



Employment Choices in  
Oakland County for the

# 21<sup>ST</sup> CENTURY

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# Employment Choices in Oakland County for the 21<sup>st</sup> Century

Prepared by: Oakland County Planning & Economic Development Services  
September 1999

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E M P L O Y M E N T   C H O I C E S

# INTRODUCTION .

## 1.0 INTRODUCTION

As mentioned previously, Oakland County Planning and Economic Development Services was an integral part of the research and review involved in the Oakland University study, “*Jobs for the 21<sup>st</sup> Century*.” However, the authors of this study believed there were some gaps that could be filled by using existing data to draw some conclusions about the current and future trends of labor market demands in Oakland County. It is not the intention of these authors to duplicate the efforts of the OU research team. The information that follows is intended for quick referencing purposes and to provide a snapshot analysis of employment patterns in this County. More importantly, the authors of this study hope this report serves as a tool for career counselors who help guide high school and college students in their career choices. Another dimension of this study offers readers a basis to compare Oakland County with the Detroit Metropolitan Statistical Area, the State of Michigan and the U.S.

The bulk of this study is presented in bullet, table and graphic forms for ease in referencing. After a brief discussion of the economic flavor of Oakland County, the study takes employment forecast reports and organizes the information by *Occupational Division*, *Industrial Division* and *Occupations*. This section also partners employment forecast data with the educational and income data. These two additional variables can further inform employers and employees of the relationship that skills have on income levels for various occupations. The final section of this study depicts Oakland County’s labor market of the future relative to labor market demands for three larger entities: the Detroit MSA, the State and the nation.

E M P L O Y M E N T C H O I C E S

**ECONOMICS**

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## 2.0 ECONOMIC CHARACTERISTICS OF OAKLAND COUNTY

Oakland County's recent history has been one of significant economic prosperity. Entering the 21<sup>st</sup> century, residents of Oakland County will benefit from the vast employment opportunities available within the County. Oakland County is home to the Midwest technological cluster, Automation Alley, which encourages retention and location of high-tech businesses. This technology driven effort can benefit the County because high-tech companies can keep existing jobs and add new jobs to Oakland County. In addition, Oakland County is home to the world headquarters of six Fortune 500 companies. The presence of DaimlerChrysler, Kmart, Lear Corporation, Kelly Services, Meritor and Delphi Automotive Systems provides citizens of Oakland County with many job opportunities and helps attract other national and international business opportunities. Due to the suitable economic environment, over 35% of all Fortune 500 companies do business in the County.

With increasing global investment focused on businesses within Oakland County, even more employment opportunities will become available. Over 394 foreign owned firms from 21 countries conduct operations in the county. Lastly, to ensure that citizens of Oakland County can enhance their skills to match current employment trends, there are 13 institutions of higher learning that provide much of the workforce with these necessary skills. When the many positive aspects of Oakland County are coupled with the projected employment gains, it is obvious that this County's citizens will prosper and continue to lead a quality life into the 21<sup>st</sup> century.

### 2.1 Unemployment in Oakland County

Oakland County currently has the 8<sup>th</sup> lowest employment rate in Michigan. With the expansion of businesses already established and the projected employment gains, Oakland County will remain at the top of this list.

#### **Unemployment by County As of August, 1999**

	<u>RATE</u>
1. Washtenaw County	1.5%
2. Livingston County	1.6%
3. Clinton County	1.6%
4. Mackinac	1.6%
5. Leelanau	1.7%
6. Midland	1.8%
7. Eaton County	1.8%
<b>8. Oakland County</b>	<b>2.0%</b>
9. Allegan	2.1%
10. Cheboygan	2.1%
16. Macomb County	2.4%
19. Wayne County	4.3%
<b>MICHIGAN</b>	<b>2.8%</b>

## 2.2 Employers of Oakland County Residents

Oakland County residents benefit from the presence of many large corporations within the county and in nearby counties which provide many job opportunities.

### **Oakland County's Top 20 Largest Employers, 1998**

<u>Employees</u>	<u>Estimated Local Employees</u>
1. General Motors	26,000
2. DaimlerChrysler AG	20,890
3. Electronic Data Systems	9,900
4. William Beaumont Hospital	7,930
5. Kmart Corp.	6,000
6. Ameritech-Michigan	5,000
7. U.S. Government	4,230
8. Providence Hospital and Medical Centers	4,020
9. Mercy Health Services	3,920
10. Oakland County Government	3,560
11. Blue Cross Blue Shield of Michigan	3,550
12. Ford Motor Company	3,530
13. Progressive Tool & Industries	3,480
14. Compuware	2,480
15. Bank One	2,410
16. Henry Ford Health System	2,140
17. Botsford Hospital	2,090
18. Lear Corporation	2,040
19. Arbor Drugs Inc.	1,910
20. Comerica Inc.	1,900

- 179 of the Fortune 500 companies did business in Oakland County in 1997
- 394 foreign owned firms representing 21 countries do business in Oakland County
- There are over 41,000 businesses present in Oakland County
- 18.8% of all people employed in Michigan work in Oakland County
- Oakland County is the third wealthiest county, based on per capita income, for counties with over 1 million people

E M P L O Y M E N T   C H O I C E S

# LABOR MARKET

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### **3.0 LABOR MARKET IN OAKLAND COUNTY**

There were 694,190 jobs total in Oakland County in 1994. By 2005, this number is expected to reach 853,790, an increase of 23%. On average, there will be 29,812 job openings every year in Oakland County, providing ample opportunities for those just starting their careers or for those looking for a change in career paths.

Where will these 159,600 additional jobs be found? The labor market of Oakland County for the period between 1994 and 2005 can be examined using several categorization tools. First, the broadest grouping of occupations is the ***Occupational Division*** Classification. This classification includes:

- Executive, administrative and managerial occupations
- Technicians and related support occupations
- Administrative support occupations
- Professional specialty occupations
- Marketing and sales occupations
- Service occupations
- Agriculture, forestry, fishing and related occupations
- Precision production, craft and repair occupations
- Operators, fabricators and laborers

Another way to group occupations is by ***Industrial Division*** which includes:

- Manufacturing
- Construction
- Transportation, Communication and Utilities
- Wholesale Trade
- Finance, Insurance and Real Estate
- Services
- Retail Trade
- Agriculture and Mining

Finally, the third unit of analysis employed in this study is ***Occupation*** -- the most discrete variable. Obviously, individual occupations represent the most diverse measure and include among many others:

- Systems analysts
- Registered nurses
- Janitors and cleaners
- General office clerks
- General managers and top executives
- Home health aides
- Retail salespersons

### **3.1 Summary of Oakland County's Labor Market**

Data gleaned from the Oakland County Occupational Employment Forecast for 1994-2005 was analyzed using all three of the classification groups listed above. A summary of Oakland County by these measures is followed by a more detailed examination of the future of employment trends in Oakland County.

#### ***By Occupational Division***

- Professional occupations increase their share of the total by 2.5%
- Administrative support occupations share of the total decline by 11%
- Marketing and Sales occupations share of the total decline by half a percent
- Technical occupations share of the total increases slightly
- Precision Production occupations drop by .8% in their share of the total jobs

#### ***By Industrial Division***

- Growth of systems analysts occurs in the services and the finance, insurance and real estate industry division.
- Half of the growth of general managers and top executives occurs in the services industry followed by a large increase in the wholesale industry.
- Secretarial and computer engineering occupations also occur primarily in the services industry.

#### ***By Occupations***

#### **Occupations Gaining Workers, 1994 – 2005**

	<b><u>Number of Jobs Gained from 1994-2005</u></b>
1. Systems Analysts	8,050
2. General Managers & Top Executives	4,290
3. Secretaries	4,130
4. Retail Salesperson	3,880
5. Computer Engineers	3,870
6. Janitors & Cleaners	3,230
7. Receptionists & Information Clerks	2,870
8. Secondary School Teachers	2,820
9. General Office Clerks	2,580
10. Registered Nurses	2,530

## Occupations Losing Workers, 1994-2005

	<b>Number of jobs Lost from 1994-2005</b>
1. Machine toolcutting operators	-530
2. Billing, posting and calculator machine operators	-370
3. Central office operators (telephone)	-210
4. Sheet metal workers	-210
5. Drilling & boring machine toolsetters	-210
6. Custom tailors and sewers	-140

### **3.2 Oakland County's Labor Market by Occupational Division**

Occupational growth in Oakland County can be measured using Annual Average Openings (see table below) or total change in employment from 1994 – 2005.

#### **Average Annual Openings**

Studying the Annual Average Openings contributes to an understanding of which jobs are gaining positions and which jobs are losing positions.

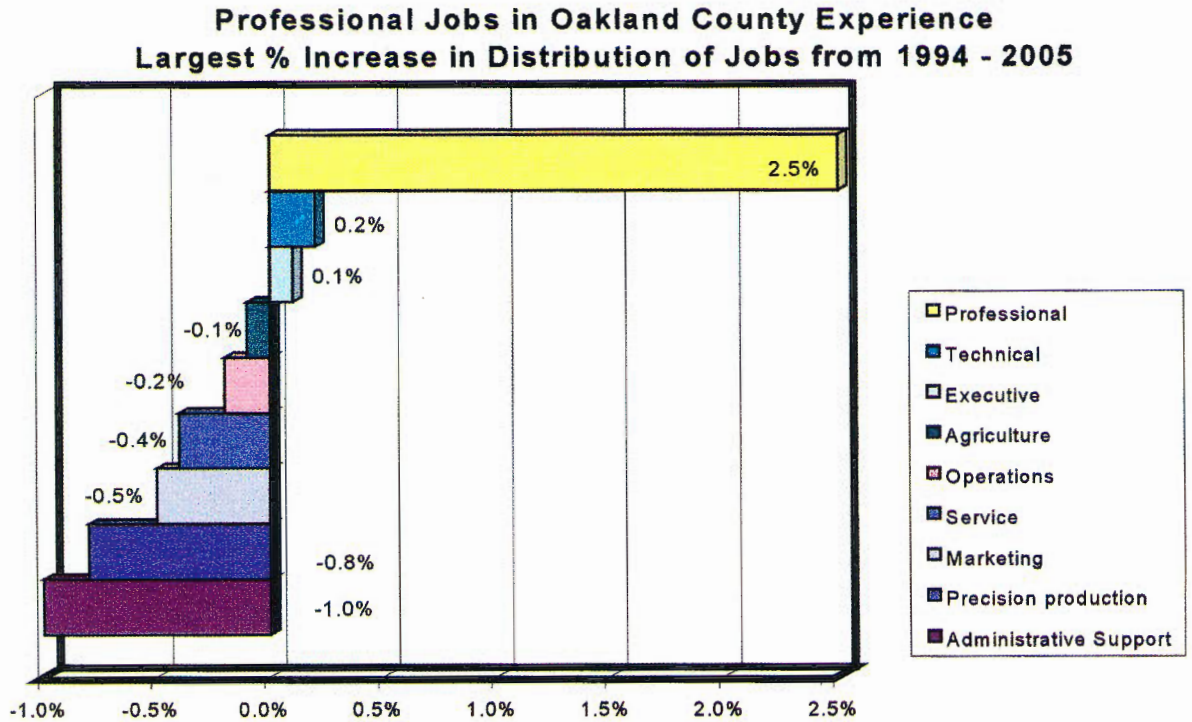
#### **Oakland County Employment Forecasts By *Occupation Division* Annual Average Openings, 1994-2005**

		<b>Annual Average Openings</b>		
		<b><u>Total</u></b>	<b><u>Grwth</u></b>	<b><u>Replcmt</u></b>
<i>All Occupations in Oakland County</i>		<i>29,812</i>	<i>14,521</i>	<i>15,291</i>
1.	Professional Specialty Occupations	5,823	3,979	1,844
2.	Administrative Support Occupations	4,634	2,058	2,576
3.	Service Occupations	4,482	1,849	2,633
4.	Marketing and Sales Occupations	3,797	1,366	2,431
5.	Operators, Fabricators and Laborers	3,774	1,760	2,014
6.	Executive, Administrative and Managerial	3,309	1,734	1,575
7.	Precision Production, Craft and Repair	2,329	862	1,467
8.	Technicians, and Related Support Occup.	1,479	833	646
9.	Agriculture, Forestry, Fishing	185	80	105

- Yearly, Oakland County grows 14,521 new jobs
- Professional jobs experience the highest annual growth, while Agriculture jobs experience the smallest annual job growth
- Administrative, Service, Marketing and Sales, Operators and Laborers, Precision Production, and Agriculture divisions fill more replacement positions than new positions
- Professional and Specialty; Executive, Administrative and Managerial; and Technicians fill more new than replacement positions

## Change in Distribution of Jobs from 1994-2005

Another way to view occupational growth in a labor market is change over a period of time rather than average yearly job openings. The bar chart below shows the change in the distribution of jobs in Oakland County from 1994 to 2005 using *Occupational Division* as the classification.



- As evident in this chart, Professional jobs earn the biggest increase in their share of all jobs during this period – 2.5%
- Technical and Executive division jobs also increase their share
- All other occupational divisions lose some of their share of the jobs to Professional, Technical and Executive jobs between 1994 - 2005



## **Job Growth by Occupational Division Change from 1994 – 2005**

While it useful to view occupational changes by *Occupational Division*, it is more helpful to examine change in employment patterns by specific occupations within each of these nine categories. The next nine (9) pages illustrate job growth by occupation by *Occupational Division*.

### **Professional & Specialty Occupations**

	<b><u>1994-2005 Job Gain</u></b>	<b><u>% of Total Job Gain</u></b>
<b>1. <u>Professional &amp; Specialty Occupations</u></b>	<b>43,813</b>	<b>27.5%</b>
1.1 Computer & operations research analysts	12,212	7.7%
Computer system analysts, eng. & scientist	11,913	7.5%
1.2 Teachers, librarians, counselors	8,150	5.0%
Secondary school teachers	2,812	1.8%
1.3 Engineers	5,602	3.5%
Mechanical engineers	2,483	1.6%
1.4 Health assessment & treating	4,327	2.7%
Registered nurses	2,526	1.6%
1.5 Writers, artists & entertainers	3,811	2.4%
Designers (except interiors)	1,427	.9%

- Between 1994 and 2005, total employment increases by 159,320 jobs.
- Professional & Specialty occupations gain 43,813 workers and account for 27.5% of total employment growth. Between 1994 and 2005, annual openings are forecast at 5,823 in this occupational division.
- Computer & operations research analysts sector is the largest growth component of Professional & Specialty occupations. It comprises about 28% of professional & specialty occupations and 7.7% of all employment growth.
- Growth by Industry Sector
  - Professional & Specialty occupations comprise 34.3% of total employment growth in the Services industry sector.
  - Professional & Specialty occupations comprise 80.6% of the increase in employment in the Manufacturing industry sector.
  - Most gains in computer & operations research analysts employment occurs in the Finance, Insurance, Real Estate and Services industry sectors.

**Job Growth by Occupational Division  
Change from 1994 – 2005**

**Administrative Support Occupations**

	<b><u>1994-2005 Job Gain</u></b>	<b><u>% of Total Job Gain</u></b>
<b>2. <u>Administrative Support Occupations</u></b>	<b>22,615</b>	<b>14.2%</b>
2.1 Other clerical & administrative support	7,917	5.0%
General office clerks	2,579	1.6%
Clerical supervisors & managers	2,496	1.6%
2.2 Secretaries, stenographers & typists	3,641	2.3%
Secretaries	4,123	2.6%
2.3 Material recording, scheduling, dispatching	3,657	2.3%
Traffic, shipping & receiving clerks	1,430	0.9%
2.4 Information clerks	3,322	2.1%
Receptionists & information clerks	2,870	1.8%

- Administrative Support occupations gain 22,615 workers and account for 14.2% of total forecast employment growth. There were 4,634 annual openings forecast between 1994 and 2005.
- Secretarial occupations comprise the largest increase in Administrative Support growing by 4,123 with 703 annual openings.
- Clerical support ranks 3<sup>rd</sup> in occupation gains while secretaries rank 5<sup>th</sup>.
- Growth by Industry Sector
  - Administrative Support will experience a 1.6% decrease in employees in the Manufacturing industry sector. Most of the job losses will be in computer operators and communication equipment operators

**Job Growth by Occupational Division  
Change from 1994 – 2005**

**Service Occupations**

	<b><u>1994-2005 Job Gain</u></b>	<b><u>% of Total Job Gain</u></b>
<b>3. <u>Service Occupations</u></b>	<b>20,320</b>	<b>12.7%</b>
3.1 Personal service	4,636	2.9%
Home health aides	2,497	1.6%
3.1 Protective service	4,152	2.6%
Guards	2,232	.4%
3.2 Food preparation & service	3,549	2.2%
Chefs, cooks & other kitchen workers	1,752	1.1%
3.3 Health service	3,530	2.2%
Medical assistants	1,102	0.7%
3.4 Cleaning & building service	3,427	2.2%
Janitors & cleaners, maids	3,221	2.0%

- Service occupations gain 20,320 workers or 12.7% of all jobs. Between 1994 and 2005, average annual job openings are forecast at 4,482.
- Building janitors & cleaners and maids are forecast for a 3,230 (22.7%) employment gain, the largest for a single occupation within the service category.
- Personal service occupations will have the largest increase in employment followed closely by Protective services occupations.
- Food, health and cleaning are forecast to increase by about 3,500 jobs each.
- Growth by Industry Sector
  - Cleaning and building service occupations decline 15.7% in the Manufacturing sector.
  - Service workers in the Retail industry sector are primarily food preparation
    - Food prep: 29% of all workers in the Retail industry sector and, 89% of service occupation employment
    - Gains in food prep workers total 25% of gains in Retail Trade employment sector

**Job Growth by Occupational Division  
Change from 1994 – 2005**

**Operators, Fabricators & Laborers Occupations**

	<b><u>1994-2005 Job Gain</u></b>	<b><u>% of Total Job Gain</u></b>
<b>4. <u>Operators, Fabricators &amp; Laborers Occup.</u></b>	<b>19,363</b>	<b>12.2%</b>
4.1 Helpers, laborers & material movers	10,572	6.6%
All others	7,259	4.6%
4.2 Transportation & material moving	4,617	2.9%
Motor vehicle operators	2,863	1.8%
Truck drivers	2,286	1.4%
4.3 Hand workers, assemblers & fabricators	2,260	1.4%
4.4 Machine setters, set-up operators	1,914	1.2%
Metal & plastic processing	838	0.5%

- Operators, Fabricators & Laborers gained 19,363 or 21.5% and represent 12.2% of total job gain. From 1994 to 2005, average annual job openings are forecast at 3,774.
- Helpers, laborers and material movers will grow by 10,572 (38.5%). This growth will expand this portion of the operators, fabricators and laborers category by 4.2%.
- Transportation and material moving occupations will grow by 23.7%.
- Losses occur in the following occupations:
  - Machine tool cutters and form setters lose 1,363 jobs (14.3%)
  - Other machine setters and operators lose 318 jobs (7.1%)
  - Freight and stock material movers and handlers decline in the manufacturing sector
- Growth by Industry Sector
  - Gains of 13,742 jobs or 62% occur in the Services industry sector.
  - Gains in the Construction industry sector total 842 jobs or 20.5%.
  - Transportation, Communication and Utilities industry sector gain 43% in motor vehicle drivers.

**Job Growth by Occupational Division  
Change from 1994 – 2005**

**Executive, Administrative & Managerial Occupations**

	<b>1994-2005 Job Gain</b>	<b>% of Total Job Gain</b>
<b>5. <u>Executive, Administrative &amp; Managerial Occup.</u></b>	<b>19,057</b>	<b>12.0%</b>
5.1 Managerial & administrative	12,829	8.1%
General Managers & top executives	4,287	2.7%
5.2 Management support	6,228	4.0%
Accountants and auditors	1,242	0.8%

- Executive, Administrative and Managerial jobs gained 19,057 or 24.8% and comprise 12% of total employment forecast gains. Between 1994 and 2005, average annual job openings are forecast at 3,309.
- Managerial and administrative occupations grow at the same rate as all occupations, about 23.4%.
- General managers, top executives, financial managers, marketing, advertising, public relations and engineering managers are leading growth occupations. Engineers and marketing managers will gain in their share of this group.
- Employment interviewers grow at 72% and gain 490 jobs.
- Construction and building inspectors grow 58%.
- Management analysts grow 45%.
- Tax examiners, collectors decline.
- Buyers for wholesale and retail lose jobs.
- Loan officers and counselors lose jobs.
- Growth in Industry Sector
  - Executive, Administrative & Managerial jobs in the Manufacturing sector grew more than twice as fast as overall job growth. Most of this growth is engineering managers.
  - Growth of Executive, Administrative & Managerial jobs in the Retail industry is in food service and lodging managers.
  - Change in the numbers of these jobs in the Service industry sector can be found in the growth rates of the following occupations. General managers and top executives increased by 35%. Financial managers increased by 42%. Managers of engineers increased by 66% and Marketing managers increased by 64%.

**Job Growth by Occupational Division  
Change from 1994 – 2005**

**Marketing & Sales Occupations**

	<b><u>1994-2005 Job Gain</u></b>	<b><u>% of Total Job Gain</u></b>
<b>6. <u>Marketing &amp; Sales Occupations</u></b>	<b>15,020</b>	<b>9.4%</b>
6.1 Retail salesperson	3,877	2.4%
6.2 All other	4,895	3.1%
6.3 Cashiers	2,078	1.3%

- Marketing & Sales gains 15,020 or 17.6%, which represents 9.4% of total employment gains. From 1994 to 2005, average annual job openings are forecast at 3,797.
- Cashiers and real estate appraiser jobs decline.
- Travel agents gain 615 jobs (62.1%).
- Growth by Industry Sector
  - Retail salespersons equal 26% of all marketing and sales occupational growth in the Retail industry sector.
  - Service industry sector gains 20.6% in marketing & sales occupations, the majority of which are supervisors of sales workers.

**Job Growth by Occupational Division  
Change from 1994 – 2005**

**Precision Production, Craft & Repair Occupations**

	<b><u>1994-2005 Job Gain</u></b>	<b><u>% of Total Job Gain</u></b>
<b>7. <u>Precision Production, Craft &amp; Repair Occup.</u></b>	<b>9,510</b>	<b>6.0%</b>
7.1 Mechanics, installers and repairers	5,050	3.2%
Maintenance repairers, general utility	1,660	1.0%
7.2 Construction trades	2,610	1.6%
Carpenters	590	0.4%
7.3 Production occupations, precision	860	0.5%
Assemblers, precision	500	0.3%

- Precision Production, Craft and Repair occupations gain 9,510 workers, a 13.6% increase and account for 6.0% of total employment growth. From 1994 to 2005, annual average job openings are forecast at 2,329.
- Mechanics, installers and repairers will gain 5,050 jobs. This gain is spread evenly across electrical and electronic equipment mechanics and installers, maintenance repairers, automotive and bus and truck mechanics and other mechanics installers and repairers.
- Construction trades have the most employment growth in carpenters, electricians and plumbers.
- Precision Production occupations grow only 4.0% due to losses in sheet metal workers and custom tailors and sewers, and little or no growth in machinists and tool and die makers.
- Growth by the Industry Sector
  - In the Manufacturing industry sector, precision occupations lose 2.8% or 718 workers. Inspectors, metal workers and millwrights also decline.
  - A 25.4% rate of growth in the Services industry sector occurs in the mechanics, installers and repairers occupations.

**Job Growth by Occupational Division  
Change from 1994 – 2005**

**Technicians and Related Support Occupations**

	<b><u>1994-2005 Job Gain</u></b>	<b><u>% of Total Job Gain</u></b>
<b>8. <u>Technicians and Related Support Occup.</u></b>	<b>9,180</b>	<b>5.8%</b>
8.1 Health technicians and technologists	4,140	2.6%
Licensed practical nurses	680	0.4%
8.2 Technicians (except health and engineering)	2,820	1.8%
Computer programmers	1,710	1.1%
8.3 Engineering and science technicians & technologists	2,210	1.4%
Electrical and electronic technicians & technologists	1,050	0.7%

- Technicians gain 9,180 workers, a 28.7% increase from 1994 levels and account for 5.8% of all job growth. Between 1994 and 2005, annual average job openings are forecast at 1,479.
- Growth by Industry Sector
  - Drafters lose jobs in the Manufacturing industry sector.
  - Over 90% of the growth of technicians occurs in the Services industry sector. Major growth occurs in health related occupations.



**Job Growth by Occupational Division  
Change from 1994 – 2005**

**Agriculture, Forestry, Fishing and related Occupations**

	<b><u>1994-2005 Job Gain</u></b>	<b><u>% of Total Job Gain</u></b>
<b>9. <u>Agriculture, Forestry, Fishing and related occup.</u></b>	<b>730</b>	<b>.5%</b>
9.1 Gardening, nursery, greenhouse & lawn services	690	.4%
Gardeners and groundskeepers (except farm)	230	.1%

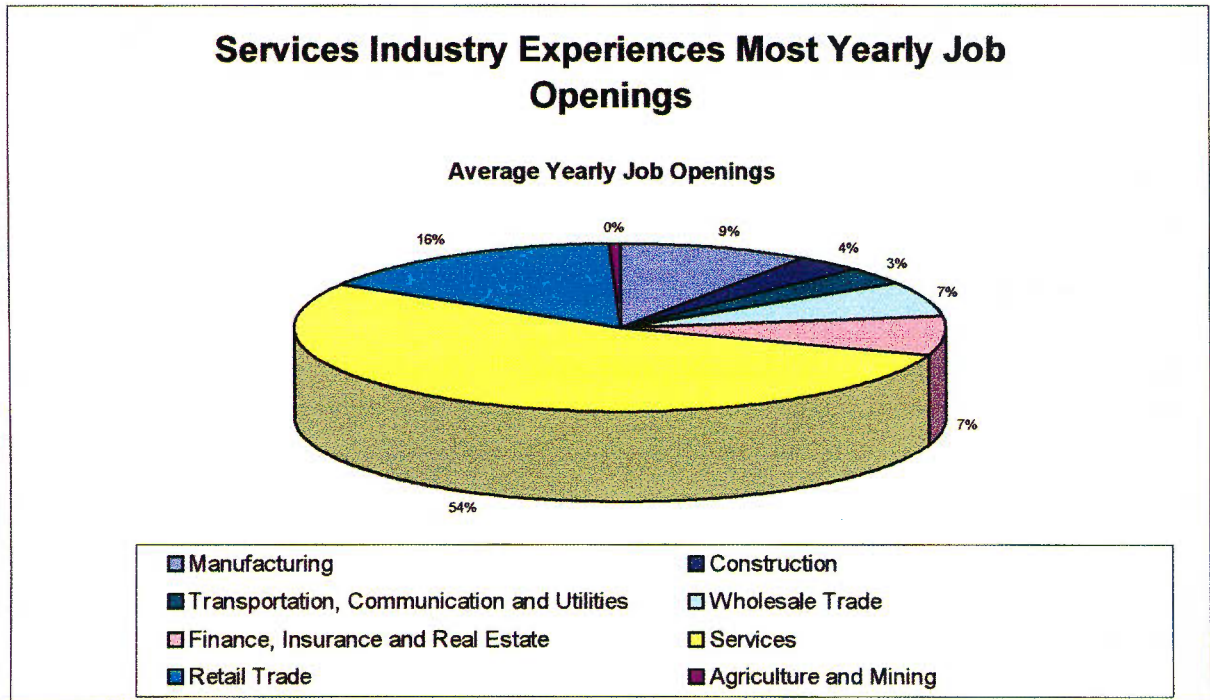
- Agriculture occupations grow a modest 11.8% well below the average of 23%. Between 1994 and 2005, annual average openings are forecast at 85.
- Farm operators and managers decline by 140 or 25% and farm workers lose 23%.
- Gardening, nursery and greenhouse and lawn service occupations comprise over 70% of this category.

### 3.3 Growth by Industry Division

Another way of grouping occupations is by *Industry Division*.

The pie chart below shows the distribution of annual openings in Oakland County from 1994 to 2005 using *Industry Division* as the classification.

#### Distribution of Annual Average Openings



- More than half or 54% of all yearly openings were in jobs in the Services industry
- The Retail Trade industry experiences 16% of the share of annual job openings
- Finance, Insurance and Real Estate industry and the Wholesale Trade industry each had 7% of the share of annual job openings

**Occupations by *Industry Division* by *Occupational Division*  
For Oakland County, 1994 - 2005**

The table below breaks down the annual job openings by *Industry Division* by *Occupational Division*.

	<b>Yearly Job Openings</b>
<b>Manufacturing Division</b>	<b>2,713</b>
Executive, Administrative and Managerial Occupations	355
Professional Specialty Occupations	474
Technicians and Related Support Occupations	103
Marketing and Sales Occupations	119
Administrative Support Occupations	243
Service Occupations	34
Agriculture, Forestry, Fishing and Related Occupations	0
Precision Production, Craft and Repair Occupations	555
Operators, Fabricators and Laborers	1,068
<b>Construction Industry</b>	<b>1,031</b>
Executive, Administrative and Managerial Occupations	154
Professional Specialty Occupations	20
Technicians and Related Support Occupations	2
Marketing and Sales Occupations	30
Administrative Support Occupations	76
Service Occupations	3
Agriculture, Forestry, Fishing and Related Occupations	1
Precision Production, Craft and Repair Occupations	576
Operators, Fabricators and Laborers	169
<b>Transportation, Communication and Utilities Division</b>	<b>924</b>
Executive, Administrative and Managerial Occupations	72
Professional Specialty Occupations	53
Technicians and Related Support Occupations	64
Marketing and Sales Occupations	125
Administrative Support Occupations	304
Service Occupations	20
Agriculture, Forestry, Fishing and Related Occupations	0
Precision Production, Craft and Repair Occupations	80
Operators, Fabricators and Laborers	235

<b>Wholesale Trade Division</b>	<b>1,983</b>
Executive, Administrative and Managerial Occupations	274
Professional Specialty Occupations	168
Technicians and Related Support Occupations	28
Marketing and Sales Occupations	517
Administrative Support Occupations	403
Service Occupations	14
Agriculture, Forestry, Fishing and Related Occupations	8
Precision Production, Craft and Repair Occupations	239
Operators, Fabricators and Laborers	332

<b>Finance, Insurance and Real Estate Division</b>	<b>2,117</b>
Executive, Administrative and Managerial Occupations	544
Professional Specialty Occupations	241
Technicians and Related Support Occupations	30
Marketing and Sales Occupations	317
Administrative Support Occupations	771
Service Occupations	89
Agriculture, Forestry, Fishing and Related Occupations	15
Precision Production, Craft and Repair Occupations	103
Operators, Fabricators and Laborers	7

<b>Services Division</b>	<b>15,583</b>
Executive, Administrative and Managerial Occupations	1,598
Professional Specialty Occupations	4,720
Technicians and Related Support Occupations	1,235
Marketing and Sales Occupations	686
Administrative Support Occupations	2,409
Service Occupations	2,488
Agriculture, Forestry, Fishing and Related Occupations	48
Precision Production, Craft and Repair Occupations	674
Operators, Fabricators and Laborers	1,743

<b>Retail Trade Division</b>	<b>4,586</b>
Executive, Administrative and Managerial Occupations	238
Professional Specialty Occupations	50
Technicians and Related Support Occupations	13
Marketing and Sales Occupations	2,004
Administrative Support Occupations	412
Service Occupations	1,522
Agriculture, Forestry, Fishing and Related Occupations	4
Precision Production, Craft and Repair Occupations	148
Operators, Fabricators and Laborers	195

<b>Agriculture and Mining Division</b>	<b>145</b>
Executive, Administrative and Managerial Occupations	7
Professional Specialty Occupations	7
Technicians and Related Support Occupations	6
Marketing and Sales Occupations	4
Administrative Support Occupations	15
Service Occupations	1
Agriculture, Forestry, Fishing and Related Occupations	97
Precision Production, Craft and Repair Occupations	5
Operators, Fabricators and Laborers	3

As illustrated in this table, Service industry jobs experienced the largest number of yearly openings (15,583), followed by Retail Trade industry jobs (4,586), followed by Manufacturing industry jobs (2,713)

- More than half or 54% of all yearly openings were in jobs in the Services industry
- The Retail Trade industry experiences 16% of the share of annual job openings
- Finance, Insurance and Real Estate industry and the Wholesale Trade industry each had 7% of the share of annual job openings

## Top Growth Occupations by Industry Division

Another way to illustrate job growth in Oakland County is to categorize occupations experiencing high growth by *Industry Division*. Below is a sample of some of these occupations.

<u>Industry Division</u>	<u>Top Growth Occupations</u>
Agriculture & Mining	Gardeners, grounds keepers, and lawn maintenance workers
Construction	Construction trades and electrical equipment mechanics
Manufacturing	Mechanical engineers
Transportation, Communication, Utilities	Travel agents
Wholesale	Supervisors
Retail	Salesperson, cashiers
Finance, Insurance, Real Estate	Insurance sales, real estate agents
Services	Computer systems analysts, Engineers and teachers
Government	Police and detectives

### 3.4 Job Growth by Occupation

*Occupational Division* and *Industrial Division* provide useful generalized information about Oakland County’s labor market. However, information on specific *Occupations* and how they will grow or decline over the 11-year period from 1994 to 2005 represents the most useful data for counselors guiding students and employees and job seekers making career choices.

The best measure of growth of occupations is the number of new (not replacement) jobs available on a yearly basis. This combined with overall job gain between 1994 – 2005 help describe the future of Oakland County.

#### **Occupations with Top Yearly Job Growth**

<b>Occupations</b>	<b># of NEW jobs available each year</b>	<b>Number of Jobs Gained from 1994-2005</b>
1. Systems Analysts	731	8,050
2. General Managers & Top Executives	390	4,290
3. Secretaries	375	4,130
4. Salesperson, Retail	352	3,880
5. Janitors and Cleaners	292	3,230
6. Receptionists and Information Clerks	261	2,870
7. Teachers, Secondary	256	2,820
8. Computer Engineers	247	3,870
9. General Office Clerks	234	2,580
10. Registered Nurses	230	2,530

#### **Occupation Groups with Highest Annual Openings**

Occupation groups include two or more occupations.

	<b>Annual Average Openings</b>
1. Helpers, Laborers and Material Movers	1,659
2. Managers	1,455
3. Systems Analysts, Computer Scientists and Engineers	1,181
4. Food and Beverage Service Occupations	1,168
5. Engineers	830
6. Management Support	745
7. Machine Operators	741

## **Brief Description of the Five Fastest Growing Jobs in Oakland County:**

### **Systems Analysts:**

Systems analysts plan and develop new computer systems or think of new ways to apply existing systems resources to additional operations. They use their knowledge and skills to solve computer problems and enable computer technology to meet the individual needs of the organization. Most system analysts work in offices or laboratories that are comfortable. A typical workweek is 40 hours, however, evening and late night work may be required in order to meet deadlines and finish certain tasks. A bachelor's degree is usually the prerequisite and some more complex jobs require a graduate degree. Systems analysts must be familiar with programming languages, have strong problem-solving skills and must be able to communicate effectively with others. Median annual earnings in 1996 were about \$46,300.

### **General Managers and Top Executives:**

General managers and top executives formulate policies and direct operations of businesses and corporations, nonprofit institutions, and government agencies. A corporation's general goals and policies are established by the chief executive officer in collaboration with other top executives. Middle managers direct their individual departments' activities within the framework of the organization's overall plan with the help of first-line managers and their staffs. Median annual earnings in 1996 were about \$90,000.

### **Secretaries:**

Secretaries are responsible for a variety of administrative and clerical duties necessary to run and maintain organizations efficiently. They schedule appointments, provide information to callers, organize and maintain paper and electronic files, manage projects, and produce correspondence for themselves and others. Median earnings in 1996 were about \$19,700.

### **Retail Salesperson:**

Retail sales workers assist customers in finding what they are looking for and attempt to interest customers in merchandise. The latter may be accomplished through description of a product's features, demonstration of its use, or by showing various models and colors. Retail sales workers make out sales checks, receive cash, check and charge payments, bag or package purchases, and give change and receipts. They may also handle returns or exchanges or merchandise, perform gift-wrapping, help stock shelves or racks; arrange for mailing or delivery of purchases, mark price tags, take inventory, and prepare displays. Median earnings in 1996 were about \$12,480.

### **Janitors and Cleaners:**

Janitors and cleaners keep office buildings, hospitals, stores, apartment houses, hotels and other types of buildings clean and in good condition. Some only do cleaning while others have a wide range of duties. They may fix leaky faucets, empty trashcans, do painting and carpentry, replenish bathroom supplies, mow lawns and see that heating and air conditioning equipment works properly. Janitors may wet or dry mop floors, clean bathrooms, vacuum carpets, dust furniture, make minor repairs and exterminate insects and rodents. In hospitals, where they are mostly known as maids or housekeepers, they may wash bed frames, brush mattresses, make beds, and disinfect and sterilize equipment and supplies. In hotels, aside from cleaning and maintaining the premises, they may deliver ironing boards, cribs and rollaway beds to guests' rooms.



### 3.5 Education and Income

Occupational growth in the near term future is an important consideration for job and employee seekers alike. However, the skills and education required of an occupation can help inform the choices of potential employees and obviously help guide the hiring process for employers. Income too varies depending on the occupation and is an important criterion for any job seeker.

#### **Jobs Requiring the Most Education**

- |  |  |
|--|--|
| 1. Physicians  | bachelors degree with pre-med. requirements, M.D., residency |
| 2. College and University Faculty                      | bachelors degree, Ph.D. or Masters in field of study         |
| 3. Lawyers   | bachelors degree in any field, J.D.                          |
| 4. General Managers and Top Executives                 | bachelors degree in business or related field, M.B.A.        |
| 5. Accountants and Auditors                            | bachelors degree in accounting, M.B.A.                       |
| 6. Engineers   | bachelors degree in engineering                              |
| 7. Systems Analysts, Computer Engineers and Scientists | bachelors degree in computer engineering/science             |
| 8. Managers  | bachelors degree in general business                         |
| 9. Computer Programmers                                | bachelors degree in computer science                         |
| 10. Secondary School Teachers                          | bachelors degree, education specialty                        |

*M.D. – Medical Doctor   Ph.D. – Doctorate   M.B.A. – Masters of Business Administration   J.D. – Juris Doctorate*

- Cross-referencing this list with the high growth occupations in Oakland County, it is clear that **not all occupations** with increasing new positions require extensive college education. This dispels the myth that all future jobs will require a college degree.

## Categorizing the Top 50 Highest Paying Jobs

	<u>Yearly Median Income*</u>
1. Physicians	\$160,000
2. General Managers and Top Executives	\$ 90,000
3. Lawyers	\$ 60,000
4. College and University Faculty	\$ 51,000
5. Accountants and Auditors	\$ 48,725
6. Managers	\$ 47,500
7. Systems Analysts, Computer Scientists, and Engineers	\$ 46,300
8. Computer Programmers	\$ 40,100
9. Secondary School Teachers	\$ 38,600
10. Engineers	\$ 38,500

\* National salary figures from 1996

- If maximization of income is the goal of the job seeker, it is evident by this list that higher education affects income levels. Each of these occupations requires a four-year college degree, at a minimum.
- However, comparison of this list with the list of high growth occupations of the future demonstrates that there will be less demand (low growth) for certain high paying jobs and more demand (high growth) for certain moderate paying jobs. This contradicts the assumption that the job market of the future will consist of only people with college degrees.

## Income and Education Levels of Occupations in Oakland County

This table links the three variables of job openings, education and income. As concluded previously, it is clear that high growth occupations in Oakland County cover a wide gamut of educational requirements. Some jobs, like Helpers and Laborers, require minimal education. While other positions, such as Managers, are available only to those with four-year college degrees. And finally some openings, for example Systems Analysts, will be accessible to those with more than a four-year college degree. In all, there will be healthy demand for some minimal-education jobs, higher income levels are associated with college-degree occupations.

### Top Growth Occupations

	<u>Yearly Job Openings</u>	<u>Minimal Education</u>	<u>Median Salary*</u>
1. Helpers and Laborers	1659	HS	\$ 17,160
2. Managers	1455	BD	\$ 47,500
3. Systems Analysts, Computer Scientists and Engineers	1181	BD+	\$ 46,300
4. Food and Beverage Service Occupations	1168	HS-	\$ 14,040
5. Retail Salesperson	1068	HS-	\$ 12,480
6. Cashiers	851	HS-	\$ 12,844
7. Engineers	830	BD	\$ 38,500
8. General Managers and Top Executives	777	BD+	\$ 90,000
9. Management Support	745	BD	\$ 30,000
10. Machine Operators	741	HS-	\$ 29,085
11. Secretaries	703	HS+	\$ 19,700
12. General Office Clerks	613	HS+	\$ 19,300
13. Assemblers and Fabricators	607	HS	\$ 17,680
14. Janitors and Cleaners	550	HS-	\$ 15,600
15. Health Technicians	491	HS+	\$ 27,828
16. Chefs, Cooks and Other Kitchen Workers	459	HS+	\$ 17,520
17. Secondary School Teachers	452	BD	\$ 38,600
18. Clerical Supervisors and Managers	409	HS+	\$ 28,900
19. Receptionists and Information Clerks	397	HS	\$ 17,940
20. Truck Drivers	387	HS	\$ 27,850
21. Home Health Aides	382	HS-	\$ 13,806
22. Registered Nurses	875	BD	\$ 36,244
23. Marketing and Sales Worker Supervisors	361	BD	\$ 24,400
24. Machinery and Related Mechanics	340	HS	\$ 28,360
25. Stock Clerks	338	HS	\$ 22,308
26. Guards	328	HS	\$ 17,300
27. Computer Programmers	286	BD	\$ 40,100
28. Material Moving Equipment Operators	255	HS	\$ 23,712

29. Blue Collar Worker Supervisors	240	HS+	\$ 33,280
30. Accountants and Auditors	230	BD+	\$ 48,725
31. Elementary School Teachers	216	BD	\$ 37,300
32. Traffic, Shipping and Receiving Clerks	212	HS	\$ 19,084
33. Teacher Aides and Educational Assistants	205	HS+	\$ 18,262
34. Industrial Designers	180	HS+	\$ 27,000
35. Bookkeeping Clerks	180	HS	\$ 20,700
36. Police and Detectives	178	HS+	\$ 34,700
37. Drafters	177	HS+	\$ 31,250
38. Electrical and Electronic Equipment Mechanics	175	HS+	\$ 32,188
39. College and University Faculty	168	BA+	\$ 51,000
40. Artists and Commercial Artists	163	BD	\$ 27,100
41. Lawyers	160	BD+	\$ 60,000
42. Bank Tellers	160	HS	\$ 16,300
43. Adjustment Clerks	152	BD	\$ 22,880
44. Automotive Mechanics	152	HS+	\$ 24,856
45. Hairdressers, Hairstylists and Cosmetologists	151	HS+	\$ 15,080
46. Physicians	141	BD++	\$160,000
47. Nursing Aides, Orderlies, and Attendants	141	HS-	\$ 15,184
48. Electrical and Electronic Technicians	137	HS+	\$ 38,435
49. Medical Assistants	130	HS+	\$ 22,261
50. Special Education Teachers	129	BD	\$ 37,900

**Key:**

\* = National salary figures from 1996

**HS-** = High school degree or less than required

**HS** = High school degree required

**HS+** = High school degree or more required, usually a 2 year Associate's Degree

**BD** = Bachelor's degree from a 4-year college or university required

**BD+** = More than a Bachelor's degree is required. Includes a J.D. (law), M.D. (medical)

Ph.D. (doctorate) and a Master's.

**BD++** = Pertains to physicians only, who after medical school, must complete an internship/

Residency with a medical establishment lasting 3-8 years

E M P L O Y M E N T C H O I C E S

# COMPARISONS .

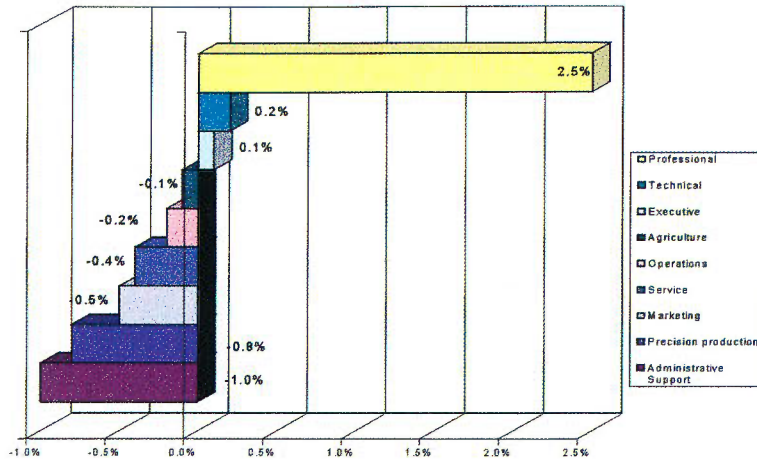
## 4.0 Labor Market Demands of Oakland County using Regional, State and National Comparison

How does Oakland County compare with other labor markets? The following section compares employment patterns and projections for the County with larger labor markets including the Detroit Metropolitan Statistical Area (MSA), the State of Michigan and the United States.

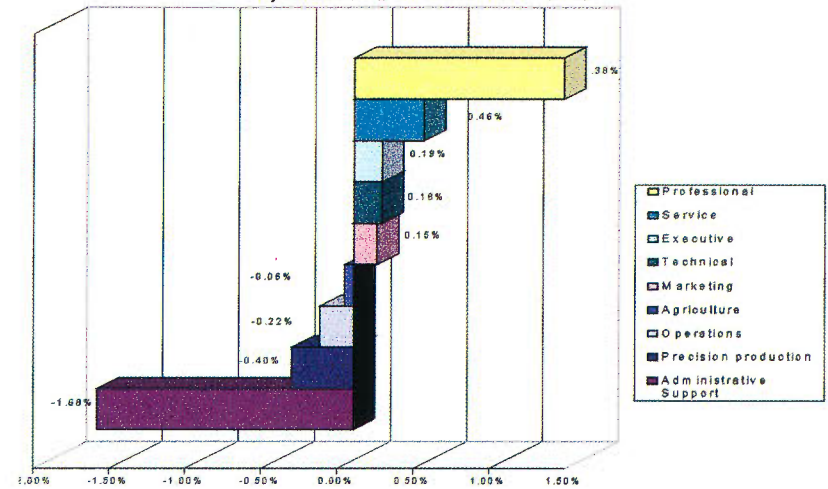
### Change in the Distribution of Jobs by *Occupational Division* From 1994-2005

Continuing the same system of analysis, the following bar charts depict the shift in the distribution of jobs between 1994 and 2005 by *Occupational Division* for Oakland County, the Detroit MSA, the State of Michigan and the U.S. as a nation.

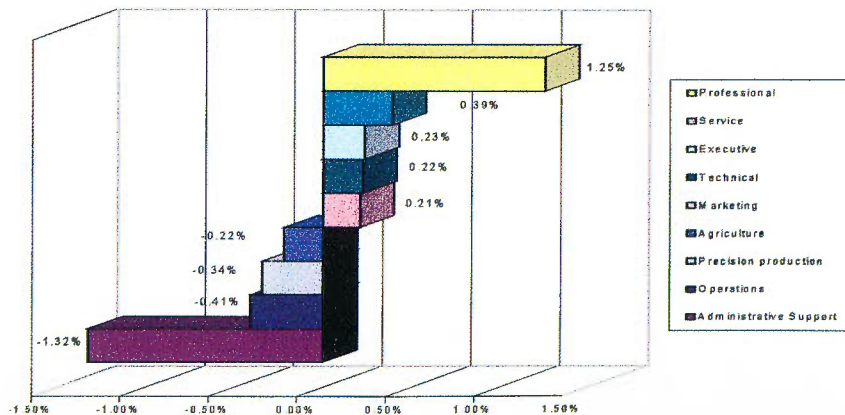
In Oakland County, Professional Jobs Increased their Share of All Jobs by 2.5% between 1994 - 2005



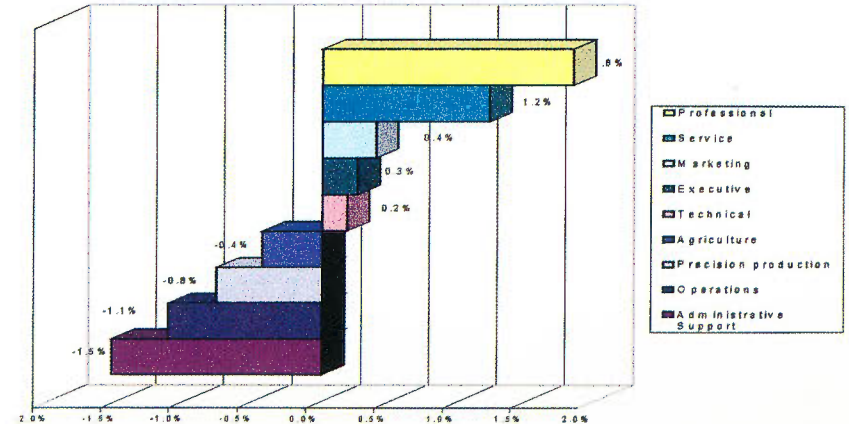
In Detroit MSA, Professional Jobs Increased their Share of All Jobs by about 1.4% between 1994 - 2005



In Michigan, Professional Jobs Increased their Share of All Jobs by 1.25% between 1994-2005



Nationally, Professional Jobs Increased their Share of All Jobs by almost 2% between 1994 - 2005



## Comparing Yearly Job Openings by *Occupational Division*

Changing employment trends can also be assessed by examining yearly job openings.

	<u>Oakland County</u>	<u>Metro Detroit</u>	<u>State of Michigan</u>	<u>United States</u>
Executive, Administrative and Managerial	3,309	7,484	16,100	4,844,000
Professional Specialty	5,823	11,801	25,590	8,376,000
Technicians and Related Support	1,479	3,154	6,600	1,798,000
Marketing and Sales	3,797	9,616	20,550	6,706,000
Administrative Support	4,634	7,936	17,400	6,991,000
Service	4,482	12,631	28,300	9,813,000
Agriculture, Forestry, Fishing	185	514	2,150	988,000
Precision Production, Craft & Repair	2,329	6,387	14,870	4,489,000
Operators, Fabricators and Laborers	3,774	10,194	22,330	5,626,000
<b>TOTAL, OCCUPATIONS</b>	<b>29,812</b>	<b>69,716</b>	<b>154,700</b>	<b>49,631,000</b>

*Metropolitan Detroit includes the following counties: Oakland, Lapeer, St. Clair, Macomb, Livingston, Wayne and Monroe*

- As illustrated in the bar charts on the previous page, Oakland County’s labor market mirrors the Detroit MSA, State and national labor markets in experiencing a larger share of Professional and Specialty jobs during the 11-year period.
- Oakland County is unique relative to the other three labor markets in that jobs in the Occupational Divisions of Agriculture and Operations lose part of their share of total employment to Professional and Specialty, Technical, and Executive Occupational Divisions. By contrast, Metropolitan Detroit, Michigan and the U.S. each show Agriculture and Operations jobs increasing their share of total employment, if only minimally.
- Workers in Administrative Support jobs experience a smaller loss in share of total employment in Oakland County (-1.0%) compared to their loss in other labor markets: Detroit MSA (-1.7%), Michigan (-1.3%) and the U.S. (-1.5%).

## Comparing Job Growth by *Occupational Division* from 1994-2005

### Oakland County

	<u>1994-2005 Job Gain</u>	<u>% of Total Job Gain</u>
1. Professional & Specialty Occupations	43,820	27%
2. Administrative Support Occupations	22,610	14%
3. Service Occupations	20,320	13%
4. Operators, Fabricators & Laborers Occupations	19,360	12%
5. Executive, Administrative & Managerial Occupations	19,050	12%
6. Marketing & Sales Occupations	15,020	9%
7. Precision Production, Craft & Repair Occupations	9,510	6%
8. Technicians and Related Support Occupations	9,180	6%
9. Agriculture, Forestry, Fishing and related Occupations	730	.5%
 Total, All Occupations	 159,600	 100%

### Detroit MSA

	<u>1994-2005 Job Gain</u>	<u>% of Total Job Gain</u>
1. Professional & Specialty Occupations	69,070	26%
2. Administrative Support Occupations	8,480	3%
3. Service Occupations	51,000	19%
4. Operators, Fabricators & Laborers Occupations	35,020	13%
5. Executive, Administrative & Managerial Occupations	32,530	12%
6. Marketing & Sales Occupations	32,980	12%
7. Precision Production, Craft & Repair Occupations	19,160	7%
8. Technicians and Related Support Occupations	15,430	6%
9. Agriculture, Forestry, Fishing and related Occupations	1,270	.5%
 Total, All Occupations	 264,940	 100%



### State of Michigan

	<b><u>1994-2005 Job Gain</u></b>	<b><u>% of Total Job Gain</u></b>
1. Professional & Specialty Occupations	144,550	25%
2. Administrative Support Occupations	30,750	5%
3. Service Occupations	110,950	19%
4. Operators, Fabricators & Laborers Occupations	69,220	12%
5. Executive, Administrative & Managerial Occupations	71,200	12%
6. Marketing & Sales Occupations	72,350	12%
7. Precision Production, Craft & Repair Occupations	46,710	8%
8. Technicians and Related Support Occupations	33,600	6%
9. Agriculture, Forestry, Fishing and related Occupations	2,600	.5%
Total, All Occupations	581,930	100%

### National Perspective

	<b><u>1994-2005 Job Gain</u></b>	<b><u>% of Total Job Gain</u></b>
1. Professional & Specialty Occupations	5,100,000	29%
2. Administrative Support Occupations	990,000	6%
3. Service Occupations	4,600,000	26%
4. Operators, Fabricators & Laborers Occupations	760,000	4%
5. Executive, Administrative & Managerial Occupations	2,200,000	12%
6. Marketing & Sales Occupations	2,500,000	14%
7. Precision Production, Craft & Repair Occupations	830,000	5%
8. Technicians and Related Support Occupations	880,000	5%
9. Agriculture, Forestry, Fishing & Related Occupations	-112,000	0%
Total, All Occupations	17,694,000	100%

- These tables show many similarities among the four (4) labor markets.
- There are some distinctions among these four labor markets. One distinction is Service occupations represent 26% of total national job gain. This is a significant share compared to the share of total job gain of Service occupations in other markets: 13% in Oakland County, 19% in the Detroit MSA, and 19% in the State of Michigan.

## Comparing Yearly Openings of Occupations from 1994-2005

As a county with a worldwide reputation for being a leader in the business world which provides residents with many employment opportunities, the following information will display how Oakland County measures up to the Detroit Metropolitan area, to the state of Michigan and to the United States.

### Oakland County – Top Jobs

	<u>New Openings Betw. 1994-2005</u>	<u>% Change From 1994-2005</u>
1. Systems Analysts	8,050	130%
2. General Managers and top executives	4,290	23%
3. Retail Salesperson	3,880	16%
4. Secretaries (except medical and legal)	3,290	22%
5. Janitors and Cleaners (except maids and housekeeping)	3,230	23%
6. Receptionists and Information Clerks	2,870	41%
7. Teachers, Secondary	2,820	39%
8. General Office Clerks	2,580	16%
9. Registered Nurses	2,530	26%
10. Clerical Supervisors and Managers	2,500	35%
11. Home Health Aides	2,500	106%

### Detroit MSA – Top Jobs

	<u>New Openings Betw. 1994-2005</u>	<u>% Change From 1994-2005</u>
1. Helpers and Laborers	12,160	34%
2. Waiters and Waitresses	11,880	37%
3. Systems Analysts	11,830	88%
4. Retail Salesperson	9,510	15%
5. Cashiers	9,090	54%
6. Mechanical Engineers	8,490	45%
7. Hand Packers and Packagers	5,580	29%
8. Home Health Aides	4,520	66%
9. Computer Engineers	4,110	90%
10. Receptionists and Information Clerks	3,970	24%

**State of Michigan – Top Jobs**

	<b><u>New Openings Betw. 1994-2005</u></b>	<b><u>% Change From 1994-2005</u></b>
1. Waiters and Waitresses	22,250	29%
2. Cashiers	22,000	19%
3. Helpers and Laborers	21,380	27%
4. Systems Analysts	20,570	98%
5. Home Health Aides	17,470	98%
6. General Managers & Top Executives	17,140	16%
7. Registered Nurses	14,520	21%
8. Retail Salespersons	13,290	10%
9. Marketing and Sales, Supervisors	12,790	19%
10. Maintenance Repairers, Gen. Utility	11,660	24%

**United States – Top Jobs**

	<b><u>New Openings Betw. 1994-2005</u></b>	<b><u>% Change From 1994-2005</u></b>
1. Retail Salesperson	1,821,000	14%
2. Cashiers	1,772,000	19%
3. Waiters and Waitresses	1,390,000	26%
4. General Managers and Top Executives	1,104,000	15%
5. General Office Clerks	908,000	4%
6. Secretaries, Except legal and medical	871,000	9%
7. Truckdrivers	823,000	10%
8. Marketing and sales worker supervisors	788,000	17%
9. Teachers, Secondary school	782,000	29%
10. Registered Nurses	740,000	25%

- Waiter and waitress jobs are among the top three jobs in terms of total new openings for each labor market, except Oakland County's.
- Systems analysts are growing between 88%-130% in Oakland County, Detroit MSA and Michigan during the 11-year period.
- Retail salespersons will be in high demand in all four labor markets.
- There will be continued need for Home Health Aides regionally, but not necessarily in the U.S.
- Truckdrivers have experienced more growth at the national than locally or regionally.
- Cashiers, though in demand elsewhere, do not surface as a high growth occupation, in terms of total new positions between 1994-2005, in Oakland County.

# CONCLUSION

## 5.0 CONCLUSION

Some important conclusions can be drawn from the studies comprising this report. Overall, Oakland County employment will grow more than 20% during the years 1994 and 2005. This is significant especially considering it is more than 1½ times the national job growth rate.

Oakland County's healthy growth rate can be summarized a variety of ways, using Occupational Division, Occupational Industry and occupation. First, in terms of Occupational Division, **Professional and Specialty** occupations increase the most during this period. Jobs in this category increased their share of all jobs by 2.5%. Second, in looking at jobs by Industrial Division, it is striking that over half (54%) of all yearly openings fell in the **Services Industry** category. Finally, the job with most significant growth was **System Analyst**, an occupation that generates over 8,000 new jobs, almost double the next largest growth occupation of General Managers and Top Executives, from 1994-2005.

Another dimension of this study was the link between education and income. As expected, people with more education or training generally make more money. However, not all growth occupations require the higher education levels that reward people with higher salaries. In fact, almost three-quarters of all Oakland County jobs DO NOT require four-year degrees.

How does Oakland County measure up to the region, the state and the country? First, the division of **Professional and Specialty** Jobs is the fastest growing not only in Oakland County's labor market but also in the Detroit metropolitan market, Michigan and the U.S. Also, Oakland County service jobs grow by a rate comparable with Metro Detroit and the state labor markets (19%) while service jobs for the nation as a whole experienced a larger job gain (26%) between 1994 and 2005.

In all, this study helps fill the gap in information about demand by occupation in Oakland County and the skills required for these jobs. Intended for a mixed audience, this study has something useful for everyone. For example, this study can inform employees of their job options and the opportunities that come with additional training and education. It can also help employers and counselors guide the decisions of workers and students. Finally, policy-makers can better understand what future employment will look like in Oakland County and how it compares with other labor markets.

One thing is clear: there are always employment options. The availability of various jobs and their growth rates over time, what they pay, and their educational requirements can be critical in decisions about what career to pursue, what job to accept or what kind of employee to hire. It is the intention of the authors and compilers of both this report and the Oakland University study that this information will help guide these very decisions.

Albeit useful this is not an exhaustive product. Research on this topic continues to increase our understanding of the factors that influence the labor markets of different areas, and specifically what shapes Oakland County's now and in the future. For example, **Appendix B** is a list of website addresses that represent some of the sources and reports of the ongoing study of employment trends.

This report has increased our understanding of Oakland County's labor market demands. However, the next step needs to address the skills of the workforce and how these skills match with the occupations in demand. In fact a skills-profile of the workforce in our labor market area will help identify the gaps between employees' skills and the skills needed to fill jobs. Finally, a look at the skills-to-job-demand mismatch will aid policy-makers in developing and implementing programs to address these needs.

# APPENDIX D

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# **Internet Sources**

## Internet sources to help you thrive in Oakland County:

### Homepages:

[http://dir.yahoo.com/Regional/U\\_S\\_States/Michigan/Counties\\_and\\_Regions/Oakland\\_County](http://dir.yahoo.com/Regional/U_S_States/Michigan/Counties_and_Regions/Oakland_County)  
<http://www.co.oakland.mi.us/start/start.html> (search engine)  
<http://www.co.oakland.mi.us/>  
[http://www.co.oakland.mi.us/c\\_serv/personel/macsurvy.html](http://www.co.oakland.mi.us/c_serv/personel/macsurvy.html)  
<http://www.co.oakland.mi.us/about/index.html>  
[http://www.co.oakland.mi.us/c\\_serv/ced/contacts/rechstaf.html](http://www.co.oakland.mi.us/c_serv/ced/contacts/rechstaf.html)

### Schools: (a “\*” denotes school located in Oakland County)

<http://realestate.yahoo.com/realestate/schools/detroit/oakland/index.html> (school districts)  
<http://www.umich.edu> (University of Michigan)  
<http://www.msu.edu/home/> (Michigan State University)  
<http://www.oakland.edu> (Oakland University\*)  
<http://www.occ.cc.mi.us/> (Oakland Community College\*)  
<http://www.ltu.edu/> (Lawrence Tech University\*)  
<http://stmarys-orchardlake.edu/> (St. Mary’s)  
<http://www.emich.edu> (Eastern Michigan University)  
<http://wayne.edu> (Wayne State University)  
<http://www.uofb.com/index2.html> (University of Berkley\*)  
<http://www.rc.edu> (Rochester College\*)  
<http://www.midwesternbaptist.edu/> (Midwestern Baptist College\*)  
<http://www.specshoward.com> (Specs Howard School of Broadcast Art\*)  
<http://www.walshcol.edu> (Walsh College of Business)

### Job Descriptions:

[http://employment.yahoo.com/employment/salaries\\_and\\_benefits/](http://employment.yahoo.com/employment/salaries_and_benefits/)  
<http://www.michlmi.org> (Michigan Department of Career Development)  
<http://www.bls.gov> (Bureau of Labor Statistics)

### Finding Jobs on the Web:

[http://dir.yahoo.com/Regional/U\\_S\\_States/Michigan/Counties\\_and\\_Regions/Oakland\\_County/Business\\_and\\_Shopping/Companies/Employment/Recruiting\\_and\\_Placement](http://dir.yahoo.com/Regional/U_S_States/Michigan/Counties_and_Regions/Oakland_County/Business_and_Shopping/Companies/Employment/Recruiting_and_Placement) (Oakland County)  
<http://www.co.oakland.mi.us/cf-sites/personel/> (Oakland County)  
<http://www.sba.oakland.edu/oaklandpartnership/> (Oakland County)  
<http://www.ajb.dni.us/> (America’s Job Bank)  
<http://www.careerosaic.com/> (Career Mosaic)  
<http://www.cweb.com/> (Career Web)  
[http://www.JobOptions.com/esp/plsql/espan\\_enter.espan\\_home](http://www.JobOptions.com/esp/plsql/espan_enter.espan_home) (Job Options)  
<http://mi.monster.com> (Monster.com)  
<http://engineerjobs.com/> (Michigan)  
<http://www.statejobs.com/mi.html> (Michigan)  
<http://www.careermatrix.com> (Career Matrix)  
<http://www.michiganjobhunter.com/freep/> (Detroit Free Press Job Hunter)  
<http://www.detroitnews.com/adsdna/frames/class.htm> (Detroit News Classifieds)  
<http://www.state.mi.us/mdcs/Index.html> (Michigan)  
<http://www.michworks.org/> (Michigan)  
<http://www.automationalley.com/> (Automation Alley)  
<http://www.kellyservices.com> (Kelly Services)

### Fortune 500 Companies Headquartered in Oakland County:

<http://www.daimlerchrysler.com/> (DaimlerChrysler)  
<http://www.kmart.com> (Kmart)  
<http://www.lear.com> (Lear Corporation)  
<http://kellyservices.com> (Kelly Services)  
<http://delphiauto.com> (Delphi Automotive Systems)  
<http://www.meritorauto.com> (Meritor Automotive Systems)  
<http://www.pathfinder.com/fortune/fortune500/> (Fortune 500)  
[http://employment.yahoo.com/employment/company\\_research/](http://employment.yahoo.com/employment/company_research/) (Large Company Research)



# APPENDIX E

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**Occupational Employment Forecasts**  
**1994-2005**  
**Oakland County**

**OAKLAND COUNTY  
OCCUPATIONAL EMPLOYMENT FORECASTS  
1994 - 2005**

OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL AVERAGE OPENINGS		
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
00000	Total, all occupations	694,190	853,790	159,600	23.0	29,812	14,521	15,291
10000	Executive, administrative, and managerial occupations	76,710	95,760	<u>19,050</u>	24.8	3,309	1,734	1,575
11000	Managerial and administrative occupations	54,830	67,660	<u>12,830</u>	23.4	2,334	1,168	1,166
13014	Administrative services managers	1,340	1,610	270	20.2	53	25	28
15023	Communication, transportation, and utilities operations	590	660	70	10.4	19	6	13
15017	Construction managers	1,060	1,460	400	36.8	58	36	22
15005	Education administrators	1,580	1,960	380	24.5	81	35	46
13017	Engineering, mathematical, and natural science managers	2,440	3,610	1,170	48.3	158	107	51
13002	Financial managers	5,970	8,370	2,400	40.4	337	219	118
15026	Food service and lodging managers	2,400	2,960	560	23.3	102	51	51
39011	Funeral directors and morticians	70	80	10	12.3	3	1	2
19005	General managers and top executives	18,380	22,670	4,290	23.3	777	390	387
19002	Government chief executives and legislators	120	150	30	21.7	5	2	3
15014	Industrial production managers	1,430	1,520	90	6.1	38	8	30
13011	Marketing, advertising, and public relations managers	3,510	5,050	1,540	43.8	216	140	76
13005	Personnel, training, and labor relations managers	1,250	1,740	490	38.6	73	44	29
15011	Property and real estate managers	1,360	1,610	250	18.0	46	22	24
13008	Purchasing managers	1,420	1,580	160	10.6	44	14	30
19998	All other managers and administrators	11,890	12,640	750	6.3	324	68	256
21000	Management support occupations	21,880	28,100	<u>6,220</u>	28.5	975	566	409
21114	Accountants and auditors	5,930	7,180	1,250	20.9	230	113	117
21117	Budget analysts	370	530	160	42.9	20	14	6

**OAKLAND COUNTY  
OCCUPATIONAL EMPLOYMENT FORECASTS  
1994 - 2005**

OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
21921	Claims examiners, property and casualty insurance	760	1,060	300	40.9	36	28	8
21908	Construction and building inspectors	360	570	210	57.9	27	19	8
21902	Cost estimators	1,630	2,080	450	27.8	60	41	19
21105	Credit analysts	140	200	60	40.7	7	5	2
21508	Employment interviewers, private or public employment svr	670	1,160	490	71.8	58	44	14
21911	Inspectors and compliance officers, except construction	180	220	40	26.0	8	4	4
21108	Loan officers and counselors	1,550	1,840	290	18.2	52	26	26
21905	Management analysts	640	920	280	45.0	35	26	9
21511	Personnel, training, and labor relations specialists	1,680	2,340	660	38.8	93	59	34
21308	Purchasing agents, except wholesale, retail, and farm prod	1,540	1,910	370	23.9	69	33	36
21914	Tax examiners, collectors, and revenue agents	90	90	0	-3.4	2	0	2
21102	Underwriters	480	580	100	20.0	19	9	10
21302	Wholesale and retail buyers, except farm products	970	1,030	60	6.3	30	6	24
21998	All other management support workers	4,890	6,420	1,530	31.2	229	139	90
20111	Professional specialty occupations	97,220	141,040	43,820	45.1	5,823	3,979	1,844
22110	Engineers	13,810	19,410	5,600	40.6	830	510	320
22114	Chemical engineers	140	160	20	12.9	6	2	4
22121	Civil engineers, including traffic engineers	840	1,130	290	34.8	49	26	23
22126	Electrical and electronics engineers	2,510	3,750	1,240	49.4	170	113	51
22128	Industrial engineers, except safety engineers	1,100	1,460	360	33.0	61	33	28
22135	Mechanical engineers	5,840	8,320	2,480	42.5	360	226	134
22105	Metallurgists and metallurgical, ceramic, and materials	160	200	40	22.4	7	3	4

**OAKLAND COUNTY  
OCCUPATIONAL EMPLOYMENT FORECASTS  
1994 - 2005**

OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
22108	Mining engineers, including mine safety engineers	10	0	-10	-20.0	0	0	0
22117	Nuclear engineers	10	10	0	0.0	0	0	0
22195	All other engineers	3,210	4,000	1,170	36.5	177	107	70
22301	Architects and surveyors	1,580	1,680	100	6.9	44	10	34
22302	Architects, except landscape and marine	980	1,160	180	18.5	35	16	19
22308	Landscape architects	90	100	10	8.5	3	1	2
22310	Surveyors	510	430	-80	-15.8	13	0	13
24300	Life scientists	400	500	100	25.4	20	9	11
24305	Agricultural and food scientists	50	60	10	20.4	2	1	1
24308	Biological scientists	160	220	60	35.6	10	5	5
24302	Foresters and conservation scientists	20	20	0	26.7	0	0	0
24311	Medical scientists	170	200	30	17.4	8	3	5
24398	All other life scientists	10	10	0	16.7	0	0	0
25301	Computer, mathematical, and operations research occupations	10,850	23,060	<u>12,210</u>	112.6	1,233	1,109	124
25313	Actuaries	180	200	20	14.7	6	2	4
25197	Computer systems analysts, engineers, and scientists	9,800	21,720	<u>11,920</u>	121.5	1,181	1,082	99
25198	Computer engineers and scientists	3,610	7,480	3,870	107.1	388	351	37
22127	Computer engineers	2,630	5,350	2,720	103.3	273	247	26
25196	All other computer scientists	980	2,130	1,150	117.6	115	104	11
25102	Systems analysts	6,190	14,240	8,050	129.9	793	731	62
25312	Statisticians	430	460	30	6.6	12	3	9
25317	Mathematicians and all other mathematical scientists	10	10	0	7.7	0	0	0

**OAKLAND COUNTY  
OCCUPATIONAL EMPLOYMENT FORECASTS  
1994 - 2005**

OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
25302	Operations research analysts	430	670	240	57.0	34	22	12
24100	Physical scientists	730	960	230	31.0	40	20	20
24105	Chemists	420	550	120	28.1	23	11	12
24111	Geologists, geophysicists, and oceanographers	90	140	50	52.7	7	4	3
24108	Meteorologists	10	10	0	-18.2	0	0	0
24102	Physicists and astronomers	50	40	-10	-13.3	1	0	1
24198	All other physical scientists	150	210	60	42.7	10	6	4
27100	Social scientists	850	1,130	280	32.6	41	25	16
27102	Economists	230	330	100	40.1	16	8	8
27108	Psychologists	430	550	120	27.7	15	11	4
27105	Urban and regional planners	100	160	60	49.0	7	5	2
27198	All other social scientists	90	100	10	17.2	3	1	2
27200	Social, recreational, and religious workers	5,000	6,610	<u>1,610</u>	32.2	249	148	101
27502	Clergy	530	600	70	13.5	16	6	10
27505	Directors, religious activities and education	630	720	90	13.2	20	8	12
27308	Human services workers	590	900	310	53.8	43	29	14
27311	Recreation workers	760	910	150	19.9	29	14	15
27307	Residential counselors	550	730	180	33.4	28	17	11
27310	Social workers	1,950	2,760	810	41.5	113	74	39
28100	Lawyers and judicial workers	4,050	5,240	<u>1,190</u>	29.3	162	108	54
28101	Judges, magistrates, and other judicial workers	90	100	10	16.9	2	1	1
28108	Lawyers	3,960	5,130	1,170	29.6	160	107	53

**OAKLAND COUNTY  
OCCUPATIONAL EMPLOYMENT FORECASTS  
1994 - 2005**

OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
31000	Teachers, librarians, and counselors	23,220	31,370	8,150	35.1	1,237	740	497
31306	Teachers, preschool and kindergarten	1,430	1,820	390	27.5	62	36	26
31305	Teachers, elementary	5,000	6,270	1,180	23.3	216	108	108
31308	Teachers, secondary school	7,150	9,970	2,820	39.3	452	256	196
31311	Teachers, special education	1,700	2,810	1,110	65.5	129	101	28
31100	College and university faculty	2,450	3,470	1,020	41.5	168	92	76
31320	Other teachers and instructors	3,310	4,320	1,010	30.4	120	91	29
31323	Farm and home management advisors	10	10	0	-8.3	0	0	0
31321	Instructors and coaches, sports and physical training	1,350	1,600	250	19.2	35	23	12
31310	Adult and vocational education teachers	1,950	2,700	750	38.3	85	68	17
31317	Instructors, adult (nonvocational) education	680	880	200	29.9	24	18	6
31314	Teachers and instructors, vocational education and tr	1,270	1,820	550	42.8	61	50	11
31398	All other teachers and instructors	1,160	1,500	340	29.2	44	30	14
31400	Librarians, archivists, curators, and related workers	460	550	90	21.5	19	9	10
31511	Curators, archivists, museum technicians, and restorers	50	80	30	48.1	3	2	1
31502	Librarians, professional	400	470	70	17.9	16	7	9
31514	Counselors	480	670	190	39.9	27	17	10
32101	Health diagnosing occupations	5,850	6,880	1,030	17.6	203	91	112
32113	Chiropractors	240	290	50	20.2	9	4	5
32105	Dentists	1,200	1,250	50	4.2	35	4	31
32108	Optometrists	200	220	20	6.4	5	1	4
32102	Physicians	3,740	4,610	870	23.1	141	79	62

**OAKLAND COUNTY  
OCCUPATIONAL EMPLOYMENT FORECASTS  
1994 - 2005**

OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
32111	Podiatrists	190	230	40	20.8	8	4	4
32114	Veterinarians and veterinary inspectors	270	290	20	4.7	7	1	6
32501	Health assessment and treating occupations	13,190	17,520	<u>4,330</u>	32.8	599	393	206
32521	Dietitians and nutritionists	150	170	20	16.3	6	2	4
32517	Pharmacists	740	760	20	2.7	14	2	12
32511	Physician assistants	330	430	100	30.2	14	9	5
32502	Registered nurses	9,720	12,250	2,530	26.0	375	230	145
32300	Therapists	2,260	3,910	<u>1,650</u>	73.5	190	150	40
32305	Occupational therapists	490	930	440	88.0	48	39	9
32308	Physical therapists	670	1,370	700	105.2	76	64	12
32317	Recreational therapists	80	100	20	33.8	3	2	1
32302	Respiratory therapists	330	440	110	32.7	16	10	6
32314	Speech-language pathologists and audiologists	560	870	310	55.8	38	28	10
32398	All other therapists	130	210	80	58.5	9	7	2
34040	Writers, artists, and entertainers	10,910	14,720	<u>3,810</u>	34.9	549	346	203
34035	Artists and commercial artists	2,660	3,890	1,230	46.2	163	112	51
34058	Athletes, coaches, umpires, and related workers	760	740	-20	-2.6	22	0	22
34053	Dancers and choreographers	80	70	-10	-10.4	2	0	2
34030	Designers	3,910	5,410	<u>1,500</u>	38.4	190	137	59
34038	Designers, except interior designers	3,340	4,770	1,430	42.7	180	130	50
34041	Interior designers	570	640	70	13.0	16	7	9
34050	Musicians	640	700	60	9.7	16	6	10



**OAKLAND COUNTY  
OCCUPATIONAL EMPLOYMENT FORECASTS  
1994 - 2005**

OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
34020	Photographers and camera operators	460	540	80	16.8	16	7	9
34026	Camera operators, television, motion picture, video	110	110	0	6.5	3	1	2
34023	Photographers	350	430	70	19.9	13	0	7
34056	Producers, directors, actors, and entertainers	360	540	180	49.7	24	16	8
34008	Public relations specialists and publicity writers	360	440	80	23.5	15	8	7
34010	Radio and TV announcers and newscasters	130	150	20	20.6	6	2	4
34011	Reporters and correspondents	240	300	60	24.0	10	5	5
34001	Writers and editors, including technical writers	1,320	1,940	620	47.2	82	56	26
39997	All other professional workers	6,790	11,960	5,170	76.1	616	470	146
35000	Technicians and related support occupations	32,000	41,180	9,180	28.7	1,479	833	646
32901	Health technicians and technologists	12,500	16,640	4,140	33.1	610	377	233
32925	Cardiology technologists	80	90	10	20.0	2	1	1
32910	Clinical laboratory technologists and technicians	1,430	1,650	220	15.9	49	21	28
32908	Dental hygienists	770	1,070	300	38.5	41	27	14
32923	Electroneurodiagnostic technologists	40	50	10	29.7	2	1	1
32926	EKG technicians	80	60	-20	-16.0	1	0	1
32508	Emergency medical technicians	790	1,220	430	54.9	54	39	15
32505	Licensed practical nurses	2,910	3,590	680	23.5	119	62	57
32911	Medical records technicians	380	600	220	58.7	27	20	7
32914	Nuclear medicine technologists	70	90	20	25.7	3	2	1
32514	Opticians, dispensing and measuring	460	540	80	18.9	19	8	11
32518	Pharmacy technicians	470	470	0	-0.6	9	0	9

**OAKLAND COUNTY  
OCCUPATIONAL EMPLOYMENT FORECASTS  
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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
32931	Psychiatric technicians	650	740	90	12.7	18	8	10
32916	Radiologic technologists and technicians	950	1,410	460	47.4	55	41	14
32928	Surgical technologists	150	150	40	20.4	6	3	3
32951	Veterinary technicians and technologists	150	160	10	12.4	5	2	3
32995	All other health professionals and paraprofessionals	3,140	4,720	<u>1,580</u>	50.2	201	143	58
35100	Engineering and science technicians and technologists	12,710	14,920	<u>2,210</u>	17.4	447	202	245
35101	Engineering technicians	5,150	6,810	<u>1,660</u>	32.4	257	152	105
22505	Electrical and electronic technicians and technologists	1,890	2,940	1,050	55.2	137	95	42
35199	All other engineering technicians and technologists	3,250	3,880	630	19.2	120	57	63
22512	Drafters	7,230	7,710	480	6.7	177	44	133
24501	Science and mathematics technicians	340	400	60	17.8	13	6	7
38000	Technicians, except health and engineering and science	6,800	9,620	<u>2,820</u>	41.6	422	254	168
97702	Aircraft pilots and flight engineers	390	860	470	118.7	54	42	12
39002	Air traffic controllers and airplane dispatchers	20	20	0	29.4	0	0	0
34028	Broadcast technicians	230	230	0	0.4	6	0	6
25106	Computer programmers	4,580	6,290	1,710	37.5	286	156	130
28300	Legal assistants and technicians, except clerical	1,300	1,870	570	43.7	65	51	14
28305	Paralegals	700	1,120	420	60.7	45	38	7
28306	Title examiners and searchers	190	240	50	27.7	7	5	2
28499	All other legal assistants, including law clerks	410	510	100	22.5	13	8	5
25111	Programmers, numerical, tool, and process control	60	60	0	3.5	1	0	1
31505	Technical assistants, library	180	240	60	32.8	9	5	4

**OAKLAND COUNTY  
OCCUPATIONAL EMPLOYMENT FORECASTS  
1994 - 2005**

OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL AVERAGE OPENINGS		
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
39099	All other technicians	50	50	0	17.4	1	0	1
40000	Marketing and sales occupations	85,360	100,380	15,020	17.6	3,797	1,366	2,431
49023	Cashiers	10,350	10,430	2,000	12.7	851	100	682
49017	Counter and rental clerks	2,180	2,560	380	17.8	98	35	63
43002	Insurance sales workers	3,150	3,790	640	20.3	110	58	52
41002	Marketing and sales worker supervisors	10,830	12,650	1,820	16.8	361	166	195
43010	Real estate agents, brokers, and appraisers	4,430	4,930	500	11.3	131	46	85
43005	Brokers, real estate	260	310	50	20.0	10	5	5
43011	Real estate appraisers	270	290	20	9.4	7	2	5
43008	Sales agents, real estate	3,910	4,340	430	10.9	114	39	75
49011	Salespersons, retail	23,790	27,670	3,880	16.3	1,068	352	716
43014	Securities and financial services sales workers	1,060	1,270	210	19.1	34	18	16
43021	Travel agents	990	1,610	620	62.1	79	56	23
49995	All other sales and related workers	22,580	27,480	4,900	21.7	1,065	446	619
50000	Administrative support occupations, including clerical	133,960	156,570	22,610	16.9	4,634	2,058	2,576
53110	Adjusters, investigators, and collectors	6,560	9,450	2,890	44.1	335	263	72
53123	Adjustment clerks	2,150	3,580	1,430	66.5	152	130	22
53508	Bill and account collectors	1,330	2,090	760	57.7	83	70	13
53310	Insurance claims and policy processing occupations	2,690	3,300	610	22.6	88	55	33
53302	Insurance adjusters, examiners, and investigators	700	950	250	35.7	31	23	8
53311	Insurance claims clerks	480	640	160	33.2	19	14	5
53314	Insurance policy processing clerks	1,510	1,710	200	13.1	38	18	20

**OAKLAND COUNTY  
OCCUPATIONAL EMPLOYMENT FORECASTS  
1994 - 2005**

OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
53502	Welfare eligibility workers and interviewers	300	380	80	27.7	12	8	4
53799	All other adjusters and investigators	80	90	10	3.6	0	0	0
57100	Communications equipment operators	1,720	1,000	-120	-6.9	35	0	35
57110	Telephone operators	1,720	1,600	-120	-6.9	35	0	35
57108	Central office operators	290	80	-210	-73.2	6	0	6
57102	Switchboard operators	1,430	1,520	90	6.6	38	9	29
56100	Computer operators and peripheral equipment operators	1,700	1,200	-500	-29.7	26	0	26
56011	Computer operators, except peripheral equipment	1,540	1,110	-430	-28.2	24	0	24
56014	Peripheral EDP equipment operators	160	90	-70	-44.6	2	0	2
55700	Information clerks	8,470	11,790	<u>3,320</u>	39.2	486	302	184
53808	Hotel desk clerks	440	470	30	8.5	23	3	20
55332	Interviewing clerks, except personnel and social welfare	650	780	130	20.3	31	12	19
53105	New accounts clerks, banking	190	260	70	36.4	11	6	5
55305	Receptionists and information clerks	7,000	9,870	2,870	41.0	397	261	136
53810	Reservation and transportation ticket agents and travel	210	420	210	104.9	24	20	4
57323	Mail clerks and messengers	1,730	2,100	370	21.4	75	34	41
57302	Mail clerks, except mail machine operators and postal ser	960	1,230	270	28.2	50	25	25
57311	Messengers	770	870	100	13.1	25	9	16
57328	Postal clerks and mail carriers	2,240	2,980	740	33.2	124	68	56
57305	Postal mail carriers	1,790	2,360	570	31.8	100	52	48
57308	Postal service clerks	440	620	180	38.5	24	16	8
58001	Material recording, scheduling, dispatching, and distributi	23,240	26,900	<u>3,660</u>	15.7	765	333	432

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
58010	Dispatchers	1,190	1,600	410	34.6	55	37	18
58005	Dispatchers, except police, fire, and ambulance	920	1,260	340	37.1	45	31	14
56002	Dispatchers, police, fire, and ambulance	270	340	70	25.7	10	6	4
58014	Meter readers, utilities	100	90	-10	-3.2	2	0	2
58026	Order fillers, wholesale and retail sales	1,220	1,490	270	21.8	50	24	26
55326	Procurement clerks	290	320	30	9.2	8	2	6
58008	Production, planning, and expediting clerks	1,320	1,570	250	18.9	48	23	25
58097	Stock clerks	12,450	13,460	1,010	8.1	338	93	245
58028	Traffic, shipping, and receiving clerks	5,390	6,820	1,430	26.5	212	130	82
58017	Weighers, measurers, checkers, and samplers, recordkeepin	530	590	60	10.7	16	5	11
58098	All other material recording, scheduling, and distributio	760	970	210	27.1	36	19	17
53200	Records processing occupations	18,920	19,620	700	3.7	455	63	392
53908	Advertising clerks	100	150	50	55.2	7	5	2
53128	Brokerage clerks	250	200	-50	-17.7	3	0	3
55317	Correspondence clerks	240	270	30	13.9	8	3	5
55321	File clerks	1,530	1,470	-60	-3.9	52	0	52
55500	Financial records processing occupations	14,370	14,770	400	2.8	310	36	274
55344	Billing, cost, and rate clerks	2,370	2,770	400	17.1	104	37	67
56002	Billing, posting, and calculating machine operators	590	220	-370	-62.1	24	0	24
55338	Bookkeeping, accounting, and auditing clerks	10,460	10,640	180	1.7	180	16	164
55341	Payroll and timekeeping clerks	950	1,130	180	18.9	35	16	19
53902	Library assistants and bookmobile drivers	280	350	70	25.4	18	6	12

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
55323	Order clerks, materials, merchandise, and service	1,620	1,920	300	18.7	61	27	34
55314	Personnel clerks, except payroll and timekeeping	440	430	-10	-2.3	9	0	9
53126	Statement clerks	110	60	-50	-41.3	1	0	1
55200	Secretaries, stenographers, and typists	24,350	27,990	<u>3,640</u>	15.0	723	331	392
55100	Secretaries	18,680	22,810	<u>4,130</u>	22.1	703	375	328
55102	Legal secretaries	2,360	2,850	490	20.9	86	45	41
55105	Medical secretaries	1,440	1,780	340	23.9	56	31	25
55198	Secretaries, except legal and medical	14,890	18,180	3,290	22.1	561	299	262
55302	Stenographers	570	630	60	11.7	16	6	10
55398	Typists and word processors	5,100	4,550	-550	-10.7	54	0	54
59900	Other clerical and administrative support workers	45,040	52,960	<u>7,920</u>	17.6	1,666	720	946
53102	Bank tellers	3,680	3,900	220	6.1	160	20	140
51002	Clerical supervisors and managers	7,200	9,700	2,500	34.7	409	227	182
53702	Court clerks	150	210	60	37.3	7	5	2
53101	Credit authorizers, credit checkers, and loan and credit	1,660	1,720	60	3.8	29	6	23
53114	Credit authorizers	40	70	30	80.0	3	3	0
53117	Credit checkers	240	220	-20	-8.8	2	0	2
53121	Loan and credit clerks	1,310	1,370	60	3.9	25	5	20
53111	Loan interviewers	70	70	0	1.5	1	0	1
55335	Customer service representatives, utilities	240	270	30	13.4	8	3	5
56017	Data entry keyers, except composing	2,740	3,240	500	18.3	63	46	17
56021	Data entry keyers, composing	60	30	-30	-57.4	0	0	0

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
56200	Duplicating, mail, and other office machine operators	1,300	1,120	-180	-13.5	51	0	51
55347	General office clerks	16,620	19,200	2,580	15.5	613	234	379
53705	Municipal clerks	40	40	0	12.8	0	0	0
53911	Proofreaders and copy markers	260	290	30	9.6	9	2	7
53914	Real estate clerks	80	90	10	14.6	3	1	2
55328	Statistical clerks	630	620	-10	-2.4	6	0	6
53904	Teacher aides and educational assistants	3,760	5,440	1,680	44.4	205	152	53
59998	All other clerical and administrative support workers	6,620	7,100	480	7.3	123	44	79
60000	Service occupations	102,700	123,020	<u>20,320</u>	19.8	4,482	1,849	2,633
67010	Cleaning and building service occupations, except private	15,690	19,120	<u>3,430</u>	21.8	602	311	291
61008	Institutional cleaning supervisors	740	840	100	13.6	29	9	20
67001	Janitors and cleaners, including maids and housekeeping	14,210	17,440	3,230	22.7	550	292	258
67008	Pest controllers and assistants	60	80	20	34.5	3	2	1
67098	All other cleaning and building service workers	680	760	80	12.6	20	8	12
65010	Food preparation and service occupations	44,200	47,750	<u>3,550</u>	8.0	1,698	322	1,376
65100	Chefs, cooks, and other kitchen workers	15,810	17,560	<u>1,750</u>	11.1	459	160	299
65020	Cooks, except short order	4,850	5,460	610	12.6	178	56	122
65021	Bakers, bread and pastry	730	920	190	27.0	36	18	18
65028	Cooks, institution or cafeteria	1,310	1,420	110	8.3	43	10	33
65026	Cooks, restaurant	2,810	3,120	310	11.0	99	28	71
65030	Cooks, short order and fast food	3,790	4,110	320	8.4	124	29	95
65038	Food preparation workers	7,180	8,000	820	11.4	157	75	82

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
65200	Food and beverage service occupations	27,130	28,630	1,500	5.5	1,168	135	1,033
65005	Bartenders	2,630	2,250	-380	-14.5	84	0	84
65014	Dining room and cafeteria attendants and bar helpers	2,740	2,550	-190	-6.6	107	0	107
65040	Food counter, fountain, and related workers	9,050	8,700	-350	-3.9	288	0	288
65002	Hosts and hostesses, restaurant, lounge, or coffee shop	1,250	1,400	150	11.8	48	13	35
65008	Waiters and waitresses	11,470	13,740	2,270	19.8	726	207	519
65300	All other food preparation and service workers	1,260	1,550	290	23.4	71	27	44
66001	Health service occupations	9,680	13,210	<u>3,530</u>	36.5	516	321	195
66023	Ambulance drivers and attendants, except EMTs	30	40	10	20.7	2	1	1
66002	Dental assistants	1,200	1,660	460	38.8	77	42	35
66005	Medical assistants	1,630	2,730	1,100	67.7	130	100	30
66010	Nursing aides and psychiatric aides	4,430	5,340	910	20.4	149	82	67
66008	Nursing aides, orderlies, and attendants	4,010	4,890	880	22.1	141	80	61
66014	Psychiatric aides	430	450	20	4.7	8	2	6
66021	Occupational therapy assistants and aides	50	110	60	100.0	6	5	1
66026	Pharmacy assistants	320	350	30	11.7	10	3	7
66017	Physical and corrective therapy assistants and aides	480	850	370	77.8	47	34	13
66099	All other health service workers	1,550	2,140	590	38.3	95	54	41
68001	Personal service occupations	13,780	18,410	<u>4,630</u>	33.6	702	423	279
68014	Amusement and recreation attendants	890	1,070	180	20.7	45	17	28
68023	Baggage porters and bellhops	70	90	20	16.2	3	1	2
68002	Barbers	260	260	0	-1.5	8	0	8



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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
68038	Child care workers	3,250	3,470	220	6.7	55	20	35
68010	Cosmetologists and related workers	5,070	5,700	630	12.5	177	58	119
68005	Hairdressers, hairstylists, and cosmetologists	4,630	5,090	460	9.9	151	42	109
68008	Manicurists	260	430	170	63.2	21	15	6
68011	Shampooers	180	190	10	3.9	5	1	4
68026	Flight attendants	30	70	40	106.3	4	3	1
68034	Homemaker-home health aides	3,470	6,980	<u>3,510</u>	101.0	382	319	63
66011	Home health aides	2,360	4,860	2,500	105.6	263	227	36
68035	Personal and home care aides	1,110	2,120	1,010	91.2	119	92	27
68021	Ushers, lobby attendants, and ticket takers	740	790	50	7.2	28	5	23
62000	Private household workers	2,200	2,400	200	8.8	75	18	57
62041	Child care workers, private household	990	1,230	240	23.6	58	21	37
62061	Cleaners and servants, private household	1,100	1,090	-10	-1.4	19	0	19
62021	Cooks, private household	30	20	-10	-34.5	0	0	0
62031	Housekeepers and butlers	80	60	-20	-20.8	1	0	1
63001	Protective service occupations	50	60	10	23.9	2	1	1
63001	Protective service occupations	11,460	15,610	<u>4,150</u>	36.2	683	379	304
63010	Firefighting occupations	880	1,180	300	34.4	63	28	35
63008	Fire fighters	640	880	240	37.8	48	22	26
61002	Fire fighting and prevention supervisors	200	250	50	25.8	13	5	8
63015	Law enforcement occupations	2,620	3,900	1,280	48.9	213	117	96
63017	Correction officers	410	730	320	77.4	35	29	6

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL AVERAGE OPENINGS		
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
63020	Police and detectives	2,210	3,170	960	43.6	178	88	90
61005	Police and detective supervisors	390	490	100	25.2	27	9	18
63009	Police detectives and investigators	210	280	70	35.9	15	7	8
63014	Police patrol officers	1,480	2,230	750	50.1	129	68	61
63032	Sheriffs and deputy sheriffs	70	110	40	48.6	5	3	2
63033	Other law enforcement occupations	50	60	10	19.2	2	1	1
63097	Other protective service workers	7,960	10,530	2,570	32.3	407	234	173
63035	Detectives, except public	620	850	230	35.4	32	20	12
63047	Guards	6,710	8,940	2,230	33.3	328	203	125
63044	Crossing guards	260	320	60	24.3	12	6	6
63099	All other protective service workers	370	420	50	14.4	35	5	30
69998	All other service workers	5,700	6,530	830	14.6	206	75	131
70010	Agriculture, forestry, fishing, and related occupations	6,160	6,890	730	11.8	185	80	105
79012	Animal breeders and trainers	20	20	0	0.0	0	0	0
79017	Animal caretakers, except farm	470	560	90	17.8	19	8	11
79801	Farm workers	330	250	-80	-23.0	8	0	8
79001	Gardening, nursery, and greenhouse and lawn service occupat	4,210	4,900	690	16.3	129	64	65
79030	Gardeners and groundskeepers, except farm	2,450	2,680	230	9.4	55	21	34
79038	Lawn maintenance workers	710	880	170	24.3	26	16	10
15032	Lawn service managers	160	190	30	18.0	6	3	3
15031	Nursery and greenhouse managers	170	200	30	18.2	6	3	3
79005	Nursery workers	530	710	180	34.2	28	16	12

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
79033	Pruners	80	90	10	24.0	3	2	1
79036	Sprayers/applicators	130	160	30	23.6	5	3	2
71000	Farm operators and managers	500	500	-140	-27.0	7	0	7
73000	Forestry and logging occupations	30	40	10	37.9	2	1	1
72000	Supervisors, farming, forestry, and agricultural related occ	60	70	10	15.6	2	1	1
79806	Veterinary assistants	160	180	20	12.1	6	2	4
79998	All other agricultural, forestry, fishing, and related work	390	520	130	32.5	20	12	8
80001	Precision production, craft, and repair occupations	69,860	79,370	<u>9,510</u>	13.6	2,329	862	1,467
81000	Blue collar worker supervisors	7,410	8,230	820	11.1	240	75	165
87001	Construction trades	14,030	16,640	<u>2,610</u>	18.6	521	236	285
87310	Bricklayers and stone masons	570	680	110	19.3	20	10	10
87110	Carpenters	3,940	4,530	590	14.9	124	53	71
87602	Carpet installers	210	230	20	6.1	7	1	6
87105	Ceiling tile installers and acoustical carpenters	40	40	0	-2.4	1	0	1
87311	Concrete and terrazzo finishers	430	630	200	47.4	25	18	7
87120	Drywall installers and finishers	390	440	50	12.5	13	4	9
87202	Electricians	3,430	3,870	440	12.7	116	40	76
87811	Glaziers	70	60	-10	-14.9	1	0	1
87308	Hard tile setters	120	120	0	4.2	3	0	3
87711	Highway maintenance workers	150	190	40	26.4	8	4	4
87802	Insulation workers	70	100	30	32.4	4	2	2
87402	Painters and paperhangers, construction and maintenance	1,220	1,480	260	21.3	50	24	26

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL AVERAGE OPENINGS		
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
87708	Paving, surfacing, and tamping equipment operators	230	440	210	95.6	25	20	5
87510	Pipelayers and pipelaying fitters	190	300	110	53.1	14	9	5
87317	Plasterers	30	40	10	18.8	2	1	1
87502	Plumbers, pipefitters, and steamfitters	1,930	2,300	370	19.1	68	33	35
87808	Roofers	440	530	90	21.1	17	8	9
87320	Structural and reinforcing metal workers	180	210	30	17.1	6	3	3
87898	All other construction trades workers	390	470	80	19.8	18	7	11
87900	Extractive and related workers, including blasters	690	750	60	8.9	15	5	10
87920	Oil and gas extraction occupations	10	10	0	20.0	0	0	0
87929	All other oil and gas extraction occupations	0	10	10	25.0	0	0	0
87988	All other extraction and related workers	680	740	60	8.8	15	5	10
85000	Mechanics, installers, and repairers	25,730	30,780	5,050	19.6	1,052	458	594
85500	Communications equipment mechanics, installers, and repairers	210	130	-80	-38.0	3	0	3
85502	Central office and PBX installers and repairers	160	90	-70	-46.3	3	0	3
85514	Radio mechanics	20	10	-10	-26.3	0	0	0
85597	All other communications equipment mechanics, installers and repairers	30	30	0	3.8	0	0	0
85701	Electrical and electronic equipment mechanics, installers and repairers	3,710	4,700	990	26.8	175	89	86
85705	Data processing equipment repairers	1,060	1,560	500	46.8	74	45	29
85723	Electrical powerline installers and repairers	620	980	360	57.4	46	32	14
85708	Electronic home entertainment equipment repairers	200	170	-30	-12.8	5	0	5
85717	Electronics repairers, commercial and industrial equipment	600	840	240	38.8	36	21	15
85726	Station installers and repairers, telephone	10	0	-10	-75.0	0	0	0

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
85702	Telephone and cable TV line installers and repairers	1,100	1,040	-60	-5.7	20	0	20
85720	All other electrical and electronic equipment mechanics	120	120	0	3.4	3	0	3
85100	Machinery and related mechanics, installers, and repairer	6,840	10,510	<u>1,670</u>	16.8	340	151	169
85109	Industrial machinery mechanics	1,490	1,630	140	9.5	53	13	40
85132	Maintenance repairers, general utility	6,490	8,150	1,660	25.5	281	150	131
85123	Millwrights	860	730	-130	-15.3	18	0	18
85300	Vehicle and mobile equipment mechanics and repairers	6,940	8,160	<u>1,220</u>	17.6	288	112	176
85320	Aircraft mechanics, including engine specialists	110	200	90	82.7	12	8	4
85326	Aircraft engine specialists	30	50	20	88.0	3	2	1
85323	Aircraft mechanics	90	150	60	81.2	9	6	3
85305	Automotive body and related repairers	1,510	1,540	30	1.9	40	3	37
85302	Automotive mechanics	3,740	4,300	560	15.0	152	51	101
85311	Bus and truck mechanics and diesel engine specialists	1,120	1,550	430	38.3	61	39	22
85321	Farm equipment mechanics	50	70	20	34.0	3	2	1
85314	Mobile heavy equipment mechanics	280	360	80	32.4	15	8	7
85318	Motorcycle, boat, and small engine mechanics	130	140	10	5.3	5	1	4
85308	Motorcycle repairers	30	40	10	29.6	2	1	1
85328	Small engine specialists	110	110	0	-0.9	3	0	3
85900	Other mechanics, installers, and repairers	6,030	7,280	<u>1,250</u>	20.7	253	113	140
85951	Bicycle repairers	80	70	-10	-15.9	2	0	2
85914	Camera and photographic equipment repairers	10	10	0	7.7	0	0	0
85947	Coin and vending machine servicers and repairers	70	60	-10	-7.5	1	0	1

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
85911	Electric meter installers and repairers	30	20	-10	-12.0	1	0	1
85908	Electromedical and biomedical equipment repairers	40	50	10	20.0	2	1	1
85932	Elevator installers and repairers	130	170	40	28.6	6	3	3
85902	Heat, air conditioning, and refrigeration mechanics and ins	870	1,310	440	51.4	60	40	20
85710	Home appliance and power tool repairers	190	210	20	15.1	7	2	5
85923	Locksmiths and safe repairers	90	110	20	27.6	4	2	2
85921	Musical instrument repairers and tuners	20	20	0	27.8	0	0	0
85926	Office machine and cash register servicers	610	730	120	19.7	35	11	24
85905	Precision instrument repairers	150	170	20	11.3	6	2	4
85935	Riggers	10	10	0	-16.7	0	0	0
85953	Tire repairers and changers	340	340	0	-2.6	10	0	10
85917	Watchmakers	40	40	0	-2.3	1	0	1
85995	All other mechanics, installers, and repairers	3,360	3,950	590	17.6	120	54	66
89997	Production occupations, precision	21,240	22,100	860	4.0	474	77	397
93100	Assemblers, precision	2,030	2,530	500	24.6	85	47	38
93102	Aircraft assemblers, precision	10	10	0	-12.5	0	0	0
93114	Electrical and electronic equipment assemblers, precisi	370	440	70	19.6	15	7	8
93111	Electromechanical equipment assemblers, precision	270	300	30	11.2	9	3	6
93108	Fitters, structural metal, precision	80	60	-20	-19.7	1	0	1
93105	Machine builders and other precision machine assemblers	970	1,190	220	22.5	37	20	17
93196	All other precision assemblers	340	530	190	57.2	24	18	6
89801	Food workers, precision	800	730	-70	-8.7	18	0	18

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
89805	Bakers, manufacturing	20	20	0	0.0	0	0	0
89803	Butchers and meatcutters	760	690	-70	-9.0	18	0	18
89898	All other precision food and tobacco workers	20	20	0	-5.3	0	0	0
83000	Inspectors, testers, and graders, precision	4,030	4,230	200	5.0	93	19	74
89100	Metal workers, precision	11,290	11,090	-200	-1.8	212	0	212
89135	Boilermakers	20	30	10	34.8	1	1	0
89123	Jewelers and silversmiths	230	240	10	5.8	5	1	4
89108	Machinists	5,190	5,150	-40	-0.8	98	0	98
87823	Sheet metal workers and duct installers	1,800	1,590	-210	-11.8	29	0	29
89102	Tool and die makers	3,190	3,210	20	0.5	67	1	66
89195	All other precision metal workers	860	870	10	1.6	15	0	15
89700	Printing workers, precision	480	660	180	36.2	23	15	8
89798	Prepress printing workers, precision	460	630	170	36.6	22	14	8
89702	Compositors and typesetters, precision	30	30	0	15.4	0	0	0
89705	Job printers	60	60	0	8.9	1	0	1
89706	Paste-up workers	60	70	10	3.1	1	0	1
89707	Electronic pagination systems workers	60	160	100	143.8	9	8	1
89712	Photoengravers	50	60	10	1.9	1	0	1
89713	Camera operators	40	50	10	22.5	2	1	1
89717	Strippers, printing	110	160	50	48.6	7	5	2
89718	Platemakers	50	60	10	7.8	1	0	1
89716	All other printing workers, precision	20	30	10	27.3	1	1	0

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
89500	Textile, apparel, and furnishings workers, precision	700	590	-110	-15.9	8	0	8
89505	Custom tailors and sewers	350	210	-140	-39.2	3	0	3
89502	Patternmakers and layout workers, fabric and apparel	30	60	30	124.0	3	0	0
89511	Shoe and leather workers and repairers, precision	30	20	-10	-17.2	0	0	0
89508	Upholsterers	160	160	0	1.3	2	0	2
89598	All other precision textile, apparel, and furnishings	140	140	0	-0.7	3	0	3
89300	Woodworkers, precision	590	740	150	25.7	26	13	13
89311	Cabinetmakers and bench carpenters	250	330	80	35.4	13	8	5
89314	Furniture finishers	50	60	10	3.7	1	0	1
89308	Wood machinists	30	30	0	13.3	1	0	1
89395	All other precision woodworkers	260	320	60	22.6	11	5	6
89900	Other precision workers	1,320	1,540	220	16.4	45	19	26
89921	Dental laboratory technicians, precision	550	510	-40	-5.9	11	0	11
89917	Optical goods workers, precision	20	20	0	43.8	1	1	0
89914	Photographic process workers, precision	60	70	10	16.7	3	1	2
89998	All other precision workers	700	930	230	33.0	33	20	13
95000	Plant and system occupations	770	890	120	14.8	27	11	16
95008	Chemical plant and system operators	40	50	10	30.6	2	1	1
95020	Electric power generating plant operators, distributors,	230	300	70	31.6	11	7	4
95028	Power distributors and dispatchers	20	20	0	-6.3	0	0	0
95200	Power generating and reactor plant operators	210	290	80	34.4	11	7	4
95032	Stationary engineers	80	80	0	-1.3	2	0	2



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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL AVERAGE OPENINGS		
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
95002	Water and liquid waste treatment plant and system operato	200	240	40	20.4	8	4	4
95094	All other plant and system operators	230	220	-10	-3.9	5	0	5
90000	Operators, fabricators, and laborers	90,200	109,560	19,360	21.5	3,774	1,760	2,014
91000	Machine setters, set-up operators, operators, and tenders	26,480	28,390	1,910	7.2	741	175	566
91502	Numerical control machine tool operators and tenders, met	870	1,270	400	45.1	49	36	13
91510	Combination machine tool setters, set-up operators, opera	1,460	2,020	560	38.2	73	51	22
91200	Machine tool cut and form setters, operators, and tenders	10,220	9,490	-730	-7.1	201	0	201
91108	Drilling and boring machine tool setters and set-up ope	930	720	-210	-22.6	14	0	14
91114	Grinding machine setters and set-up operators, metal an	960	980	20	1.9	18	2	16
91105	Lathe and turning machine tool setters and set-up opera	1,100	950	-150	-14.0	17	0	17
91321	Machine forming operators and tenders, metal and plasti	2,410	2,360	-50	-1.9	75	0	75
91117	Machine tool cutting operators and tenders, metal and p	2,120	1,590	-530	-25.1	32	0	32
91302	Punching machine setters and set-up operators, metal an	460	620	160	33.0	23	14	9
91399	All other machine tool cutting and forming etc	2,230	2,270	40	2.0	42	4	38
91700	Metal fabricating machine setters, operators, and related	1,120	1,150	30	2.9	29	3	26
91714	Metal fabricators, structural metal products	140	180	40	25.7	5	3	2
91710	Soldering and brazing machine operators and tenders	50	50	0	-2.2	1	0	1
91750	Welding machine setters, operators, and tenders	930	930	0	-0.4	23	0	23
91900	Metal and plastic processing machine setters, operators,	3,540	4,380	840	23.7	170	76	94
91920	Electrolytic plating machine operators and tenders, set	260	290	30	9.5	8	2	6
91914	Foundry mold assembly and shakeout workers	10	10	0	0.0	0	0	0
91935	Furnace operators and tenders	50	60	10	9.6	1	0	1

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
91932	Heat treating machine operators and tenders, metal and	150	170	20	14.4	5	2	3
91910	Metal molding machine operators and tenders, setters an	150	190	40	22.4	7	3	4
91950	Plastic molding machine operators and tenders, setters	1,670	1,880	210	12.4	71	19	52
92101	All other metal and plastic machine setters, operators,	1,250	1,790	540	43.8	78	50	28
92500	Printing, binding, and related workers	1,010	1,410	400	39.4	52	35	17
92540	Bindery machine operators and set-up operators	260	400	140	51.9	16	12	4
92548	Prepress printing workers, production	120	70	-50	-41.0	2	0	2
92545	Photoengraving and lithographic machine operators and	50	40	-10	-8.7	1	0	1
92541	Typesetting and composing machine operators and tende	70	30	-40	-62.0	1	0	1
92550	Printing press operators	530	780	250	46.3	32	22	10
92515	Letterpress operators	30	10	-20	-59.4	1	0	1
92512	Offset lithographic press operators	320	490	170	51.7	21	15	6
92542	Printing press machine setters, operators and tenders	160	250	90	54.9	11	8	3
92519	All other printing press setters and set-up operators	20	30	10	57.9	1	1	0
92524	Screen printing machine setters and set-up operators	60	90	30	67.9	4	3	1
92599	All other printing, binding, and related workers	40	70	30	59.5	2	2	0
92701	Textile and related setters, operators, and related worke	930	920	-10	-1.3	16	0	16
92728	Pressing machine operators and tenders, textile, garmen	350	340	-10	-2.0	7	0	7
92717	Sewing machine operators, garment	160	200	40	23.2	6	3	3
92721	Sewing machine operators, non-garment	400	360	-40	-11.5	6	0	6
92710	Textile draw-out and winding machine operators and tend	10	10	0	27.3	0	0	0
92300	Woodworking machine setters, operators, and other related	180	150	-30	-14.6	3	0	3

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
92305	Head sawyers and sawing machine operators and tenders,	30	20	-10	-17.9	0	0	0
92310	Woodworking machine operators and tenders, setters and	150	130	-20	-14.0	3	0	3
92901	Other machine setters, set-up operators, operators, and t	7,140	7,600	460	6.4	217	43	174
92926	Boiler operators and tenders, low pressure	50	30	-20	-40.8	1	0	1
92956	Cement and gluing machine operators and tenders	90	60	-30	-27.6	2	0	2
92930	Chemical equipment controllers, operators and tenders	100	120	20	23.5	6	2	4
92910	Cooking and roasting machine operators and tenders, foo	10	10	0	-7.7	0	0	0
92965	Crushing and mixing machine operators and tenders	580	610	30	4.7	16	2	14
92940	Cutting and slicing machine setters, operators and tend	100	130	30	27.9	4	3	1
92932	Dairy processing equipment operators, including setters	0	10	10	25.0	0	0	0
92902	Electronic semiconductor processors	10	10	0	0.0	0	0	0
92970	Extruding and forming machine setters, operators and te	270	280	10	5.2	8	1	7
92923	Furnace, kiln, or kettle operators and tenders	40	40	0	0.0	1	0	1
92726	Laundry and drycleaning machine operators and tenders,	750	740	-10	-1.5	18	0	18
92905	Motion picture projectionists	90	40	-50	-53.5	2	0	2
92974	Packaging and filling machine operators and tenders	830	1,030	200	24.5	38	18	20
92950	Painting and coating machine operators	800	830	30	3.1	23	3	20
92960	Coating, painting, and spraying machine operators, te	490	560	70	14.2	19	7	12
92947	Painters, transportation equipment	310	260	-50	-14.7	8	0	8
92914	Paper goods machine setters and set-up operators	40	30	-10	-13.9	1	0	1
92908	Photographic processing machine operators and tenders	270	280	10	3.7	7	1	6
92962	Separating and still machine operators and tenders	20	20	0	10.0	1	0	1

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		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
92999	All other machine operators, tenders, setters, and set-	3,090	3,320	230	7.5	98	22	76
93900	Hand workers, including assemblers and fabricators	16,710	18,970	<u>2,260</u>	13.5	607	206	401
93935	Cannery workers	20	20	0	-16.7	0	0	0
93908	Coil winders, tapers, and finishers	80	80	0	0.0	2	0	2
93926	Cutters and trimmers, hand	140	180	40	23.2	7	3	4
93905	Electrical and electronic assemblers	970	1,170	200	20.7	40	18	22
93953	Grinders and polishers, hand	500	510	10	2.4	14	1	13
93902	Machine assemblers	140	140	0	-3.5	3	0	3
93938	Meat, poultry, and fish cutters and trimmers, hand	0	10	10	25.0	0	0	0
93947	Painting, coating, and decorating workers, hand	80	90	10	9.9	3	1	2
93921	Pressers, hand	10	10	0	0.0	0	0	0
93923	Sewers, hand	20	50	30	100.0	2	2	0
93917	Solderers and brazers	140	160	20	15.2	6	2	4
93914	Welders and cutters	1,980	2,110	130	7.0	60	13	47
93996	All other assemblers, fabricators, and hand workers	12,630	14,460	<u>1,830</u>	14.5	470	166	304
97000	Transportation and material moving machine and vehicle oper	19,520	24,130	<u>4,610</u>	23.7	767	418	349
97100	Motor vehicle operators	12,720	15,580	<u>2,860</u>	22.5	475	260	215
97110	Bus drivers	1,720	2,170	450	26.4	71	41	30
97108	Bus drivers, except school	400	460	60	14.6	12	5	7
97111	Bus drivers, school	1,320	1,710	390	30.0	59	36	23
97114	Taxi drivers and chauffeurs	400	520	120	28.5	14	10	4
97101	Truck drivers	10,480	12,770	2,290	21.8	387	208	179

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OES CODE	TITLE	EMPLOYMENT		CHANGE		ANNUAL	AVERAGE	OPENINGS
		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
97117	Driver/sales workers	1,310	1,470	160	12.0	44	14	30
97001	Truck drivers light and heavy	9,170	11,300	2,130	23.2	343	194	149
97199	All other motor vehicle operators	110	120	10	8.0	3	1	2
97300	Rail transportation workers	190	180	-10	-3.8	1	0	1
97305	Locomotive engineers	120	120	0	-0.8	1	0	1
97317	Railroad brake, signal, and switch operators	30	20	-10	-21.4	0	0	0
97302	Railroad conductors and yardmasters	30	30	0	3.3	0	0	0
97308	Rail yard engineers, dinkey operators, and hostlers	10	10	0	-14.3	0	0	0
97900	Material moving equipment operators	5,670	7,200	1,530	26.9	255	138	117
97944	Crane and tower operators	280	330	50	16.1	10	4	6
97923	Excavation and loading machine operators	240	270	30	16.1	7	3	4
97938	Grader, dozer, and scraper operators	210	260	50	23.8	7	4	3
97941	Hoist and winch operators	30	30	0	6.3	1	0	1
97947	Industrial truck and tractor operators	3,960	5,110	1,150	29.3	190	105	85
97956	Operating engineers	510	660	150	29.3	25	14	11
97910	All other material moving equipment operators	450	540	90	18.5	15	8	7
97998	All other transportation and material moving equipment op	940	1,170	230	25.1	37	21	16
98000	Helpers, laborers, and material movers, hand	27,490	38,060	10,570	38.5	1,659	961	698
98710	Freight, stock, and material movers, hand	3,150	3,740	590	18.6	178	54	124
98902	Hand packers and packagers	7,340	9,590	2,250	30.6	349	204	145
98310	Helpers, construction trades	1,130	1,410	280	24.8	53	26	27
98502	Machine feeders and offbearers	820	860	40	4.1	23	3	20

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		1994	2005	LEVEL	PERCENT	TOTAL	GROWTH	REPLACEMENT
97808	Parking lot attendants	220	250	30	17.2	7	3	4
98705	Refuse collectors	190	200	10	5.7	5	1	4
97805	Service station attendants	720	730	10	1.5	21	1	20
98905	Vehicle washers and equipment cleaners	1,470	1,580	110	7.2	58	10	48
98998	All other helpers, laborers, and material movers, hand	12,450	19,710	7,260	58.3	965	659	-306

**NOTES:**

- Employment totals may not add up due to rounding.
- Occupations with less than five workers were omitted from the table but are still represented in the totals and sub-totals.
- Percent change is based on unrounded numbers.
- OES codes refer to the occupational classification system used by the Occupational Employment Statistics program.
- Replacement openings reflect permanent separations (such as death, retirement, disability, other), but do not reflect total job turnover.