



# Bureau *of* Business & Economic Research

## Employment Forecast for Santa Fe County and Santa Fe County Service Areas: 2013 to 2030

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*Part 2: Santa Fe County Employment Forecast*

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While many people contributed to this report, I am responsible for any errors or omissions.

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## Executive Summary

The Geospatial and Population Studies (GPS) and the Bureau of Business and Economic Research (BBER) expect that the population and employment of Santa Fe County will reach 165,290 and 73,464 in 2030, respectively. From 2013, population is expected to increase by 18,443 people (or 13%) while employment is expected to increase by 12,834 jobs (or 21%).

The population growth rate has been slowing and we expect to see this trend continue, with a slight reversal in the last decade of the forecast. From 1990 to 2000, population increased by 27,787 people (or 27.4%). However, from 2000 to 2010, population only increased by 15,386 (or 11.9%). From 2010 to 2020 and subsequently from 2020 to 2030, we expect population to increase by 7,364 (or 5.1%) and 13,380 (or 8.8%), respectively. Table 1 presents Santa Fe County historical and forecasted population and employment decennially.

The employment growth rate has suffered recently because of the Great Recession. From 1990 to 2000, employment increased by 15,372 jobs (or 36.3%). However from 2000 to 2010, employment increased by only 2,867 (or 5.0%). Specifically, employment started to fall in 2007, after it peaked at 65,905 jobs. We expect that it will be 13 years from 2007 for employment to reach that previous peak, with 65,982 jobs in 2020. From 2010 to 2020 and subsequently from 2020 to 2030, we expect employment to increase by 5,446 (or 9.0%) and 7,480 (or 11.3%).

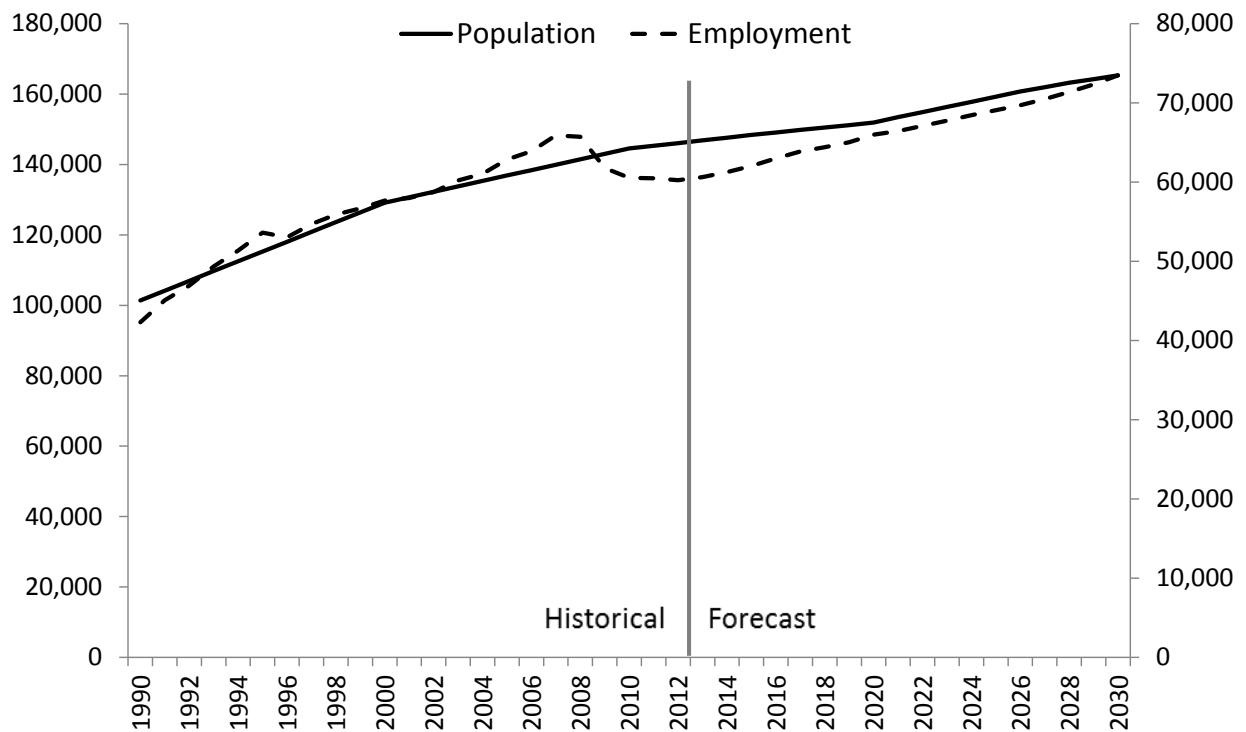
**Table 1: Santa Fe County population and employment estimates and forecasts**

Year	Population		Employment	
	Count	% Change	Count	% Change
1990	101,373		42,298	
2000	129,160	27.4	57,671	36.3
2010	144,546	11.9	60,538	5.0
2020	151,910	5.1	65,984	9.0
2030	165,290	8.8	73,464	11.3

Sources: University of New Mexico, Geospatial Population Studies (population estimate and forecast) and Bureau of Business and Economic Research (employment forecast), U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages (employment estimate).

The historic trend of Santa Fe County employment and population share a similar growth path, leading up to the Great Recession. Immediately preceding the recession, employment grew faster than population, and then commencing with the recession, employment suffered losses. While many people lost their jobs during the recession, many of them remained in the county. We expect that employment will grow faster than population as the economy recovers and many of those unemployed workers will return to the workplace. Figure 1 displays estimated (1990-2012) and forecasted (2013-2030) population (on the left axis) and employment (on the right axis).

**Figure 1: Estimated (1990-2012) and forecasted (2013-2030) population (left axis) and employment (right axis) for Santa Fe County**



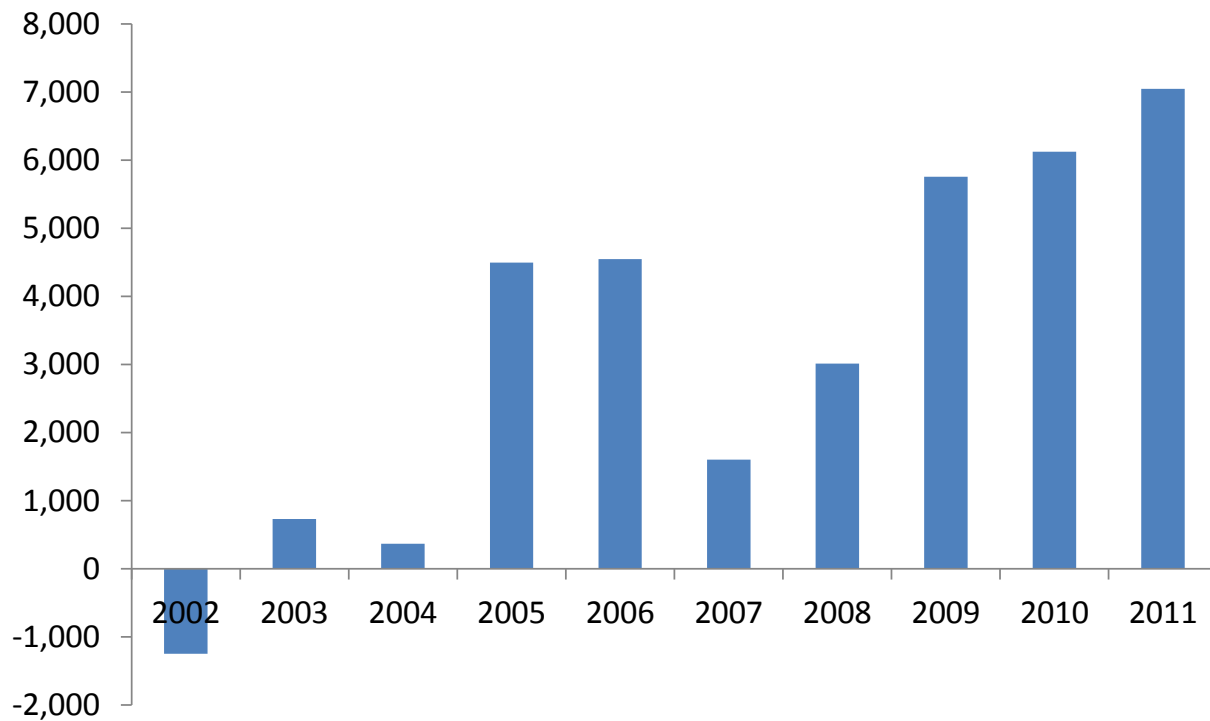
Source: University of New Mexico, Geospatial Population Studies (population estimate and forecast) and Bureau of Business and Economic Research (employment forecast), U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages (employment estimate).

The historic commuting trends of Santa Fe County residents and employees have played a role in population/employment dynamics and we expect them to play a larger role in the future.

Although the flow of commuters entering or leaving the county to work was not forecasted, Figure 2 suggests that the net inflow will increase in the future. The net flow of workers commuting to Santa Fe County was negative in 2002, but has increased from 2003 through 2011. For example, in 2002, 13,689 employees commuted to Santa Fe County while 14,936 Santa Fe County residents commuted to work outside Santa Fe County for a net outflow of 1,247. However, in 2011, 25,887 employees commuted to Santa Fe County, while only 18,840 Santa Fe County residents commuted to work outside of Santa Fe County, for a net inflow of 7,047 employees.

Although we expect population to increase by 18,443 people and employment to increase by 12,834 jobs in the forecast period, we do not expect that the increase in employment will be fully filled by the increase in population, or unemployed workers returning to the workplace. We expect that commuters will fill some of the increase in Santa Fe County employment.

**Figure 2: Net inflow/outflow of Santa Fe County commuters**



Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics, OnTheMap (2002-2012).

## Introduction

The Santa Fe County Growth Management Department contracted UNM's Geospatial and Population Studies (GPS) and Bureau of Business and Economic Research (BBER) to forecast Santa Fe County population and employment, respectively. In this report, BBER will forecast employment for 2013 through 2030 for Santa Fe County and the following Santa Fe County service areas:

- Land Use Regulatory Jurisdiction<sup>1</sup>
  - Land Use Regulatory Jurisdiction by Growth Management Area

### Sustainable Development<sup>2</sup>

- SDA-1
- SDA-2
- SDA-3

### Utility/Water Service<sup>3</sup>

### Growth Management<sup>4</sup>

- El Centro
- El Norte
- Estancia
- Galisteo

The first section of this report describes Santa Fe County employment forecast by sector. The second section describes total employment forecast for Santa Fe County, the City of Santa Fe, Santa Fe County parts of Edgewood and Espanola, Tribal Area, and the Land Use Regulatory Jurisdiction Area. The third section describes total employment for Land Use Regulatory Jurisdiction by Growth Management Areas. The fourth section describes total employment forecast for the Sustainable Development Areas and the Utility/Water Service Area. The Appendix describes the method used to forecast Santa Fe County employment by sectors and the method used to allocate total forecasted Santa Fe County employment to the service areas.

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<sup>1</sup> Areas where Santa Fe County has land use regulatory authority, does not include municipalities, Tribal, or federal land.

<sup>2</sup> Santa Fe County identified these areas, which are only in the unincorporated county, as part of the Sustainable Growth Management Plan process. These areas have been identified to target and leverage public/private funding/investment to ensure adequate public facilities/services to direct and phase future growth.

SDA-1 is the County's primary growth area, where new development is likely and reasonable to occur within the next 10 years.

SDA-2 is County area where new development is likely and reasonable to occur over the next 10 to 20 years and in some cases, as infill within existing communities within the next 10 years.

SDA-3 is County area where there are no plans to provide urban or suburban facilities and services. Infrastructure is not available or budgeted. Any infrastructure will be provided solely at the expense of new development.

<sup>3</sup> Santa Fe County determined Utility/Water Service Area to be SDA-1 in El Centro, which is a primary growth area where new development is likely to occur within the next 10 years.

<sup>4</sup> Santa Fe County delineated these areas as part of the Sustainable Growth Management Plan process.



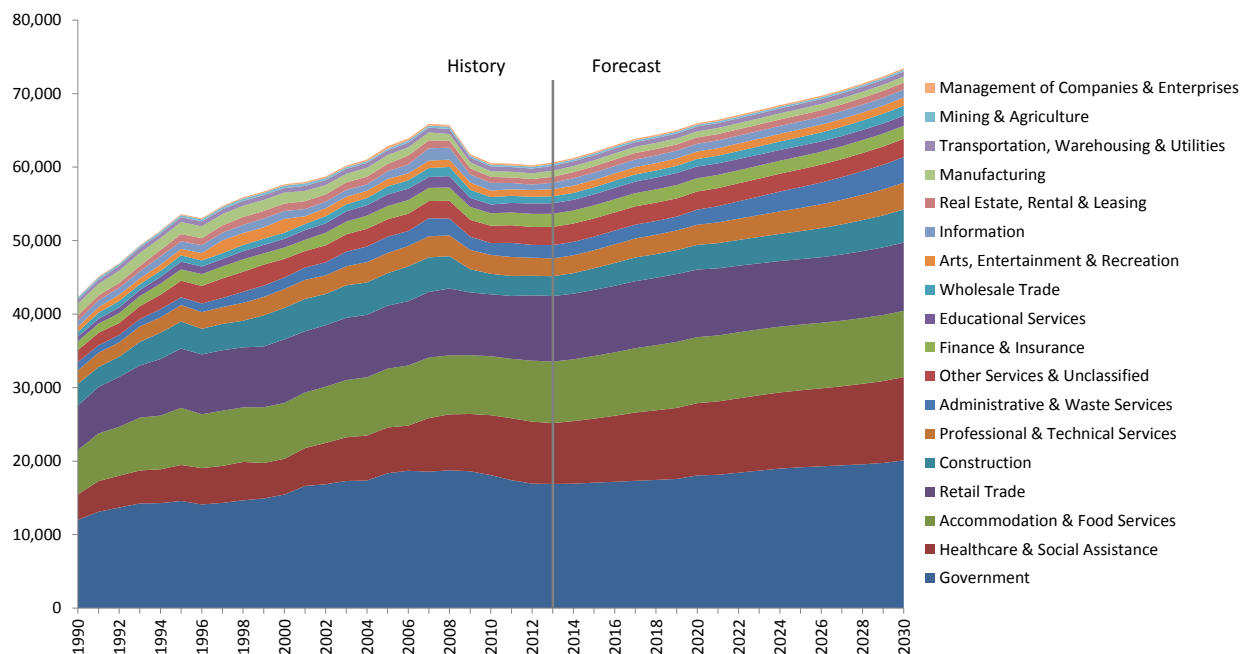
## Santa Fe County Employment by Sector

Santa Fe County employment growth has varied in recent decades. The annual compound growth rate ranged from .7% (from 1995 through 2012) to 2.6% (from 1990 through 2007). Table 2 displays Santa Fe County employment from 1990 through 2012. County employment peaked in 2007 with 65,905 jobs and we expect that it will take until 2020 for the county to recover to its previous employment peak with 65,982 jobs.

From 2013 through 2030, we expect employment to grow at an annual compound rate of 1.1% from 60,630 to 73,464. Figure 3 displays historical (1990-2012) and forecasted (2013-2030) Santa Fe County employment by sector. Table 3 displays forecasted Santa Fe County employment from 2013 through 2030.

From 1990 through 2012, Healthcare & Social Assistance and Government grew the most, increasing by 4,982 and 4,917 jobs respectively (or by 1.6% and 4.1% annually respectively). We expect these two sectors to also grow the most in the forecast period and increase by 3,041 and 3,210 respectively (or 1.9% and 1.0% annually respectively). From 1990 through 2012, Construction lost 272 jobs due to the housing bubble collapse. We expect this sector to gain 1,799 jobs in the forecast period, but remain below its historic high employment level reached in 2006 of 4,729.

**Figure 3: Historical (1990-2012) and forecasted (2013-2030) Santa Fe County employment by sector**



Sources: U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages (1990-2012); University of New Mexico, Bureau of Business and Economic Research, FOR-UNM (2013-2019), BBER forecast (2020-2030).

**Table 2: Santa Fe County employment history by sector from 1990 through 2012**

Sector	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mining & Agriculture	287	296	252	247	261	285	270	306	331	324	344	353	290	243	218	219	290	276	299	234	215	234	255
Construction	2,934	2,714	2,741	3,210	3,576	3,674	3,480	3,589	3,620	4,239	4,289	4,389	4,257	4,415	4,412	4,409	4,729	4,710	4,391	3,154	2,792	2,714	2,662
Manufacturing	1,590	1,559	1,669	1,761	1,613	1,653	1,604	1,542	1,526	1,489	1,469	1,399	1,251	1,164	1,207	1,207	1,116	1,068	914	801	770	772	776
Wholesale Trade	618	831	879	794	827	850	826	793	835	850	819	836	986	950	980	1,104	1,148	1,218	1,254	1,114	1,005	972	913
Retail Trade	6,046	6,321	6,796	7,098	7,697	8,074	8,141	8,225	8,161	8,266	8,654	8,343	8,359	8,473	8,493	8,570	8,753	8,932	9,094	8,546	8,416	8,558	8,884
Transportation, Warehousing & Utilities	545	576	660	685	643	659	689	639	665	657	631	674	694	687	639	652	668	690	664	669	640	651	651
Information	820	931	939	954	1,143	1,029	1,078	1,055	1,109	1,205	1,069	973	887	925	874	1,051	1,197	1,688	1,626	1,103	1,049	850	745
Finance & Insurance	1,205	1,237	1,336	1,370	1,510	1,536	1,611	1,616	1,679	1,533	1,543	1,529	1,711	1,738	1,780	1,803	1,855	1,788	1,809	1,755	1,694	1,735	1,776
Real Estate, Rental & Leasing	723	667	669	749	858	977	950	985	1,075	1,021	1,021	1,072	1,004	1,030	1,048	1,001	1,217	1,075	942	847	804	758	747
Professional & Technical Services	1,831	1,935	1,961	2,099	2,085	2,242	2,276	2,288	2,431	2,508	2,568	2,594	2,534	2,595	2,766	2,755	2,773	2,854	2,839	2,625	2,568	2,580	2,468
Management of Companies & Enterprises	50	120	92	96	121	135	139	150	162	179	184	200	205	203	229	360	269	250	225	225	223	238	192
Administrative & Waste Services	1,145	1,026	996	997	1,116	1,053	1,172	1,231	1,503	1,541	1,550	1,679	1,773	1,989	2,117	2,213	2,048	2,470	2,273	1,811	1,615	1,928	1,733
Educational Services	651	666	790	820	920	1,058	1,022	1,025	1,111	1,141	1,193	1,320	1,273	1,389	1,425	1,566	1,550	1,485	1,539	1,237	1,196	1,297	1,411
Healthcare & Social Assistance	3,452	4,177	4,333	4,495	4,602	4,897	4,945	5,033	5,229	4,825	4,864	5,155	5,627	5,944	6,121	6,231	6,142	7,298	7,608	7,799	8,153	8,427	8,434
Arts, Entertainment & Recreation	707	761	833	793	833	882	1,005	1,738	1,633	1,556	1,885	1,051	1,072	1,033	973	1,005	949	1,003	993	971	890	890	924
Accommodation & Food Services	6,056	6,482	6,641	7,186	7,304	7,769	7,330	7,509	7,425	7,578	7,602	7,557	7,650	7,786	7,926	8,006	8,177	8,229	8,026	7,991	8,031	8,083	8,296
Other Services & Unclassified	1,620	1,695	1,635	1,761	1,965	2,265	2,387	2,665	2,735	2,851	2,542	2,245	2,313	2,357	2,422	2,368	2,344	2,333	2,431	2,284	2,356	2,396	2,446
Government	12,020	13,109	13,688	14,236	14,286	14,577	14,103	14,319	14,663	14,924	15,445	16,620	16,847	17,297	17,359	18,349	18,690	18,560	18,757	18,616	18,094	17,405	16,937
Total	42,300	45,103	46,910	49,351	51,360	53,615	53,028	54,708	55,893	56,687	57,672	57,989	58,733	60,201	61,037	62,856	63,899	65,905	65,710	61,777	60,540	60,477	60,250

Source: U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

**Table 3: Santa Fe County employment forecast by sector from 2013 through 2030**

Sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Mining & Agriculture	244	250	248	247	244	241	240	240	239	239	239	240	241	242	242	243	244	244
Construction	2,695	2,788	2,939	3,104	3,228	3,216	3,257	3,356	3,432	3,499	3,588	3,691	3,811	3,956	4,098	4,225	4,346	4,494
Manufacturing	823	816	818	829	834	834	825	828	827	824	824	828	828	826	825	823	817	814
Wholesale Trade	944	944	955	962	968	972	975	1,010	1,045	1,080	1,116	1,151	1,186	1,221	1,256	1,291	1,326	1,361
Retail Trade	8,924	8,929	8,993	9,054	9,120	9,170	9,231	9,193	9,127	9,065	8,983	8,929	8,909	8,921	8,993	9,102	9,204	9,304
Transportation, Warehousing & Utilities	682	668	667	667	667	668	669	671	672	674	675	676	679	682	684	686	689	690
Information	898	1,009	1,014	1,025	1,035	1,042	1,052	1,056	1,060	1,065	1,069	1,072	1,072	1,070	1,070	1,072	1,074	1,076
Finance & Insurance	1,775	1,778	1,785	1,792	1,800	1,808	1,817	1,808	1,794	1,783	1,774	1,764	1,763	1,758	1,754	1,754	1,756	1,762
Real Estate, Rental & Leasing	799	834	850	871	876	864	842	851	858	865	873	881	890	899	911	926	943	961
Professional & Technical Services	2,420	2,429	2,466	2,535	2,584	2,633	2,684	2,745	2,820	2,901	2,982	3,063	3,151	3,249	3,348	3,446	3,543	3,640
Management of Companies & Enterprises	195	200	200	200	202	203	203	206	208	210	211	212	210	208	207	207	207	207
Administrative & Waste Services	1,818	1,823	1,842	1,877	1,888	1,877	1,872	2,053	2,204	2,359	2,525	2,695	2,828	2,952	3,084	3,215	3,349	3,486
Educational Services	1,447	1,441	1,501	1,549	1,574	1,595	1,638	1,606	1,569	1,530	1,493	1,464	1,438	1,409	1,386	1,377	1,373	1,367
Healthcare & Social Assistance	8,285	8,515	8,715	8,984	9,295	9,470	9,665	9,831	9,980	10,121	10,252	10,360	10,470	10,601	10,760	10,952	11,144	11,326
Arts, Entertainment & Recreation	953	987	993	998	1,005	1,011	1,018	1,024	1,029	1,036	1,041	1,045	1,051	1,058	1,072	1,088	1,104	1,119
Accommodation & Food Services	8,361	8,413	8,518	8,630	8,746	8,862	8,976	8,981	8,983	8,980	8,968	8,956	8,939	8,924	8,929	8,952	8,984	9,016
Other Services & Unclassified	2,475	2,498	2,475	2,468	2,482	2,492	2,482	2,467	2,457	2,448	2,436	2,431	2,432	2,437	2,445	2,463	2,481	2,495
Government	16,892	16,928	17,069	17,186	17,320	17,443	17,574	18,056	18,140	18,424	18,706	18,984	19,164	19,294	19,425	19,565	19,751	20,102
Total	60,630	61,250	62,048	62,978	63,868	64,401	65,020	65,982	66,444	67,103	67,755	68,442	69,062	69,707	70,489	71,387	72,335	73,464

Source: University of New Mexico, Bureau of Business and Economic Research, FOR-UNM (2013-2019), BBER forecast (2020-2030).

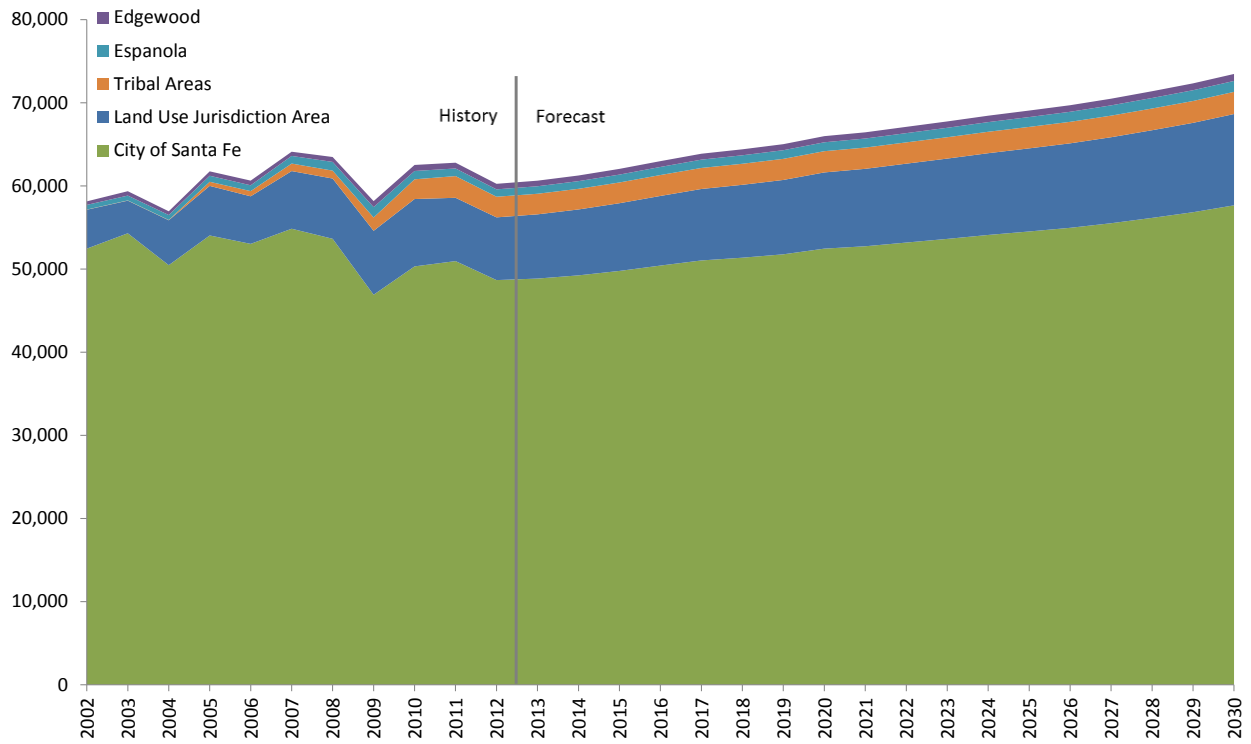
## **Santa Fe County, Municipalities, Tribal Areas, and Land Use Regulatory Jurisdiction Area**

Santa Fe County employment growth has also varied among the municipalities, tribal areas, and the land use jurisdiction areas. From 2002 through 2012, Santa Fe County employment increased by .3% annually. However, during this period, the City of Santa Fe employment shrunk by .7% annually, while the Santa Fe County parts of Edgewood and Espanola employment grew by 4.7% annually, the Land Use Jurisdiction Area employment grew by 4.9% annually, and the Tribal Areas employment grew by 60.4% annually. Table 4 displays historical (2002-2012) and forecasted (2013-2030) Santa Fe County employment by municipality, tribal area, and land use jurisdiction.

Although the City of Santa Fe lost jobs over the period, those job losses were concentrated in the construction sector as a result of the housing bubble burst in 2007. Conversely, although the Tribal Areas gained jobs over the period, those job gains were connected to the opening of Buffalo Thunder Hotel and Resort. We expect construction to reemerge from the Great Recession depths in the City of Santa Fe and Tribal Area employment growth to return to historic rates.

From 2013 through 2030, we expect employment to grow at an annual compound growth rate of 1.1% from 60,630 to 73,464. The City of Santa will lead the job gains with 8,810 (or 1.0% annually), followed by the Land Use Jurisdiction Area with 3,256 (or 2.1% annually), Espanola in Santa Fe County with 411 (or 2.2% annually), the Tribal Areas with 190 (or .4% annually), and part of Edgewood in Santa Fe County with 167 (or 1.3% annually). Figure 4 displays estimated (2002-2012) and forecasted (2013-2030) Santa Fe County employment by municipality, tribal area, and land use jurisdiction. Map 1 displays Santa Fe County municipalities, tribal areas, and land use jurisdiction.

**Figure 4: Historical (2002-2012) and forecasted (2013-2030) Santa Fe County employment by municipality, tribal area, and land use jurisdiction**



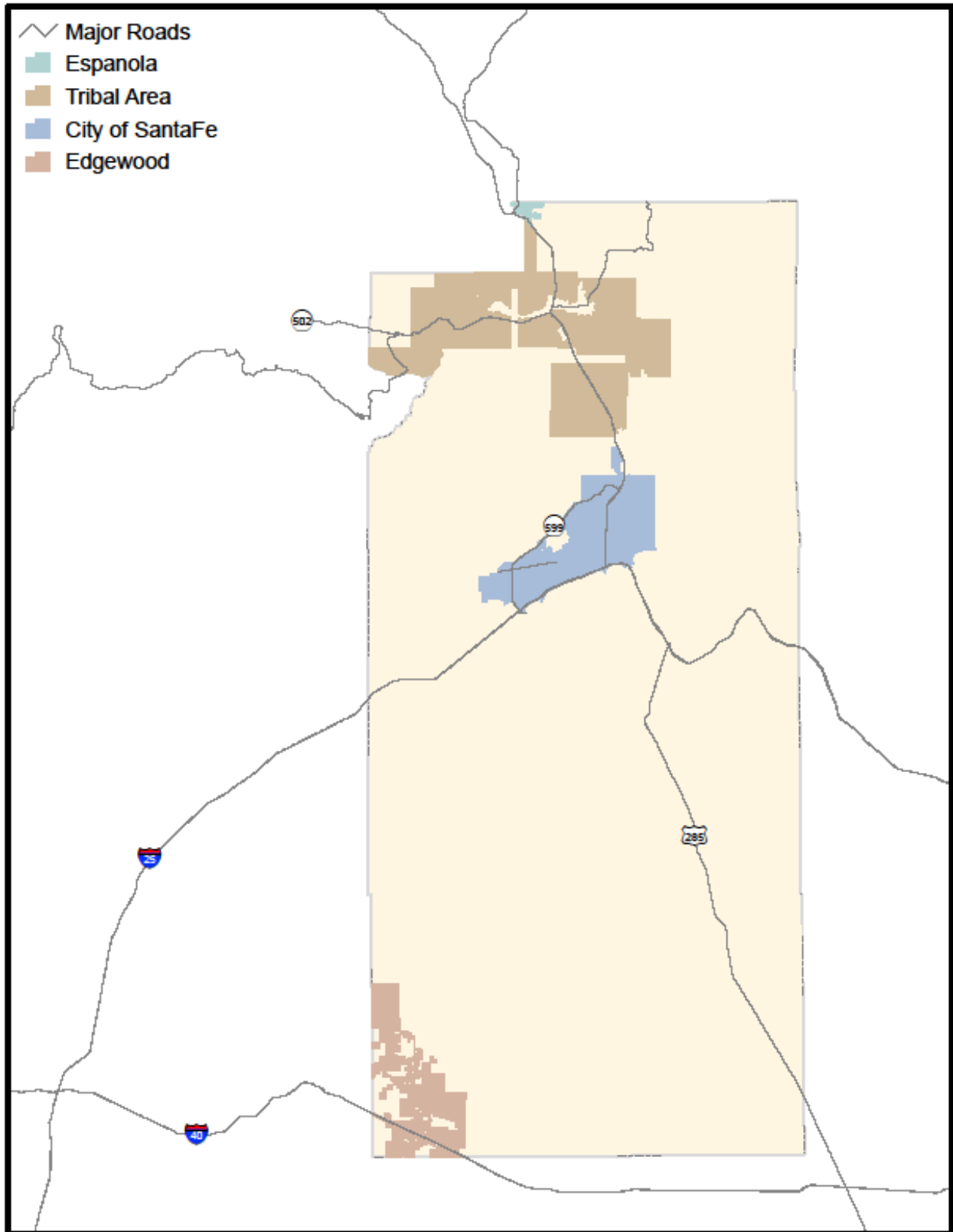
Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics, OnTheMap (2002-2012); estimates and forecasts performed by UNM BBER.

**Table 4: Santa Fe County employment estimates (2002-2012) and forecast (2013-2030)**

Year	Santa Fe County	City of Santa Fe	Edgewood	Espanola	Tribal Areas
2002	58,731	52,455	422	562	22
2003	60,201	54,300	527	579	31
2004	61,038	50,467	448	597	34
2005	62,857	54,038	529	726	493
2006	63,898	53,028	563	698	626
2007	65,908	54,848	506	919	903
2008	65,710	53,639	590	1,048	952
2009	61,775	46,909	719	1,250	1,601
2010	60,538	50,318	728	1,001	2,370
2011	60,477	50,955	695	915	2,611
2012	60,250	48,670	666	887	2,480
2013	60,630	48,853	671	904	2,476
2014	61,251	49,239	679	924	2,482
2015	62,048	49,772	689	947	2,495
2016	62,980	50,417	700	973	2,513
2017	63,870	51,033	711	999	2,530
2018	64,402	51,365	718	1,019	2,532
2019	65,021	51,771	727	1,041	2,538
2020	65,984	52,454	739	1,069	2,557
2021	66,445	52,740	745	1,089	2,556
2022	67,102	53,184	754	1,112	2,563
2023	67,754	53,626	763	1,136	2,569
2024	68,445	54,100	773	1,161	2,577
2025	69,063	54,519	781	1,184	2,581
2026	69,706	54,959	790	1,209	2,587
2027	70,489	55,510	801	1,236	2,597
2028	71,388	56,154	813	1,265	2,612
2029	72,335	56,836	826	1,296	2,628
2030	73,464	57,664	838	1,315	2,666

Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics, OnTheMap (2002-2012) estimates; (2013-2030) forecasts performed by UNM BBER. Note that prior to 2012, the sum of City of Santa Fe, parts of Edgewood and Espanola in Santa Fe County, and Tribal Areas do not equal Santa Fe County. The estimates were spatial queried using OnTheMap and spatial error was introduced.

Map 1: Santa Fe County

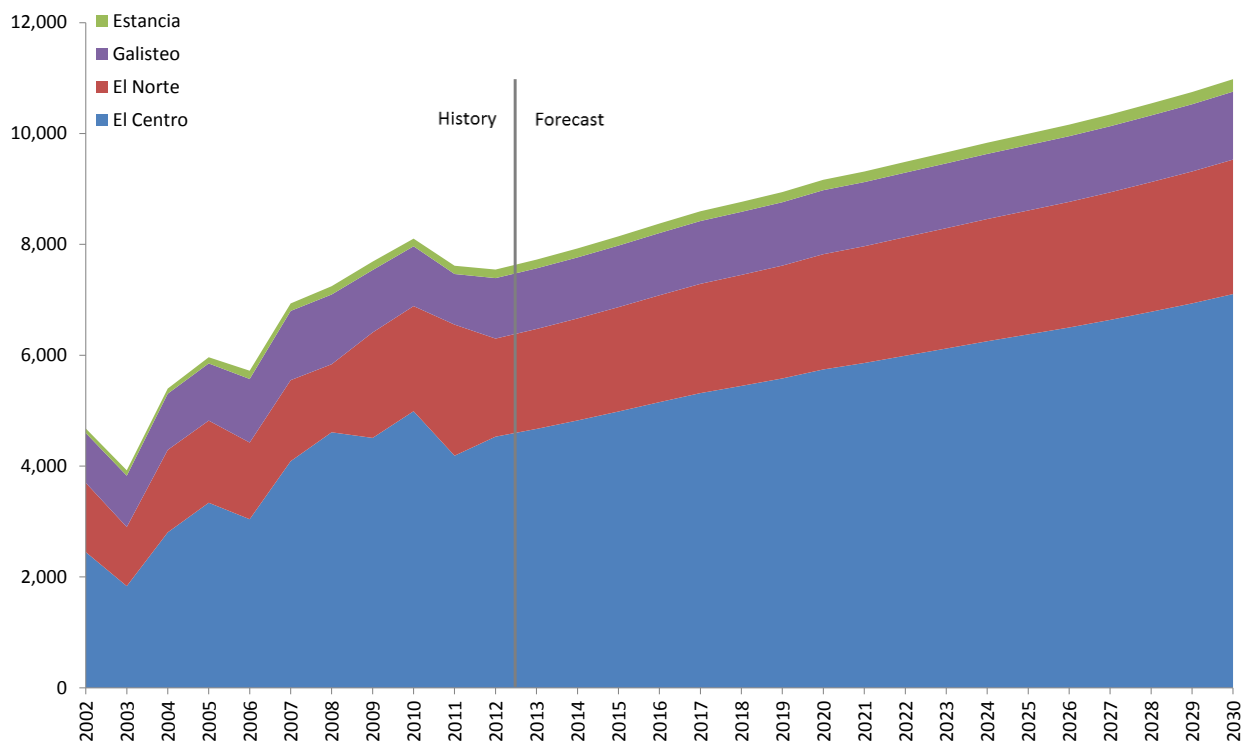


## Santa Fe County Land Use Jurisdiction by Growth Management Areas

As noted earlier, from 2002 through 2012, Santa Fe County Land Use Jurisdiction Area employment increased by a 4.9% annual growth rate. However, during this period, employment growth varied Areas within the Land Use Jurisdiction among the Growth Management Areas. Galisteo employment increased by a 2.0% annual growth rate, El Norte employment increased by a 3.5% annual growth rate, El Centro employment increased by a 6.4% annual growth rate, and Estancia employment increased by 6.7% annual growth rate. Table 5 displays estimated (2002-2012) and forecasted (2013-2030) Santa Fe County Land Use Jurisdiction by Growth Management Area employment.

From 2013 through 2030, we expect employment to grow at an annual compound growth rate of 2.5% from 4,671 to 7,104. El Centro will lead the job gains with 2,433 (or 2.5% annually), followed by El Norte with 624 (or 1.8% annually), Galisteo with 132 (or .7% annually), and Estancia with 68 (or 2.1%). We expect that the proximity of El Centro to the City of Santa Fe will continue to have positive impact in attracting jobs to the area, along with the fact that El Centro contains two of the three SDA-1 areas. Figure 5 displays estimated (2002-2012) and forecasted (2013-2030) Land Use Jurisdiction by Growth Management Area for Santa Fe County employment. Map 2 displays Land Use Jurisdiction by Growth Management Area for Santa Fe County.

**Figure 5: Employment history (2002-2012) and forecast (2013-2030) for Land Use Jurisdiction by Growth Management Area**



Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics (2002-2012); estimates and forecasts performed by UNM BBER.

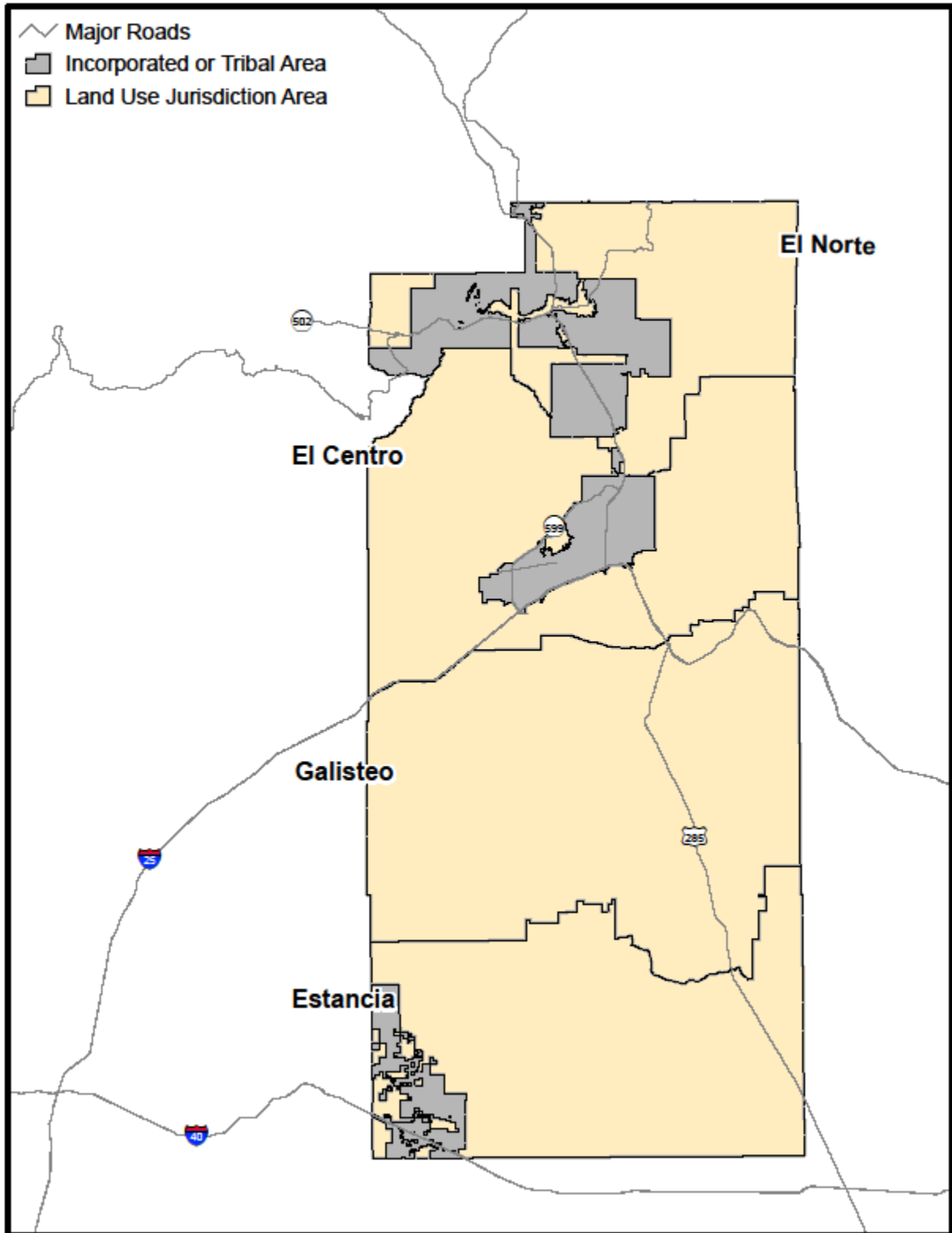
**Table 5: Employment history (2002-2012) and forecast (2013-2030) for Land Use Jurisdiction by Growth Management Area**

Year	Land Use Jurisdiction				
	Area	El Centro	El Norte	Estancia	Galisteo
2002	4,678	2,448	1,250	81	899
2003	3,924	1,835	1,066	97	926
2004	5,399	2,805	1,488	92	1,014
2005	5,964	3,339	1,482	112	1,031
2006	5,721	3,042	1,383	149	1,147
2007	6,935	4,089	1,462	135	1,249
2008	7,246	4,610	1,228	150	1,258
2009	7,690	4,509	1,902	152	1,126
2010	8,104	4,990	1,897	138	1,079
2011	7,615	4,188	2,365	149	913
2012	7,546	4,531	1,770	154	1,091
2013	7,726	4,671	1,802	158	1,094
2014	7,927	4,823	1,841	162	1,101
2015	8,145	4,985	1,883	167	1,111
2016	8,376	5,154	1,928	171	1,123
2017	8,598	5,317	1,971	176	1,133
2018	8,767	5,447	2,003	180	1,138
2019	8,944	5,582	2,036	183	1,143
2020	9,166	5,744	2,080	188	1,155
2021	9,315	5,860	2,107	191	1,157
2022	9,489	5,992	2,140	195	1,163
2023	9,660	6,121	2,172	198	1,169
2024	9,835	6,253	2,205	202	1,175
2025	9,997	6,376	2,235	205	1,180
2026	10,161	6,501	2,266	209	1,185
2027	10,344	6,638	2,302	212	1,193
2028	10,544	6,785	2,340	216	1,202
2029	10,749	6,936	2,380	221	1,213
2030	10,982	7,104	2,426	226	1,226

Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics OnTheMap (2002-2012); estimates and forecasts performed by UNM BBER. Note that prior to 2012, the sum of El Centro, El Norte, Estancia, and Galisteo do not equal Land Use Jurisdiction Area. The estimates were spatial queried using OnTheMap and spatial error was introduced.



Map 2: Land Use Jurisdiction by Growth Management Area for Santa Fe County



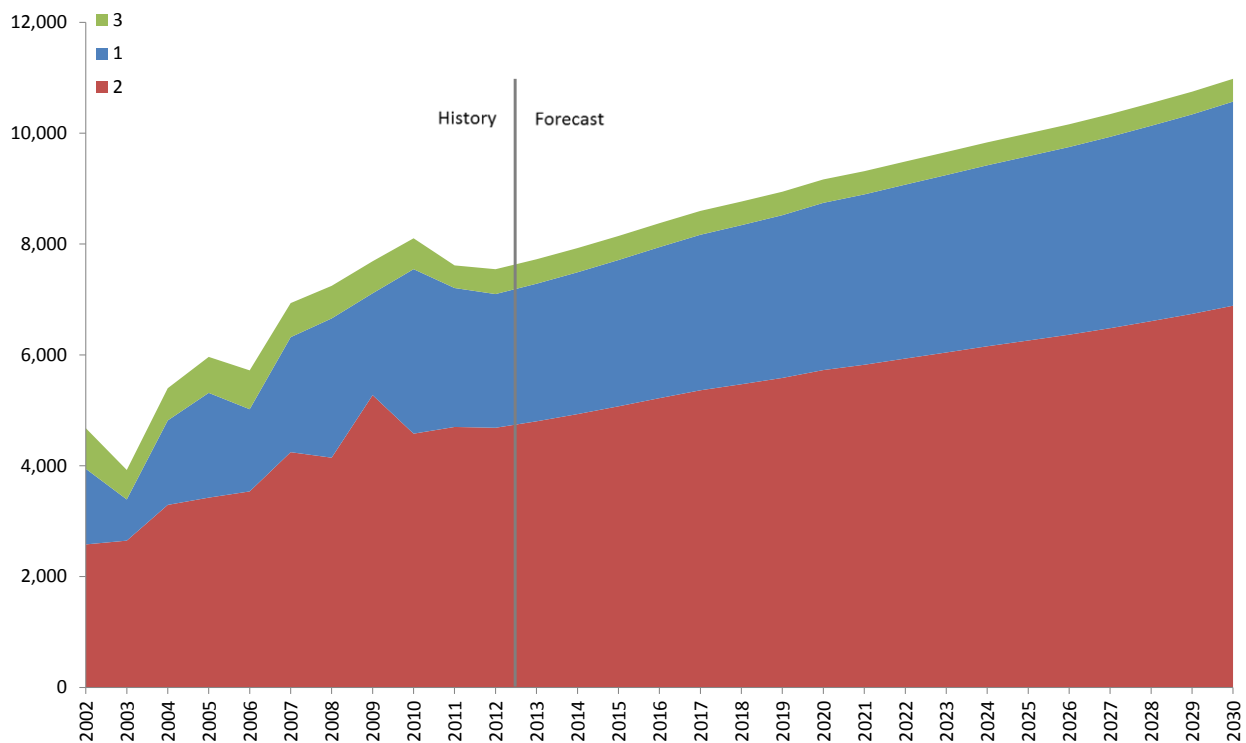
## Santa Fe County Sustainable Development Areas

As noted earlier, from 2002 through 2012, Santa Fe County Land Use Jurisdiction Area employment increased by a 4.9% annual growth rate. However, employment growth varied among the Sustainable Development Areas (SDAs). From 2002 through 2012, SDA-3 employment decreased by .48% annually, SDA-2 employment increased by 6.1% annually, and SDA-1 employment increased by 5.9% annually. Table 6 displays estimated (2002-2012) and forecasted (2013-2030) Sustainable Development Area employment.<sup>5</sup>

From 2013 through 2030, we expect Land Use Jurisdiction employment to grow at an annual compound growth rate of 2.1%, from 7,726 to 10,982. SDA-2 will lead the job gains with 2,086 (or 2.1% annually), followed by SDA-1 with 1,200 (or 2.3% annually), and SDA-3 will lose 30 jobs (or -.04% annually). Figure 6 displays historical (2002-2013) and forecasted (2013-2030) Santa Fe County employment by Sustainable Development Area. Map 3 displays Santa Fe County Sustainable Development Areas.

The Water/Utility service area is defined to be SDA-1 that is within El Centro, not including SDA-1 in Estancia, hence its employment follows closely with SDA-1.

**Figure 6: Employment historical (2002-2012) and forecast (2013-2030) for Sustainable Development Area**



Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics (2002-2012) OnTheMap; estimates and forecasts performed by UNM BBER.

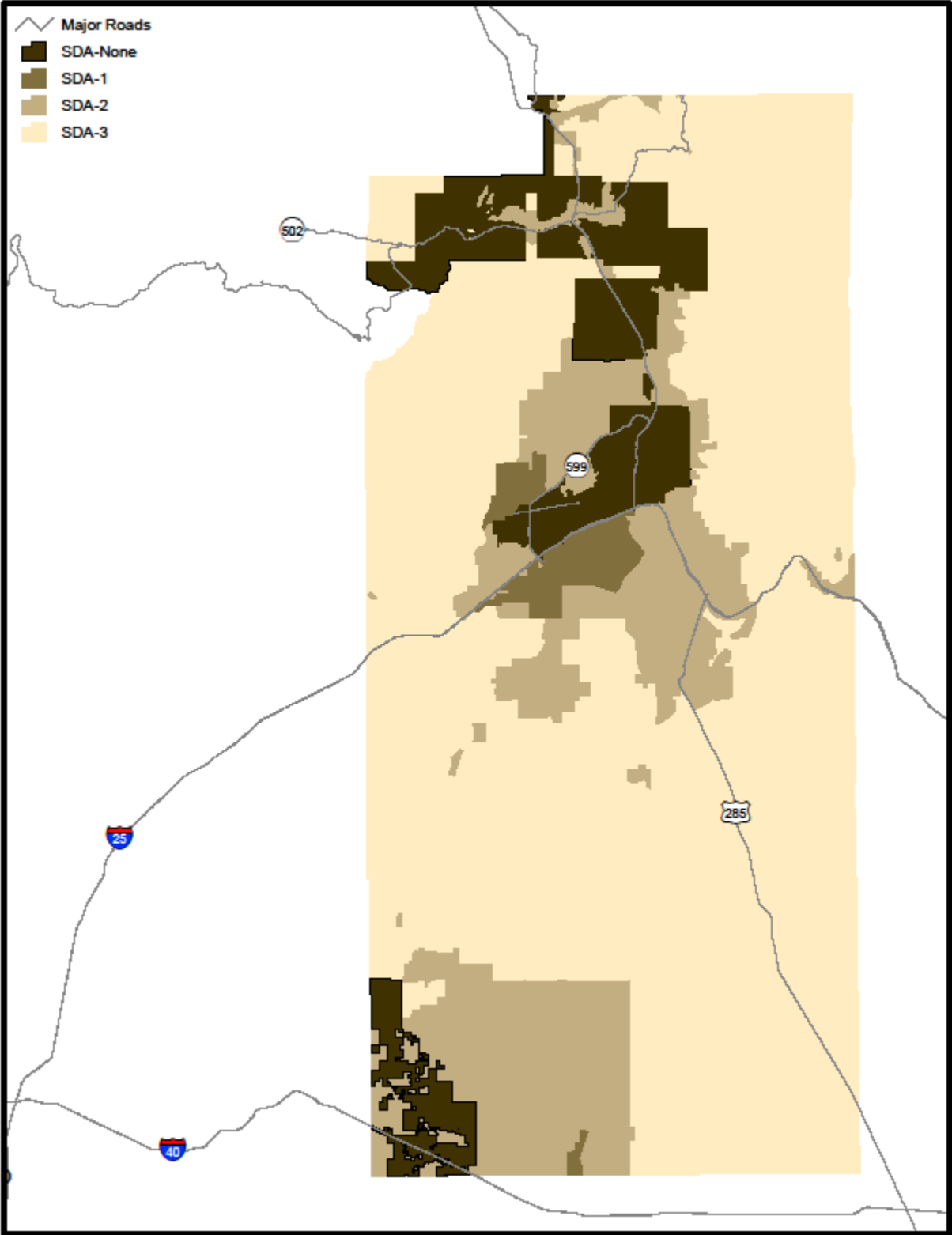
<sup>5</sup> Although SDA-1 is expected to be developed sooner than SDA-2, it is much smaller geographically than SDA-2, and thus has less employment than SDA-2.

**Table 6: Employment history (2002-2012) and forecast (2013-2030) for Sustainable Development Areas**

Year	Land Use	Jurisdiction			Water/ Utility
	Area	1	2	3	Service Area
2002	4,678	1,364	2,581	733	1,331
2003	3,924	743	2,649	532	733
2004	5,399	1,524	3,294	581	1,482
2005	5,964	1,890	3,425	649	1,830
2006	5,721	1,483	3,537	701	1,445
2007	6,935	2,075	4,245	615	2,004
2008	7,246	2,512	4,146	588	2,408
2009	7,690	1,838	5,274	578	1,774
2010	8,104	2,968	4,579	557	2,817
2011	7,615	2,507	4,700	408	2,398
2012	7,546	2,412	4,685	449	2,283
2013	7,726	2,482	4,802	441	2,352
2014	7,927	2,559	4,932	437	2,426
2015	8,145	2,640	5,072	433	2,505
2016	8,376	2,725	5,220	432	2,588
2017	8,598	2,806	5,362	430	2,667
2018	8,767	2,870	5,471	426	2,724
2019	8,944	2,936	5,585	423	2,783
2020	9,166	3,017	5,726	423	2,855
2021	9,315	3,073	5,823	419	2,905
2022	9,489	3,138	5,934	417	2,962
2023	9,660	3,201	6,044	415	3,018
2024	9,835	3,265	6,156	414	3,075
2025	9,997	3,325	6,260	412	3,128
2026	10,161	3,386	6,365	410	3,181
2027	10,344	3,453	6,482	410	3,241
2028	10,544	3,525	6,609	410	3,305
2029	10,749	3,599	6,740	410	3,371
2030	10,982	3,682	6,888	412	3,445

Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics (2002-2012); estimates and forecasts performed by UNM BBER.

Map 2: Santa Fe County sustainable development areas



## Conclusion

The Geospatial and Population Studies (GPS) and the Bureau of Business and Economic Research (BBER) expect that the population and employment of Santa Fe County will reach 165,290 and 73,464 in 2030, respectively. From 2013, population is expected to increase by 18,443 people (or 13%) while employment is expected to increase by 12,834 jobs (or 21%).

The expected increase in employment will be filled by the expected increased working population, those who lost their jobs during the Great Recession, and commuters from outside of Santa Fe County.

The annual compound growth rate of Santa Fe County employment ranged from .7% (from 1995 through 2012) to 2.6% (from 1990 through 2007). From 2013 through 2030, we expect employment to grow at an annual compound growth rate of 1.1%, with the largest employment increases expected to be in the Healthcare & Social Assistance and Government sectors, which already comprise the two largest sectors of the economy.

## Issues and Limitations

It is important to note issues and limitations with the forecast so that the forecast is viewed with an appropriate dose of skepticism.

- The forecast does not and cannot anticipate extraordinary events, either good or bad.
- The forecast is based on the most current data available. However, this data is subject to revision, while the forecast is not.
- The forecast assumes that the historical relationships and trends will continue to hold into the future.
- The forecast assumes that IHS Global Insight's U.S. employment by sector forecast will be accurate.
- Forecast reliability decreases as the length of time increases.
- Forecast reliability decreases as the level of detail increases, both categorical (employment by sector) and geographical (employment by service area).

## Appendix

### Employment Measure

BBER measured historical employment levels with the Quarterly Census of Employment and Wages (QCEW) in Part 1. To keep the unit of measure consistent across both reports, BBER will also forecast employment levels in units analogous with QCEW in Part 2.

The U.S. Department of Labor, Bureau of Labor Statistics (BLS) produces the QCEW in cooperation with State Employment Security Agencies and includes tabulation of employment covered by state Unemployment Insurance (UI) laws and federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program, which together cover about 98 percent of U.S. jobs. The QCEW includes partial information on agricultural industries and employees in private households. However, QCEW does not include non-profits, religious organizations, members of the armed forces, the self-employed, proprietors, domestic workers, unpaid family workers, railroad workers covered by the railroad UI system, work study employees, or hospital interns.

### Forecast Method

QCEW employment data is available from 1990 through 2012, thus the forecast presented begins in 2013. From 2013 through 2019, the forecast is supplemented with the short-term FOR-UNM employment forecast.<sup>6</sup> From 2020 through 2030, BBER forecasted Santa Fe County employment by sector.

The Santa Fe County employment by sector was aggregated and the resulting total Santa Fe County employment was allocated to the service areas by shifting shares. Finally, input from local economic development officials was included to adjust the forecast to reflect near term potential economic developments.

BBER estimated the historic relationship of Santa Fe County employment by sector to U.S. employment by sector and applied that relationship to forecasted U.S. employment by sector to forecast Santa Fe County employment by sector.

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<sup>6</sup> Based on IHS Global Insight's five-year short term forecast of the U.S. economy, BBER produces a five-year short-term forecast of New Mexico and New Mexico MSA's (including Santa Fe MSA, which is defined to be Santa Fe County) total employment by 2-digit NAICS, income, housing, and other variables. Global Insight also produces a long-term forecast (30 years out) of the U.S. economy based on trends and other scenarios.

The historical relationship between Santa Fe County employment by sector and U.S. employment by sector was estimated via Ordinary Least Squares regression. If the adjusted r-square was low, modifications were made to the model.<sup>7</sup> Modifications to the model include the introduction of a dummy variable to remove an outlying observation, the introduction of a time trend, or the specification of the model to be based only on a time trend. Either a dummy variable was introduced to remove an outlying observation, or the model was specified to include a time trend, or the model was specified to only be based on a time trend. On average, the model modifications doubled the adjusted r-square from 21 percent to 42 percent. The table below lists the adjusted r-square and modified adjusted r-square for each regression along with 2012 employment. The regression results are presented in Table A2.

**Table A1: Regression diagnostics for historical relationship estimation between Santa Fe County employment by sector and U.S. employment by sector**

Sector	Adjusted R-Square		2012 Employment
	Original	Modified	
Government	0.94		16,938
Retail Trade	0.81		8,884
Healthcare & Social Assistance	0.94		8,434
Accommodation & Food Services	0.83		8,296
Construction	0.74		2,662
Professional & Technical Services	0.73		2,468
Other Services & Unclassified	0.45	0.56	2,446
Finance & Insurance	0.75		1,776
Administrative & Waste Services	0.70		1,733
Educational Services	0.73		1,411
Arts, Entertainment & Recreation	0.00	0.28	924
Wholesale Trade	0.26	0.48	913
Manufacturing	0.93		776
Real Estate, Rental & Leasing	0.51	0.56	747
Information	0.00	0.35	745
Transportation, Warehousing & Utilities	0.17	0.46	651
Mining & Agriculture	0.02	0.13	255
Management of Companies & Enterprises	0.24	0.57	192

Sources: University of New Mexico, Bureau of Business and Economic Research; U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

<sup>7</sup> In our case, the adjusted r-square is the proportion of variation in county employment that is explained by U.S. employment with an adjustment made to account for the number of explanatory variables used.

The largest sector, Government, had the best fit with an adjusted r-square of .94. Moreover, four of the five largest sectors (Government, Retail Trade, Healthcare & Social Assistance, and Accommodation & Food Services) had the highest adjusted r-squares, which account for 72% of the employment.

Conversely, three of the five smallest sectors (Mining & Agriculture, Transportation, Warehousing & Utilities, and Information) had the lowest adjusted r-squares, which only account for 3% of the employment.

Once the historical employment relationship was estimated, it was applied to IHS Global Insight forecasted U.S. employment by sector. Global insight provides economic and financial information as well as economic forecasts, of which the BBER subscribes to the U.S. economic forecasts and uses this forecast as an input to the FOR-UNM forecast.

**Table A2: Regression results from regressing Santa Fe County employment by sector on U.S. employment by sector (if needed with modifications)**

Sector	Intercept	Dummy Variable	U.S. Sector Employment	Time Trend
Mining & Agriculture	404	-75	-0.00009	
Construction	-534		0.0007	
Manufacturing	-934		0.0001	
Wholesale Trade	-29,278			15
Retail Trade	-4,326		0.0009	
Transportation, Warehousing & Utilities	431	101	0.00003	
Information	1,307	-659	0.00013	
Finance & Insurance	-541		0.0004	
Real Estate, Rental & Leasing	-490	194	0.00063	
Professional & Technical Services	1,111		0.0002	
Management of Companies & Enterprises	-184	-188	0.00031	
Administrative & Waste Services	-494		0.0003	
Educational Services	113		0.0004	
Healthcare & Social Assistance	-2,202		0.0006	
Arts, Entertainment & Recreation	1,542	-847	0.00019	
Accommodation & Food Services	3,303		0.0004	
Other Services & Unclassified	383	-568	0.00049	
Government	-12,872		0.0014	

Source: University of New Mexico, Bureau of Business and Economic Research.



## Allocation

Since the service area forecast is based on total employment rather than sector employment, the employment forecast for Santa Fe County by sector was aggregated and then allocated to the service areas. BBER allocated total employment for all Santa Fe County service areas, but for exposition, only the allocation for the Growth Management Areas (GMAs) will be detailed. The forecasted employment shares for Sustainable Development Areas, Land Use Jurisdiction Area, Land Use Jurisdiction by GMAs, and Water/Utility Service Area are in the Appendix.

## Data Source

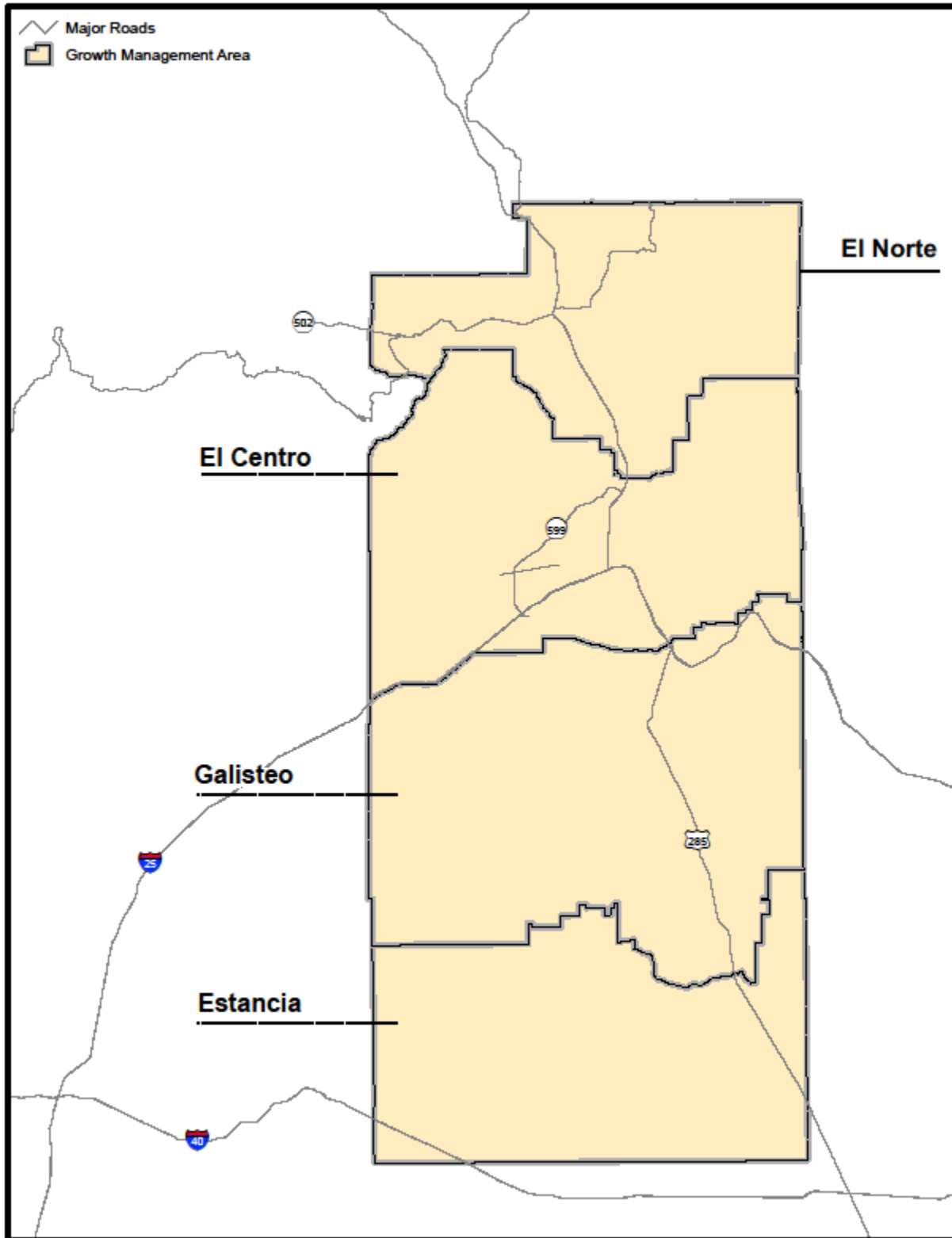
The U.S. Department of Commerce, Census Bureau has partnered with the New Mexico Department of Workforce solutions (and every state employment agency) to produce the Longitudinal Employer-Household Dynamic OnTheMap product.<sup>8</sup> OnTheMap allows spatial query of QCEW employment data that is user defined for 2002 through 2011. BBER used the shapefiles provided by the Santa Fe County Growth Management Department to query employment data by GMAs (and other service areas).

The GMAs completely cover the county and are comprised of four regions: El Norte, El Centro, Galisteo, and Estancia. Each GMA roughly represents about a quarter of the area of the county, but not necessarily a quarter of the employment. El Centro, which contains the City of Santa Fe, leads the GMA in employment share. It comprised 95% of the share of employment in 2003 and 88% in 2011. Table 3 and Table 4 display employment and employment share by GMA from 2002 through 2011. El Centro's share of employment has been whittled away by El Norte with the opening of the casinos in Pojoaque and Tesuque. Map 1 displays the GMAs.

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<sup>8</sup> <http://onthemap.ces.census.gov/>

Map A1: Santa Fe County Growth Management Areas



**Table A3: Employment by Growth Management Area from 2002 through 2011**

GMA	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
El Norte	1,834	1,676	2,119	2,701	2,707	3,284	3,228	4,902	5,268	5,891
El Centro	54,903	56,135	53,272	57,377	56,070	58,937	58,249	51,162	55,308	55,143
Galisteo	899	926	1,014	1,031	1,147	1,249	1,258	1,221	1,079	913
Estancia	503	624	540	641	712	641	740	884	866	844
Total	58,139	59,361	56,945	61,750	60,636	64,111	63,475	58,169	62,521	62,791

Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics OnTheMap; adjustments made by UNM BBER

**Table A4: Employment share by Growth Management Area from 2002 through 2011**

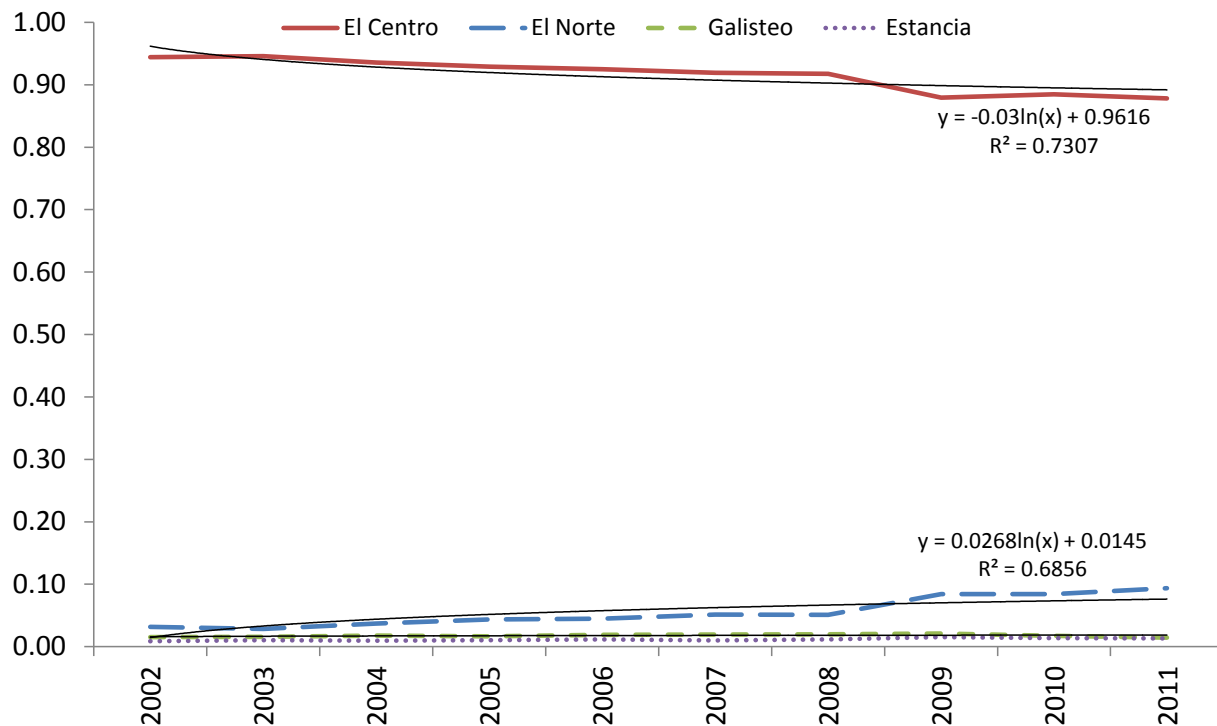
GMA	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
El Norte	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.08	0.08	0.09
El Centro	0.94	0.95	0.94	0.93	0.92	0.92	0.92	0.88	0.88	0.88
Galisteo	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Estancia	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01

Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics OnTheMap; calculations performed by UNM BBER

## Employment Share Trend Estimation

The employment share trend from 2002 through 2011 was estimated for El Norte, El Centro, and Galisteo with a logarithm regression. These trends were extended to 2012 through 2030 to forecast the employment share of each area, while Estancia share was controlled to be the remainder. Figure 2 displays employment shares by area and the estimated employment share by area using a logarithm regression. Historic employment shares display stability and change slowly over time, so a logarithm regression was chosen to model this behavior.

Figure A1: Employment share by GMA and estimated employment share by GMA



Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics OnTheMap; regressions performed by UNM BBER

Once the employment share trend was estimated, it was extended from 2012 through 2030 and applied to the forecasted total employment to forecast employment by GMA. Table 5 displays the historical and forecasted employment shares and employment by GMA.

**Table A5: Forecasted employment share and employment for Growth Management Areas**

Year	Santa Fe County	GMA Share				GMA Employment			
		El Centro	El Norte	Estancia	Galisteo	El Centro	El Norte	Estancia	Galisteo
2012	60,250	0.88	0.09	0.01	0.02	52,911	5,653	561	1,125
2013	60,630	0.88	0.09	0.01	0.02	53,245	5,688	558	1,139
2014	61,251	0.88	0.09	0.01	0.02	53,791	5,747	558	1,156
2015	62,048	0.88	0.09	0.01	0.02	54,491	5,821	559	1,177
2016	62,980	0.88	0.09	0.01	0.02	55,309	5,909	563	1,200
2017	63,870	0.88	0.09	0.01	0.02	56,091	5,992	566	1,222
2018	64,402	0.88	0.09	0.01	0.02	56,455	6,042	668	1,237
2019	65,021	0.87	0.09	0.01	0.02	56,886	6,100	782	1,253
2020	65,984	0.87	0.09	0.01	0.02	57,622	6,191	896	1,276
2021	66,445	0.87	0.09	0.01	0.02	57,922	6,298	936	1,289
2022	67,102	0.87	0.10	0.01	0.02	58,397	6,448	952	1,305
2023	67,754	0.87	0.10	0.01	0.02	58,869	6,595	968	1,322
2024	68,445	0.87	0.10	0.01	0.02	59,378	6,744	984	1,339
2025	69,063	0.87	0.10	0.01	0.02	59,826	6,884	998	1,355
2026	69,706	0.87	0.10	0.01	0.02	60,298	7,024	1,013	1,371
2027	70,489	0.86	0.10	0.01	0.02	60,893	7,177	1,030	1,389
2028	71,388	0.86	0.10	0.01	0.02	61,588	7,341	1,049	1,410
2029	72,335	0.86	0.10	0.01	0.02	62,326	7,509	1,068	1,432
2030	73,464	0.86	0.10	0.01	0.02	63,222	7,695	1,090	1,458

Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics (2002-2011); estimates and forecasts performed by UNM BBER.

**Table A6: Santa Fe County estimated (2002-2012) and forecasted (2013-2030) employment share**

Year	Santa Fe County	City of Santa Fe	Edgewood	Espanola	Tribal Areas
2002	1.00	0.98	0.01	0.01	0.00
2003	1.00	0.98	0.01	0.01	0.00
2004	1.00	0.98	0.01	0.01	0.00
2005	1.00	0.97	0.01	0.01	0.01
2006	1.00	0.97	0.01	0.01	0.01
2007	1.00	0.96	0.01	0.02	0.02
2008	1.00	0.95	0.01	0.02	0.02
2009	1.00	0.93	0.01	0.02	0.03
2010	1.00	0.92	0.01	0.02	0.04
2011	1.00	0.92	0.01	0.02	0.05
2012	1.00	0.92	0.01	0.02	0.05
2013	1.00	0.92	0.01	0.02	0.05
2014	1.00	0.92	0.01	0.02	0.05
2015	1.00	0.92	0.01	0.02	0.05
2016	1.00	0.92	0.01	0.02	0.05
2017	1.00	0.92	0.01	0.02	0.05
2018	1.00	0.92	0.01	0.02	0.05
2019	1.00	0.92	0.01	0.02	0.05
2020	1.00	0.92	0.01	0.02	0.04
2021	1.00	0.92	0.01	0.02	0.04
2022	1.00	0.92	0.01	0.02	0.04
2023	1.00	0.92	0.01	0.02	0.04
2024	1.00	0.92	0.01	0.02	0.04
2025	1.00	0.92	0.01	0.02	0.04
2026	1.00	0.92	0.01	0.02	0.04
2027	1.00	0.92	0.01	0.02	0.04
2028	1.00	0.92	0.01	0.02	0.04
2029	1.00	0.92	0.01	0.02	0.04
2030	1.00	0.92	0.01	0.02	0.04

Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics (2002-2011); estimates and forecasts performed by UNM BBER.

**Table A7: Estimated (2002-2012) and forecasted (2013-2030) employment share for Growth Management by Land Use Jurisdiction Area**

LUJA by GMA Share					
Year	Land Use	El Centro	El Norte	Estancia	Galisteo
	Jurisdiction Area				
2002	1.00	0.52	0.27	0.02	0.19
2003	1.00	0.47	0.27	0.02	0.24
2004	1.00	0.52	0.28	0.02	0.19
2005	1.00	0.56	0.25	0.02	0.17
2006	1.00	0.53	0.24	0.03	0.20
2007	1.00	0.59	0.21	0.02	0.18
2008	1.00	0.64	0.17	0.02	0.17
2009	1.00	0.59	0.25	0.02	0.15
2010	1.00	0.62	0.23	0.02	0.13
2011	1.00	0.55	0.31	0.02	0.12
2012	1.00	0.60	0.23	0.02	0.14
2013	1.00	0.60	0.23	0.02	0.14
2014	1.00	0.61	0.23	0.02	0.14
2015	1.00	0.61	0.23	0.02	0.14
2016	1.00	0.62	0.23	0.02	0.13
2017	1.00	0.62	0.23	0.02	0.13
2018	1.00	0.62	0.23	0.02	0.13
2019	1.00	0.62	0.23	0.02	0.13
2020	1.00	0.63	0.23	0.02	0.13
2021	1.00	0.63	0.23	0.02	0.12
2022	1.00	0.63	0.23	0.02	0.12
2023	1.00	0.63	0.22	0.02	0.12
2024	1.00	0.64	0.22	0.02	0.12
2025	1.00	0.64	0.22	0.02	0.12
2026	1.00	0.64	0.22	0.02	0.12
2027	1.00	0.64	0.22	0.02	0.12
2028	1.00	0.64	0.22	0.02	0.11
2029	1.00	0.65	0.22	0.02	0.11
2030	1.00	0.65	0.22	0.02	0.11

Source: U.S. Department of Commerce, Census Bureau, Longitudinal Employer-Household Dynamics (2002-2011); estimates and forecasts performed by UNM BBER.