

OHIO SHALE



QUARTERLY ECONOMIC TRENDS FOR
OHIO OIL AND GAS INDUSTRIES

February 2013

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A Message from Director Colbert

Ohio is fortunate to have a natural gift with great potential for reinvigorating our economy: huge deposits of shale rock, beneath which sit potentially vast reserves of oil and natural gas. Safely and responsibly extracting this oil and gas and making them usable as energy sources will take work, but Ohio is perfectly poised to do that work. We have a workforce equipped with the skills employers need and a multitude of local training programs to keep that pipeline of skilled workers flowing.

The pages that follow show the effect that shale already has had on Ohio's economy, as of June 2012. Total shale-related employment for the second quarter of 2012 was 179,414, and employment in core shale-related industries was up 15.5 percent from the second quarter of 2011. In any given month, thousands of shale-related jobs openings are posted online, at www.ohiomeansjobs.com. The Ohio Board of Regents also provides an overview of shale-related employment opportunities and information about education and training at www.ohioenergypathways.com.

The average wages of shale-related jobs are excellent: \$73,070 in core shale-related industries (such as pipeline construction and well drilling), and \$58,981 in ancillary shale-related industries (such as freight trucking and environmental consulting). To put that in perspective, the average wage in all industries in Ohio is \$43,958.

For Ohio families and communities still struggling to regain their financial footing after the recession, this is welcome news. The Ohio Department of Job and Family Services (ODJFS) has been working hard to help employers, workers and the state as a whole take advantage of these opportunities. We've been working closely with the Board of Regents, local workforce investment areas, post-secondary educational institutions and employers to identify the most-needed shale-related occupations and make sure that training programs are in place to help fill them.

Individuals can sign up for on-the-job training opportunities at any of the state's local One-Stop Centers, which provide free job training and other services to Ohioans looking for work and employers looking for workers. Individuals can post their resumes, and employers can post job openings at www.ohiomeansjobs.com.

We are excited about the potential shale holds for Ohio and will publish regular snapshots of shale employment trends in future issues of this report. Check back quarterly for the latest updates.



Michael B. Colbert, Director
Ohio Department of Job and Family Services



EXECUTIVE SUMMARY

Employment (2011 Q2 to 2012 Q2)

- Core industry employment (such as pipeline construction and well drilling) was up 1,064 (15.5 percent).
- Ancillary industry employment (such as freight trucking and environmental consulting) was up 4,564 (2.7 percent).
- All industry employment was up 86,925 (1.7 percent).
- Total employment in shale-related industries for the second quarter of 2012 was 179,414.

Business Establishments (2011 Q2 to 2012 Q2)

- 42 core business establishments were added. Ancillary industries declined by 58 establishments.
- This represented a 7.1 percent growth in the core industries and a modest decline in the ancillary industries. Over the same time period, there was virtually no change in the number of Ohio establishments. Shale-related business establishments totaled 13,439 during the second quarter of 2012.

Wages (2011 Q3 through 2012 Q2)

- The average wage across all industries was \$43,958.
- The average wage in core industries was \$73,070, which was \$29,112 greater than the average for all industries.
- The average wage in ancillary industries was \$58,981, which was \$15,023 greater than the average for all industries.

Stable Employment, All Hires and Separations (2010 Q4 to 2011 Q4)

- Stable jobs, those present at the beginning and end of a quarter, increased in all core shale-related industries. Stable employment in oil and gas extraction and support activities for mining increased 4.0 and 5.3 percent, respectively. The largest percent increase was in pipeline transportation of natural gas (9.0 percent).

Online Job Postings (2012 Q4)

- There were 6,036 online job postings statewide in core and ancillary industries.

These data are meant to provide a barometer of shale-related economic activity and employment trends. While the vast majority of shale-related employment can be found in certain industries, not all business establishments in those industries are involved in shale activity. For those that are, not all of their products and services and, therefore, their employment, are necessarily linked to shale-related economic activity.

BACKGROUND INFORMATION

Data Sources

The purpose of this quarterly publication is to provide the most current available data on shale-related economic activity in Ohio. Although several data sources are cited in this publication, the primary source is the Quarterly Census of Employment and Wages (QCEW).

The QCEW program derives its data from quarterly tax reports of employers subject to state and federal unemployment insurance laws. This includes 95 percent or more of all wage and salary employment in Ohio. Under the QCEW program, employment data represent the number of covered workers who worked during, or received pay for, the pay period including the 12th of the month. Excluded are members of the armed forces, the self-employed, unpaid family workers and railroad workers covered by the railroad unemployment insurance system. Data is published approximately six months after the quarter ends.

Also included in this publication are several additional data sources that capture Ohio's overall economic situation (Local Area Unemployment Statistics and Current Employment Statistics), employer demand (The Conference Board Help Wanted OnLine™ Data Set) and hiring activity (Quarterly Workforce Indicators). For an explanation of all data sources, please refer to the "Definitions" section on page 18.

In this edition, data from the QCEW program are for the second quarter of 2012. This is the most current data available. Because the data are not seasonally adjusted, the same quarter must be used when analyzing growth over time. This will ensure that seasonal factors are not influencing employment change. Therefore, second quarter 2012 QCEW data are compared to second quarter 2011 QCEW data.

Data Limitations

The North American Industry Classification System (NAICS) was used to define shale-related industries. Much of the information included in this publication reflects data on a group of six industries identified as "core" and a group of 30 industries identified as "ancillary." These data are meant to provide a barometer of shale-related economic activity and employment trends. While the vast majority of shale-related employment can be found in these industries, not all business establishments in these industries are involved in shale activity. For those that are, not all of their products and services and, therefore, their employment are necessarily linked to shale-related economic activity. This is particularly true for the ancillary industries.

The data in this edition include government employment (federal, state and local) in all shale-related industries because significant non-private employment is present in a number of these industries, most notably: highway, street and bridge construction; engineering services; water supply and irrigation systems; and sewage treatment facilities.

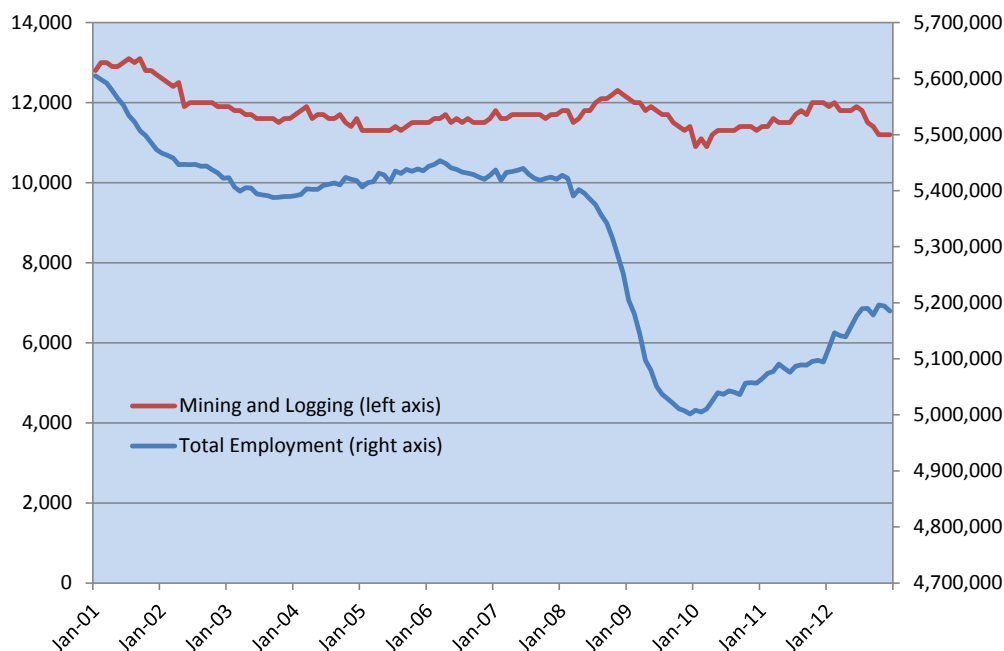
As shale-related activity develops further in Ohio, additional industries may be added to the ancillary group, based on such factors as significant employment gains in an industry in a geographic region or the identification of a group of companies in the same industry involved in shale-related activity.

Snapshot of Ohio's Economy

- **Ohio's seasonally adjusted unemployment rate for December 2012 was 6.7 percent.**
 - The rate was 1.2 percentage points lower than the December 2011 rate.
- **Ohio had 5,185,000 seasonally adjusted nonfarm jobs in December 2012.**
 - From December 2011, employment increased by 90,700 jobs.
- **Ohio's hiring activity increased from the fourth quarter of 2010 to the fourth quarter of 2011.**
 - Across all industries, an estimated 862,263 workers started new jobs (new hires and rehires) during the fourth quarter of 2011, an increase of 38,124 hires over the fourth quarter of 2010.
- **Employer demand increased in Ohio.**
 - 441,119 job ads were posted online in fourth quarter 2012, an increase of 29,518 from fourth quarter 2011.
- **Ohio's supply/demand rate, which is the ratio of the number of unemployed people to advertised job vacancies, decreased slightly in December 2012 (The Conference Board).**
 - The Ohio supply/demand rate was 2.15, which was lower than the U.S. rate (2.55).

Mining Jobs vs. Total Jobs in Ohio

Total Mining and Logging Employment since January 2001 (Seasonally Adjusted).



Source: Current Employment Statistics. Estimates may be revised.

- **In December 2012, 11,200 Ohio workers were employed in the mining and logging industries.**
 - From December 2011 to December 2012, employment decreased by a total of 800 jobs.

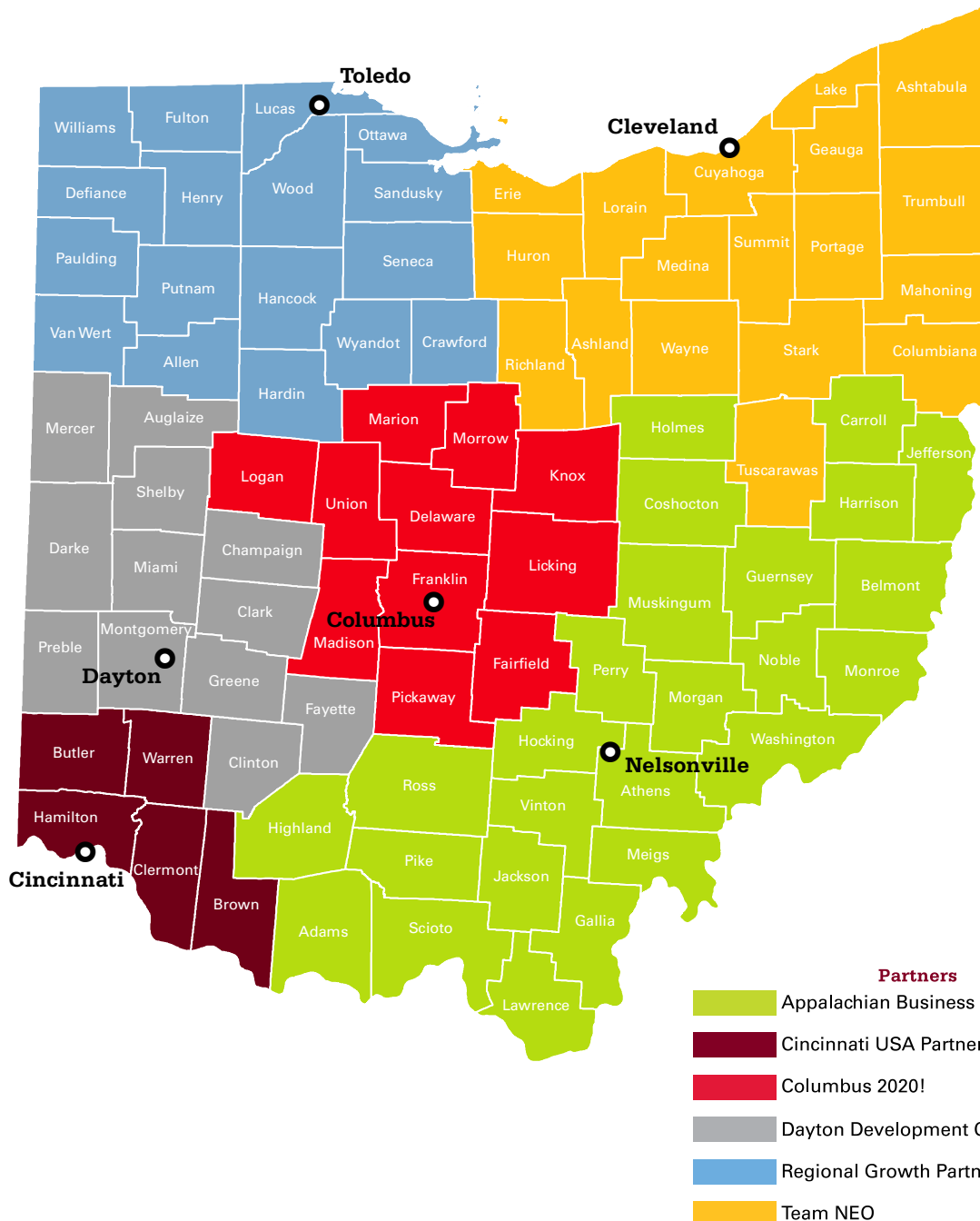
STATEWIDE SHALE-RELATED INDUSTRIES

Number of Business Establishments and Employment in Shale-Related Industries (2011 Q2-2012 Q2)							
Core Industries		2011 Q2		2012 Q2		Change	
NAICS	Title	Estab.	Empl.	Estab.	Empl.	Estab.	Empl.
211111	Crude petroleum and natural gas extraction	194	2,863	198	2,864	4	1
211112	Natural gas liquid extraction	3	24	11	160	8	136
213111	Drilling oil and gas wells	79	525	92	635	13	110
213112	Support activities for oil and gas operations	181	1,292	195	1,522	14	230
237120	Oil and gas pipeline construction	98	1,862	101	2,435	3	573
486210	Pipeline transportation of natural gas	36	307	36	321	0	14
Totals		591	6,873	633	7,937	42	1,064
Ancillary Industries		2011 Q2		2012 Q2		Change	
NAICS	Title	Estab.	Empl.	Estab.	Empl.	Estab.	Empl.
221112	Fossil fuel electric power generation	83	5,292	75	4,664	-8	-628
221210	Natural gas distribution	142	3,723	148	4,118	6	395
221310	Water supply and irrigation systems	248	6,049	253	6,122	5	73
221320	Sewage treatment facilities	212	3,846	208	3,784	-4	-62
237110	Water and sewer system construction	390	5,029	374	5,065	-16	36
237310	Highway, street, and bridge construction	724	15,156	720	15,983	-4	827
238912	Nonresidential site preparation contractors	628	5,117	603	5,427	-25	310
325110	Petrochemical manufacturing	5	357	5	315	0	-42
325120	Industrial gas manufacturing	47	748	45	784	-2	36
331110	Iron and Steel Mills and Ferroalloy Manufacturing	58	9,982	62	10,754	4	772
331210	Iron, steel pipe and tube from purchase steel	53	3,122	51	3,138	-2	16
333131	Mining machinery and equipment manufacturing	12	453	10	508	-2	55
333132	Oil and gas field machinery and equipment	6	137	10	346	4	209
423810	Construction equipment merchant wholesalers	200	2,575	202	3,015	2	440
423830	Industrial machinery merchant wholesalers	1,693	15,287	1,668	16,063	-25	776
423840	Industrial supplies merchant wholesalers	503	4,803	508	4,645	5	-158
484110	General freight trucking, local	1,361	12,206	1,344	12,514	-17	308
484220	Other specialized trucking, local	1,008	7,094	1,012	7,582	4	488
484230	Other specialized trucking, long-distance	284	4,540	292	4,863	8	323
531190	Lessors of other real estate property	291	949	284	927	-7	-22
532412	Other heavy machinery rental and leasing	167	1,318	173	1,502	6	184
541330	Engineering services	2,285	27,611	2,278	28,589	-7	978
541360	Geophysical surveying and mapping services	51	257	52	279	1	22
541380	Testing laboratories	359	6,535	363	5,748	4	-787
541620	Environmental consulting services	299	1,676	306	1,693	7	17
562910	Remediation services	178	2,394	202	2,701	24	307
811310	Commercial machinery repair and maintenance	1,102	7,328	1,092	7,692	-10	364
924110	Air, water, and waste program administration	165	6,259	162	6,196	-3	-63
924120	Administration of conservation programs	281	6,586	276	5,992	-5	-594
926130	Utility regulation and administration	29	484	28	468	-1	-16
Totals		12,864	166,913	12,806	171,477	-58	4,564
Core Industries and Ancillary Industries Totals		13,455	173,786	13,439	179,414	-16	5,628

Source: Quarterly Census of Employment and Wages.

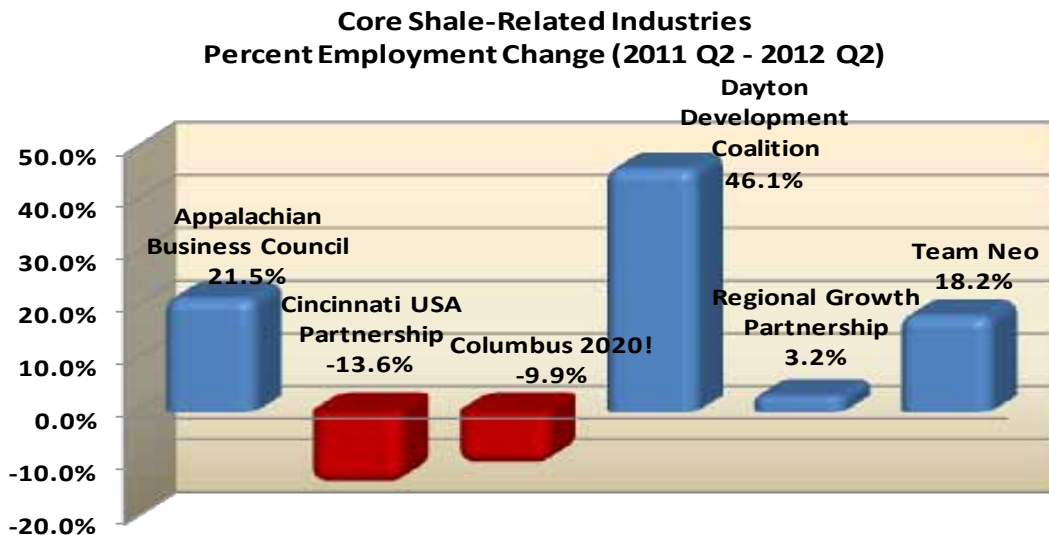
- From 2011 Q2 to 2012 Q2, employment in core industries increased by 1,064 (15.5 percent). Over the same period, employment in ancillary industries increased by 4,564 (2.7 percent).
- From 2011 Q2 to 2012 Q2, the number of business establishments in the core industries grew by 42 (7.1 percent), while establishments in ancillary industries declined by 58 (-0.1 percent).

JOB OHIO NETWORK



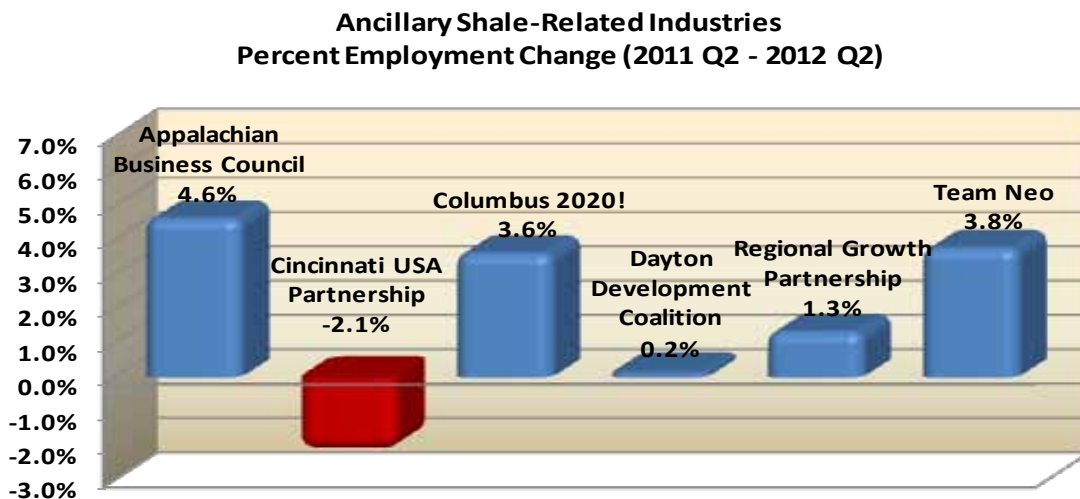
REGIONAL SHALE-RELATED INDUSTRIES

The JobsOhio Network is a partnership of statewide economic development organizations with deep ties to their business communities. The following charts show trends in shale-related employment for each of the six JobsOhio regions.



Source: Quarterly Census of Employment and Wages.

- For the core shale-related industries, the largest percent growth in employment was in the Dayton Development Coalition region (46.1 percent), followed by the Appalachian Business Council region (21.5 percent).



Source: Quarterly Census of Employment and Wages.

- For the ancillary shale-related industries, the largest percent growth in employment was in the Appalachian Business Council region (4.6 percent), followed by the Team Neo region (3.8 percent).

WAGES FOR OHIO SHALE CORE AND ANCILLARY INDUSTRIES

- The average wage across all industries for 2011 Q3 through 2012 Q2 was \$43,958.
- The average wage in the core industries was approximately \$29,112 greater than the average wage for all industries.
- The average wage in the ancillary industries was approximately \$15,023 higher.

Core Shale-Related Industries
(2011 Q3-2012 Q2)

\$73,070

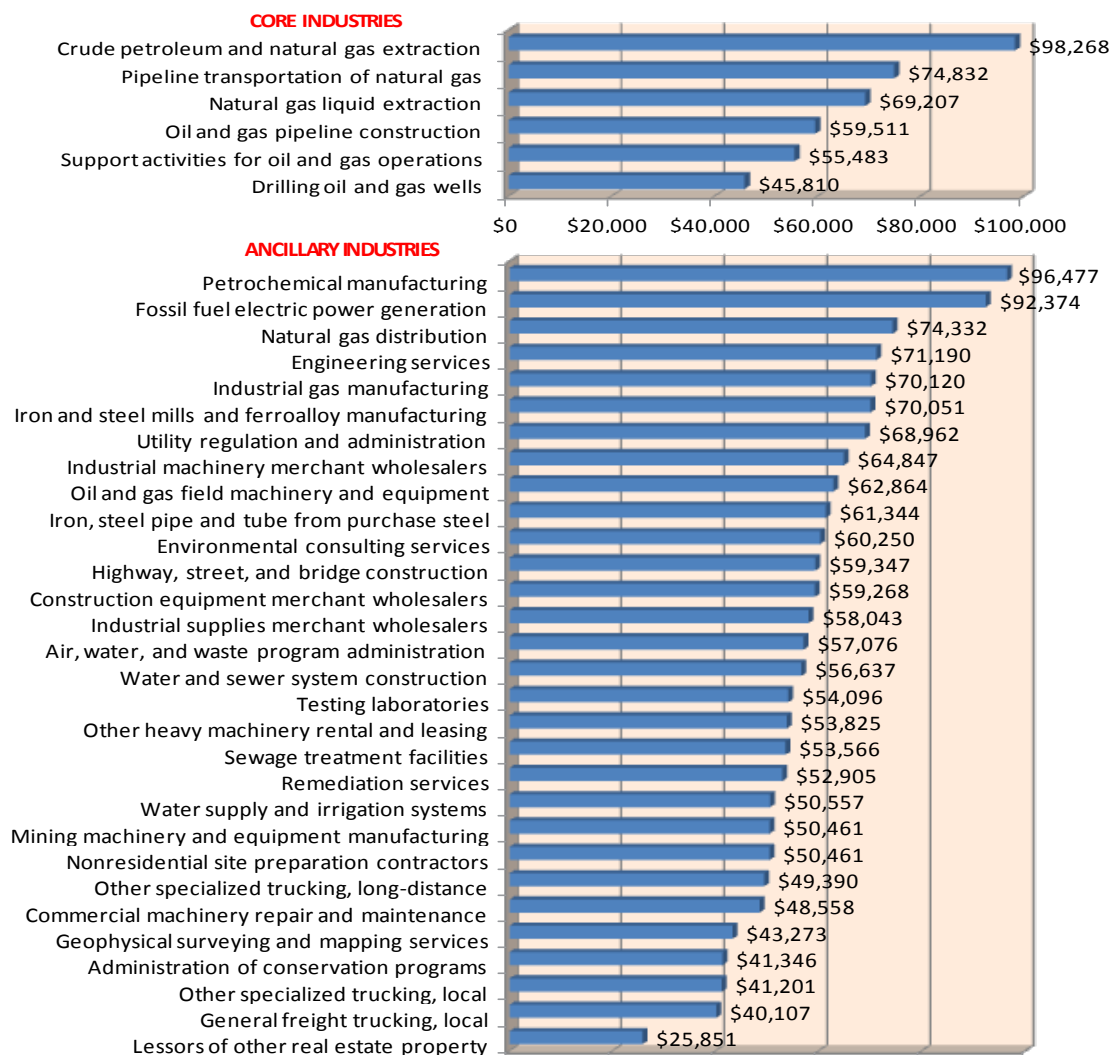
Ancillary Shale-Related Industries
(2011 Q3-2012 Q2)

\$58,981

All Ohio Industries
(2011 Q3-2012 Q2)

\$43,958

Average Wage by Industry



OHIO SHALE-RELATED ONLINE JOB POSTINGS

Ohio Statewide Online Job Postings

	2011 Q4	2012 Q4	% Change
Core Industries	164	160	-2.4%
Ancillary Industries	6,389	5,875	-8.0%
Total: ALL Industries	411,601	441,119	7.2%

JobsOhio Network Region Online Job Postings

	2011 Q4	2012 Q4	% Change
Core & Ancillary Combined			
Appalachian Business Council	230	293	27.4%
Cincinnati USA Partnership	1,254	917	-26.9%
Columbus 2020!	1,403	977	-30.4%
Dayton Development Coalition	765	739	-3.4%
Regional Growth Partnership	454	335	-26.2%
Team NEO	2,137	2,599	21.6%
Total*	6,554	6,036	-7.9%

Source: The Conference Board Help Wanted Online® (HWOL). Data subject to revision. Not seasonally adjusted.

* The total includes job ads that may have listed Ohio as the only geographical area. As a result, the sum of the job ads for the JobsOhio Regions may be lower, since it does not include these ads without a city or MSA specification.

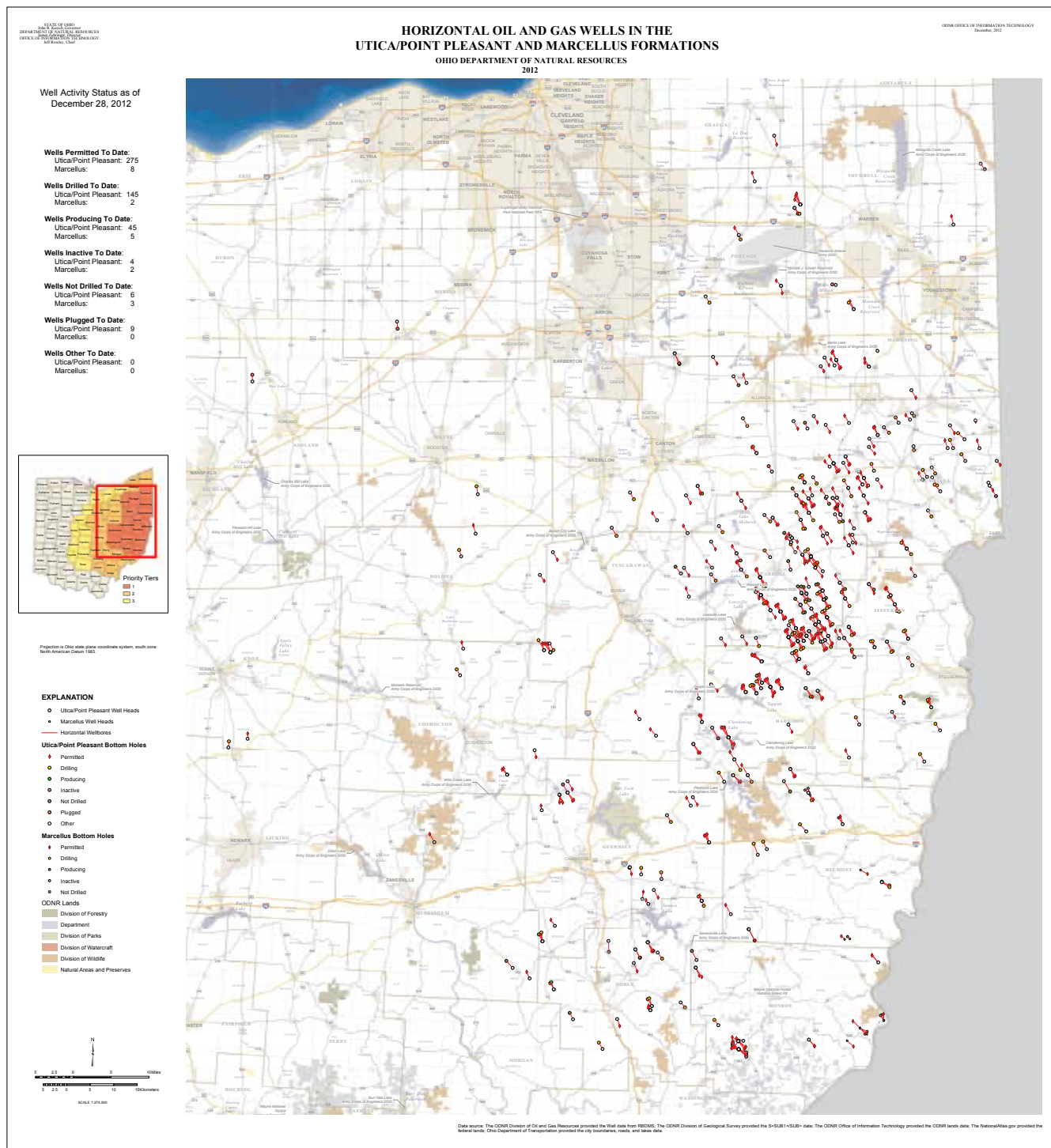
Ohio Online Job Postings

- Total job postings across all industries for Ohio were 7.2 percent higher in fourth quarter 2012 than in fourth quarter 2011.
- Overall, job postings decreased in core and ancillary shale-related industries.

JobsOhio Network Region Online Job Postings

- The Appalachian Business Council (27.4 percent) and Team Neo (21.6 percent) regions had increases in the number of job postings in fourth quarter 2012 when compared to fourth quarter 2011.

WELL ACTIVITY STATUS AS OF DECEMBER 2012



STATEWIDE HIGH-PRIORITY OCCUPATIONS RELATED TO SHALE-RELATED INDUSTRIES

The occupations listed in the table below and on the next page are found in shale-related core and ancillary industries and have been identified as high-priority occupations. High-priority occupations are identified as in demand by employers, have higher skills needs, and are most likely to provide family-sustaining wages.

A standard occupation classification (SOC) code is provided for each occupation. For a complete list of terms, please refer to the Staffing Patterns definition on page 19.

SOC Code	SOC Title	Average Median Wage	Typical Education Level
53-7062	Laborers and Freight Stock and Material Movers Hand	\$22,490	Short-Term OJT
43-9061	Office Clerks General	\$27,000	Short-Term OJT
43-3021	Billing and Posting Clerks	\$31,400	Short-Term OJT
53-3032	Heavy and Tractor-Trailer Truck Drivers	\$37,380	Short-Term OJT
43-4051	Customer Service Representatives	\$29,990	Moderate-Term OJT
43-6014	Secretaries and Administrative Assistants Except Legal Medical and Executive	\$30,970	Moderate-Term OJT
43-3031	Bookkeeping, Accounting and Auditing Clerks	\$33,730	Moderate-Term OJT
51-9061	Inspectors, Testers, Sorters, Samplers and Weighers	\$34,650	Moderate-Term OJT
47-2061	Construction Laborers	\$36,100	Moderate-Term OJT
43-5061	Production Planning and Expediting Clerks	\$38,880	Moderate-Term OJT
47-2073	Operating Engineers and Other Construction Equipment Operators	\$45,030	Moderate-Term OJT
49-9052	Telecommunications Line Installers and Repairers	\$42,340	Long-Term OJT
49-9041	Industrial Machinery Mechanics	\$44,600	Long-Term OJT
47-2152	Plumbers, Pipefitters and Steamfitters	\$45,220	Long-Term OJT
49-9051	Electrical Power-Line Installers and Repairers	\$58,040	Long-Term OJT
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	\$51,410	Related Work Exp.
51-1011	First-Line Supervisors of Production and Operating Workers	\$52,260	Related Work Exp.
49-1011	First-Line Supervisors of Mechanics, Installers and Repairers	\$57,060	Related Work Exp.
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	\$57,670	Related Work Exp.
41-4011	Sales Representatives Wholesale and Manufacturing Technical and Scientific Products	\$66,250	Related Work Exp.
51-4121	Welders, Cutters, Solderers, and Brazers	\$34,740	Postsec. Voc. Award
13-1051	Cost Estimators	\$54,820	Bachelor's Degree
17-2112	Industrial Engineers	\$70,840	Bachelor's Degree

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics, May 2011.

(continued on the next page)

Statewide High-Priority Occupations Related to Shale-Related Industries

(continued from the previous page)

SOC Code	SOC Title	Average Median Wage	Typical Education Level
45-4022	Logging Equipment Operators	\$27,810	Moderate-Term OJT
47-5071	Roustabouts Oil and Gas	\$30,980	Moderate-Term OJT
53-7073	Wellhead Pumpers	\$31,140	Moderate-Term OJT
47-5011	Derrick Operators Oil and Gas	\$31,700	Moderate-Term OJT
47-5012	Rotary Drill Operators Oil and Gas	\$32,750	Moderate-Term OJT
47-5013	Service Unit Operators Oil Gas and Mining	\$34,610	Moderate-Term OJT
53-7072	Pump Operators Except Wellhead Pumpers	\$46,030	Moderate-Term OJT
53-7071	Gas Compressor and Gas Pumping Station Operators	\$57,440	Moderate-Term OJT
49-3042	Mobile Heavy Equipment Mechanics Except Engines	\$43,420	Long-Term OJT
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators and Tenders	\$31,830	Postsec. Voc. Award
17-3025	Environmental Engineering Technicians	\$38,730	Associate's Degree
17-3023	Electrical and Electronics Engineering Technicians	\$53,780	Associate's Degree
19-4041	Geological and Petroleum Technicians	\$54,410	Associate's Degree
17-2151	Mining and Geological Engineers Including Mining Safety Engineers	\$56,660	Bachelor's Degree
19-2042	Geoscientists Except Hydrologists and Geographers	\$71,020	Master's Degree

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics, May 2011.

STATEWIDE SHALE-RELATED EMPLOYMENT DATA

The Quarterly Workforce Indicators (QWI) are a set of economic indicators derived from state administrative records and basic demographic information from the Census Bureau. They can be examined based on geography, as well as by industry, gender and age of workers. Data are presented for the most recent data available and because QWI data are not seasonally adjusted, the same quarter must be used to analyze changes over time. This will ensure that seasonal factors are not influencing employment change. Therefore, in the table below and on the following page, fourth quarter data from 2011 is presented with fourth quarter data from 2010.

The table below, and on the follow page, show Ohio shale-related employment. "Stable Employment," which is abbreviated as "Stable Employ.," is an estimate of the number of jobs that were present at the beginning and end of a quarter. "All hires" is the estimated number of workers who started a job during the quarter; it includes new and recalled employees. "Separations" is the estimated number of workers whose jobs with a given employer ended during a quarter.

Ohio	2010 Q4			2011 Q4		
	Stable Employ.	All Hires	Separations	Stable Employ.	All Hires	Separations
All industry groups	4,373,655	824,139	814,231	4,352,796	862,263	853,280
2111 Oil and Gas Extraction	2,704	124	148	2,812	187	203
2131 Support Activities for Mining	2,434	479	586	2,563	720	894
2371 Utility System Construction	8,846	2,742	3,918	9,548	2,309	3,689
4862 Pipeline Trans. of Natural Gas	310	37	6	338	14	3

Source: U.S. Census Bureau, Quarterly Workforce Indicators.

Quarterly Workforce Indicators are only available at the 4-digit NAICS level. Consequently, although these industry groups contain some employment from non-shale related core industries, they provide an indication of labor activity for these shale-related industries.

- Stable jobs, those present at the beginning and end of a quarter, increased in all core shale-related industries from fourth quarter 2010 to fourth quarter 2011. During this time frame, stable employment in oil and gas extraction and support activities for mining increased 4.0 and 5.3 percent, respectively.
- It is also clear there is significant churn and turnover in the job market, as demonstrated by the levels of hires and separations.

JOB OHIO NETWORK SHALE-RELATED EMPLOYMENT

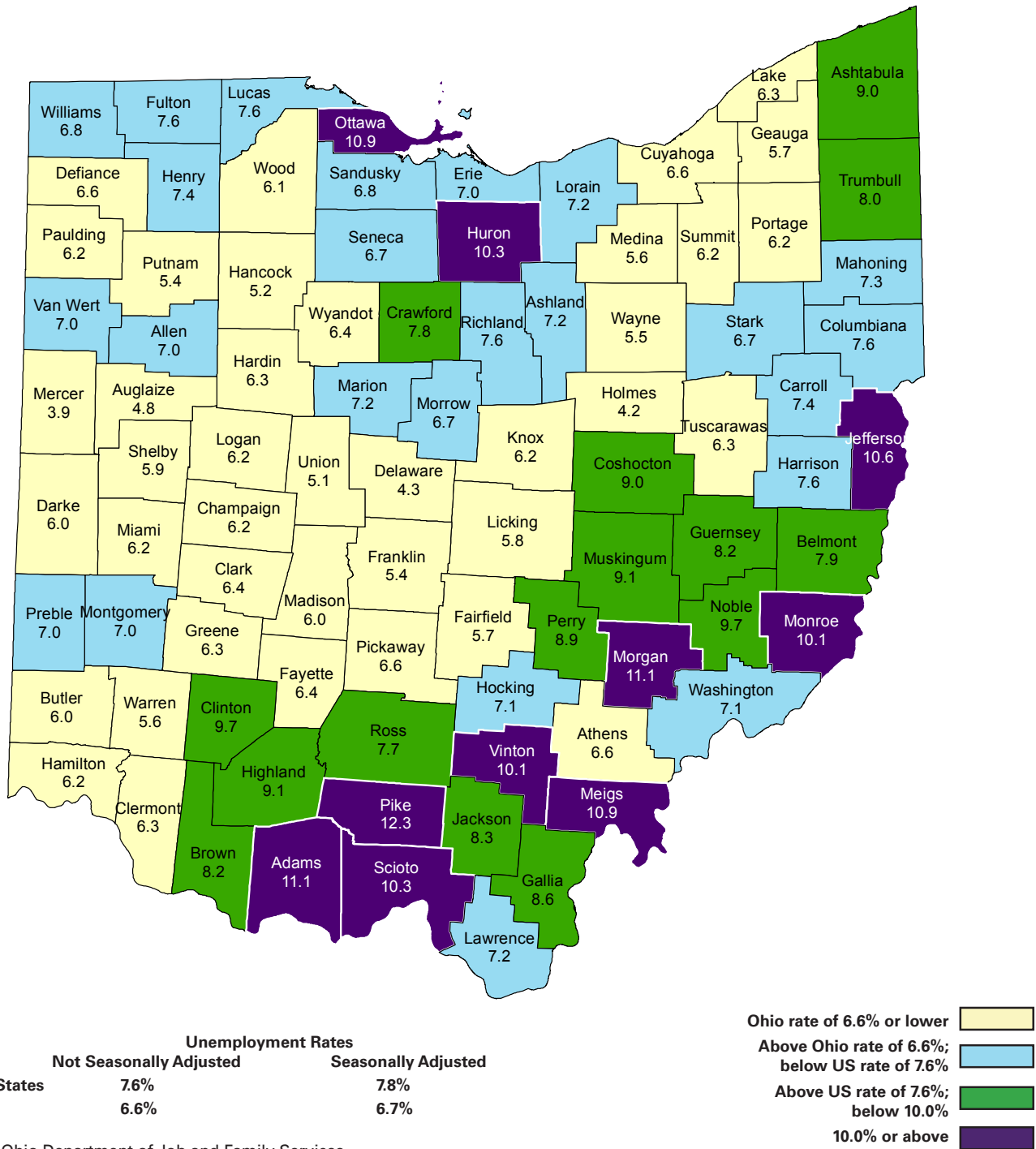
Appalachian Business Council	2010 Q4			2011 Q4		
	Stable Employ.	All Hires	Separations	Stable Employ.	All Hires	Separations
All industry groups	266,459	70,514	69,898	268,412	47,155	50,663
2111 Oil and Gas Extraction	353	13	17	336	42	38
2131 Support Activities for Mining	1,434	238	229	1,620	467	447
2371 Utility System Construction	409	65	99	427	172	111
4862 Pipeline Trans. of Natural Gas	29	0	0	25	0	0
Cincinnati USA Partnership						
All industry groups	659,940	130,930	128,120	663,197	124,588	136,064
2111 Oil and Gas Extraction	56	6	13	***	0	0
2131 Support Activities for Mining	7	7	***	21	22	18
2371 Utility System Construction	1,425	264	453	1,606	278	359
4862 Pipeline Trans. of Natural Gas	***	***	0	***	***	0
Columbus 2020I						
All industry groups	842,004	163,210	156,348	859,885	179,064	170,227
2111 Oil and Gas Extraction	311	24	26	172	7	11
2131 Support Activities for Mining	168	45	121	182	41	129
2371 Utility System Construction	1,664	363	502	1,850	295	425
4862 Pipeline Trans. Of Natural Gas	19	0	0	21	0	0
Dayton Development Coalition						
All industry groups	458,891	74,882	73,803	458,563	74,973	75,808
2111 Oil and Gas Extraction	***	0	0	***	0	0
2131 Support Activities for Mining	12	***	***	0	0	0
2371 Utility System Construction	590	115	165	673	157	170
4862 Pipeline Trans. Of Natural Gas	0	0	0	***	0	0
Regional Growth Partnership						
All industry groups	458,030	81,323	84,395	451,683	96,913	89,875
2111 Oil and Gas Extraction	0	0	0	0	0	0
2131 Support Activities for Mining	***	0	0	***	25	61
2371 Utility System Construction	1,100	627	979	1,187	332	571
4862 Pipeline Trans. Of Natural Gas	***	0	0	***	0	0
Team NEO						
All industry groups	1,688,329	303,278	301,670	1,651,057	339,567	330,646
2111 Oil and Gas Extraction	408	41	30	612	66	86
2131 Support Activities for Mining	636	108	161	591	104	141
2371 Utility System Construction	3,303	880	1,305	3,542	966	1,587
4862 Pipeline Trans. of Natural Gas	57	0	0	55	0	0

Source: U.S. Census Bureau, Local Employment Dynamics, Quarterly Workforce Indicators.

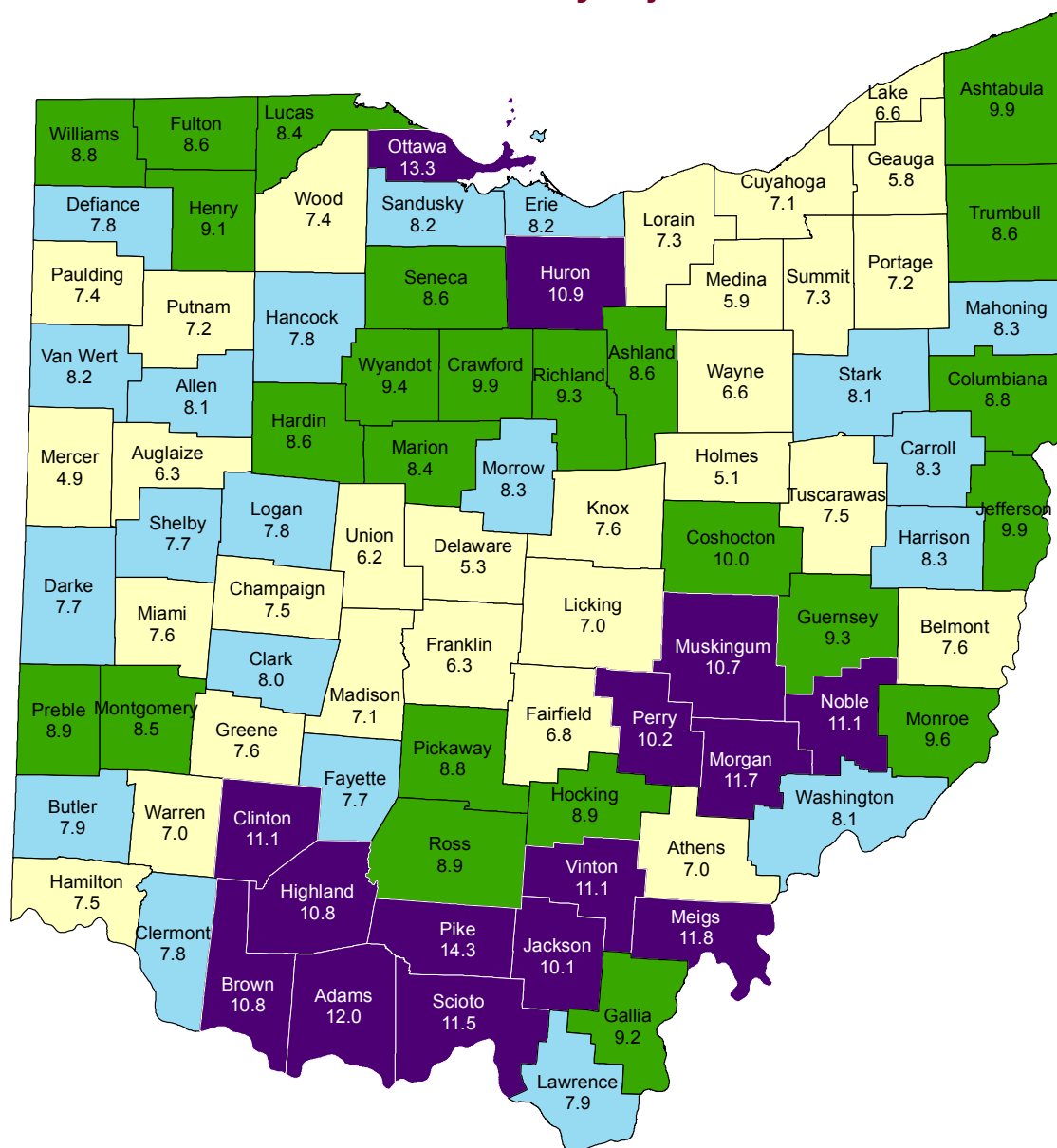
*** Indicates data cannot be disclosed due to confidentiality restrictions or data quality standards.

Quarterly Workforce Indicators are only available at the 4-digit NAICS level. Consequently, although these industry groups contain some employment from non-shale related core industries, they help provide an indication of labor activity for these shale-related industries.

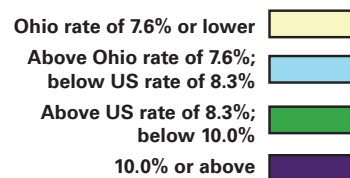
COUNTY UNEMPLOYMENT RATES IN DECEMBER 2012 (Not seasonally adjusted)



COUNTY UNEMPLOYMENT RATES IN DECEMBER 2011 (Not seasonally adjusted)



	Unemployment Rates	
	Not Seasonally Adjusted	Seasonally Adjusted
United States	8.3%	8.5%
Ohio	7.6%	8.1%



Source: Ohio Department of Job and Family Services
Office of Workforce Development
Bureau of Labor Market Information

DEFINITIONS

OHIO LABOR FORCE STATISTICS*

Source: Ohio Department of Job and Family Services' Bureau of Labor Market Information, Local Area Unemployment Statistics (LAUS)

The labor force and unemployment data are based on the same concepts and definitions as those used for the official national estimates obtained from the Current Population Survey (CPS). The LAUS program measures employment and unemployment on a place-of-residence basis and produces estimates using equations based on regression techniques. This method uses data from several sources, including the CPS, the Current Employment Statistics (CES) program, and state unemployment insurance programs. The LAUS program does not produce estimates for any demographic groups.

Employment – A count of all persons who, during the week that includes the 12th day of the month, (a) did any work as paid employees, worked in their own businesses or professions or on their own farm, or worked 15 hours or more as unpaid workers in enterprises operated by members of their families, or (b) were not working but who had jobs from which they were temporarily absent. Each employed person is counted only once, even if the person holds more than one job. Included are the self-employed, unpaid family workers, agricultural workers and private household workers, who are excluded by the CES survey.

Labor Force – The population of people either working or looking for work, or classified as employed or unemployed.

Unemployment – A count of all persons aged 16 years and older who had no employment during the reference week (the week containing the 12th day of the month), who were available for work (except for temporary illness), and who had made specific efforts to find employment sometime during the four-week

period ending with the reference week. This includes those waiting to be recalled to jobs from which they had been laid off.

Unemployment Rate – The number of unemployed workers as a percent of the labor force.

JOBS*

Source: Ohio Department of Job and Family Services' Bureau of Labor Market Information, Current Employment Statistics

Each month the CES program surveys about 140,000 national businesses and government agencies to provide detailed industry data on employment, hours and earnings of workers on non-farm payrolls. This is a collaborative effort between the Bureau of Labor Statistics (BLS) and the states. CES produces a count of jobs, not of people.

Nonfarm Jobs – The total number of persons on established payrolls employed full- or part-time who received pay for any part of the pay period that includes the 12th day of the month. Temporary and intermittent employees are included, as are any employees who are on paid sick leave, on paid holiday, or who worked during only part of the specified pay period. A striking employee who works only a small portion of the survey period, and is paid, is included as employed. Those on payrolls of more than one establishment are counted in each establishment. Data exclude proprietors, self-employed workers, unpaid family or volunteer workers, farm workers, and domestic workers. Those on layoff, strike or leave without pay for the entire pay period, or who have not yet reported for work are not counted as employed. Government employment covers only civilian employees.

*THESE DATA ARE SEASONALLY ADJUSTED. Seasonal adjustment removes changes in employment due to normal seasonal hiring or layoffs (such as holidays, weather, etc.).

DEFINITIONS

QUARTERLY WORKFORCE INDICATORS

Source: U.S. Census Bureau

The Quarterly Workforce Indicators are data that can be examined by region, industry, gender and age of workers. These indicators are built upon wage records in the unemployment insurance system and information from state Quarterly Census of Employment and Wages (QCEW) data.

QUARTERLY CENSUS OF EMPLOYMENT AND WAGES

Source: Ohio Department of Job and Family Services' Bureau of Labor Market Information, Quarterly Census of Employment and Wages

Business Establishment – An establishment is the location of a certain economic activity, such as a factory, store, office or mine, which produces goods or services. It is typically at a single physical location and engaged in one, or predominantly one, type of economic activity. An employer may have one or more establishments.

Employment – Employment data include all employment covered under federal and Ohio unemployment insurance laws for each of the three months in a quarter. The employment count represents the number of full- and part-time employees who worked during or received pay for the payroll period including the 12th day of the month. The employment totals for each month are averaged for the quarter employment count. Those on paid vacations or paid sick leave are included. Workers temporarily earning no wages due to labor-management disputes, layoffs or other reasons are not reported as employed. Those on the payroll of more than one employer during the same reference week are reported more than once.

Wages – Wages include total compensation paid during a calendar quarter, including

bonuses. Average wages are calculated by dividing total wages for a quarter by average employment in that quarter.

STAFFING PATTERNS (High-Priority Occupations Section)

Source: Ohio Department of Job and Family Services' Bureau of Labor Market Information

A staffing pattern is a list of the occupations most commonly found within a particular industry. This information comes from the biennial Long-Term Occupational Employment Projections data.

Annual Median Wage – The annual median wage earned by workers in an occupation, assuming 40 hours of work per week, 52 weeks a year. Wage data is derived from the annual Occupational Employment Statistics survey.

Educational Attainment – BLS identifies 11 categories of educational attainment, for use in career planning. These categories describe the most significant postsecondary education or training pathways to employment for workers in a given occupation.

Educational Attainment Levels

- **Associate's degree** – Degree completed after two years of full-time schooling beyond high school
- **Bachelor's degree** – Degree completed after four years of full-time schooling beyond high school
- **Degree plus experience** – A four-year bachelor's degree plus work experience
- **Long-term training** – Knowledge and skills developed through years of On-the-Job-Training (OJT) or formal classroom instruction
- **Master's, doctoral or professional degree** – Degree earned at the college or university level beyond a four-year bachelor's degree.

DEFINITIONS

- **Postsecondary award** – Certificate earned after training through a vocational training program
- **Related work experience** – Training gained through hands-on work in a similar occupation
- **Short-term or moderate-term OJT** – Basic tasks and skills learned through a period of OJT lasting up to one year

HELP WANTED ONLINE ADS

Source: The Conference Board Help Wanted OnLine™ Data Set

The Conference Board HWOL data set provides real-time insight into the employment marketplace through the world's largest database of online job ads. Jobs ads can be classified by industry, occupation, employer and geographic area. Data are analyzed for employment trends and to forecast economic conditions. The underlying data for The Conference Board HWOL are provided by Wanted Technologies Corporation.

NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS) CHANGES

NAICS, established in 1997, is reviewed for potential revisions every five years. The latest revision, in 2012, was implemented by BLS in the QCEW program with the release of first quarter 2011 data. As part of this revision, the NAICS code of only one shale-related industry was impacted: NAICS 331111 (Iron & Steel Mills). The NAICS 2012 structure eliminated NAICS 331111, combining it with NAICS 331112 (Electrometallurgical ferroalloy product manufacturing) to form NAICS 331110 (Iron & Steel Mills and Ferroalloy Manufacturing).

Core Shale-Related Industries (NAICS):

Crude Petroleum & Natural Gas Extraction (211111); Natural Gas Liquid Extraction (211112); Drilling Oil & Gas Wells (213111); Support Activities for Oil & Gas Operations (213112); Oil & Gas Pipeline & Related Structures Construction

(237120); and Pipeline Transportation of Natural Gas (486210).

Ancillary Shale-Related Industries (NAICS):

Fossil Fuel Electric Power Generation (221112); Natural Gas Distribution (221210); Water Supply & Irrigation Systems (221310); Sewage Treatment Facilities (221320); Water & Sewer Line & Related Structures Construction (237110); Highway, Street, and Bridge Construction (237310); Nonresidential Site Preparation Contractors (238912); Petrochemical Manufacturing (325110); Industrial Gas Manufacturing (325120); Iron & Steel Mills & Ferroalloy Manufacturing (3311101); Iron & Steel Pipe & Tube Manufacturing from Purchased Steel (331210); Mining Machinery & Equipment Manufacturing (333131); Oil & Gas Field Machinery & Equipment Manufacturing (333132); Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers (423810); Industrial Machinery and Equipment Merchant Wholesalers (423830); Industrial Supplies Merchant Wholesalers (423 840); General Freight Trucking, Local (4841 10); Specialized Freight Trucking, Local (484220); Specialized Freight Trucking, Long-Distance (484230); Lessors of Other Real Property (531190); Construction, Mining & Forestry Machinery & Equipment Rental & Leasing (532412); Engineering Services (541330); Geophysical Surveying & Mapping Services (541360); Testing Laboratories (541380); Environmental Consulting Services (541620); Remediation Services (562910); Commercial & Industrial Machinery & Equipment Repair & Maintenance (811310); Administration of Air and Water Resource and Solid Waste Management Programs (924110); Administration of Conservation Programs (924120); and Regulation and Administration of Communications, Electric, Gas, and Other Utilities (926130).

John R. Kasich,
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