



Analysis of Regions Not Currently Involved in WIRED Grants or RIGs: BEA Region 81

October 2008

BEA Region 81

- Carter County, Tennessee
- Greene County, Tennessee
- Hawkins County, Tennessee
- Sullivan County, Tennessee
- Unicoi County, Tennessee
- Washington County, Tennessee
- Buchanan County, Virginia
- Dickenson County, Virginia
- Lee County, Virginia
- Russell County, Virginia
- Scott County, Virginia
- Smyth County, Virginia
- Tazewell County, Virginia
- Washington County, Virginia
- Wise County, Virginia
- Bristol City, Virginia
- Norton City, Virginia
- McDowell County, West Virginia
- Mercer County, West Virginia

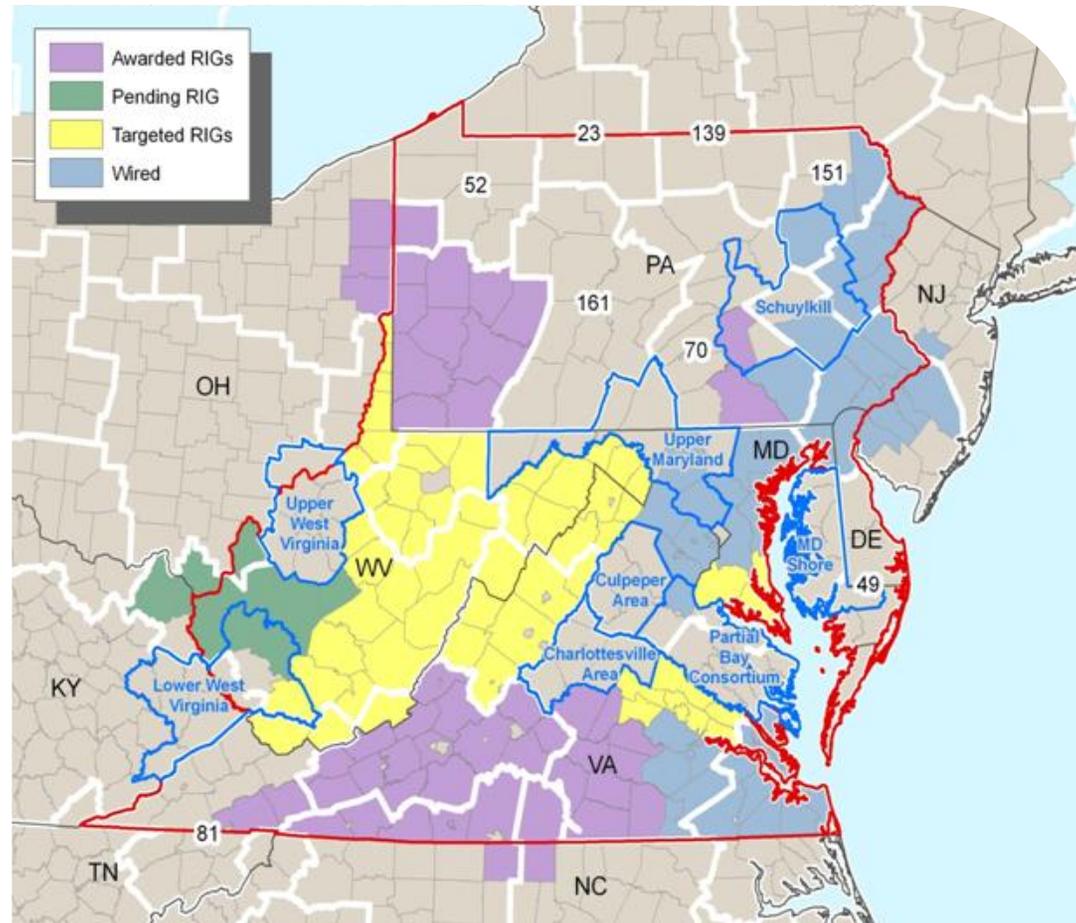




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About This Report

Chmura Economics & Analytics recognizes that accurate, timely data can be difficult to find. This regional report provides employment, wages, occupations, and skills data that can be used as background for developing a regional innovation grant (RIG) application to the Department of Labor (DOL).

Frequently Asked Questions

What data sources were utilized in the creation of this report?

The data for this analysis come from a variety of sources. All data are checked, cleaned, combined, organized, and displayed in a way to maximize their usefulness in applications supporting RIG criteria. Yearly employment data in the below charts are based on four-quarter averages. Data for the regions outside of Virginia and Ohio are imputed when not fully disclosed. A few of the sources of data which have been used in the creation of this report are:

- Quarterly Census of Employment and Wages (QCEW)
- Local Area Unemployment Statistics (LAUS)
- Occupation and Industry Forecasts
- Local Employment Dynamics (LED)
- O*Net
- National Center for Education Statistics
- Occupational Employment Statistics (OES)

Who is Chmura Economics & Analytics?

Chmura Economics & Analytics (Chmura) is a provider of applied economic consulting, quantitative research, and software solutions requiring the integration of advanced economic analysis. Chmura publishes *Virginia Economic Trends*, *Ohio Economic Trends*, electronic publications, and national and regional economic and workforce forecasts available via www.chmuraecon.com. Commercially available software products include JOBSeq®, WIBeq™, and OnStage.

Chmura is headquartered in Richmond, Virginia with a branch office in Cleveland, Ohio. Chmura Economics & Analytics is committed to achieving 100% customer satisfaction in all project engagements. The Chmura philosophy is that when our customer succeeds, Chmura has been successful. To contact us, send an email to info@chmuraecon.com.



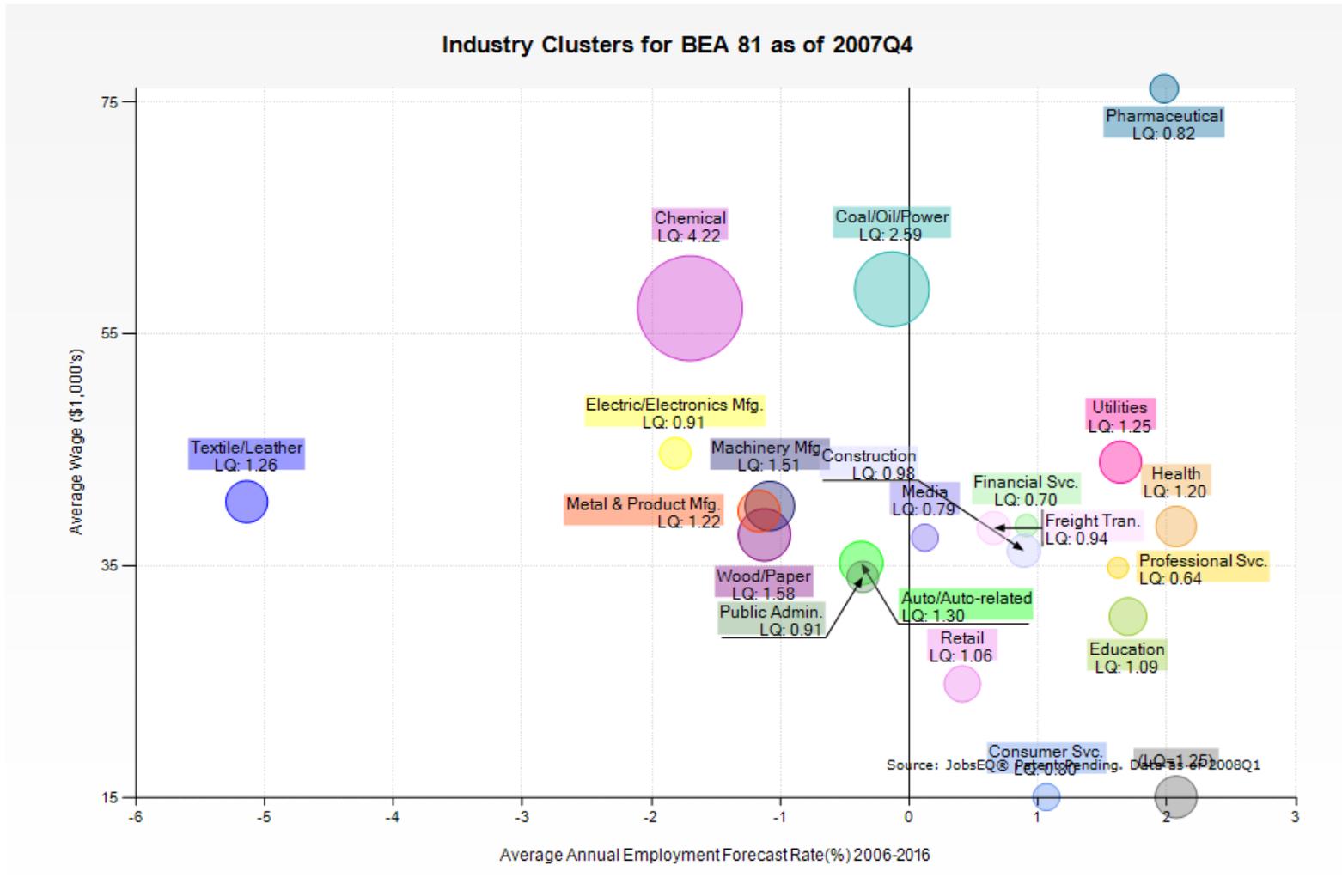
Executive Summary

BEA Region 81 crosses into Tennessee, Virginia, and West Virginia with the majority of the localities in Virginia. This mining and manufacturing-oriented economy is expected to continue to see stagnant-to-slight growth based on its current mix of industries.

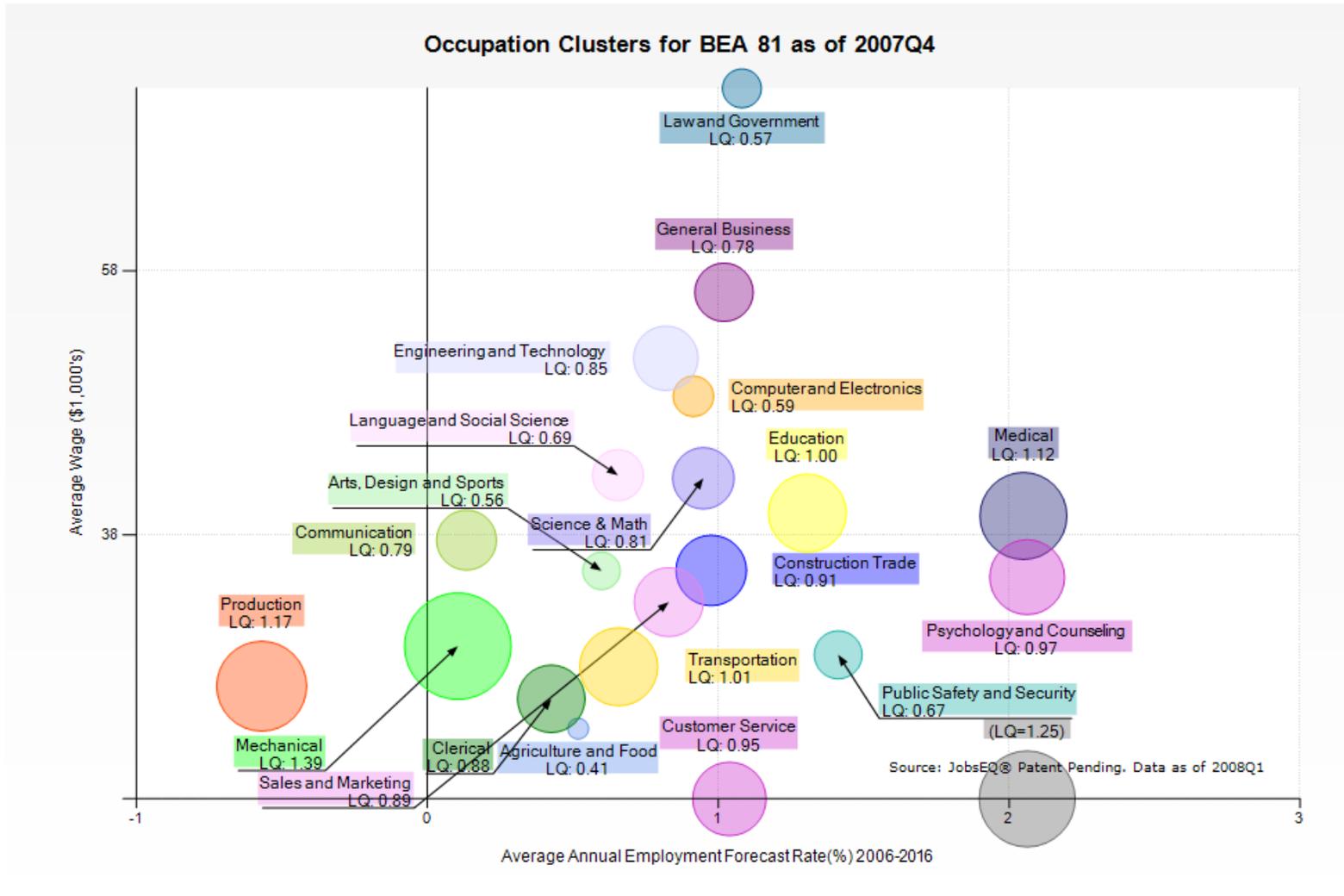
The industry and occupation concentrations in BEA Region 81 put it in a favorable position to focus on energy initiatives as a driver of future economic growth. The coal, utility, and chemical industries that have a strong presence in the region are good candidates for innovative technologies such as coal gasification, clean coal technology, and alternative fuel platforms.

The declining manufacturing sector will continue to displace workers with mechanical and production skills. Some of these skills are transferable to industries that can grow an energy-diverse ecosystem.

Industry and Occupation Clusters



Note: See the appendix for an explanation of how to use industry and occupation cluster charts.



Employment by Major Sector

Bureau of Economic Analysis Region 81 Employment by Major Sector

NAICS	Industry Description	Employment				Annual Aver Wages 2007	Employment Change Since 2005		Annual Aver Change Since 2002
		2007	2005	2002	Annual Aver		Number	Annual Average	
0	Total	324,470	319,098	313,769	\$ 32,697	5,372	0.8%	0.7%	
11	Agriculture, Forestry, Fishing and Hunting	773	762	972	\$ 22,229	11	0.7%	-4.5%	
21	Mining, Quarrying, and Oil and Gas Extraction	7,794	7,079	6,862	\$ 57,353	714	4.9%	2.6%	
22	Utilities	2,078	2,126	2,119	\$ 55,302	(48)	-1.1%	-0.4%	
23	Construction	17,791	17,153	16,474	\$ 35,531	638	1.8%	1.5%	
31	Manufacturing	50,975	56,011	60,397	\$ 45,108	(5,036)	-4.6%	-3.3%	
42	Wholesale Trade	10,931	11,260	10,496	\$ 40,738	(329)	-1.5%	0.8%	
44	Retail Trade	43,611	42,455	41,796	\$ 21,096	1,156	1.4%	0.9%	
48	Transportation and Warehousing	9,626	9,363	8,711	\$ 36,186	263	1.4%	2.0%	
51	Information	7,437	6,944	6,745	\$ 43,289	493	3.5%	2.0%	
52	Finance and Insurance	9,927	9,515	8,912	\$ 38,326	412	2.1%	2.2%	
53	Real Estate and Rental and Leasing	2,563	2,541	2,492	\$ 32,070	22	0.4%	0.6%	
54	Professional, Scientific, and Technical Services	7,554	7,899	7,957	\$ 41,113	(345)	-2.2%	-1.0%	
55	Management of Companies and Enterprises	2,564	2,611	2,720	\$ 55,047	(47)	-0.9%	-1.2%	
56	Administrative and Support and Waste Management and Remediation Services	15,155	14,141	11,533	\$ 24,589	1,014	3.5%	5.6%	
61	Educational Services	32,965	31,530	30,306	\$ 30,845	1,436	2.3%	1.7%	
62	Health Care and Social Assistance	48,640	45,502	43,482	\$ 38,158	3,138	3.4%	2.3%	
71	Arts, Entertainment, and Recreation	2,717	2,328	2,326	\$ 23,595	388	8.0%	3.2%	
72	Accommodation and Food Services	26,546	25,283	23,958	\$ 11,692	1,264	2.5%	2.1%	
81	Other Services (except Public Administration)	9,061	9,346	9,364	\$ 24,108	(285)	-1.5%	-0.7%	
92	Public Administration	15,798	15,191	16,111	\$ 33,877	607	2.0%	-0.4%	

Employment growth is the broadest and most timely indicator of the general health of an economy.

Information obtained from this table provides insight to questions such as:

- Which industries are posting the largest increases or decreases in employment? What are their average wages—will the trend lead to a decrease or increase in the region’s overall wealth?
- Are changes in employment levels cyclical or is a particularly industry in long-term decline? What is driving that trend?

Top 20 Employers by 3-Digit NAICS

Bureau of Economic Analysis Region 81 Top 20 Employers by 3-Digit NAICS

NAICS	Industry Description	Employment				Employment Change Since 2005		
		2007	2005	2002	Annual Average Wages 2007	Number	Annual Average	Annual Average Change Since 2002
611	Educational Services	32,965	31,530	30,306	\$ 30,845	1,436	2.3%	1.7%
722	Food Services and Drinking Places	24,159	22,934	21,490	\$ 11,375	1,225	2.6%	2.4%
622	Hospitals	17,431	17,132	16,083	\$ 41,019	298	0.9%	1.6%
621	Ambulatory Health Care Services	15,739	14,278	13,201	\$ 46,112	1,462	5.0%	3.6%
561	Administrative and Support Services	14,415	13,427	10,694	\$ 23,903	987	3.6%	6.2%
452	General Merchandise Stores	11,778	11,276	10,829	\$ 19,063	502	2.2%	1.7%
325	Chemical Manufacturing	9,631	9,305	9,546	\$ 71,162	326	1.7%	0.2%
623	Nursing and Residential Care Facilities	9,068	8,549	8,658	\$ 25,508	520	3.0%	0.9%
238	Specialty Trade Contractors	8,441	8,011	7,284	\$ 30,613	430	2.6%	3.0%
921	Executive, Legislative, and Other General Government Support	8,047	7,841	8,704	\$ 28,966	206	1.3%	-1.6%
522	Credit Intermediation and Related Activities	7,807	7,250	6,694	\$ 35,319	556	3.8%	3.1%
445	Food and Beverage Stores	7,651	7,948	8,245	\$ 14,799	(297)	-1.9%	-1.5%
541	Professional, Scientific, and Technical Services	7,554	7,899	7,957	\$ 41,113	(345)	-2.2%	-1.0%
423	Merchant Wholesalers, Durable Goods	6,561	6,301	5,211	\$ 37,700	260	2.0%	4.7%
333	Machinery Manufacturing	6,403	6,517	7,271	\$ 41,339	(115)	-0.9%	-2.5%
624	Social Assistance	6,399	5,543	5,534	\$ 28,490	856	7.4%	2.9%
441	Motor Vehicle and Parts Dealers	6,187	6,122	5,999	\$ 32,758	65	0.5%	0.6%
236	Construction of Buildings	5,473	4,989	5,107	\$ 36,847	484	4.7%	1.4%
336	Transportation Equipment Manufacturing	5,459	6,359	5,169	\$ 40,441	(900)	-7.3%	1.1%
212	Mining (except Oil and Gas)	5,428	5,474	5,830	\$ 59,071	(46)	-0.4%	-1.4%

The **North American Industry Classification System** (NAICS) was developed cooperatively between the United States, Canada, and Mexico to provide data users with accurate information pertaining to the economy in the 21st century. The NAICS Code is composed of six digits. The first two digits define the top-level category. The three-digit industries shown above represent components of the major sectors.

Similar to the previous table, information obtained from this table provides insight to questions such as:

- Which industries are posting the largest increases or decreases in employment? What are their average wages—will the trend lead to a decrease or increase in the region’s overall wealth?
- Are changes in employment levels cyclical or is a particularly industry in long-term decline? What is driving that trend?

Industries with Largest Employment Gains and Losses

Bureau of Economic Analysis Region 81 Top 20 Industries with Largest Employment Gain by 3-Digit NAICS

NAICS	Industry Description	Employment			Annual Aver Wages 2007	Employment Change Since 2005		Annual Aver Change Since 2002
		2007	2005	2002		Number	Percent	
621	Ambulatory Health Care Services	15,739	14,278	13,201	\$ 46,112	1,461.70	5.0%	3.6%
722	Food Services and Drinking Places	24,159	22,934	21,490	\$ 11,375	1,225.28	2.6%	2.4%
624	Social Assistance	6,399	5,543	5,534	\$ 28,490	856.23	7.4%	2.9%
213	Support Activities for Mining	2,111	1,419	903	\$ 51,568	692.00	22.0%	18.5%
522	Credit Intermediation and Related Activities	7,807	7,250	6,694	\$ 35,319	556.49	3.8%	3.1%
623	Nursing and Residential Care Facilities	9,068	8,549	8,658	\$ 25,508	519.65	3.0%	0.9%
452	General Merchandise Stores	11,778	11,276	10,829	\$ 19,063	501.72	2.2%	1.7%
236	Construction of Buildings	5,473	4,989	5,107	\$ 36,847	484.14	4.7%	1.4%
922	Justice, Public Order, and Safety Activities	4,526	4,074	3,752	\$ 37,503	452.09	5.4%	3.8%
448	Clothing and Clothing Accessories Stores	2,293	1,854	1,689	\$ 13,181	438.87	11.2%	6.3%
325	Chemical Manufacturing	9,631	9,305	9,546	\$ 71,162	326.18	1.7%	0.2%
423	Merchant Wholesalers, Durable Goods	6,561	6,301	5,211	\$ 37,700	259.99	2.0%	4.7%
444	Building Material and Garden Equipment and Supplies Dealers	3,362	3,104	2,990	\$ 24,245	257.92	4.1%	2.4%
446	Health and Personal Care Stores	3,207	2,956	2,626	\$ 31,922	250.67	4.2%	4.1%
713	Amusement, Gambling, and Recreation Industries	1,878	1,632	1,630	\$ 14,855	246.61	7.3%	2.9%
921	Executive, Legislative, and Other General Government Support	8,047	7,841	8,704	\$ 28,966	205.58	1.3%	-1.6%
493	Warehousing and Storage	1,058	917	769	\$ 27,742	141.74	7.5%	6.6%
451	Sporting Goods, Hobby, Book, and Music Stores	916	795	836	\$ 15,507	120.84	7.3%	1.8%
484	Truck Transportation	5,171	5,066	4,585	\$ 35,671	105.06	1.0%	2.4%
712	Museums, Historical Sites, and Similar Institutions	332	234	232	\$ 41,133	98.01	19.1%	7.5%

Information obtained from the table above identifies the industries that are adding the largest number of jobs which translates into those creating the greatest demand for new workers.

Bureau of Economic Analysis Region 81 Top 20 Industries with Largest Employment Loss by 3-Digit NAICS

NAICS	Industry Description	Employment			Annual Aver Wages 2007	Employment Change Since 2005		Annual Aver Change Since 2002
		2007	2005	2002		Number	Annual Average	
332	Fabricated Metal Product Manufacturing	5,402	6,172	5,375	\$ 37,125	(770)	-6.4%	0.1%
323	Printing and Related Support Activities	1,498	2,164	3,322	\$ 33,348	(666)	-16.8%	-14.7%
331	Primary Metal Manufacturing	1,171	1,780	1,946	\$ 38,823	(609)	-18.9%	-9.7%
322	Paper Manufacturing	1,866	2,422	3,192	\$ 51,627	(556)	-12.2%	-10.2%
321	Wood Product Manufacturing	2,259	2,741	2,909	\$ 28,461	(481)	-9.2%	-4.9%
425	Wholesale Electronic Markets and Agents and Brokers	860	1,312	826	\$ 52,882	(452)	-19.0%	0.8%
445	Food and Beverage Stores	7,651	7,948	8,245	\$ 14,799	(297)	-1.9%	-1.5%
335	Electrical Equipment, Appliance, and Component Mfg	3,048	3,323	3,881	\$ 42,700	(274)	-4.2%	-4.7%
237	Heavy and Civil Engineering Construction	3,890	4,153	4,084	\$ 44,307	(263)	-3.2%	-1.0%
453	Miscellaneous Store Retailers	1,525	1,716	1,833	\$ 17,515	(191)	-5.7%	-3.6%
515	Broadcasting (except Internet)	1,004	1,167	916	\$ 44,538	(164)	-7.3%	1.8%
812	Personal and Laundry Services	3,741	3,900	3,481	\$ 23,600	(159)	-2.1%	1.5%
813	Religious, Grantmaking, Civic, Professional, Similar Org	2,123	2,281	2,405	\$ 18,802	(157)	-3.5%	-2.5%
424	Merchant Wholesalers, Nondurable Goods	3,509	3,646	4,459	\$ 42,849	(137)	-1.9%	-4.7%
511	Publishing Industries (except Internet)	1,351	1,475	1,706	\$ 36,052	(123)	-4.3%	-4.6%
313	Textile Mills	941	1,060	1,589	\$ 57,804	(119)	-5.8%	-10.0%
524	Insurance Carriers and Related Activities	1,756	1,870	1,878	\$ 40,545	(114)	-3.1%	-1.3%
481	Air Transportation	94	181	180	\$ 39,567	(87)	-27.9%	-12.1%
454	Nonstore Retailers	819	881	926	\$ 28,784	(61)	-3.6%	-2.4%
221	Utilities	2,078	2,126	2,119	\$ 55,302	(48)	-1.1%	-0.4%

Information obtained from the table above identifies the industries that are shedding the largest number of workers which translates into the number of people who are likely looking for jobs in the region or in need of retraining.

Declining Occupations

Bureau of Economic Analysis Region 81 Top 20 Declining Occupations Based on Top 20 Declining Industries

Occupation Description	SOC	Employment			Annual Aver Wages 2007	Employment Change Since 2005		Annual Aver Change Since 2002
		2007	2005	2002		Number	Annual Average	
Team Assemblers	51-2092	1,413	1,712	1,838	\$ 21,938	(299)	-9.1%	-5.1%
Helpers--Production Workers	51-9198	563	733	867	\$ 19,295	(170)	-12.4%	-8.3%
First-Line Supervisors/Mgrs of Production, Operating Workers	51-1011	718	866	952	\$ 42,152	(148)	-9.0%	-5.5%
Laborers and Freight, Stock, and Material Movers, Hand	53-7062	1,138	1,272	1,416	\$ 20,109	(134)	-5.4%	-4.3%
Cashiers	41-2011	2,849	2,983	3,092	\$ 16,826	(134)	-2.3%	-1.6%
Printing Machine Operators	51-5023	360	483	675	\$ 26,886	(123)	-13.7%	-11.8%
Industrial Truck and Tractor Operators	53-7051	567	687	791	\$ 24,453	(120)	-9.1%	-6.5%
Inspectors, Testers, Sorters, Samplers, and Weighers	51-9061	484	603	669	\$ 25,835	(119)	-10.4%	-6.3%
Customer Service Representatives	43-4051	1,097	1,215	1,275	\$ 25,308	(118)	-5.0%	-3.0%
Sales Representatives, Wholesale and Mfg, Ex Technical and Scientific Products	41-4012	827	944	1,036	\$ 50,655	(117)	-6.4%	-4.4%
General and Operations Mgrs	11-1021	989	1,106	1,167	\$ 82,498	(117)	-5.5%	-3.3%
Stock Clerks and Order Fillers	43-5081	1,856	1,970	2,080	\$ 19,251	(114)	-2.9%	-2.3%
Paper Goods Machine Setters, Operators, and Tenders	51-9196	326	436	588	\$ 26,227	(110)	-13.5%	-11.1%
Packers and Packagers, Hand	53-7064	867	970	1,053	\$ 16,072	(103)	-5.4%	-3.8%
Maintenance and Repair Workers, General	49-9042	592	688	775	\$ 31,305	(96)	-7.3%	-5.3%
Office Clerks, General	43-9061	875	965	1,007	\$ 20,931	(90)	-4.8%	-2.8%
Retail Salespersons	41-2031	874	962	1,006	\$ 19,530	(88)	-4.7%	-2.8%
Bindery Workers	51-5011	216	304	460	\$ 22,247	(88)	-15.8%	-14.0%
Cutting, Punching, Press Machine Setters, Operators, Tenders, Metal and Plastic	51-4031	472	545	593	\$ 23,902	(73)	-7.0%	-4.5%
Shipping, Receiving, and Traffic Clerks	43-5071	422	493	535	\$ 23,815	(72)	-7.5%	-4.6%

The **Standard Occupational Classification (SOC)** system is used by all Federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. All workers are classified into one of over 820 occupations according to their occupational definition. Each occupation group includes detailed occupation(s) requiring similar job duties, skills, education, or experience. This system is provided by the U.S. Department of Labor, Bureau of Labor Statistics.

The table above identifies the most prevalent occupations in the regional industries shedding the most workers over the past year. The occupations on this list identify those that are in need of retraining or transferring to other industries.

Bureau of Economic Analysis Region 81 Top 20 Declining Occupations Based on All Industries

Occupation Description	SOC	Employment			Annual Aver Wages 2007 Q4	Employment		Annual Aver Change Since 2002 Q4
		2007 Q4	2006 Q4	2002 Q4		Number	Percent	
Team Assemblers	51-2092	5,856	6,077	6,373	\$ 22,880	(220)	-3.6%	-1.7%
Telecommunications Line Installers and Repairers	49-9052	238	367	430	\$ 42,073	(129)	-35.1%	-11.1%
Hairdressers, Hairstylists, and Cosmetologists	39-5012	972	1,089	715	\$ 19,839	(116)	-10.7%	6.3%
Laborers and Freight, Stock, and Material Movers, Hand	53-7062	5,470	5,584	5,421	\$ 20,503	(114)	-2.0%	0.2%
Helpers--Production Workers	51-9198	1,547	1,642	1,856	\$ 20,334	(95)	-5.8%	-3.6%
Industrial Truck and Tractor Operators	53-7051	2,060	2,152	2,186	\$ 25,570	(92)	-4.3%	-1.2%
Inspectors, Testers, Sorters, Samplers, and Weighers	51-9061	1,709	1,801	1,945	\$ 27,700	(92)	-5.1%	-2.6%
First-Line Supervisors/Managers of Production and Operating Workers	51-1011	2,323	2,409	2,622	\$ 43,502	(85)	-3.5%	-2.4%
Truck Drivers, Heavy and Tractor-Trailer	53-3032	5,128	5,206	4,717	\$ 31,226	(78)	-1.5%	1.7%
Packers and Packagers, Hand	53-7064	1,957	2,025	2,075	\$ 17,136	(67)	-3.3%	-1.2%
Assemblers and Fabricators, All Other	51-2099	1,075	1,142	1,150	\$ 24,991	(67)	-5.9%	-1.3%
Production Workers, All Other	51-9199	848	915	919	\$ 24,918	(67)	-7.3%	-1.6%
Paper Goods Machine Setters, Operators, and Tenders	51-9196	333	399	596	\$ 26,282	(65)	-16.4%	-11.0%
Printing Machine Operators	51-5023	431	495	742	\$ 26,553	(64)	-12.9%	-10.3%
Machinists	51-4041	1,254	1,315	1,322	\$ 30,536	(61)	-4.6%	-1.1%
Mine Cutting and Channeling Machine Operators	47-5042	440	499	285	\$ 39,491	(59)	-11.8%	9.1%
Bindery Workers	51-5011	226	278	466	\$ 22,280	(52)	-18.6%	-13.4%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scien	41-4012	2,416	2,465	2,411	\$ 49,049	(49)	-2.0%	0.0%
Electrical and Electronic Equipment Assemblers	51-2022	461	510	726	\$ 23,971	(49)	-9.6%	-8.7%
Continuous Mining Machine Operators	47-5041	503	547	512	\$ 39,134	(44)	-8.0%	-0.4%

The table above identifies the most prevalent occupations that are declining from ALL industries in the region. The occupations on this list identify those that are in need of retraining or transferring to other industries.

Growing Occupations

Bureau of Economic Analysis Region 81 Top 20 Growing Occupations Based on All Industries

Occupation Description	SOC	Employment			Annual Aver Wages 2007 Q4	Employment Change		Annual Aver Change Since 2002 Q4
		2007 Q4	2006 Q4	2002 Q4		Number	Percent	
Retail Salespersons	41-2031	10,677	10,317	9,587	\$ 20,802	360	3.5%	2.2%
Registered Nurses	29-1111	7,233	6,987	6,562	\$ 49,291	245	3.5%	2.0%
Cashiers	41-2011	10,287	10,098	10,017	\$ 15,726	188	1.9%	0.5%
Personal and Home Care Aides	39-9021	1,628	1,493	1,337	\$ 16,436	135	9.0%	4.0%
Office Clerks, General	43-9061	6,696	6,567	6,137	\$ 21,915	129	2.0%	1.8%
Home Health Aides	31-1011	1,485	1,360	1,208	\$ 17,393	125	9.2%	4.2%
Telemarketers	41-9041	1,427	1,313	963	\$ 21,730	114	8.7%	8.2%
Licensed Practical and Licensed Vocational Nurses	29-2061	3,069	2,963	2,747	\$ 30,965	105	3.6%	2.2%
Nursing Aides, Orderlies, and Attendants	31-1012	4,365	4,260	4,102	\$ 19,305	105	2.5%	1.3%
Bill and Account Collectors	43-3011	1,412	1,323	1,079	\$ 25,837	89	6.7%	5.5%
Waiters and Waitresses	35-3031	5,400	5,331	4,912	\$ 14,506	69	1.3%	1.9%
First-Line Supervisors/Managers of Office and Administrative Support Workers	43-1011	3,238	3,170	2,949	\$ 37,856	68	2.1%	1.9%
Medical Assistants	31-9092	1,258	1,191	1,067	\$ 22,604	68	5.7%	3.4%
Receptionists and Information Clerks	43-4171	2,362	2,296	2,142	\$ 20,481	66	2.9%	2.0%
First-Line Supervisors/Managers of Retail Sales Workers	41-1011	3,110	3,046	2,921	\$ 33,843	64	2.1%	1.3%
Child, Family, and School Social Workers	21-1021	618	554	527	\$ 35,325	64	11.6%	3.2%
Stock Clerks and Order Fillers	43-5081	4,728	4,666	4,779	\$ 19,397	62	1.3%	-0.2%
Secretaries, Except Legal, Medical, and Executive	43-6014	3,695	3,636	3,460	\$ 24,484	58	1.6%	1.3%
Telecommunications Equipment Installers and Repairers, Except Line Installers	49-2022	482	424	420	\$ 43,729	58	13.7%	2.8%
Combined Food Preparation and Serving Workers, Including Fast Food	35-3021	6,092	6,037	5,603	\$ 13,669	56	0.9%	1.7%

The table above identifies the most prevalent occupations that are in demand for the industries in the region that are showing the largest employment growth.

Forecast Occupation Gaps

Bureau of Economic Analysis Region 81 Gaps in Top 20 Occupations (Requiring 2-Year Degree or Greater) Over Next 7 Years

Occupation Description	SOC	Annual Occupation Gaps	Employment			Annual Average Wages 2007 Q4
			2007 Q4	2006 Q4	2002 Q4	
Registered Nurses	29-1111	163	7,233	6,987	6,562	\$ 49,291
Elementary School Teachers, Except Special Education	25-2021	85	4,063	4,013	4,067	\$ 42,645
Licensed Practical and Licensed Vocational Nurses	29-2061	51	3,069	2,963	2,747	\$ 30,965
Secondary School Teachers, Except Special and Vocational Education	25-2031	38	2,631	2,604	2,639	\$ 45,317
Medical Assistants	31-9092	33	1,258	1,191	1,067	\$ 22,604
Accountants and Auditors	13-2011	31	1,602	1,589	1,567	\$ 52,195
Bookkeeping, Accounting, and Auditing Clerks	43-3031	29	3,747	3,707	3,574	\$ 26,831
Executive Secretaries and Administrative Assistants	43-6011	26	2,552	2,531	2,373	\$ 32,367
Middle School Teachers, Except Special and Vocational Education	25-2022	26	1,475	1,457	1,495	\$ 41,968
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific I	41-4012	24	2,416	2,465	2,411	\$ 49,049
Teacher Assistants	25-9041	21	3,058	3,005	3,020	\$ 19,072
Business Operations Specialists, All Other	13-1199	19	1,342	1,338	1,264	\$ 51,247
Preschool Teachers, Except Special Education	25-2011	19	795	771	744	\$ 22,568
First-Line Supervisors/Managers of Office and Administrative Support Workers	43-1011	19	3,238	3,170	2,949	\$ 37,856
Sales Representatives, Services, All Other	41-3099	19	985	948	853	\$ 37,550
Social and Human Service Assistants	21-1093	16	511	484	462	\$ 23,337
Child, Family, and School Social Workers	21-1021	16	618	554	527	\$ 35,325
Pharmacists	29-1051	16	743	726	651	\$ 77,940
Graduate Teaching Assistants	25-1191	14	439	433	322	\$ 24,103
Rehabilitation Counselors	21-1015	13	452	419	402	\$ 27,533

The **Gap** forecasts the average annual number of individuals needed in the occupation beyond the supply of new workers. It includes changes due to replacements. For example, consider the case in which a retail salesperson gets a degree, leaves their occupation, and becomes a financial analyst. This turnover dictates that a new retail salesperson is needed. Even though the total number of retail salespersons in the region is unchanged, the gap counts this situation as an increase of one in demand for retail salesperson. It also includes expected changes due to worker preferences and wages.

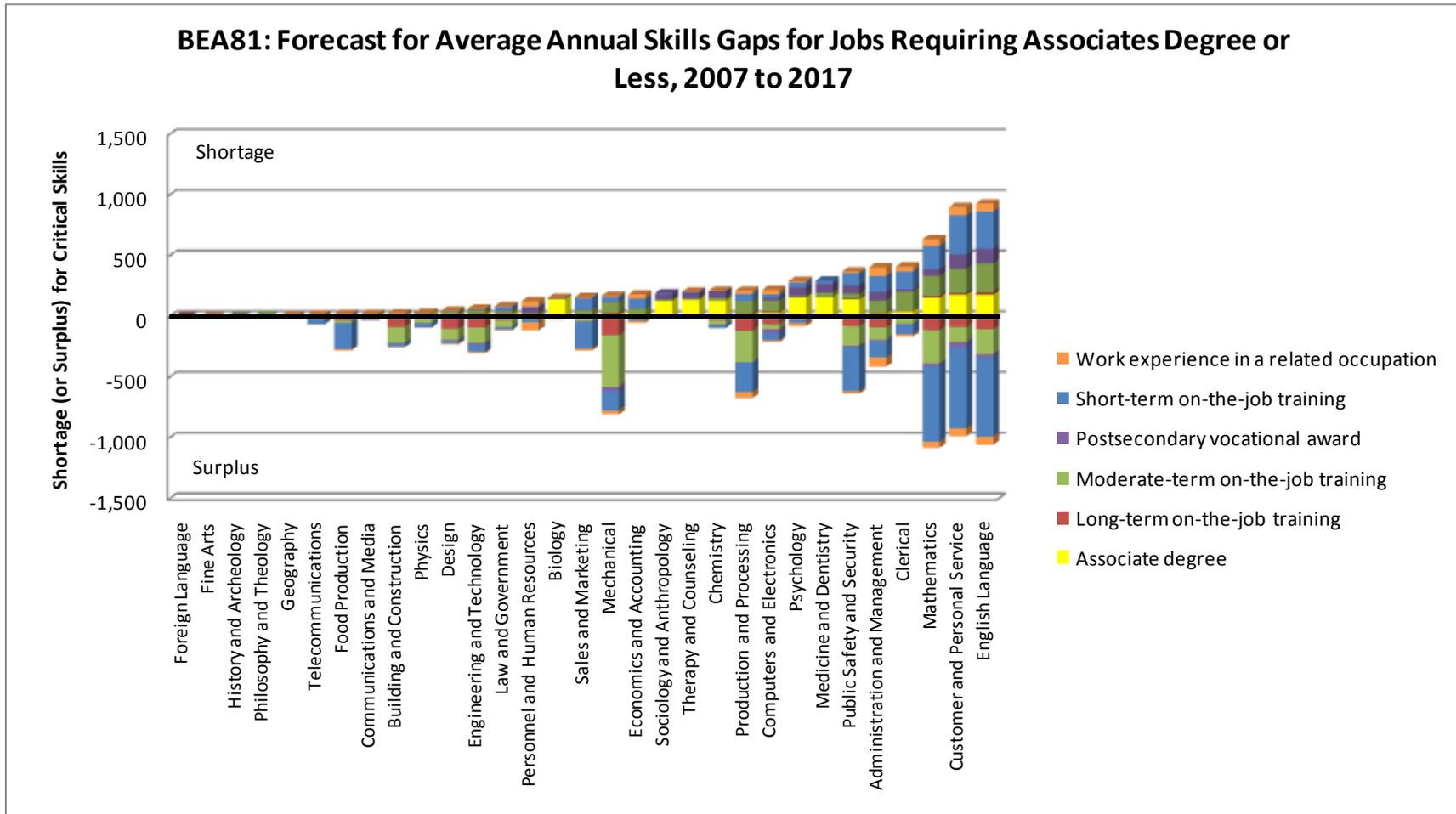
This table provides insight into the occupations that typically require a 2-year degree or greater that are expected to be in greatest demand.

Bureau of Economic Analysis Region 81 Gaps in Top 20 Occupations (Requiring Less than 2-Year Degree) Over Next 7 Years

SOC	Occupation Description	Annual Occupation Gaps	Employment			Annual Aver Wages 2007 Q4
			2007 Q4	2006 Q4	2002 Q4	
41-2031	Retail Salespersons	91	10,677	10,317	9,587	\$ 20,802
43-9061	Office Clerks, General	70	6,696	6,567	6,137	\$ 21,915
39-9021	Personal and Home Care Aides	64	1,628	1,493	1,337	\$ 16,436
43-4051	Customer Service Representatives	59	5,103	5,054	4,375	\$ 25,443
31-1011	Home Health Aides	43	1,485	1,360	1,208	\$ 17,393
33-9032	Security Guards	33	2,357	2,311	1,997	\$ 19,372
43-4171	Receptionists and Information Clerks	27	2,362	2,296	2,142	\$ 20,481
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	21	4,069	4,045	3,876	\$ 19,243
41-2021	Counter and Rental Clerks	13	983	981	983	\$ 20,149
31-1012	Nursing Aides, Orderlies, and Attendants	13	4,365	4,260	4,102	\$ 19,305
29-2052	Pharmacy Technicians	13	899	872	763	\$ 29,756
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	11	3,110	3,046	2,921	\$ 33,843
43-6013	Medical Secretaries	10	820	782	720	\$ 24,330
37-2012	Maids and Housekeeping Cleaners	9	2,121	2,087	2,116	\$ 16,336
31-9091	Dental Assistants	8	590	579	540	\$ 25,573
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	7	6,092	6,037	5,603	\$ 13,669
29-2012	Medical and Clinical Laboratory Technicians	6	462	446	448	\$ 27,817
39-3091	Amusement and Recreation Attendants	6	300	280	267	\$ 15,821
53-3033	Truck Drivers, Light or Delivery Services	5	2,205	2,214	2,157	\$ 23,536
41-9099	Sales and Related Workers, All Other	4	778	790	658	\$ 33,553

This table provides insight into the occupations that typically require less than a 2-year degree that are expected to be in greatest demand.

Forecast Skill Needs



The chart above identifies the skills needed for the gap occupations identified on the previous page that typically require less than a 2-year degree.

Appendix: Clusters

Cluster charts display a geographic concentration of interrelated industries or occupations.

- **Cluster**
 - Industry clusters can form and grow because of a region's competitive advantage—resources such as location, trained labor, and education systems.
 - Occupation clusters describe the specialization of a region's workforce.
- **Location Quotient** - (LQ) This value is shown by the size of the circle; the larger the circle, the larger the location quotient.
 - A location quotient greater than 1.0 indicates that the region has a higher concentration of employment in a particular industry or occupation than the nation; a location quotient less than 1 indicates the region has a lower concentration of employment in the cluster than the nation.
 - If a regional industry group has a location quotient of 1.25 or higher, it is considered to possess a *Competitive Advantage* in that industry.
 - Only industries or occupations with an LQ higher than .5 are shown in the clusters chart.
 - Nondisclosure - if cluster data are nondisclosable, a range will be given for the LQ.
- **Average Wages** - This value is shown on the vertical axis. The higher the circle is shown on the chart, the higher the average wages in that cluster.
- **Forecast Growth** - The forecast growth rate for a cluster is the annual average percentage change in employment expected over the given period. This value is shown along the horizontal axis. The further to the right a cluster's circle is shown, the greater the growth expected in that cluster. The expected growth is based upon a long-range national industry and occupation forecast and may not reflect short-term and regional fluctuations.