

Ohio County Profiles



Department of
Development

Prepared by the Office of Strategic Research

Region 8

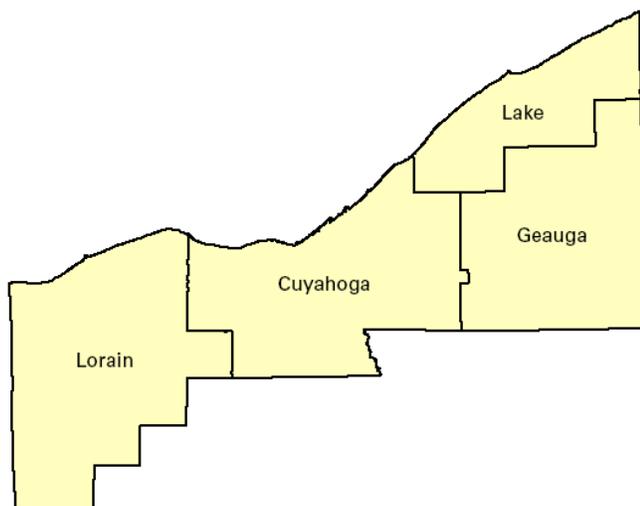
2006 Population: 1,944,802

Land Area: 1,583.2 square miles

Regional Economic Development Office Location:

Lausche State Office Building, 615 W. Superior Ave, 12th Floor
Cleveland, OH 44113

Phone: (216) 787-3471 Fax: (216) 787-3244



Taxes

| | |
|--------------------------------|------------------|
| Taxable value of real property | \$41,407,733,400 |
| Residential | \$30,553,802,320 |
| Agriculture | \$483,450,660 |
| Industrial | \$1,925,217,780 |
| Commercial | \$8,442,097,340 |
| Mineral | \$3,165,300 |
| Ohio income tax liability | \$1,657,622,119 |
| Average per return | \$1,857.45 |

Land Use/Land Cover

| | Percent |
|--|---------|
| Urban (Residential/Commercial/Industrial/ Transportation and Urban Grasses) | 34.98% |
| Cropland | 19.45% |
| Pasture | 2.90% |
| Forest | 38.35% |
| Open Water | 1.19% |
| Wetlands (Wooded/Herbaceous) | 3.03% |
| Bare/Mines | 0.11% |

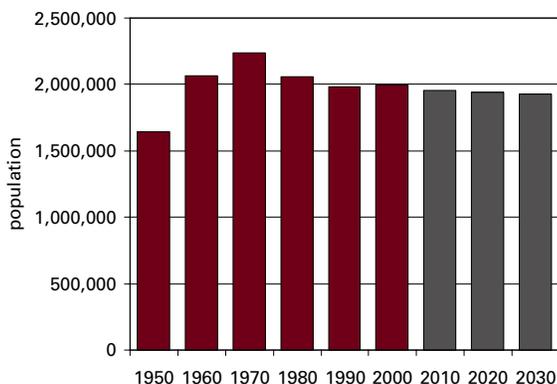
Largest Areas

| | Census 2000 | Est. 2006 |
|------------------------------|-------------|-----------|
| Cleveland, Cuyahoga Co. | 478,403 | 444,313 |
| Parma, Cuyahoga Co. | 85,655 | 80,009 |
| Lorain, Lorain Co. | 68,652 | 70,592 |
| Elyria, Lorain Co. | 55,953 | 55,745 |
| Lakewood, Cuyahoga Co. | 56,646 | 52,194 |
| Mentor, Lake Co. | 50,278 | 51,593 |
| Euclid, Cuyahoga Co. | 52,717 | 48,717 |
| Cleveland Heights, Cuya. Co. | 49,958 | 47,097 |
| Strongsville, Cuyahoga Co. | 43,858 | 43,347 |
| North Olmsted, Cuyahoga Co | 34,113 | 32,126 |

UB: Unincorporated Balance

Total Population

| Census | Estimated |
|--------------|----------------|
| 1800 | 2001 1,990,573 |
| 1810 4,376 | 2002 1,984,257 |
| 1820 14,119 | 2003 1,977,962 |
| 1830 31,882 | 2004 1,969,349 |
| 1840 74,989 | 2005 1,958,170 |
| 1850 106,666 | 2006 1,944,802 |
| 1860 139,170 | |
| 1870 192,443 | Projected |
| 1880 263,046 | 2010 1,956,090 |
| 1890 381,989 | 2020 1,940,830 |
| | 2030 1,928,090 |



Population by Race

| | Number | Percent |
|-------------------------------|----------------|--------------|
| Total Population | 1,997,048 | 100.0% |
| White | 1,488,765 | 74.5% |
| African-American | 408,772 | 20.5% |
| Native American | 3,506 | 0.2% |
| Asian | 30,150 | 1.5% |
| Pacific Islander | 356 | 0.0% |
| Other | 31,028 | 1.6% |
| Two or More Races | 34,471 | 1.7% |
| Hispanic (may be of any race) | 70,459 | 3.5% |
| Total Minority | 539,934 | 27.0% |

Educational Attainment

| | Number | Percent |
|---------------------------|-----------|---------|
| Persons 25 years and over | 1,337,032 | 100.0% |
| No high school diploma | 233,160 | 17.4% |
| High school graduate | 419,972 | 31.4% |
| Some college, no degree | 289,069 | 21.6% |
| Associate degree | 76,237 | 5.7% |
| Bachelor's degree | 200,850 | 15.0% |
| Master's degree or higher | 117,744 | 8.8% |

Family Type by Employment Status

| | Number | Percent |
|---|---------|---------|
| Total Families | 520,559 | 100.0% |
| Married couple, husband and wife in labor force | 199,790 | 38.4% |
| Married couple, husband in labor force, wife not | 81,733 | 15.7% |
| Married couple, wife in labor force, husband not | 25,132 | 4.8% |
| Married couple, husband and wife not in labor force | 71,878 | 13.8% |
| Male householder, in labor force | 22,240 | 4.3% |
| Male householder, not in labor force | 8,603 | 1.7% |
| Female householder, in labor force | 72,053 | 13.8% |
| Female householder, not in labor force | 39,130 | 7.5% |

Household Income in 1999

| | Number | Percent |
|--------------------------------|-----------------|---------|
| Total Households | 798,849 | 100.0% |
| Less than \$10,000 | 77,407 | 9.7% |
| \$10,000 to \$19,999 | 100,865 | 12.6% |
| \$20,000 to \$29,999 | 105,152 | 13.2% |
| \$30,000 to \$39,999 | 98,575 | 12.3% |
| \$40,000 to \$49,999 | 85,297 | 10.7% |
| \$50,000 to \$59,999 | 73,278 | 9.2% |
| \$60,000 to \$74,999 | 84,552 | 10.6% |
| \$75,000 to \$99,999 | 83,427 | 10.4% |
| \$100,000 to \$149,999 | 57,573 | 7.2% |
| \$150,000 to \$199,999 | 15,140 | 1.9% |
| \$200,000 or more | 17,583 | 2.2% |
| Median household income | \$41,903 | |

Population by Age

| | Number | Percent |
|-------------------|-------------|---------|
| Total Population | 1,997,048 | 100.0% |
| Under 6 years | 157,597 | 7.9% |
| 6 to 17 years | 345,090 | 17.3% |
| 18 to 24 years | 157,329 | 7.9% |
| 25 to 44 years | 586,450 | 29.4% |
| 45 to 64 years | 454,739 | 22.8% |
| 65 years and more | 295,843 | 14.8% |
| Median Age | 37.4 | |

Family Type by Presence of Own Children Under 18

| | Number | Percent |
|---|---------|---------|
| Total Families | 520,559 | 100.0% |
| Married-couple families with own children | 163,976 | 31.5% |
| Male householder, no wife present, with own children | 14,051 | 2.7% |
| Female householder, no husband present, with own children | 63,795 | 12.3% |
| Families with no own children | 278,737 | 53.5% |

Poverty Status in 1999 of Families By Family Type by Presence Of Related Children

| | Number | Percent |
|---|---------|---------|
| Total Families | 520,559 | 100.0% |
| Family income above poverty level | 475,987 | 91.4% |
| Family income below poverty level | 44,572 | 8.6% |
| Married couple, with related children | 7,305 | 16.4% |
| Male householder, no wife present, with related children | 2,680 | 6.0% |
| Female householder, no husband present, with related children | 25,860 | 58.0% |
| Families with no related children | 8,727 | 19.6% |

Ratio of Income in 1999 To Poverty Level

| | Number | Percent |
|--|-----------|---------|
| Population for whom poverty status is determined | 1,956,102 | 100.0% |
| Below 50% of poverty level | 106,647 | 5.5% |
| 50% to 99% of poverty level | 113,002 | 5.8% |
| 100% to 149% of poverty level | 140,109 | 7.2% |
| 150% to 199% of poverty level | 152,493 | 7.8% |
| 200% of poverty level or more | 1,443,851 | 73.8% |

Residence in 1995

| | Number | Percent |
|------------------------------|-----------|---------|
| Population 5 years and over | 1,866,536 | 100.0% |
| Same house in 1995 | 1,124,829 | 60.3% |
| Different house, same county | 515,511 | 27.6% |
| Different county, same state | 114,418 | 6.1% |
| Different state | 83,427 | 4.5% |
| Puerto Rico or U.S. islands | 3,512 | 0.2% |
| Foreign country | 24,839 | 1.3% |

Travel Time To Work

| | Number | Percent |
|---------------------------|---------|---------|
| Workers 16 years and over | 917,100 | 100.0% |
| Less than 15 minutes | 230,114 | 25.1% |
| 15 to 29 minutes | 370,796 | 40.4% |
| 30 to 44 minutes | 196,477 | 21.4% |
| 45 to 59 minutes | 55,790 | 6.1% |
| 60 minutes or more | 39,755 | 4.3% |
| Worked at home | 24,168 | 2.6% |

Mean travel time 24.1 minutes

Housing Units

| | Number | Percent |
|------------------------|---------|---------|
| Total housing units | 854,563 | 100.0% |
| Occupied housing units | 798,623 | 93.5% |
| Owner occupied | 536,576 | 62.8% |
| Renter occupied | 262,047 | 30.7% |
| Vacant housing units | 55,940 | 6.5% |

Year Structure Built

| | Number | Percent |
|--------------------------|---------|---------|
| Total housing units | 854,563 | 100.0% |
| Built 1995 to March 2000 | 35,765 | 4.2% |
| Built 1990 to 1994 | 32,793 | 3.8% |
| Built 1980 to 1989 | 56,383 | 6.6% |
| Built 1970 to 1979 | 108,676 | 12.7% |
| Built 1960 to 1969 | 133,415 | 15.6% |
| Built 1950 to 1959 | 173,238 | 20.3% |
| Built 1940 to 1949 | 100,955 | 11.8% |
| Built 1939 or earlier | 213,338 | 25.0% |

Median year built 1953

Value for Specified Owner-Occupied Housing Units

| | Number | Percent |
|--|---------|---------|
| Specified owner-occupied housing units | 476,426 | 100.0% |
| Less than \$20,000 | 2,039 | 0.4% |
| \$20,000 to \$39,999 | 8,925 | 1.9% |
| \$40,000 to \$59,999 | 23,272 | 4.9% |
| \$60,000 to \$79,999 | 52,701 | 11.1% |
| \$80,000 to \$99,999 | 88,080 | 18.5% |
| \$100,000 to \$124,999 | 85,020 | 17.8% |
| \$125,000 to \$149,999 | 67,234 | 14.1% |
| \$150,000 to \$199,999 | 73,822 | 15.5% |
| \$200,000 to \$249,999 | 31,913 | 6.7% |
| \$250,000 to \$499,999 | 37,407 | 7.9% |
| \$500,000 to \$999,999 | 5,113 | 1.1% |
| \$1,000,000 or more | 900 | 0.2% |

Median value \$107,433

House Heating Fuel

| | Number | Percent |
|----------------------------|---------|---------|
| Occupied housing units | 798,623 | 100.0% |
| Utility gas | 670,999 | 84.0% |
| Bottled, tank or LP gas | 12,838 | 1.6% |
| Electricity | 86,681 | 10.9% |
| Fuel oil, kerosene, etc | 14,067 | 1.8% |
| Coal, coke or wood | 3,227 | 0.4% |
| Solar energy or other fuel | 7,440 | 0.9% |
| No fuel used | 3,371 | 0.4% |

Gross Rent

| | Number | Percent |
|---|---------|---------|
| Specified renter-occupied housing units | 260,687 | 100.0% |
| Less than \$100 | 4,469 | 1.7% |
| \$100 to \$199 | 12,973 | 5.0% |
| \$200 to \$299 | 12,229 | 4.7% |
| \$300 to \$399 | 24,630 | 9.4% |
| \$400 to \$499 | 46,456 | 17.8% |
| \$500 to \$599 | 52,368 | 20.1% |
| \$600 to \$699 | 38,157 | 14.6% |
| \$700 to \$799 | 24,151 | 9.3% |
| \$800 to \$899 | 14,047 | 5.4% |
| \$900 to \$999 | 7,986 | 3.1% |
| \$1,000 to \$1,499 | 10,613 | 4.1% |
| \$1,500 or more | 2,771 | 1.1% |
| No cash rent | 9,837 | 3.8% |

Median gross rent \$546

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 | 330,001 | 100.0% |
| Less than \$400 | 5,410 | 1.6% |
| \$400 to \$599 | 24,279 | 7.4% |
| \$600 to \$799 | 51,201 | 15.5% |
| \$800 to \$999 | 66,315 | 20.1% |
| \$1,000 to \$1,249 | 68,663 | 20.8% |
| \$1,250 to \$1,499 | 44,554 | 13.5% |
| \$1,500 to \$1,999 | 42,089 | 12.8% |
| \$2,000 to \$2,999 | 20,637 | 6.3% |
| \$3,000 or more | 6,853 | 2.1% |

Median monthly owners cost \$1,065

Median monthly owners cost as a percentage of household income

Vital Statistics

| | Number | Rate |
|--|--------|---------|
| Births / rate per 1,000 women aged 15-44 | 23,589 | 60.9 |
| Teen births / rate per 1,000 females 15-17 | 788 | 18.8 |
| Deaths / rate per 100,000 population | 20,188 | 1,030.4 |
| Marriages / rate per 1,000 population | 10,966 | 5.6 |
| Divorces / rate per 1,000 population | 5,845 | 3.0 |

Migration

Agriculture

| | |
|-----------------------|---------------|
| Land in farms (acres) | 240,000 |
| Number of farms | 2,400 |
| Average size (acres) | 100 |
| Total cash receipts | \$191,452,000 |
| Per farm | \$79,772 |

Education

| | |
|-------------------------------------|----------|
| Public schools | 607 |
| Students (Average Daily Membership) | 286,566 |
| Expenditures per student | \$10,583 |
| Student-teacher ratio | |
| Graduation rate | |
| Teachers (Full Time Equivalent) | 17,125.1 |
| Non-public schools | 194 |
| Students | 53,878 |
| 4-year public universities | 1 |
| Branches | 1 |
| 2-year public colleges | 3 |
| Private universities and colleges | 9 |
| Public libraries (Main / Branches) | 27 / 84 |

Transportation

| | |
|---------------------------|-----------------|
| Registered motor vehicles | 1,760,751 |
| Passenger cars | 1,378,541 |
| Noncommercial trucks | 151,023 |
| Total license revenue | \$43,111,644.76 |
| Interstate highway miles | 199.77 |
| Turnpike miles | 39.62 |
| U.S. highway miles | 251.40 |
| State highway miles | 728.08 |
| Commercial airports | 12 |

Voting

| | |
|-----------------------------|-----------|
| Number of precincts | 1,982 |
| Number of registered voters | 1,462,461 |
| Voted in 2006 election | 704,265 |
| Percent turnout | 48.2% |

Health Care

| | |
|--|--------|
| Physicians (MDs & DOs) | 7,225 |
| Registered hospitals | 30 |
| Number of beds | 9,684 |
| Licensed nursing homes | 140 |
| Number of beds | 16,306 |
| Licensed residential care | 89 |
| Number of beds | 6,926 |
| Adults with employer-based insurance | 62.3% |
| Children with employer-based insurance | 63.6% |

State Parks, Forests, Nature Preserves, And Wildlife Areas

| | |
|------------|----------|
| Facilities | 16 |
| Acreage | 4,632.21 |

Communications

| | |
|---------------------|-----------|
| Television stations | 9 |
| Radio stations | 35 |
| Daily newspapers | 5 |
| Circulation | 1,012,963 |

Crime

| | |
|---|--------|
| Total crimes reported in Uniform Crime Report | 57,345 |
|---|--------|

Finance

| | |
|---|-------------------|
| FDIC insured financial institutions (HQs) | 20 |
| Assets | \$299,676,197,000 |
| Branch offices | 678 |
| Institutions represented | 41 |

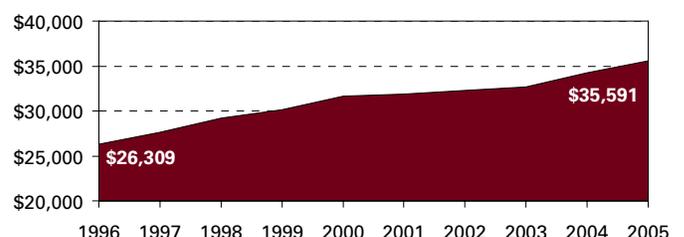
Transfer Payments

| | |
|--|------------------|
| Total transfer payments | \$11,767,485,000 |
| Payments to individuals | \$11,239,358,000 |
| Retirement and disability | \$4,457,367,000 |
| Medical payments | \$5,176,817,000 |
| Income maintenance (Supplemental SSI, family assistance, food stamps, etc) | \$1,134,343,000 |
| Unemployment benefits | \$205,074,000 |
| Veterans benefits | \$174,853,000 |
| Federal education and training assistance | \$87,346,000 |
| Other payments to individuals | \$3,558,000 |
| Total personal income | \$69,693,240,000 |
| Dependency ratio | 16.9% |

Federal Expenditures

| | |
|--|------------------|
| Direct expenditures or obligations | \$12,787,123,556 |
| Retirement and disability | \$4,733,733,932 |
| Other direct payments | \$3,210,806,297 |
| Grant awards | \$2,846,407,566 |
| Highway planning and construction | \$116,535,602 |
| Temporary assistance to needy families | \$132,997,106 |
| Medical assistance program | \$1,444,687,023 |
| Procurement contract awards | \$753,353,997 |
| Dept. of Defense | \$252,082,202 |
| Salary and wages | \$1,242,821,764 |
| Dept. of Defense | \$139,228,000 |
| Other federal assistance | \$1,390,743,108 |
| Direct loans | \$53,460,812 |
| Guaranteed loans | \$985,204,794 |
| Insurance | \$352,077,502 |

Per Capita Personal Income



Civilian Labor Force

| | 2002 | 2003 | 2004 | 2005 | 2006 |
|----------------------|-----------|-----------|-----------|-----------|-----------|
| Civilian labor force | 1,015,800 | 1,016,100 | 1,007,000 | 1,001,200 | 1,000,200 |
| Employed | 959,800 | 954,500 | 945,900 | 944,300 | 946,100 |
| Unemployed | 56,100 | 61,700 | 61,100 | 56,900 | 54,100 |
| Unemployment rate | 5.5 | 6.1 | 6.1 | 5.7 | 5.4 |

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 | 971,365 | 969,669 | \$37,985,809 | \$38,656,780 |
| Private Sector | 855,532 | 855,214 | \$33,309,990 | \$33,973,094 |
| Agriculture, forestry, fishing and hunting | 1,503 | 1,660 | \$31,701 | \$37,410 |
| Mining | 529 | 570 | \$28,278 | \$34,130 |
| Utilities | 2,511 | 2,608 | \$164,925 | \$188,281 |
| Construction | 39,010 | 37,695 | \$1,636,217 | \$1,620,910 |
| Manufacturing | 141,018 | 139,170 | \$6,985,771 | \$7,023,461 |
| Wholesale trade | 48,686 | 48,923 | \$2,633,236 | \$2,717,594 |
| Retail trade | 105,034 | 102,082 | \$2,468,633 | \$2,416,428 |
| Transportation and warehousing | 25,113 | 25,274 | \$996,579 | \$1,016,019 |
| Information | 19,219 | 18,586 | \$1,002,491 | \$974,436 |
| Finance and insurance | 60,250 | 59,124 | \$3,558,550 | \$3,589,336 |
| Real estate and rental and leasing | 16,166 | 15,615 | \$551,966 | \$569,826 |
| Professional and technical services | 49,518 | 51,258 | \$2,721,700 | \$2,970,757 |
| Management of companies and enterprises | 15,587 | 16,334 | \$1,264,801 | \$1,230,557 |
| Administrative and waste services | 57,842 | 59,466 | \$1,480,741 | \$1,541,770 |
| Educational services | 23,084 | 23,974 | \$770,446 | \$787,447 |
| Health care and social assistance | 131,703 | 134,234 | \$4,796,275 | \$5,008,390 |
| Arts, entertainment, and recreation | 13,494 | 13,317 | \$503,105 | \$518,495 |
| Accommodation and food services | 72,597 | 73,624 | \$898,289 | \$932,227 |
| Other services, except public administration | 31,116 | 30,676 | \$765,101 | \$769,642 |
| State and Local Government | 115,834 | 114,456 | \$4,675,819 | \$4,683,687 |
| State government | 6,679 | 6,719 | \$321,903 | \$331,186 |
| Local government | 109,155 | 107,737 | \$4,353,915 | \$4,352,500 |
| Federal Government | 18,104 | 17,762 | \$1,169,983 | \$1,187,227 |

-1 or \$0 indicates suppression for confidentiality

Business Numbers

| | 2002 | 2003 | 2004 | 2005 | 2006 |
|-------------------|--------|--------|--------|--------|--------|
| Business starts | 4,252 | 5,032 | 4,061 | 4,100 | 4,357 |
| Active businesses | 43,001 | 43,374 | 43,494 | 43,694 | 43,338 |

Residential

Construction

| | 2002 | 2003 | 2004 | 2005 | 2006 |
|-----------------------------|-----------|-------------|-------------|-------------|-----------|
| Total units | 5,275 | 5,659 | 5,770 | 5,249 | 4,023 |
| Total valuation (000) | \$937,677 | \$1,013,508 | \$1,102,956 | \$1,049,463 | \$795,633 |
| Total single-unit bldgs | 4,796 | 5,220 | 5,311 | 4,714 | 3,652 |
| Average cost per unit | \$186,837 | \$186,448 | \$199,294 | \$212,580 | \$208,904 |
| Total multi-unit bldg units | 479 | 439 | 459 | 535 | 371 |
| Average cost per unit | \$86,867 | \$91,689 | \$96,957 | \$88,524 | \$88,185 |

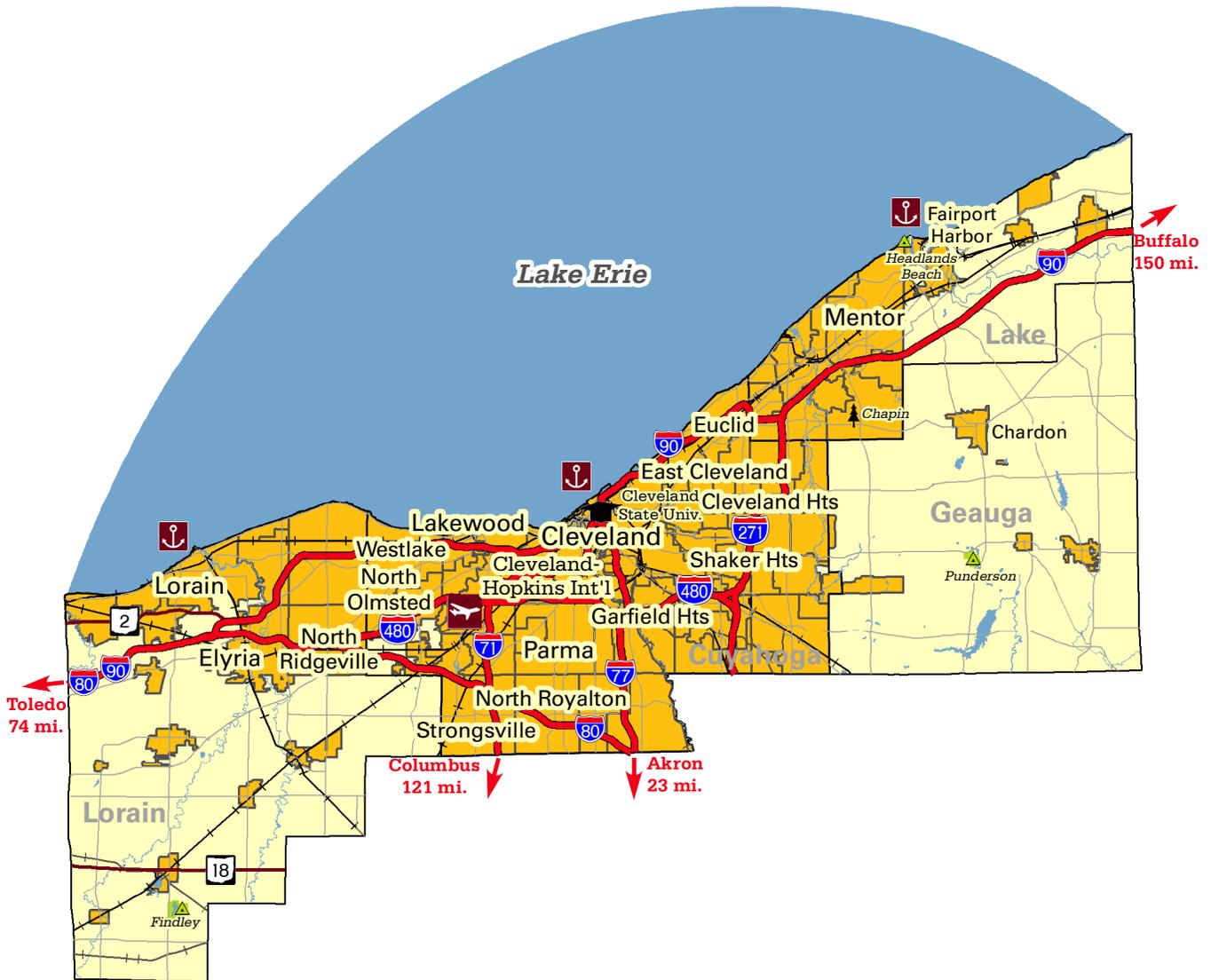
Major Employers

| | |
|------------------------------------|-------|
| American Greetings Corp | Mfg |
| Case Western Reserve University | Serv |
| Cleveland Clinic Health System | Serv |
| Continental Airlines | Trans |
| Ford Motor Co | Mfg |
| General Motors Corp | Mfg |
| KeyCorp | Fin |
| Lincoln Electric Holding Inc | Mfg |
| Masco Corp/KraftMaid Cabinetry Inc | Mfg |
| National City Corp | Fin |
| Parker Hannifin Corp | Mfg |
| Progressive Corp | Ins |
| Sherwin-Williams Co | Mfg |
| University Hospitals Health System | Serv |

Region 8 Northern Ohio



Department of
Development



Lausche State Office Building
615 W. Superior Ave., 12th Floor
Cleveland, OH 44113
Phone: (216) 787-3471
Fax: (216) 787-3244

Population (2006): 1,944,802
Area: 1,583.2 sq. mi.

2007 Ohio Private Investment List

| Region | County | Company | City | NAICS | Product | Type | Jobs | Investment | Square Feet | New | Exp |
|--------|----------|-------------------------------|----------------------|--------|----------------------------------|---------------|------|---------------|-------------|-----|-----|
| 8 | Cuyahoga | Chemcentral | Cleveland | 42469 | Chemicals | DW | | \$3,900,000 | 11,000 | | Exp |
| 8 | Cuyahoga | Cleveland Hopkins Airport | Cleveland | 488119 | Airport | Trans | | \$21,500,000 | | | Exp |
| 8 | Cuyahoga | Cleveland Wire Cloth | Cleveland | 332618 | Wire mesh | MF | | \$3,000,000 | 50,000 | New | |
| 8 | Cuyahoga | Insurance.com Inc | Solon | 52421 | Insurance | OF | 131 | \$6,700,000 | 70,000 | | Exp |
| 8 | Cuyahoga | Metalworks 95 Inc | Cleveland | 333514 | Machine tools | MF | 30 | \$5,600,000 | | | Exp |
| 8 | Cuyahoga | NDT Ltd | Solon | 23311 | Spec of - Solon Bus Campus | SO | | \$3,000,000 | 35,400 | New | |
| 8 | Cuyahoga | Power Direct | Cleveland | 561422 | Call center | CC | 220 | \$1,800,000 | 17,000 | | Exp |
| 8 | Cuyahoga | Quadax Inc | Middleburg Heights | 541152 | Back office | OF | | \$9,000,000 | 100,000 | | Exp |
| 8 | Cuyahoga | ThermaFab Alloy | Cleveland | 332312 | Machine parts | MF | 90 | \$2,600,000 | 59,000 | New | |
| 8 | Cuyahoga | TTI Floor Care | Glenwillow | 335212 | Floor care products | R&D/F | 90 | \$2,000,000 | | | Exp |
| 8 | Cuyahoga | Workflow.com | Westlake | 51121 | Software | OF | 180 | \$2,300,000 | | | Exp |
| 8 | Cuyahoga | Cellular Technology | Cleveland | 325414 | Vaccine development | R&D | 51 | \$2,000,000 | | New | |
| 8 | Cuyahoga | Cleveland Clinic/Hillcrest | Mayfield Heights | 62211 | Hospital | Health | | \$163,000,000 | | | Exp |
| 8 | Cuyahoga | Continental Airlines | Cleveland | 481111 | Airline | Trans | 711 | \$44,500,000 | | | Exp |
| 8 | Cuyahoga | Geis Cos | Glenwillow | 23311 | Spec dist | SW | | \$16,000,000 | 400,000 | New | |
| 8 | Cuyahoga | Geis Cos | Glenwillow | 23311 | Spec dist | SW | | \$8,000,000 | 122,000 | New | |
| 8 | Cuyahoga | Green Source Products | Cleveland | 321211 | Construction materials | MF | 29 | \$1,700,000 | 70,000 | New | |
| 8 | Cuyahoga | National Biological Corp | Beachwood | 33511 | Ultraviolet lamps | MF | | | 36,000 | New | |
| 8 | Cuyahoga | Quality Electro Dynamics | Mayfield | 339112 | MRI Hardware | MF/R&D | 20 | \$3,500,000 | | | Exp |
| 8 | Cuyahoga | Banner Service Corp | Strongsville | 42351 | Steel | DW | | \$1,500,000 | 19,500 | | Exp |
| 8 | Cuyahoga | Holiday Inn | Cleveland | 72111 | Hotel | HO | | \$10,000,000 | | | Exp |
| 8 | Cuyahoga | Industrial Partners LLC | Glenwillow | 23311 | Spec dist | SW | | \$15,000,000 | 400,000 | New | |
| 8 | Cuyahoga | Kowitz & Passov | Warrensville Heights | 23311 | Spec of | SO | | \$1,200,000 | 23,000 | New | |
| 8 | Cuyahoga | Philips Medical | Highland Heights | 334517 | Medical equipment | MF/OF/DW/F | | \$15,000,000 | 188,000 | | Exp |
| 8 | Cuyahoga | Staybridge Suites | Cleveland | 72111 | Hotel | HO | | \$20,000,000 | | New | |
| 8 | Cuyahoga | Alcoa Inc | Cleveland | 332112 | Aluminum forging | MF | | \$7,000,000 | | | Exp |
| 8 | Cuyahoga | American Tank and Fabricating | Cleveland | 332313 | Metal fabricating | MF | 25 | \$3,750,000 | 100,000 | | Exp |
| 8 | Cuyahoga | Cutting Systems Inc | Brook Park | 33518 | Cutting machines | MF | | \$1,200,000 | 44,000 | New | |
| 8 | Cuyahoga | Intelect Medical | Cleveland | 339112 | Medical devices | R&D | 34 | \$1,200,000 | | | Exp |
| 8 | Cuyahoga | Sanson Co | Cleveland | 42448 | Food products | DW | | \$5,000,000 | 60,000 | | Exp |
| 8 | Cuyahoga | Applied Medical Technology | Brecksville | 339112 | Medical instruments | MF/DW | | \$2,200,000 | | New | |
| 8 | Cuyahoga | Laszeray Technologies | North Royalton | 333514 | Tool & die maker | MF | 1 | \$3,000,000 | 300,000 | New | |
| 8 | Cuyahoga | Enterprise Rent-a-Car | Strongsville | 532111 | Passenger car rental | HQ - regional | | \$5,000,000 | 25,000 | New | |
| 8 | Cuyahoga | Premier Development Partners | Glenwillow | 23311 | Spec dist - 30300 Emerald Valley | SW/SO | | \$5,000,000 | 182,000 | New | |
| 8 | Cuyahoga | American Punch Co | Euclid | 33271 | Machine shop | MF | | \$1,200,000 | 26,900 | New | |
| 8 | Cuyahoga | Hyland Software | Westlake | 541511 | Software | OF | 220 | | | | Exp |
| 8 | Cuyahoga | Great Lakes Brewing Co | Cleveland | 31212 | Beer | MF | 30 | \$11,500,000 | | | Exp |
| 8 | Geauga | SDC / Steven Douglas Corp | Newbury | 333999 | Manufacturing equipment | MF | | \$1,500,000 | 30,000 | New | |
| 8 | Geauga | Bicron/St Gobain | Troy Twp | 334413 | Crystals | MF/R&D/F | 30 | \$5,000,000 | 90,000 | New | |
| 8 | Lake | Hampton Inn | Mentor | 72111 | Hotel | HO | | \$5,000,000 | | New | |
| 8 | Lake | Headwaters Resources | Mentor | 42469 | Fly ash | DW | | \$1,000,000 | 39,000 | New | |
| 8 | Lake | Lake Hospital System | Madison Twp | 62211 | Hospital | Health | | \$2,000,000 | 8,000 | | Exp |



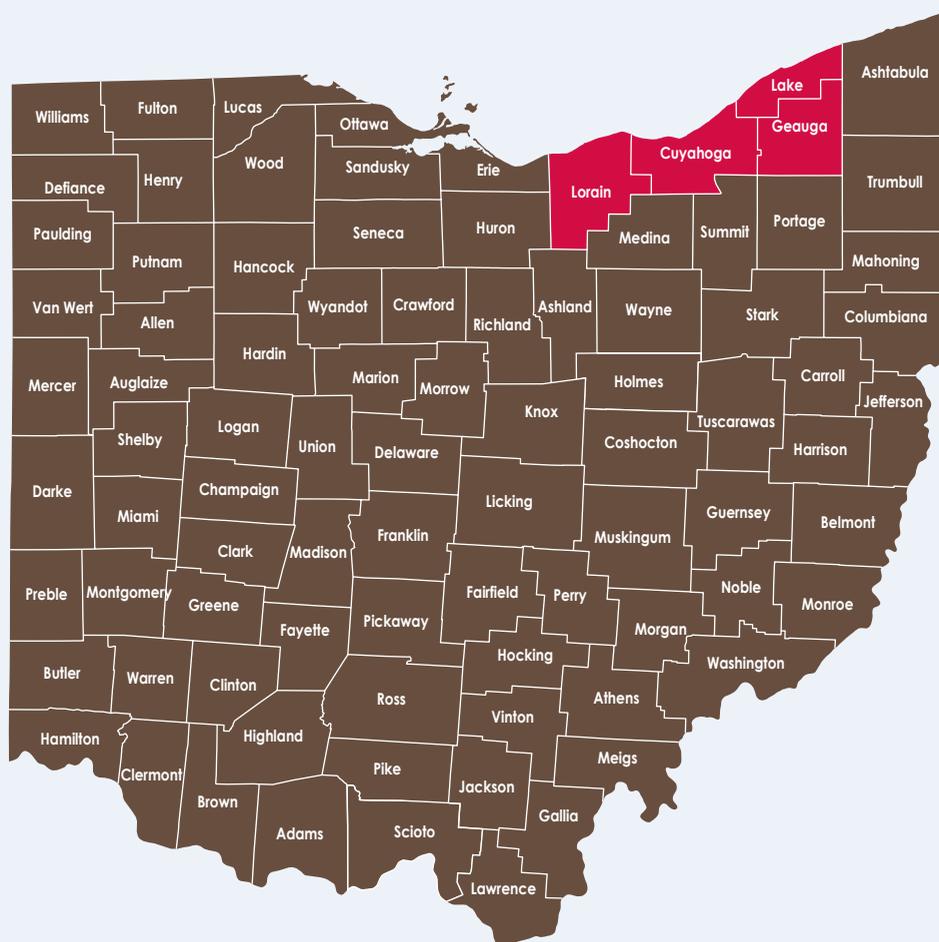
2007 Ohio Private Investment List

| Region | County | Company | City | NAICS | Product | Type | Jobs | Investment | Square Feet | New | Exp |
|-----------------|---------------|--------------------------------|------------------|--------|---------------------------|-------|--------------|----------------------|------------------|-----|-----|
| 8 | Lake | Pacific Fuel Cell Corp | Willoughby | 335999 | Fuel cell parts | MF | 9 | \$8,000,000 | 24,000 | New | |
| 8 | Lake | Value Place Hotel | Mentor | 72111 | Hotel | HO | | \$4,000,000 | 43,000 | New | |
| 8 | Lake | Parker Hannifin | Wickliffe | 54171 | Industrial materials | R&D | 6 | \$3,000,000 | | | Exp |
| 8 | Lake | Ricerca Biosciences LLC | Concord Twp | 541712 | Bioscience research | R&D | | \$15,000,000 | | | Exp |
| 8 | Lake | Lincoln Electric Co | Mentor | 42384 | Welding equipment | DW | | \$5,000,000 | 100,000 | New | |
| 8 | Lake | PCC Airfoils LLC | Painesville | 333611 | Gas turbines | MF | 150 | \$32,800,000 | 96,800 | New | |
| 8 | Lake | Trust Technologies/Kilroy | Mentor | 333514 | Machine tools | MF | 89 | \$2,300,000 | | | Exp |
| 8 | Lake | Dyna Flex Inc | Mentor | 332912 | Hose couplings | MF | | \$1,000,000 | 20,000 | New | |
| 8 | Lorain | Equity Administrative Services | Elyria | 52412 | Back office services | OF | 75 | \$3,800,000 | 26,800 | | Exp |
| 8 | Lorain | All Pro Freight Systems | Avon | 48423 | Trucking | DW | | \$5,000,000 | 120,000 | New | |
| 8 | Lorain | Clovervale Farms Inc | Amherst | 311999 | Food products | MF | 200 | \$10,000,000 | 21,000 | | Exp |
| 8 | Lorain | Chemtron | Avon Lake | 56292 | Environmental remediation | MF | | | 56,000 | New | |
| 8 | Lorain | Value Place Hotel | Avon | 72111 | Hotel | HO | | \$4,000,000 | 43,000 | New | |
| 8 | Lorain | Value Place Hotel | North Ridgeville | 72111 | Hotel | HO | | \$4,000,000 | 42,000 | New | |
| 8 | Lorain | Johnston Aviation Co | Elyria | 488119 | Airport management | Trans | 13 | \$1,800,000 | | | Exp |
| 8 | Lorain | CAMACO Inc | Lorain | 332999 | Fabricated metal products | MF | | \$1,171,000 | | | Exp |
| 8 | Lorain | Shiloh | Lorain | 33637 | Stampings | MF | 25 | \$3,000,000 | | | New |
| 8 | Lorain | Elyria Foundry | Elyria | 331513 | Foundry | MF | 40 | \$3,000,000 | | | Exp |
| 8 | Lorain | Inservco | LaGrange | 334419 | Electronic circuits | MF | 35 | \$1,200,000 | 13,000 | | Exp |
| 8 | Lorain | Holiday Inn | Sheffield | 72111 | Hotel | HO | | \$5,000,000 | | | New |
| 8 | Lorain | Hinkley Lighting | Avon Lake | 335121 | Lighting fixtures | MF | | | 212,000 | New | |
| 8 | Lorain | TeleTech | Elyria | 561421 | Call center | CC | 840 | | | | New |
| Region 8 | Totals | | | | | | 3,374 | \$536,421,000 | 3,323,400 | | |

Workforce Analysis

Northern Ohio

Economic Development Region 8



*Cuyahoga, Geauga, Lake
and Lorain Counties*

Workforce Analysis
Economic Development Region 8



October
2007

Workforce Analysis Economic Development Region 8 Northern Ohio

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Executive Summary

- This region is contained completely within the Cleveland-Elyria-Mentor MSA. Nearly 77,000 workers in net commute into the region to work.
- 2006 regional population was 1.94 million residents, a decline of 3.4 percent since 1995. This region has an older age profile than the rest of Ohio and the U.S.
- Total nonfarm employment was about 989,700 in 2006, a decline of 6.6 percent since 2000 but posting a slight gain from 2005.
- Unemployment was 5.4 percent in 2006, a drop of 1.3 percentage points from the last peak in 2003.
- Regional per capita income in 2005 was \$35,591, having shown a 3.4 percent annual compound rate of growth from 1995. Geauga County had Ohio's highest per capita income level for 2005.
- Four thousand residential building permits were granted in 2006, a similar decline as experienced statewide. Average valuation climbed to about \$200,000, much higher than state and national averages.
- This EDR is projected to create 57,300 net new jobs between 2004 and 2014. The fastest-growing sectors expected to add a substantial number of jobs include health care and social assistance; administrative and waste services; professional, scientific and technical services; and wholesale trade.
- The fastest-growing occupational groups will be computer and mathematical; healthcare; business and financial operations; education, training and library occupations; and construction and extraction occupations. Office and administrative support occupations are projected to have the most average annual openings.
- Northern Ohio has a slightly higher level of overall educational attainment than the rest of the state.
- This region has 56 postsecondary training providers offering over 2,000 different programs. Over 19,000 certificates and degrees were awarded in 2006.
- The most important workplace skills through 2014 will be reading comprehension, critical thinking, coordination, speaking and active listening.

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.

The Northern Ohio EDR is contained entirely within the Cleveland-Elyria-Mentor MSA, so it is not surprising that this region draws a large number of commuters from outside the area. Cuyahoga County, which contains the main central city, has a net inflow of nearly 126,000 commuters. In total, only 4.7 percent of workers commute out of the region to work. This total excludes commuting between counties within the region.

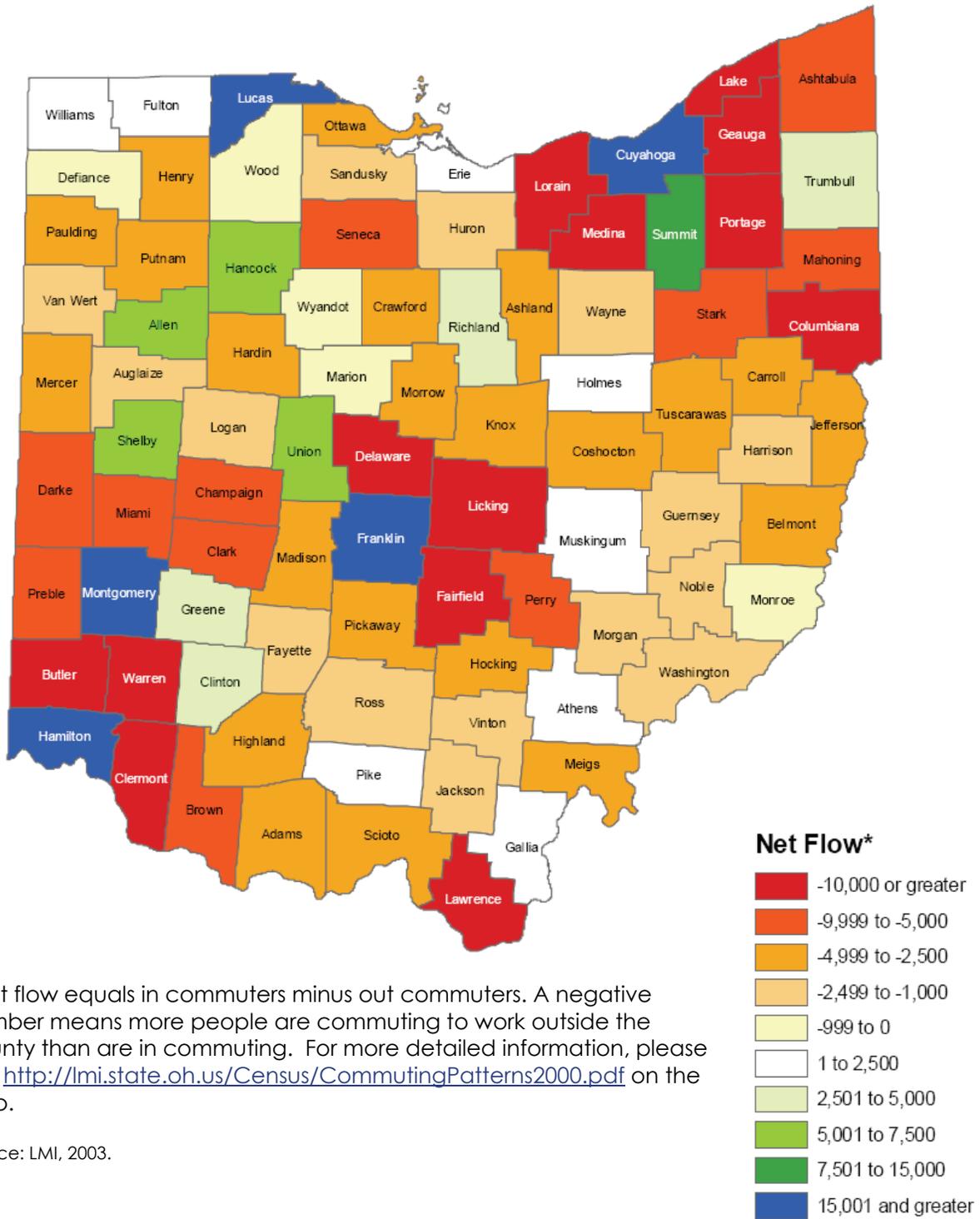
Figure 1: Regional Commuting Patterns

| 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 |
| Cuyahoga | 748,630 | 182,725 | 24.4% | 622,876 | 56,971 | 9.1% | 125,754 | 52.5% |
| Geauga | 34,417 | 15,379 | 44.7% | 44,499 | 25,461 | 57.2% | -10,082 | -24.7% |
| Lake | 102,913 | 30,045 | 29.2% | 116,830 | 43,962 | 37.6% | -13,917 | -18.8% |
| Lorain | 108,001 | 19,185 | 17.8% | 132,895 | 44,079 | 33.2% | -24,894 | -39.3% |
| Northern Ohio | 993,961 | 119,875 | 12.1% | 917,100 | 43,034 | 4.7% | 76,841 | 47.2% |

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



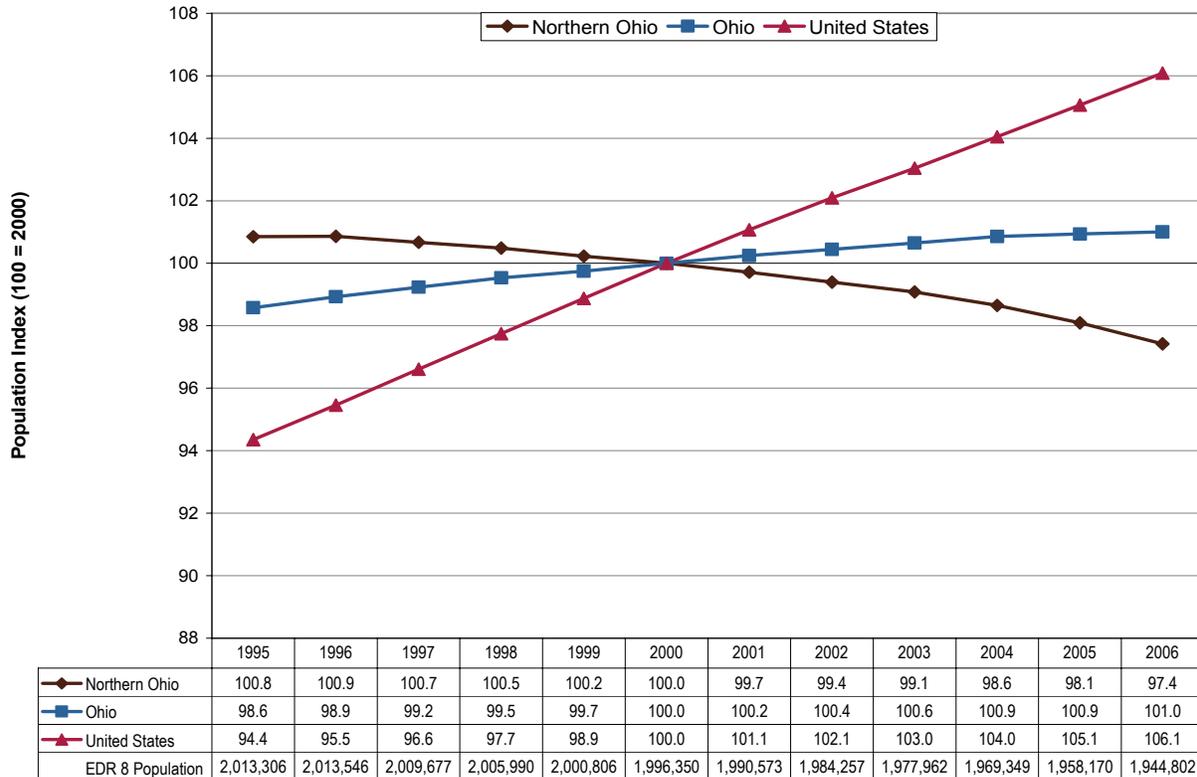
*Net flow equals in commuters minus out commuters. A negative number means more people are commuting to work outside the county than are in commuting. For more detailed information, please visit <http://lmi.state.oh.us/Census/CommutingPatterns2000.pdf> on the web.

Source: LMI, 2003.

II. Economic Indicators

Population Trends. Combined regional population in 2006 was approximately 1.94 million residents. While other EDRs around the state have grown since 1995, Northern Ohio has shed population in the last ten years, declining 3.4 percent during that time. For comparison, Ohio's population rose 2.5 percent while the national population rose 12.4 percent.

Figure 3: Population Trends, 1995-2006



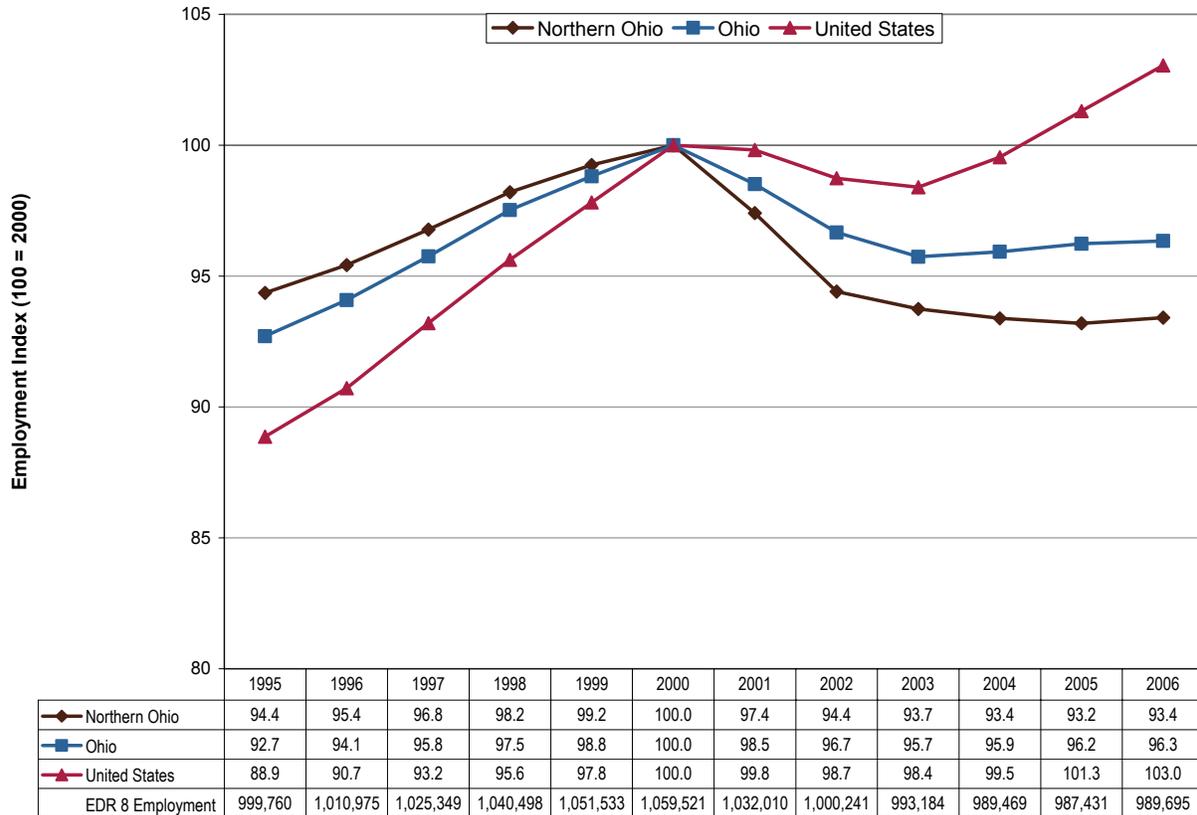
Demographic Traits. Population estimates for 2006, shown in Figure 4 below, reveal differences between this EDR and the rest of the state and nation. Northern Ohio is slightly older than the rest of Ohio, with smaller proportions younger than 25 (32.5%) and between 25 and 54 (41.4%). 26.1 percent of the region's population is 55 or older.

Figure 4: Demographic Characteristics, 2006

| | United States | | Ohio | | Northern Ohio | |
|--------------|--------------------|---------------|-------------------|---------------|------------------|---------------|
| Total | 299,238,484 | 100.0% | 11,478,006 | 100.0% | 1,944,802 | 100.0% |
| Under 5 | 20,417,636 | 6.8% | 734,735 | 6.4% | 119,924 | 6.2% |
| 5 to 14 | 40,337,284 | 13.5% | 1,534,571 | 13.4% | 263,111 | 13.5% |
| 15 to 24 | 42,435,426 | 14.2% | 1,597,458 | 13.9% | 249,830 | 12.8% |
| 25 to 34 | 40,415,979 | 13.5% | 1,459,394 | 12.7% | 218,206 | 11.2% |
| 35 to 44 | 43,666,950 | 14.6% | 1,621,662 | 14.1% | 278,449 | 14.3% |
| 45 to 54 | 43,278,174 | 14.5% | 1,738,480 | 15.1% | 308,377 | 15.9% |
| 55 to 64 | 31,586,683 | 10.6% | 1,259,712 | 11.0% | 222,203 | 11.4% |
| 65 and older | 37,260,352 | 12.5% | 1,531,994 | 13.3% | 284,702 | 14.6% |

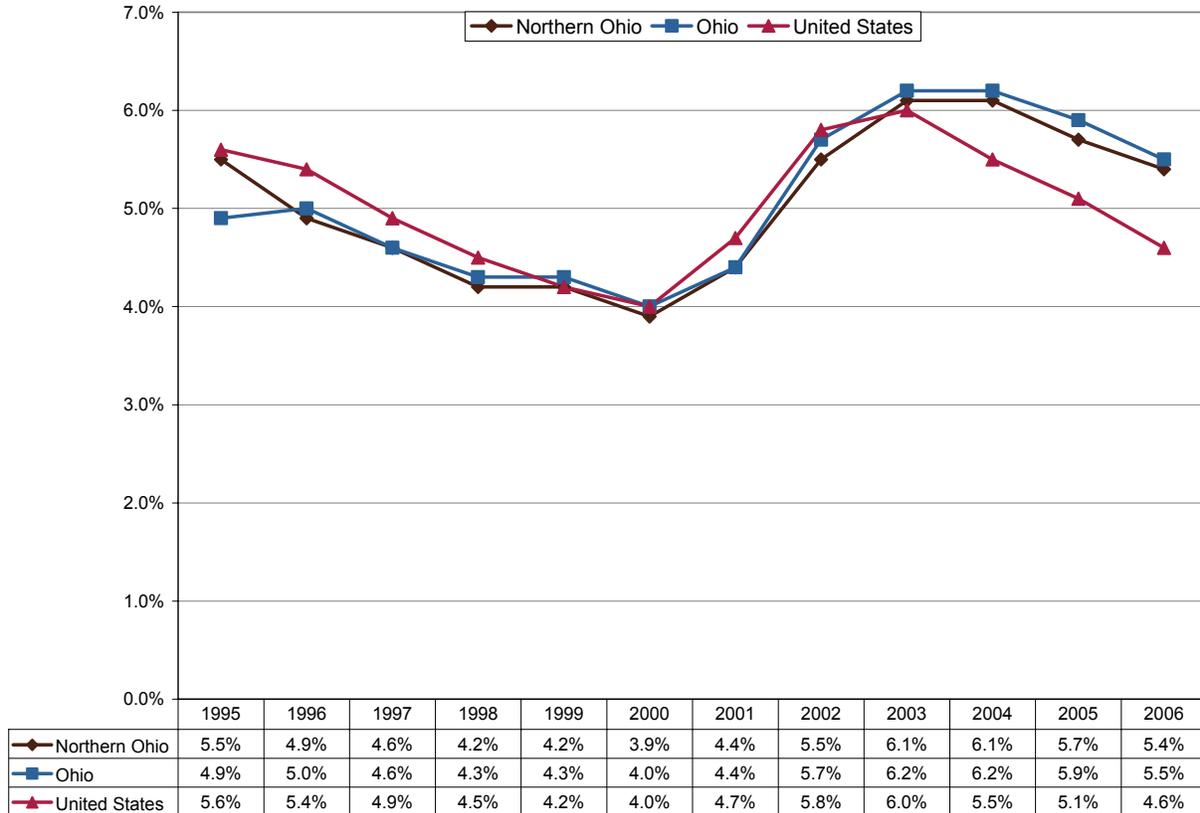
Employment Trends. Northern Ohio's nonfarm payroll employment was about 989,700 in 2006, 18.6 percent of the state total. As Figure 5 below indicates, Northern Ohio followed business cycle trends with a peak in employment in 2000 but has only recently begun recovery after a sharp decline in employment. Since 2000, total employment in this region has fallen 6.6 percent, compared with a 3.7 percent drop across Ohio. The United States as a whole has recovered from the recession, having grown 3.0 percent since 2000.

Figure 5: Nonfarm Employment Trends, 1995-2006



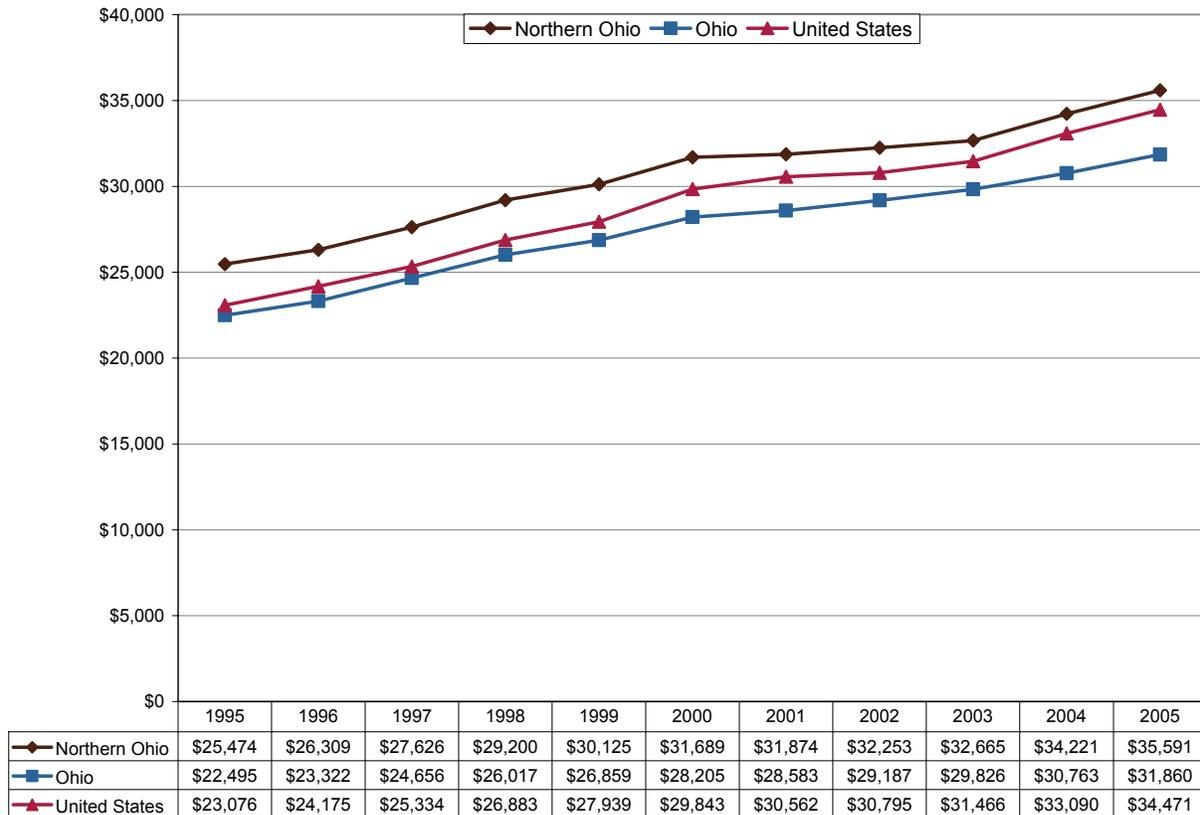
Unemployment Rate Trends. The unemployed are those in the non-institutional population 16 years or older who were not employed during the reference week but were actively seeking work, waiting to be called back to a job after a layoff, or waiting to report within 30 days to a new job. The regional unemployment rate for 2006 was 5.4 percent, about on par with the statewide rate. Since the last peak in 2003, the unemployment rate has fallen 1.3 percentage points, the same as the statewide decline. National unemployment was 4.6 percent in 2006, falling 1.4 percentage points since 2003.

Figure 6: Unemployment Trends, 1995-2006



Per Capita Income Trends. Northern Ohio's per capita income reached \$35,591 in 2005, higher than the state and national income figures that year. Urban areas tend to have higher income levels than rural areas, and this EDR is highly urbanized. In addition, the region includes Geauga County, which had Ohio's highest per capita income level for 2005. Since 1995, regional per capita income has grown at a 3.4 percent annual compound rate, compared with 3.5 percent across Ohio and 4.1 percent nationally.

Figure 7: Per Capita Income, 1995-2005



Residential Construction Permit Trends. There were about 4,000 residential building permits granted in Northern Ohio in 2006, a significant drop-off from the peak of nearly 6,000 permits granted in 2004. There has been a significant nationwide decline in construction activity in the last year. Building valuation has generally been much higher than nationwide.

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

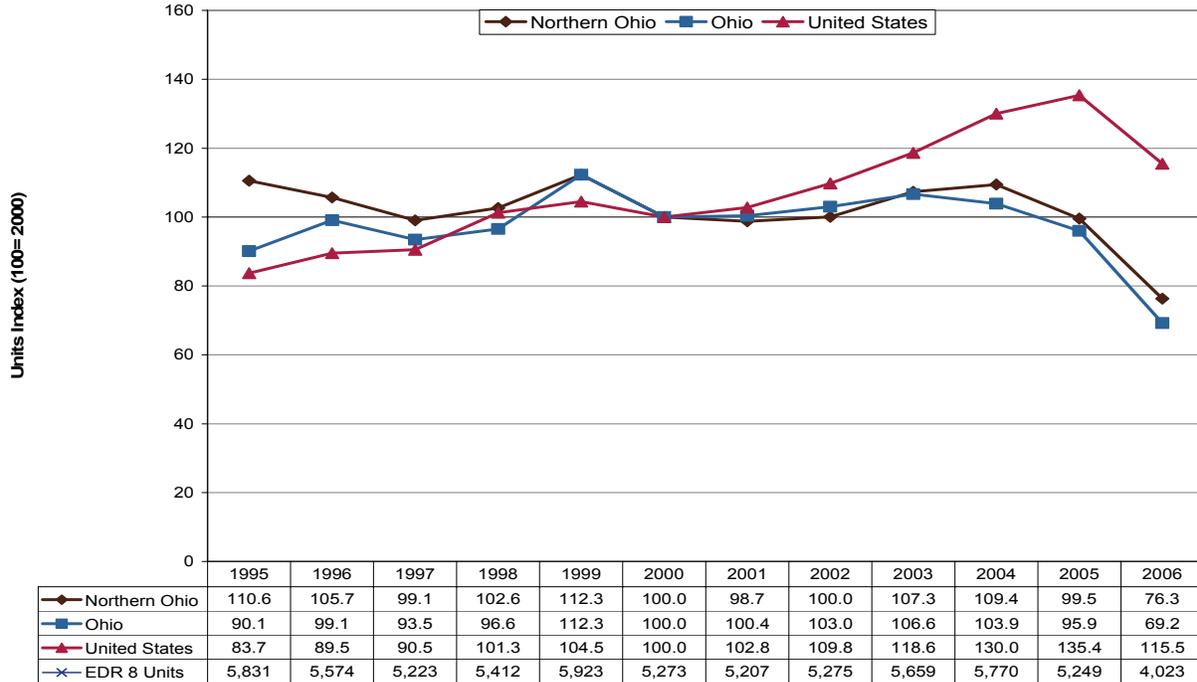
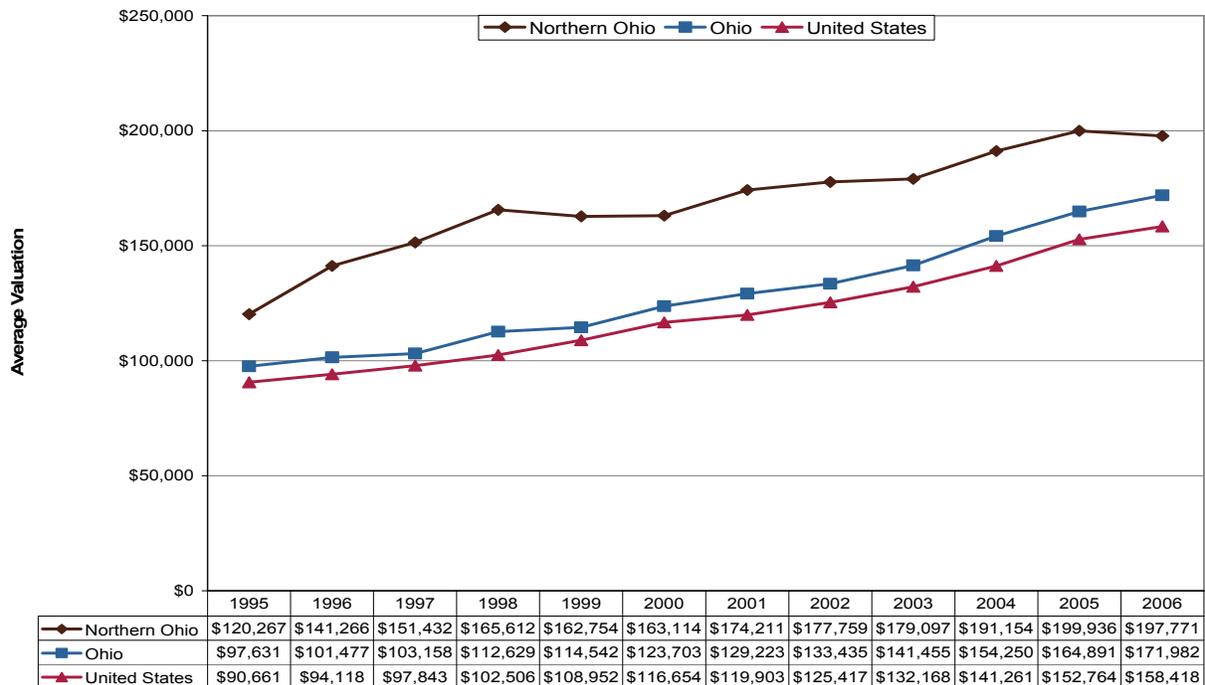


Figure 9: Valuation of New Residential Building Permits, 1995-2006



III. Employment Projections to 2014

Projections by Industry Sector. Figure 10 below shows projections from the Job Outlook to 2014 for Northern Ohio. As of 2004, 17.2 percent of local employment was in goods-producing industries such as construction and manufacturing. For comparison, the statewide average was 19.9 percent. Another 76.2 percent was in service-providing industries like health care and retail trade. The remainder consisted of the self-employed and private household workers.

From 2004 to 2014, this EDR is projected to create 57,300 net new jobs (5.3%), most of them in service-providing industries. Health care and social assistance will add the most new jobs: 19,600. Strong demand for health services will arise from an aging population and new emerging medical technologies. Professional and business services are also expected to grow rapidly and add many new jobs, including administrative and waste services (21.7%) and professional, scientific and technical services (15.6%). Wholesale trade employment is projected to increase by more than 5,000 (10.7%). Manufacturing job losses are projected to number about 15,000.

Figure 10: Northern 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 | 1,076,800 | 1,134,100 | 57,300 | 5.3% |
| Goods-Producing | 185,600 | 174,600 | -11,000 | -5.9% |
| Natural Resources and Mining | 5,500 | 5,000 | -500 | -9.1% |
| Construction | 39,000 | 43,900 | 4,900 | 12.6% |
| Manufacturing | 141,000 | 125,700 | -15,300 | -10.9% |
| Service-Providing | 820,400 | 888,800 | 68,400 | 8.3% |
| Trade, Transportation and Utilities | 183,100 | 191,500 | 8,400 | 4.6% |
| Wholesale Trade | 48,800 | 54,000 | 5,200 | 10.7% |
| Retail Trade | 105,100 | 106,400 | 1,300 | 1.2% |
| Information | 19,200 | 19,400 | 200 | 1.0% |
| Financial Activities | 78,600 | 81,200 | 2,600 | 3.3% |
| Finance and Insurance | 62,400 | 64,500 | 2,100 | 3.4% |
| Real Estate and Rental and Leasing | 16,200 | 16,700 | 500 | 3.1% |
| Professional and Business Services | 124,100 | 146,500 | 22,400 | 18.0% |
| Professional, Scientific & Technical Services | 49,500 | 57,200 | 7,700 | 15.6% |
| Management of Companies and Enterprises | 15,600 | 17,500 | 1,900 | 12.2% |
| Administrative and Waste Services | 59,000 | 71,800 | 12,800 | 21.7% |
| Education and Health Services | 154,800 | 177,800 | 23,000 | 14.9% |
| Educational Services | 23,000 | 26,500 | 3,500 | 15.2% |
| Health Care & Social Assistance | 131,800 | 151,400 | 19,600 | 14.9% |
| Leisure and Hospitality | 86,200 | 92,600 | 6,400 | 7.4% |
| Arts, Entertainment & Recreation | 13,400 | 15,300 | 1,900 | 14.2% |
| Accommodation and Food Services | 72,700 | 77,300 | 4,600 | 6.3% |
| Other Services | 41,800 | 44,300 | 2,500 | 6.0% |
| Government | 132,600 | 135,600 | 3,000 | 2.3% |
| Federal Government | 18,100 | 17,600 | -500 | -2.8% |
| State Government | 6,700 | 6,900 | 200 | 3.0% |
| Local Government | 107,800 | 111,000 | 3,200 | 3.0% |
| Self-Employed, Private Household and Unpaid Family Workers | 70,900 | 70,600 | -300 | -0.4% |

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

Between 2004 and 2014, healthcare occupations are projected to add the most jobs in this region: about 13,400 net new positions (14.2%). Again, this is related to strong demand for health services and concentration in this region. Computer and math occupations are expected to have the fastest growth: 24.0 percent. Other fast-growing occupational groups include business and financial operations (12.1%); education, training and library occupations (12.2%); and construction and extraction (11.2%).

On average there will be about 31,000 job openings per year in Northern Ohio. Many of the occupational groups with high average annual opening figures are those with high replacement needs such as food preparation and serving and sales. Note that although production occupations are expected to shed over 7,000 jobs during the period of analysis, there will also be a large number of openings. About three out of every four job openings are for replacement hires.

Figure 11: Northern Ohio Projections to 2014 by Occupational Group

| Occupational Group | 2004 Annual | 2014 Proj. | Change in Employment | | Avg. Ann. Openings |
|---|------------------|------------------|----------------------|-------------|--------------------|
| | Empl. | Empl. | 2004-2014 | Percent | |
| Total, All Occupations | 1,076,800 | 1,134,100 | 57,300 | 5.3% | 31,027 |
| Management Occupations | 50,330 | 54,320 | 3,990 | 7.9% | 1,317 |
| Business and Financial Operations Occupations | 56,480 | 63,310 | 6,830 | 12.1% | 1,684 |
| Computer and Mathematical Occupations | 21,040 | 26,090 | 5,050 | 24.0% | 786 |
| Architecture and Engineering Occupations | 17,740 | 18,940 | 1,200 | 6.8% | 524 |
| Life, Physical, and Social Science Occupations | 7,590 | 8,270 | 680 | 9.0% | 253 |
| Community and Social Services Occupations | 17,620 | 19,550 | 1,930 | 11.0% | 522 |
| Legal Occupations | 12,590 | 13,670 | 1,080 | 8.6% | 255 |
| Education, Training, and Library Occupations | 50,280 | 56,430 | 6,150 | 12.2% | 1,704 |
| Arts, Design, Entertainment, Sports, & Media Occ. | 16,820 | 18,180 | 1,360 | 8.1% | 448 |
| Healthcare Occupations, total | 94,370 | 107,740 | 13,370 | 14.2% | 3,037 |
| Protective Service Occupations | 25,830 | 27,590 | 1,760 | 6.8% | 894 |
| Food Preparation and Serving Related Occupations | 77,300 | 82,500 | 5,200 | 6.7% | 3,538 |
| Building & Grounds Cleaning & Maintenance Occup. | 36,930 | 39,310 | 2,380 | 6.4% | 970 |
| Personal Care and Service Occupations | 31,730 | 33,750 | 2,020 | 6.4% | 967 |
| Sales and Related Occupations | 114,370 | 117,200 | 2,830 | 2.5% | 3,894 |
| Office and Administrative Support Occupations | 186,890 | 183,610 | -3,280 | -1.8% | 4,211 |
| Farming, Fishing, and Forestry Occupations | 2,460 | 2,470 | 10 | 0.4% | 66 |
| Construction and Extraction Occupations | 42,470 | 47,240 | 4,770 | 11.2% | 1,284 |
| Installation, Maintenance, and Repair Occupations | 40,200 | 41,840 | 1,640 | 4.1% | 1,073 |
| Production Occupations | 97,910 | 90,790 | -7,120 | -7.3% | 2,347 |
| Transportation and Material Moving Occupations | 75,910 | 81,320 | 5,410 | 7.1% | 2,292 |

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 50 average annual openings. There are about 100 such occupations identified for Northern Ohio. Figure 12 shows these high prospect occupations arranged by required education and training.

Figure 12: High Prospect Occupations in Northern 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) | | | | | | | |
| 41-9041 | Telemarketers | 5,460 | 4,710 | -750 | -13.7% | 90 | \$12.53 |
| 43-3011 | Bill and Account Collectors | 3,790 | 4,390 | 600 | 15.8% | 132 | \$14.39 |
| 43-4031 | Court, Municipal, and License Clerks | 2,850 | 3,100 | 250 | 8.8% | 88 | \$15.43 |
| 43-4111 | Interviewers, except Eligibility and Loan | 2,390 | 2,700 | 310 | 13.0% | 93 | \$12.85 |
| 43-5052 | Postal Service Mail Carriers | 2,780 | 2,630 | -150 | -5.4% | 87 | \$23.56 |
| 43-5053 | Postal Service Mail Sorters/Proc/Proc Mach. Op. | 1,920 | 1,820 | -100 | -5.2% | 51 | \$21.61 |
| 43-5061 | Production, Planning, and Expediting Clerks | 2,830 | 2,770 | -60 | -2.1% | 68 | \$21.00 |
| 43-5071 | Shipping, Receiving, and Traffic Clerks | 6,900 | 6,640 | -260 | -3.8% | 142 | \$14.18 |
| 51-2022 | Electrical & Electronic Equipment Assemblers | 2,980 | 2,450 | -530 | -17.8% | 70 | \$12.53 |
| 53-3033 | Truck Drivers, Light or Delivery Services | 8,160 | 8,880 | 720 | 8.8% | 147 | \$14.79 |
| 53-7051 | Industrial Truck and Tractor Operators | 4,320 | 4,440 | 120 | 2.8% | 94 | \$14.54 |
| Occupations Requiring Moderate-Term On-the-Job Training (one to twelve months combined experience/training) | | | | | | | |
| 21-1093 | Social and Human Service Assistants | 1,620 | 1,920 | 300 | 18.5% | 59 | \$12.34 |
| 31-9091 | Dental Assistants | 2,130 | 2,700 | 570 | 26.8% | 117 | \$13.46 |
| 31-9092 | Medical Assistants | 3,090 | 4,300 | 1,210 | 39.2% | 178 | \$12.06 |
| 33-3012 | Correctional Officers and Jailers | 3,570 | 3,620 | 50 | 1.4% | 79 | \$16.61 |
| 41-4011 | Sales Rep., Wholesale & Mfg, Tech./Sci. Prod. | 3,110 | 3,550 | 440 | 14.1% | 126 | \$33.06 |
| 41-4012 | Sales Rep., Wholesale/Mfg, ex. Tech./Sci. Prod. | 14,130 | 15,770 | 1,640 | 11.6% | 535 | \$31.07 |
| 43-3021 | Billing & Posting Clerks & Machine Operators | 4,380 | 4,120 | -260 | -5.9% | 74 | \$14.50 |
| 43-3031 | Bookkeeping, Accounting, and Auditing Clerks | 15,350 | 15,000 | -350 | -2.3% | 287 | \$15.18 |
| 43-3051 | Payroll and Timekeeping Clerks | 1,720 | 1,870 | 150 | 8.7% | 61 | \$16.25 |
| 43-4051 | Customer Service Representatives | 17,690 | 20,110 | 2,420 | 13.7% | 505 | \$15.41 |
| 43-6011 | Executive Secretaries & Administrative Assistants | 12,410 | 12,850 | 440 | 3.5% | 282 | \$19.33 |
| 43-6014 | Secretaries, except Legal, Medical & Executive | 15,010 | 13,710 | -1,300 | -8.7% | 288 | \$14.49 |
| 43-9021 | Data Entry Keyers | 2,580 | 2,500 | -80 | -3.1% | 61 | \$12.83 |
| 43-9041 | Insurance Claims and Policy Processing Clerks | 3,300 | 3,300 | 0 | 0.0% | 53 | \$14.02 |
| 47-2061 | Construction Laborers | 5,690 | 5,870 | 180 | 3.2% | 94 | \$19.28 |
| 47-2073 | Operating Engineers & Other Con. Equip. Op. | 1,750 | 1,920 | 170 | 9.7% | 62 | \$24.37 |
| 47-2141 | Painters, Construction and Maintenance | 2,680 | 3,020 | 340 | 12.7% | 75 | \$17.37 |
| 47-2181 | Roofers | 1,440 | 1,700 | 260 | 18.1% | 59 | \$17.48 |
| 49-9042 | Maintenance and Repair Workers, General | 9,910 | 10,490 | 580 | 5.9% | 248 | \$16.78 |
| 51-2092 | Team Assemblers | 9,520 | 9,370 | -150 | -1.6% | 246 | \$12.56 |
| 51-4031 | Cutting/Punching/Press Machine S/O/T, M/P | 4,260 | 3,300 | -960 | -22.5% | 99 | \$14.22 |
| 51-4072 | Molding/Coremaking/Casting Mach. S/O/T, M/P | 3,200 | 2,690 | -510 | -15.9% | 80 | \$17.79 |
| 51-9023 | Mixing/Blending Mach. Setter/Operator/Tenders | 2,290 | 2,100 | -190 | -8.3% | 60 | \$16.01 |
| 51-9061 | Inspectors/Testers/Sorters/Samplers/Weighers | 6,140 | 5,640 | -500 | -8.1% | 140 | \$16.69 |
| 53-3032 | Truck Drivers, Heavy and Tractor-Trailer | 10,050 | 11,330 | 1,280 | 12.7% | 292 | \$18.59 |
| Occupations Requiring Long-Term On-the-Job Training (twelve months or more combined experience/training) | | | | | | | |
| 33-2011 | Fire Fighters | 3,280 | 3,850 | 570 | 17.4% | 152 | \$17.39 |
| 33-3051 | Police and Sheriff's Patrol Officers | 3,870 | 4,220 | 350 | 9.0% | 135 | \$23.59 |
| 47-2031 | Carpenters | 8,060 | 9,300 | 1,240 | 15.4% | 255 | \$19.49 |
| 47-2111 | Electricians | 5,430 | 5,910 | 480 | 8.8% | 155 | \$26.23 |

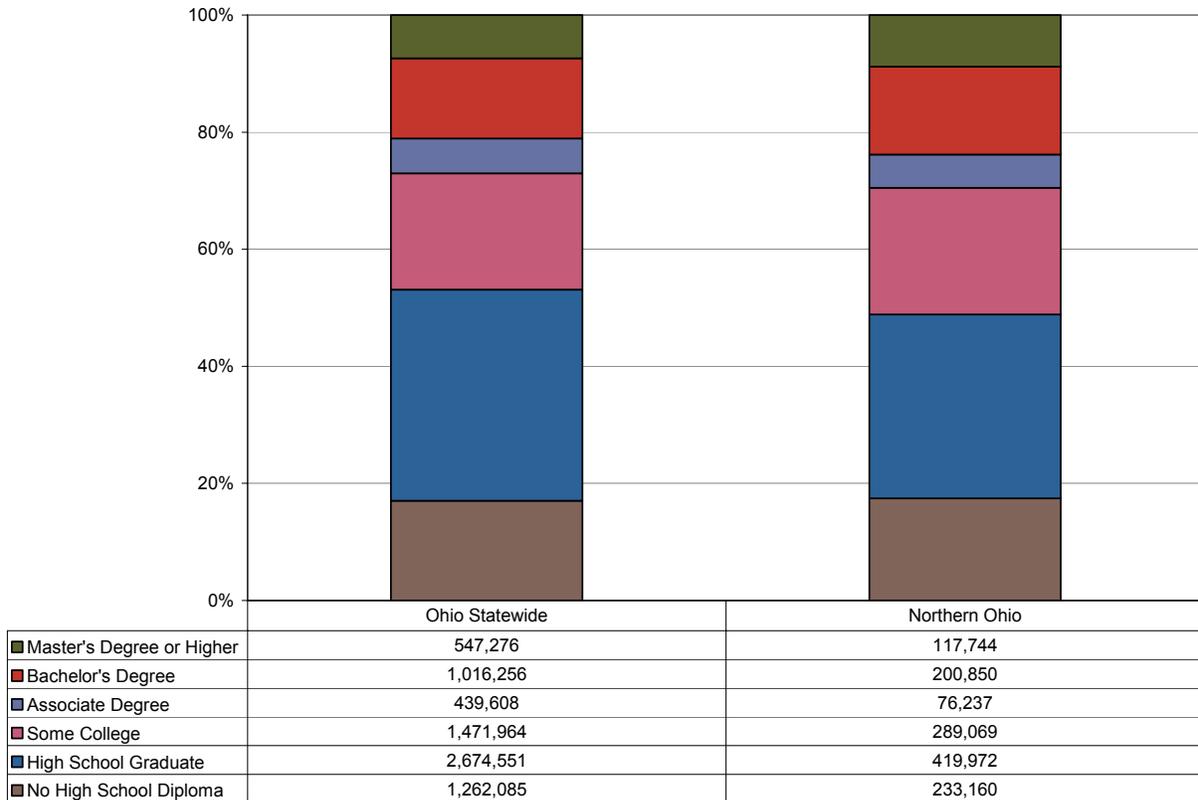
| Code | Occupational Title** | Employment | | Change in Employment | | Avg. Ann. Openings | 2006 Avg. Wage* |
|---|---|-------------|----------------|----------------------|---------|--------------------|-----------------|
| | | 2004 Annual | 2014 Projected | 2004 - 2014 | Percent | | |
| Occupations Requiring Long-Term On-the-Job Training (twelve months or more combined experience/training) [con't] | | | | | | | |
| 47-2152 | Plumbers, Pipefitters and Steamfitters | 2,510 | 2,810 | 300 | 12.0% | 88 | \$26.55 |
| 49-9021 | Heating, AC, & Refrigeration Mechanics/Installers | 1,570 | 1,880 | 310 | 19.7% | 52 | \$18.84 |
| 51-4041 | Machinists | 6,390 | 6,280 | -110 | -1.7% | 149 | \$16.15 |
| 51-4111 | Tool and Die Makers | 2,480 | 2,230 | -250 | -10.1% | 56 | \$22.52 |
| 51-4121 | Welders, Cutters, Solderers, and Brazers | 2,890 | 2,750 | -140 | -4.8% | 82 | \$16.79 |
| Occupations Requiring Work Experience in a Related Occupation | | | | | | | |
| 11-9051 | Food Service Managers | 2,690 | 2,890 | 200 | 7.4% | 64 | \$21.07 |
| 13-1023 | Purchasing Agents, ex. Whole., Retail, & Farm | 2,330 | 2,360 | 30 | 1.3% | 61 | \$25.17 |
| 13-1051 | Cost Estimators | 1,850 | 2,090 | 240 | 13.0% | 66 | \$25.72 |
| 35-1011 | Chefs and Head Cooks | 1,440 | 1,540 | 100 | 6.9% | 53 | \$16.45 |
| 35-1012 | FL Sup/Mgrs of Food Prep. & Serving Workers | 4,510 | 4,870 | 360 | 8.0% | 143 | \$13.51 |
| 41-1011 | First-Line Superv./Mgrs of Retail Sales Workers | 11,240 | 11,240 | 0 | 0.0% | 202 | \$19.50 |
| 41-1012 | First-Line Sup./Mgrs of Non-Retail Sales Workers | 4,110 | 4,080 | -30 | -0.7% | 78 | \$34.73 |
| 43-1011 | First-Line Sup/Mgrs of Office & Admin. Support | 8,630 | 8,580 | -50 | -0.6% | 185 | \$22.86 |
| 47-1011 | First-Line Sup/Mgrs of Con. Trades/Extract. Work | 3,320 | 3,730 | 410 | 12.3% | 97 | \$29.97 |
| 49-1011 | FL Sup/Mgrs of Mechanics/Installers/Repairers | 3,350 | 3,530 | 180 | 5.4% | 102 | \$27.16 |
| 51-1011 | FL Sup/Mgrs of Production/Operating Workers | 7,150 | 6,860 | -290 | -4.1% | 150 | \$26.40 |
| 53-1031 | FL Sup/Mgr of Trans/Mat.-Mov. Mach & Veh Op | 1,530 | 1,700 | 170 | 11.1% | 53 | \$24.16 |
| Occupations Requiring Postsecondary Vocational Training | | | | | | | |
| 29-2061 | Licensed Practical & Licensed Vocat. Nurses | 7,050 | 7,520 | 470 | 6.7% | 201 | \$19.36 |
| 31-9011 | Massage Therapists | 1,660 | 1,840 | 180 | 10.8% | 50 | \$15.13 |
| 39-5012 | Hairdressers, Hairstylists and Cosmetologists | 7,170 | 7,800 | 630 | 8.8% | 201 | \$12.93 |
| 43-6012 | Legal Secretaries | 2,940 | 3,220 | 280 | 9.5% | 84 | \$18.84 |
| 43-6013 | Medical Secretaries | 6,610 | 7,100 | 490 | 7.4% | 176 | \$13.57 |
| 49-3023 | Automotive Service Technicians and Mechanics | 6,150 | 6,590 | 440 | 7.2% | 208 | \$17.24 |
| 49-3031 | Bus & Truck Mechanics & Diesel Engine Spec. | 1,860 | 2,080 | 220 | 11.8% | 70 | \$19.55 |
| Occupations Requiring an Associate Degree | | | | | | | |
| 15-1041 | Computer Support Specialists | 3,140 | 3,620 | 480 | 15.3% | 87 | \$20.56 |
| 23-2011 | Paralegals and Legal Assistants | 2,060 | 2,490 | 430 | 20.9% | 60 | \$22.95 |
| 29-1111 | Registered Nurses | 23,510 | 28,500 | 4,990 | 21.2% | 991 | \$28.03 |
| 29-2034 | Radiologic Technologists and Technicians | 1,710 | 1,990 | 280 | 16.4% | 60 | \$20.44 |
| Occupations Requiring a Bachelor's Degree | | | | | | | |
| 11-9021 | Construction Managers | 1,630 | 1,840 | 210 | 12.9% | 51 | \$43.82 |
| 13-1071 | Employment, Recruitment & Placement Specialists | 1,440 | 1,750 | 310 | 21.5% | 53 | \$23.04 |
| 13-1073 | Training and Development Specialists | 2,200 | 2,590 | 390 | 17.7% | 73 | \$25.03 |
| 13-2011 | Accountants and Auditors | 12,460 | 13,720 | 1,260 | 10.1% | 361 | \$27.00 |
| 13-2051 | Financial Analysts | 2,180 | 2,510 | 330 | 15.1% | 65 | \$32.99 |
| 13-2072 | Loan Officers | 2,720 | 2,840 | 120 | 4.4% | 56 | \$26.71 |
| 15-1021 | Computer Programmers | 2,940 | 2,900 | -40 | -1.4% | 69 | \$31.20 |
| 15-1031 | Computer Software Engineers, Applications | 3,310 | 4,790 | 1,480 | 44.7% | 181 | \$33.66 |
| 15-1032 | Comp. Software Engineers, Systems Software | 1,450 | 1,990 | 540 | 37.2% | 68 | \$35.59 |
| 15-1051 | Computer Systems Analysts | 3,140 | 3,780 | 640 | 20.4% | 100 | \$33.70 |
| 15-1071 | Network and Computer Systems Administrators | 2,380 | 3,100 | 720 | 30.3% | 98 | \$29.89 |
| 15-1081 | Network Systems & Data Comm. Analysts | 1,550 | 2,300 | 750 | 48.4% | 93 | \$32.03 |
| 17-2112 | Industrial Engineers | 2,100 | 2,320 | 220 | 10.5% | 73 | \$32.28 |
| 17-2141 | Mechanical Engineers | 2,360 | 2,440 | 80 | 3.4% | 72 | \$29.75 |
| 19-3021 | Market Research Analysts | 1,730 | 1,970 | 240 | 13.9% | 69 | \$31.64 |

| Code | Occupational Title** | Employment | | Change in Employment | | Avg. Ann. Openings | 2006 Avg. Wage* |
|---|---|-------------|----------------|----------------------|---------|--------------------|-----------------|
| | | 2004 Annual | 2014 Projected | 2004 - 2014 | Percent | | |
| Occupations Requiring a Bachelor's Degree [con't] | | | | | | | |
| 21-1021 | Child, Family and School Social Workers | 3,260 | 3,520 | 260 | 8.0% | 82 | \$19.79 |
| 21-1022 | Medical and Public Health Social Workers | 1,620 | 1,880 | 260 | 16.0% | 54 | \$18.68 |
| 25-2021 | Elementary School Teachers, ex.Special Ed.† | 7,680 | 8,350 | 670 | 8.7% | 236 | \$49,578 |
| 25-2022 | Middle School Teachers, ex. Special & Voc. Ed.† | 4,850 | 5,040 | 190 | 3.9% | 126 | \$50,651 |
| 25-2031 | Secondary Sch. Teachers, ex. Spec. & Voc. Ed.† | 8,960 | 9,530 | 570 | 6.4% | 309 | \$44,904 |
| 25-2043 | Special Education Teachers, Secondary School† | 1,720 | 1,920 | 200 | 11.6%† | 61 | \$50,060 |
| 29-2011 | Medical and Clinical Laboratory Technologists | 1,590 | 1,730 | 140 | 8.8% | 57 | \$21.32 |
| 41-3021 | Insurance Sales Agents | 4,040 | 4,210 | 170 | 4.2% | 114 | \$18.74 |
| 41-3031 | Securities/Commodities/Fin. Serv. Sales Agents | 3,130 | 3,390 | 260 | 8.3% | 61 | \$38.44 |
| Occupations Requiring Work Experience plus a Bachelor's Degree | | | | | | | |
| 11-1011 | Chief Executives | 3,240 | 3,500 | 260 | 8.0% | 87 | \$77.27 |
| 11-1021 | General and Operations Managers | 12,010 | 13,050 | 1,040 | 8.7% | 331 | \$50.33 |
| 11-2022 | Sales Managers | 1,980 | 2,200 | 220 | 11.1% | 59 | \$49.37 |
| 11-3021 | Computer and Information Systems Managers | 1,680 | 1,960 | 280 | 16.7% | 59 | \$48.86 |
| 11-3031 | Financial Managers | 3,350 | 3,570 | 220 | 6.6% | 70 | \$50.46 |
| 11-9032 | Education Admin., Elem. & Secondary School† | 1,870 | 1,980 | 110 | 5.9% | 57 | \$70,655 |
| 11-9111 | Medical and Health Services Managers | 1,980 | 2,270 | 290 | 14.6% | 68 | \$35.31 |
| 13-1111 | Management Analysts | 4,280 | 4,740 | 460 | 10.7% | 105 | \$32.84 |
| Occupations Requiring a First Professional Degree | | | | | | | |
| 23-1011 | Lawyers | 7,530 | 8,400 | 870 | 11.6% | 184 | \$52.95 |
| 29-1051 | Pharmacists | 2,020 | 2,390 | 370 | 18.3% | 76 | \$45.73 |
| *May 2005 wages aged to April 2006. Wages in <i>italics</i> are for the Cleveland-Elyria-Mentor MSA 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 | | | | | | | |
| Source: Ohio Department of Job and Family Services, Bureau of Labor Market Information, 2007a. | | | | | | | |

IV. Education & Training

Educational Attainment. As Figure 13 below indicates, the Northern Ohio EDR has a slightly higher level of educational attainment than the rest of the state. The region has comparable proportions of adults 25 and older with some college education and with associate's degrees as the rest of the state. 23.8 percent of adults have a bachelor's degree or better, compared with 21.1 percent across Ohio.

Figure 13: Educational Attainment, 2000



Institutions and Degree Completions. There are about 56 postsecondary training providers in Northern Ohio offering over 2,000 different programs: 6 public adult schools with vocational programs; 19 two-year technical and community colleges; 19 four-year colleges and universities; and 12 private business and technical schools. From 2005 to 2006, the number of completers from these institutions increased by more than 500. The most growth during this period was in bachelor's degrees and award programs less than two years long. Details on educational institutions and program completers are available in Appendices E and F, respectively.

Figure 14: Degree Completions in Northern Ohio

| Award Type | 2005 | 2006 | Net Growth |
|----------------------------|---------------|---------------|------------|
| Postsec. Awards; < 2 yrs. | 3,998 | 4,117 | 119 |
| Associate's Degrees | 4,026 | 4,098 | 72 |
| Bachelor's Degrees | 5,996 | 6,273 | 277 |
| Master's Degrees | 3,454 | 3,382 | -72 |
| Doctor's Degrees | 243 | 281 | 38 |
| First-Professional Degrees | 678 | 701 | 23 |
| All Other Awards | 324 | 378 | 54 |
| Totals | 18,719 | 19,230 | 511 |

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 Northern 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.

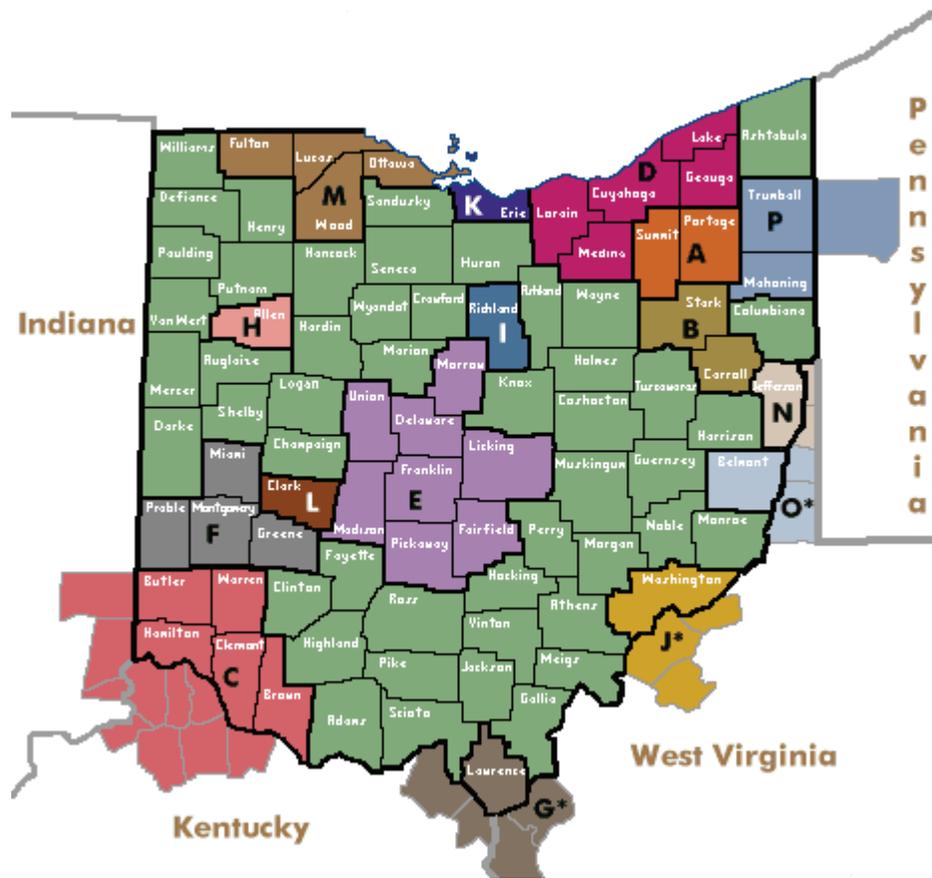
As is typical for much of the state, reading comprehension will be the most important workplace skill in the coming years. It will be required in 54.4 percent of all projected job openings and also has the largest gap between supply and projected demand. Other important skills include critical thinking, coordination, speaking and active listening.

In general, the Northern Ohio EDR will require a much more skilled workforce than other regions in the state. Of the top-ten ranked workplace skills in the area, each will be required in a greater proportion of projected openings than statewide, especially active listening—demanded in 52.9 percent of openings compared with only 46.6 percent across Ohio. None of the workplace skills will be in lower demand here.

Figure 15: Projected Skills Needs for 2014

| Skill | Northern Ohio | | | | Ohio | |
|-----------------------------------|---------------|----------------|-----------|-------------|----------------|-----------|
| | Supply Rank | Percent Demand | Gap Index | Repl. Index | Percent Demand | Gap Index |
| Reading Comprehension | 1 | 54.4% | 100 | 70 | 48.3% | 100 |
| Critical Thinking | 3 | 47.1% | 97 | 69 | 41.9% | 94 |
| Coordination | 6 | 40.9% | 94 | 67 | 36.8% | 89 |
| Speaking | 4 | 43.7% | 91 | 68 | 38.4% | 91 |
| Active Listening | 2 | 52.9% | 89 | 71 | 46.6% | 97 |
| Monitoring | 7 | 39.2% | 86 | 67 | 34.3% | 83 |
| Active Learning | 5 | 41.8% | 83 | 69 | 37.4% | 86 |
| Writing | 8 | 38.3% | 80 | 68 | 33.6% | 80 |
| Time Management | 10 | 35.7% | 77 | 68 | 31.6% | 74 |
| Learning Strategies | 11 | 35.6% | 74 | 68 | 31.3% | 71 |
| Instructing | 9 | 37.2% | 71 | 69 | 34.1% | 77 |
| Social Perceptiveness | 12 | 31.7% | 69 | 68 | 28.6% | 69 |
| Service Orientation | 13 | 28.5% | 66 | 67 | 25.4% | 66 |
| Judgment and Decision Making | 14 | 26.8% | 63 | 67 | 23.6% | 63 |
| Persuasion | 15 | 24.9% | 60 | 67 | 22.2% | 60 |
| Complex Problem Identification | 16 | 24.4% | 57 | 67 | 21.3% | 57 |
| Mathematics | 17 | 21.3% | 54 | 67 | 18.9% | 54 |
| Equipment Selection | 18 | 16.9% | 51 | 71 | 16.0% | 51 |
| Negotiation | 19 | 13.5% | 49 | 71 | 12.0% | 49 |
| Management of Personnel Resources | 21 | 10.6% | 46 | 73 | 10.1% | 46 |
| Troubleshooting | 20 | 12.4% | 43 | 70 | 11.0% | 43 |
| Installation | 23 | 8.4% | 40 | 68 | 7.6% | 40 |
| Operations Analysis | 29 | 5.9% | 37 | 59 | 5.2% | 31 |
| Systems Evaluation | 30 | 5.4% | 34 | 54 | 4.3% | 29 |
| Systems Analysis | 33 | 4.1% | 31 | 51 | 3.2% | 26 |
| Management of Financial Resources | 24 | 7.2% | 29 | 71 | 6.6% | 37 |
| Equipment Maintenance | 22 | 9.5% | 26 | 75 | 9.3% | 34 |
| Technology Design | 34 | 3.6% | 23 | 51 | 2.9% | 17 |
| Science | 32 | 4.2% | 20 | 68 | 3.9% | 23 |
| Repairing | 28 | 6.1% | 17 | 72 | 5.9% | 20 |
| Management of Material Resources | 31 | 3.9% | 14 | 68 | 3.5% | 14 |
| Programming | 35 | 1.2% | 11 | 42 | 1.0% | 9 |
| Quality Control | 25 | 7.2% | 9 | 74 | 6.0% | 11 |
| Operation and Control | 27 | 6.1% | 6 | 79 | 5.4% | 6 |
| Operation Monitoring | 26 | 7.5% | 3 | 82 | 6.8% | 3 |

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

| Cuyahoga | | | Percent of workers that work outside the county - | | | 9.1% | | | | | |
|--|--------|------|---|---------|-----------------|---|--|--------|---------|--|--|
| | | | Average commute time in minutes - | | | 24.4 | | | | | |
| Number of workers 16+ years of age living in Cuyahoga County | | | 622,876 | | | Number of workers 16+ years of age working in Cuyahoga County | | | 748,630 | | |
| Commute Out To | | | Number | Percent | Commute In From | | | Number | Percent | | |
| Lake Co. OH | 15,692 | 2.5% | Lorain Co. OH | 36,888 | 4.9% | | | | | | |
| Summit Co. OH | 14,207 | 2.3% | Lake Co. OH | 36,741 | 4.9% | | | | | | |
| Lorain Co. OH | 9,289 | 1.5% | Summit Co. OH | 34,476 | 4.6% | | | | | | |
| Medina Co. OH | 4,795 | 0.8% | Medina Co. OH | 26,572 | 3.5% | | | | | | |
| Geauga Co. OH | 2,973 | 0.5% | Geauga Co. OH | 16,676 | 2.2% | | | | | | |
| Portage Co. OH | 2,632 | 0.4% | Portage Co. OH | 11,934 | 1.6% | | | | | | |
| Stark Co. OH | 565 | 0.1% | Ashtabula Co. OH | 2,683 | 0.4% | | | | | | |
| Franklin Co. OH | 524 | 0.1% | Stark Co. OH | 2,443 | 0.3% | | | | | | |
| Ashtabula Co. OH | 397 | 0.1% | Trumbull Co. OH | 1,976 | 0.3% | | | | | | |
| Cook Co. IL | 298 | 0.0% | Wayne Co. OH | 1,193 | 0.2% | | | | | | |

| Geauga | | | Percent of workers that work outside the county - | | | 57.2% | | | | | |
|--|--------|-------|---|---------|-----------------|---|--|--------|---------|--|--|
| | | | Average commute time in minutes - | | | 27.0 | | | | | |
| Number of workers 16+ years of age living in Geauga County | | | 44,499 | | | Number of workers 16+ years of age working in Geauga County | | | 34,417 | | |
| Commute Out To | | | Number | Percent | Commute In From | | | Number | Percent | | |
| Cuyahoga Co. OH | 16,676 | 37.5% | Trumbull Co. OH | 3,900 | 11.3% | | | | | | |
| Lake Co. OH | 5,276 | 11.9% | Lake Co. OH | 3,147 | 9.1% | | | | | | |
| Summit Co. OH | 1,130 | 2.5% | Cuyahoga Co. OH | 2,973 | 8.6% | | | | | | |
| Portage Co. OH | 1,002 | 2.3% | Ashtabula Co. OH | 2,265 | 6.6% | | | | | | |
| Trumbull Co. OH | 310 | 0.7% | Portage Co. OH | 1,989 | 5.8% | | | | | | |
| Ashtabula Co. OH | 257 | 0.6% | Summit Co. OH | 563 | 1.6% | | | | | | |
| Mahoning Co. OH | 105 | 0.2% | Mahoning Co. OH | 107 | 0.3% | | | | | | |
| Stark Co. OH | 82 | 0.2% | Lorain Co. OH | 70 | 0.2% | | | | | | |
| Lorain Co. OH | 68 | 0.2% | Mercer Co. PA | 40 | 0.1% | | | | | | |
| Medina Co. OH | 43 | 0.1% | Medina Co. OH | 32 | 0.1% | | | | | | |

| Lake | | | Percent of workers that work outside the county - | | | 37.6% | | | | | |
|--|--------|-------|---|---------|-----------------|---|--|--------|---------|--|--|
| | | | Average commute time in minutes - | | | 22.9 | | | | | |
| Number of workers 16+ years of age living in Lake County | | | 116,830 | | | Number of workers 16+ years of age working in Lake County | | | 102,913 | | |
| Commute Out To | | | Number | Percent | Commute In From | | | Number | Percent | | |
| Cuyahoga Co. OH | 36,741 | 31.4% | Cuyahoga Co. OH | 15,692 | 15.2% | | | | | | |
| Geauga Co. OH | 3,147 | 2.7% | Ashtabula Co. OH | 5,775 | 5.6% | | | | | | |
| Ashtabula Co. OH | 1,200 | 1.0% | Geauga Co. OH | 5,276 | 5.1% | | | | | | |
| Summit Co. OH | 1,157 | 1.0% | Summit Co. OH | 1,148 | 1.1% | | | | | | |
| Portage Co. OH | 307 | 0.3% | Portage Co. OH | 436 | 0.4% | | | | | | |
| Lorain Co. OH | 277 | 0.2% | Lorain Co. OH | 342 | 0.3% | | | | | | |
| Trumbull Co. OH | 119 | 0.1% | Medina Co. OH | 307 | 0.3% | | | | | | |
| Stark Co. OH | 108 | 0.1% | Stark Co. OH | 142 | 0.1% | | | | | | |
| Medina Co. OH | 65 | 0.1% | Trumbull Co. OH | 135 | 0.1% | | | | | | |
| Franklin Co. OH | 43 | 0.0% | Erie Co. PA | 62 | 0.1% | | | | | | |

| Lorain | | | Percent of workers that work outside the county - | | | 33.2% | | | | | |
|---|--|--|---|---------|--|---|--|--|---------|---------|--|
| | | | Average commute time in minutes - | | | 22.8 | | | | | |
| Number of workers 16+ years of age living in Lorain County. | | | 132,895 | | | Number of workers 16+ years of age working in Lorain County | | | 108,001 | | |
| Commute Out To | | | Number | Percent | | Commute In From | | | Number | Percent | |
| Cuyahoga Co. OH | | | 36,888 | 27.8% | | Cuyahoga Co. OH | | | 9,289 | 8.6% | |
| Medina Co. OH | | | 1,874 | 1.4% | | Erie Co. OH | | | 3,923 | 3.6% | |
| Erie Co. OH | | | 1,594 | 1.2% | | Huron Co. OH | | | 1,501 | 1.4% | |
| Summit Co. OH | | | 970 | 0.7% | | Medina Co. OH | | | 1,418 | 1.3% | |
| Huron Co. OH | | | 421 | 0.3% | | Ashland Co. OH | | | 648 | 0.6% | |
| Lake Co. OH | | | 342 | 0.3% | | Summit Co. OH | | | 588 | 0.5% | |
| Portage Co. OH | | | 182 | 0.1% | | Lake Co. OH | | | 277 | 0.3% | |
| Ashtabula Co. OH | | | 138 | 0.1% | | Portage Co. OH | | | 152 | 0.1% | |
| Franklin Co. OH | | | 135 | 0.1% | | Wayne Co. OH | | | 145 | 0.1% | |
| Lucas Co. OH | | | 113 | 0.1% | | Ashtabula Co. OH | | | 134 | 0.1% | |

Source: U.S. Census Bureau, 2004.

Appendix D: Major Employers by County

| Cuyahoga | |
|---|----------------|
| American Greetings Corp. | Publishing |
| Case Western Reserve University | Education |
| Cleveland Clinic Health System | Health Care |
| Continental Airlines | Transportation |
| Ford Motor Co. | Manufacturing |
| General Motors Corp. | Manufacturing |
| KeyCorp | Finance |
| Lincoln Electric Holding, Inc. | Manufacturing |
| National City Corp. | Finance |
| Parker Hannifin Corp. | Manufacturing |
| Progressive Corp. | Insurance |
| Sherwin-Williams Co. | Manufacturing |
| University Hospitals Health System | Health Care |
| Geauga | |
| Chardon Local Board of Education | Government |
| Duramax, Inc./Johnson Rubber | Manufacturing |
| Geauga County Government | Government |
| Great Lakes Cheese Company | Manufacturing |
| Kenston Local Board of Education | Government |
| Masco Corp./KraftMaid Cabinetry, Inc. | Manufacturing |
| Myers Holding Corp. | Manufacturing |
| Pentair, Inc. | Manufacturing |
| Tarkett/Johnsonite, Inc. | Manufacturing |
| University Hospitals Health System | Health Care |
| Lake | |
| ABB, Inc. | Manufacturing |
| Avery Dennison Corp. | Manufacturing |
| Cleveland Clinic Health System | Health Care |
| FirstEnergy Corp. | Utilities |
| Lake County Government | Government |
| Lake Hospital System | Health Care |
| Lubrizol Corp. | Manufacturing |
| Mentor Exempted Village Board of Education | Government |
| STERIS Corp. | Manufacturing |
| Willoughby-Eastlake City Board of Education | Government |
| Lorain | |
| Community Health Partners | Health Care |
| Elyria City Board of Education | Government |
| Emerson Electric/Ridge Tool | Manufacturing |
| EMH Regional Medical Center | Health Care |
| Ford Motor Co. | Manufacturing |
| Invacare Corp. | Manufacturing |
| Lorain City Board of Education | Government |
| Lorain County Government | Government |
| Nordson Corp. | Manufacturing |
| Oberlin College | Education |
| PolyOne Corp. | Manufacturing |
| Republic Engineered Products, Inc. | Manufacturing |
| State of Ohio | Government |

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

Appendix E: Postsecondary Institutions

| Name | Type | Address | Telephone | URL |
|--|--------------------|---|----------------|--------------------------------|
| Academy of Court Reporting-Cleveland | Two-Year | 2044 Euclid Avenue, Cleveland, OH 44115 | (216) 861-3222 | |
| ATS Institute of Technology | Two-Year | 230 Alpha Park Dr, Highland Heights, OH 44143 | (440) 449-1700 | www.atsinstitute.com |
| Auburn Career Center | Pub. Adult Sch. | 8140 Auburn Rd, Concord Twp, OH 44077 | (800) 544-9750 | www.auburncc.org |
| Baldwin-Wallace College | Four-Year | 275 Eastland Rd, Berea, OH 44017 | (440) 826-2900 | www.bw.edu |
| Beatrice Academy of Beauty | Priv. Bus. & Tech. | 10500-04 Cedar Ave, Cleveland, OH 44106 | (216) 421-2313 | |
| Brown Aveda Institute | Priv. Bus. & Tech. | 8816 Mentor Ave, Mentor, OH 44060 | (440) 255-9494 | www.brownaveda.com |
| Bryant and Stratton College-Cleveland | Four-Year | 1700 E 13th St, Cleveland, OH 44114 | (216) 771-1700 | www.bryantstratton.edu |
| Bryant and Stratton College-Parma | Four-Year | 12955 Snow Rd, Parma, OH 44130 | (216) 265-3151 | www.bryantstratton.edu |
| Bryant and Stratton College-Willoughby Hills | Two-Year | 27557 Chardon Rd, Willoughby Hills, OH 44092 | (440) 944-6800 | www.bryantstratton.edu |
| Case Western Reserve University | Four-Year | 10900 Euclid Ave, Cleveland, OH 44106 | (216) 368-2000 | www.case.edu |
| Central School of Practical Nursing | Priv. Bus. & Tech. | 4600 Carnegie Ave, Cleveland, OH 44103 | (216) 391-8434 | www.cspnohio.org |
| Cleveland Clinic Health System-School of Diagnostic Im | Two-Year | 18901 Lakeshore Blvd, Euclid, OH 44119 | (216) 692-8665 | www.cchseast.org/schools |
| Cleveland Industrial Training Center | Two-Year | 1311 Brookpark Rd, Cleveland, OH 44109 | (216) 459-9292 | |
| Cleveland Institute of Art | Four-Year | 11141 East Blvd, Cleveland, OH 44106 | (216) 421-7000 | www.cia.edu |
| Cleveland Institute of Dental-Medical Assistants | Priv. Bus. & Tech. | 2450 Prospect Ave E. 2nd Fl., Cleveland, OH 44115 | (216) 241-2930 | www.cidma.com |
| Cleveland Institute of Dental-Medical Assistants | Priv. Bus. & Tech. | 5733 Hopkins Rd, Mentor, OH 44060 | (216) 241-2930 | www.cidma.com |
| Cleveland Institute of Dental-Medical Assistants | Priv. Bus. & Tech. | 5564 Mayfield Rd, Lyndhurst, OH 44124 | (216) 241-2930 | www.cidma.com |
| Cleveland Institute of Music | Four-Year | 11021 East Blvd, Cleveland, OH 44106 | (216) 791-5000 | www.cim.edu |
| Cleveland Municipal School District Adult and Continuing Education | Pub. Adult Sch. | 4600 Detroit Ave, Cleveland, OH 44102 | (216) 634-2157 | www.cmsdnet.net |
| Cleveland State University | Four-Year | 2121 Euclid Avenue, Cleveland, OH 44115 | (216) 687-2000 | www.csuohio.edu/ |
| Cuyahoga Community College District | Two-Year | 700 Carnegie Ave, Cleveland, OH 44115 | (800) 954-8742 | www.tri-c.edu |
| David N Myers University | Four-Year | 3813 Euclid Avenue, Cleveland, OH 44115 | (216) 391-6937 | www.myers.edu |
| Euclid Beauty College | Priv. Bus. & Tech. | 22741 Shore Ctr Dr, Euclid, OH 44123 | (216) 261-2600 | |
| Fairview Beauty Academy | Priv. Bus. & Tech. | 22610 Lorain Rd, Fairview Park, OH 44126 | (216) 734-5555 | |
| Huron School of Nursing | Two-Year | 13951 Terrace Rd, Cleveland, OH 44112 | (216) 761-7996 | www.cchseast.org/schools |
| Inner State Beauty School | Priv. Bus. & Tech. | 5150 Mayfield Road, Lyndhurst, OH 44124 | (440) 461-1000 | www.innerstatebeautyschool.com |
| ITT Technical Institute-Strongsville | Two-Year | 14955 Sprague Rd, Strongsville, OH 44136 | (440) 234-9091 | www.itt-tech.edu |
| ITT Technical Institute-Warrensville Heights | Two-Year | 4700 Richmond Rd., Suite 3000, Warrensville Heights, OH 44128 | (216) 896-6500 | www.itt-tech.edu |
| John Carroll University | Four-Year | 20700 N Park Blvd, Cleveland, OH 44118 | (216) 397-1886 | www.jcu.edu |
| Kent State University-Geauga Campus | Two-Year | 14111 Claridon-Troy Rd, Burton, OH 44021 | (440) 834-4187 | www.geauga.kent.edu |
| Lake Erie College | Four-Year | 391 W Washington St, Painesville, OH 44077 | (440) 375-7000 | www.lec.edu |
| Lakeland Community College | Two-Year | 7700 Clocktower Dr, Kirtland, OH 44094 | (440) 525-7000 | www.lakelandcc.edu |
| Laura and Alvin Siegal College of Judaic Studies | Four-Year | 26500 Shaker Blvd, Beachwood, OH 44122 | (216) 464-4050 | www.siegalcollege.edu |
| Lincoln Welding School | Priv. Bus. & Tech. | 22801 Saint Clair Avenue, Cleveland, OH 0 | (216) 481-8100 | www.lincolnelectric.com |
| Lorain County Community College | Two-Year | 1005 North Abbe Rd, Elyria, OH 44035 | (440) 366-5222 | www.lorainccc.edu |
| Lorain County Joint Vocational School District | Pub. Adult Sch. | 15181 St Rte 58 S, Oberlin, OH 44074 | (440) 774-1051 | www.loraincounty.com/jvsadult |
| Northern Institute of Cosmetology | Priv. Bus. & Tech. | 669 Broadway, Lorain, OH 44052 | (440) 244-4282 | |

Appendix E: Postsecondary Institutions

| Name | Type | Address | Telephone | URL |
|---|--------------------|---|----------------|---|
| Notre Dame College | Four-Year | 4545 College Rd, Cleveland, OH 44121 | (216) 381-1680 | www.notredamecollege.edu |
| Oberlin College | Four-Year | 70 N Professor St, Oberlin, OH 44074 | (440) 775-8411 | www.oberlin.edu |
| Ohio Business College-Lorain | Two-Year | 1907 N Ridge Rd, Lorain, OH 44055 | (440) 277-0021 | ohiobusinesscollege.edu |
| Ohio Center for Broadcasting | Priv. Bus. & Tech. | 9000 Sweet Valley Dr, Valley View, OH 44125 | (216) 447-9117 | www.beonair.com |
| Ohio College of Podiatric Medicine | Four-Year | 10515 Carnegie Ave, Cleveland, OH 44106 | (216) 231-3300 | www.ocpm.edu |
| Ohio Institute of Health Careers-Elyria | Two-Year | 631 Griswold Rd, Elyria, OH 44035 | (440) 324-2293 | ohioinstituteofhealthcareers.com |
| Ohio Technical College | Two-Year | 1374 E 51st St, Cleveland, OH 44103 | (216) 881-1700 | ohiotechnicalcollege.com |
| Polaris Career Center | Pub. Adult Sch. | 7285 Old Oak Blvd, Middleburg Heights, OH 44130 | (440) 891-7600 | www.polaris.edu |
| Quest Career College | Two-Year | 6248 Pearl Rd, Parma Heights, OH 44130 | (440) 886-5544 | www.quest.edu |
| Rabbinical College Telshe | Four-Year | 28400 Euclid Ave, Wickliffe, OH 44092 | (440) 943-5300 | |
| Remington College-Cleveland Campus | Two-Year | 14445 Broadway Ave, Cleveland, OH 44125 | (216) 475-7520 | www.remingtoncollege.edu |
| Remington College-Cleveland West Campus | Two-Year | 26350 Brookpark Road, North Olmsted, OH 44070 | (440) 777-2560 | www.remingtoncollege.edu |
| Saint Mary Seminary | Four-Year | 28700 Euclid Ave, Wickliffe, OH 0 | (440) 943-7600 | www.stmarysem.edu |
| Sanford-Brown Institute | Two-Year | 17535 Rosbough Dr Ste 100, Middleburg Heights, OH 44130 | (440) 202-3232 | www.sbcleveland.com |
| School of Nursing at Cuyahoga Valley Career Center | Pub. Adult Sch. | 8001 Brecksville Road, Brecksville, OH 44141 | (440) 746-8200 | www.cvcc.k12.oh.us |
| Stautzenberger College-Strongsville Campus | Two-Year | 12925 Pearl Rd, Strongsville, OH 44136 | (440) 846-1999 | www.sctoday.edu |
| The Cleveland Clinic Foundation-Dietetic Internship | Four-Year | 9500 Euclid Ave Ste M17, Cleveland, OH 44195 | (216) 444-6487 | www.clevelandclinic.org/education/diet |
| Total Technical Institute | Priv. Bus. & Tech. | 8720 Brookpark Road, Brooklyn, OH 44129 | (216) 485-0900 | www.ttinst.com |
| University of Phoenix-Cleveland Campus | Four-Year | 5005 Rockside Road, Suite 130, Independence, OH 44131 | (216) 447-8807 | www.phoenix.edu |
| Ursuline College | Four-Year | 2550 Lander Rd, Pepper Pike, OH 44124 | (440) 449-4200 | www.ursuline.edu |
| Vatterott College-Cleveland | Two-Year | 5025 E Royalton Rd, Broadview Heights, OH 44147 | (440) 526-1660 | |
| Virginia Marti College of Art and Design | Two-Year | 11724 Detroit Avenue, Lakewood, OH 44107 | (216) 221-8584 | www.vmcad.edu |
| Vocational Guidance Services | Priv. Bus. & Tech. | 2239 E 55th St, Cleveland, OH 0 | (216) 431-7800 | www.vgsjob.org |
| Willoughby-Eastlake School of Practical Nursing | Pub. Adult Sch. | 25 Public Sq, Willoughby, OH 44094 | (440) 946-7085 | www.willoughby-eastlake.k12.oh.us/tech/ |

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 8

| 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 |
| Agriculture, Agriculture Operations and Related Sciences | 7 | 16 | | | | 6 | 21 | | | |
| Natural Resources and Conservation | | 41 | 5 | | | | 57 | 6 | | |
| Area, Ethnic, Cultural and Gender Studies | | 70 | | | | | 73 | | | |
| Communication, Journalism and Related Programs | | 331 | 14 | | | | 303 | 21 | | |
| Communications Technologies/Technicians and Support Services | 7 | | | | | 2 | | | | |
| Computer and Information Sciences and Support Services | 357 | 135 | 77 | 1 | | 283 | 138 | 64 | 4 | |
| Education | 45 | 518 | 807 | 9 | | 49 | 492 | 785 | 7 | |
| Engineering | 52 | 327 | 239 | 78 | | 44 | 409 | 230 | 75 | |
| Engineering Technologies/Technicians | 239 | 23 | 34 | | | 212 | 26 | 31 | | |
| Foreign Languages, Literatures and Linguistics | 10 | 110 | 6 | | | 11 | 115 | 8 | | |
| Family and Consumer Sciences/Human Sciences | 7 | 3 | 26 | | | 12 | 15 | 30 | 3 | |
| Legal Professions and Studies | 77 | 35 | 41 | | 417 | 68 | 31 | 33 | | 454 |
| English Language and Literature/Letters | | 293 | 27 | 3 | | | 250 | 26 | 2 | |
| Liberal Arts and Sciences, General Studies and Humanities | 1,410 | 28 | 7 | | | 1,473 | 21 | 8 | | |
| Biological and Biomedical Sciences | | 317 | 63 | 54 | | | 321 | 66 | 48 | |
| Mathematics and Statistics | | 84 | 25 | 4 | | | 65 | 24 | 3 | |
| Multi/Interdisciplinary Studies | | 87 | 1 | 3 | | | 130 | 1 | 6 | |
| Parks, Recreation, Leisure and Fitness Studies | 1 | 45 | 27 | | | 7 | 63 | 25 | | |
| Philosophy and Religious Studies | | 110 | 38 | | | | 121 | 28 | | |
| Theology and Religious Vocations | | 5 | 16 | 7 | | | 5 | 8 | 2 | |
| Physical Sciences | | 135 | 23 | 23 | | | 155 | 31 | 24 | |
| Science Technologies/Technicians | 10 | 3 | | | | 8 | 5 | | | |
| Psychology | | 388 | 60 | 6 | | | 353 | 78 | 8 | |
| Security and Protective Services | 130 | 43 | | | | 192 | 48 | | | |
| Public Administration and Social Service Professions | 22 | 91 | 290 | 7 | | 29 | 84 | 287 | 6 | |
| Social Sciences | | 560 | 33 | 7 | | | 608 | 43 | 8 | |
| Construction Trades | 21 | | | | | 29 | | | | |
| Mechanic and Repair Technologies/Trades | 54 | | | | | 60 | | | | |
| Precision Production | 4 | | | | | 1 | | | | |
| Visual and Performing Arts | 96 | 560 | 102 | 4 | | 93 | 602 | 113 | 9 | |
| Health Professions and Related Clinical Sciences | 900 | 278 | 286 | 13 | 261 | 919 | 316 | 260 | 47 | 247 |
| Business, Management, Marketing and Related Support Services | 577 | 1,205 | 1,185 | 22 | | 600 | 1,258 | 1,155 | 26 | |
| History | | 155 | 22 | 2 | | | 188 | 21 | 3 | |
| Total, All Programs | 4,026 | 5,996 | 3,454 | 243 | 678 | 4,098 | 6,273 | 3,382 | 281 | 701 |

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

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

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The Workforce Research Section, under the direction of Labor Economist Larry Less, was responsible for the composition of this report. Labor Market Analyst Jonathan Calig was primarily responsible for production. Thanks are extended to the many other analysts who developed and reviewed the data presented herein. This publication was prepared under the supervision of Labor Market Information Bureau Chief Keith Ewald and Assistant Bureau Chief Rudy Wilkinson.

This report was prepared by the Ohio Department of Job and Family Services, Office of Workforce Development. For further information, visit our website at <http://lmi.state.oh.us> or contact the Ohio Bureau of Labor Market Information at 1-888-2WORK-411 or 1-888-296-7541.

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