

3. Economic Characteristics and Vitality

In this section, historic and current economic conditions within the five counties surrounding the Apache-Sitgreaves National Forests (ASNF) are examined. A primary purpose of this analysis is to determine trends in the economic dependency of communities on certain industries and forest resources. Data on selected cities within the area of assessment are also included in order to illustrate trends that may signal linkages between forest management alternatives and economic change affecting specific populations. Indicators used to assess economic characteristics and vitality include major employers within the region, employment by industry, per capita and household income, portion of income derived from natural resources, and federal-lands related payments based on forest resource use.

Data show that the area of assessment for the ASNF has experienced limited economic growth over the past two decades. In general, growth in wage and salary employment was particularly low when compared to state averages despite significant gains in the finance, real estate, and retail trade sectors. In terms of occupational structure, the region closely resembled the situation for the state overall with management, professional, and related occupations maintaining primary importance over sales and office as well as service occupations. Both Apache and Navajo Counties reported relatively low per capita and family incomes as well as high rates of poverty, placing them among the most economically challenged regions in the state. Four of the five counties within the area of assessment reported substantial losses in income from wood products and processing between 1990 and 2000. These losses were partially offset by dramatic increases in income from special forest products and processing in Coconino and Navajo Counties over the same period. Each of the counties reported gains in tourism employment between 1990 and 2000, exceeding increases at the state level over the same period. In terms of federal-lands related revenue, Coconino County is the clear exception in the region given its abundance of PILT entitlement acreage and relatively large amount of forest receipts or “twenty-five percent monies.”

3.1 Historical context and regional economic conditions

The economy of the region surrounding ASNF has undergone dramatic changes over the past century. Originally a territory isolated on the borders of a cohering nation, Arizona, and the West in general, is quickly becoming more metropolitan, and economic realities have shifted to reflect this change. For the first half of the century, Arizona’s economy was dominated by the mining, agricultural, and ranching industries. Following World War II and a dramatic increase in population which continues to the present, Arizona shifted away from a dependence on these earlier industries and diversified into a mix of urban and rural industries that cover nearly every sector. Industrial diversity in Arizona showed some increases after 1971, but reached a peak in the mid-80s and has now fallen well below other states to between .45-.5 on the Industrial Diversity Index¹ (Sheridan 1995, Canamex 2001, ADOC 2002a).

Per capita personal income (PPI) in Arizona has, in a general sense, followed the national trends although it has often fluctuated more dramatically. Labor force growth has been in the process of slowing since the 1970s when it reached a peak of 2.7% per annum. It afterwards slowed to 1.7% in the 1980s and to 1.2% in the 1990s. The relation and impact of education on economic standing has also heightened, with the salary ratio of college-educated workers to high-school educated workers increasing dramatically since 1975, up to above 1.85:1 from 1.55 to 1. Poverty rates have shifted only slightly in the past three or four decades, remaining between 14-16% in Arizona (U.S. Census Bureau 2005, ADOC 2002a).

Over the past thirty to thirty-five years, the primary locus of economical advancement has shifted. Mining, which represented 3% of the Arizona’s per capita income in the late 1960s, had dropped to a

¹ Where 1.0 represents a state of industrial diversity equal to the U.S. as a whole. While no longer limited to agricultural and mining interests, Arizona is still restricted in its industrial array. By contrast, states like Texas and Illinois have IDIs near 0.8, which suggests a much broader industrial foundation.

mere fraction of a percent by 2002. Agriculture, too, remained beneath 1%. While the construction, manufacturing, and trade/utilities areas of the Arizona economy have either remained static or dropped slightly in the second half of the past century, the service industry has skyrocketed, topping 20% by 2002, up from 13% in 1969 (Morton 2003). This trend is partially due to the fact that Arizona has become an increasingly urbanized state, with 88.2% of the population living in urban areas according to the 2000 census. Recent PPI also reflects this disparity, with the 2002 metro figure being \$27,285 as compared to the non-metro amount of \$18,992—a differential of 30.4%, up from 23.3% in 1970.

The counties surrounding the Apache-Sitgreaves National Forests are, collectively, the most economically challenged compared to those surrounding the other forests in the state. The 2002 PPI of the four Arizona counties abutting the forest land is \$19,333², representing a 26.5% differential from the state average at that time, a 2% drop from its relative numbers 1969. Compared to the national averages, the PPI of the counties containing the Apache-Sitgreaves represents only 62.8% of the national total, down nearly 6% over the past thirty years (BEA 2002). The average rate of income growth in the area of assessment over the past three decades is just under 8%, slightly below the 8.5% rate of growth for New Mexico and well below the 10.1% Arizona average (BEA 2002). This suggests that although Arizona's growth continues to be strong, it nonetheless remains behind the country as a whole in individual economic status. These figures are likely influenced by the aforementioned shift in economic industries within these states (i.e. away from mining) and the nearby presence of several Native American reservations whose economic situations regularly lie below state and national averages.

3.2 Income and employment within key industries

Table 11 presents employment by industry at both the state and county levels for the years 1990 and 2000. Economic data confirm earlier findings which suggested relatively limited growth in the region when compared to state averages. For instance, growth in total full- and part-time employment for each of the five counties in the area of assessment was below that of their respective states as a whole. Employment growth for Navajo and Apache Counties was particularly limited (26.62% and 38.66% respectively) when compared to the increase of 47.62% over ten years at the state level. Economic data for the region also differed from those of the state regarding changes in types of employment between 1990 and 2000. While increases in wage and salary employment were below the state average for all but Greenlee County, Apache and Coconino Counties witnessed substantial increases in employment of proprietors, particularly non-farm proprietors.

With the exception of Greenlee County, the region experienced relatively low increases in private employment over the ten-year period. There were, however, significant increases within certain industries for individual counties. Between 1990 and 2000, Coconino, Apache, and Navajo Counties each demonstrated substantial employment increases in the financial/real estate sector as well as in retail trade. Similarly, both Coconino and Greenlee Counties also saw a considerable increase of employment in the construction industry over the same period.

Table 12 displays the percentage of employment in each industry at the state and county levels as well as the percentage change between 1990 and 2000. As stated earlier, wage and salary employment is relatively limited in the region when compared to state levels and actually declined as a portion of overall employment for all but Greenlee County. With the exception of Navajo County, all counties saw further deterioration of previously limited farm employment, mirroring a similar trend for the state as a whole. As stated earlier, individual counties experienced relatively strong employment growth within specific sectors between 1990 and 2000. Table 12 affirms that the share of employment in the financial services/real estate industry grew considerably in Apache, Coconino, and Navajo Counties while the

² N.B.: Discrepancies between these figures and the PPIs listed in Table 16 stem from the latter having been adjusted for deflation in order to calculate % change. The salaries listed in this section represent current PPIs in non-adjusted dollars.

percentage of construction employment outpaced growth in other sectors for Greenlee County. The relatively limited percentage of private employment for both Apache and Navajo Counties is likely offset by considerable employment in the government through the Navajo and Apache Nations.

Table 11. Employment by Industry, County, and State, 1990-2000 and % Change

	Apache			Coconino			Greenlee			Catron, NM		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Employment by place of work												
Total full-time and part-time employment	17,876	24,786	38.66%	48,977	70,286	43.51%	3,607	5,216	44.61%	1,246	1,456	16.85%
By type												
Wage and salary employment	15,476	20,114	29.97%	41,079	55,639	35.44%	3,096	4,645	50.03%	709	689	-2.82%
Proprietors employment	2,400	4,672	94.67%	7,898	14,647	85.45%	511	571	11.74%	537	767	42.83%
Farm proprietors employment	351	327	-6.84%	276	204	-26.09%	136	134	-1.47%	226	221	-2.21%
Non-farm proprietors employment	2,049	4,345	112.05%	7,622	14,443	89.49%	375	437	16.53%	311	546	75.56%
By industry												
Farm employment	358	345	-3.63%	313	254	-18.85%	154	168	9.09%	282	274	-2.84%
Non-farm employment	17,518	24,441	39.52%	48,664	70,032	43.91%	3,453	5,048	46.19%	964	1,182	22.61%
Private employment	8,441	11,986	42.00%	36,864	54,305	47.31%	2,886	4,480	55.23%	607	825	35.91%
Ag. services, forestry, fishing and other	125	(D)	N/A	(D)	510	N/A	33	(D)	N/A	(D)	(D)	N/A
Mining	66	(D)	N/A	(D)	159	N/A	(D)	(D)	N/A	(D)	(L)	N/A
Construction	(D)	1,183	N/A	2,363	4,014	69.87%	170	869	411.18%	64	(D)	N/A
Manufacturing	(D)	167	N/A	3,562	2,985	-16.20%	(D)	24	N/A	106	58	-45.28%
Transportation and public utilities	728	650	-10.71%	1,979	1,957	-1.11%	49	88	79.59%	46	69	50.00%
Wholesale trade	111	(D)	N/A	801	1,378	72.03%	52	93	78.85%	(L)	(L)	N/A
Retail trade	1,897	2,616	37.90%	10,862	15,266	40.55%	369	328	-11.11%	110	160	45.45%
Finance, insurance, and real estate	616	1,379	123.86%	2,052	4,674	127.78%	42	(D)	N/A	(D)	(D)	N/A
Services	(D)	5,432	N/A	14,837	23,362	57.46%	420	494	17.62%	188	287	52.66%
Government and government enterprises	9,077	12,455	37.21%	11,800	15,727	33.28%	567	568	0.18%	357	357	0.00%
Federal, civilian	2,068	2,861	38.35%	3,054	3,322	8.78%	32	44	37.50%	151	129	-14.57%
Military	231	158	-31.60%	378	283	-25.13%	30	20	-33.33%	13	12	-7.69%
State and local	6,778	9,436	39.22%	8,368	12,122	44.86%	505	504	-0.20%	193	216	11.92%
State government	321	528	64.49%	3,560	(D)	N/A	51	38	-25.49%	66	63	-4.55%
Local government	6,457	8,908	37.96%	4,808	(D)	N/A	454	466	2.64%	127	153	20.47%

Table 11 (cont.). Employment by Industry, County, and State, 1990-2000 and % Change

	Navajo			Arizona			New Mexico		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Employment by place of work									
Total full-time and part-time employment	26,878	34,033	26.62%	1,909,879	2,819,302	47.62%	767,139	972,954	26.83%
By type									
Wage and salary employment	22,377	27,429	22.58%	1,607,628	2,355,299	46.51%	635,725	789,690	24.22%
Proprietors employment	4,501	6,604	46.72%	302,251	464,003	53.52%	131,414	183,264	39.46%
Farm proprietors employment	404	357	-11.63%	8,027	7,572	-5.67%	13,600	14,985	10.18%
Non-farm proprietors employment	4,097	6,247	52.48%	294,224	456,431	55.13%	117,814	168,279	42.83%
By industry									
Farm employment	423	555	31.21%	19,297	19,842	2.82%	19,766	21,760	10.09%
Non-farm employment	26,455	33,478	26.55%	1,890,582	2,799,460	48.07%	747,373	951,194	27.27%
Private employment	18,794	22,737	20.98%	1,583,146	2,410,566	52.26%	568,085	748,804	31.81%
Ag. services, forestry, fishing and other	175	252	44.00%	27,817	46,873	68.50%	8,414	13,548	61.02%
Mining	1,220	(D)	N/A	15,475	12,607	-18.53%	20,489	19,323	-5.69%
Construction	1,295	(D)	N/A	108,918	200,373	83.97%	40,606	59,895	47.50%
Manufacturing	2,029	(D)	N/A	194,529	225,767	16.06%	47,732	48,788	2.21%
Transportation and public utilities	1,859	1,877	0.97%	84,360	124,954	48.12%	34,130	43,350	27.01%
Wholesale trade	467	596	27.62%	82,812	122,582	48.02%	27,896	33,751	20.99%
Retail trade	5,014	6,625	32.13%	344,297	484,207	40.64%	134,482	172,516	28.28%
Finance, insurance, and real estate	953	2,090	119.31%	170,005	281,675	65.69%	46,955	62,905	33.97%
Services	5,782	6,965	20.46%	544,933	911,528	67.27%	207,381	294,728	42.12%
Government and government enterprises	7,661	10,741	40.20%	307,436	388,894	26.50%	179,288	202,390	12.89%
Federal, civilian	1,627	1,577	-3.07%	45,843	48,135	5.00%	31,621	30,205	-4.48%
Military	354	224	-36.72%	38,197	33,258	-12.93%	22,552	17,167	-23.88%
State and local	5,680	8,940	57.39%	223,396	307,501	37.65%	125,115	155,018	23.90%
State government	362	(D)	N/A	61,595	81,026	31.55%	55,722	64,654	16.03%
Local government	5,318	(D)	N/A	161,801	226,475	39.97%	69,393	90,364	30.22%

Source: Bureau of Economic Analysis website <http://www.bea.doc.gov/bea/regional/reis/action.cfm>

(D) Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.

(L) Less than 10 jobs, but the estimates for this item are included in the totals.

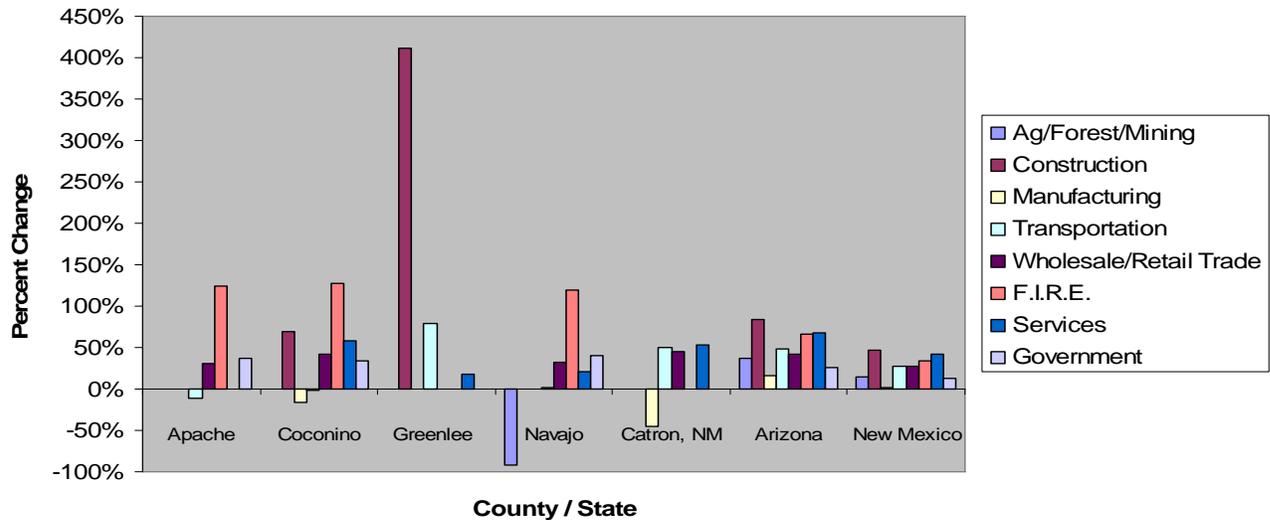
Table 12. Employment by Industry Percentages, County, and State, 1990-2000 and % Change

	Apache			Coconino			Greenlee			Catron, NM		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Employment by place of work												
Total full-time and part-time employment	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%
By type												
Wage and salary employment	86.57%	81.15%	-6.26%	83.87%	79.16%	-5.62%	85.83%	89.05%	3.75%	56.90%	47.32%	-16.84%
Proprietors employment	13.43%	18.85%	40.40%	16.13%	20.84%	29.23%	14.17%	10.95%	-22.73%	43.10%	52.68%	22.23%
Farm proprietors employment	1.96%	1.32%	-32.81%	0.56%	0.29%	-48.50%	3.77%	2.57%	-31.86%	18.14%	15.18%	-16.32%
Non-farm proprietors employment	11.46%	17.53%	52.94%	15.56%	20.55%	32.04%	10.40%	8.38%	-19.41%	24.96%	37.50%	50.24%
By industry												
Farm employment	2.00%	1.39%	-30.50%	0.64%	0.36%	-43.45%	4.27%	3.22%	-24.56%	22.63%	18.82%	-16.85%
Non-farm employment	98.00%	98.61%	0.62%	99.36%	99.64%	0.28%	95.73%	96.78%	1.10%	77.37%	81.18%	4.93%
Private employment	47.22%	48.36%	2.41%	75.27%	77.26%	2.65%	80.01%	85.89%	7.35%	48.72%	56.66%	16.31%
Ag. services, forestry, fishing and other	0.70%	(D)	N/A	(D)	0.73%	N/A	0.91%	(D)	N/A	(D)	(D)	N/A
Mining	0.37%	(D)	N/A	(D)	0.23%	N/A	(D)	(D)	N/A	(D)	(L)	N/A
Construction	(D)	4.77%	N/A	4.82%	5.71%	18.37%	4.71%	16.66%	253.49%	5.14%	(D)	N/A
Manufacturing	(D)	0.67%	N/A	7.27%	4.25%	-41.61%	(D)	0.46%	N/A	8.51%	3.98%	-53.17%
Transportation and public utilities	4.07%	2.62%	-35.61%	4.04%	2.78%	-31.09%	1.36%	1.69%	24.19%	3.69%	4.74%	28.37%
Wholesale trade	0.62%	(D)	N/A	1.64%	1.96%	19.88%	1.44%	1.78%	23.68%	(L)	(L)	N/A
Retail trade	10.61%	10.55%	-0.54%	22.18%	21.72%	-2.06%	10.23%	6.29%	-38.53%	8.83%	10.99%	24.48%
Finance, insurance, and real estate	3.45%	5.56%	61.45%	4.19%	6.65%	58.72%	1.16%	(D)	N/A	(D)	(D)	N/A
Services	(D)	21.92%	N/A	30.29%	33.24%	9.72%	11.64%	9.47%	-18.66%	15.09%	19.71%	30.64%
Government and government enterprises	50.78%	50.25%	-1.04%	24.09%	22.38%	-7.13%	15.72%	10.89%	-30.73%	28.65%	24.52%	-14.42%
Federal, civilian	11.57%	11.54%	-0.22%	6.24%	4.73%	-24.20%	0.89%	0.84%	-4.92%	12.12%	8.86%	-26.89%
Military	1.29%	0.64%	-50.67%	0.77%	0.40%	-47.83%	0.83%	0.38%	-53.90%	1.04%	0.82%	-21.01%
State and local	37.92%	38.07%	0.40%	17.09%	17.25%	0.94%	14.00%	9.66%	-30.98%	15.49%	14.84%	-4.22%
State government	1.80%	2.13%	18.63%	7.27%	(D)	N/A	1.41%	0.73%	-48.47%	5.30%	4.33%	-18.31%
Local government	36.12%	35.94%	-0.50%	9.82%	(D)	N/A	12.59%	8.93%	-29.02%	10.19%	10.51%	3.10%

Table 12 (cont.). Employment by Industry Percentages, County, and State, 1990-2000 and % Change

	Navajo			Arizona			New Mexico		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Employment by place of work									
Total full-time and part-time employment	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%
By type									
Wage and salary employment	83.25%	80.60%	-3.19%	84.17%	83.54%	-0.75%	82.87%	81.16%	-2.06%
Proprietors employment	16.75%	19.40%	15.88%	15.83%	16.46%	4.00%	17.13%	18.84%	9.96%
Farm proprietors employment	1.50%	1.05%	-30.21%	0.42%	0.27%	-36.10%	1.77%	1.54%	-13.12%
Non-farm proprietors employment	15.24%	18.36%	20.42%	15.41%	16.19%	5.09%	15.36%	17.30%	12.62%
By industry									
Farm employment	1.57%	1.63%	3.62%	1.01%	0.70%	-30.34%	2.58%	2.24%	-13.20%
Non-farm employment	98.43%	98.37%	-0.06%	98.99%	99.30%	0.31%	97.42%	97.76%	0.35%
Private employment	69.92%	66.81%	-4.45%	82.89%	85.50%	3.15%	74.05%	76.96%	3.93%
Ag. services, forestry, fishing and other	0.65%	0.74%	13.73%	1.46%	1.66%	14.15%	1.10%	1.39%	26.96%
Mining	4.54%	(D)	n/a	0.81%	0.45%	-44.81%	2.67%	1.99%	-25.64%
Construction	4.82%	(D)	n/a	5.70%	7.11%	24.62%	5.29%	6.16%	16.30%
Manufacturing	7.55%	(D)	n/a	10.19%	8.01%	-21.38%	6.22%	5.01%	-19.41%
Transportation and public utilities	6.92%	5.52%	-20.26%	4.42%	4.43%	0.34%	4.45%	4.46%	0.15%
Wholesale trade	1.74%	1.75%	0.79%	4.34%	4.35%	0.28%	3.64%	3.47%	-4.60%
Retail trade	18.65%	19.47%	4.35%	18.03%	17.17%	-4.73%	17.53%	17.73%	1.15%
Finance, insurance, and real estate	3.55%	6.14%	73.20%	8.90%	9.99%	12.24%	6.12%	6.47%	5.63%
Services	21.51%	20.47%	-4.87%	28.53%	32.33%	13.32%	27.03%	30.29%	12.06%
Government and government enterprises	28.50%	31.56%	10.73%	16.10%	13.79%	-14.31%	23.37%	20.80%	-10.99%
Federal, civilian	6.05%	4.63%	-23.45%	2.40%	1.71%	-28.87%	4.12%	3.10%	-24.68%
Military	1.32%	0.66%	-50.03%	2.00%	1.18%	-41.02%	2.94%	1.76%	-39.98%
State and local	21.13%	26.27%	24.30%	11.70%	10.91%	-6.75%	16.31%	15.93%	-2.31%
State government	1.35%	(D)	n/a	3.23%	2.87%	-10.89%	7.26%	6.65%	-8.51%
Local government	19.79%	(D)	n/a	8.47%	8.03%	-5.18%	9.05%	9.29%	2.67%

Source: Bureau of Economic Analysis website <http://www.bea.doc.gov/bea/regional/reis/action.cfm>



Source: Bureau of Economic Analysis

Figure 9. Percent Change in Industry by County and State, 1990-2000

Table 13 presents a list of major employers throughout the region which has been adapted from the Arizona Department of Commerce Community Profiles. Dominant occupations, as determined by number of employees and the percentage of total employment, are shown for each county in Table 14. Data show that four of the five counties within the area of assessment maintain occupational structures very similar to that for the states of Arizona and New Mexico as a whole. “Management, professional, and related occupations” is the dominant occupational category for the state of Arizona, followed by sales and office occupations and finally by service occupations. The same ranking occurs in Apache, Coconino, and Navajo Counties. The clear exception to this trend is Greenlee County where construction, extraction, and maintenance occupations were foremost as of 2004, followed by management, professional, and related occupations, then by production, transportation, and material moving occupations.

Table 15 presents annual unemployment rates for the counties, the states of Arizona and New Mexico, the United States, and selected cities within the area of assessment. During the period covered, average unemployment ranged from a high of 14.9% in Apache County to a low of 7.2% in Coconino County. Navajo County also experienced an average unemployment (12.6%) that was much higher than the state average of 5.2% over the same period. This may be due, at least in part, to the extremely high average unemployment rate in Whiteriver (22.0%), the second most populous town in Navajo County. Among individual cities within the area of assessment, Sedona enjoyed the lowest average unemployment rate, which was 2.3% during the period.

Table 16 provides per capita and median family incomes as well as rates of individual and family poverty. Data demonstrate increases in per capita and median family income that were greater in each county than increases at the state level during the same period. Despite these increases, however, per capita and median family income remained significantly lower than the state average in each of the counties as of 2000. A similar trend is evident in individual and family poverty between 1990 and 2000. Each of the counties saw declines in individual and family poverty that were greater than the reductions in poverty at the state level over the ten-year period. Still, the percentage of individual and family poverty was higher than the state average in each of the counties within the area of assessment. Apache County appears to be the most economically challenged of the four Arizona counties with an income below and a poverty level well above that of neighboring counties and the state of Arizona. As of 2000, individual and family poverty was particularly high in Whiteriver on the Apache Indian Reservation in Navajo County.

Household income distribution for each county is presented in Table 17. Here again, the economic status of Apache County is shown to be considerably limited with over 27% of households earning less than \$15,000 per year. Median household income was greatest in Greenlee County at \$39,384 in 2000. By comparison, Coconino County is the more affluent of the five counties with 8.5% of households earning \$100,000 or more as of 2000.

Table 13. Major Employers by County, 2004

Apache County	Coconino County
Fort Defiance Hospital, Ft. Defiance	ARA Leisure Services, Page
Indian Health Services, Chinle/Ft. Defiance	City of Flagstaff
Navajo Communications Co., Window Rock	Coconino Community College, Flagstaff
Navajo Nation, Window Rock	Coconino County, Flagstaff
Navajo Tribal Utility Authority, Navajo Nation	Flagstaff Unified School District, Flagstaff
P&M Coal Co., Window Rock	Flagstaff Medical Center, Flagstaff
Packard-Hughes Interconnect, Ft. Defiance	Grand Canyon Railway, Williams
Sage Memorial Hospital, Ganado	Kaibab National Forest, Williams
Salt River Project Coronado Generating Station	National Park Service, Page
Tucson Electric Power, Springerville	Navajo Generating Station, Page
White Mountain Community Hospital, Springerville	Navajo Government Executive Branch, Navajo Nation
	Navajo Tribal Utility Authority, Navajo Nation
	Northern Arizona University, Flagstaff
	Pittsburg & Midway Coal Mining Co., Navajo Nation
	Nestle Purina Petcare, Flagstaff
	Samaritan Family Health Center, Grand Canyon
	Tooh-Dineh Industries, Leupp
	Tuba City Indian Medical Center
	Tuba City Unified School District #15
	Walgreens Distribution
	Wal-Mart, Flagstaff and Page
	Window Rock Unified School District
	SCA Tissue, Flagstaff
	W.L. Gore and Associates, Inc., Flagstaff
Greenlee County	Navajo County
Clifton Elementary	Abitibi Consolidated Inc., Snowflake
Clifton High School	APS, Joseph City
Copperroom Restaurant & Lounge, Morenci	Burlington Northern Santa Fe
Duncan Public Schools, Duncan	Railway, Winslow
Fairbanks School, Morenci	Holiday Inn, Kayenta
Greenlee County, Clifton	Kayenta Boarding B.I.A. School, Kayenta
Kempton Chevrolet, Buick, Geo, Clifton	Keams Canyon Indian Hospital, Keams Canyon
Morenci Healthcare Center	Navajo Government Executive Branch, Navajo Nation
Morenci High School	Navajo Tribal Utility Authority, Keams Canyon
Morenci Public Schools	Navapache Hospital, Show Low
Morenci Water and Electric Co.	Northland Pioneer College, Holbrook
Phelps Dodge, Morenci	Peabody Coal Co., Kayenta
Town of Clifton	PFFJ, Inc., Snowflake
	Piñon Unified School District #4
	Suntastic Hothouse Inc., Snowflake
	Grower Western
	Western Moulding Company Inc., Snowflake
Catron County, NM	
Catron County Commission on Aging	
Reserve Independent Schools	
Quemado Independent Schools	
State of New Mexico Highway Department	
United States Forest Service	

Source: Arizona Department of Commerce - Community Profiles
http://www.azcommerce.com/Communities/community_profiles.asp

Table 14. Dominant Occupations of State and County Populations, 2000

County/State	Number	Percent
Apache County		
Management, professional, and related occupations	5,467	33.2%
Sales and office occupations	3,582	21.7%
Service occupations	2,944	17.9%
Construction, extraction, and maintenance occupations	2,680	16.3%
Production, transportation, and material moving occupations	1,686	10.2%
Coconino County		
Management, professional, and related occupations	19,309	38.4%
Sales and office occupations	14,240	25.7%
Service occupations	10,610	19.1%
Construction, extraction, and maintenance occupations	5,548	10.0%
Production, transportation, and material moving occupations	5,529	10.0%
Greenlee County		
Construction, extraction, and maintenance occupations	1,037	30.0%
Management, professional, and related occupations	797	23.0%
Production, transportation, and material moving occupations	636	18.4%
Sales and office occupations	546	15.8%
Service occupations	403	11.6%
Navajo County		
Management, professional, and related occupations	8,042	27.2%
Sales and office occupations	7,136	24.1%
Service occupations	5,254	17.8%
Construction, extraction, and maintenance occupations	4,731	16.0%
Production, transportation, and material moving occupations	4,042	13.7%
Catron County		
Management, professional, and related occupations	394	31.8%
Sales and office occupations	280	22.6%
Service occupations	201	16.2%
Construction, extraction, and maintenance occupations	197	15.9%
Production, transportation, and material moving occupations	132	10.6%
Arizona		
Management, professional, and related occupations	730,001	32.70%
Sales and office occupations	636,970	28.50%
Service occupations	362,547	16.20%
Construction, extraction, and maintenance occupations	245,578	11.00%
Production, transportation, and material moving occupations	244,015	10.90%
New Mexico		
Management, professional, and related occupations	259,510	34.0%
Sales and office occupations	197,580	25.9%
Service occupations	129,349	17.0%
Construction, extraction, and maintenance occupations	87,172	11.4%
Production, transportation, and material moving occupations	81,911	10.7%

Source: U.S. Census Bureau, American Fact Finder
<http://factfinder.census.gov>

Table 15. Average Annual Unemployment Rates by County, State, Place, and U.S., 1980-2004

Area	1980*	1990*	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Average
Apache County	12.6%	13.5%	18.4%	16.4%	19.7%	17.4%	15.5%	14.0%	13.0%	11.9%	13.1%	14.1%	13.5%	14.9%
Eagar	13.0%	4.2%	5.9%	5.2%	6.3%	5.5%	4.8%	4.3%	4.0%	3.6%	4.0%	4.3%	4.2%	5.5%
St. Johns	5.9%	4.3%	6.1%	5.4%	6.6%	5.7%	5.0%	4.5%	4.1%	3.8%	4.1%	4.5%	4.3%	4.9%
Springerville	n/a	7.1%	9.9%	8.8%	10.8%	9.3%	8.3%	7.4%	6.8%	6.2%	6.9%	7.5%	7.1%	7.9%
Coconino County	7.7%	7.8%	9.2%	7.8%	8.7%	8.4%	7.3%	6.7%	5.8%	5.4%	5.9%	6.4%	6.1%	7.2%
Flagstaff	7.0%	6.1%	7.3%	6.1%	6.9%	6.6%	5.8%	5.3%	4.6%	4.3%	4.6%	5.1%	4.8%	5.7%
Sedona	5.3%	2.1%	2.5%	2.1%	2.4%	2.3%	2.0%	1.8%	1.6%	1.5%	1.6%	1.8%	1.6%	2.3%
Page	4.8%	6.1%	7.3%	6.1%	6.9%	6.6%	5.8%	5.3%	4.6%	4.2%	4.6%	5.0%	4.8%	5.4%
Williams	n/a	3.7%	4.4%	3.6%	4.1%	4.0%	3.4%	3.2%	2.7%	2.5%	2.7%	3.0%	2.9%	3.3%
Fredonia	n/a	7.2%	8.6%	7.2%	8.1%	7.8%	6.8%	6.3%	5.3%	5.0%	5.4%	5.9%	5.7%	6.5%
Greenlee County	5.4%	8.7%	9.5%	6.7%	7.9%	7.2%	8.1%	8.7%	5.5%	8.9%	9.1%	7.5%	5.2%	7.6%
Clifton	4.0%	6.6%	7.2%	5.1%	6.0%	5.5	6.1%	6.6%	4.1%	6.8%	6.9%	5.7%	3.9%	5.6%
Morenci	5.3%	n/a	8.9%	6.3%	7.3%	6.7%	7.5%	8.1%	5.1%	8.3%	8.5%	6.9%	4.9%	6.8%
Navajo County	10.0%	11.2%	15.3%	15.0%	15.9%	15.3%	13.6%	13.1%	11.6%	10.6%	10.7%	10.8%	10.7%	12.6%
Show Low	4.7%	4.0%	5.6%	5.5%	5.8%	5.6%	4.9%	4.7%	4.1%	3.7%	3.8%	3.8%	3.8%	4.5%
Whiteriver	n/a	20.1%	26.5%	26.1%	27.4%	26.5%	24.0%	23.2%	20.9%	19.1%	19.3%	19.5%	19.4%	22.0%
Snowflake	10.9%	4.6%	6.4%	6.3%	6.7%	6.4%	5.6%	5.4%	4.7%	4.3%	4.3%	4.4%	4.4%	5.7%
Pinetop-Lakeside	n/a	3.1%	4.5%	4.4%	4.7%	4.4%	3.9%	3.8%	3.3%	2.9%	3.0%	3.0%	3.0%	3.5%
Heber-Overgaard	n/a	7.7%	10.7%	10.6%	11.2%	10.7%	9.5%	9.1%	8.0%	7.2%	7.3%	7.5%	7.4%	8.6%
Catron County, NM	-	15.4%	13.6%	12.1%	14.3%	11.9%	12.0%	9.7%	6.7%	6.9%	5.9%	8.1%	8.2%	10.4
Arizona	6.7%	5.5%	6.4%	5.1%	5.5%	4.6%	4.1%	4.4%	4.0%	4.7%	6.2%	5.6%	4.9%	5.2%
New Mexico	7.5%	6.5%	6.3%	6.3%	8.1%	6.2%	6.2%	5.6%	5.0%	4.8%	5.4%	6.4%	5.5%	6.1%
United States	7.1%	5.6%	6.1%	5.6%	5.4%	4.9%	4.5%	4.2%	4.0%	4.7%	5.8%	6.0%	5.5%	5.3%

Source: Arizona Department of Commerce, Arizona Workforce Informer

<http://www.workforce.az.gov/cqi/dataanalysis/?PAGEID=94&SUBID=142>

U.S. Bureau Of Labor Statistics

http://www.bls.gov/cps/prev_vrs.htm

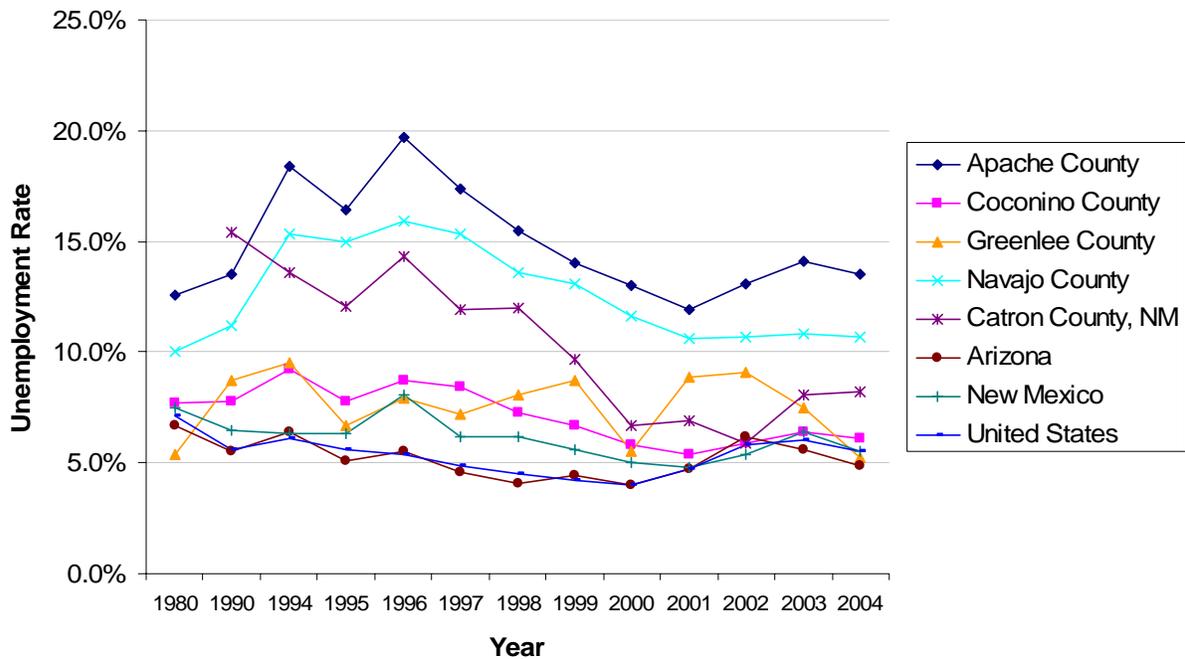
* 1980 and 1990 unemployment data unavailable for towns with a population of less than 2,500 individuals

Table 16. Per Capita and Family Income by County and State, 1990-2000 and % Change

County/Place	Per Capita Income			Median Family Income			% Individuals in Poverty			% Families in Poverty		
	1990	2000*	% Change	1990	2000*	% Change	1990	2000	% Change	1990	2000	% Change
Apache County	\$5,399	\$6,818	26.28%	\$16,346	\$19,966	22.15%	47.1%	37.8%	-19.75%	41.5%	33.5%	-19.28%
Eagar	\$9,725	\$11,095	14.09%	\$33,421	\$31,297	-6.35%	14.2%	7.4%	-47.89%	12.4%	7.8%	-37.10%
St. Johns	\$10,720	\$10,115	-5.65%	\$36,917	\$28,436	-22.97%	11.2%	15.3%	36.61%	9.0%	12.5%	38.89%
Springerville	\$9,528	\$10,493	10.13%	\$26,141	\$27,565	5.45%	15.4%	21.0%	36.36%	12.5%	14.7%	17.60%
Coconino County	\$10,580	\$13,004	22.91%	\$30,648	\$34,805	13.56%	23.1%	18.2%	-21.21%	16.9%	13.1%	-22.49%
Flagstaff	\$11,517	\$14,140	22.78%	\$34,952	\$36,743	5.12%	17.2%	17.4%	1.16%	10.4%	10.6%	1.92%
Sedona	\$19,893	\$23,786	19.57%	\$35,559	\$39,954	12.36%	8.9%	9.7%	8.99%	6.3%	4.7%	-25.40%
Page	\$12,352	\$14,181	14.81%	\$42,068	\$41,216	-2.02%	9.2%	13.9%	51.09%	8.5%	12.8%	50.59%
Williams	\$10,121	\$10,098	-0.23%	\$26,524	\$23,454	-11.57%	11.7%	15.0%	28.21%	8.0%	12.3%	53.75%
Fredonia	\$8,185	\$12,309	50.38%	\$27,065	\$29,638	9.51%	13.5%	12.8%	-5.19%	11.1%	9.9%	-10.81%
Greenlee County	\$9,794	\$11,998	22.50%	\$29,945	\$33,022	10.28%	12.6%	9.9%	-21.43%	10.8%	8.0%	-25.93%
Clifton	\$9,810	\$11,618	18.43%	\$28,504	\$31,730	11.32%	13.3%	11.5%	-13.53%	9.9%	8.1%	-18.18%
Morenci	\$10,208	\$14,184	38.95%	\$35,226	\$41,414	17.57%	6.2%	3.0%	-51.61%	5.9%	2.7%	-54.24%
Navajo County	\$7,586	\$8,808	16.11%	\$21,336	\$24,590	15.25%	34.7%	29.5%	-14.99%	30.3%	23.4%	-22.77%
Show Low	\$10,358	\$11,788	13.80%	\$29,375	\$27,615	-5.99%	18.5%	15.0%	-18.92%	14.2%	11.7%	-17.61%
Whiteriver	\$3,896	\$4,339	11.37%	\$10,139	\$13,486	33.01%	55.6%	51.6%	-7.19%	58.4%	46.9%	-19.69%
Snowflake	\$7,810	\$10,160	30.09%	\$29,200	\$32,246	10.43%	18.6%	15.0%	-19.35%	16.3%	10.4%	-36.20%
Pinetop-Lakeside	\$12,582	\$14,068	11.81%	\$30,778	\$32,014	4.02%	10.0%	10.1%	1.00%	7.9%	6.6%	-16.46%
Heber-Overgaard	n/a	\$15,596	n/a	n/a	\$35,380	n/a	n/a	16.4%	n/a	n/a	11.7%	n/a
Catron County	\$8,537	\$10,585	23.99%	\$22,278	\$23,325	4.70%	25.6%	24.5%	-4.30%	19.5%	17.4%	-10.77%
Arizona	\$13,461	\$15,383	14.28%	\$32,178	\$35,450	10.17%	15.7%	14.0%	-10.83%	11.4%	10.0%	-12.28%
New Mexico	\$11,246	\$13,096	16.45%	\$27,623	\$29,913	8.29%	21.0%	18.0%	-16.67%	17.0%	15.0%	-11.76%

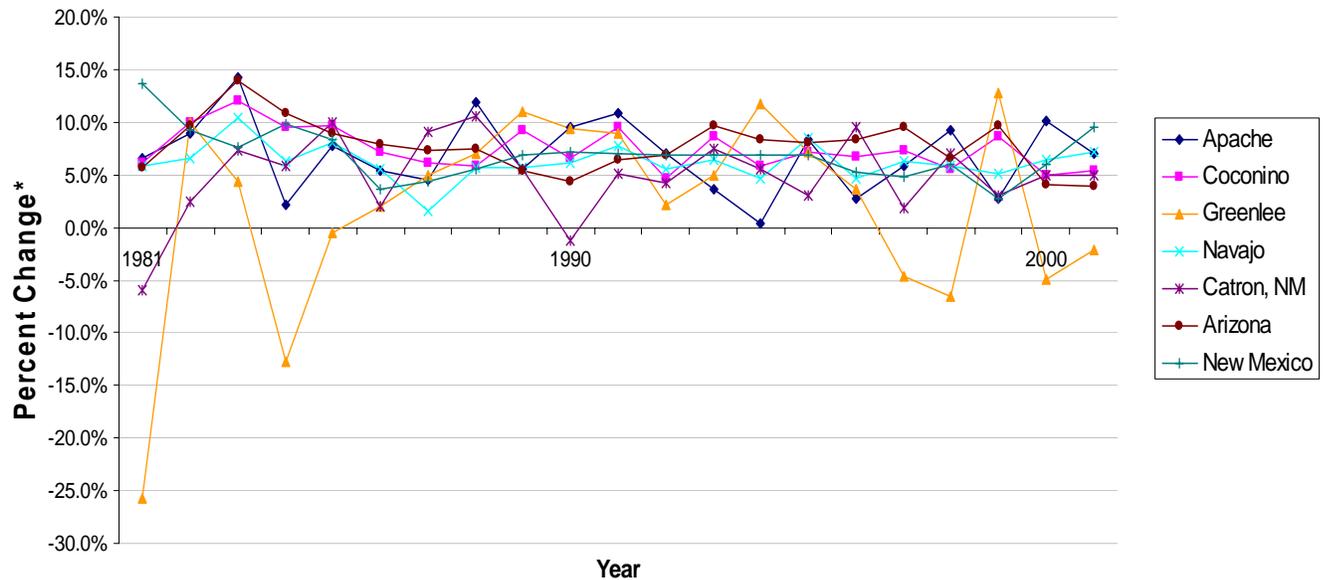
Source: NRIS - Human Dimensions

*2000 Income data adjusted to reflect 1990 constant dollars by applying deflation factor calculated by Consumer Price Index



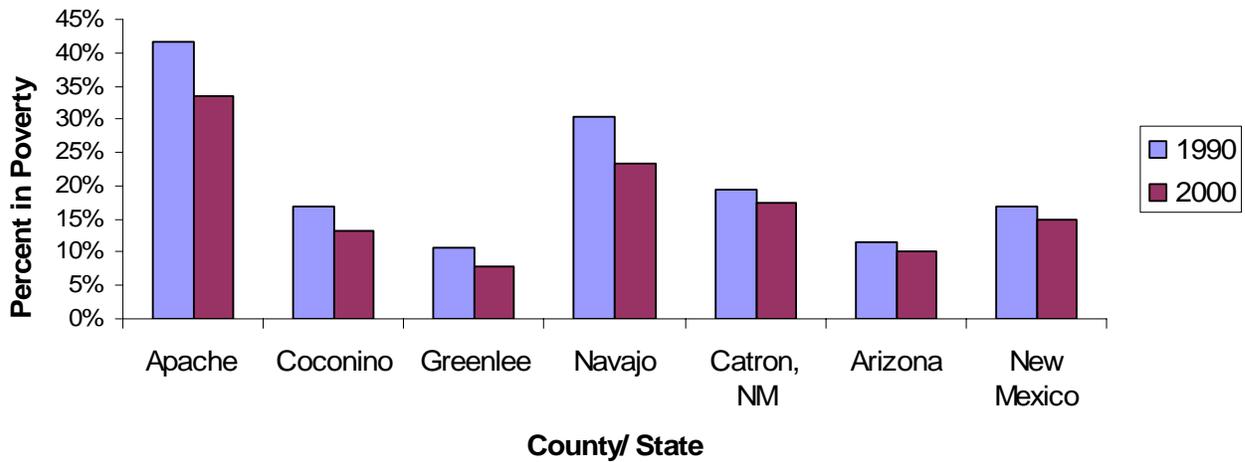
Sources: Arizona Department of Commerce, Arizona Workforce Informer
U.S. Bureau of Labor Statistics

Figure 10. Unemployment Rates by County and State, 1980-2004



Source: Bureau of Economic Analysis
* Annual percent change in per capita personal income based on mid-year Census Bureau estimates of county population

Figure 11. Annual Percent Change in Per Capita Income by County, 1980-2000



Source: NRIS – Human Dimensions

Figure 12. Percent of Families in Poverty by County, 1990-2000

Table 17. Household Income Distribution by County, 2000

	Apache County		Coconino County		Greenlee County		Navajo County		Catron County	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Less than \$10,000	5,401	27.1%	4,285	10.6%	291	9.3%	5,589	18.6%	333	21.0%
\$10,000 to \$14,999	2,053	10.3%	2,838	7.0%	204	6.5%	2,684	8.9%	159	10.0%
\$15,000 to \$24,999	2,979	14.9%	5,670	14.0%	406	13.0%	5,040	16.8%	325	20.5%
\$25,000 to \$34,999	2,791	14.0%	5,542	13.7%	416	13.3%	4,264	14.2%	237	14.9%
\$35,000 to \$49,999	2,781	14.0%	7,018	17.4%	795	25.4%	4,848	16.1%	225	14.2%
\$50,000 to \$74,999	2,488	12.5%	7,661	19%	680	21.7%	4,425	14.7%	201	12.7%
\$75,000 to \$99,999	839	4.2%	3,950	9.8%	249	8.0%	1,900	6.3%	65	4.1%
\$100,000 to \$149,999	487	2.4%	2,349	5.8%	61	1.9%	951	3.2%	37	2.3%
\$150,000 to \$199,999	47	0.2%	555	1.4%	22	0.7%	198	0.7%	3	0.2%
\$200,000 or more	66	0.3%	518	1.3%	7	0.2%	156	0.5%	2	0.1%
Median household income (\$)	\$23,34	(x)	\$38,25	(x)	\$39,38	(x)	\$28,56	(x)	\$23,89	(X)

Source: U.S. Census Bureau, Profile of Selected Economic Characteristics: 2000
<http://www.census.gov/census2000/states/az.html>

3.3 Forest and natural resource dependent economic activities

Data on natural-resource dependent economic activities are comprised of available information on income from wood products and processing, income from special forest products and processing, and tourism employment. Analysis is based on IMPLAN data provided by the USFS Planning Analysis Group and Inventory and Monitoring Institute in Fort Collins, Colorado. IMPLAN is a form of input-output analysis developed specifically for the unique needs of the Forest Service. Input-output analysis (I-O) is used to quantify linkages among the structural parts of an economy. Given a particular economic impact, for example a public lands management decision, I-O analysis generally calculates the overall effects

resulting from a direct impact on the economy. This mathematical model accounts for a variety of employment, income, and output effects including both direct effects (i.e. wages) and indirect effects (i.e. the stimulation of local economy to supply inputs and processing). Some I-O analyses also model induced effects, the additional economic effects of household spending of increased wages within the community. The secondary (indirect and induced) effects are often described as “ripple-like” effects of spending throughout other sectors of a local economy (Loomis 2002). IMPLAN data are tabulated for 525 distinct industries according to the North American Industry Classification System (NAICS). A list of industries used to calculate income from wood and special forest products and processing as well as tourism employment is included in Appendix A. It should also be noted that analysis of IMPLAN data in this assessment is based solely on the direct economic impacts of selected industries and does not include indirect or induced economic impacts. Appendix B addresses some of the indirect economic effects of forest-related industries.

Total labor income from Forest Resources for the years 1990 and 2000 is shown in Table 18. Total labor income is commonly defined as the sum of employee compensation and proprietor’s income. Data show significant losses in total labor income from wood products and processing for each of the counties between 1990 and 2000 with the exception of Greenlee County which reported no income from this category in either year. Apache and Greenlee Counties reported similar losses in total labor income from special forest products and processing, while Navajo County reported a substantial increase (328%) in the same category. The increase in total labor income from special forest products and processing was greatest for Coconino County between 1990 and 2000 (2,346%), due primarily to a considerable increase in income from the agriculture, forestry, and fishery services industry.

Table 19 suggests that the most substantial gains in tourism employment between 1990 and 2000 took place in Coconino County. Although the rate of increase was larger within other counties, the gain in actual number of individuals employed in tourism related sectors was significantly less. Notably, each of the five counties reported rates of increase in tourism employment exceeding that of their respective states between 1990 and 2000.

Table 18. Total Labor Income from Forest Resources by County and State, 1990-2000 and % Change

County	Income from Wood Processing and Products			Income From Special Forest Products and Processing		
	1990	2000	%Change	1990	2000	%Change
Apache	\$8,680,090.55	\$1,160,175.56	-86.63%	\$840,850.11	\$520,546.91	-38.09%
Coconino	\$30,558,827.28	\$4,973,588.91	-83.72%	\$78,834.20	\$1,928,131.94	2,345.81%
Greenlee	\$0.00	\$0.00	n/a	\$406,979.70	\$98,564.00	-75.78%
Navajo	\$49,567,159.03	\$34,270,346.61	-30.86%	\$1,294,655.82	\$5,535,208.71	327.54%
Catron, NM	\$307,427.69	\$192,946.78	-37.24%	\$129,989.50	\$148,253.04	14.05%
Assessment Area Total	\$88,806,076.86	\$40,404,111.08	-54.50%	\$2,621,319.82	\$8,082,451.55	208.34%
Arizona	\$263,558,989.17	\$369,474,538.71	40.19%	\$175,994,086.50	\$137,825,248.28	-21.69%
New Mexico	\$74,750,035.16	\$71,318,854.00	-4.59%	\$32,359,688.72	\$39,734,899.98	22.79%

*2000 Income data adjusted to reflect 1990 constant dollars by applying deflation factor calculated by Consumer Price Index

Source: 1990 and 2000 IMPLAN data

Table 19. Tourism Employment by County and State, 1990-2000 and % Change

Industry Sector	Apache County			Coconino County			Catron County ,NM		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Retail	144	201	39.71%	562	896	59.47%	6	12	111.76%
Restaurant/Bar	76	157	105.48%	1,054	1,451	37.69%	9	12	31.79%
Lodging	278	587	111.02%	3,812	4,831	26.73%	26	56	118.89%
Amusement	2	1	-3.33%	60	121	101.21%	0	2	n/a
Total	500	947	89.29%	5,488	7,299	33.00%	40	82	102.24%

Industry Sector	Greenlee County			Navajo County			Arizona		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Retail	21	28	34.29%	310	408	31.71%	21,655	30,376	40.28%
Restaurant/Bar	17	22	29.86%	373	559	49.94%	26,393	38,395	45.47%
Lodging	63	94	50.30%	469	623	32.69%	47,848	56,848	18.81%
Amusement	0	10	7,940.00%	12	20	69.64%	1,442	3,462	140.05%
Total	101	155	53.50%	1,163	1,609	38.33%	97,338	129,081	32.61%

Industry Sector	New Mexico		
	1990	2000	% Change
Retail	8,217	10,748	30.81%
Restaurant/Bar	10,734	14,290	33.13%
Lodging	14,056	17,021	21.09%
Amusement	490	1,421	189.73%
Total	33,497	43,480	29.80%

Source: 1990 and 2000 IMPLAN data

3.4 Government earnings from federal-lands related payments

Federal lands support the fiscal management of local governments through Payments in Lieu of Taxes (PILT) and what are commonly referred to as “Payments to States” or “Secure Schools and Roads” funding. PILT funds derive from a 1976 law (Public Law 94-565) that provides money to local governments based on the amount of federal lands within their jurisdiction. These payments are affected by federal funding limitations, prior year “Payments to States,” and formulas derived from county populations. Based on annual congressional appropriation decisions, PILT payments may not always be fully funded. Counties may also receive monies based on a 1908 law that allocates to them ten percent of the gross revenues generated from timber harvest, grazing, mining, and all other uses from the federal lands within their jurisdictions.

The Weeks Law of 1911 increased the amount of forest receipt payments from ten to twenty-five percent. These “twenty-five percent monies” were mandated for use in schools and on roads. With recent diminishing commercial uses of federal lands, the President, in 2000, signed the Secure Rural Schools and Community Self Determination Act (PL 106-393). The purpose of the Act was to address the diminishing amounts of the twenty-five percent monies. This new law provides counties with the option of continuing to receive the twenty-five percent amount or to elect to receive a fixed amount based on the average of the three highest years between 1986 and 1999. In rural counties, these funds can be an important source of funding to maintain roads and provide support for schools. The law was originally

scheduled to sunset in 2006, but a bill to reauthorize the Act and extend it through FY 2013 was, at the time of this report, being considered by Congress (S. 267, H.R. 517).

PILT entitlement acreage is presented for each county in Table 20. Coconino County holds, by far, the greatest entitlement acreage with over 4.7 million acres, 3.2 million of which are FS lands. Catron County also reports a significant amount of entitlement acreage. Greenlee County also holds a significant amount of FS lands entitled to PILT with over 750,000 acres. Actual PILT payments for each county are presented in Table 21. Coconino County has consistently been among the largest recipients of PILT payments, which is not surprising given its abundance of entitlement acreage. In 2003 and 2004, however, Apache County received the greatest PILT payments with \$910,399 and \$896,233 respectively. Catron County reported the lowest average PILT payment between 2000 and 2004.

Annual forest receipts for the period spanning 1986-1999 are presented for each county in Table 22. Here again, Coconino County is shown to be the clear exception within the area of assessment with average annual receipts of over \$2.4 million during the period. By contrast, Apache County reported the fewest forest receipts with an annual average of \$273,300.

Table 20. Payment in Lieu of Taxes (PILT) Entitlement Acreage by County and Agency, FY 2004

County	BLM	FS	BOR	NPS	COE	ARMY	FISH	URC	TOTAL
Apache County	95,774	492,814	0	63,885	0	0	0	0	652,473
Coconino County	605,440	3,269,240	24,083	826,877	0	0	0	0	4,725,640
Greenlee County	156,233	751,142	0	0	0	0	0	0	907,375
Navajo County	92,981	487,997	4,819	18,904	0	0	0	0	604,701
Catron County, NM	598,884	2,150,385	0	533	0	0	0	0	2,749,802
TOTAL	1,549,312	7,151,578	28,902	910,199	0	0	0	0	9,639,991

Source: U.S. Department of the Interior, Bureau of Land Management

<http://www.blm.gov/pilt>

Table 21. County PILT Payments, 2000-2004

County	2000	2001	2002	2003	2004	Average
Apache County	\$523,885	\$745,100	\$795,723	\$926,386	\$910,399	\$780,299
Coconino County	\$820,879	\$1,260,220	\$1,329,731	\$858,124	\$896,233	\$1,033,037
Greenlee County	\$345,990	\$473,543	\$530,056	\$341,525	\$353,908	\$409,004
Navajo County	\$435,569	\$641,880	\$694,151	\$794,619	\$826,810	\$678,606
Catron County	\$149,812	\$267,638	\$280,882	\$320,469	\$329,469	\$269,654
TOTAL	\$2,276,135	\$3,388,381	\$3,630,543	\$3,241,123	\$3,316,819	\$3,170,600

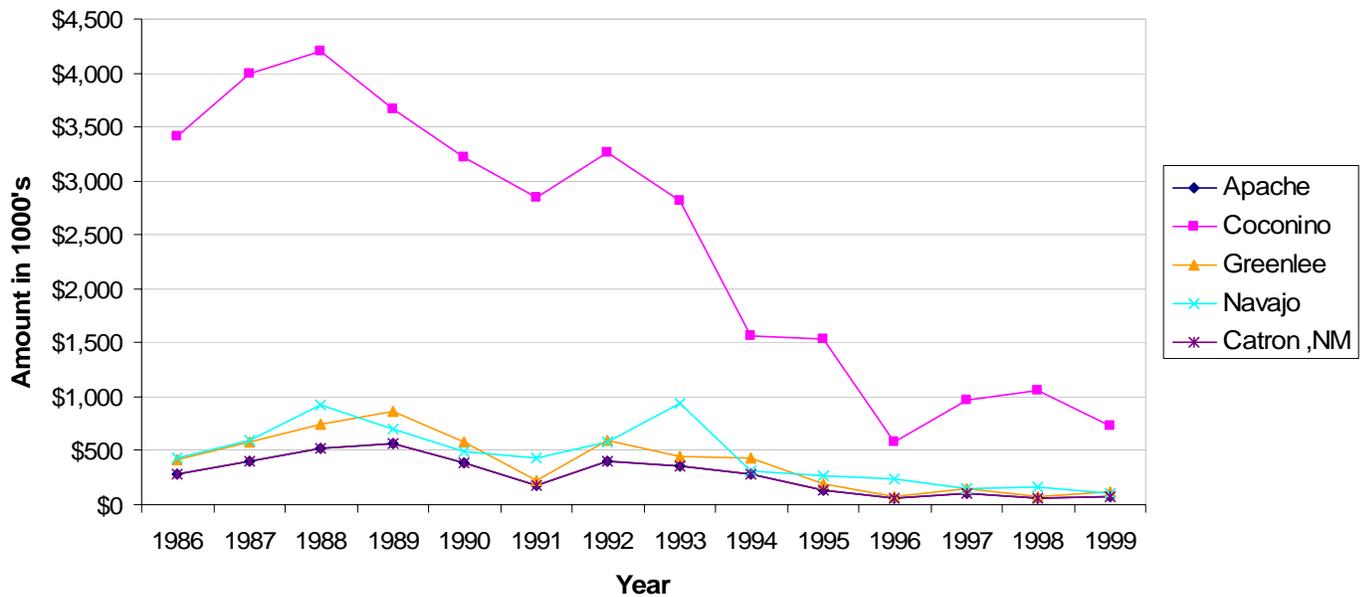
Source: U.S. Department of the Interior, Bureau of Land Management
<http://www.blm.gov/pilt/search.html>

Table 22. Forest Receipts by County, 1986-1999 (Amounts in 1,000s)

County	1986	1987	1988	1989	1990	1991	1992	1993	1994
Apache County	\$284.1	\$397.2	\$523.2	\$569.5	\$387.1	\$174.2	\$406.8	\$355.1	\$285.5
Coconino County	\$3,418.8	\$3,991.3	\$4,208.3	\$3,671.3	\$3,218.2	\$2,839.2	\$3,256.8	\$2,817.3	\$1,566.2
Greenlee County	\$415.6	\$581.0	\$743.8	\$858.1	\$580.2	\$227.9	\$597.5	\$453.5	\$432.2
Navajo County	\$426.3	\$594.2	\$919.2	\$693.1	\$487.9	\$428.0	\$578.2	\$937.1	\$305.5
Catron County, NM	\$459.6	\$613.0	\$859.2	\$942.0	\$616.9	\$323.7	\$736.0	\$535.4	\$499.3
County	1994	1995	1996	1997	1998	1999	Average		
Apache County	\$285.5	\$137.1	\$62.0	\$100.3	\$63.1	\$81.4	\$273.3		
Coconino County	\$1,566.2	\$1,534.2	\$584.4	\$969.9	\$1,058.5	\$735.3	\$2,419.3		
Greenlee County	\$432.2	\$189.0	\$67.1	\$144.2	\$79.9	\$119.8	\$392.1		
Navajo County	\$305.5	\$265.1	\$238.4	\$156.0	\$165.8	\$108.0	\$450.2		
Catron County, NM	\$499.3	\$266.6	\$119.5	\$195.3	\$140.5	\$163.7	\$462.2		

Source: NRIS - Human Dimensions

Amounts in \$1,000's



Source: NRIS - Human Dimensions

Figure 13. Forest Receipts by County, 1986-1999

3.5 Key issues for forest planning and management

In the early stages of Arizona's development, extractive industries such as mining, ranching, farming, and timber harvesting were the mainstays of local economies. For decades, these sectors provided the foundation for employment upon which the state's predominantly rural economy was based (Case and Alward 1997, Rasker 2000). In recent decades, however, Arizona has joined neighboring western states in experiencing a significant decline in extractive industries along with the employment and income traditionally provided by these sectors (Baden and Snow 1997, Booth 2002).

While these changes have undoubtedly had a negative impact on many local economies, the relative expansion of information- and service-based industries has led to a more diverse, and some say more sustainable, state economy (Baden and Snow 1997, Booth 2002). The economic data gathered for the area of assessment for Apache-Sitgreaves National Forests illustrate this trend showing substantial growth in the F.I.R.E. (finance, insurance and real estate) sector as well as in the retail trade industry. When matched with a simultaneous decline in extractive and productive industries, these changes have made the composition of the area's rural economy similar to those of urban areas and the state of Arizona as a whole (Booth 2002, Case and Alward 1997).

Again, these changes are emblematic of those seen in recent decades throughout the Mountain West and signal important demographic and economic trends that are likely to shape the region's future development. Despite relatively slow population and economic growth for the area surrounding the ASNF, data show expansion of certain populations and industries that are increasingly important to the local economy. In particular, the increase in retirement-aged population and increase in seasonal housing units, when combined with increases in the service/professional, retail trade, and construction industries, mirror a common trend in rural western economies.

These trends support the notion that growth in rural western communities is increasingly supported by individuals and households with the wherewithal to support increasingly non-extractive economies. Although the data show that per capita and median household income in the region grew somewhat faster than the state average between 1990 and 2000, overall income levels remain below the state average for most counties in the area of assessment. This trend takes on increasing relevance when combined with observed demographic trends showing an influx of retirement-age residents and seasonal homeowners. Several researchers have noted that while labor income is growing in the rural Mountain West, it is growing more slowly than transfer (social security, pensions, retirement) and dividend income. In other words, growth of rural communities is being fueled, at least in part, by income that is not tied to local employment (Booth 2002, Rasker 2000).

The relative expansion of the service and professional industries is also facilitated by advances in the transportation and information technologies that increasingly allow urban populations to relocate to high-amenity rural communities while maintaining employment and income characteristics typical of more urban settings (Booth 2002, Rasker 2000).

Together, these trends signal a convergence of rural and urban economies and carry important implications for natural resource management. Many of the rural communities hardest hit by the transition away from extractive industries belong to traditional constituencies associated with the FS, the BLM, and other federal and state agencies. In many cases, these agencies are caught between the necessity of responding to market forces and powerful interests determined to protect established industries from such changes (Baden and Snow and Snow 1997). Finally, data for the area surrounding the ASNF demonstrate the reciprocal cause and effect relationship between economic and demographic trends. Although the economic growth of rural communities may be fueled by households with relatively "footloose" income, potentially negative consequences include an increased demand for construction, schools, health care, and other services as well as undesirable side effects such as pollution, urban sprawl, and congestion (Rasker 2000, Case and Alward 1997).