These authors note that Nzaku and Bukenya (2005) and Cromartie (2001) found that migration to the Southeastern United States and other parts of the Sun Belt has been influenced by people’s preference for natural amenities such as a warmer temperatures and access to water-based recreation. They summarize the results of the their own amenity modeling stating, “ Our projections also suggest that some parts of the Southeast, South Central, and Northeast regions that already have more moderate climates (e g , Southern Appalachians, Ozark Mountains, northern New England) will become more desirable as places to move for amenity reasons as the global and U S climate warms In parts of the Southeast and Southwestern regions that already have relatively hot climates (e.g., counties at lower elevations), our results suggest that these areas will become less desirable as places to move for amenity reasons.

Counties were classified into one of four categories: Moderate-High positive amenity migration (rural net migration greater than 2 percent), Low to Moderate positive amenity migration (rural net migration between 0 and 2 percent), Low to Moderate negative amenity migration (rural net migration between 0 and -2 percent), and Moderate to High negative amenity migration (rural net migration less than -2 percent) for three time periods. For both the 2007-2030 and 2007-2060 time periods, most of the 18 economic impact area counties are expected to see low to moderate positive effects of natural amenities on rural population net migration; some counties are not expected to see any changes and Graham and Avery Counties are expected to see low to moderate negative effects (Cordell et al 2011, p. 10).

The authors offered the following limitation and cautions regarding interpreting the results of their study: the model excludes the effects of births/deaths and immigration on population changes; it does not consider possible spatial interrelationships and dependencies among counties; and it does not account for significant economic opportunity or employment changes.

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