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- Job availability in Minnesota in 1



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# Job Availability in Minnesota in 1997:

*Preliminary Estimates of  
Labor Market Conditions  
in Light of Welfare Reform*

prepared by  
Research and Statistics Office  
Minnesota Department of Economic Security  
January 1997

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We obtained our data on AFDC recipients from the Workforce Preparation Branch of the Minnesota Department of Economic Security, which regularly receives an extract of the Department of Human Services MAXIS database on AFDC recipients. We thank Steve Erbes for his assistance in sharing this data. We also appreciate the Department of Human Services and Minnesota Planning for reviewing a draft of this report and providing us with comments.

Mustapha Hammida  
Research Analysis Specialist

Pradeep Kotamraju, Ph.D.  
Senior Project Consultant

David Senf  
Project Consultant

Elizabeth Starling  
Research Analysis Specialist

## EXECUTIVE SUMMARY

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This report suggests that individuals from the Minnesota adult AFDC population seeking employment will face labor market conditions characterized by a low ratio of job seekers to job openings in 1997. Despite the fact that Minnesota is at or near full employment, there will still be some unemployment, and job seekers will face some competition in the job market. There will always be people changing jobs, and it takes time for both job seekers and employers with job openings to find good matches. The numbers indicate that the more education and training individuals have, the more opportunities they have and the lighter the competition they face for job openings.

Some highlights of the findings are:

- ◆ Based on the *Minnesota Employment and Occupation Outlook 1994–2005*, **there will be an estimated 46,633 job openings during an average month in Minnesota in 1997.**
- ◆ In 1997, **56%** of job openings will require a **high school diploma or less**, **29%** will require **some post-secondary** education, and **15%** will require a **Bachelor's degree or higher.**
- ◆ Excluding welfare recipients expected to seek employment, **approximately 148,000 persons will experience some period of job seeking during an average month in Minnesota in 1997.** These job seekers will enter the labor market from the current unemployment pool (**67%**), the employed who are laid off (**14%**), the employed seeking job or career changes (**12%**) and those entering or re-entering the workforce (**7%**). These job seekers are the **potential competitors to the welfare recipients** expected to enter the labor market in 1997.
- ◆ Excluding welfare recipients expected to seek employment, **there will be on average an estimated 318 job seekers competing for every 100 job openings during an average month in 1997.** Given the average duration of thirteen weeks unemployment in Minnesota, most of the remaining 218 job seekers are expected to find work sometime in the following nine weeks.
- ◆ Currently there are 73,932 adult AFDC recipients in Minnesota. Of these, **an estimated 15,000 persons will seek employment during 1997.** This estimate is based on the new federal welfare reform law requirement that 25 percent of the total welfare population are expected to seek employment and is adjusted for welfare recipients already in the workforce.
- ◆ In 1996, **29%** of adult welfare population had not completed high school, **57%** had a high school diploma, **12%** had completed some post-secondary education, and **2%** had a college degree.

- ◆ With the addition of job seekers from the welfare population into the workforce, **the estimated overall job-seekers-to-job-openings ratio increases from 318 to 325 job seekers for every 100 job openings**, assuming the average spell of unemployment for an AFDC recipient is the same as that of others in the Minnesota unemployment pool.
- ◆ It is estimated that, on average, **each AFDC recipient** seeking employment with less than a high school education will compete with **three** other job seekers for **every job opening**.
- ◆ It is estimated that, on average, **each AFDC recipient** seeking employment with a high school education will compete with **two** other job seekers for **every job opening**.
- ◆ It is estimated that, on average, **each AFDC recipient** seeking employment with some college education will compete with **two** other job seekers for **every job opening**.
- ◆ It is estimated that, on average, **each AFDC recipient** seeking employment with a college education will compete with **one** other job-seeker for **every job opening**.

## INTRODUCTION

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The federal Personal Responsibility and Work Opportunity Reconciliation Act of 1996, commonly known as the welfare reform law, requires that 25% of the current welfare population seek employment during fiscal year 1997. Under its guidelines, 25% of individuals now receiving welfare benefits must either find paid employment of at least 20 hours per week or enroll in educational or training programs to improve their work readiness. This report addresses the availability of jobs for workers seeking employment in 1997 under two scenarios: (1) excluding the influx of workers from the adult AFDC population, and (2) including an influx equal to 25 percent of the adult AFDC population, likely to be the maximum number transitioning from welfare to work. Summarizing only preliminary findings of the effect of welfare reform on the Minnesota labor market, this report does not address many of the other conditions necessary for a successful transition from welfare to work, such as work readiness, the availability of affordable child care and health care, and access to transportation.

The analysis estimates the degree of competition job seekers will face in 1997 via the job-seekers-to-job-openings ratio. The total number of new jobs projected in 1997 is 42,000 and is based on the Minnesota Department of Finance forecast of 1.7% growth in nonfarm employment.

This report distinguishes between the unemployed and job seekers. The Bureau of Labor Statistics (BLS) definition of the unemployed are those persons without a job who are available for work and actively seeking work. In contrast, this report counts job seekers, including unemployed individuals, employed individuals changing occupations, and individuals who find jobs without going through a period of unemployment, e.g., high school students hired in April to start work in June after they receive their degrees. These last two groups constitute almost one-third of total job seekers. The estimated total number of job seekers is 148,000 for 1997 excluding the expected influx of AFDC recipients into the workforce.

This report contains five sections: the first discusses the characteristics of expected job openings. The second describes job seekers excluding the welfare population. The third section presents information on the job market with a maximum influx of workers from the welfare population. The fourth section addresses regional variations in labor market competition, and the final section summarizes the methodology used.

# I. MINNESOTA JOB OPENINGS FOR 1997

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## *Job Openings*

- ◆ Based on the *Minnesota Employment and Occupation Outlook 1994–2005* and the short-term employment forecast of the Minnesota Department of Finance, there will be an estimated **46,633 job openings during an average month in Minnesota in 1997.**\*

## *Occupational Distribution of Job Openings in 1997 (Chart 1)*

- ◆ Using the six major occupational groups defined by the Bureau of Labor Statistics, the occupational distribution of total job openings in Minnesota in 1997 will be:
  - 37% will be in Technical, Sales, and Administrative Support occupations;
  - 15% will be in Managerial and Professional Specialty occupations;
  - 23% will be in Service occupations;
  - 16% will be in Operators, Fabricators, and Laborers occupations;
  - 6% will be in Precision Production, Craft, Repair occupations; and
  - 3% will be in Farming, Forestry, and Fishery occupations.

## *Educational Requirements of Job Openings in 1997 (Chart 2)*

- ◆ Of total job openings, 25% will require **less than a high school** education.
- ◆ Of total job openings, 31% will require a **high school** education.
- ◆ Of total job openings, 29% will require **some post-secondary** education.
- ◆ Of total job openings, 15% will require a **Bachelor's degree or higher**.

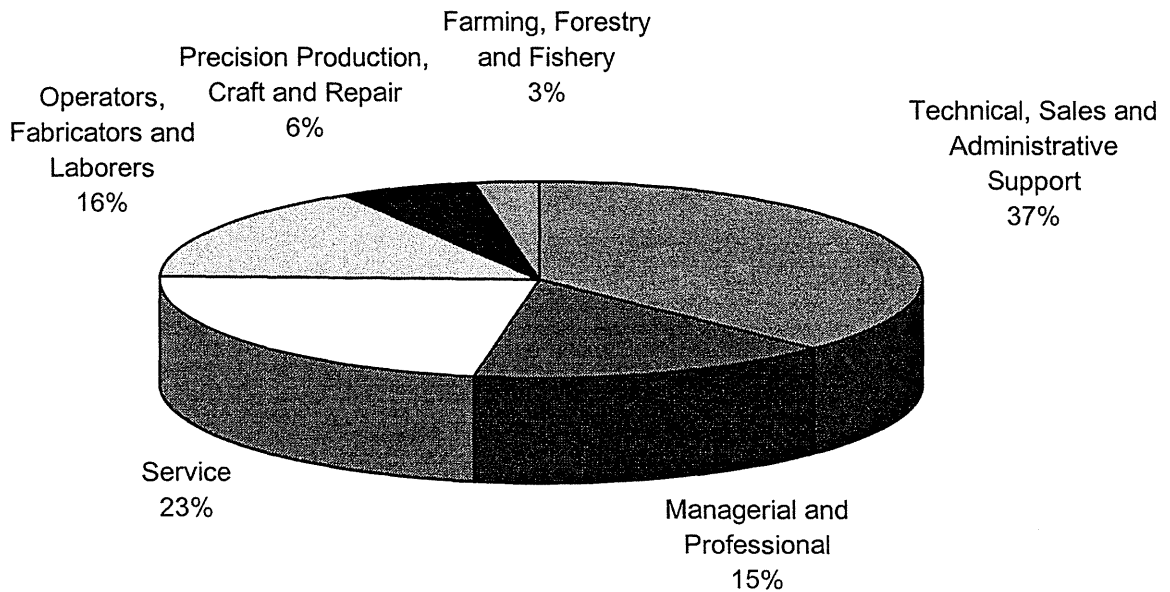
## *Median Wages of Job Openings in 1997 (Table 1)*

- ◆ For job openings requiring **less than a high school education**, an estimated 89% will pay between **\$5.00 and \$7.50 per hour**. These openings will be in Technical, Sales, and Administrative Support occupations and Service occupations.
- ◆ For job openings requiring a **high school diploma**, an estimated 67% will pay between **\$5.00 and \$10.00 per hour**. Most of these job openings will be in Technical, Sales, and Administrative Support occupations.
- ◆ For job openings requiring **some college education**, an estimated 44% will pay between **\$10.00 and \$15.00 per hour**. Most of these job openings will be in Technical, Sales, and Administrative Support occupations and in Precision Production, Craft, Repair occupations.

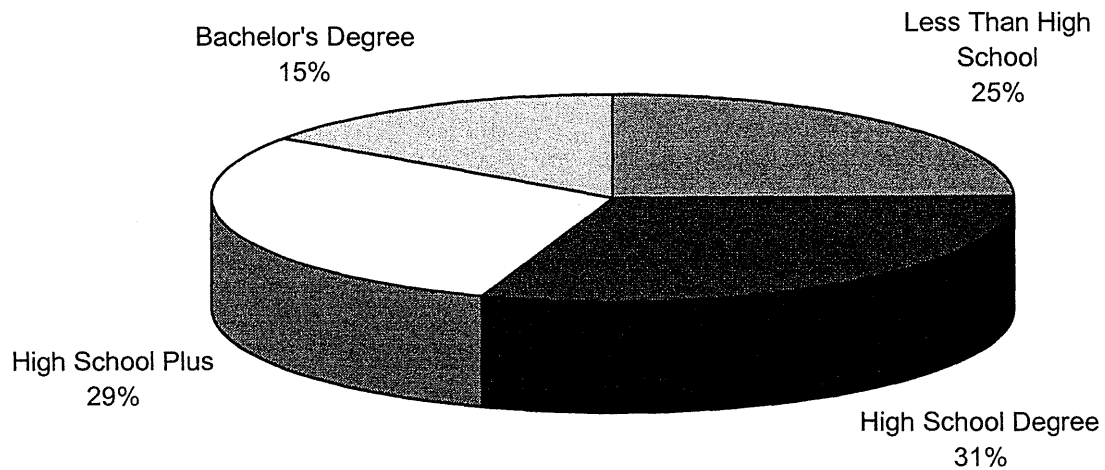
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\* These job openings result from net job growth, persons changing occupations, and persons leaving the workforce. Job openings due to persons changing jobs in the same occupation are omitted. See Section V. Methodology for further information.

# Chart 1: Projected Job Openings by Occupation Minnesota, 1997



**Chart 2:  
Projected Job Openings  
by Educational Requirements  
Minnesota, 1997**



**Table 1: Job Openings, Minnesota, 1997  
by Occupation, Education and 1994 Median Wages\***

Occupation	Education																					Number of Jobs
	Less than High School					High School					High School Plus					Bachelor's Degree or higher						
	Below	\$5.00 -	\$7.51 -	\$10.00 -	Above	Below	\$5.00 -	\$7.51 -	\$10.00 -	Above	Below	\$5.00 -	\$7.51 -	\$10.00 -	Above	Below	\$5.00 -	\$7.51 -	\$10.00 -	Above		
	\$5.00	\$7.50	\$9.99	\$14.99	\$15.00	\$5.00	\$7.50	\$9.99	\$14.99	\$15.00	\$5.00	\$7.50	\$9.99	\$14.99	\$15.00	\$5.00	\$7.50	\$9.99	\$14.99	\$15.00		
Managerial and Professional	0	0	0	0	0	0	0	0	0	0	0	1,199	1,706	4,633	2,150	0	0	1,834	1,107	52,699	65,329	
Technical, Sales, and Administrative Support	0	34,069	0	0	0	0	41,747	46,677	15,942	543	0	4,256	3,063	34,444	1,484	0	0	0	1,209	6,953	190,388	
Service Occupations	0	40,836	0	0	0	20,058	8,082	0	0	0	6,024	18,173	14,299	3,005	725	0	0	0	0	0	111,202	
Precision Production, Craft, and Repair	0	189	0	756	0	0	0	0	164	0	0	175	905	10,168	11,105	0	0	0	0	0	23,461	
Operators, Fabricators, and Laborers	119	7,290	6,455	2,399	0	0	548	4,063	11,608	760	0	1,389	468	3,824	1,374	0	0	0	0	0	40,297	
Farming, Forestry, and Fisherys	0	0	0	0	0	0	0	0	0	0	0	0	2,745	193	0	0	0	0	0	0	2,938	
<b>Total</b>	119	82,384	6,455	3,155	0	20,058	50,377	50,741	27,714	1,303	6,024	25,191	23,186	56,267	16,839	0	0	1,834	2,316	59,652	*	

\*Total job openings for 1997 is 559,600. Of these, 22% had no wage information available. This table refers to occupations with 1994 wage information only.

## II. MINNESOTA JOB SEEKERS FOR 1997 EXCLUDING THE AFDC POPULATION

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### *Job Seekers*

- ◆ An estimated **148,183 persons** will experience some period of job seeking during an average month in 1997 in Minnesota.
- ◆ These job seekers will enter the labor market from the current unemployment pool (67%), from among the employed who are laid off (14%), those employed seeking job and career changes (12%) and from outside the workforce (7%). These job seekers are the **potential competitors to the welfare recipients** expected to seek employment in 1997.

### *Educational Attainment of Job Seekers not Affected by Changes in the Welfare Law (Chart A3)*

- ◆ Of total job seekers, 30% will have **less than a high school** education.
- ◆ Of total job seekers, 31% will have a **high school** degree.
- ◆ Of total job seekers, 28% will have **some post-secondary** education.
- ◆ Of total job seekers, 11% will have a **Bachelor's degree or higher**.

### *Job Seekers per Job Opening – 1997 (Table 2, Chart 4)*

Given the forecasted unemployment rate of 3.8% in Minnesota in 1997:

- ◆ An estimated **318 job seekers** will compete for every **100 job openings** in 1997.
- ◆ **Competition will be stiffest for those with less than a high school education, and job seeking prospects will improve at higher education levels.**
- ◆ For workers with **less than a high school degree**, an estimated **393 job seekers** will be competing for every **100 job openings**.
- ◆ For workers with a **high school education**, an estimated **319 job seekers** will be competing for every **100 job openings**.
- ◆ For workers with **some college education**, an estimated **303 job seekers** will be competing for every **100 job openings**.
- ◆ For workers with a **college education or higher**, an estimated **223 job seekers** will be competing for every **100 job openings**.

### III. MINNESOTA JOB SEEKERS FOR 1997 INCLUDING THE AFDC POPULATION

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#### *AFDC Recipients Seeking Employment in 1997 (Table 2)*

- ◆ Currently, there are **73,932 adult AFDC recipients in Minnesota**. Of these, 15% are between the ages of 18 and 22 and 85% are above the age of 22. 84% are women and 16% are men. (Chart A4)
- ◆ Of the current adult AFDC population in Minnesota, 83% are not in the workforce.
- ◆ **An estimated total of 15,229 workers from the welfare population are expected to seek employment in 1997**. This estimate is based on the requirement under the new welfare reform law that 25% of the total welfare population is expected to seek employment and is adjusted for welfare recipients already in the workforce.

#### *Educational Attainment of AFDC Population (Chart 3)*

- ◆ Of the adult AFDC population in Minnesota, **29% had not completed high school**.
- ◆ Of the adult AFDC population in Minnesota, **57% had a high school education**.
- ◆ Of the adult AFDC population in Minnesota, **12% had completed some post-secondary education**.
- ◆ Of the adult AFDC population in Minnesota, **2% had received a college degree**.

#### *With the Addition of Job Seekers from Welfare Reform into the Labor Market (Chart 4)*

Given the forecasted unemployment rate of 3.8% and the expected addition of 15,229 workers from the welfare population in Minnesota in 1997:

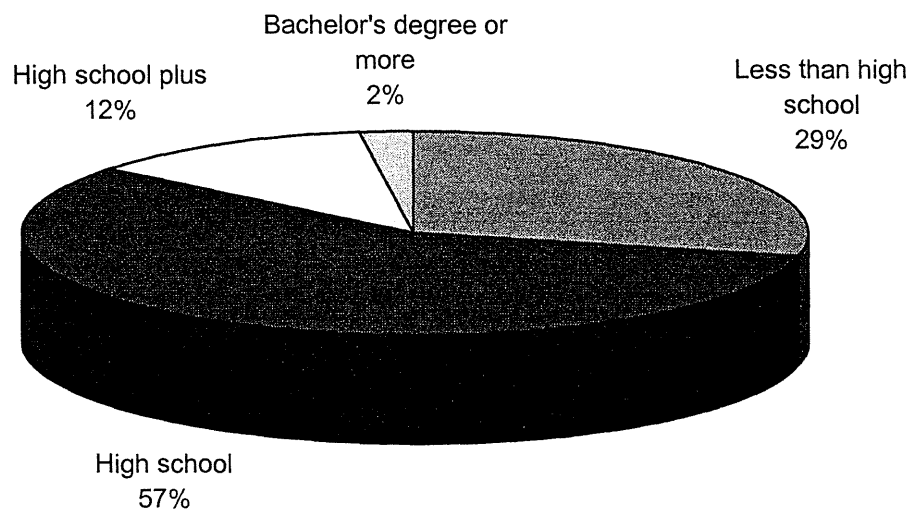
- ◆ The **monthly aggregate job seekers to total job openings ratio will increase from an estimated 318 to an estimated 325 job seekers for every 100 job openings**.
- ◆ For jobs requiring **less than a high school education**, the monthly job seekers to job openings ratio will increase **from an estimated 393 to an estimated 402 job seekers for every 100 job openings**.

- ◆ For jobs requiring a **high school education**, the monthly job-seekers-to-job-openings ratio will increase **from an estimated 319 to an estimated 333** job seekers for every 100 job openings.
- ◆ For jobs requiring **some college education**, the monthly job-seekers-to-job-openings ratio will increase **from an estimated 303 to an estimated 306** job seekers for every 100 job openings.
- ◆ For jobs requiring **college education**, the monthly job-seekers-to-job-openings ratio will increase **from an estimated 223 to an estimated 224** workers for every 100 job openings.

*Labor Market Competition for AFDC Recipients Seeking Employment (Table 2, Chart 4)*

- ◆ Overall, **each AFDC recipient** seeking employment will compete with **two** other job seekers for every **job opening**.
- ◆ For AFDC recipients entering the workforce in 1997, **competition will be stiffest for those with less than a high school education, and job seeking prospects will improve as education levels become higher.**
- ◆ **Each AFDC recipient** seeking employment with **less than a high school education** will compete with **three** other job seekers for every **job opening**.
- ◆ **Each AFDC recipient** seeking employment with a **high school education** will compete with **two** other job seekers for every **job opening**.
- ◆ **Each AFDC recipient** seeking employment with **some college education** will compete with **two** other job seekers for every **job opening**.
- ◆ **Each AFDC recipient** seeking employment with a **Bachelor's degree or higher** will compete with **one** other job seeker for every **job opening**.

### **Chart 3: AFDC Recipients by Education Minnesota, 1996**



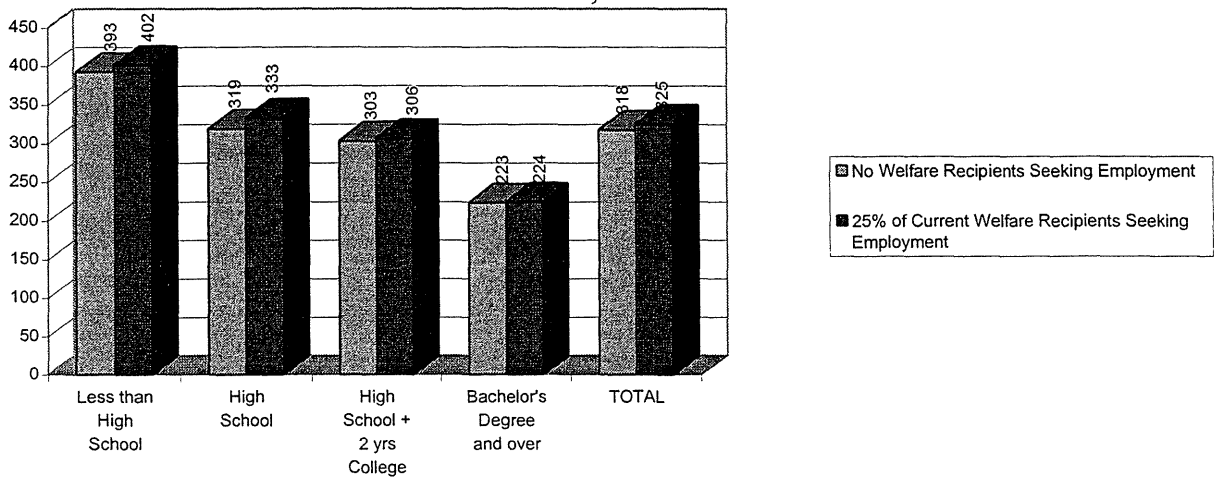
Total adult AFDC population as of July 1996: 73,932. Data on AFDC recipients obtained from the MDES Workforce Preparation Branch extract from the Minnesota Department of Human Services MAXIS System. Data do not include participants in the Minnesota Family Investment Program (MFIP), estimated at about 4,000 cases.

**Table 2: Minnesota Job Seekers and Job Openings by Education Level in 1997**

Educational Attainment	No Welfare Recipients Seeking Employment			25% of Current Welfare Recipients Seeking Employment			
	Average Monthly Job Seekers	Monthly Job Openings	Ratio of Job Seekers to Job Openings	Average Monthly Job Seekers	Monthly Job Openings	Ratio of Job Seekers to Job Openings	Welfare Recipients Seeking Employment each Month*
Less than High School	45,342	11,546	3.93	46,386	11,546	4.02	1,044
High School	45,536	14,276	3.19	47,586	14,276	3.33	2,050
High School + 2 yrs College	41,694	13,744	3.03	42,125	13,744	3.06	431
Bachelor's Degree and over	15,794	7,067	2.23	15,864	7,067	2.24	70
TOTAL	148,183	46,633	3.18	151,781	46,633	3.25	3,598

\* The average spell of unemployment for an AFDC recipient in the workforce is assumed to be the same as that of other job-seekers.

**Chart 4:  
Job Seekers by Hundred Job Openings  
Minnesota, 1997**



## IV. REGIONAL VARIATIONS

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### *Regional Variation in Educational Attainment of AFDC Recipients*

Chart A8 shows the regional variation in educational attainment of AFDC recipients. Some highlights are:

- ◆ In the Central Region, a very low 25% of the adult AFDC population had not completed high school.
- ◆ In the Southeast Region, a very high 79% of the adult AFDC population had completed high school, but only 4% had received any further education.
- ◆ In the Southwest Region, only a very low 17% of the adult AFDC population had not completed high school.

### *Regional Variation in Labor Market Competition (Table 3, Chart 5)*

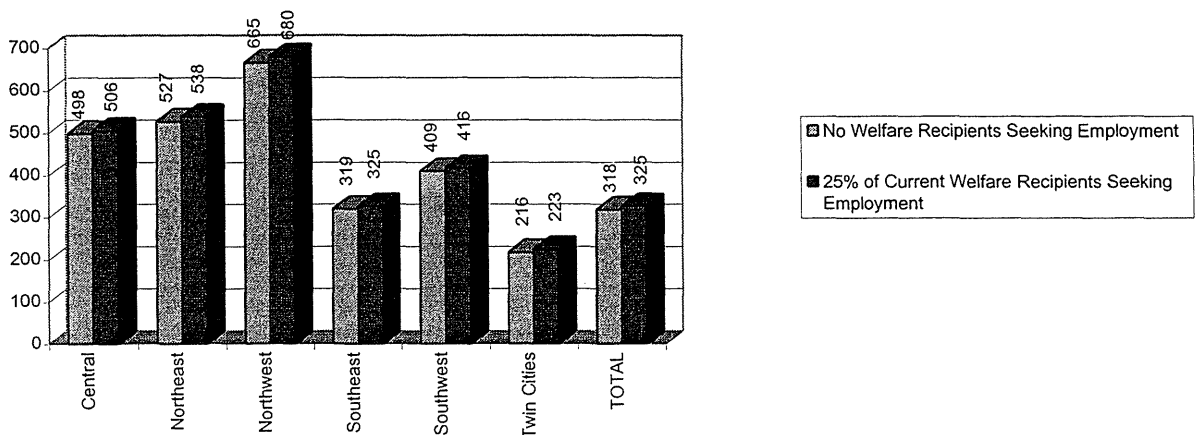
- ◆ In the **Central Region**, excluding the AFDC population, an **estimated 498 job seekers will be competing for every 100 job openings**. The addition of the AFDC population to the workforce increases the ratio to an **estimated 506 job seekers for every 100 job openings**.
- ◆ In the **Northeast Region**, excluding the AFDC population, an **estimated 527 job seekers will be competing for every 100 job openings**. The addition of the AFDC population to the workforce increases the ratio to an **estimated 538 job seekers for every 100 job openings**.
- ◆ In the **Northwest Region**, excluding the AFDC population, an **estimated 665 job seekers will be competing for every 100 job openings**. The addition of the AFDC population to the workforce increases the ratio to an **estimated 680 job seekers for every 100 job openings**.
- ◆ In the **Southeast Region**, excluding the AFDC population, an **estimated 319 job seekers will be competing for every 100 job openings**. The addition of the AFDC population to the workforce increases the ratio to an **estimated 325 job seekers for every 100 job openings**.
- ◆ In the **Southwest Region**, excluding the AFDC population, an **estimated 409 job seekers will be competing for every 100 job openings**. The addition of the AFDC population to the workforce increases the ratio to an **estimated 416 job seekers for every 100 job openings**.
- ◆ In the **Twin Cities Region**, excluding the AFDC population, an **estimated 216 job seekers will be competing for every 100 job openings**. The addition of the AFDC population to the workforce increases the ratio to an **estimated 223 job seekers for every 100 job openings**.

**Table 3: Minnesota Job Seekers and Job Openings by Region in 1997**

Region	No Welfare Recipients Seeking Employment			25% of Current Welfare Recipients Seeking Employment			
	Average Monthly Job Seekers	Monthly Job Openings	Ratio of Job Seekers to Job Openings	Average Monthly Job Seekers	Monthly Job Openings	Ratio of Job Seekers to Job Openings	Welfare Recipients Seeking Employment Each Month*
Central	20,897	4,197	<b>4.98</b>	21,218	4,197	<b>5.06</b>	321
Northeast	14,741	2,798	<b>5.27</b>	15,048	2,798	<b>5.38</b>	307
Northwest	24,196	3,637	<b>6.65</b>	24,716	3,637	<b>6.80</b>	520
Southeast	13,405	4,197	<b>3.19</b>	13,658	4,197	<b>3.25</b>	253
Southwest	12,977	3,171	<b>4.09</b>	13,192	3,171	<b>4.16</b>	215
Twin Cities	61,968	28,633	<b>2.16</b>	63,951	28,633	<b>2.23</b>	1,983
TOTAL	148,183	46,633	<b>3.18</b>	151,781	46,633	<b>3.25</b>	3,598

\* The average spell of unemployment for an AFDC recipient in the workforce is assumed to be the same as that of other job-seekers.

**Chart 5:  
Job Seekers by Hundred Job Openings, by Region  
Minnesota, 1997**



## V. METHODOLOGY

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### *Introduction*

This report estimates the degree of competition Minnesota job seekers will face in 1997 through the job-seekers-to-job-openings ratio, an average estimate calculated for the typical job seeker. Developing this ratio for the state, by region, and by educational attainment requires separately calculating the number of job openings and job seekers for the state and the six regions and estimating the 1997 workforce and unemployment levels by educational attainment level and age category. This methodology summarizes briefly the processes developed to estimate the job-seekers-to-job-openings ratios; a more technical description of the methodology is available upon request from the Research and Statistics Office of the Minnesota Department of Economic Security (MDES).

### *The 1997 Job Openings Estimate*

The MDES Research and Statistics Office biennially produces long-term employment projections which serve as the basis of the estimates of 1997 total job openings for the state and its regions. Using a methodology originally developed by the Bureau of Labor Statistics (BLS), the state and regional projections are now conducted in cooperation with the Employment and Training Administration (ETA) of the U.S. Department of Labor. The most recent statewide projections, for the period 1994-2005, provide the foundation for estimating 1997 state job openings.

The MDES forecast of new job openings in 1997 is likely to be an underestimate because the estimate is based on the long-term forecast for the period 1994-2005. Over the 1994-2005 period, employment growth in Minnesota is projected to average 1.3% annually (34,000 new jobs), a rate slightly above the projected 1.2% national rate. Because the long-term projections assume two mild national recessions before 2005, the annual average 1.3% employment growth rate is an underestimate for non-recession years and an overestimate for recession years. Recent job growth has, however, averaged 2.0% in the five years since the last recession, and the economic expansion is anticipated to continue through 1997.

To correct for the probable underestimate of job growth in the MDES estimates, the Minnesota Department of Finance short-term forecasts are used. These recently released forecasts project a growth rate of 1.7% in non-agricultural employment for 1997. The MDES estimates of new openings by occupation are proportionately increased to the 42,000 total based on the Department of Finance forecasts.<sup>†</sup>

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<sup>†</sup> This total of 42,000 includes adjustments for agricultural employment and the self-employed. For comparison, 1996 employment growth may reach 45,000 new jobs according to estimates based on the Current Employment Statistics. Forecasts of slowing national economic growth as well as Minnesota's tight labor market suggest that new employment growth in 1997 will be lower than in 1996.

In addition to job growth, the MDES Research and Statistics Office projects net replacement needs by occupation, which are job openings created when workers leave the workforce, e.g., retirement. Net replacement openings, however, understate the total number of available job openings by excluding openings created by workers changing positions within the workforce. A broader measure of available opportunities in the labor market adds total replacement needs to the job openings due to employment growth. However, individuals who change employers but remain employed in the same occupation are not included in the measure of total replacement needs because these job changes have no effect on the total number of openings available for individuals desiring to enter an occupation. Thus, job openings in the study include those generated by employment growth and total replacement needs and best represent the total number of opportunities available to new workers as well as unemployed workers seeking to enter an occupation.<sup>‡</sup>

The projection system uses national longitudinal data of movement of workers into and out of occupations to project net replacement openings projections by occupation for the states and the nation and total replacement needs for the nation. The ratios of national total replacement openings to national net replacement openings for each occupation are used to convert Minnesota's occupational net replacement openings projections to total replacement openings projections. Summing over all total occupational replacement needs and calculating an average annual total over the 1994-2005 yields an estimate of 517,600 total replacement openings per year. Combining annual average replacement openings with the 42,000 estimate of new jobs in 1997 produces the estimate of 559,600 total job openings in Minnesota in 1997 for 46,633 job openings during an average month.

Estimates of 1997 job openings by region are derived by distributing openings generated by employment growth based on the regional pattern of new jobs from the 1993-2001 regional projections. The regional distribution of 1997 state total replacement openings are obtained by distributing the total replacement openings based on the regional pattern of net replacement openings from the 1993-2001 regional projections.

To obtain projected job openings by educational attainment, every occupation in the 1994-2005 projections is assigned to one of four educational attainment categories: less than high school; high school; up to two years of college; and four or more years of college. The information used to classify jobs by required educational and training qualifications is from the 1994 edition of the *Occupational Projections and Training Data*, the recently expanded eleven categories of educational and training requirements developed by the BLS<sup>§</sup> to include on-the-job training and/or work experience as qualifying criteria for occupations, and consultation with experts from the Minnesota

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<sup>‡</sup> More information on replacement openings is available in *Occupational Projections and Training Data*, 1992 Edition, U.S. Department of Labor Bureau of Labor Statistics, Bulletin 2401, May 1992. The ratios used to convert net replacement openings to total replacement openings are from Table 13.

<sup>§</sup> See "A New Way to Classify Occupations by Education and Training," *Occupational Outlook Quarterly*, Winter 1995-96.

Department of Children, Families and Learning and the Minnesota State Colleges and Universities (MnSCU) to identify occupations for which educational and training requirements are higher in Minnesota than national standards. The total job openings for each educational attainment category are then estimated and a percentage in total job openings obtained.

### *The 1997 Job Seekers Estimate* \*\*

The supply of job seekers is the count of individuals seeking jobs during a particular month. Because individuals regularly move or flow into and out of the workforce, using stock measures rather than flow measures to analyze the supply of job seekers produces biased estimates. Thus, estimating this count reliably requires consideration of the flows of the dynamic labor market.

Incorporating the flows among employment, unemployment, and out of the workforce, the supply of job seekers during a particular month is derived as the sum of:

1. The stock of unemployment reported for the week including the 12th day of the previous month in the Local Area Unemployment Statistics (LAUS) developed by the MDES Research and Statistics Office;
2. the flows into unemployment during that particular month of:
  - a) individuals who were employed during the week including the 12th day of the previous month and
  - b) individuals who were not in the workforce during the week including the 12th day of the previous month;
3. the flows into employment during that particular month of individuals who were not in the workforce during the week including the 12th day of the previous month; and
4. the flows of employed persons changing both jobs and occupations during that month.

Data published by the BLS on total replacement needs, used to estimate the flows of individuals who change jobs and occupations, count those who leave an occupation for any reason whatsoever, including to the ranks of unemployment or out of the workforce.<sup>††</sup> To avoid double-counting individuals leaving employment, flows from employment to unemployment and to out of the workforce are subtracted from total replacement needs. Additional data sources included in the estimate of the average number of job seekers in a particular month are the monthly BLS Current Population Survey, the MDES *Minnesota Employment and Occupational Outlook 1994-2005*, and the BLS *Occupational Projections and Training Data, 1994*.

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\*\* For further information on how 1997 job-seekers are estimated, see the technical report on the methodology.

†† During a given period, individuals who leave their occupations must be replaced. Some become employed in a different occupation as a result of promotion, a desire to change careers, the loss of an existing job, the need for a different job while attending school or caring for a family, or some other reason. Others leave an occupation and stop working altogether because they retire, desire more leisure time or time for an extended vacation, assume family responsibilities, return to school, relocate out of a geographic area, become ill, or for some other reason.

A more complete measure of the supply of job seekers would also include the flows of employed persons changing jobs but remaining in the same occupation. However, as previously mentioned, estimating this flow is conceptually and empirically difficult, and this study has made no attempt to overcome these hindrances. Nevertheless, both BLS experts and studies using the Unemployment Insurance wage records to measure the flow of individuals changing jobs within an occupation estimate this flow to be between 7% and 25% of the total flow of persons who fill job vacancies.

The regional distribution of job seekers is estimated by using the percentage distribution in the 1996 total Minnesota unemployment of each of the six regions. The distribution of job seekers by educational attainment category is obtained by using the estimated percentage distribution of each educational attainment category among the estimated 1997 unemployed. The percentage distribution of job seekers by educational attainment category is estimated to be the same as the percentage distribution of the unemployed by educational attainment category in 1997. The 1994 percentage distribution of unemployment by educational attainment category is used to distribute the total number of job seekers by education.<sup>††</sup>

#### ***Job-Seekers-to-Job-Openings Ratio Without the Influx from the AFDC Population***

The job-seekers-to-job-openings ratio is the result of dividing the number of job seekers by the number of job openings. Three different ratios are obtained: an overall job-seekers-to-job-openings ratio; a job-seekers-to-job-openings ratio by educational attainment category; and a job-seekers-to-job-openings ratio by region. These ratios are average estimates calculated with the typical job-seeker in mind.

#### ***The Adult AFDC Population***

Data on AFDC recipients is from the Workforce Preparation Branch of the Minnesota Department of Economic Security, which regularly receives an extract of the Department of Human Services MAXIS database on AFDC recipients. Table A1 describes the AFDC population by county.

#### ***Job-Seekers-to-Job-Openings Ratio With the Influx from the AFDC Population***

A job-seekers-to-job-openings ratio including the influx of the AFDC population expected to enter the workforce in 1997 is derived. Comparisons between the job-seekers-to-job-openings ratio without the entry of AFDC recipients into the workforce and the job-seekers-to-job-openings ratio with the entry of AFDC recipients into the workforce evaluate the change in the degree of competition job seekers will face in 1997. Calculations on job seekers assume that the average spell of unemployment for an AFDC recipient entering the workforce is the same as that of other job seekers.

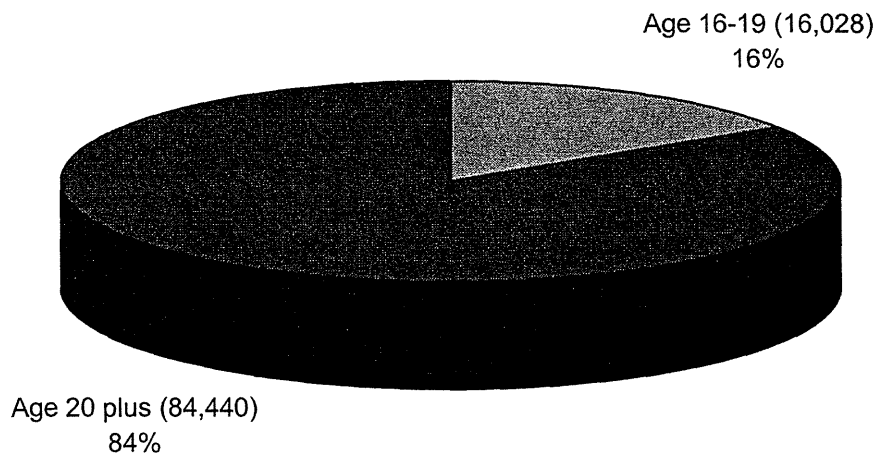
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<sup>††</sup> For further information on how 1997 workforce and unemployment levels by age category and educational attainment level are estimated, see the technical report on the methodology.

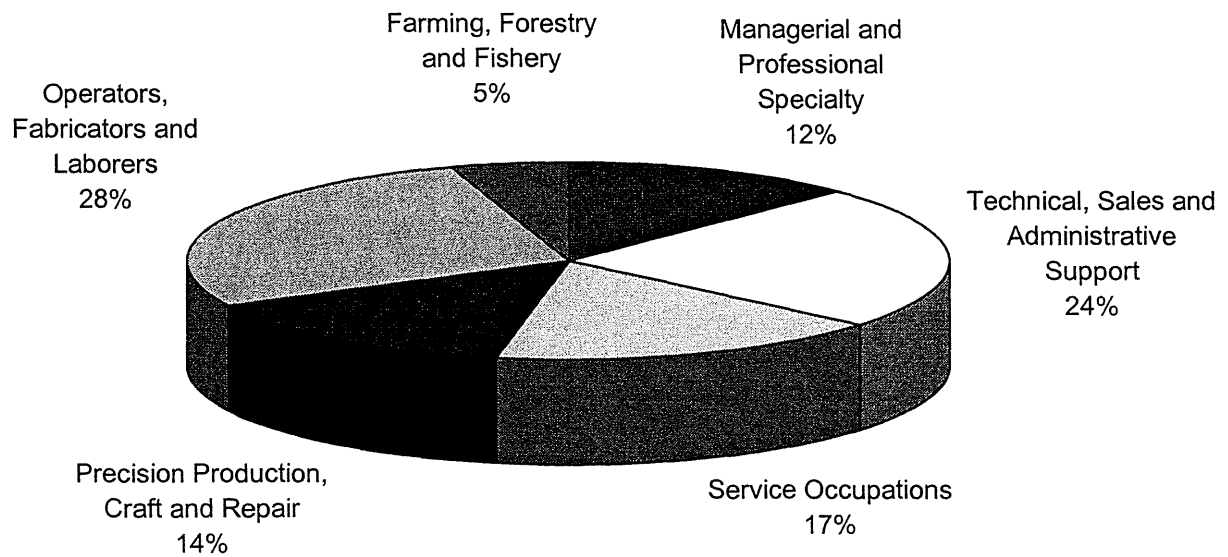
## **APPENDIX A: CHARTS AND TABLES**

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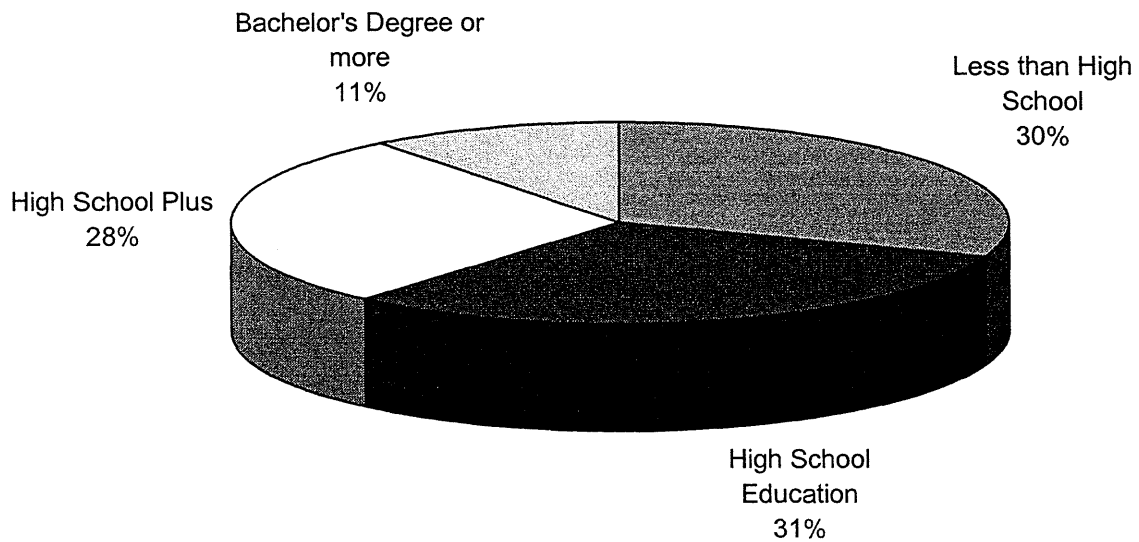
**Chart A1:  
Unemployed Persons by Age  
Minnesota, 1997**



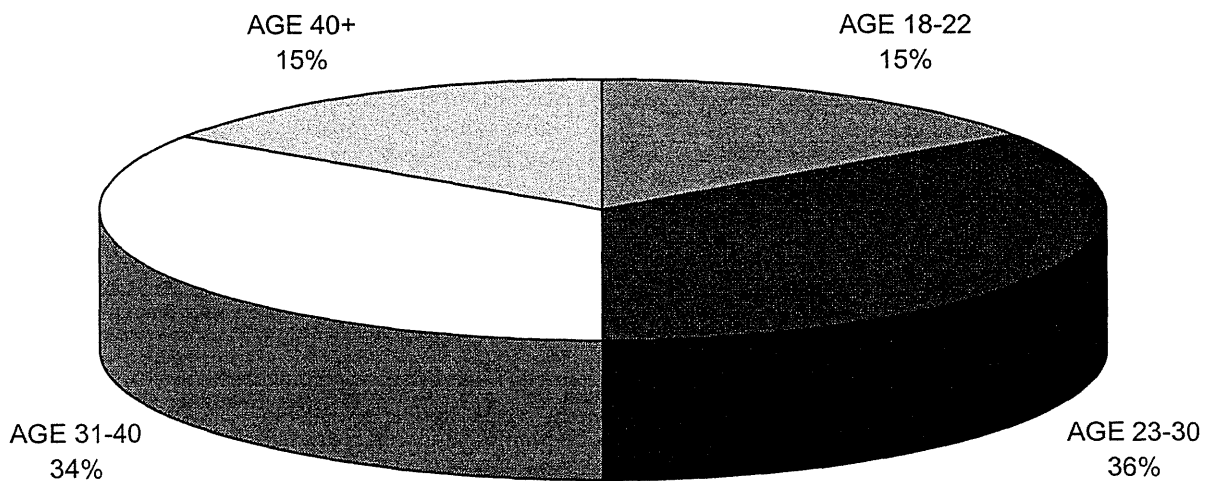
**Chart A2:  
Experienced Unemployed Persons  
by Occupation  
Minnesota, 1997**



**Chart A3:  
Unemployed Persons by Education  
Minnesota, 1997**

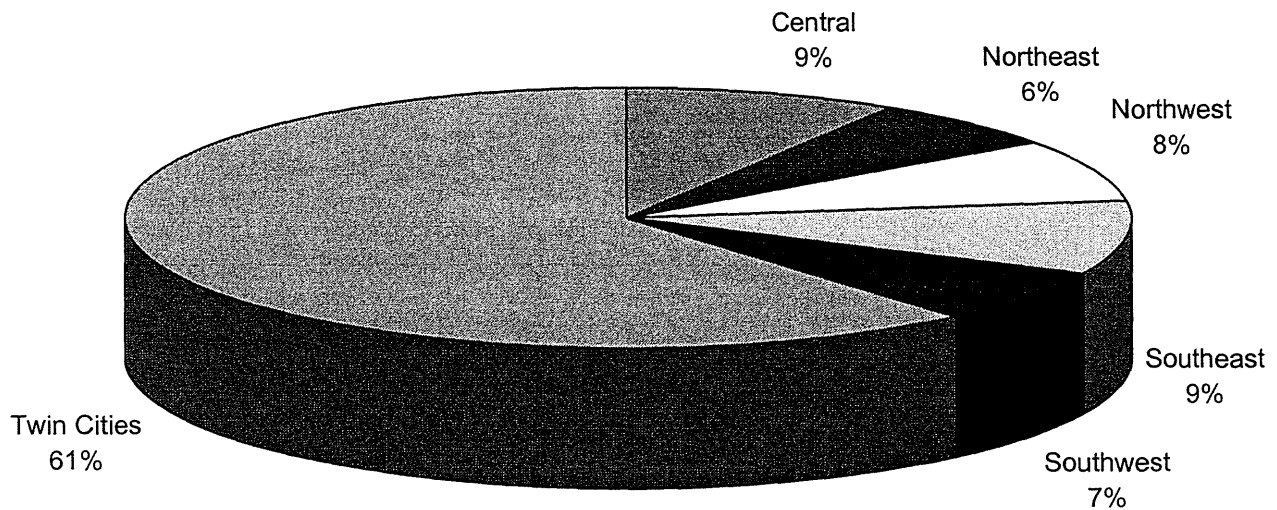


### Chart A4: AFDC Recipients by Age Minnesota, 1996

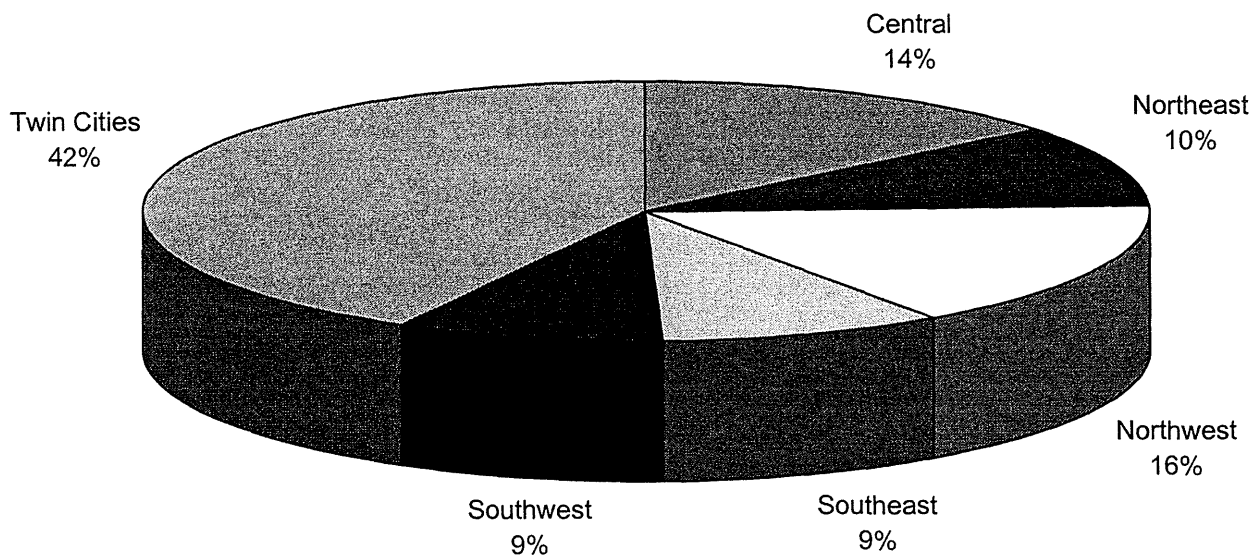


Total adult AFDC population as of July 1996: 73,932. Data on AFDC recipients obtained from the MDES Workforce Preparation Branch extract from the Minnesota Department of Human Services MAXIS System. Data do not include participants in the Minnesota Family Investment Program (MFIP), estimated at about 4,000 cases.

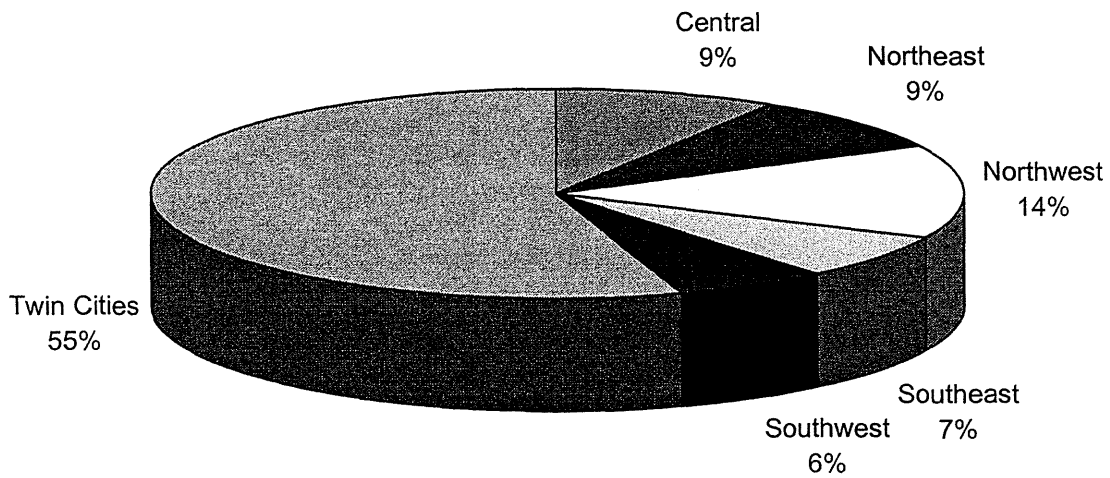
**Chart A5:  
Projected Job Openings by Region  
Minnesota, 1997**



# Chart A6: Unemployment by Region Minnesota, 1997

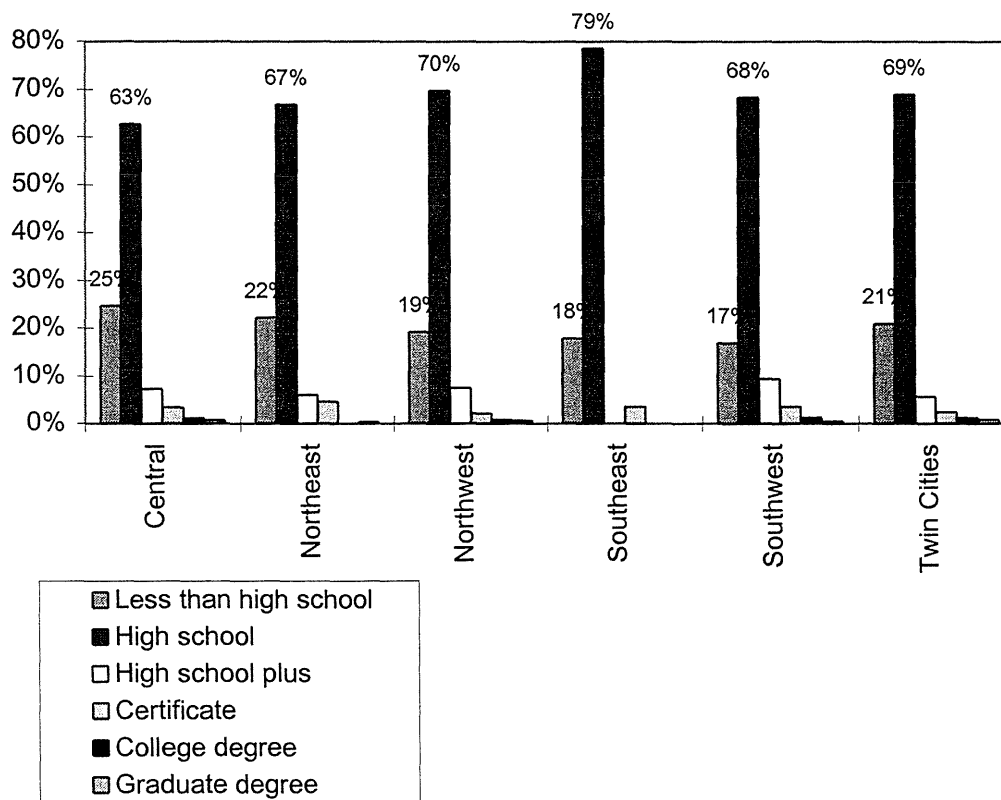


### Chart A7: AFDC Recipients by Region Minnesota, 1996



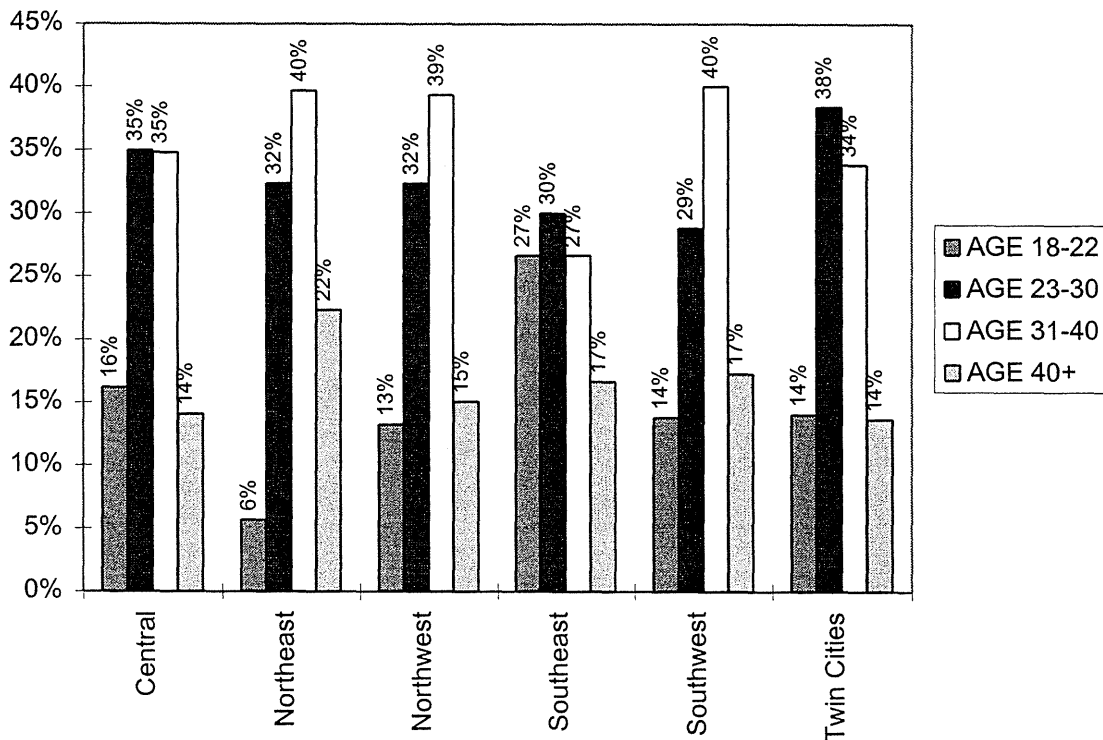
Total adult AFDC population as of July 1996: 73,932. Data on AFDC recipients obtained from the MDES Workforce Preparation Branch extract from the Minnesota Department of Human Services MAXIS System. Data do not include participants in the Minnesota Family Investment Program (MFIP), estimated at about 4,000 cases.

## Chart A8: Educational Attainment of AFDC Recipients by Region Minnesota, 1996



Total adult AFDC population as of July 1996: 73,932. Data on AFDC recipients obtained from the MDES Workforce Preparation Branch extract from the Minnesota Department of Human Services MAXIS System. Data do not include participants in the Minnesota Family Investment Program (MFIP), estimated at about 4,000 cases.

## Chart A9: Age Composition of Minnesota AFDC Recipients, by Region



Total adult AFDC recipients as of July 1996: 73,932. Data on AFDC recipients obtained from the MDES Workforce Preparation Branch extract from the Minnesota Department of Human Services MAXIS System. Data do not include participants in the Minnesota Family Investment Program (MFIP), estimated at about 4,000 cases.

Table A1: Characteristics of the Minnesota AFDC Population by County and Region, 1996

COUNTY	ADULTS	FEMALES	MALES	AGE 18-22	AGE 23-30	AGE 31-40	AGE 40+	Less than high school	High school	High school plus	Certificate	College degree	Graduate degree	1 dependent	2 dependents	More than 2 dependents	Children aged 0-6 years	Children aged 7-12 years
Benton	490	421	69	76	189	158	67	90	293	47	22	7	7	219	147	72	455	296
Chisago	421	373	48	61	160	162	36	98	262	21	15	2	2	183	125	76	424	293
Isanti	405	343	62	70	147	146	42	97	239	25	15	3	1	158	127	66	389	251
Kanabec	233	196	37	41	64	95	33	62	127	15	5	4	1	78	80	52	219	171
Kandiyohi	970	742	228	164	324	309	165	197	389	47	20	4	3	331	217	243	917	601
Mcleod	279	230	49	51	120	67	40	51	161	9	4	2	1	118	64	56	297	177
Meeker	205	172	33	36	65	75	29	51	121	9	6	1	0	90	45	47	189	131
Mille Lacs	236	194	42	35	71	98	30	63	130	14	3	4	3	67	83	56	236	177
Pine	520	410	110	79	181	186	72	146	270	30	18	3	2	177	151	124	489	388
Renville	489	323	166	67	132	160	127	112	158	9	4	4	0	129	94	130	387	315
Sherburne	344	303	41	59	136	109	40	79	203	25	9	7	0	145	102	64	373	211
Stearns	1,241	1,073	168	195	435	441	166	210	692	133	61	19	22	537	337	227	1,161	773
Wright	758	667	91	129	271	279	78	146	520	34	13	4	1	320	222	138	717	464
Central	6,591	5,447	1,144	1,063	2,295	2,285	925	1,402	3,565	418	195	64	43	2,552	1,794	1,351	6,253	4,248
Aitkin	301	216	84	17	97	119	67	62	187	17	13	0	1	99	88	58	230	208
Carlton	548	439	109	72	176	214	82	99	360	39	11	4	3	224	134	106	461	324
Cook	31	31	0	8	9	8	5	5	22	0	1	0	0	18	9	3	28	18
Itasca	867	680	187	120	250	347	150	137	553	76	29	10	4	313	227	181	678	649
Koochiching	263	218	45	37	101	89	36	52	171	14	6	3	2	117	64	48	225	170
Lake	112	93	19	17	30	51	14	16	75	12	3	0	1	41	36	19	96	65
St. Louis	4,187	3,413	774	604	1,477	1,528	570	638	2,629	420	151	60	33	1,763	1,089	731	3,561	2,437
Northeast	6,309	5,090	1,218	875	2,140	2,356	924	1,009	3,997	578	214	77	44	2,575	1,647	1,146	5,279	3,871
Becker	658	526	132	81	227	249	98	168	351	52	15	6	5	232	174	167	587	498
Beltrami	1,558	1,304	254	231	556	493	268	359	854	108	38	11	15	587	411	415	1,780	1,389
Cass	630	497	133	65	183	260	121	143	374	34	12	4	2	204	180	177	648	606
Clay	1,931	1,412	519	279	652	616	372	379	767	148	46	22	13	643	419	433	1,672	1,121
Clearwater	196	163	33	23	60	73	40	48	104	15	4	4	1	80	46	46	183	140
Crow Wing	941	787	154	161	330	321	129	222	515	90	37	7	4	386	242	204	938	636
Douglas	281	248	33	52	106	89	34	47	172	35	9	2	3	131	83	36	246	130
Grant	97	82	15	9	40	33	14	12	53	17	4	1	0	27	30	24	93	76
Hubbard	309	249	60	39	100	112	58	58	188	28	11	4	2	106	101	61	270	203
Kittson	56	47	9	6	21	16	12	6	32	2	1	3	0	18	15	12	46	36
Lake of the Woods	17	15	2	3	8	4	2	3	11	3	0	0	0	7	5	3	16	9
Mahnomen	202	168	34	31	69	56	45	40	121	16	7	2	0	72	51	57	255	150
Marshall	113	85	28	10	44	45	14	26	45	5	1	1	0	34	20	35	101	84
Morrison	256	221	35	28	91	100	35	56	160	13	4	1	4	85	63	65	243	200
Norman	185	127	58	15	48	68	52	39	66	10	3	0	0	34	31	65	153	124
Otter Tail	577	482	95	73	195	216	93	103	317	80	22	10	4	225	161	121	502	408
Pennington	184	167	17	40	57	61	26	34	99	19	12	2	0	94	40	35	173	105
Polk	1,335	960	375	160	427	458	280	303	524	51	25	11	5	388	277	347	1,040	825
Pope	104	86	18	10	39	41	14	23	64	9	1	3	0	39	29	26	99	80
Red Lake	53	44	9	9	10	26	8	10	22	2	4	0	0	19	8	17	39	35
Roseau	93	81	12	12	32	38	11	23	50	6	3	1	0	39	21	21	80	80
Stevens	71	59	12	10	34	17	10	5	35	19	1	4	2	41	10	10	56	37
Todd	211	173	38	28	58	95	30	35	137	13	12	1	0	83	43	51	162	155

Table A1: Characteristics of the Minnesota AFDC Population by County and Region, 1996

Traverse	104	75	29	19	33	31	21	14	45	13	3	2	0	29	26	28	105	67
Wadena	278	226	52	37	88	110	43	46	175	26	6	1	0	106	62	61	226	176
Wilkin	238	165	73	36	64	75	61	45	81	14	7	0	0	61	65	50	190	149
<b>Northwest</b>	<b>10,678</b>	<b>8,449</b>	<b>2,229</b>	<b>1,467</b>	<b>3,572</b>	<b>3,703</b>	<b>1,891</b>	<b>2,247</b>	<b>5,362</b>	<b>828</b>	<b>288</b>	<b>103</b>	<b>60</b>	<b>3,770</b>	<b>2,613</b>	<b>2,567</b>	<b>9,903</b>	<b>7,519</b>
Dodge	180	140	40	23	65	64	28	46	81	15	3	1	0	65	46	39	161	126
Fillmore	179	151	28	29	51	64	35	31	111	12	4	2	2	69	59	28	134	100
Freeborn	553	459	94	94	185	187	84	123	261	41	31	3	0	215	158	106	482	348
Goodhue	314	280	34	60	109	108	36	61	191	13	17	2	3	142	93	51	299	204
Houston	157	139	18	17	52	66	22	25	89	20	13	2	2	67	46	32	142	108
Mower	594	512	82	114	213	178	85	116	359	36	14	2	0	246	151	118	544	317
Olmsted	1,663	1,343	320	252	527	568	314	486	690	125	49	14	11	624	376	388	1,444	1,117
Rice	561	501	60	95	204	186	74	122	274	54	26	7	2	244	158	105	570	400
Steele	313	270	43	41	116	109	46	73	142	17	14	2	6	115	73	81	332	226
Wabasha	165	142	23	21	54	67	23	41	94	11	1	4	2	75	47	24	136	107
Winona	521	427	94	76	178	184	83	142	251	52	10	8	5	210	121	109	489	372
<b>Southeast</b>	<b>5,200</b>	<b>4,364</b>	<b>836</b>	<b>822</b>	<b>1,754</b>	<b>1,781</b>	<b>830</b>	<b>1,266</b>	<b>2,543</b>	<b>396</b>	<b>182</b>	<b>47</b>	<b>33</b>	<b>2,072</b>	<b>1,328</b>	<b>1,081</b>	<b>4,733</b>	<b>3,425</b>
Big Stone	70	57	13	10	20	31	9	13	40	4	4	1	0	33	13	11	58	40
Blue Earth	700	597	103	111	255	228	101	106	347	101	27	34	10	298	179	124	630	414
Brown	217	176	41	30	75	70	42	42	104	18	10	0	1	82	50	43	175	124
Chippewa	162	135	27	24	66	47	25	27	70	15	9	1	0	63	38	37	166	98
Cottonwood	162	131	31	25	59	52	26	37	79	16	3	0	0	61	43	33	150	97
Fairbault	222	186	36	35	54	91	41	47	105	17	11	2	0	90	58	45	183	136
Jackson	136	110	26	23	35	47	30	22	72	11	2	0	1	42	34	39	114	109
Lac Qui Parle	29	25	4	1	8	16	4	3	13	3	3	0	1	9	12	5	23	22
Le Sueur	270	223	47	45	100	92	32	65	127	15	7	3	1	98	64	63	265	193
Lincoln	48	43	5	14	12	14	8	5	30	7	3	0	2	24	10	10	40	28
Lyon	297	267	30	58	96	108	32	52	144	38	18	8	4	136	72	60	293	187
Martin	378	303	75	44	140	133	60	75	194	36	10	5	0	123	108	82	358	225
Murray	54	43	11	6	20	21	7	5	39	5	0	1	0	17	16	13	51	43
Nicollet	271	242	29	55	110	76	29	50	141	38	12	8	4	134	73	40	253	133
Nobles	261	213	48	48	91	73	48	71	107	9	8	4	1	89	78	56	275	168
Pipestone	118	102	16	18	39	42	19	27	66	15	4	0	0	53	30	22	98	104
Redwood	144	107	37	17	55	43	29	39	56	5	3	0	1	56	24	34	121	86
Rock	80	70	10	16	23	27	14	10	52	8	2	1	0	32	21	19	96	75
Sibley	150	122	28	26	46	49	29	39	62	7	4	1	2	43	41	37	145	110
Swift	133	109	24	19	37	48	29	28	72	9	2	0	0	51	30	32	117	80
Waseca	217	181	36	33	68	80	36	49	119	17	5	0	1	92	50	39	176	117
Watonwan	180	155	25	39	53	57	30	44	79	5	2	0	0	59	47	54	192	136
Yellow Medicine	115	90	26	16	25	58	17	23	55	8	2	1	1	43	30	23	91	73
<b>Southwest</b>	<b>4,414</b>	<b>3,687</b>	<b>728</b>	<b>713</b>	<b>1,487</b>	<b>1,503</b>	<b>697</b>	<b>879</b>	<b>2,173</b>	<b>407</b>	<b>151</b>	<b>70</b>	<b>30</b>	<b>1,728</b>	<b>1,121</b>	<b>921</b>	<b>4,070</b>	<b>2,798</b>
Anoka	3,106	2,718	388	522	1,157	1,072	348	711	1,814	194	124	37	28	1,441	784	563	2,903	1,866
Carver	305	269	36	42	99	136	27	56	208	6	11	1	3	142	85	46	300	192
Dakota	2,520	2,245	275	399	959	860	297	477	1,365	332	111	51	25	1,114	673	482	2,386	1,561
Hennepin	19,322	16,918	2,404	3,055	6,707	6,542	2,908	5,639	9,360	1,304	707	288	235	7,511	5,049	4,796	19,996	13,560
Ramsey	13,833	11,583	2,250	2,063	4,807	4,562	2,364	4,784	6,146	812	344	110	60	4,775	3,332	3,864	15,056	10,474
Scott	464	425	39	62	186	166	48	121	270	23	8	8	2	213	130	85	445	328
Washington	1,190	1,087	103	192	468	423	107	244	666	127	55	21	14	547	323	239	1,201	792
Twin Cities	40,740	35,245	5,495	6,335	14,383	13,761	6,099	12,032	19,829	2,798	1,360	516	367	15,743	10,376	10,075	42,287	28,773
<b>Statewide</b>	<b>73,932</b>	<b>62,282</b>	<b>11,650</b>	<b>11,275</b>	<b>25,631</b>	<b>25,389</b>	<b>11,366</b>	<b>18,835</b>	<b>37,469</b>	<b>5,425</b>	<b>2,390</b>	<b>877</b>	<b>577</b>	<b>28,440</b>	<b>18,879</b>	<b>17,141</b>	<b>72,525</b>	<b>50,634</b>

<i>Table A2: Major 1997 Statewide Job Openings Requiring Less than a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Cashiers	28,789	6.09	5.00
Amusement & Recreation Attendants	8,203	5.83	4.75
Counter Attendants & Other Food Preparation/Service Worker	6,596	6.07	4.75
Counter & Rental Clerks	5,280	6.16	4.50
Food Preparation Workers	3,886	7.03	5.66
Dining Room & Cafeteria Attendants & Bartender Helpers	2,306	6.16	5.00
Cannery Workers	1,100	5.59	5.00
<i>\$7.51 - \$9.99 1994 Mean Wage</i>			
Janitors & Cleaners, Including Maids & Housekeeping Cleaner	16,975	8.47	6.05
Freight, Stock & Material Movers, Hand	5,947	9.87	6.41
Vehicle Washers & Equipment Cleaners	5,727	8.13	5.75
Hand Packers & Packagers	4,624	7.55	6.00
Guards & Watch Guards	2,287	7.85	6.00
Meat, Poultry & Fish Cutters & Trimmers, Hand	1,376	9.05	6.50
<i>\$10.00-\$14.99 1994 Mean Wage</i>			
Helpers, Construction Trades & Extractive Workers	2,015	13.12	9.05
<i>1994 Mean Wage Not Available</i>			
All Other Helpers, Laborers & Material Movers, Hand	23,613	NA	NA
All Other Hand Workers	7,480	NA	NA
Farm Workers	2,607	NA	NA
All Other Food Service Workers	2,319	NA	NA
All Other Cleaning & Building Service Workers	1,164	NA	NA

<i>Table A2: Major 1997 Statewide Job Openings Requiring a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Salespersons, Retail	31,093	7.29	5.05
Waiters & Waitresses	20,058	5.48	4.25
Cooks, Specialty Fast Food & Short Order	5,138	5.27	4.65
Bartenders	2,944	6.37	5.00
Child Care Workers, Private Household	1,585	7.09	5.35
File Clerks	1,577	7.28	6.00
<i>\$7.51 - \$9.99 1994 Mean Wage</i>			
General Office Clerks	20,578	9.47	7.50
Receptionists & Information Clerks	11,850	8.13	7.00
Stock Clerks, Sales Floor, Stockroom or Warehouse	6,091	9.26	6.50
Shipping, Receiving & Traffic Clerks	4,258	9.50	7.50
Bus Drivers, School	2,262	9.12	7.65
Adjustment Clerks	1,636	8.73	7.70
Packaging & Filling Machine Operators	1,333	8.62	6.00
Loan & Credit Clerks	1,237	8.73	7.36
Order Clerks, Materials, Merchandise & Service	1,121	9.32	7.61
Billing, Cost & Rate Clerks	1,058	9.54	8.20
<i>\$10.00-\$14.99 1994 Mean Wage</i>			
Truck Drivers, Heavy & Light	9,836	10.99	8.69
Secretaries, Except Legal & Medical	7,657	10.95	9.05
Salespersons, Parts	2,369	10.52	6.73
Typists, Including Word Processing	1,567	10.93	9.65
<i>1994 Mean Wage Not Available</i>			
All Other Sales & Related Workers	7,911	NA	NA
All Other Material-Moving Equipment Operators	2,364	NA	NA
All Other Machine Setters & Operators	1,582	NA	NA
All Other Clerical & Administrative Support Workers	1,416	NA	NA
All Other Protective Service Workers	1,384	NA	NA
All Other Office Machine Operators	1,300	NA	NA

<i>Table A2: Major 1997 Central Region Job Openings Requiring Less than a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Cashiers	3,034	5.70	4.63
Amusement & Recreation Attendants	1,054	5.28	4.75
Counter Attendants & Other Food Preparation/Service Workers	655	6.42	4.75
Freight, Stock & Material Movers, Hand	524	7.29	5.50
Vehicle Washers & Equipment Cleaners	454	6.14	5.00
Counter & Rental Clerks	419	5.92	4.82
Food Preparation Workers	402	7.19	5.50
Dining Room & Cafeteria Attendants & Bartender Helpers	237	5.56	4.50
Guards & Watch Guards	167	7.00	6.42
<i>\$7.51-\$14.99 Mean Wage</i>			
Janitors & Cleaners, Including Maids & Housekeeping Cleaners	1,512	9.28	6.81
Hand Packers & Packagers	416	7.73	7.30
<i>\$10.00-\$14.99 Mean Wage</i>			
Helpers, Construction Trades & Extractive Workers	225	11.45	9.13
<i>1994 Mean Wage Not Available</i>			
All Other Helpers, Laborers & Material Movers, Hand	1,931	NA	NA
All Other Hand Workers	826	NA	NA
Farm Workers	656	NA	NA
Meat, Poultry & Fish Cutters & Trimmers, Hand	310	NA	NA
All Other Food Service Workers	195	NA	NA
Cannery Workers	118	NA	NA

<i>Table A2: Major 1997 Central Region Job Openings Requiring a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>Below \$5.00 1994 Mean Wage</i>			
Waiters & Waitresses	1,919	4.60	4.25
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Salespersons, Retail	2,621	6.33	4.30
Receptionists & Information Clerks	757	7.48	6.80
Cooks, Specialty Fast Food & Short Order	487	5.18	4.50
Bartenders	294	6.13	5.00
Child Care Workers, Private Household	117	6.34	5.25
Order Fillers, Wholesale & Retail Sales	102	6.65	5.65
<i>\$7.51 - \$9.99 1994 Mean Wage</i>			
General Office Clerks	1,567	8.90	7.25
Truck Drivers, Heavy & Light	1,060	9.65	8.48
Stock Clerks, Sales Floor, Stockroom or Warehouse	622	9.23	7.25
Shipping, Receiving & Traffic Clerks	357	8.99	8.00
Bus Drivers, School	305	9.89	8.00
Salespersons, Parts	213	8.53	6.88
Adjustment Clerks	117	9.43	7.25
Order Clerks, Materials, Merchandise & Service	108	8.67	7.59
<i>\$10.00 - \$14.99 1994 Mean Wage</i>			
Secretaries, Except Legal & Medical	703	10.34	8.75
<i>1994 Mean Wage Not Available</i>			
All Other Sales & Related Workers	655	NA	NA
All Other Machine Setters & Operators	147	NA	NA
All Other Protective Service Workers	130	NA	NA

<i>Table A2: Major 1997 Northeast Region Job Openings Requiring Less than a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>Below \$5.00 Mean Wage</i>			
Amusement & Recreation Attendants	639	4.62	4.25
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Cashiers	1,921	6.97	5.12
Counter Attendants & Other Food Preparation/Service Workers	427	5.90	4.50
Counter & Rental Clerks	289	7.05	4.90
Food Preparation Workers	269	7.04	5.45
Freight, Stock & Material Movers, Hand	257	6.44	5.37
Dining Room & Cafeteria Attendants & Bartender Helpers	164	5.68	4.70
Hand Packers & Packagers	149	6.74	5.88
<i>\$7.51 - 9.99 1994 Mean Wage</i>			
Janitors & Cleaners, Including Maids & Housekeeping Cleaners	1,091	8.04	4.80
<i>Above \$15.00 Mean Wage</i>			
Helpers, Construction Trades & Extractive Workers	132	16.03	15.08
<i>1994 Mean Wage Not Available</i>			
All Other Helpers, Laborers & Material Movers, Hand	2,040	NA	NA
Vehicle Washers & Equipment Cleaners	228	NA	NA
All Other Hand Workers	188	NA	NA
All Other Food Service Workers	159	NA	NA
All Other Cleaning & Building Service Workers	107	NA	NA

<i>Table A2: Major 1997 Northeast Region Job Openings Requiring a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>Below \$5.00 Mean Wage</i>			
Waiters & Waitresses	1,384	4.58	4.25
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Salespersons, Retail	1,984	6.12	4.30
Cooks, Specialty Fast Food & Short Order	340	5.50	5.10
Bartenders	210	7.16	5.63
Child Care Workers, Private Household	126	6.41	4.25
<i>\$7.51 - 9.99 1994 Mean Wage</i>			
Receptionists & Information Clerks	564	8.24	7.25
General Office Clerks	984	8.94	6.50
<i>\$10.00 - \$14.99 1994 Mean Wage</i>			
Truck Drivers, Heavy & Light	600	12.48	10.05
Secretaries, Except Legal & Medical	403	11.11	9.53
Stock Clerks, Sales Floor, Stockroom or Warehouse	323	11.35	7.50
Shipping, Receiving & Traffic Clerks	153	10.74	8.06
Bus Drivers, School	134	11.98	10.89
Salespersons, Parts	131	10.36	8.81
<i>1994 Mean Wage Not Available</i>			
All Other Sales & Related Workers	366	NA	NA
All Other Protective Service Workers	120	NA	NA
All Other Machine Setters & Operators	108	NA	NA

<i>Table A2: Major 1997 Northwest Region Job Openings Requiring Less than a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Cashiers	2,956	5.44	4.50
Amusement & Recreation Attendants	989	5.62	4.65
Counter Attendants & Other Food Preparation/Service Workers	603	5.52	4.25
Freight, Stock & Material Movers, Hand	451	6.93	5.25
Food Preparation Workers	408	6.08	5.50
Hand Packers & Packagers	337	6.43	5.50
Dining Room & Cafeteria Attendants & Bartender Helpers	235	5.12	4.25
Guards & Watch Guards	135	6.70	5.77
<i>\$7.51 - 9.99 1994 Mean Wage</i>			
Janitors & Cleaners, Including Maids & Housekeeping Cleaners	1,511	8.41	6.48
Vehicle Washers & Equipment Cleaners	301	8.53	5.50
<i>\$10.00 - \$14.99 Mean Wage</i>			
Helpers, Construction Trades & Extractive Workers	189	11.40	8.50
Highway Maintenance Workers	116	13.40	12.50
<i>1994 Mean Wage Not Available</i>			
All Other Helpers, Laborers & Material Movers, Hand	1,801	NA	NA
All Other Hand Workers	910	NA	NA
Farm Workers	600	NA	NA
Counter & Rental Clerks	352	NA	NA
All Other Food Service Workers	202	NA	NA
All Other Cleaning & Building Service Workers	138	NA	NA
Meat, Poultry & Fish Cutters & Trimmers, Hand	108	NA	NA
Service Station Attendants	104	NA	NA

<i>Table A2: Major 1997 Northwest Region Job Openings Requiring a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Salespersons, Retail	2,324	6.05	5.00
Waiters & Waitresses	1,943	5.08	4.25
Cooks, Specialty Fast Food & Short Order	469	5.01	4.25
Bartenders	311	5.30	4.60
Shipping, Receiving & Traffic Clerks	268	7.49	5.45
Child Care Workers, Private Household	185	5.82	4.94
<i>\$7.51 - \$9.99 1994 Mean Wage</i>			
General Office Clerks	1,319	8.39	6.31
Truck Drivers, Heavy & Light	844	9.61	7.27
Receptionists & Information Clerks	720	7.57	6.28
Secretaries, Except Legal & Medical	592	9.02	7.55
Stock Clerks, Sales Floor, Stockroom or Warehouse	573	8.11	5.25
Salespersons, Parts	192	9.53	6.41
<i>\$10.00 - \$14.99 1994 Mean Wage</i>			
Bus Drivers, School	234	10.20	9.19
Typists, Including Word Processing	114	10.03	8.36
<i>1994 Mean Wage Not Available</i>			
All Other Sales & Related Workers	556	NA	NA
All Other Protective Service Workers	161	NA	NA
All Other Machine Setters & Operators	108	NA	NA

<i>Table A2: Major 1997 Southeast Region Job Openings Requiring Less than a High School Education</i>			
Occupation	1997 Job Openings	1994 Mean Wage	1994 25% Wage
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Cashiers	2,763	5.67	4.75
Counter Attendants & Other Food Preparation/Service Workers	584	5.85	4.45
Counter & Rental Clerks	416	6.80	4.75
Hand Packers & Packagers	396	7.21	6.00
Food Preparation Workers	372	6.49	5.50
Dining Room & Cafeteria Attendants & Bartender Helpers	219	5.93	4.75
<i>\$7.51 - 9.99 1994 Mean Wage</i>			
Janitors & Cleaners, Including Maids & Housekeeping Cleaners	1,504	8.10	6.00
Amusement & Recreation Attendants	837	8.86	6.69
Meat, Poultry & Fish Cutters & Trimmers, Hand	500	9.76	8.90
Vehicle Washers & Equipment Cleaners	451	8.24	5.50
<i>\$10.00 - \$14.99 Mean Wage</i>			
Freight, Stock & Material Movers, Hand	571	10.00	4.75
Helpers, Construction Trades & Extractive Workers	194	12.16	8.96
<i>1994 Mean Wage Not Available</i>			
All Other Helpers, Laborers & Material Movers, Hand	1,954	NA	NA
All Other Hand Workers	858	NA	NA
Farm Workers	352	NA	NA
All Other Food Service Workers	213	NA	NA
Cannery Workers	204	NA	NA
Guards & Watch Guards	165	NA	NA
All Other Cleaning & Building Service Workers	107	NA	NA

<i>Table A2: Major 1997 Southeast Region Job Openings Requiring a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Salespersons, Retail	2,466	7.29	4.60
Waiters & Waitresses	1,808	7.19	4.25
Cooks, Specialty Fast Food & Short Order	441	5.05	4.50
Bartenders	278	6.72	5.50
<i>\$7.51 - 9.99 1994 Mean Wage</i>			
General Office Clerks	1,518	9.25	7.26
Receptionists & Information Clerks	1,261	7.80	6.55
Stock Clerks, Sales Floor, Stockroom or Warehouse	603	9.13	6.79
Shipping, Receiving & Traffic Clerks	332	9.30	7.00
Bus Drivers, School	220	8.59	8.00
Salespersons, Parts	184	9.67	7.61
File Clerks	176	8.14	7.00
Child Care Workers, Private Household	165	9.30	8.17
Medical Secretaries	125	8.90	8.06
Adjustment Clerks	111	9.83	7.72
<i>\$10.00 - \$14.99 1994 Mean Wage</i>			
Truck Drivers, Heavy & Light	832	11.34	8.42
Secretaries, Except Legal & Medical	698	10.31	8.69
Packaging & Filling Machine Operators	136	10.22	7.92
Typists, Including Word Processing	121	10.33	9.12
<i>1994 Mean Wage Not Available</i>			
All Other Sales & Related Workers	565	NA	NA
All Other Machine Setters & Operators	123	NA	NA
All Other Protective Service Workers	120	NA	NA

<i>Table A2: Major 1997 Southwest Region Job Openings Requiring Less than a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>Below \$5.00 1994 Mean Wage</i>			
Amusement & Recreation Attendants	563	4.43	4.25
Counter Attendants & Other Food Preparation/Service Workers	453	4.73	4.25
Counter & Rental Clerks	255	4.89	4.45
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Cashiers	2,302	5.19	4.50
Hand Packers & Packagers	327	6.84	5.50
Food Preparation Workers	312	6.34	5.15
Dining Room & Cafeteria Attendants & Bartender Helpers	169	5.87	5.25
<i>\$7.51 - 9.99 1994 Mean Wage</i>			
Janitors & Cleaners, Including Maids & Housekeeping Cleaners	1,112	8.28	6.51
Freight, Stock & Material Movers, Hand	477	8.20	6.78
Vehicle Washers & Equipment Cleaners	374	8.74	7.75
Helpers, Construction Trades & Extractive Workers	138	8.18	7.25
<i>1994 Mean Wage Not Available</i>			
All Other Helpers, Laborers & Material Movers, Hand	1,505	NA	NA
Farm Workers	743	NA	NA
All Other Hand Workers	605	NA	NA
Cannery Workers	425	NA	NA
Meat, Poultry & Fish Cutters & Trimmers, Hand	422	NA	NA
All Other Food Service Workers	181	NA	NA
Machine Feeders & Offbearers	109	NA	NA
All Other Cleaning & Building Service Workers	102	NA	NA

<i>Table A2: Major 1997 Southwest Region Job Openings Requiring a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>Below \$5.00 1994 Mean Wage</i>			
Cooks, Specialty Fast Food & Short Order	346	4.86	4.50
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Salespersons, Retail	1,914	5.78	4.70
Waiters & Waitresses	1,354	6.15	4.25
Receptionists & Information Clerks	622	6.98	5.95
Bartenders	210	5.61	4.88
Packaging & Filling Machine Operators	188	7.07	6.00
Child Care Workers, Private Household	146	5.80	5.00
<i>\$7.51 - \$9.99 1994 Mean Wage</i>			
General Office Clerks	1,177	8.21	6.50
Truck Drivers, Heavy & Light	882	9.38	7.63
Secretaries, Except Legal & Medical	451	8.79	7.21
Stock Clerks, Sales Floor, Stockroom or Warehouse	429	7.85	5.50
Shipping, Receiving & Traffic Clerks	285	8.77	7.08
Salespersons, Parts	166	9.07	6.50
<i>\$10.00 - \$14.99 1994 Mean Wage</i>			
Bus Drivers, School	198	10.01	8.66
<i>1994 Mean Wage Not Available</i>			
All Other Sales & Related Workers	504	NA	NA
All Other Protective Service Workers	120	NA	NA
All Other Machine Setters & Operators	116	NA	NA

<i>Table A2: Major 1997 Twin Cities Region Job Openings Requiring Less than a High School Education</i>			
<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<i>\$5.00 - \$7.50 1994 Mean Wage</i>			
Cashiers	15,833	6.52	5.30
Amusement & Recreation Attendants	4,128	5.42	4.75
Counter Attendants & Other Food Preparation/Service Workers	3,877	6.44	5.50
Food Preparation Workers	2,126	7.45	6.10
Dining Room & Cafeteria Attendants & Bartender Helpers	1,284	6.57	5.15
<i>\$7.51 - 9.99 1994 Mean Wage</i>			
Janitors & Cleaners, Including Maids & Housekeeping Cleaners	10,255	8.50	6.08
Vehicle Washers & Equipment Cleaners	3,923	7.93	6.00
Counter & Rental Clerks	3,553	7.86	5.30
Hand Packers & Packagers	3,001	7.85	6.00
Guards & Watch Guards	1,658	8.11	6.32
<i>\$10.00 - \$14.99 Mean Wage</i>			
Freight, Stock & Material Movers, Hand	3,671	10.99	7.15
Helpers, Construction Trades & Extractive Workers	1,140	14.18	11.60
<i>1994 Mean Wage Not Available</i>			
All Other Helpers, Laborers & Material Movers, Hand	14,394	NA	NA
All Other Hand Workers	4,098	NA	NA
All Other Food Service Workers	1,370	NA	NA
All Other Cleaning & Building Service Workers	619	NA	NA

**Table A2: Major 1997 Twin Cities Region Job Openings Requiring a High School Education**

<b>Occupation</b>	<b>1997 Job Openings</b>	<b>1994 Mean Wage</b>	<b>1994 25% Wage</b>
<b><i>\$5.00 - \$7.50 1994 Mean Wage</i></b>			
Waiters & Waitresses	11,650	5.44	4.25
Cooks, Specialty Fast Food & Short Order	3,055	5.46	4.95
Bartenders	1,640	6.53	5.25
File Clerks	1,094	7.48	6.00
Child Care Workers, Private Household	846	6.80	5.76
<b><i>\$7.51 - \$9.99 1994 Mean Wage</i></b>			
Salespersons, Retail	19,784	7.89	5.45
General Office Clerks	14,014	9.93	7.75
Receptionists & Information Clerks	7,926	8.51	7.00
Stock Clerks, Sales Floor, Stockroom or Warehouse	3,541	9.49	7.00
Shipping, Receiving & Traffic Clerks	2,863	9.90	7.50
Adjustment Clerks	1,219	9.39	7.79
Bus Drivers, School	1,172	8.31	7.50
Packaging & Filling Machine Operators	781	9.07	7.00
Data Entry Keyers, Except Composing	678	7.65	5.75
Bill & Account Collectors	663	9.51	7.50
<b><i>\$10.00 - \$14.99 1994 Mean Wage</i></b>			
Truck Drivers, Heavy & Light	5,617	11.72	9.30
Secretaries, Except Legal & Medical	4,809	11.74	10.00
Salespersons, Parts	1,483	10.98	6.73
Typists, Including Word Processing	1,062	11.28	9.86
Loan & Credit Clerks	866	10.29	8.02
Travel Agents	796	10.62	9.50
Order Clerks, Materials, Merchandise & Service	793	10.19	8.50
Billing, Cost & Rate Clerks	695	10.16	8.55
<b><i>1994 Mean Wage Not Available</i></b>			
All Other Sales & Related Workers	5,265	NA	NA
All Other Material-Moving Equipment Operators	1,917	NA	NA
All Other Clerical & Administrative Support Workers	1,062	NA	NA
All Other Office Machine Operators	1,020	NA	NA
All Other Machine Setters & Operators	980	NA	NA
All Other Protective Service Workers	732	NA	NA
All Other Material Recording/Scheduling/Distributing Workers	626	NA	NA

# Minnesota Economic Regions and Counties

