



## **Jamestown Labor Availability and Surrounding Area**

## Jamestown Labor Availability and Surrounding Area

### Major Findings

#### Summary of Findings

Site developers, economic planners, and others will often refer to the unemployment rate to determine if there is an available labor force; but while the unemployment rate is a consistent measure across the country, it is incomplete. Being unemployed is defined as not working but actively seeking work. However, some individuals who are working would be interested in changing jobs or occupations, others would want additional hours, and some are planning to find work within the year. These individuals are not normally counted as part of the available labor pool in an area.

In 2006, the state of North Dakota, in cooperation with local partners, funded a study to measure the available labor pool.

In the area including and surrounding the community of Jamestown, there exists a potential labor force of 17,069 individuals, or approximately 56 percent of the adult population. The majority of these individuals are currently working but would be willing to consider alternative jobs. The labor force (those employed, which includes the self-employed, as well as those actively seeking work) is estimated to be 54 percent of the adult population, or 16,559 individuals.

#### Characteristics of the Potential Job Seekers

	<u>Number*</u>	<u>Percentage of 18+</u>
<b>Potential Job Seekers</b>	7,956	26.0%
<b>Actively Seeking Work</b>	680	2.2%
<b>Planning to Look Within the Year</b>	476	1.6%
<b>Interested in Changing Jobs</b>	5,882	19.2%
<b>Interested in Additional Jobs</b>	2,414	7.9%
<b>Those Discouraged From Looking</b>	34	0.1%

\*The numbers will not total to the Potential Job Seekers, as duplication is possible.

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### Scope of Study

The purpose of this study was to explore the size and characteristics of the potential labor pool in and around Jamestown, North Dakota. A telephone survey was conducted by the University of North Dakota – Social Science Research Institute (SSRI), who contacted 901 respondents in Stutsman, Barnes and LaMoure Counties as well as select areas of Kidder, Foster, Griggs, and Logan Counties. The areas included the city of Jamestown, all of the remainder of Stutsman County and communities within a 45 mile radius of Jamestown. This area was determined by the developer and was based on community and business trade patterns. According to 2000 Census estimates, there are approximately 30,567 people age 18 and older living in these areas.

Area/Counties	Census	
	2000	Adult 18+
Stutsman County	21,908	16,903
Barnes County	11,775	9,151
LaMoure County	4,701	3,563
Select Areas of Kidder County	345	242
Select Areas of Foster County	299	224
Select Areas of Griggs County	181	142
Select Areas of Logan County	386	342
Total	<b>39,595</b>	<b>30,567</b>

### The Population

Approximately 55 percent of the survey respondents live in Stutsman County where Jamestown is located. The remaining 45 percent reside in the counties surrounding Stutsman. Slightly more women (52 percent) than men (48 percent) completed the survey. The typical respondent is 54 years old, currently working (52 percent) and travel approximately 12 minutes or 19 miles to get to work. The largest occupations in the Jamestown area are Office and Administrative Support (13 percent), Healthcare Support (13 percent), and Education, Training and Library (11 percent). In general, respondents are well-educated with 92 percent having received a high school diploma and 29 percent having received a college degree.

These results differ somewhat from the 2000 Census data for the area.<sup>1</sup> According to the Census Bureau, 51 percent of the population is female while 49 percent is male, and the median age is 38.6. The Census Bureau also found that 81 percent of the population has a high school diploma and 22 percent has a college degree.

The median age of respondents (54) is older than the population of the 2000 Census. In comparison, the median age of the nation was 35.3 in 2000. Among survey respondents, 15.4 percent were between the ages of 18 and 34.

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<sup>1</sup> Census data is for the City of Jamestown.

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Education Level	Percentage that Attained This Level
Less Than HS Diploma	8.4%
HS GED Graduate	31.5%
Some College and Vo-tech	24.1%
Vo-tech Graduate	6.8%
College Grad and Advanced Degree	29.2%
<b>Total</b>	<b>100.0</b>

At the time of this study the unemployment rate in the Jamestown area was 4.0 percent<sup>2</sup>. Among the respondents, 52 percent are currently working, 2 percent are actively seeking work, and 2 percent are not actively seeking work. Also, an additional 17 percent are considered potential job seekers (PJSs), who are people willing to change jobs or take an additional job if the circumstances are right. These PJSs will be covered later in the paper. The remainder of the population over age 18 is not in the workforce.

### The Current Workforce

A typical employed respondent works 40.8 hours per week and makes \$14.48 per hour. A majority of these respondents has only one job and works full-time, which is defined in this study as 30 hours per week or more. Nineteen percent held more than one job. Generally, if a respondent works more than one job, the additional job is part-time. Twenty-five percent of employed respondents have shift-oriented schedules, but an additional 19 percent of working respondents who do not currently work shifts said they would be willing to consider shift work. The following table shows the most recent occupations of the current employees in the Jamestown area.

Occupational Group	Numbers <sup>3</sup>		Percentage of Workforce	
Managerial, Professional and Related Occupations	6,882		43.3%	
Managerial		1,410		8.9%
Business and Financial Operations		622		3.9%

<sup>2</sup> This figure reflects Stutsman County as of March, 2006. Regional data is not available to the specific geographical region defined by this study.

<sup>3</sup> Estimates are rounded to the nearest whole number and may not sum.

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Occupational Group	Numbers		Percentage of Workforce	
Computer and Mathematical Science		249		1.6%
Architecture and Engineering		166		1.0%
Life, Physical and Social Services		41		0.3%
Community and Social Services		290		1.8%
Legal Occupation		83		0.5%
Education, Training and Library		1,783		11.2%
Arts, Design, Entertainment, Sports and Media		124		0.8%
Healthcare Practitioner and Technicians		124		0.8%
Healthcare Support		1,990		12.5%
Service Occupations	1,658		10.4%	
Protective Services		497		3.1%
Food Preparation and Serving		705		4.4%
Building and Grounds, Cleaning, Maintenance		207		1.3%
Personal Care		249		1.6%
Sales and Office Occupations	3,068		19.3%	
Sales		995		6.3%
Office and Administrative Support		2,073		13.1%
Farming and Related Occupations	954		6.0%	
Farming and Related Occupations		954		6.0%
Construction, Extraction, Installation and Repair	1,575		9.9%	
Construction and Extraction		746		4.7%
Installation and Repair		829		5.2%
Production, Transportation and Material Moving	1,575		9.9%	
Production		995		6.3%
Transportation and Material Moving		580		3.7%

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<b>Occupational Group</b>	<b>Numbers</b>		<b>Percentage of Workforce</b>	
Other Occupations not Classified Elsewhere	124		0.8%	
Other Occupations not Classified Elsewhere		124		0.8%

The demographics of the workforce in the area are different from those of the general population. Current employees have a median age of 46.1. As shown in the chart, 20 percent of these current employees are between the ages of 18 and 34. Also, 41 percent are male, 35 percent have a college degree, and the average wage of current employees is \$14.48 per hour.

<b>Age Group</b>	<b>Percentage</b>
18 – 24	6.5%
25 – 34	13.1%
35 – 44	21.7%
45 – 54	30.8%
55 – 64	22.4%
65 Plus	5.6%

Typically, current employees travel 12 minutes or 19 miles to get to work. This, however, depends on the occupation of the employee. For instance, the majority of those in Community and Social occupations travel, on average, less than 3 miles to get to work while those in Transportation occupations travel on average 57 miles to get to work.

The average length of tenure for employees in the Jamestown area is 9.2 years. Of the currently employed respondents, 85 percent work full-time--defined here as more than 30 hours a week--and most (90 percent) work year round jobs. The following table shows the benefits that currently employed respondents receive at their jobs.

<b>Benefit</b>	<b>Percentage Provided</b>
Healthcare	65%
Retirement Plan	53%
Life Insurance	37%
Disability Insurance	28%
Child Care	4%
Other	20%
Provided No Fringe Benefits	27%

The following table shows various occupations in the area by number of employed respondents as well as by years with employer, hours worked and hourly wages. In the Jamestown area, the highest percentage of employees are in Office and Administrative Support, Healthcare Support, and Education, Training and Library Occupations. The occupations with the oldest employees are Legal Occupations at 56.5, while those in Food Preparation and Serving Related Occupations have the youngest employees at 42. Computer

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and Mathematical Sciences pays the highest with an average wage of \$21.33 per hour. On average, employees in Architecture and Engineering work the most hours (49).

Occupational Group	Estimated Number	Percentage	Years with current employer	Hours worked in average week	Hourly wage
Management	1,410	9%	10	42.09	\$15.56
Business and Financial Operations	622	4%	15	39.93	\$15.33
Computer and Mathematical Science	249	2%	4	44.67	\$21.33
Architecture and Engineering	166	1%	9	48.75	\$17.82
Life, Physical, and Social Science	41	< 1%	2	40.00	\$14.50
Community and Social Services	290	2%	7	44.00	\$11.00
Legal Occupations	83	1%	14	47.50	\$12.00
Education, Training, and Library	1,783	11%	10	42.67	\$14.62
Arts, Design, Entertainment, Sports, and Media	124	1%	6	25.00	\$7.50
Healthcare Practitioner and Technical	124	1%	18	24.67	\$11.57
Healthcare Support	1,990	13%	7	38.52	\$16.70
Protective Service	497	3%	9	41.58	\$12.98
Food Preparation and Serving Related	705	4%	3	33.24	\$8.25
Building and Grounds Cleaning and Maintenance	207	1%	4	36.60	\$8.55
Personal Care and Service	249	2%	9	38.50	\$9.53
Sales and Related	995	6%	8	40.50	\$14.98
Office and Administrative Support	2,073	13%	10	38.80	\$11.58
Farming, Fishing, and Forestry	954	6%	15	41.57	\$15.34
Construction and Extraction	746	5%	10	44.94	\$15.05
Installation, Maintenance, and Repair	829	5%	11	48.10	\$17.89
Production	995	6%	9	44.50	\$12.85
Transportation and Material Moving	580	4%	8	45.64	\$18.79
Miscellaneous	124	1%	9	32.00	\$10.00

### Potential Job Seekers

Potential job seekers (PJSs) may either be employed or unemployed and are interested in either taking an additional job or changing jobs if the circumstances are right. In the Jamestown area, 26 percent or approximately 7,956 people age 18 or over fall into this category. The five types of potential job seekers are listed in detail below.

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1. The unemployed:  
Those who are 18 and older, unemployed, and actively seeking work.
2. Individuals who plan to seek a job within the next year:  
Those who are not working, not seeking work, but plan to be looking for work within the year would be included in this category.
3. People who are working, but would be willing to change jobs:  
Using Bureau of Labor Statistics definitions, these people would be classified as employed. This group includes those individuals who are presently working who may or may not be actively seeking work, but would consider changing employers.
4. People who are currently working and are willing to take an additional job:  
Like the previous group, these individuals would be defined as employed. However, they would be willing to work an additional job and, as such, are part of the possible labor pool for different businesses.
5. Individuals who are discouraged and do not look for work:  
For the purpose of this study, the discouraged worker is defined as someone who is not working, is not actively seeking work nor planning to find a job within the next year, but would accept a job if it met their minimum acceptable wage requirements.

<b>Characteristics of the Potential Job Seekers</b>		
	<b>Number</b>	<b>Percentage of Population 18 Years of Age and over</b>
Potential Job Seekers <sup>4</sup>	7,956	26.0%
Actively Seeking Work	680	2.2%
Planning to Look Within the Year	476	1.6%
Interested in Changing Jobs but No Additional Jobs	4,352	14.2%
Interested in Both Changing Jobs and Additional Jobs	1,530	5.0%
Interested in Additional Jobs -but not changing jobs	884	2.9%
Those Discouraged From Looking	34	0.1%

The number of available workers an employer can expect in an area depends upon individual work experiences, the skills of applicants, the working conditions, wages, and benefits offered. The following table reports the current or most recent occupation of potential job seekers.

<sup>4</sup> Will not sum as PJSs can be in multiple categories.

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Occupational Group	Number		Percentage of Potential Job Seekers	
Managerial, Professional and Related Occupations	2,277		38.7%	
Managerial		617		10.5%
Business and Financial Operations		95		1.6%
Computer and Mathematical Science		95		1.6%
Architecture and Engineering		47		0.8%
Community and Social Services		237		4.0%
Education, Training and Library		522		8.9%
Healthcare Support		664		11.3%
Service Occupations	806		13.7%	
Protective Services		285		4.8%
Food Preparation and Serving		332		5.6%
Building and Grounds, Cleaning, Maintenance		95		1.6%
Personal Care		95		1.6%
Sales and Office Occupations	1,281		21.8%	
Sales		427		7.3%
Office and Administrative Support		854		14.5%
Farming and Related Occupations	190		3.2%	
Farming and Related Occupations		190		3.2%
Construction, Extraction, Installation and Repair	664		11.3%	
Construction and Extraction		332		5.6%
Installation and Repair		332		5.6%
Production, Transportation and Material Moving	664		11.3%	
Production		427		7.3%
Transportation and Material Moving		237		4.0%

The demographics of PJSs are different from those of the sample population. In general, the median age of a PJS is 43.9, making them younger than the rest of the sample. In addition, PJSs are more likely to be female (57.2 percent), have about the same level of education, have shorter tenure at their jobs (7.8 years), have slightly less years of management experience (12 years), and have approximately slightly less (9.8 years) experience with computers.

The typical PJS travels 12 minutes or 16 miles one-way to get to his or her job. This varies by occupation. PJSs in Management Occupations travel an average, of 22 minutes to get to work while PJSs work in Office and Administrative Support only travel 7 miles. The typical PJS would be willing to travel 36 minutes or 31 miles to go to work, but this also depends on

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their occupation. A PJS employed in Management Occupations is willing to travel 48 miles, while a PJS in Food Preparation is only willing to travel 20 miles.

On average, 25 percent of PJSs work shifts. Of those who do not currently work shifts, 24 percent would be willing to work shifts. Specifically, many PJSs (64 percent) say they would work shifts if it resulted in better pay. The most popular choice of shift for this group is day time (65 percent). Currently, 82 percent of PJSs work year round while 5 percent work seasonal jobs. Generally, in the Jamestown area, year round jobs are preferred (81 percent). On average, 67 percent of PJSs are interested in flexible work schedules in which their work hours are arranged around their personal schedules.

As the following table shows, there are differences among occupational groups between those who are willing to take an additional job and those who are willing to change jobs. Notably, PJSs in Healthcare Support are most likely to be interested in either a new job or an additional job than PJSs in other occupations. Of those interested in full-time employment are currently working an average of 20.3 hours per week.

Occupational Group	Interested In New Job	Interested in Additional Job
Managerial, Professional and Related Occupations	3,076	1,109
Managerial	735	196
Business and Financial Operations	134	-- <sup>5</sup>
Computer and Mathematical Science	134	65
Architecture and Engineering	67	--
Community and Social Services	669	130
Education, Training and Library	669	326
Healthcare Support	669	391
Service Occupations	1,070	518
Protective Services	401	130
Food Preparation and Serving	468	65
Building and Grounds, Cleaning, Maintenance	67	130
Personal Care	134	215
Sales and Office Occupations	1,671	326
Sales	535	130
Office and Administrative Support	1,137	196
Farming and Related Occupations	134	125
Farming and Related Occupations	134	130
Construction, Extraction, Installation and Repair	936	125
Construction and Extraction	468	65

<sup>5</sup> Insufficient data sample

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Occupational Group	Interested In		Interested in	
	New Job		Additional Job	
Installation and Repair		468		65
Production, Transportation and Material Moving	869		187	
Production		602		65
Transportation and Material Moving		267		130
Military Specific	67		65	
Military Specific		67		65
Other Occupations not Classified Elsewhere	67		65	
Other Occupations not Classified Elsewhere		67		65

The reasons why PJSs would consider alternative employment vary. As shown in the following table, the most common reason to choose alternative employment is an increase in pay (54 percent). However, 14 percent would seek alternative employment for more career advancement opportunities.

Reason	Percentage
Increase in Pay	54%
Increase in benefits	10%
Improvement in working conditions	7%
More career advancement opportunities	14%
Feel you are underutilized	6%
Gain more job status/prestige	1%
Something else <sup>6</sup>	10%

The next table shows that currently employed PJSs would generally accept a lower wage to work at an additional job. Similarly, many of those who would consider changing jobs would also be willing to accept a lower wage. The previous table indicates that 54 percent of PJSs would consider taking a different job for an increase in pay, but 10 percent would consider different employment if it meant an increase in benefits. The most desirable benefit, to PJSs is healthcare – overwhelmingly desired by 75 percent of those responding—distantly followed by paid vacation (7 percent). And a retirement plan (6 percent).

<sup>6</sup> Of those who selected “Something else” the most common cited reasons dealt with variety of work experienced, quality of management and desire to reduce stress.

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<b>Current Occupation</b>	<b>Current Pay</b>	<b>Minimum Pay to Accept New Job</b>
Management	\$18.44	\$14.88
Business and Financial Operations	\$13.00	\$8.50
Computer and Mathematical Science	\$16.50	\$6.58
Architecture and Engineering	\$10.63	\$10.00
Education, Training, and Library	\$14.25	\$9.38
Healthcare Support	\$12.92	\$11.41
Protective Service	\$13.88	\$12.00
Food Preparation and Serving Related	\$7.48	\$7.71
Building and Grounds Cleaning and Maintenance	\$8.23	\$7.50
Personal Care and Service	\$7.25	\$6.25
Sales and Related	\$13.09	\$12.46
Office and Administrative Support	\$11.73	\$10.48
Farming, Fishing, and Forestry	\$23.33	\$9.38
Construction and Extraction	\$16.44	\$13.95
Installation, Maintenance, and Repair	\$13.88	\$14.21
Production	\$13.67	\$10.98
Transportation and Material Moving	\$11.54	\$11.73
Average	\$13.55	\$11.25

Approximately 96 percent of PJSs in the area have at least a high school education, and 34 percent have a college degree. Among the PJSs, 58 percent have some management experience. The median length of time for this experience is 12 years.

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Education Level	Percent Attainment
Less than High School	2.7%
High School	29.1%
Some College	25.3%
Vo-tech Graduate	10.4%
College and Advanced Degree	32.4%

A majority of PJS respondents have experience using computers (81 percent), and 73 percent report experience using office suite productivity software. However, there were differences in levels of proficiency with different types of applications. Many respondents (70 percent) have high levels of proficiency<sup>7</sup> with word processing, but fewer are proficient at databases (38 percent).

Technical Skill	Not Skilled	Some Skills	Average	Above Average	Very Skilled	No Answer
Word Processing	2%	11%	32%	27%	28%	0%
Spreadsheets	13%	19%	35%	25%	8%	0%
Databases	15%	22%	38%	18%	6%	0%
Desktop Publishing	29%	20%	26%	15%	9%	0%

Nine percent or the equivalent of 559 of PJSs indicated they have specialized computer technology training. They identified their level of proficiency as follows:

Technical Skill	Not Skilled	Some Skills	Average	Above Average	Very Skilled	No Answer
Installing Computer Hardware	8%	8%	38%	38%	8%	0%
Writing Computer Program	69%	23%	8%	0%	0%	0%
HTML Programming	54%	23%	23%	0%	0%	0%

Although PJSs in the Jamestown area have impressive education and skill levels, there is still the acknowledgement by the group that more training may be necessary in certain professions. There are, however, some differences in the type of training these people would be willing to consider. As shown in the table below, the industry that PJSs were most

<sup>7</sup> High levels of skill is interpreted as meaning that the respondent selected either 4 or 5 on a 5 point scale with the higher number indicating a higher level of skill.

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interested in receiving training in Computer related fields (67 percent) while the industry with the least amount of interest is Engineering (34 percent).

Industry	Percent Interested
Information Computer Technology	67%
Business Services	58%
Production	47%
Healthcare Service Fields	47%
Engineering Fields	34%
Construction Trades	37%

Respondents were asked “what type of training would they be most likely to consider, such as 2 – 4 years of training including apprenticeships, associate or bachelor’s degrees, licenses and/or certification.” Overall, the most desirable type of training was “on-the-job” according to 67 percent of PJSs.

Training Desired	Percent Interested
On-the-job	67%
Eighteen months or less of training	19%
Nineteen to twenty three months of Training	5%
Two to four years of training	4%
Over four years of training	3%
Did not know / Refused	2%

Many PJSs have received Job Skills training in the past three years. Forty-seven percent indicated they have received some Job Skill training. The most common training received was Technical training followed by Safety training. The majority of these individuals are PJS who currently hold jobs but are interested in a new job or an additional job.

Job Skills Training	
Basic Skills	7%
Product Sales	14%
Interpersonal Skills	18%
Thinking and Organizing	21%
Quality Improvement	20%
Technical Training	29%
Safety Training	23%
Did not know /Refused	6%

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### **Discouraged Workers<sup>8</sup>**

In the Jamestown area there are approximately 34 individuals who are categorized as discouraged workers. The typical discouraged worker in this area has been out of the labor force for one year. In general, these workers are older than the average PJSs, with a median age of over 50 years of age. These individuals tend to be fairly well educated with most holding at least a high school diploma and about 25 percent holding a college degree. Discouraged workers are not in the labor force for a number of reasons. The most common reasons a person may be a discouraged worker are childcare, care for ill or disabled adult members of the family, or lack of interest in work.

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<sup>8</sup> The Discouraged Worker sample size for the City of Jamestown is too small to provide a demographic description.

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### **How the Study was Done**

The Workforce Development Division of the Department of Commerce selected the Social Science Research Institute (SSRI) to conduct Labor Availability and Underemployment Studies for several North Dakota communities, including designated counties in Minnesota and South Dakota. The goal of the studies are to provide the “core” data elements which have been identified as being needed to support businesses attraction, expansion and retention by a workgroup consisting of representatives from local development organizations, Job Service North Dakota, and the Department of Commerce.

SSRI uses a proven research methodology that has been adopted by the Bureau of Labor Statistics which establishes standards for collection of the core data. The following is a detailed description of SSRI’s research methodology utilized in these studies.

### **Methodology**

**Target Population.** The target population was defined as adults 18 years of age or older who had the most recent birthday residing in telephone households in the selected labor market county areas.

**Target Labor Market Areas.** As defined by the Department of Commerce, the 2006 study included 40 North Dakota counties, 8 Minnesota counties and 4 South Dakota counties.

**Target Labor Market County Area Sample Sizes.** County sample sizes provide accuracy at plus or minus five percent<sup>9</sup> with a 90 percent confidence level. The samples are distributed in proportion to the total adult population age 18 or older in each of the target labor market county areas.

**Field Period.** The survey was pre-tested January 3 and 4 and the data were collected February 1 through June 21, 2006.

**Sample Design.** Information about how survey samples are developed is important in assessing the validity and reliability of the results of the survey. While a fully random design is the most desirable approach in developing a representative sample of the population, this approach often results in under-sampling demographic groups with low rates of telephone ownership. These groups most often include young adults, minorities and individuals with low education and income. Increasingly, researchers use stratified random designs to guard against under-sampling. To determine whether a representative sample was obtained, it is helpful to calculate the response rate for the sample as a whole as well as to examine how closely the sample matches the known demographic characteristics of the population. If substantial differences are detected, post-stratification weights can be applied during analysis to ensure that the results of the survey can be generalized to the larger population.

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<sup>9</sup> This means that one can be 90 percent confident that the mean response for any question in the survey will not vary any more than 5.0% in either direction from the actual mean for that response if all persons age 18 or older in the target county area were surveyed.

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To obtain a representative sample for the labor market survey, random selection of households and random selection of respondents within households by county were used during the data collection process. The survey of adults (18 or older) performed by SSRI was conducted by telephone. A random sample of 10-digit telephone numbers were generated for each county labor market area utilizing Genesys Sampling Systems Random Digit Dialing (RDD) in-house software. The list from which the numbers were drawn included only selected North Dakota, Minnesota and South Dakota area codes and telephone banks (that is, blocks of 1,000 consecutive numbers) that had been determined to contain a threshold number of active residential numbers.

Overall, SSRI called 11,546 numbers in the selected labor market counties to determine whether it was a working residential number in contrast to a nonworking number, a commercial/business line, a cell phone, data or fax line, or a non-primary household telephone. SSRI staff classified 2,591 of these numbers as working residential numbers eligible for interview and successfully interviewed 1,493 of these households. Throughout the study, completed interviews were monitored to determine whether the county samples matched population estimates in terms of gender and the age distribution of North Dakota and Minnesota residents' age 18 or older.

**Response Rates.** Survey professionals in general have found that response rates for telephone surveys have declined in recent years. These declines are related to the proliferation of fax machines, answering machines, blocking devices and other telecommunications technology that make it more difficult to identify and recruit eligible individuals. These declines are also related to the amount of political polling and market research that is now done by telephone and to the higher likelihood that eligible households will refuse to participate in any surveys. The consequence has been that response rates for telephone surveys are now calculated in several different ways although all of these approaches involve dividing the number of respondents by the number of contacts believed to be eligible. Differences in response rates result from different ways of calculating the denominator, i.e. the number of individuals eligible to respond. The most liberal approach is called the Upper Bound method and takes into account only those individuals who refuse to participate or who terminate an interview. This approach is used by the federal government because of controversies about the eligibility of numbers that could not be reached. The Upper Bound method of calculating the response rate for the overall project yields an average rate of 59%. The most conservative approach is the method adopted by the Council of American Survey Research Organizations (CASRO). The CASRO method uses the known status of portions of the sample that are contacted to impute characteristics of portions of the sample that were not reached. The CASRO method of calculating the response rates for the overall project yields an average completion rate of 68.5% if over-quota eligible are assumed to qualify as "good numbers." Table 1 shows the dispositions and the Upper Bound and CASRO response rates by county for the sample numbers classified.

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### County Area Labor Market Sample Dispositions<sup>10</sup>

County	Dates	C	NW	NP	B	R	T	HCNI	U-Bound	CASRO	Total
<b>Jamestown/Stutsman</b>											
Stutsman	5-1 to 5-4	238	687	27	1	79	11	105	72.6%	55.0%	1,148
Kidder	2-24 to 3-2	246	2,468	31	4	65	18	56	74.8%	63.9%	2,888
Foster	4-23 to 4-26	246	1,431	97	6	105	19	79	66.5%	54.8%	1,983
Barnes	4-19 to 4-24	265	1,430	101	9	59	22	102	76.6%	59.2%	1,988
LaMoure	2-6 to 2-10	256	1,544	53	6	95	45	56	64.6%	56.6%	2,055
Logan	5-2 to 5-4	242	1,017	38	5	109	4	69	68.2%	57.1%	1,484
<b>Totals</b>	Succ. Interviewed	1,493	8,577	347	31	512	119	467	70.3%	57.6%	11,546

<b>C</b>	Completed Interviews	<b>R</b>	Refused
<b>NW</b>	Non-working	<b>T</b>	Terminated Interview
<b>NP</b>	Non-Primary Household	<b>HCNI</b>	Household Contacted Not Interviewed
<b>B</b>	Language Barrier		

**Interviewing Procedures.** Telephone interviews were conducted from SSRI and the Department of Sociology at the University of North Dakota by trained interviewers with supervision and random monitoring for technique and adherence to established procedures. Production interviewing began after a pre-test of the survey in a series of actual telephone interviews. The majority of interviews were conducted on weekday and Sunday evenings. Throughout the study, completed interviews were monitored to determine whether the samples match U.S. Census 2000 North Dakota County population figures in terms of gender and the age distribution of respondents age 18 or older. Efforts to complete interviews with selected respondents were extensive. The number of callbacks to complete an interview with an eligible respondent ranged from 1 to 12.

**Computerized Assisted Telephone Interviewing (CATI).** To ease telephone interviewing, all telephone interviews were conducted with a computer assisted telephone interview (CATI) system. The SSRI version of CATI is implemented with microcomputers, which display survey questions on interview terminals and collect telephone interview data as the interview is being conducted. For CATI telephone interviews, all coding of numeric and categorical responses is done by microcomputer software, with error checking to catch out-of-range values at the time of the interview.

The use of CATI increases both the speed of data collection and the accuracy of data collected. All CATI questionnaires are tested prior to conducting telephone interviews to ensure accurate encoding of survey responses and accurate branching and skip patterns in the questionnaire. The system prompts interviewers for a valid response to every question in the survey. For numeric questions, legitimate ranges of responses are entered into the computer so that the computer can detect out-of-range values. When these are detected during the interview, the computer warns the interviewer that the entered value is out of

<sup>10</sup> No Griggs County respondents were randomly selected for this survey.

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range and prompts the interviewer for a legitimate response.

Data validation at the data management step consists of accounting for all cases in the survey, and ensuring that data record exists for every completed interview in the sample. Data records were passed through a SPSS program to ensure that all data fields are readable, and that all fields are reading the format specified for that variable. A separate data-cleaning step will also be reviewed and spell-checked for readability. The final validation step consists of checking the consistency of respondents' answers to objective and verifiable survey questions. All survey data will be backed up and stored on micro-computer diskettes for immediate access and corrections, should data corrections be needed.