

Population by Race	Number	Percent
Total Population	585,399	100.0%
White	508,475	86.9%
African-American	60,403	10.3%
Native American	1,320	0.2%
Asian	2,314	0.4%
Pacific Islander	116	0.0%
Other	4,300	0.7%
Two or More Races	8,471	1.4%
Hispanic (may be of any race)	11,891	2.0%
Total Minority	83,147	14.2%

Educational Attainment	Number	Percent
Persons 25 years and over	395,841	100.0%
No high school diploma	71,156	18.0%
High school graduate	169,138	42.7%
Some college, no degree	75,446	19.1%
Associate degree	19,895	5.0%
Bachelor's degree	41,069	10.4%
Master's degree or higher	19,137	4.8%

Family Type by Employment Status	Number	Percent
Total Families	159,158	100.0%
Married couple, husband and wife in labor force	58,148	36.5%
Married couple, husband in labor force, wife not	26,660	16.8%
Married couple, wife in labor force, husband not	8,835	5.6%
Married couple, husband and wife not in labor force	27,136	17.0%
Male householder, in labor force	6,299	4.0%
Male householder, not in labor force	2,753	1.7%
Female householder, in labor force	18,942	11.9%
Female householder, not in labor force	10,385	6.5%

Household Income in 1999	Number	Percent
Total Households	231,047	100.0%
Less than \$10,000	23,600	10.2%
\$10,000 to \$19,999	35,709	15.5%
\$20,000 to \$29,999	35,082	15.2%
\$30,000 to \$39,999	30,833	13.3%
\$40,000 to \$49,999	26,024	11.3%
\$50,000 to \$59,999	21,618	9.4%
\$60,000 to \$74,999	22,825	9.9%
\$75,000 to \$99,999	19,658	8.5%
\$100,000 to \$149,999	11,172	4.8%
\$150,000 to \$199,999	2,182	0.9%
\$200,000 or more	2,344	1.0%
Median household income	\$36,708	

Population by Age	Number	Percent
Total Population	585,399	100.0%
Under 6 years	43,348	7.4%
6 to 17 years	99,098	16.9%
18 to 24 years	47,112	8.0%
25 to 44 years	158,907	27.1%
45 to 64 years	140,810	24.1%
65 years and more	96,124	16.4%
Median Age	39.0	

Family Type by Presence of Own Children Under 18	Number	Percent
Total Families	159,158	100.0%
Married-couple families with own children	49,010	30.8%
Male householder, no wife present, with own children	4,412	2.8%
Female householder, no husband present, with own children	16,435	10.3%
Families with no own children	89,301	56.1%

Poverty Status in 1999 of Families By Family Type by Presence Of Related Children	Number	Percent
Total Families	159,158	100.0%
Family income above poverty level	145,036	91.1%
Family income below poverty level	14,122	8.9%
Married couple, with related children	2,804	19.9%
Male householder, no wife present, with related children	901	6.4%
Female householder, no husband present, with related children	7,459	52.8%
Families with no related children	2,958	20.9%

Ratio of Income in 1999 To Poverty Level	Number	Percent
Population for whom poverty status is determined	571,984	100.0%
Below 50% of poverty level	28,839	5.0%
50% to 99% of poverty level	37,439	6.5%
100% to 149% of poverty level	49,412	8.6%
150% to 199% of poverty level	57,470	10.0%
200% of poverty level or more	398,824	69.7%

Residence in 1995	Number	Percent
Population 5 years and over	549,633	100.0%
Same house in 1995	350,262	63.7%
Different house, same county	136,904	24.9%
Different county, same state	35,092	6.4%
Different state	24,270	4.4%
Puerto Rico or U.S. islands	596	0.1%
Foreign country	2,509	0.5%

Travel Time To Work

	Number	Percent
Workers 16 years and over	252,276	100.0%
Less than 15 minutes	87,551	34.7%
15 to 29 minutes	102,208	40.5%
30 to 44 minutes	32,653	12.9%
45 to 59 minutes	11,099	4.4%
60 minutes or more	13,570	5.4%
Worked at home	5,195	2.1%

Mean travel time 21.7 minutes

Housing Units

	Number	Percent
Total housing units	250,671	100.0%
Occupied housing units	231,004	92.2%
Owner occupied	169,981	67.8%
Renter occupied	61,023	24.3%
Vacant housing units	19,667	7.8%

Year Structure Built

	Number	Percent
Total housing units	250,671	100.0%
Built 1995 to March 2000	13,709	5.5%
Built 1990 to 1994	9,546	3.8%
Built 1980 to 1989	16,562	6.6%
Built 1970 to 1979	40,745	16.3%
Built 1960 to 1969	35,934	14.3%
Built 1950 to 1959	47,812	19.1%
Built 1940 to 1949	27,877	11.1%
Built 1939 or earlier	58,486	23.3%

Median year built 1951

Value for Specified Owner-Occupied Housing Units

	Number	Percent
Specified owner-occupied housing units	145,638	100.0%
Less than \$20,000	4,852	3.3%
\$20,000 to \$39,999	13,177	9.0%
\$40,000 to \$59,999	20,277	13.9%
\$60,000 to \$79,999	29,481	20.2%
\$80,000 to \$99,999	28,661	19.7%
\$100,000 to \$124,999	17,752	12.2%
\$125,000 to \$149,999	12,978	8.9%
\$150,000 to \$199,999	11,050	7.6%
\$200,000 to \$249,999	3,630	2.5%
\$250,000 to \$499,999	3,479	2.4%
\$500,000 to \$999,999	206	0.1%
\$1,000,000 or more	95	0.1%

Median value \$83,175

House Heating Fuel

	Number	Percent
Occupied housing units	231,004	100.0%
Utility gas	181,421	78.5%
Bottled, tank or LP gas	7,059	3.1%
Electricity	22,509	9.7%
Fuel oil, kerosene, etc	14,549	6.3%
Coal, coke or wood	2,787	1.2%
Solar energy or other fuel	2,209	1.0%
No fuel used	470	0.2%

Gross Rent

	Number	Percent
Specified renter-occupied housing units	59,915	100.0%
Less than \$100	1,089	1.8%
\$100 to \$199	3,767	6.3%
\$200 to \$299	4,667	7.8%
\$300 to \$399	9,827	16.4%
\$400 to \$499	14,456	24.1%
\$500 to \$599	10,572	17.6%
\$600 to \$699	5,624	9.4%
\$700 to \$799	2,646	4.4%
\$800 to \$899	1,113	1.9%
\$900 to \$999	659	1.1%
\$1,000 to \$1,499	767	1.3%
\$1,500 or more	327	0.5%
No cash rent	4,401	7.3%

Median gross rent \$456

Median gross rent as a percentage of household income in 1999

Selected Monthly Owner Costs for Specified Owner-Occupied Housing Units

	Number	Percent
Specified owner-occupied housing units with a mortgage	88,229	100.0%
Less than \$400	4,313	4.9%
\$400 to \$599	16,248	18.4%
\$600 to \$799	21,968	24.9%
\$800 to \$999	17,977	20.4%
\$1,000 to \$1,249	13,662	15.5%
\$1,250 to \$1,499	6,540	7.4%
\$1,500 to \$1,999	5,197	5.9%
\$2,000 to \$2,999	1,821	2.1%
\$3,000 or more	503	0.6%

Median monthly owners cost \$816

Median monthly owners cost as a percentage of household income

Vital Statistics

	Number	Rate
Births / rate per 1,000 women aged 15-44	6,397	58.2
Teen births / rate per 1,000 females 15-17	226	18.9
Deaths / rate per 100,000 population	6,615	1,146.9
Marriages / rate per 1,000 population	3,130	5.4
Divorces / rate per 1,000 population	1,979	3.4

Migration

Agriculture

Land in farms (acres)	365,000
Number of farms	2,900
Average size (acres)	126
Total cash receipts	\$116,022,000
Per farm	\$39,870

Education

Public schools	236
Students (Average Daily Membership)	89,431
Expenditures per student	\$9,012
Student-teacher ratio	
Graduation rate	
Teachers (Full Time Equivalent)	5,367.2
Non-public schools	38
Students	6,277
4-year public universities	1
Branches	3
2-year public colleges	0
Private universities and colleges	0
Public libraries (Main / Branches)	16 / 22

Transportation

Registered motor vehicles	630,673
Passenger cars	434,110
Noncommercial trucks	87,047
Total license revenue	\$16,816,877.61
Interstate highway miles	107.05
Turnpike miles	35.20
U.S. highway miles	176.84
State highway miles	728.47
Commercial airports	10

Voting

Number of precincts	688
Number of registered voters	380,675
Voted in 2006 election	216,695
Percent turnout	56.9%

Health Care

Physicians (MDs & DOs)	1,056
Registered hospitals	12
Number of beds	2,077
Licensed nursing homes	58
Number of beds	6,098
Licensed residential care	40
Number of beds	2,439
Adults with employer-based insurance	57.1%
Children with employer-based insurance	52.7%

State Parks, Forests, Nature Preserves, And Wildlife Areas

Facilities	21
Acreage	26,007.24

Communications

Television stations	3
Radio stations	20
Daily newspapers	4
Circulation	137,623

Crime

Total crimes reported in Uniform Crime Report	14,949
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Finance

FDIC insured financial institutions (HQs)	7
Assets	\$7,490,309,000
Branch offices	188
Institutions represented	17

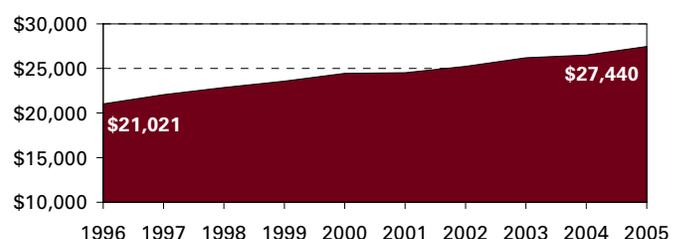
Transfer Payments

Total transfer payments	\$3,737,234,000
Payments to individuals	\$3,581,718,000
Retirement and disability	\$1,474,173,000
Medical payments	\$1,619,506,000
Income maintenance (Supplemental SSI, family assistance, food stamps, etc)	\$338,034,000
Unemployment benefits	\$69,688,000
Veterans benefits	\$57,449,000
Federal education and training assistance	\$21,707,000
Other payments to individuals	\$1,161,000
Total personal income	\$15,775,110,000
Dependency ratio	23.7%

Federal Expenditures

Direct expenditures or obligations	\$3,476,958,021
Retirement and disability	\$1,606,742,481
Other direct payments	\$965,739,231
Grant awards	\$698,453,231
Highway planning and construction	\$71,007,377
Temporary assistance to needy families	\$38,985,727
Medical assistance program	\$411,100,313
Procurement contract awards	\$67,183,381
Dept. of Defense	\$33,798,152
Salary and wages	\$138,839,697
Dept. of Defense	\$28,073,000
Other federal assistance	\$297,263,395
Direct loans	\$16,068,440
Guaranteed loans	\$159,230,448
Insurance	\$121,964,507

Per Capita Personal Income



Civilian Labor Force

	2002	2003	2004	2005	2006
Civilian labor force	275,100	274,800	274,400	275,300	275,100
Employed	255,700	254,100	254,000	256,400	257,300
Unemployed	19,400	20,700	20,400	18,900	17,700
Unemployment rate	7.0	7.5	7.4	6.9	6.5

Employment and Wages by Sector

NAICS Industrial Sector	Average Annual Employment		Total Wages (in thousands of dollars)	
	2004	2005	2004	2005
Total covered under Ohio UC Law	220,742	221,611	\$6,998,131	\$7,072,019
Private Sector	191,887	193,534	\$6,010,222	\$6,083,317
Agriculture, forestry, fishing and hunting	307	276	\$5,921	\$5,568
Mining	391	323	\$15,845	\$17,764
Utilities	893	826	\$55,014	\$53,870
Construction	9,623	9,552	\$342,157	\$349,225
Manufacturing	40,834	40,508	\$2,069,460	\$2,073,109
Wholesale trade	7,742	7,974	\$300,452	\$312,609
Retail trade	30,991	30,896	\$627,378	\$628,645
Transportation and warehousing	6,019	6,557	\$203,481	\$232,027
Information	3,483	3,016	\$119,293	\$113,508
Finance and insurance	6,029	5,727	\$229,619	\$217,237
Real estate and rental and leasing	2,505	2,568	\$69,068	\$69,270
Professional and technical services	4,597	4,788	\$163,408	\$170,225
Management of companies and enterprises	1,399	1,457	\$74,854	\$69,792
Administrative and waste services	10,980	12,420	\$239,941	\$269,724
Educational services	2,506	2,502	\$43,684	\$44,660
Health care and social assistance	33,943	34,455	\$1,083,924	\$1,089,711
Arts, entertainment, and recreation	2,285	2,265	\$24,498	\$24,423
Accommodation and food services	19,463	19,633	\$194,650	\$197,407
Other services, except public administration	7,326	7,179	\$131,084	\$129,019
State and Local Government	28,856	28,077	\$987,910	\$988,701
State government	4,543	4,555	\$172,218	\$180,330
Local government	24,313	23,522	\$815,692	\$808,372
Federal Government	2,015	2,061	\$103,919	\$104,813

-1 or \$0 indicates suppression for confidentiality

Business Numbers

	2002	2003	2004	2005	2006
Business starts	1,097	1,244	1,036	1,051	1,160
Active businesses	11,561	11,642	11,723	11,723	11,656

Residential

Construction

	2002	2003	2004	2005	2006
Total units	1,602	1,385	1,668	1,174	933
Total valuation (000)	\$191,206	\$142,308	\$230,889	\$187,046	\$169,489
Total single-unit bldgs	1,447	1,247	1,484	1,075	855
Average cost per unit	\$124,274	\$106,528	\$146,170	\$166,416	\$188,537
Total multi-unit bldg units	155	138	184	99	78
Average cost per unit	\$73,423	\$68,610	\$75,937	\$82,310	\$106,276

Major Employers

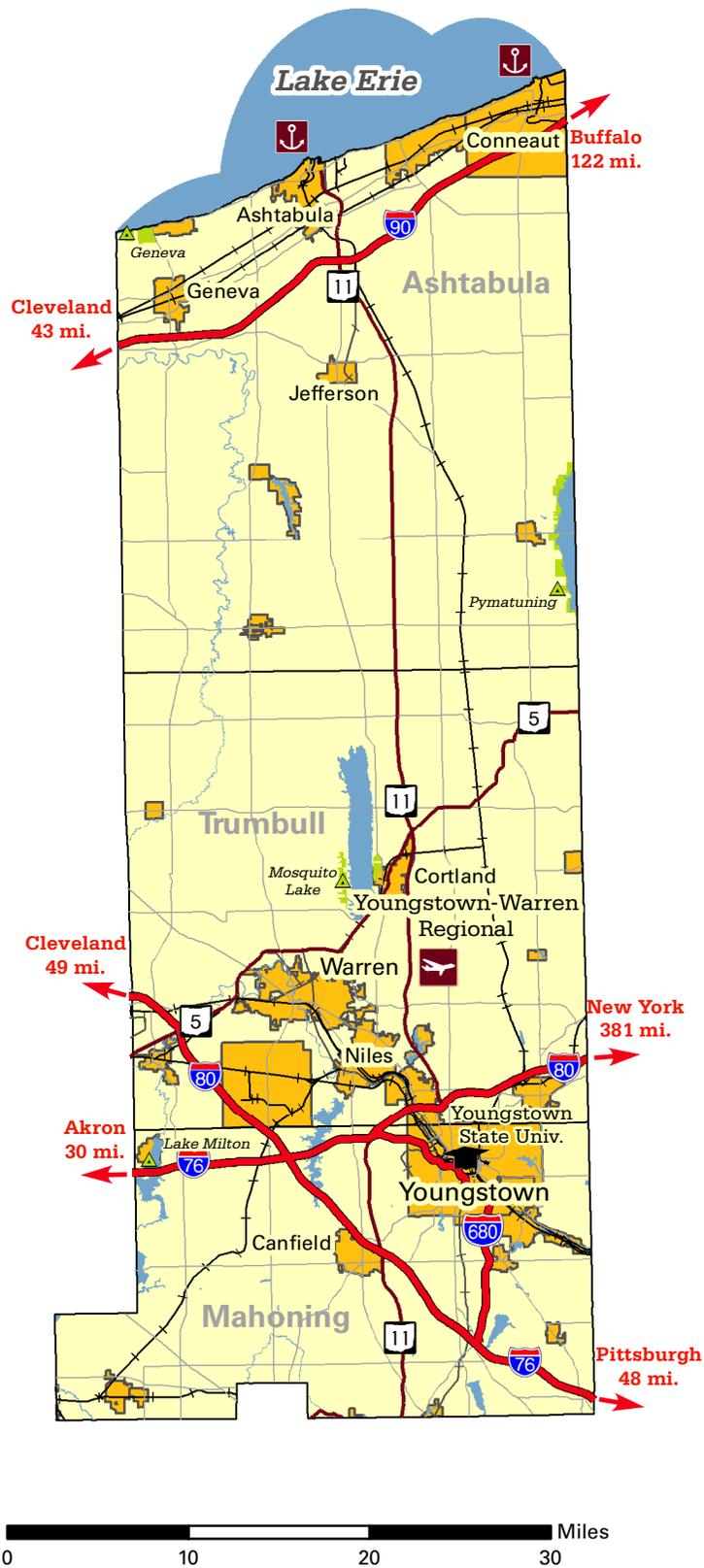
Delphi Corp	Mfg
Forum Health	Serv
General Aluminum Mfg Co	Mfg
General Motors Corp	Mfg
HM Health Partners	Serv
Kennametal Inc	Mfg
Lyondell Chemical Co	Mfg
Masco/KraftMaid Cabinetry	Mfg
Molded Fiber Glass Companies	Mfg
Premix Inc	Mfg
WCI Steel Inc	Mfg
West Corp	Serv
Youngstown State University	Govt

Region 12

Northeast Ohio



Department of
Development



242 Federal Plaza West, Suite 401
Youngstown, OH 44503
Phone: (330) 797-6301
Fax: (330) 744-1822

Population (2006): 571,091
Area: 1,733.8 sq. mi.



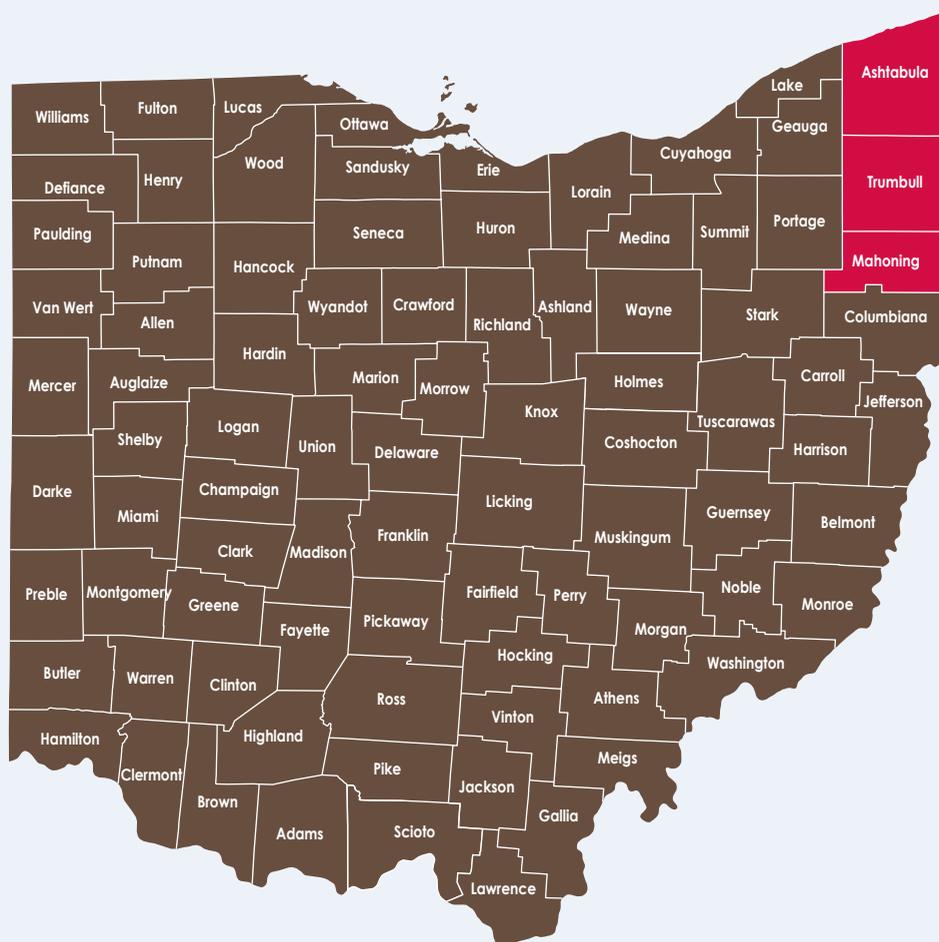
2007 Ohio Private Investment List

Region	County	Company	City	NAICS	Product	Type	Jobs	Investment	Square Feet	New	Exp
12	Ashtabula	Lyondell Chemical	Ashtabula	325999	Titanium dioxide	MF		\$13,000,000			Exp
12	Ashtabula	Ashtabula City Ind Park	Ashtabula	23311	Industrial park	Park		\$1,470,000		New	
12	Mahoning	BJ Alan	Beaver Twp	42392	Fireworks	DW	40	\$20,000,000	350,000	New	
12	Mahoning	Brilex Industries	Youngstown	332312	Fabricated metal	MF	6	\$1,900,000	25,000		Exp
12	Mahoning	FedEx Ground	Jackson Twp	48423	Distribution hub	DW		\$7,000,000	79,000	New	
12	Mahoning	InfoCision Management	Boardman Twp	561422	Call center	CC	73	\$1,500,000	10,000	New	
12	Mahoning	InfoCision Management	Austintown Twp	561422	Call center	CC	80	\$4,000,000	9,000		Exp
12	Mahoning	RAS Manufacturing	Youngstown	33271	Conveyor systems	MF		\$1,250,000			Exp
12	Mahoning	Macy's	Jackson Twp	452111	Retail warehousing	DW		\$5,000,000			Exp
12	Mahoning	Struthers Metal Service	Youngstown	42351	Metals	DW		\$1,200,000	15,000		Exp
12	Mahoning	USF Holland/Roadway	Beaver Twp	484122	Freight terminal	DW		\$5,000,000		New	
12	Mahoning	Extudex Corp	Jackson Twp	331316	Aluminum products	MF/F	20	\$2,500,000	27,000		Exp
12	Mahoning	Summer Garden Food Manufacturing	Boardman Twp	311941	Pasta sauces	HQ/MF	25	\$6,000,000	18,000		Exp
12	Mahoning	Simon Roofing & Sheet Metal	Struthers	324122	Roofing materials	MF	11	\$2,000,000		New	
12	Trumbull	Berk Enterprises	Warren	42441	Food products	DW		\$1,500,000	32,000		Exp
12	Trumbull	Checked Express	Girard	48423	Truck terminal	DW		\$1,000,000	145,000	New	
12	Trumbull	Mack Industries	Vienna	32732	Concrete	MF		\$1,000,000	24,500		Exp
12	Trumbull	Starr Manufacturing	Vienna	332312	Fabricated metals	MF	18	\$2,200,000			Exp
12	Trumbull	Glunt Industries Inc	Howland Twp	333298	Steel making equipment	MF	30	\$1,900,000			Exp
Region 12	Totals						303	\$79,420,000	734,500		
State Totals							21,453	\$8,022,576,000	42,379,520		

Workforce Analysis

Northeast Ohio

Economic Development Region 12



*Ashtabula, Mahoning and
Trumbull Counties*

Workforce Analysis
Economic Development Region 12



October
2007

Workforce Analysis Economic Development Region 12 Northeast Ohio

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Executive Summary

- Although this region contains two counties in the Youngstown-Warren-Boardman MSA, approximately 5,000 workers in net commute to jobs outside the region.
- Total population in 2006 was 751,000, a decline of 4.1 percent from 1995. Demographically, the region is much older than the rest of the state.
- Total nonfarm employment was about 220,900 in 2006, a drop of 8.8 percent from 2000.
- The 2006 unemployment rate was 6.5 percent, down one percentage point from the peak in 2003. Northeast Ohio's unemployment rate has remained substantially higher than the state and national rates over the last decade.
- Per capita income in 2005 was \$27,440, having increased at a 2.9 percent annual compound rate from 1995.
- Nearly 1,000 residential building permits were granted in 2006, a significant drop from 2004 mirroring state and national trends. The average valuation was approximately \$182,000, higher than for the rest of Ohio and the U.S.
- From 2004 to 2014, there are expected to be 9,600 net new jobs in the region (3.9%). The sectors expected to add the most new jobs include health care and social assistance; administrative and waste services; accommodation and food services; and wholesale and retail trade.
- The fastest-growing occupational groups will be healthcare; personal care and service; business and financial operations; and community and social service occupations.
- In general, this region has a somewhat lower level of educational attainment than the rest of Ohio. The number of postsecondary awards granted has risen 5.6 percent in the last year.
- There are 14 postsecondary training providers in Northeast Ohio offering about 600 different programs. Approximately 3,700 degrees and certificates were awarded in 2006.
- The most important workplace skills through 2014 will be reading comprehension, speaking, active listening, critical thinking and coordination.

I. Understanding the Local Labor Market

Labor economists define a *labor market* as a geographic area in which both the demand and supply for labor are met primarily within that region.¹ In other words, it is an area where there are jobs and the majority of workers needed for those jobs. An important first step in identifying local labor markets is to examine the commuting patterns of individuals who live or work in the area. These patterns are one of the primary inputs used to define metropolitan areas.

Despite containing the central city of the Youngstown-Warren-Boardman MSA, Mahoning County has a strong net outflow of commuters. Trumbull County was the only county with a positive commuter flow. In total, about 5,000 workers commute to jobs outside the region. This total excludes commuting between counties within the region.

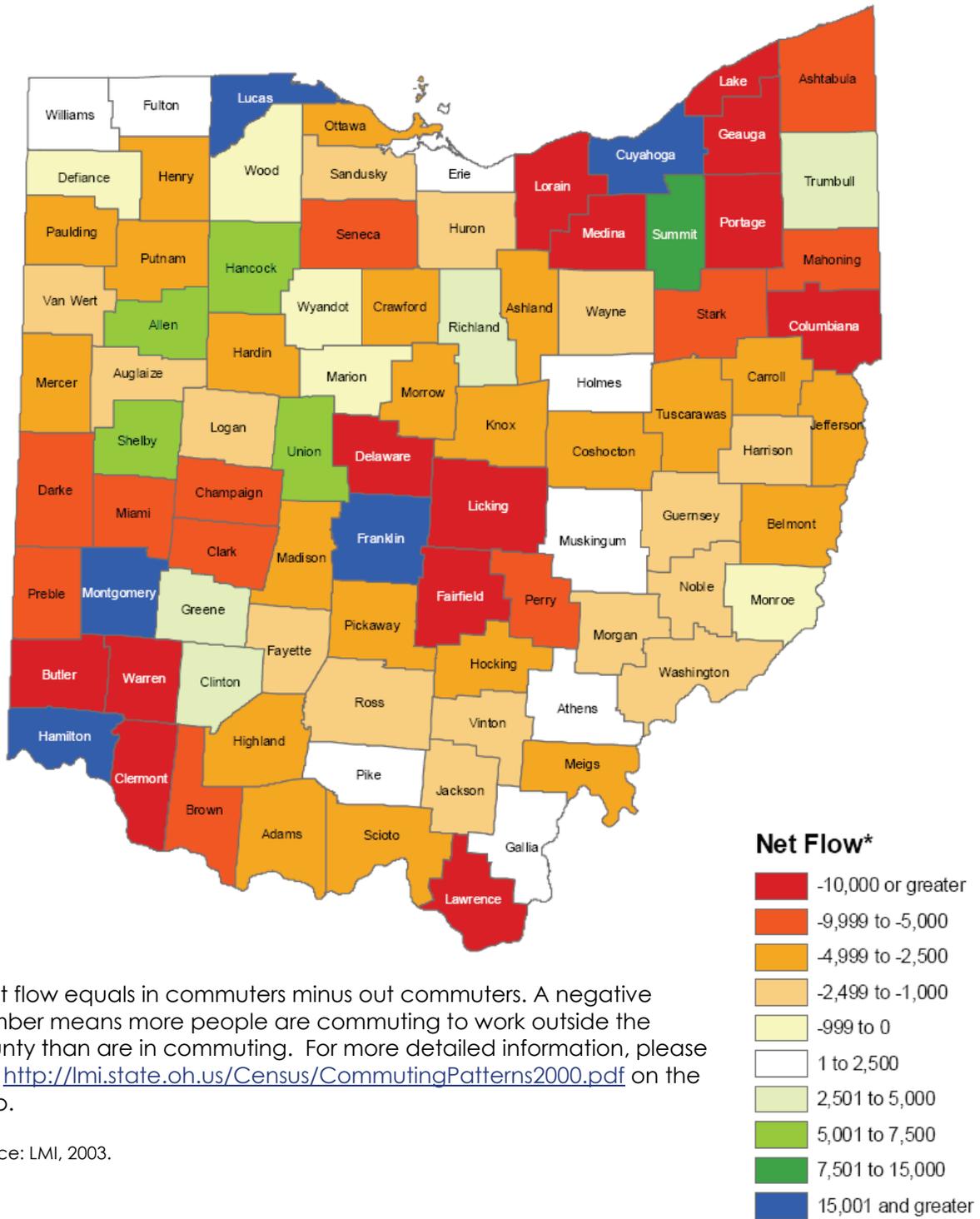
Figure 1: Regional Commuting Patterns

County	In-Commuters			Out-Commuters			Net Comparisons	
	Working in the County	In-Commuters	Percent of In-Commuters	Employed Living in the County	Out-Commuters	Percent of Out-Commuters	Net Flow of Commuters	Percent of Total Commuters
Ashtabula	37,925	4,961	13.1%	45,689	12,725	27.9%	-7,764	-43.9%
Mahoning	102,992	26,310	25.5%	109,102	32,420	29.7%	-6,110	-10.4%
Trumbull	100,101	29,040	29.0%	97,485	26,424	27.1%	2,616	4.7%
Northeast Ohio	241,018	27,498	11.4%	252,276	32,756	13.0%	-5,258	-8.7%

Figure 2 on the next page shows a visual summary of the net flow of commuters from the 2000 decennial census. Most workers commuting into a county to work usually do so from adjacent counties. Detailed county-to-county commuting is shown in Appendix C.

¹ Goldstein, 2005 (p. 1).

Figure 2: Net Flow of Ohio Commuters



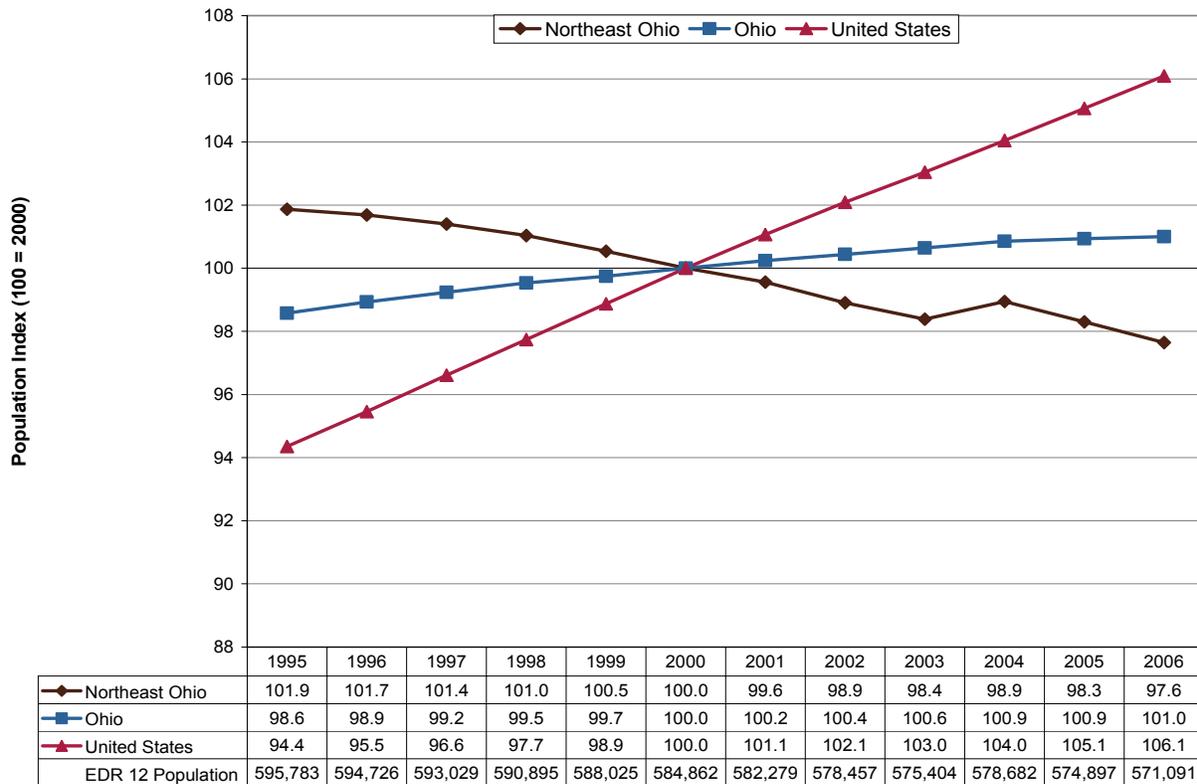
*Net flow equals in commuters minus out commuters. A negative number means more people are commuting to work outside the county than are in commuting. For more detailed information, please visit <http://lmi.state.oh.us/Census/CommutingPatterns2000.pdf> on the web.

Source: LMI, 2003.

II. Economic Indicators

Population Trends. Figure 3 below shows how Northeast Ohio's population has fallen in the last eleven years. In 2006, total population was estimated at about 571,000, 4.1 percent lower than in 1995. For comparison, Ohio's population grew 2.5 percent during the same period while U.S. population rose 12.4 percent.

Figure 3: Population Trends, 1995-2006



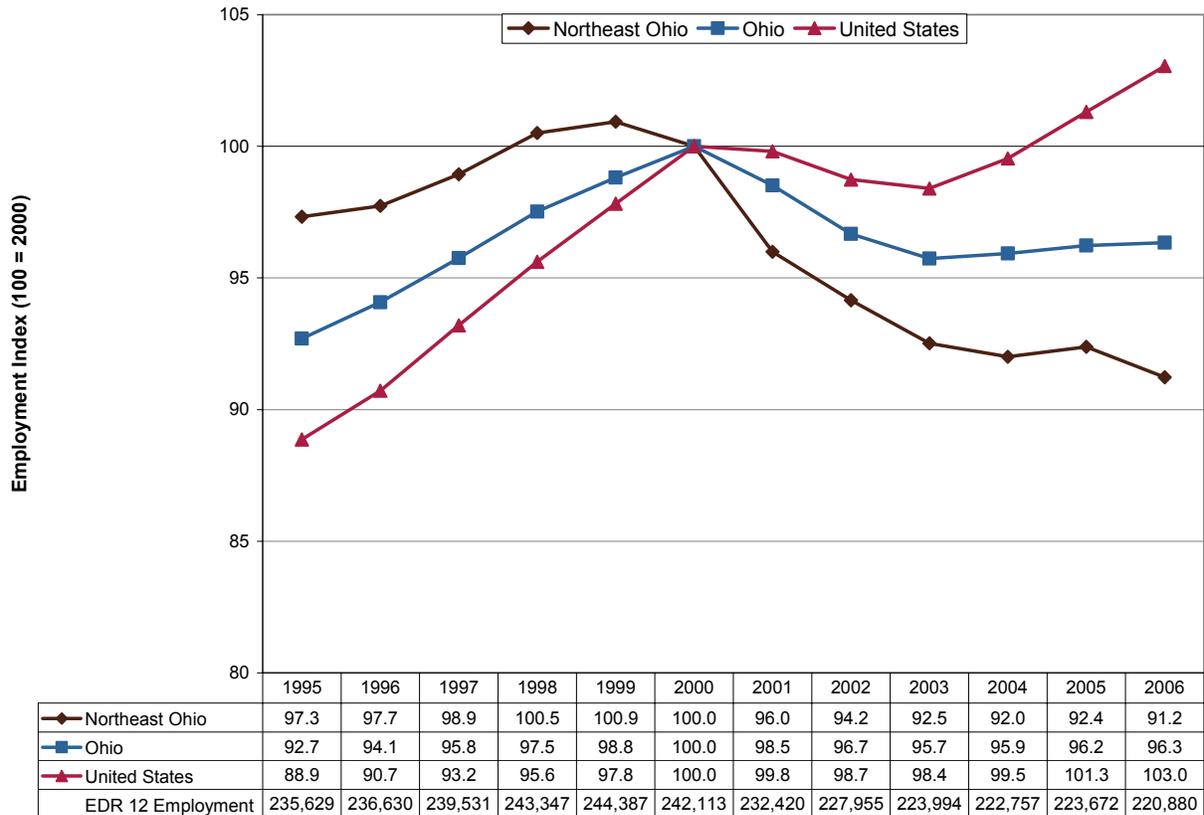
Demographic Traits. Population estimates for 2006, shown in Figure 4 below, reveal differences between this EDR and the rest of the state and nation. Demographically, this region is much older than the rest of the state, with 28.2 percent of the population 55 or older, compared with 24.3 percent statewide. People younger than 25 make up 32.0 percent, versus 33.7 percent across Ohio.

Figure 4: Demographic Trends, 2006

	United States		Ohio		Northeast Ohio	
Total	299,238,484	100.0%	11,478,006	100.0%	571,091	100.0%
Under 5	20,417,636	6.8%	734,735	6.4%	31,015	5.4%
5 to 14	40,337,284	13.5%	1,534,571	13.4%	72,438	12.7%
15 to 24	42,435,426	14.2%	1,597,458	13.9%	79,106	13.9%
25 to 34	40,415,979	13.5%	1,459,394	12.7%	65,220	11.4%
35 to 44	43,666,950	14.6%	1,621,662	14.1%	73,496	12.9%
45 to 54	43,278,174	14.5%	1,738,480	15.1%	89,013	15.6%
55 to 64	31,586,683	10.6%	1,259,712	11.0%	68,961	12.1%
65 and older	37,260,352	12.5%	1,531,994	13.3%	91,842	16.1%

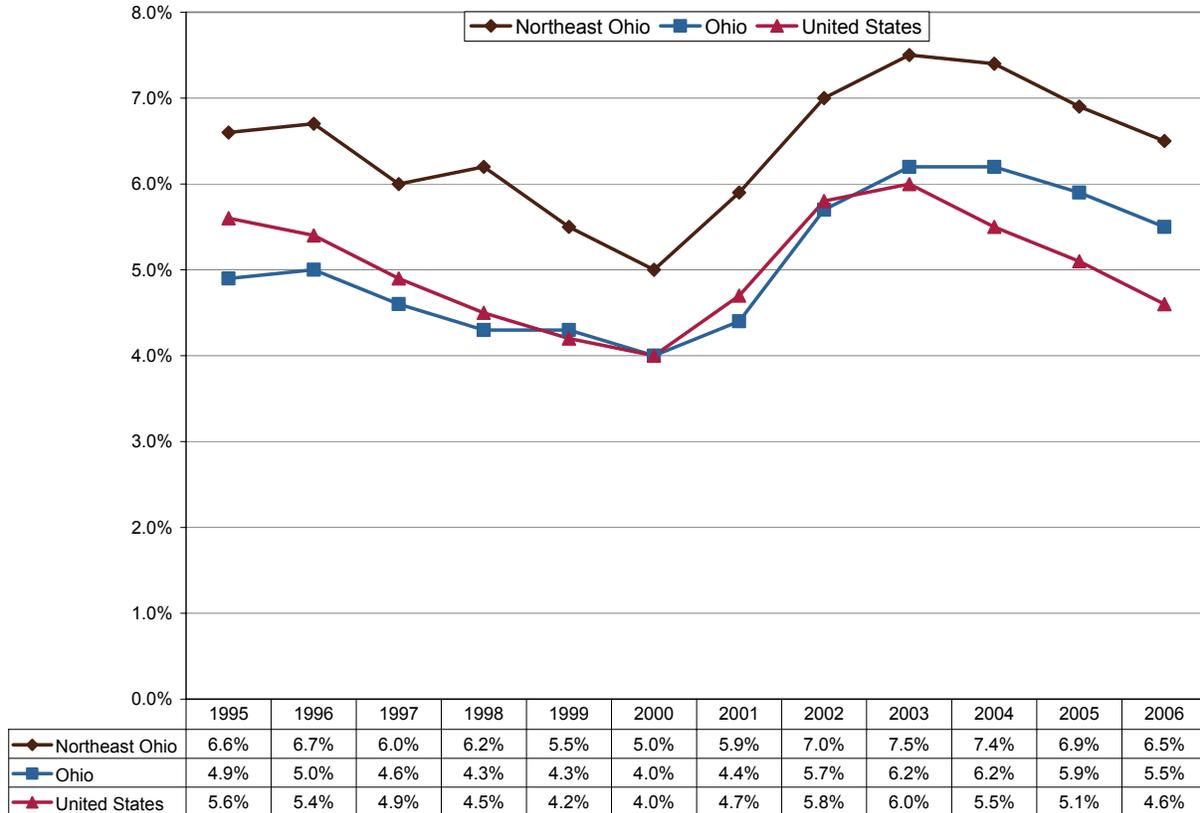
Employment Trends. Northeast Ohio has sustained severe job losses in the last seven years. Total nonfarm payroll employment was approximately, 220,900 in 2006, a decrease of 8.8 percent from 2000. Note that employment levels began to decline a year before Ohio and the rest of the U.S. From 2000 to 2006, statewide employment dropped 3.7 percent while national employment recovered and grew 3.0 percent.

Figure 5: Nonfarm Employment Trends, 1995-2006



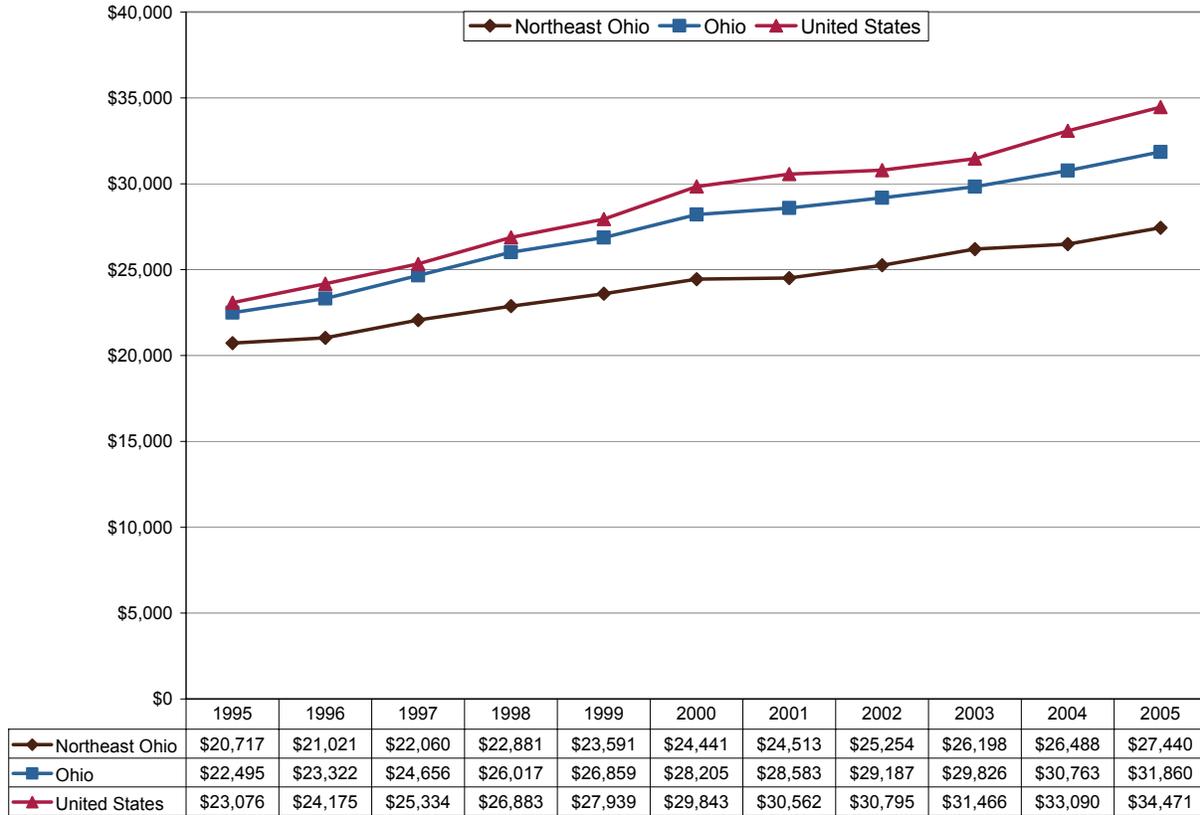
Unemployment Rate Trends. The unemployed are those in the non-institutional population 16 years or older who were not employed during the reference week but were actively seeking work, waiting to be called back to a job after a layoff, or waiting to report within 30 days to a new job. The 2006 unemployment rate in this region was 6.5 percent, having held well above both the state and national rates since 1995. Since the most recent peak in 2003, the local unemployment rate has fallen one percentage point. For comparison, Ohio's unemployment rate dropped 0.7 percentage point and the U.S. rate declined 1.4 percentage points during the same period.

Figure 6: Unemployment Trends, 1995-2006



Per Capita Income Trends. Per capita income in Northeast Ohio was \$27,440 in 2005. During the ten-year period of analysis, local per capita income grew at a 2.9 percent annual compound rate, slower than both the state and national rates of growth during the same period—3.5 percent and 4.1 percent, respectively.

Figure 7: Per Capita Income, 1995-2005



Residential Construction Permit Trends. Nationwide, there has been a significant drop in the number of residential building permits granted. Northeast Ohio had 933 permits granted in 2006 with an average valuation of about \$182,000. Local trends in new residential construction have generally followed state trends.

Figure 8: Number of New Residential Building Permits, 1995-2006

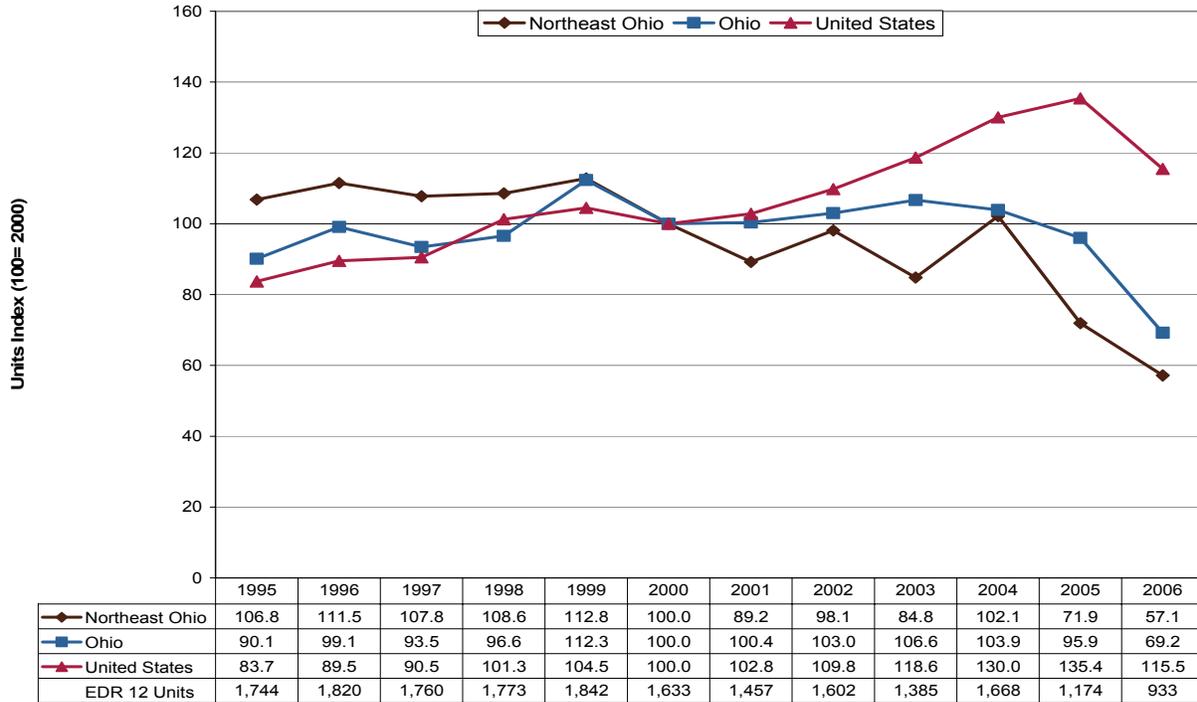
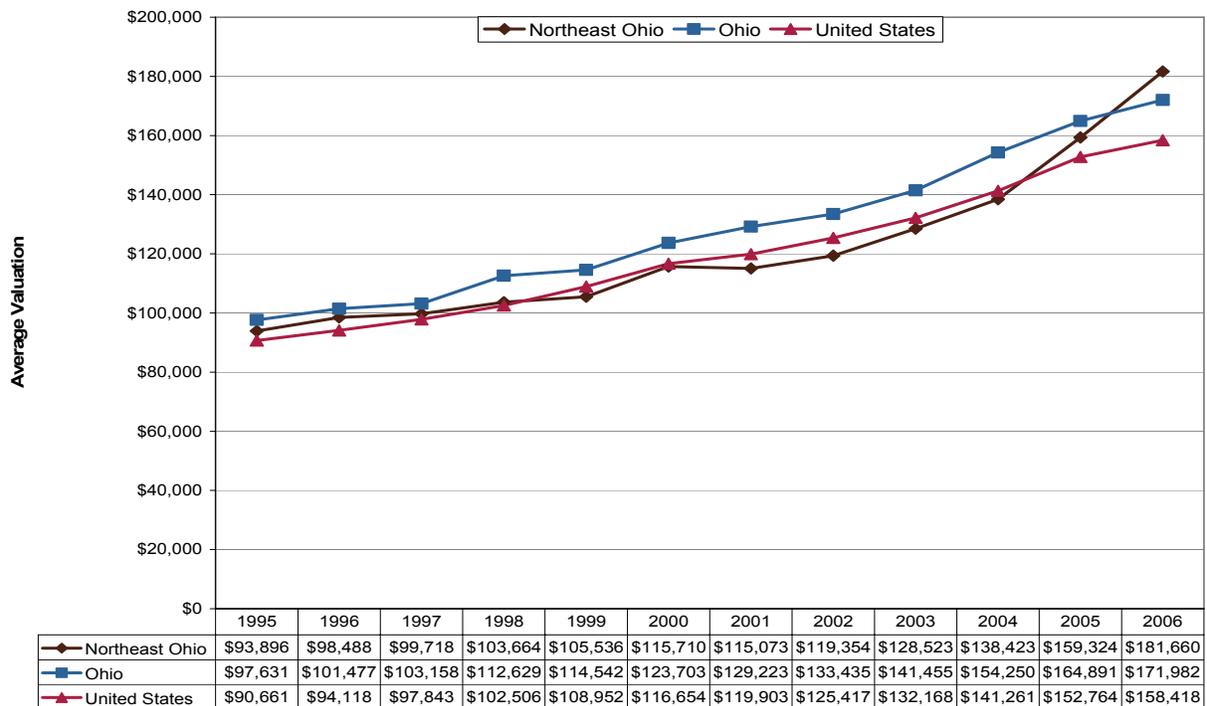


Figure 9: Valuation of New Residential Building Permits, 1995-2006



III. Employment Projections to 2014

Projections by Industry Sector. Figure 10 below shows employment projections from the Job Outlook to 2014 for Northeast Ohio arranged by industry sector. As of 2004, 22.0 percent of total nonfarm employment was in goods-producing industries such as construction and manufacturing. Another 71.6 percent was in service-providing industries like health care and retail trade. The remaining 6.4 percent consisted of the self-employed, private household and unpaid family workers.

Between 2004 and 2014, Northeast Ohio employment is projected to grow by 9,600 jobs (3.9%), mostly in service-providing industries. Health care and social assistance, which includes hospitals, clinics and certain non-profit organizations, is projected to show the most growth with 5,600 net new jobs. Demand will be driven by an aging population and new emerging medical technologies. Other fast-growing sectors include arts, entertainment and recreation; administrative and waste services; and wholesale trade.

Figure 10: Northeast Ohio Projections to 2014 by Industry Sector

Industry Sector	2004 Annual Employment	2014 Projected Employment	Change in Employment 2004-2014	Percent Change 2004-2014
Total Employment	245,100	254,700	9,600	3.9%
Goods-Producing	54,000	49,300	-4,700	-8.7%
Natural Resources and Mining	3,600	3,300	-300	-8.3%
Construction	9,600	10,000	400	4.2%
Manufacturing	40,800	36,000	-4,800	-11.8%
Service-Providing	175,400	189,900	14,500	8.3%
Trade, Transportation and Utilities	46,300	48,800	2,500	5.4%
Wholesale Trade	7,700	8,700	1,000	13.0%
Retail Trade	31,000	32,100	1,100	3.5%
Transportation and Warehousing	6,700	7,200	500	7.5%
Utilities	900	700	-200	-22.2%
Information	3,500	3,100	-400	-11.4%
Financial Activities	9,100	9,600	500	5.5%
Finance and Insurance	6,600	6,900	300	4.5%
Real Estate and Rental and Leasing	2,500	2,700	200	8.0%
Professional and Business Services	17,700	21,200	3,500	19.8%
Administrative and Waste Services	11,100	13,900	2,800	25.2%
Education and Health Services	36,500	42,200	5,700	15.6%
Educational Services	2,500	2,600	100	4.0%
Health Care & Social Assistance	34,000	39,600	5,600	16.5%
Leisure and Hospitality	21,800	23,800	2,000	9.2%
Arts, Entertainment & Recreation	2,300	2,900	600	26.1%
Accommodation and Food Services	19,500	20,900	1,400	7.2%
Other Services	10,100	10,600	500	5.0%
Government	30,600	30,600	0	0.0%
Federal Government	2,000	1,900	-100	-5.0%
State Government	4,500	4,600	100	2.2%
Local Government	24,000	24,100	100	0.4%
Self-Employed, Private Household and Unpaid Family Workers	15,600	15,600	0	0.0%

Projections by Occupational Group. Figure 11 shows the region's employment projections arranged by major occupational group. As of 2004, the largest occupational groups were office and administrative support; production; and sales and related occupations.

Healthcare occupations will be the fastest-growing occupational group through 2014, projected to add approximately 4,220 net new jobs through 2014 (17.8%), again driven by strong demand for services. Other fast-growing occupational groups include personal care and service (11.4%); business and financial operations (10.9%); and community and social services occupations (9.8%).

Note that although production occupations are projected to shed about 2,600 jobs through 2014, the group has a relatively large number of average annual openings expected during this period: 734 per year. In general, three out of every four job openings are for replacement hires.

Figure 11: Northeast Ohio Projections to 2014 by Occupational Group

Occupational Group	2004 Annual Empl.	2014 Proj. Empl.	Change in Employment		Avg. Ann. Openings
			2004-2014	Percent	
Total, All Occupations	245,100	254,700	9,600	3.9%	6,921
Management Occupations	10,450	10,760	310	3.0%	194
Business and Financial Operations Occupations	7,730	8,570	840	10.9%	225
Computer and Mathematical Occupations	1,900	2,040	140	7.4%	40
Architecture and Engineering Occupations	2,160	2,120	-40	-1.9%	52
Life, Physical, and Social Science Occupations	580	600	20	3.4%	17
Community and Social Services Occupations	3,890	4,270	380	9.8%	112
Legal Occupations	1,510	1,630	120	7.9%	29
Education, Training, and Library Occupations	13,120	13,680	560	4.3%	347
Arts, Design, Entertainment, Sports, & Media Occ.	2,640	2,850	210	8.0%	70
Healthcare Occupations, total	23,750	27,970	4,220	17.8%	840
Protective Service Occupations	5,150	5,400	250	4.9%	168
Food Preparation and Serving Related Occupations	23,320	24,930	1,610	6.9%	1,066
Building & Grounds Cleaning & Maintenance Occup.	9,080	9,470	390	4.3%	217
Personal Care and Service Occupations	7,370	8,210	840	11.4%	260
Sales and Related Occupations	25,010	26,210	1,200	4.8%	973
Office and Administrative Support Occupations	34,640	34,880	240	0.7%	834
Farming, Fishing, and Forestry Occupations	500	490	-10	-2.0%	14
Construction and Extraction Occupations	11,100	11,410	310	2.8%	243
Installation, Maintenance, and Repair Occupations	11,230	11,070	-160	-1.4%	258
Production Occupations	30,400	27,800	-2,600	-8.6%	734
Transportation and Material Moving Occupations	19,570	20,370	800	4.1%	515

High Prospect Occupations. A high prospect occupation is one that pays at least \$12 per hour on average and is expected to have at least ten average annual openings. There are about 100 such occupations identified for Northeast Ohio. Figure 12 shows these high prospect occupations arranged by required education and training.

Figure 12: High Prospect Occupations in Northeast Ohio

Code	Occupational Title**	Employment		Change in Employment		Avg. Ann. Openings	2006 Avg. Wage*
		2004 Annual	2014 Projected	2004 - 2014	Percent		
Occupations Requiring Short-Term On-the-Job Training (up to one month)							
43-3011	Bill and Account Collectors	560	640	80	14.3%	19	\$13.32
43-4111	Interviewers, except Eligibility and Loan	420	480	60	14.3%	17	\$13.02
43-5052	Postal Service Mail Carriers	720	680	-40	-5.6%	23	\$22.42
43-5061	Production, Planning, and Expediting Clerks	440	430	-10	-2.3%	11	\$17.00
43-5071	Shipping, Receiving, and Traffic Clerks	1,280	1,200	-80	-6.3%	26	\$14.80
51-9111	Packaging & Filling Machine Operators/Tenders	550	510	-40	-7.3%	11	\$14.06
51-9198	Helpers--Production Workers	1,580	1,540	-40	-2.5%	44	\$13.82
53-3031	Driver/Sales Workers	860	920	60	7.0%	20	\$12.33
53-3033	Truck Drivers, Light or Delivery Services	2,530	2,780	250	9.9%	48	\$14.35
53-7051	Industrial Truck and Tractor Operators	1,100	1,050	-50	-4.5%	21	\$16.59
53-7061	Cleaners of Vehicles and Equipment	1,280	1,180	-100	-7.8%	45	\$15.17
53-7062	Laborers/Freight/Stock/Material Movers, Hand	4,640	4,750	110	2.4%	163	\$12.66
Occupations Requiring Moderate-Term On-the-Job Training (one to twelve months combined experience/training)							
31-9091	Dental Assistants	470	620	150	31.9%	28	\$12.02
33-3012	Correctional Officers and Jailers	830	1,010	180	21.7%	35	\$16.62
41-2022	Parts Salespersons	480	430	-50	-10.4%	14	\$12.45
41-4011	Sales Rep., Wholesale & Mfg, Tech./Sci. Prod.	330	340	10	3.0%	10	\$26.38
41-4012	Sales Rep., Wholesale/Mfg, ex. Tech./Sci. Prod.	2,190	2,470	280	12.8%	86	\$27.30
43-3031	Bookkeeping, Accounting, and Auditing Clerks	2,640	2,590	-50	-1.9%	49	\$13.23
43-3051	Payroll and Timekeeping Clerks	290	310	20	6.9%	10	\$14.29
43-4051	Customer Service Representatives	2,800	3,900	1,100	39.3%	152	\$13.42
43-5032	Dispatchers, except Police, Fire and Ambulance	450	460	10	2.2%	11	\$14.41
43-6011	Executive Secretaries & Administrative Assistants	1,430	1,510	80	5.6%	35	\$17.42
43-6014	Secretaries, except Legal, Medical & Executive	3,390	3,040	-350	-10.3%	65	\$12.56
47-2061	Construction Laborers	1,350	1,290	-60	-4.4%	18	\$18.99
47-2073	Operating Engineers & Other Con. Equip. Op.	550	570	20	3.6%	16	\$23.24
47-2141	Painters, Construction and Maintenance	740	760	20	2.7%	13	\$19.51
49-9042	Maintenance and Repair Workers, General	2,570	2,740	170	6.6%	66	\$15.80
51-4021	Extruding & Drawing Machine Setters, O/T, M/P	360	260	-100	-27.8%	12	\$15.28
51-4023	Rolling Machine Setters/Operators/Tenders, M/P	800	720	-80	-10.0%	18	\$18.60
51-4031	Cutting/Punching/Press Machine S/O/T, M/P	2,040	1,720	-320	-15.7%	47	\$14.03
51-4033	Grind/Lapping/Polish/Buf Mach.Tool S/O/T, M/P	500	410	-90	-18.0%	10	\$15.16
51-4072	Molding/Coremaking/Casting Mach. S/O/T, M/P	1,190	1,020	-170	-14.3%	30	\$14.71
51-9041	Extrud/Form/Pressing/Compacting Mach. S/O/T	490	430	-60	-12.2%	13	\$20.13
51-9121	Coating/Painting/Spraying Machine Setters, O/T	470	460	-10	-2.1%	12	\$12.93
53-3032	Truck Drivers, Heavy and Tractor-Trailer	3,590	4,050	460	12.8%	105	\$17.88
Occupations Requiring Long-Term On-the-Job Training (twelve months or more combined experience/training)							
27-2022	Coaches and Scouts	490	520	30	6.1%	12	\$29,222
29-2081	Opticians, Dispensing	570	600	30	5.3%	13	\$15.54
33-2011	Fire Fighters	1,000	1,080	80	8.0%	37	\$13.55
33-3051	Police and Sheriff's Patrol Officers	1,220	1,230	10	0.8%	33	\$19.78
47-2031	Carpenters	1,830	1,950	120	6.6%	42	\$19.67

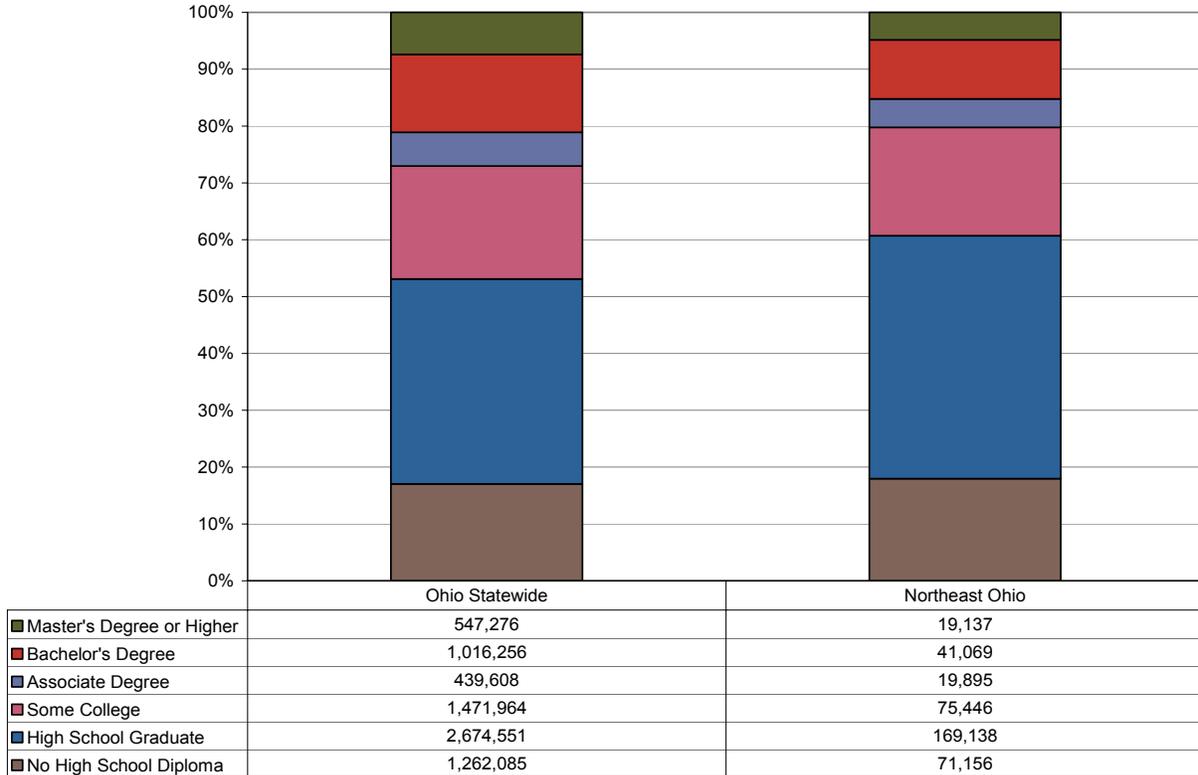
Code	Occupational Title**	Employment		Change in Employment		Avg. Ann. Openings	2006 Avg. Wage*
		2004 Annual	2014 Projected	2004 - 2014	Percent		
Occupations Requiring Long-Term On-the-Job Training (twelve months or more combined experience/training) [con't]							
47-2111	Electricians	1,400	1,450	50	3.6%	33	\$26.20
47-2152	Plumbers, Pipefitters and Steamfitters	610	620	10	1.6%	15	\$23.57
47-2211	Sheet Metal Workers	420	430	10	2.4%	11	\$26.09
49-2022	Telecomm. Equip. Install/Repair, ex. Line Install	490	440	-50	-10.2%	10	\$25.35
49-9041	Industrial Machinery Mechanics	970	890	-80	-8.2%	20	\$26.32
51-4041	Machinists	930	870	-60	-6.5%	22	\$17.64
51-4121	Welders, Cutters, Solderers, and Brazers	810	800	-10	-1.2%	23	\$14.45
Occupations Requiring Work Experience in a Related Occupation							
11-9051	Food Service Managers	690	730	40	5.8%	15	\$20.03
13-1051	Cost Estimators	550	610	60	10.9%	18	\$29.88
25-3021	Self-Enrichment Education Teachers	390	450	60	15.4%	11	\$13.51
35-1012	FL Sup/Mgrs of Food Prep. & Serving Workers	1,630	1,770	140	8.6%	53	\$13.46
39-1021	First-Line Sup/Mgrs of Personal Serv. Workers	330	380	50	15.2%	13	\$14.42
41-1011	First-Line Superv./Mgrs of Retail Sales Workers	3,310	3,340	30	0.9%	63	\$16.41
41-1012	First-Line Sup./Mgrs of Non-Retail Sales Workers	630	620	-10	-1.6%	12	\$29.37
43-1011	First-Line Sup/Mgrs of Office & Admin. Support	1,670	1,710	40	2.4%	40	\$20.62
47-1011	First-Line Sup/Mgrs of Con. Trades/Extract. Work	1,280	1,360	80	6.3%	30	\$25.77
49-1011	FL Sup/Mgrs of Mechanics/Installers/Repairers	900	900	0	0.0%	23	\$25.51
51-1011	FL Sup/Mgrs of Production/Operating Workers	2,250	2,200	-50	-2.2%	47	\$25.71
53-1031	FL Sup/Mgr of Trans/Mat.-Mov. Mach & Veh Op	430	470	40	9.3%	14	\$20.27
Occupations Requiring Postsecondary Vocational Training							
29-2041	Emergency Medical Technicians & Paramedics	620	730	110	17.7%	18	\$12.73
29-2061	Licensed Practical & Licensed Vocat. Nurses	2,160	2,290	130	6.0%	60	\$16.92
49-3023	Automotive Service Technicians and Mechanics	1,060	1,120	60	5.7%	34	\$16.00
49-3031	Bus & Truck Mechanics & Diesel Engine Spec.	760	810	50	6.6%	25	\$17.33
Occupations Requiring an Associate Degree							
15-1041	Computer Support Specialists	360	420	60	16.7%	10	\$16.26
29-1111	Registered Nurses†	4,630	5,490	860	18.6%	183	\$27.41
29-1126	Respiratory Therapists	230	270	40	17.4%	12	\$21.89
29-2021	Dental Hygienists	480	640	160	33.3%	20	\$24.27
29-2034	Radiologic Technologists and Technicians	610	730	120	19.7%	23	\$20.56
31-2011	Occupational Therapist Assistants	210	280	70	33.3%	10	\$19.29
31-2021	Physical Therapist Assistants	280	390	110	39.3%	16	\$19.19
Occupations Requiring a Bachelor's Degree							
11-9021	Construction Managers	380	410	30	7.9%	10	\$36.85
13-2011	Accountants and Auditors	1,780	1,970	190	10.7%	53	\$23.38
15-1071	Network and Computer Systems Administrators	260	330	70	26.9%	10	\$25.76
17-2112	Industrial Engineers	430	450	20	4.7%	12	\$32.30
21-1021	Child, Family and School Social Workers	430	480	50	11.6%	12	\$15.96
25-2021	Elementary School Teachers, ex.Special Ed.†	2,890	2,940	50	1.7%	69	\$49,167
25-2022	Middle School Teachers, ex. Special & Voc. Ed.†	1,430	1,430	0	0.0%	32	\$49,262
25-2031	Secondary Sch. Teachers, ex. Spec. & Voc. Ed.†	2,630	2,630	0	0.0%	74	\$48,824
25-2041	Special Ed. Teachers, Pre./Kinder./Elem. Sch.†	360	400	40	11.1%	13	\$46,156
25-2043	Special Education Teachers, Secondary School†	430	450	20	4.7%	12	\$48,291
41-3021	Insurance Sales Agents	640	690	50	7.8%	20	\$28.80
41-3031	Securities/Commodities/Fin. Serv. Sales Agents	460	520	60	13.0%	11	\$33.12

Code	Occupational Title**	Employment		Change in Employment		Avg. Ann. Openings	2006 Avg. Wage*
		2004 Annual	2014 Projected	2004 - 2014	Percent		
Occupations Requiring Work Experience plus a Bachelor's Degree							
11-1011	Chief Executives	640	670	30	4.7%	15	\$60.27
11-1021	General and Operations Managers	2,190	2,410	220	10.0%	63	\$41.05
11-2022	Sales Managers	300	380	80	26.7%	14	\$37.15
11-9032	Education Admin., Elem. & Secondary School†	510	500	-10	-2.0%	13	\$79,129
11-9111	Medical and Health Services Managers	430	510	80	18.6%	16	\$34.12
Occupations Requiring a Master's Degree							
21-1012	Educational, Vocational, & School Counselors	380	410	30	7.9%	12	\$24.27
21-1023	Mental Health & Substance Abuse Social Work.	310	380	70	22.6%	12	\$18.28
25-4021	Librarians	410	370	-40	-9.8%	10	\$24.42
29-1122	Occupational Therapists	270	360	90	33.3%	13	\$30.96
29-1123	Physical Therapists	400	520	120	30.0%	16	\$31.08
Occupations Requiring a First Professional Degree							
23-1011	Lawyers	780	840	60	7.7%	16	\$36.69
29-1051	Pharmacists	550	620	70	12.7%	18	\$45.27
*May 2005 wages aged to April 2006. Wages in <i>italics</i> are statewide figures because EDR wages were unavailable.							
**Abbreviations							
FL Sup/Mgrs = First-Line Supervisors/Managers							
M/P = Metal and Plastic							
O/T = Operators and Tenders							
S/O/T = Setters, Operators and Tenders							
†Annual earnings, typically for a 9½ month school year							
‡Training requirements may be met through a two-year associate's degree; a three-year diploma; or a four-year bachelor's degree.							
Source: Ohio Department of Job and Family Services, Bureau of Labor Market Information, 2007a.							

IV. Education & Training

Educational Attainment. Figure 13 below compares educational attainment levels among adults 25 and older in Northeast Ohio and the state as a whole. This region has a somewhat lower level of educational attainment than the rest of Ohio, due mostly to smaller proportions of adults with postsecondary degrees. About one-fifth of adults have an associate's degree or better, compared with 27.0 percent statewide. Also, there is a slightly larger proportion of adults without a high school diploma (18.0%).

Figure 13: Educational Attainment, 2000



Institutions and Degree Completions. There are 14 postsecondary training providers in Northeast Ohio offering about 600 different programs: 4 public adult schools with vocational programs; 6 two-year technical and community colleges; one four-year university; and 3 private business and technical schools. Almost 200 more postsecondary awards were completed in Northeast Ohio in 2006 than in 2005 (5.6%). The most growth was in postsecondary award programs lasting less than two years—important in many production trades. Details on educational institutions and program completers are available in Appendices E and F, respectively.

Figure 14: Degree Completions in Northeast Ohio

Award Type	2005	2006	Net Growth
Postsec. Awards; < 2 yrs.	801	879	78
Associate's Degrees	719	783	64
Bachelor's Degrees	1,551	1,516	-35
Master's Degrees	320	387	67
Doctor's Degrees	3	13	10
All Other Awards	129	143	14
Totals	3,523	3,721	198

Skills-Based Projections. The Bureau of Labor Market Information recently analyzed occupational projections to determine the workplace skills that will be in demand in 2014. There are 35 skills that have been identified as potentially related to a job by the Occupational Information Network (O*NET) system. Skills are learned capabilities that allow workers to master and perform the specific activities of their jobs. On average, each occupation has about five skills associated with it. For additional details on how the skills-based projections analysis was conducted, please refer to the Technical Notes at the end of this report.

Figure 15 on the next page ranks all 35 skills by the projected need for training and gives several importance measures for both Central Ohio and the entire state. The first, supply rank, ranks the skills based on how many jobs today require each. Percent demand gives the proportion of average annual openings through 2014 that will require a skill, with higher percentages indicating stronger demand. The gap index is the difference between the available supply of a workplace skill and its projected demand, standardized to a range of 0 to 100. A higher gap index indicates stronger need for training. Finally, the replacement index gives the proportion of projected annual openings requiring a given skill that will arise to replace exiting workers (e.g. through dismissals, retirements, etc.) rather than to fill a new position. Demand for skills with higher replacement indices may be tempered with poor employment growth.

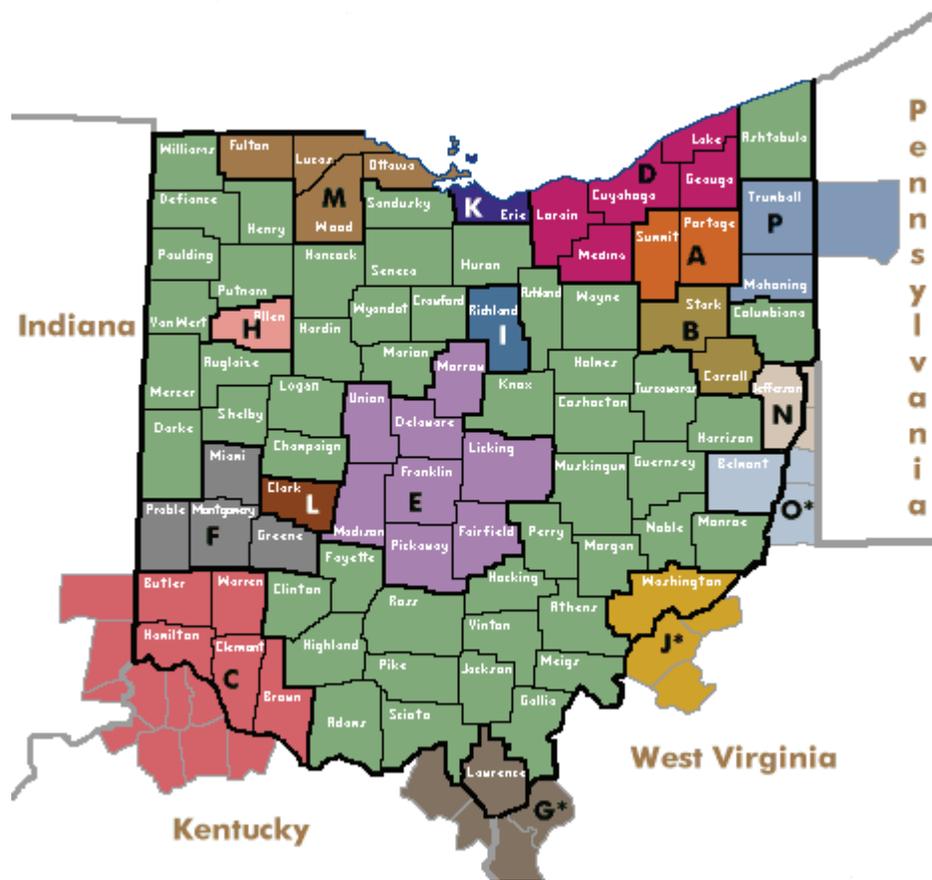
As is common for most of Ohio, reading comprehension will be the most vital workplace skill in Northeast Ohio through 2014. Proficiency in this skill will be required for nearly half of all projected job openings, and it also has the largest gap between supply and projected demand. Other vital skill sets include speaking, active listening, critical thinking and coordination.

Many of the workplace skills listed in Figure 15 will actually be in less demand in this region than across Ohio. Only a few skills—equipment maintenance, social perceptiveness and service orientation—have significantly higher demand percentages.

Figure 15: Projected Skills Needs for 2014

Skill	Northeast Ohio				Ohio	
	Supply Rank	Percent Demand	Gap Index	Repl. Index	Percent Demand	Gap Index
Reading Comprehension	1	49.1%	100	70	48.3%	100
Speaking	4	37.5%	97	70	38.4%	91
Active Listening	2	46.7%	94	72	46.6%	97
Critical Thinking	3	41.8%	91	71	41.9%	94
Coordination	6	36.8%	89	69	36.8%	89
Monitoring	8	34.3%	86	70	34.3%	83
Active Learning	5	37.7%	83	71	37.4%	86
Social Perceptiveness	12	30.0%	80	70	28.6%	69
Service Orientation	13	26.4%	77	66	25.4%	66
Writing	9	32.1%	74	71	33.6%	80
Instructing	7	35.0%	71	73	34.1%	77
Time Management	10	29.8%	69	73	31.6%	74
Learning Strategies	11	31.1%	66	72	31.3%	71
Persuasion	14	21.6%	63	72	22.2%	60
Judgment and Decision Making	15	20.7%	60	73	23.6%	63
Complex Problem Identification	16	19.4%	57	75	21.3%	57
Mathematics	18	17.3%	54	73	18.9%	54
Negotiation	22	10.3%	51	78	12.0%	49
Management of Personnel Resources	20	9.8%	49	79	10.1%	46
Equipment Selection	17	16.6%	46	76	16.0%	51
Management of Financial Resources	28	5.5%	43	74	6.6%	37
Equipment Maintenance	21	10.7%	40	79	9.3%	34
Science	32	3.1%	37	68	3.9%	23
Management of Material Resources	31	2.9%	34	76	3.5%	14
Systems Evaluation	30	2.9%	31	73	4.3%	29
Operations Analysis	29	3.0%	29	78	5.2%	31
Systems Analysis	34	1.2%	26	69	3.2%	26
Programming	35	0.3%	23	67	1.0%	9
Repairing	24	6.4%	20	84	5.9%	20
Technology Design	33	1.3%	17	75	2.9%	17
Installation	25	6.3%	14	86	7.6%	40
Troubleshooting	19	10.2%	11	85	11.0%	43
Operation and Control	27	5.9%	9	88	5.4%	6
Operation Monitoring	23	7.6%	6	90	6.8%	3
Quality Control	26	5.4%	3	90	6.0%	11

Appendix B: Ohio's Metropolitan Statistical Areas



- A. **Akron MSA:** Portage and Summit Counties.
- B. **Canton-Massillon MSA:** Carroll and Stark Counties.
- C. **Cincinnati-Midletown MSA:** Brown, Butler, Clermont, Hamilton and Warren Counties in Ohio; Dearborn, Franklin and Ohio Counties in Indiana; and Boone, Bracken, Campbell, Gallatin, Grant, Kenton and Pendleton Counties in Kentucky.
- D. **Cleveland-Elyria-Mentor MSA:** Cuyahoga, Geauga, Lake, Lorain and Medina Counties.
- E. **Columbus MSA:** Delaware, Fairfield, Franklin, Licking, Madison, Morrow, Pickaway and Union Counties
- F. **Dayton MSA:** Greene, Miami, Montgomery and Preble Counties
- G. **Huntington-Ashland MSA*:** Cabell and Wayne Counties in West Virginia; Boyd and Greenup Counties in Kentucky; and Lawrence County in Ohio.
- H. **Lima MSA:** Allen County.
- I. **Mansfield MSA:** Richland County.
- J. **Parkersburg-Marietta-Vienna MSA*:** Pleasants, Wirt and Wood Counties in West Virginia and Washington County in Ohio.
- K. **Sandusky MSA:** Erie County.
- L. **Springfield MSA:** Clark County.
- M. **Toledo MSA:** Fulton, Lucas, Ottawa and Wood Counties.
- N. **Weirton-Steubenville MSA:** Jefferson County in Ohio and Brooke and Hancock Counties in West Virginia.
- O. **Wheeling MSA*:** Marshall and Ohio Counties in West Virginia and Belmont County in Ohio.
- P. **Youngstown-Warren-Boardman MSA:** Mahoning and Trumbull Counties in Ohio and Mercer County in Pennsylvania.

*Statistical Areas in other states that include Ohio counties.

Appendix C: Detailed County-to-County Commuting Patterns

Ashtabula			Percent of workers that work outside the county -			27.9%					
			Average commute time in minutes -			23.9					
Number of workers 16+ years of age living in Ashtabula County			45,689			Number of workers 16+ years of age working in Ashtabula County			37,925		
Commute Out To			Number	Percent	Commute In From			Number	Percent		
Lake Co. OH	5,775	12.6%	Lake Co. OH	1200	3.2%						
Cuyahoga Co. OH	2,683	5.9%	Trumbull Co. OH	892	2.4%						
Geauga Co. OH	2,265	5.0%	Crawford Co. PA	644	1.7%						
Trumbull Co. OH	485	1.1%	Erie Co. PA	569	1.5%						
Erie Co. PA	412	0.9%	Cuyahoga Co. OH	397	1.0%						
Mahoning Co. OH	151	0.3%	Geauga Co. OH	257	0.7%						
Lorain Co. OH	134	0.3%	Summit Co. OH	196	0.5%						
Summit Co. OH	113	0.2%	Mercer Co. PA	146	0.4%						
Portage Co. OH	100	0.2%	Lorain Co. OH	138	0.4%						
Crawford Co. PA	91	0.2%	Portage Co. OH	127	0.3%						

Mahoning			Percent of workers that work outside the county -			29.7%					
			Average commute time in minutes -			21.5					
Number of workers 16+ years of age living in Mahoning County			109,102			Number of workers 16+ years of age working in Mahoning County			102,992		
Commute Out To			Number	Percent	Commute In From			Number	Percent		
Trumbull Co. OH	19,210	17.6%	Trumbull Co. OH	12,003	11.7%						
Columbiana Co. OH	3,684	3.4%	Columbiana Co. OH	7,371	7.2%						
Stark Co. OH	2,548	2.3%	Lawrence Co. PA	1,620	1.6%						
Portage Co. OH	1,171	1.1%	Stark Co. OH	1,158	1.1%						
Cuyahoga Co. OH	1,117	1.0%	Mercer Co. PA	1,083	1.1%						
Summit Co. OH	1,096	1.0%	Portage Co. OH	603	0.6%						
Lawrence Co. PA	718	0.7%	Summit Co. OH	460	0.4%						
Mercer Co. PA	624	0.6%	Cuyahoga Co. OH	268	0.3%						
Allegheny Co. PA	508	0.5%	Beaver Co. PA	172	0.2%						
Beaver Co. PA	224	0.2%	Allegheny Co. PA	159	0.2%						

Trumbull			Percent of workers that work outside the county -			27.1%					
			Average commute time in minutes -			21.0					
Number of workers 16+ years of age living in Trumbull County			97,485			Number of workers 16+ years of age working in Trumbull County			100,101		
Commute Out To			Number	Percent	Commute In From			Number	Percent		
Mahoning Co. OH	12,003	12.3%	Mahoning Co. OH	19,210	19.2%						
Geauga Co. OH	3,900	4.0%	Mercer Co. PA	2,805	2.8%						
Mercer Co. PA	2,457	2.5%	Columbiana Co. OH	1,719	1.7%						
Cuyahoga Co. OH	1,976	2.0%	Portage Co. OH	1,449	1.4%						
Portage Co. OH	1,863	1.9%	Lawrence Co. PA	653	0.7%						
Summit Co. OH	1,038	1.1%	Ashtabula Co. OH	485	0.5%						
Ashtabula Co. OH	892	0.9%	Summit Co. OH	447	0.4%						
Columbiana Co. OH	344	0.4%	Geauga Co. OH	310	0.3%						
Lawrence Co. PA	251	0.3%	Cuyahoga Co. OH	281	0.3%						
Stark Co. OH	202	0.2%	Stark Co. OH	172	0.2%						

Source: U.S. Census Bureau, 2004.

Appendix D: Major Employers by County

Ashtabula	
Ashtabula Area City Board of Education	Government
Ashtabula County Government	Government
Ashtabula County Medical Center	Health Care
General Aluminum Manufacturing Co.	Manufacturing
Kennametal, Inc.	Manufacturing
Lyondell Chemical Co.	Manufacturing
Masco/KraftMaid Cabinetry	Manufacturing
Molded Fiber Glass Companies	Manufacturing
Premix, Inc.	Manufacturing
Mahoning	
Austintown Local Board of Education	Government
Boardman Local Board of Education	Government
Forum Health	Health Care
HM Health Partners	Health Care
Mahoning County Government	Government
UCFC/Home Savings & Loan Co.	Finance
Wal-Mart Stores, Inc.	Retail
Youngstown City Board of Education	Government
Youngstown State University	Education
Trumbull	
Delphi Corp.	Manufacturing
Forum Health	Health Care
General Motors Corp.	Manufacturing
Giant Eagle, Inc.	Retail
HM Health Services	Health Care
Sears Holdings/Kmart Corp.	Retail
Trumbull County Government	Government
Warren City Board of Education	Government
West Corp.	Telecommunications
WCI Steel, Inc.	Manufacturing
Warren City Board of Education	Government
West Corp.	Telecommunications
WCI Steel, Inc.	Manufacturing

Source: Ohio Department of Development, 2007.
Employers are listed in alphabetical order.

Appendix E: Postsecondary Institutions

Name	Type	Address	Telephone	URL
Ashtabula County Joint Vocational School	Pub. Adult Sch.	1565 State Rte 167, Jefferson, OH 44047	(440) 576-6015	www.acjvs.org
Casal Aveda Institute	Two-Year	6000 Mahoning Ave, Youngstown, OH 44515	(330) 792-6504	
Choffin Career and Technical Center	Pub. Adult Sch.	200 E Wood St., Youngstown, OH 44503	(330) 744-8710	www.choffincareers.com
ETI Technical College	Two-Year	2076 Youngstown Warren Rd, Niles, OH 44446	(330) 652-9919	eticollege.edu
ITT Technical Institute-Youngstown	Two-Year	1030 N Meridian Rd, Youngstown, OH 44509	(330) 270-1600	www.itt-tech.edu
Kent State University-Ashtabula Campus	Two-Year	3300 Lake Road West, Ashtabula, OH 44004	(440) 964-3322	www.ashtabula.kent.edu
Kent State University-Trumbull Campus	Two-Year	4314 Mahoning Ave N.W., Warren, OH 44483	(330) 847-0571	www.trumbull.kent.edu
Mahoning County Career and Technical Center	Pub. Adult Sch.	7300 N Palmyra Rd, Canfield, OH 44406	(330) 729-4100	www.mahoningctc.com
Raphaels School of Beauty Culture	Two-Year	1324 Youngstown Warren Rd, Niles, OH 44446	(330) 652-1559	www.raphaelsbeautyschool.com
Raphaels School of Beauty Culture Inc	Two-Year	3307 Center Rd., Brunswick, OH 44212	(330) 225-0195	www.raphaelsbeautyschool.com
Raphaels School of Beauty Culture Inc	Two-Year	5311 Market St., Boardman, OH 44512	(330) 782-3395	www.raphaelsbeautyschool.com
TCTC Adult Training Center	Pub. Adult Sch.	528 Educational Highway, Warren, OH 44483	(330) 847-0503	www.tctcadulttraining.org
TDDS Technical Institute	Priv. Bus. & Tech.	1688 North Pricetown Road, Sr 534, Lake Milton, OH 44429	(330) 538-2216	www.tdds.edu
The Youngstown College of Massotherapy	Priv. Bus. & Tech.	14 Highland Ave, Struthers, OH 44471	(330) 755-1406	www.ycm.edu
Tri-State College of Massotherapy	Priv. Bus. & Tech.	9159 Market St Ste 26, North Lima, OH 44452	(330) 629-9998	www.tristatemasso.com
Trumbull Business College	Two-Year	3200 Ridge Road, Warren, OH 44484	(330) 369-3200	www.tbc-trumbullbusiness.com
Youngstown State University	Four-Year	One University Plaza, Youngstown, OH 44555	(877) 468-6978	www.ysu.edu

Source: *Integrated Postsecondary Educational Data System (IPEDS)*, *College Opportunities Online (COOL)*

<http://nces.ed.gov/collegenavigator>

Appendix F: Degree Completers by Program Class for Economic Development Region 12

Program Class	2005 Completions					2006 Completions				
	Assoc. Degrees	Bachelor's Degrees	Master's Degrees	Doctoral Degrees	First-Prof. Degrees	Assoc. Degrees	Bachelor's Degrees	Master's Degrees	Doctoral Degrees	First-Prof. Degrees
Natural Resources and Conservation		4	2				1	2		
Area, Ethnic, Cultural and Gender Studies		2					5			
Communication, Journalism and Related Programs		51					37			
Computer and Information Sciences and Support Services	151	73				151	50			
Education	6	356	148	3		5	331	144	13	
Engineering	8	77	12			8	94	19		
Engineering Technologies/Technicians	140	44				138	40			
Foreign Languages, Literatures and Linguistics		2					4			
Family and Consumer Sciences/Human Sciences	12	4				15	3			
Legal Professions and Studies	23					20				
English Language and Literature/Letters		55	16				46	28		
Liberal Arts and Sciences, General Studies and Humanities	55	18				54	31			
Biological and Biomedical Sciences	3	53	14			1	48	5		
Mathematics and Statistics		7	10				12	18		
Parks, Recreation, Leisure and Fitness Studies		25					29			
Philosophy and Religious Studies		12					13			
Physical Sciences		65	12				51	15		
Psychology		45					30			
Security and Protective Services	17	82	5			22	83	9		
Public Administration and Social Service Professions	6	38				2	45	6		
Social Sciences		64	2				76	5		
Visual and Performing Arts		64	12				70	4		
Health Professions and Related Clinical Sciences	161	123	38			188	146	39		
Business, Management, Marketing and Related Support Services	137	266	43			179	253	84		
History		21	6				18	9		
Total, All Programs	719	1,551	320	3	0	783	1,516	387	13	0

Source: Integrated Postsecondary Educational Data System (IPEDS), College Opportunities Online (COOL)

<http://nces.ed.gov/collegenavigator>

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

Ted Strickland, Governor
Helen E. Jones-Kelley, Director

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