



Analysis of Regions Not Currently Involved in WIRED Grants or RIGs: Partial Bay Consortium Area

October 2008

Partial Bay Consortium Area

- Caroline County, Virginia
- Essex County, Virginia
- King and Queen County, Virginia
- King George County, Virginia
- King William County, Virginia
- Lancaster County, Virginia
- Mathews County, Virginia
- Middlesex County, Virginia
- Northumberland County, Virginia
- Richmond County, Virginia
- Spotsylvania County, Virginia
- Stafford County, Virginia
- Westmoreland County, Virginia
- Fredericksburg City, Virginia

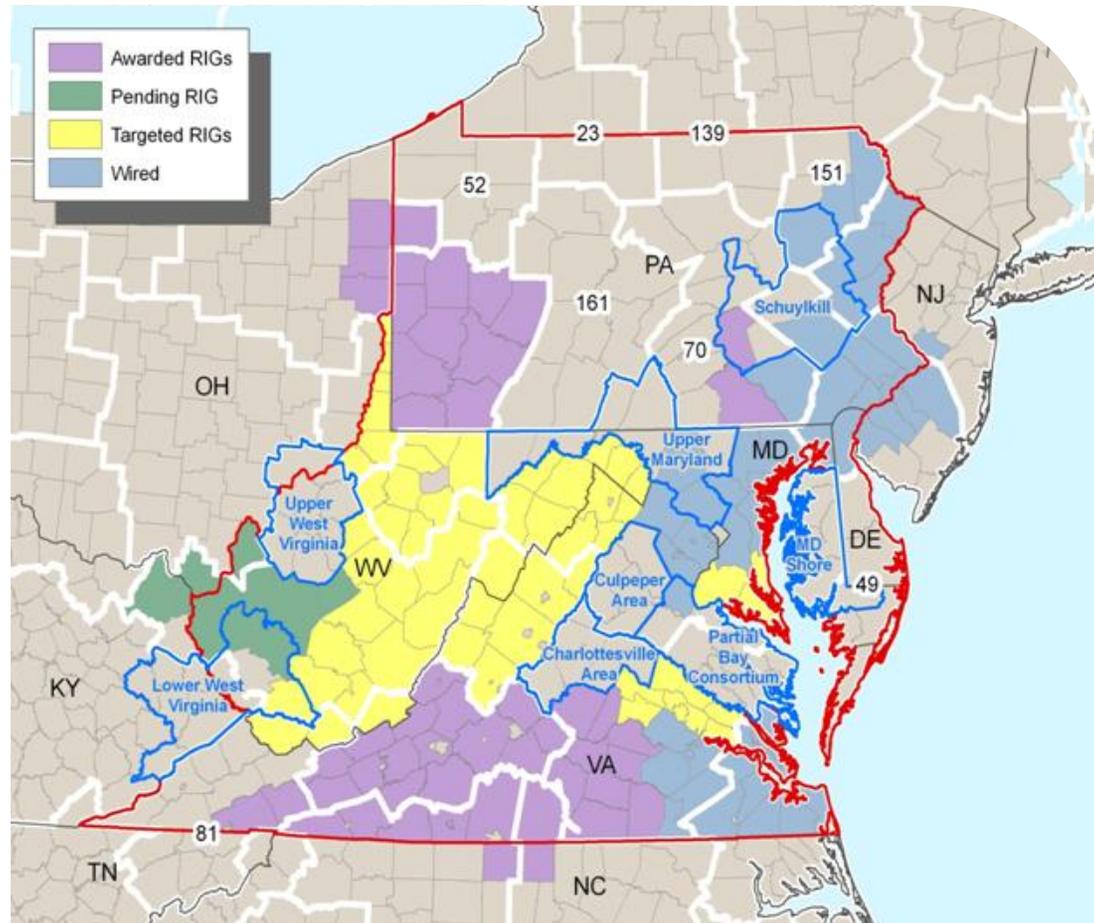




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About This Report

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 an RIG application.

Frequently Asked Questions

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

The data for this report come from a variety of sources. All data are checked, cleaned, combined, organized, and displayed in a way to maximize its usefulness. Yearly employment data in the below charts are based on four-quarter averages. Data for regions outside of Virginia and Ohio are imputed when not 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 forecasts available via www.chmuraecon.com. Software products include JOBSeq®, WIBeq™, and OnStage.

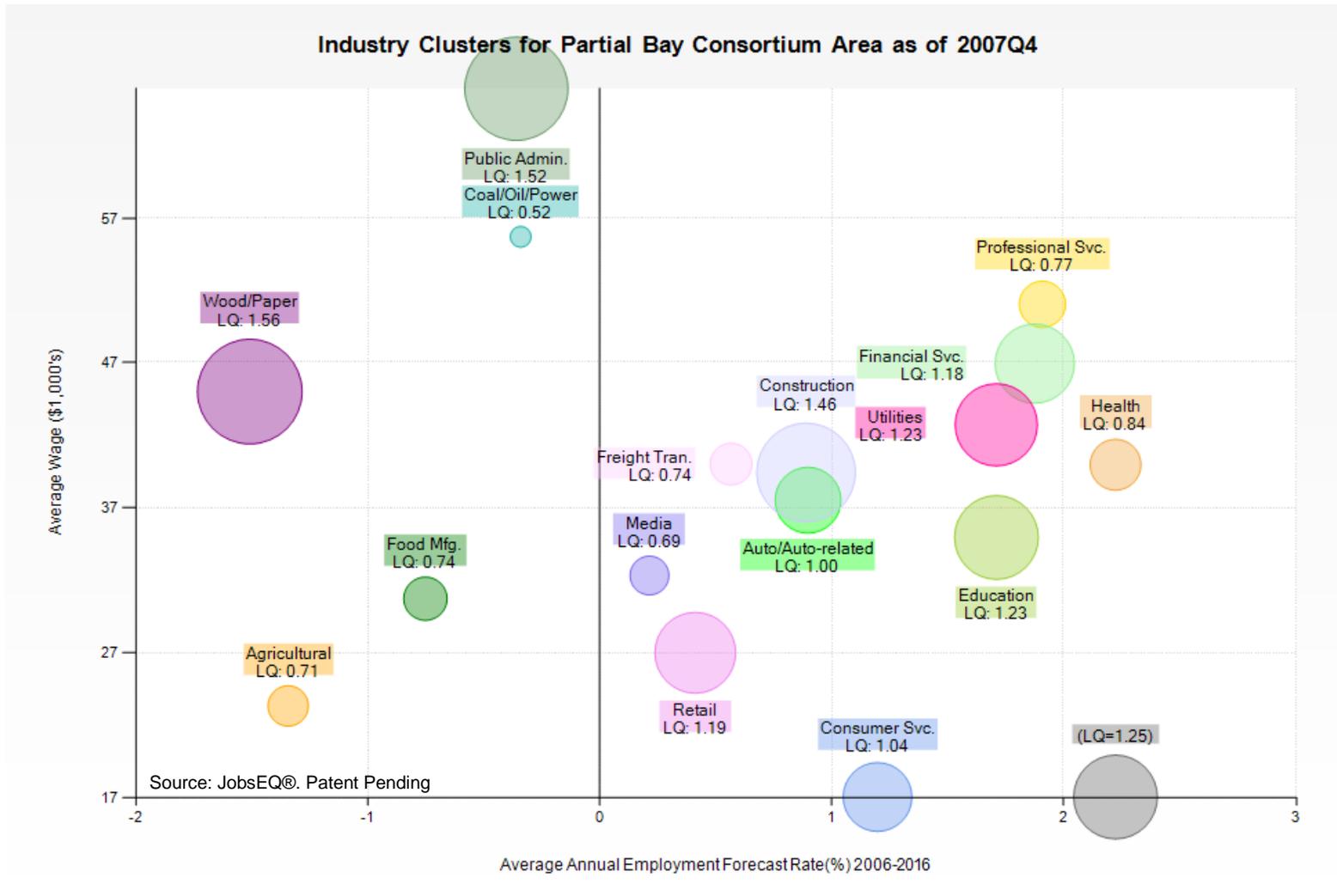
Chmura has headquarters in Richmond, Virginia and a branch office in Cleveland, Ohio. Chmura Economics & Analytics is committed to achieving 100% customer satisfaction in all project engagements. The Chmura philosophy is that when our customer succeeds, Chmura has been successful. To contact us, send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



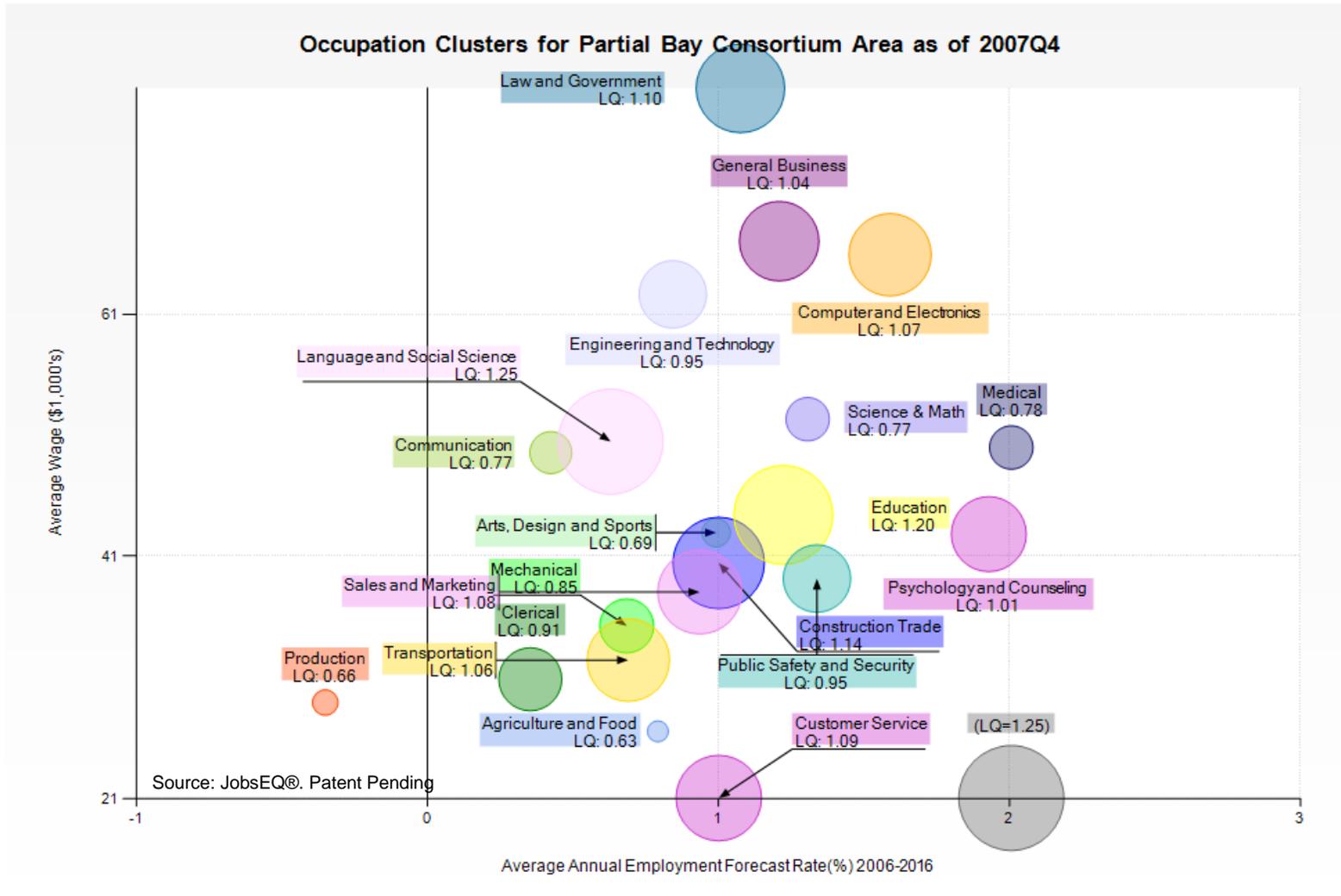
Executive Summary

The Partial Bay Consortium area reflects a mix of a few urban counties within a mainly rural region. Consequently, the concentration of wood/paper firms is the region's largest cluster. Forecasts suggest employment within that cluster will continue to decline and some of the displaced workers will need retraining to meet the needs of the growing industries as reflected in the skills gap chart. Construction occupations are also heavily concentrated in the region and, in light of the continued slowdown in residential building, will need to be retrained for demand occupations.

Industry and Occupation Clusters



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



Employment by Major Sector

Partial Bay Consortium Area Employment by Major Sector

NAICS	Industry Description	Employment				Employment Change Since 2005		Annual Average Change Since 2002
		2007	2005	2002	Annual Average Wages 2007	Number	Annual Average	
0	Total	133,969	128,140	115,667	\$ 36,255	5,829	2.2%	3.0%
11	Agriculture, Forestry, Fishing and Hunting	1,082	1,085	950	\$ 25,428	(3)	-0.1%	2.6%
21	Mining, Quarrying, and Oil and Gas Extraction	187	146	119	\$ 47,290	40	13.0%	9.5%
22	Utilities	627	609	609	\$ 58,806	17	1.4%	0.6%
23	Construction	11,439	12,631	10,128	\$ 38,499	(1,192)	-4.8%	2.5%
31	Manufacturing	6,276	6,835	7,691	\$ 40,076	(559)	-4.2%	-4.0%
42	Wholesale Trade	4,893	5,062	4,532	\$ 42,400	(169)	-1.7%	1.5%
44	Retail Trade	20,257	18,960	16,930	\$ 23,361	1,297	3.4%	3.7%
48	Transportation and Warehousing	3,934	3,951	3,669	\$ 37,461	(17)	-0.2%	1.4%
51	Information	2,220	2,211	2,198	\$ 41,176	8	0.2%	0.2%
52	Finance and Insurance	7,043	6,954	7,134	\$ 46,792	89	0.6%	-0.3%
53	Real Estate and Rental and Leasing	1,805	1,743	1,514	\$ 32,345	62	1.7%	3.6%
54	Professional, Scientific, and Technical Services	8,294	7,591	6,233	\$ 61,173	703	4.5%	5.9%
55	Management of Companies and Enterprises	1,635	1,430	1,384	\$ 52,047	205	6.9%	3.4%
56	Administrative and Support and Waste Management and Remediation Services	4,225	4,647	4,502	\$ 26,766	(422)	-4.7%	-1.3%
61	Educational Services	15,031	14,102	12,764	\$ 35,410	929	3.2%	3.3%
62	Health Care and Social Assistance	13,814	12,749	11,015	\$ 38,876	1,065	4.1%	4.6%
71	Arts, Entertainment, and Recreation	2,589	2,347	2,170	\$ 17,264	242	5.0%	3.6%
72	Accommodation and Food Services	13,170	12,352	10,302	\$ 13,352	818	3.3%	5.0%
81	Other Services (except Public Administration)	4,598	4,320	3,670	\$ 25,176	277	3.2%	4.6%
92	Public Administration	10,846	8,414	8,153	\$ 63,329	2,432	13.5%	5.9%

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

Partial Bay Consortium Area Top 20 Employers 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	
611	Educational Services	15,031	14,102	12,764	\$ 35,410	929	3.2%	3.3%
722	Food Services and Drinking Places	11,748	10,930	8,874	\$ 12,823	819	3.7%	5.8%
541	Professional, Scientific, and Technical Services	8,294	7,591	6,233	\$ 61,173	703	4.5%	5.9%
238	Specialty Trade Contractors	6,863	7,287	6,004	\$ 34,808	(425)	-3.0%	2.7%
621	Ambulatory Health Care Services	4,888	4,341	3,633	\$ 53,546	547	6.1%	6.1%
452	General Merchandise Stores	4,604	4,236	3,306	\$ 18,919	368	4.3%	6.9%
922	Justice, Public Order, and Safety Activities	4,530	2,191	2,024	\$ 64,504	2,339	43.8%	17.5%
525	Funds, Trusts, and Other Financial Vehicles	4,016	3,771	3,656	\$ 46,264	245	3.2%	1.9%
561	Administrative and Support Services	3,741	4,141	4,278	\$ 25,082	(400)	-5.0%	-2.6%
622	Hospitals	3,690	3,531	3,032	\$ 41,535	160	2.2%	4.0%
928	National Security and International Affairs	3,350	3,526	3,712	\$ 87,167	(176)	-2.5%	-2.0%
445	Food and Beverage Stores	2,926	2,468	3,074	\$ 19,526	459	8.9%	-1.0%
623	Nursing and Residential Care Facilities	2,681	2,732	2,572	\$ 26,689	(51)	-0.9%	0.8%
624	Social Assistance	2,555	2,145	1,778	\$ 20,010	409	9.1%	7.5%
423	Merchant Wholesalers, Durable Goods	2,528	2,110	1,811	\$ 41,716	418	9.5%	6.9%
441	Motor Vehicle and Parts Dealers	2,440	2,224	1,984	\$ 38,905	216	4.7%	4.2%
237	Heavy and Civil Engineering Construction	2,339	2,630	2,200	\$ 45,777	(291)	-5.7%	1.2%
236	Construction of Buildings	2,237	2,714	1,923	\$ 41,859	(477)	-9.2%	3.1%
447	Gasoline Stations	2,198	2,110	2,168	\$ 18,465	89	2.1%	0.3%
522	Credit Intermediation and Related Activities	2,113	2,279	2,733	\$ 46,880	(166)	-3.7%	-5.0%

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

Partial Bay Consortium Area Top 20 Industries with Largest Employment Gain by 3-Digit NAICS

NAICS	Industry Description	Employment				Employment Change Since 2005			Annual Average Change Since 2002
		2007	2005	2002	Annual Average Wages 2007	Number	Percent		
922	Justice, Public Order, and Safety Activities	4,530	2,191	2,024	\$ 64,504	2,338.83	43.8%	17.5%	
722	Food Services and Drinking Places	11,748	10,930	8,874	\$ 12,823	818.50	3.7%	5.8%	
621	Ambulatory Health Care Services	4,888	4,341	3,633	\$ 53,546	547.42	6.1%	6.1%	
445	Food and Beverage Stores	2,926	2,468	3,074	\$ 19,526	458.67	8.9%	-1.0%	
423	Merchant Wholesalers, Durable Goods	2,528	2,110	1,811	\$ 41,716	417.67	9.5%	6.9%	
624	Social Assistance	2,555	2,145	1,778	\$ 20,010	409.42	9.1%	7.5%	
452	General Merchandise Stores	4,604	4,236	3,306	\$ 18,919	368.17	4.3%	6.9%	
441	Motor Vehicle and Parts Dealers	2,440	2,224	1,984	\$ 38,905	215.83	4.7%	4.2%	
551	Management of Companies and Enterprises	1,635	1,430	1,384	\$ 52,047	205.17	6.9%	3.4%	
713	Amusement, Gambling, and Recreation Industries	2,091	1,897	1,708	\$ 16,212	193.83	5.0%	4.1%	
448	Clothing and Clothing Accessories Stores	1,215	1,036	883	\$ 13,952	179.00	8.3%	6.6%	
921	Executive, Legislative, and Other General Government Support	1,825	1,661	1,474	\$ 32,975	163.42	4.8%	4.4%	
311	Food Manufacturing	974	859	953	\$ 29,187	114.92	6.5%	0.4%	
812	Personal and Laundry Services	1,555	1,444	1,234	\$ 17,582	110.67	3.8%	4.7%	
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	1,067	971	749	\$ 18,782	96.42	4.8%	7.3%	
447	Gasoline Stations	2,198	2,110	2,168	\$ 18,465	88.50	2.1%	0.3%	
446	Health and Personal Care Stores	985	913	861	\$ 23,325	71.92	3.9%	2.7%	
811	Repair and Maintenance	1,975	1,905	1,687	\$ 34,805	70.08	1.8%	3.2%	
926	Administration of Economic Programs	422	360	296	\$ 37,605	61.67	8.2%	7.4%	
712	Museums, Historical Sites, and Similar Institutions	366	327	330	\$ 23,714	38.25	5.7%	2.1%	

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.

Partial Bay Consortium Area 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	
236	Construction of Buildings	2,237	2,714	1,923	\$ 41,859	(477)	-9.2%	3.1%
425	Wholesale Electronic Markets and Agents and Brokers	321	751	733	\$ 69,102	(430)	-34.6%	-15.2%
237	Heavy and Civil Engineering Construction	2,339	2,630	2,200	\$ 45,777	(291)	-5.7%	1.2%
928	National Security and International Affairs	3,350	3,526	3,712	\$ 87,167	(176)	-2.5%	-2.0%
522	Credit Intermediation and Related Activities	2,113	2,279	2,733	\$ 46,880	(166)	-3.7%	-5.0%
424	Merchant Wholesalers, Nondurable Goods	2,044	2,201	1,988	\$ 40,266	(157)	-3.6%	0.6%
332	Fabricated Metal Product Manufacturing	408	535	779	\$ 40,041	(127)	-12.7%	-12.1%
321	Wood Product Manufacturing	1,340	1,443	1,499	\$ 32,779	(103)	-3.6%	-2.2%
313	Textile Mills	77	168	336	\$ 24,985	(91)	-32.4%	-25.6%
443	Electronics and Appliance Stores	589	646	525	\$ 23,797	(56)	-4.5%	2.3%
623	Nursing and Residential Care Facilities	2,681	2,732	2,572	\$ 26,689	(51)	-0.9%	0.8%
322	Paper Manufacturing	688	724	705	\$ 71,306	(36)	-2.5%	-0.5%
488	Support Activities for Transportation	242	277	258	\$ 39,188	(35)	-6.5%	-1.3%
493	Warehousing and Storage	1,061	1,094	752	\$ 36,529	(34)	-1.6%	7.1%
444	Building Material and Garden Equipment and Supplies Dealers	2,108	2,137	1,587	\$ 29,207	(29)	-0.7%	5.8%
562	Waste Management and Remediation Services	484	506	225	\$ 39,472	(22)	-2.2%	16.6%
484	Truck Transportation	1,248	1,270	1,447	\$ 37,002	(22)	-0.9%	-2.9%
454	Nonstore Retailers	228	246	289	\$ 32,212	(18)	-3.7%	-4.6%
114	Fishing, Hunting and Trapping	51	63	58	\$ 24,209	(12)	-9.6%	-2.5%
325	Chemical Manufacturing	57	68	251	\$ 27,504	(11)	-8.4%	-25.7%

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

Partial Bay Consortium Area 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	
Carpenters	47-2031	770	926	698	\$ 39,306	(157)	-8.8%	2.0%
Sales Representatives, Wholesale and Mfg, Ex Technical and Scientific Products	41-4012	518	652	577	\$ 56,112	(134)	-10.9%	-2.1%
Construction Laborers	47-2061	690	790	655	\$ 31,916	(100)	-6.6%	1.0%
First-Line Supervisors/Mgrs of Construction Trades and Extraction Workers	47-1011	487	567	440	\$ 56,800	(80)	-7.3%	2.1%
Laborers and Freight, Stock, and Material Movers, Hand	53-7062	1,004	1,081	913	\$ 23,879	(76)	-3.6%	1.9%
Office Clerks, General	43-9061	568	643	606	\$ 25,332	(75)	-6.0%	-1.3%
Truck Drivers, Heavy and Tractor-Trailer	53-3032	1,055	1,106	1,128	\$ 36,412	(51)	-2.4%	-1.3%
Customer Service Representatives	43-4051	380	425	478	\$ 30,122	(45)	-5.5%	-4.5%
Bookkeeping, Accounting, and Auditing Clerks	43-3031	361	403	375	\$ 31,147	(43)	-5.4%	-0.8%
Sales Representatives, Wholesale and Mfg, Technical and Scientific Products	41-4011	137	177	166	\$ 67,559	(40)	-12.0%	-3.7%
General and Operations Mgrs	11-1021	356	394	362	\$ 95,867	(38)	-4.9%	-0.3%
Helpers--Carpenters	47-3012	153	189	137	\$ 24,256	(36)	-9.9%	2.3%
Construction Mgrs	11-9021	200	234	174	\$ 82,029	(33)	-7.4%	2.9%
Retail Salespersons	41-2031	872	904	707	\$ 25,963	(32)	-1.8%	4.3%
Operating Engineers and Other Construction Equipment Operators	47-2073	258	289	254	\$ 42,423	(31)	-5.6%	0.3%
Loan Officers	13-2072	204	233	309	\$ 60,185	(28)	-6.3%	-7.9%
Stock Clerks and Order Fillers	43-5081	317	344	295	\$ 27,100	(28)	-4.1%	1.4%
Truck Drivers, Light or Delivery Services	53-3033	472	500	448	\$ 28,203	(28)	-2.8%	1.1%
First-Line Supervisors/Mgrs of Office and Administrative Support Workers	43-1011	333	360	352	\$ 46,342	(27)	-3.8%	-1.1%
Secretaries, Ex Legal, Medical, and Executive	43-6014	209	235	214	\$ 28,572	(26)	-5.7%	-0.5%

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.

Partial Bay Consortium Area 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	
Carpenters	47-2031	1,086	1,240	1,028	\$ 39,437	(154)	-12.4%	1.1%
Construction Laborers	47-2061	1,141	1,261	1,059	\$ 30,996	(120)	-9.5%	1.5%
Sales Representatives, Wholesale and Mfg, Except Technical and Scientific Produ	41-4012	1,227	1,332	1,179	\$ 55,873	(104)	-7.8%	0.8%
Truck Drivers, Heavy and Tractor-Trailer	53-3032	1,464	1,561	1,498	\$ 35,819	(97)	-6.2%	-0.5%
First-Line Supervisors/Mgrs of Construction Trades and Extraction Workers	47-1011	982	1,072	903	\$ 56,459	(90)	-8.4%	1.7%
Laborers and Freight, Stock, and Material Movers, Hand	53-7062	1,853	1,920	1,782	\$ 23,312	(67)	-3.5%	0.8%
Sales Representatives, Wholesale and Mfg, Technical and Scientific Products	41-4011	319	371	343	\$ 69,249	(53)	-14.2%	-1.4%
Painters, Construction and Maintenance	47-2141	350	393	357	\$ 33,999	(43)	-11.0%	-0.4%
Team Assemblers	51-2092	439	481	513	\$ 25,524	(43)	-8.9%	-3.1%
Operating Engineers and Other Construction Equipment Operators	47-2073	489	527	430	\$ 41,343	(38)	-7.3%	2.6%
Construction Mgrs	11-9021	370	406	334	\$ 79,345	(36)	-9.0%	2.1%
Helpers--Carpenters	47-3012	207	241	194	\$ 24,341	(34)	-14.2%	1.3%
Industrial Truck and Tractor Operators	53-7051	690	723	657	\$ 27,983	(33)	-4.6%	1.0%
Hairdressers, Hairstylists, and Cosmetologists	39-5012	456	485	399	\$ 24,962	(28)	-5.9%	2.7%
Drywall and Ceiling Tile Installers	47-2081	193	221	200	\$ 38,814	(28)	-12.8%	-0.8%
Welders, Cutters, Solderers, and Brazers	51-4121	246	274	278	\$ 34,189	(28)	-10.3%	-2.4%
Electricians	47-2111	816	844	927	\$ 46,249	(28)	-3.3%	-2.5%
Assemblers and Fabricators, All Other	51-2099	139	166	196	\$ 29,376	(27)	-16.2%	-6.6%
Loan Officers	13-2072	233	259	332	\$ 60,692	(26)	-10.1%	-6.9%
Cement Masons and Concrete Finishers	47-2051	248	273	218	\$ 35,857	(24)	-8.8%	2.6%

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

Partial Bay Consortium Area 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	5,818	5,668	4,534	\$ 23,664	150	2.6%	5.1%
Registered Nurses	29-1111	1,890	1,778	1,521	\$ 58,188	112	6.3%	4.4%
Business Operations Specialists, All Other	13-1199	1,492	1,398	1,290	\$ 61,853	93	6.7%	3.0%
Combined Food Preparation and Serving Workers, Including Fast Food	35-3021	2,472	2,381	2,019	\$ 16,248	91	3.8%	4.1%
Police and Sheriff's Patrol Officers	33-3051	522	435	392	\$ 48,499	87	20.1%	5.9%
Personal and Home Care Aides	39-9021	386	303	243	\$ 18,650	84	27.7%	9.7%
Cashiers	41-2011	4,907	4,824	4,329	\$ 17,729	83	1.7%	2.5%
Correctional Officers and Jailers	33-3012	520	438	393	\$ 38,019	82	18.8%	5.8%
Management Analysts	13-1111	686	624	511	\$ 77,931	61	9.8%	6.0%
Child, Family, and School Social Workers	21-1021	331	271	227	\$ 40,473	60	22.2%	7.8%
Stock Clerks and Order Fillers	43-5081	1,903	1,845	1,631	\$ 22,476	58	3.1%	3.1%
Home Health Aides	31-1011	471	417	373	\$ 20,080	54	13.0%	4.8%
Parts Salespersons	41-2022	349	298	263	\$ 29,755	51	17.0%	5.8%
Automotive Service Technicians and Mechanics	49-3023	1,059	1,012	904	\$ 35,915	48	4.7%	3.2%
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	37-2011	2,320	2,275	1,940	\$ 22,226	45	2.0%	3.6%
Secretaries, Except Legal, Medical, and Executive	43-6014	1,891	1,846	1,640	\$ 29,724	45	2.4%	2.9%
Nursing Aides, Orderlies, and Attendants	31-1012	1,243	1,199	1,097	\$ 22,124	44	3.7%	2.5%
Office Clerks, General	43-9061	3,304	3,264	2,869	\$ 25,045	40	1.2%	2.9%
Elementary School Teachers, Except Special Education	25-2021	2,274	2,236	1,998	\$ 48,683	38	1.7%	2.6%
Managers, All Other	Nov-99	592	554	498	\$ 87,820	37	6.8%	3.5%

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

Partial Bay Consortium Area 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	22	1,890	1,778	1,521	\$ 59,373
Bookkeeping, Accounting, and Auditing Clerks	43-3031	19	1,599	1,591	1,432	\$ 31,809
Teacher Assistants	25-9041	17	1,700	1,678	1,489	\$ 21,585
Executive Secretaries and Admin Assistants	43-6011	10	780	772	688	\$ 39,124
Sales Representatives, Services, All Other	41-3099	9	625	624	544	\$ 44,053
Licensed Practical and Licensed Vocational Nurses	29-2061	9	771	734	642	\$ 36,932
Medical Assistants	31-9092	8	317	305	240	\$ 26,767
Business Operations Specialists, All Other	13-1199	7	1,492	1,398	1,290	\$ 61,828
Automotive Service Technicians and Mechanics	49-3023	6	1,059	1,012	904	\$ 35,882
Preschool Teachers, Ex Special Ed	25-2011	6	495	507	457	\$ 26,130
Computer Software Engineers, Applications	15-1031	6	648	632	524	\$ 81,424
Hairdressers, Hairstylists, and Cosmetologists	39-5012	5	456	485	399	\$ 24,962
First-Line Supervisors/Mgrs of Construction Trades and Extraction Workers	47-1011	3	982	1,072	903	\$ 56,459
Social and Human Service Assistants	21-1093	3	169	146	126	\$ 28,105
Management Analysts	13-1111	3	686	624	511	\$ 77,853
First-Line Supervisors/Mgrs of Housekeeping and Janitorial Workers	37-1011	3	249	244	210	\$ 34,166
Bill and Account Collectors	43-3011	3	302	304	371	\$ 31,523
Fitness Trainers and Aerobics Instructors	39-9031	3	255	232	188	\$ 30,674
Cost Estimators	13-1051	3	212	229	200	\$ 56,847
Network Systems and Data Communications Analysts	15-1081	3	166	166	149	\$ 67,387

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.

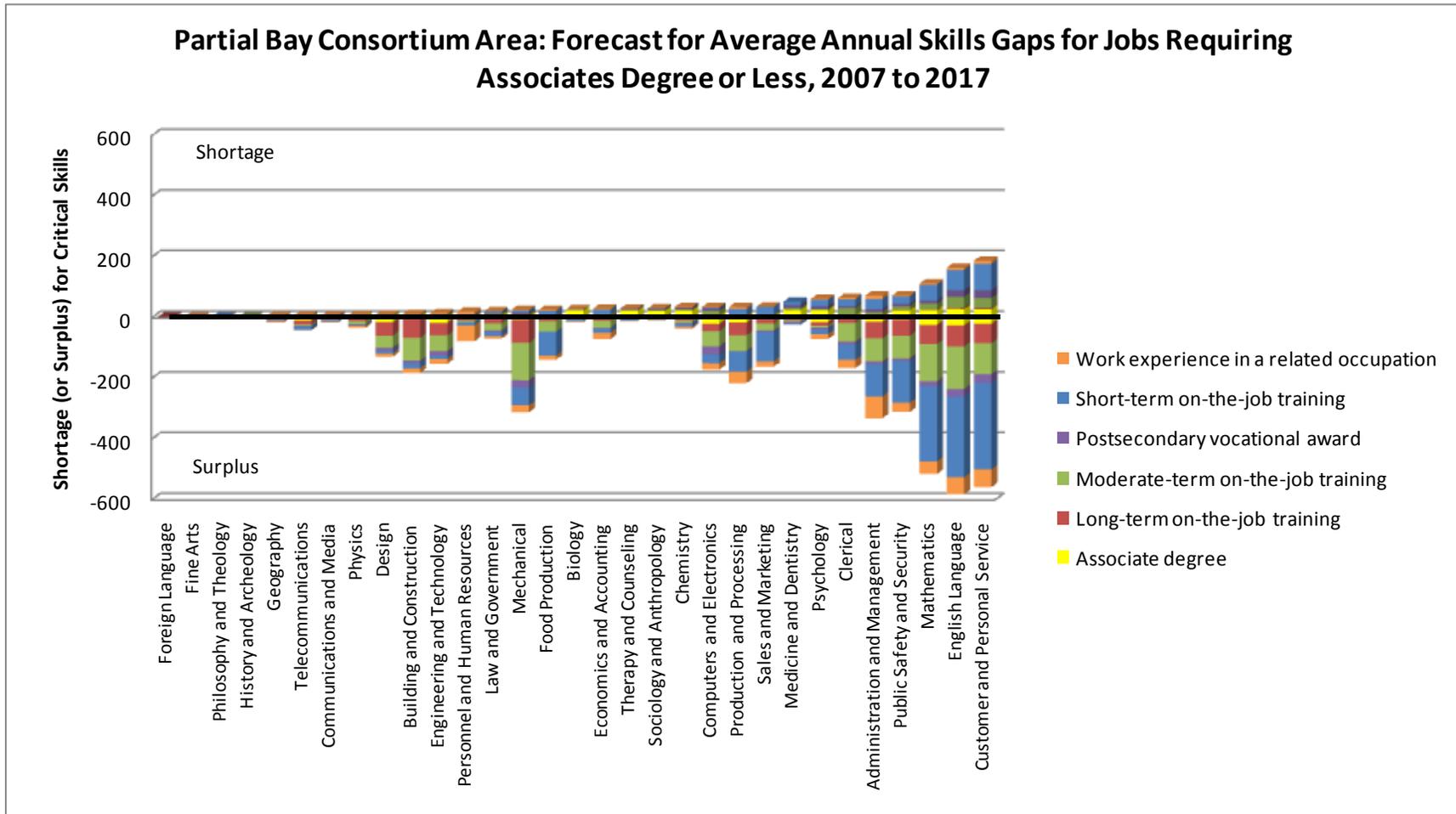
This table provides insight into the occupations that typically require a 2-year degree or greater that are expected to be in greatest demand.

Partial Bay Consortium Area 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	
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	45	2,320	2,275	1,940	\$ 22,226
43-9061	Office Clerks, General	33	3,304	3,264	2,869	\$ 25,045
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	29	2,472	2,381	2,019	\$ 16,248
41-2031	Retail Salespersons	19	5,818	5,668	4,534	\$ 23,664
39-9021	Personal and Home Care Aides	18	386	303	243	\$ 18,650
31-1011	Home Health Aides	18	471	417	373	\$ 20,080
53-3032	Truck Drivers, Heavy and Tractor-Trailer	17	1,464	1,561	1,498	\$ 35,778
53-3022	Bus Drivers, School	12	1,048	1,028	915	\$ 24,585
43-4051	Customer Service Representatives	12	1,530	1,531	1,551	\$ 29,658
43-4171	Receptionists and Information Clerks	12	1,003	989	851	\$ 23,111
37-3011	Landscaping and Groundskeeping Workers	11	908	884	745	\$ 22,960
53-3033	Truck Drivers, Light or Delivery Services	11	1,181	1,144	1,035	\$ 26,493
31-1012	Nursing Aides, Orderlies, and Attendants	11	1,243	1,199	1,097	\$ 22,124
37-2012	Maids and Housekeeping Cleaners	11	877	884	786	\$ 18,585
33-9032	Security Guards	10	558	529	496	\$ 25,007
43-6014	Secretaries, Except Legal, Medical, and Executive	7	1,891	1,846	1,640	\$ 29,724
39-3091	Amusement and Recreation Attendants	5	353	318	296	\$ 17,386
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers	5	939	915	762	\$ 28,088
41-2021	Counter and Rental Clerks	5	515	496	469	\$ 22,929
47-2061	Construction Laborers	4	1,141	1,261	1,059	\$ 30,985

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.