

# Ellis County Labor Basin Labor Availability Analysis – 2018

Including a comparison to data from the  
2004 and 2012 Labor Availability Analyses

Barton • Ellis • Graham • Ness • Osborne •  
Rooks • Rush • Russell • Trego Counties



Prepared For

**Ellis County Coalition for Economic Development**





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# Ellis County Labor Basin Labor Availability Analysis – 2018

Including a comparison to data from the  
2004 and 2012 Labor Availability Analyses

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Ellis County Coalition for Economic Development

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## Executive Summary

The Ellis County Labor Basin includes Barton, Ellis, Graham, Ness, Osborne, Rooks, Rush, Russell and Trego Counties in Kansas. The purpose of this report is to assess the “Available Labor Pool” in this labor basin. The “Available Labor Pool” represents those who are looking for employment or are interested in new jobs for the right employment opportunities.

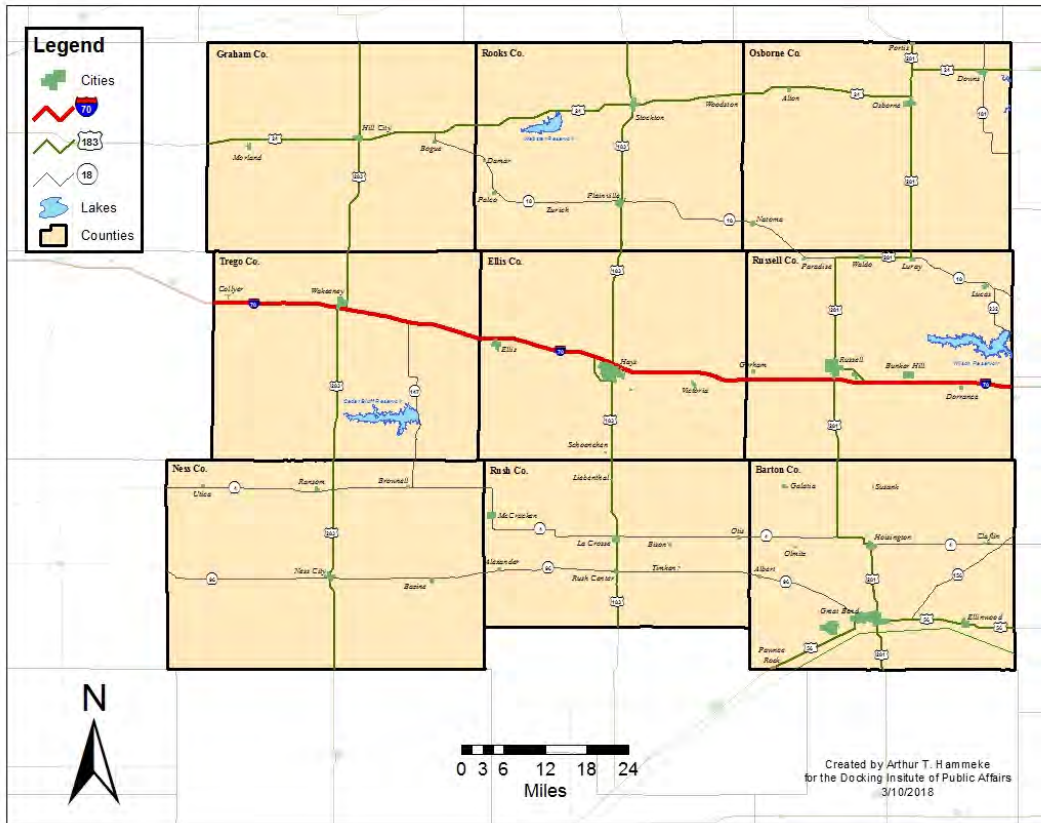
The Docking Institute’s independent analysis of this labor basin shows that:

- The population of the Ellis County Labor Basin is 82,830. The Civilian Labor Force is 45,367. The Available Labor Pool contains 25,697 individuals.
- Of the *non-working* members of the Available Labor Pool, an estimated 1,337 (5.2%) are currently looking for work and 3,790 (14.7%) are interested in working for the right opportunities. Of the *working* members of the Available Labor Pool, 3,622 (14.1%) are currently looking for work, while 16,948 (66.0%) are interested in different jobs given the right opportunities.
- More than four-fifths (82.8%) of the Available Labor Pool have at least some college experience and almost all (99.2%) have at least a high school diploma. The average age for members of the Pool is about 40 years old, and women make up more than half (56.2%) of the Pool.
- Almost 18% of the Available Labor Pool are currently employed as general laborers, while an additional 5.1% work in government services or technical/high skill blue-collar occupations. About 40% of the Pool work in service sector jobs, while 17.1% work in professional white-collar jobs. A fifth (20%) are not currently working.
- More than three-quarters (77.8%) of the Available Labor Pool are “willing to work outside of their primary field of employment for a new or different employment opportunity.”
- More than a quarter (29%) of the members of the Available Labor Pool will commute up to 45 minutes, one-way, for an employment opportunity, while 72% will commute up to 30 minutes for employment.
- The four most important desired benefits, in order, are good salary or hourly wage, on-the-job training (OJT) or paid training, good health benefits, and good retirement benefits.
- An estimated 3,836 members (15%) of the Available Labor Pool are interested in a new job at \$10 an hour, 10,134 (39%) are interested at \$15 an hour, and 15,579 (61%) are interested at \$20 an hour.
- Of the 20,570 members in the subset of *employed members* of the Available Labor Pool, 5,816 (28%) consider themselves underemployed.
- About a 4,558 (9.1%) of all survey respondents (Available Labor Pool members and non-Pool respondents) report that they have childcare services for their children. Another 895 (1.8%) report that they need childcare services but currently lack services.

# The Ellis County Labor Basin

The Ellis County Labor Basin includes nine counties in northwest Kansas (see Map 1 below). The criterion used to include a county in this labor basin is whether it contains communities from which, it can be reasonably assumed, individuals may commute to the center of the labor basin (Hays) for an employment opportunity. In the case of the Ellis County Labor Basin, it is reasonable that individuals may commute from (and within) the map because these counties contain 1) communities with adequate transportation to the Hays area and 2) communities that are within a 45-minute commute to the center of the labor basin.

Map 1: Ellis County Labor Basin



The Ellis County Labor Basin has a total population of approximately 82,830, and a Civilian Labor Force of 45,367. The total number of employed is 43,532 and the average unemployment rate was about 4.04% at the time of this study.

The Docking Institute's analysis suggests that the Ellis County Labor Basin contains an Available Labor Pool of 25,697 individuals.

This report describes characteristics of the Available Labor Pool for the Ellis County Labor Basin. This report also provides information on three subsets of the Available Labor Pool.



Please see the Methods section (page 43) for more information about the Institute's Available Labor Pool Analysis methodology and the survey research methods used for this study. The glossary (page 45) provides definitions of terms used in this report.

### ***Components of the Report***

The majority of this report assesses the characteristics of the Available Labor Pool in the Ellis County Labor Basin by answering the following questions:

- What portions of the labor force – employed, unemployed, homemakers, students, retired and disabled – are interested in a new employment opportunity?
- What types of jobs have workers and potential workers had in the past?
- What skills and education levels do those interested in new employment have?
- What certificates and technical school experiences do workers and potential workers have?
- What are the job satisfaction levels of those interested in new employment?
- What types of considerations (pay, benefits, and commute time) shape their decision-making?
- What are some of the characteristics of the general laborers, high skill blue-collar workers, service and support workers, and professional white-collar workers?
- What percentage is willing to change fields of employment?
- What work shifts are they willing to work?

### ***Three Subsets/Groups of the Available Labor Pool***

This report also provides information on three subsets/groups of the Available Labor Pool:

- Those living “within the necessary commute time.” Necessary commute time is defined as a commute time stated by the respondent that is equal to or greater than the commute time necessary for the respondent to travel from his or her ZIP code of residence to the ZIP code at the center of the labor basin. Information includes the following:
  - Desired wages for a new job
  - Wages by employment sector
  - Locations of subset members by ZIP code areas
- Those that consider themselves as “underemployed.” Information includes the following:
  - Reasons for underemployment
  - Education levels
  - Current employment sectors and categories
  - Location of subset members by ZIP code areas
  - If seeking new employment addresses underemployment status
- Those that currently use childcare services and those that need childcare services. Information includes the following:
  - The number of survey respondents (Available Labor Pool members and non-Pool respondents) currently using childcare services
  - The number of survey respondents needing childcare services
  - The monthly fees paid by those currently using childcare services, and the monthly fees deemed affordable by those currently needing childcare services
  - If a lack of childcare services has hindered a respondent's ability to seek new employment
  - The types of jobs that a respondent might take if childcare services were available
  - Reasons for not using childcare
  - Time periods thought the day that childcare services are used and needed

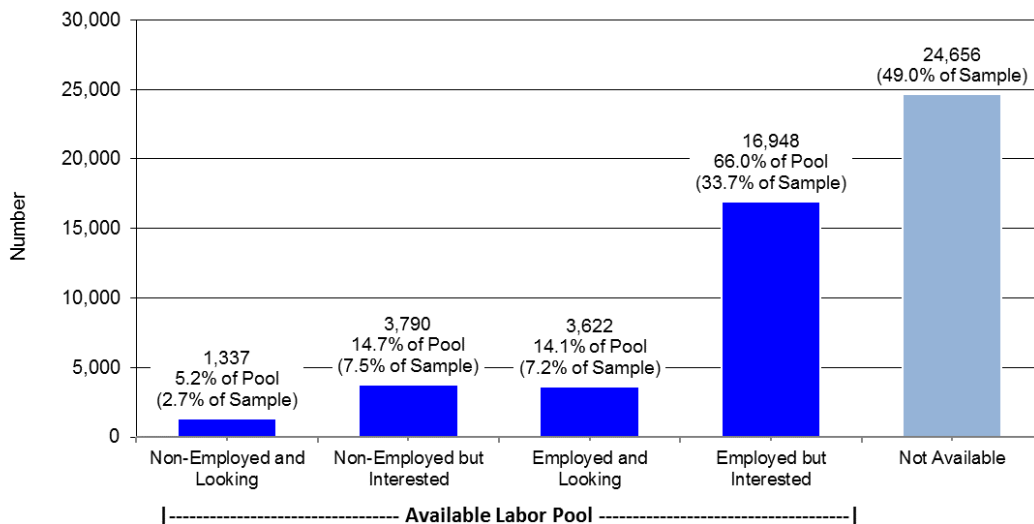
## The Ellis County Labor Basin’s Available Labor Pool

The Available Labor Pool is composed of workers categorized as either 1) currently not working *and* looking for employment, 2) not working *but* interested in employment, 3) currently working *and* looking for other employment, and 4) currently employed *but* interested in different employment for the right opportunities.

Figure 1 shows the extrapolated number of area adult residents that are members of the Available Labor Pool, as well as those that are not interested in a new or different job. The far right column shows that 49% of respondents are not available for a new or different job. The remaining 51% are members of the Available Labor Pool<sup>1</sup>.

It is estimated that 1,337 (5.2%) members of the Available Labor Pool are non-employed<sup>2</sup> *and* looking for employment, while 3,790 (14.7%) are non-employed *but* interested in a job for the right opportunities. In addition, 3,622 (14.1%) members of the Pool are employed *and* currently looking for different employment, while 16,948 (66.0%) are employed *but* interested in new employment for the right opportunities.

**Figure 1: The Available Labor Pool for the Ellis County Labor Basin**



The Available Labor Pool is composed of workers categorized as either 1) currently not employed and looking for full-time employment, 2) currently not employed *but* interested in full-time employment, 3) currently employed *and* looking for full-time employment, 4) currently employed *but* interested in other full-time employment for the *right opportunities*.

<sup>1</sup> The figure shows percentages of the Available Labor Pool as well as the entire sample (shown in parentheses). For example, 5.2% of the Available Labor Pool is non-employed and looking for work, while this percentage is 2.7% for the entire sample.

<sup>2</sup> The terms “non-employed,” “not employed,” and “non-working” refer to officially unemployed members of the Civilian Labor Force *and* any non-employed/non-working full-time students, homemakers, retirees, and disabled individuals that indicate they are available for employment but that might not be officially unemployed.

Table 1 shows the gender, age, and education levels of the 25,697-member Available Labor Pool. More than half (56.2%) of the Pool are women, and the average age is about 40 years old. Almost all (99.2%) have *at least* a high school diploma, more than four-fifths (82.8%) have *at least* some college experience, and more than two-fifths (46.7%) have *at least* a bachelor's degree. Less than a fifth (16.3%) speak Spanish, and most (78.8%) speak "only a little."

**Table 1: Age, Gender, and Education Levels of Available Labor Pool**

<b>Age Information</b>		Age in 2017	
Range		18 to 65	
Mean Average		40	
Median Average		41	
<b>Gender</b>		Number	Percent
Female		14,447	56.2
Male		11,250	43.8
<b>Total</b>		<b>25,697</b>	<b>100</b>
<b>Highest Level of Education Achieved</b>			Cumulative Percent
Doctoral Degree		526	2.0
Masters Degree		3,711	14.4
Bachelors Degree		7,750	30.2
Associates Degree		5,154	20.1
Some College (including current students)		4,129	16.1
High School Diploma		4,231	16.5
Less than HS Diploma		196	0.8
<b>Total</b>		<b>25,697</b>	<b>100</b>
<b>"Do you speak Spanish?"</b>		Number	Percent
"Yes"		4,192	16.3
<i>Speak Very Well</i>		386	9.2
<i>Speak Fairly Well</i>		502	12.0
<i>Speak Only a Little</i>		3,303	78.8
			100

} These percentages represent portions of 16.3%

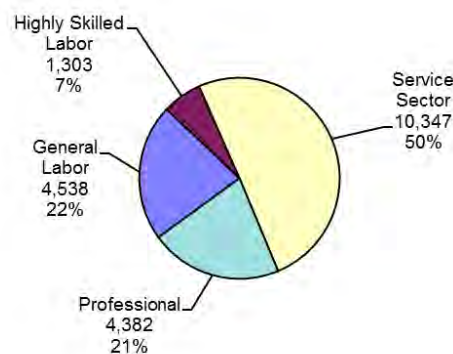
Table 2 shows the various occupational categories of the 25,697-member Available Labor Pool. General labor occupations represent 17.7% of the entire Available Labor Pool, while highly-skilled, blue-collar jobs make up 5.1%. Traditional service-related occupations represent 40.3% of the Available Labor Pool, while professional occupations represent 17.1%. Non-employed members of the Pool represent 20.0% of the total.

**Table 2: Major Occupational Categories of Available Labor**

	Number	Percent	Years at Job	
			Mean	Median
General Labor/Delivery	3,000	11.7	12.6	9.5
Manufacturing/Maintenance/Trucking	1,538	6.0	8.9	7.0
<b>Total General Labor</b>	<b>4,538</b>	<b>17.7</b>	<b>10.8</b>	<b>8.3</b>
Mechanic/Welder/Comp Tech	1,036	4.0	8.4	6.0
Crew Management/Protection Services	267	1.0	12.4	10.4
<b>Total Highly-Skilled Labor</b>	<b>1,303</b>	<b>5.1</b>	<b>10.4</b>	<b>8.2</b>
Customer Service	1,307	5.1	7.0	3.0
Clerical	1,303	5.1	16.7	11.7
Office or Dept Manager	2,226	8.7	12.4	9.1
Health Aid/Nurse	3,176	12.4	8.9	5.0
Education Aid/Teacher	2,334	9.1	10.9	10.5
<b>Total Service Sector</b>	<b>10,347</b>	<b>40.3</b>	<b>11.2</b>	<b>7.9</b>
Exec Management	1,497	5.8	10.0	9.0
Accounting/Engineering	1,624	6.3	8.8	7.6
Doctor/Professor/Attorney	932	3.6	7.4	6.0
Writer/Artist/Musician	329	1.3	18.19	14.5
<b>Total Professional Sector</b>	<b>4,382</b>	<b>17.1</b>	<b>11.1</b>	<b>9.3</b>
Homemaker/Student/Unemployed	1,751	6.8	n/a	n/a
Retired/Disabled	3,376	13.1	n/a	n/a
<b>Total Non-Employed</b>	<b>5,127</b>	<b>20.0</b>		
<b>Total</b>	<b>25,697</b>	<b>100</b>		

Figure 2 shows the occupational sectors of the *employed members* of the Available Labor Pool only. The *percentages* shown in Table 2 differ from those presented in Figure 2 because the figure excludes non-employed Available Labor Pool members.

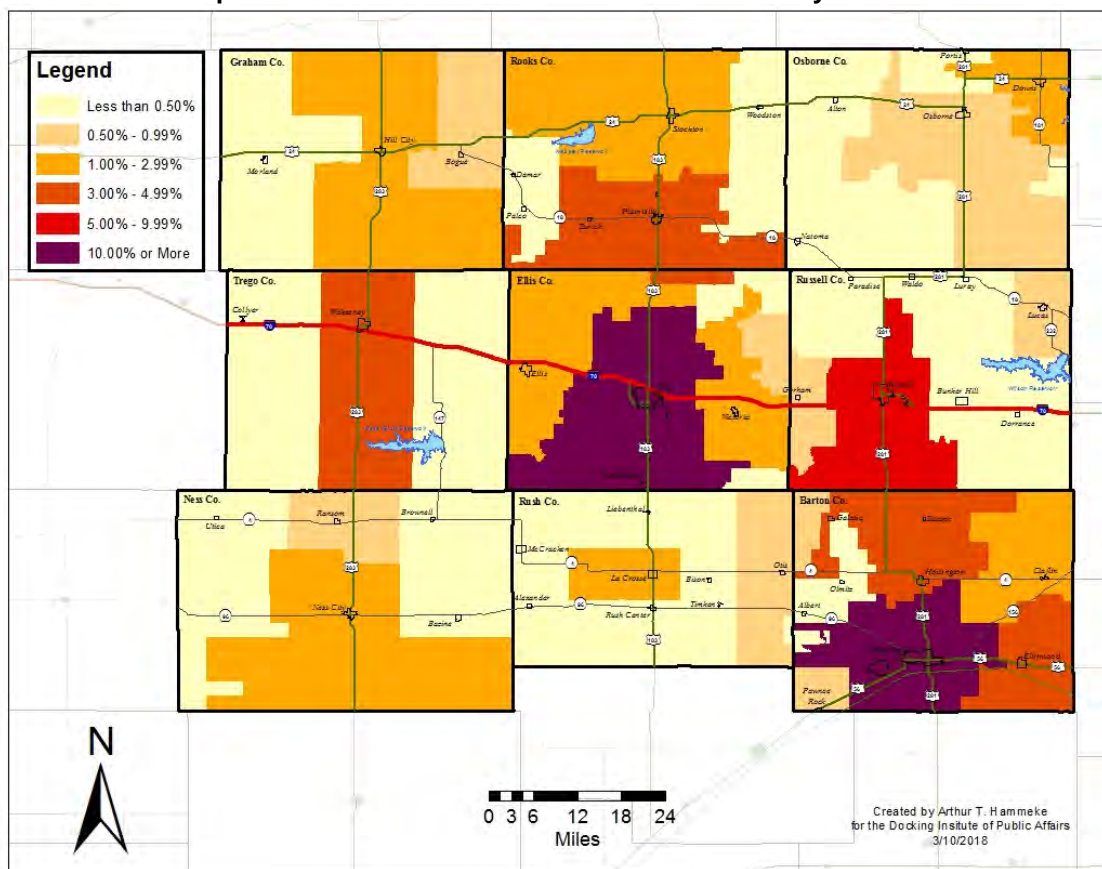
**Figure 2: Occupational Sectors of Available Labor (Employed Only)**



Map 2 shows how each ZIP code area compares to all other ZIP code areas in terms of the percent of total available labor in the Ellis County Labor Basin. The map shows:

- Ten percent or more of the entire labor basin's Available Labor Pool is located in ZIP code areas within Ellis and Barton Counties. (See purple area in the map.)
- Between 5% and 9.99% of the entire labor basin's Available Labor Pool is located in ZIP code areas within Russell County. (See red area in the map.)
- ZIP code areas in Barton, Rooks, and Trego Counties contain 3% to 4.99% of the basin's Available Labor Pool. (See dark orange areas in the map.)
- ZIP code areas in Barton, Ellis, Graham, Ness, Osborne, and Rush Counties contain 1% to 2.99% of the basin's Available Labor Pool. (See light orange areas in the map.)
- ZIP codes areas across the basin contain less than 1% of the Available Labor Pool. (See light orange and light yellow areas on the map.)

**Map 2: Percent of Total Available Labor in Basin by ZIP Code**



## Current Skills and Work Experience

To gain perspective on the types of workers that are available for new and/or different employment in the Ellis County Labor Basin, survey respondents were asked questions assessing work skills and previous work experience.

Table 3 shows the number of workers currently employed in various job categories, as well as the number of workers and non-workers that have previous work or training experience in those same job categories. The table also shows the sum of working Available Labor Pool members currently employed in a job category *plus* those who indicate previous training or experience in that particular field.

For example, 1,894 members of the Pool are currently employed as general laborers, construction, cleaners, and similar positions. An additional 1,305 Pool members (employed and currently non-employed) had previous employment experience or training in one of those jobs, for a total of 3,199 individuals.

**Table 3: Current Work Experience plus Previous Work or Training Experience**

	Current Employment* Number +	Previous Work/Training Number =	Current plus Previous Work or Training** Number***
<b>Working with Hands</b>			
Construction, Cleaning, Manual Labor	1,894	1,305	3,199
Farm or Ranch Labor	483	428	911
Manufacturing and Assembly	281	617	898
Maintenance	975	541	1,516
Driving (Delivery, Bus, Postal)	624	151	775
Truck Driving/HEO	282	537	819
Skilled Labor	390	601	991
Crew Management	78	1,067	1,145
<b>Working with People</b>			
General Customer Service	1,307	2,740	4,047
Office Management	2,226	1,503	3,729
Governmental Services	189	365	554
Executive Management	1,497	517	2,014
Advanced Social Services	78	278	356
<b>Working with Numbers</b>			
Clerical	1,303	732	2,035
Accounting/Finance/Banking	437	0	437
Researcher/Analyst	434	305	739
<b>Working with Technology</b>			
IT and Other (Non-Med) Tech. Maint.	646	132	777
Software Dev./Comp. Prog.	278	73	352
Engineer/Designer	475	0	475
<b>Providing Health Services</b>			
Health Aid	1,904	1,151	3,055
Nurse	1,272	344	1,616
Advanced Medical Practitioner	241	6	246
<b>Providing Educational Services</b>			
Education Aid	957	632	1,590
Teacher/Trainer	1,377	648	2,025
Professor/Lecturer	614	293	907
<b>Creative Arts</b>			
Writer/Artist/Musician	329	375	703
<b>Total</b>	<b>20,570</b>	<b>15,339</b>	<b>35,909</b>

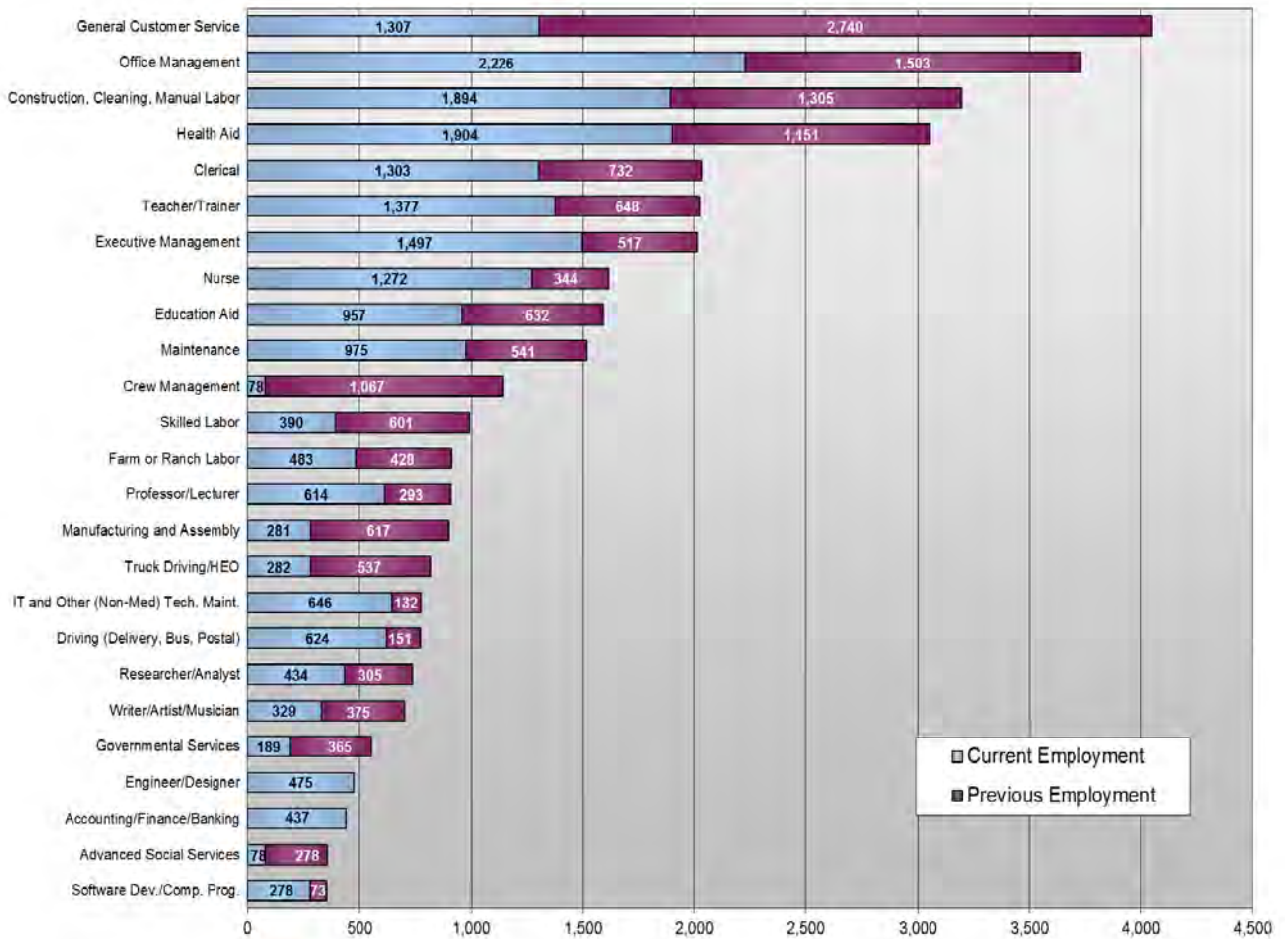
\* Retired, disabled, non-working students, homemakers are not included.

\*\* An individual member of the Pool is counted only once within each employment category. If an individual's previous job is the same as the current job, he or she is not counted in the Previous Job Category.

\*\*\* Totals do not sum precisely due to rounding.

Figure 3 shows the same information as that presented in Table 3, but in graphic format. Many Available Labor Pool members report current work experience or previous work/training as front desk clerks, retail sales positions, receptionists, and other jobs classified as “general customer service” workers. There are 1,307 working Pool members currently employed in this category and 2,740 previously employed/trained in this category, for a total of 4,047 individuals (total not shown in figure below).

**Figure 3: Current Work Experience plus Previous Work or Training Experience**



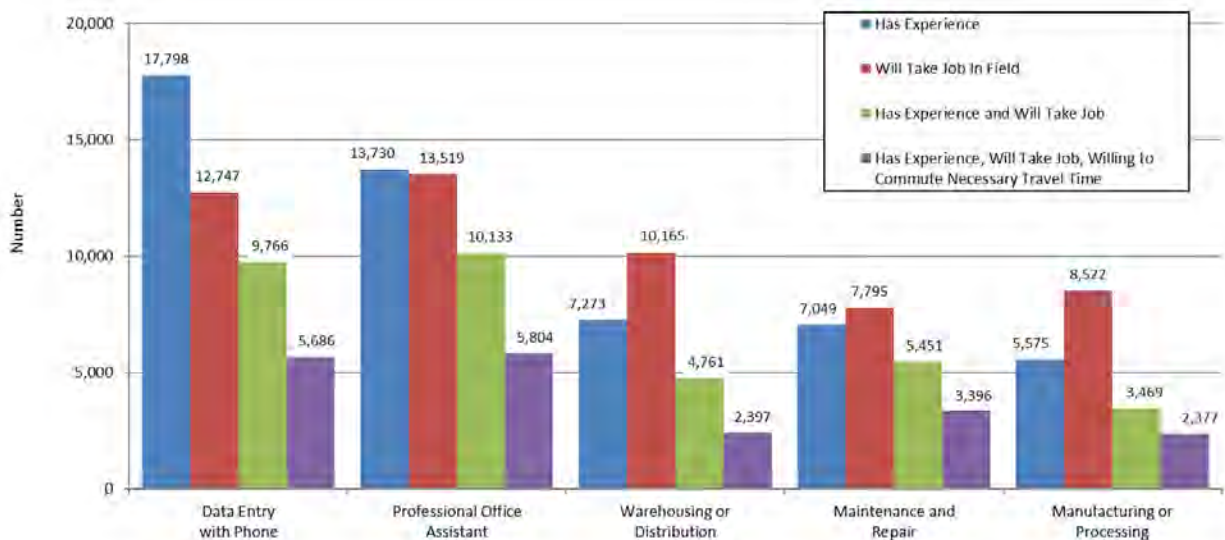
In addition to collecting data regarding the current employment status and previous work or training experience through a series of “open-ended” survey questions (the results of which are shown previously), respondents were asked about the five specific employment areas listed in Figure 4. Respondents were first asked if they had any training or work experience in a specific field and then if they would take a job in that field (regardless of their prior training or experience).<sup>3</sup>

The figure shows that an estimated 17,798 Pool members report any experience or training in data entry with telephone operation (blue column), while fewer (12,747 individuals) would consider employment in that field (red column). An estimated 13,730 members of the Pool have any experience or training as a professional office assistant (blue column), while slightly fewer members of the Pool (13,519 individuals) would take a job in that field (red column).

The figure also shows responses for training or experience working in warehousing or distribution, maintenance and repair, and manufacturing or processing.

The third column shows the estimated number that have any experience/training in a field **and** are willing to work in that field again (green column). The fourth column shows the estimated numbers that have any experience/training **and** are willing to take a job in that field **and** are within the necessary commute time (purple column). See page 23 for a definition of “necessary commute time.”

**Figure 4: Work Experience / Willing to Work in Field**



<sup>3</sup> Figure 4 differs substantially from Table 3 and Figure 3 (previous pages). For example, the “has experience” column above represents an extrapolated total of **all** Pool members answering “yes” to the question “do you have any experience or training in...” As such, Figure 4 provides a “50,000-foot view” of the skill sets of Pool members. Table 3 and Figure 3, on the other hand, provide extrapolated responses from Pool members (working in the first column, working and non-working in the second) about specific jobs – one current job and/or one previous job.

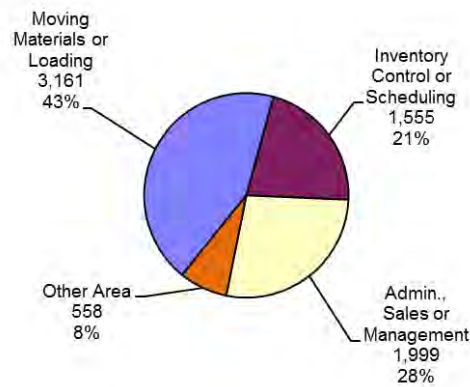


Survey respondents with training or experience in warehousing/ distribution or in manufacturing/processing were asked additional questions to assess the type of work they performed at those jobs.

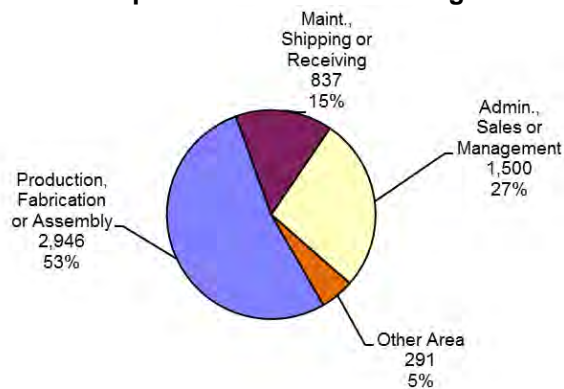
Figures 4a and 4b show the responses to those questions. The figures show that about two-fifths (43%) of those with warehousing experience worked in jobs involving moving materials or loading (see figure 4a).

Slightly more than half (53%) of those with manufacturing or processing experience worked in jobs involving production, fabrication, or assembly (see figure 4b).

**Figure 4a: Work Experience in Warehousing or Distribution**



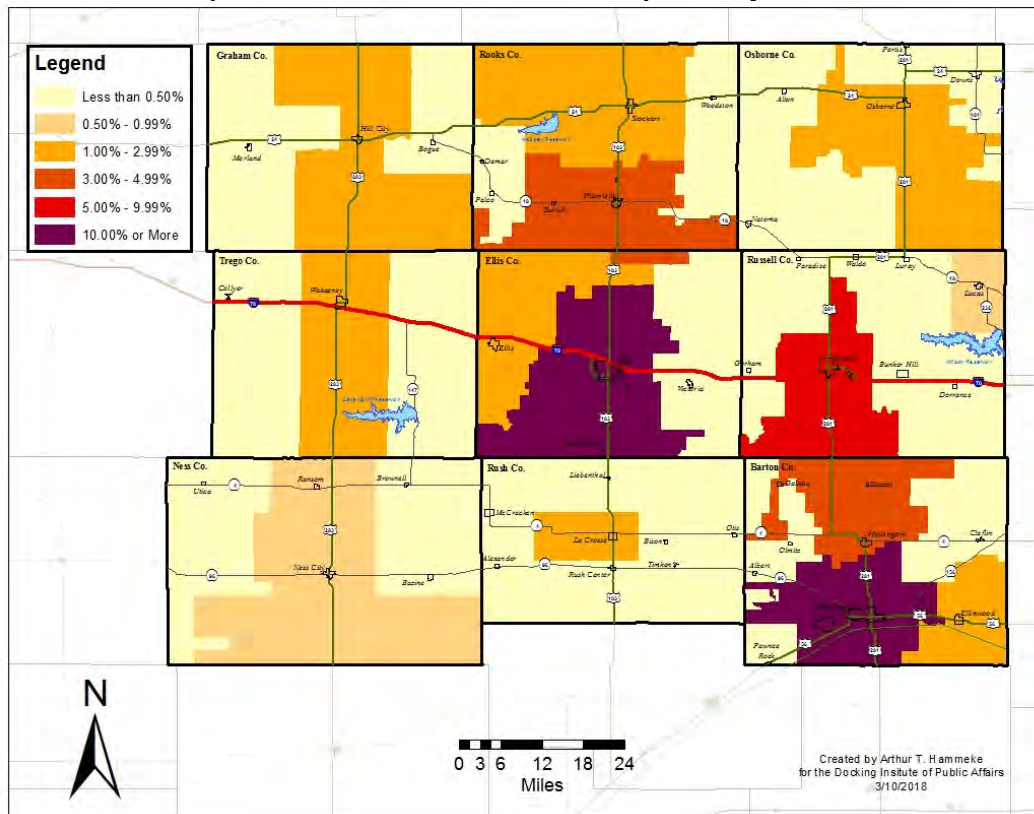
**Figure 4b: Work Experience in Manufacturing or Processing**



Working Available Labor Pool members were asked for the ZIP code of their workplaces. Map 3 shows the locations of workplaces employing Available Labor Pool members by ZIP code area. The map shows the following:

- Ten percent or more of the working members of the Available Labor Pool work in ZIP code areas in Ellis and Barton Counties. (See purple areas in the map.)
- Between 5% and 9.99% of the working members of the Pool work in ZIP codes areas in Russell County. (See red area in the map.)
- Workplaces located in ZIP code areas in Rooks County employ 3% to 4.99% of the basin’s working Pool members. (See dark orange areas in the map.)
- Workplaces located in ZIP code areas in Barton, Ellis, Graham, Osborne, Rooks, Rush, and Trego Counties employ 1% to 2.99% of the basin’s working Pool members. (See light orange areas in the map.)
- Finally, less than 1% of the Pool work for employers located in ZIP code areas in the rest of the labor basin. (See light orange and light yellow areas on the map.)

**Map 3: Percent of Pool Member Workplaces by ZIP Code**



## Educational Experience and Job Satisfaction

Table 1 (see page 5) shows that 82.8% of the Available Labor Pool report at least some college experience (with 66.7% holding associate's degrees at least and 46.7% having completed a bachelor's degree at least).

Respondents that have at least some college experience or are currently enrolled in a community college, college, or university were asked to provide their major area of study. Answers are grouped into the following categories:

**Social Sciences:** Sociology, Psychology, Anthropology, Politics, and Social Work.

**Biological Sciences and Health:** Biology, Agriculture, Nursing, Pre-med, and Pre-vet.

**Physical Sciences and Engineering:** Physics, Geology, Chemistry, and Engineering.

**Business and Economics:** Management, Accounting, Finance, Marketing, and Economics.

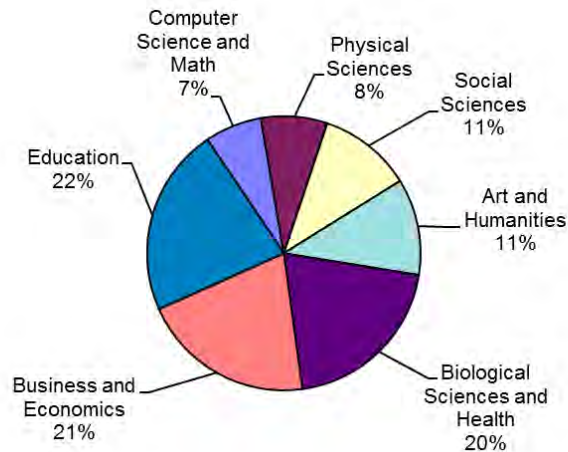
**Education:** Elementary and Secondary Teaching.

**Computer Science and Math:** Programming or Technology, Networking, Web Design, and Math.

**Arts and Humanities:** Art, Music, History, Philosophy, and Languages.

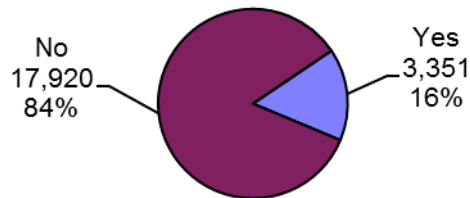
Figure 5 shows that Available Labor Pool members with at least some college experience indicate majors in education (22%), business and economics (21%), biological sciences and health (20%), arts and humanities (11%), social sciences (11%), physical sciences (8%), and computer science and math (7%).

**Figure 5: Undergraduate College Major**



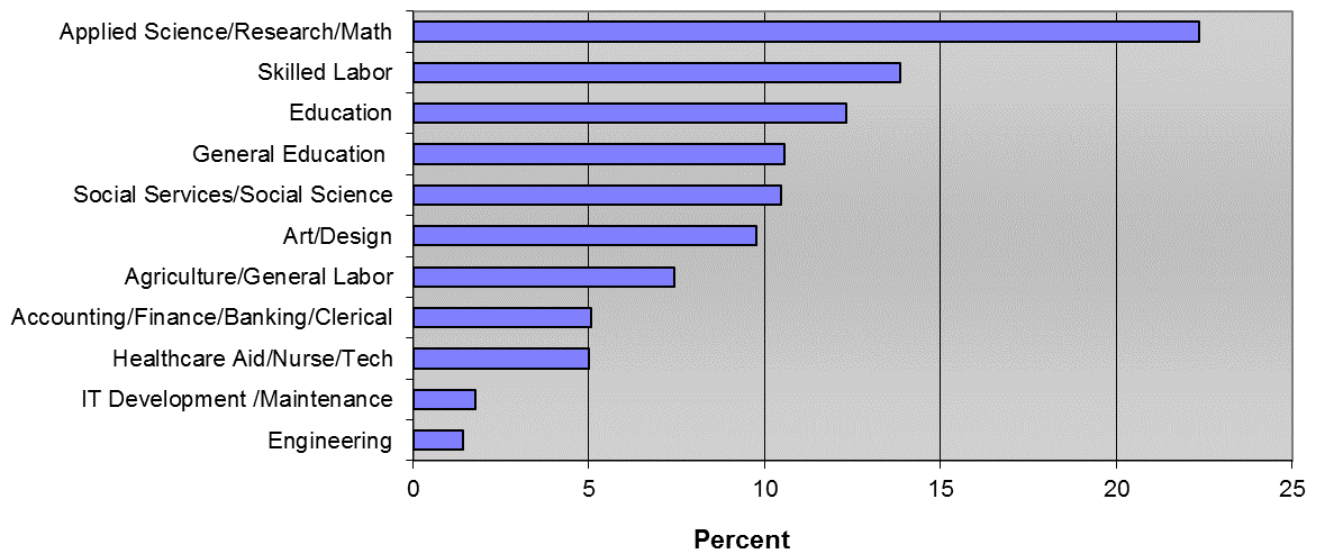
All respondents that have completed at least some college were also asked: “Are you attending a community college or technical school now, or have you received a community college or technical degree?” Figure 6 shows that 16% of the respondents hold a community college or technical degree or are working on one at the present time.

**Figure 6: Community College or Technical College Experience**



Respondents answering “yes” to the above question were asked for their area of study. Answer options are grouped into one of the options shown in Figure 6a. The figure shows that about 22% report studying applied science, research or math, about 14% report studying for a skilled labor occupation, and about 12% report studying education.

**Figure 6a: Community or Technical College Study Area**



All members of the Available Labor Pool were asked if they have completed a certificate in a technical field. Figure 7 shows that 33% of the Pool members report completing a technical certificate of some kind.

**Figure 7: Completed a Technical Certificate**

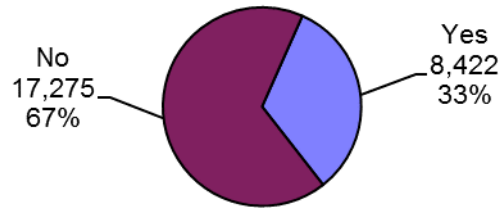


Figure 8 and Table 4 show responses to questions regarding *job satisfaction*. The figure and table report responses from *working survey respondents* only. The figure shows that about 40% of the working Pool respondents “strongly agree” with a statement suggesting that they “enjoy the things I do,” while 56% “agree” with that statement. In all, about 96% at least “agree” that they enjoy their work.

In general, Pool members are generally satisfied with their work and their work environments and seem to be simply looking for and/or are available for new employment. About 52%, however, at least disagree that they have a “fair chance at promotion” to another position.

**Figure 8: Job Satisfaction among Available Labor Pool Workers**

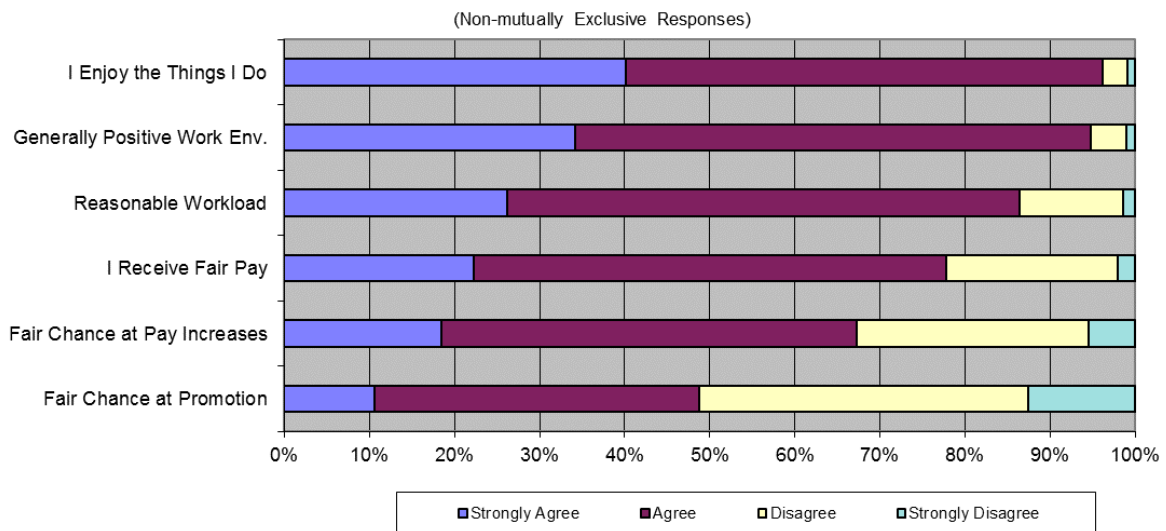


Table 4 (next page) shows combined strongly agree and agree responses of working Pool members and working non-Pool respondents. The table shows that 96% of the working Pool members at least agree with the statement regarding “enjoying the things I do,” while a higher percentage (99.8%) of the working non-Pool respondents suggest the same.

The statement with the largest percentages of disparity between working Pool members and working non-Pool respondents is with regard to “fair chance at pay increases.” Almost 81% of the working non-Pool respondents at least agree with this statement, whereas 13.3% fewer (67.3%) of the working Pool members feel the same way.

**Table 4: Job Satisfaction Among Workers: Pool and Non-Pool Members**

	<b>Strongly and Agree</b>		<i>Difference (Pool-NonPool)</i>
	Pool Only Percent	NonPool Only* Percent	
I Enjoy the Things I Do	96.0	99.8	-3.8
Generally Positive Work Env.	94.9	99.3	-4.4
Reasonable Workload	86.4	90.3	-3.9
I Receive Fair Pay	77.8	86.9	-9.1
Fair Chance at Pay Increases	67.3	80.6	-13.3
Fair Chance at Promotion	48.8	54.9	-6.1

\*This column represents working non-Pool respondents.

## Considerations for Employment

An important consideration for many employers looking to locate or expand operations is whether workers are willing to pursue new employment opportunities. Some workers may be available for new employment but are unwilling to switch from their current job to a different type of position, for example. A large percentage of those unwilling to change their jobs might limit the types of employers that can enter the labor basin.

This does not seem to be the case for the Ellis County Labor Basin. Figure 9 shows that a clear majority of the Available Labor Pool (19,988 members or 77.8%) are willing to accept positions outside of their primary fields of employment.

**Figure 9: Considerations for Employment**

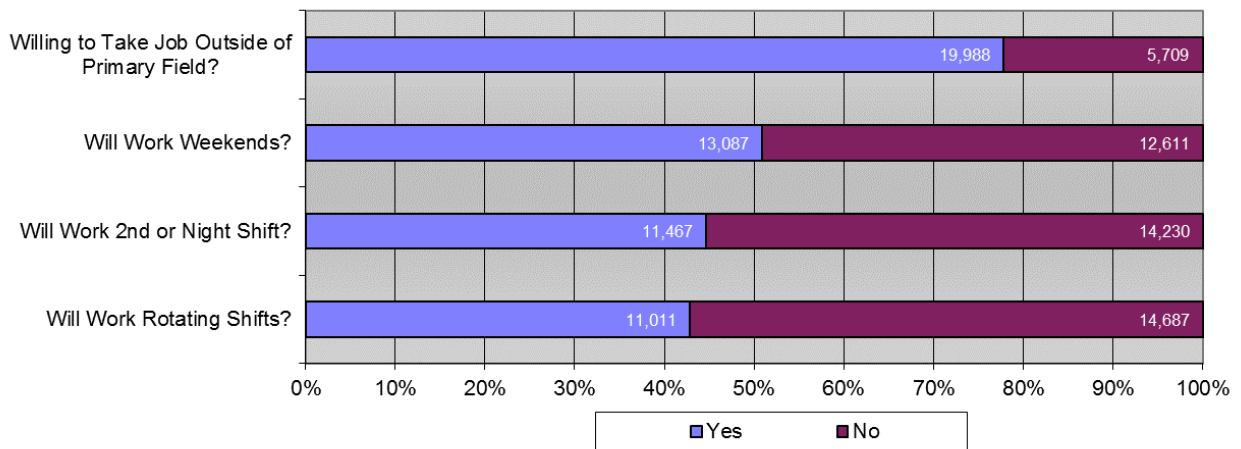
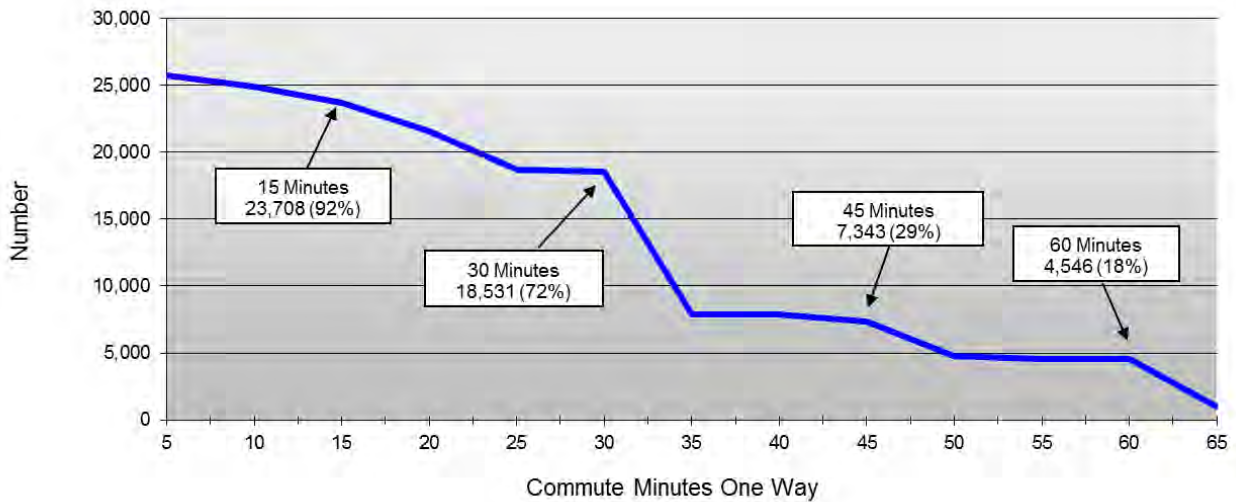


Figure 9 also shows responses to three questions regarding work shifts. Respondents were asked if they would be willing to work weekends, a second or night shift, or rotating shifts for a new job.

The figure shows that 51% of the Available Labor Pool are willing to work weekends, 45% are willing to work a second shift or night shift, and 43% are willing to work rotating shifts for a new or different job.

Another important consideration for many employers is whether workers are willing to commute for a new or different employment opportunity. Figure 10 shows that the Available Labor Pool in the Ellis County Labor Basin is generally open to commuting. More than a quarter (29%) of the members of the Available Labor Pool will commute up to 45 minutes, one-way, for an employment opportunity, while 72% will commute up to 30 minutes, one-way, for employment. A vast majority (92%) will travel up to 15 minutes, one-way, for employment.

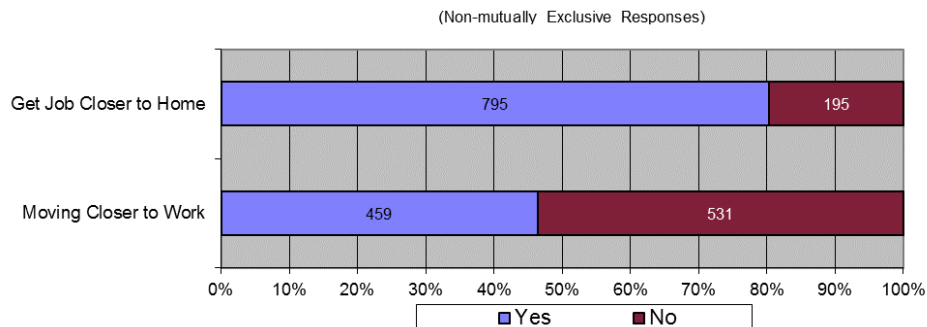
**Figure 10: Available Labor by Commute Minutes**



Working members of the Pool indicating that they *currently commute farther than 60 minutes*, one-way, for a job, were asked two questions: “Have you considered moving to be closer to your job?” and “Have you considered getting a job closer to your home?”

Figure 10a shows that a vast majority (80%) of this subset of the Pool would consider getting a new job closer to their places of residence, while about 46% would consider moving closer to their places of work.

**Figure 10a: Being Closer to Work**





Available Labor Pool members were asked about various benefits that might be important when considering whether to take a new or different job. Respondents were asked if each benefit would be a “very important” consideration for taking a new job, with answer options including “yes” and “no.” (Responses are non-mutually exclusive.)

Figure 11 shows that the four most important benefits are, in order: good salary or hourly pay, on-the-job training (OJT) or paid training, good health benefits, and good retirement benefits. All four of these benefits are considered “very important” by 80% or more of the Available Labor Pool.

Good vacation benefits and flexible hours or flex-time are considered “very important” by 70% or more of the Available Labor Pool.

Good educational assistance, transportation assistance, and childcare assistance are considered “very important” by about 52%, 27%, and 20% of Pool members, respectively.

**Figure 11: Benefits Very Important to Change Employment**

(Non-mutually Exclusive Responses)

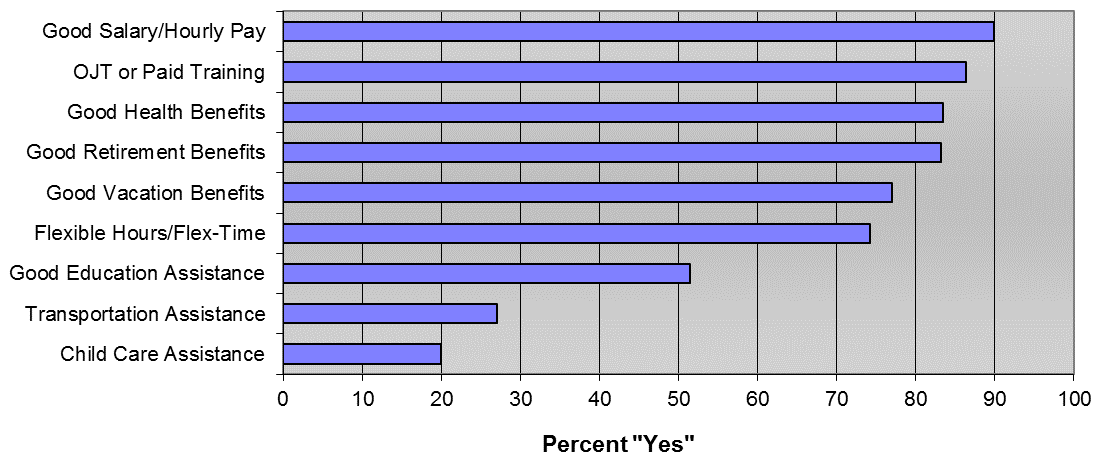


Table 5 on the next page compares responses from all Available Labor Pool members and working members of the Available Labor Pool. The percentages for the entire Pool show “very important benefits” for new job (and are the same shown in Figure 11). The percentages for the working members of the Pool represent currently offered by employers.

The left column in Table 5 shows the percentages of all Pool members, while the right column shows the percentages of *working members* of the Available Labor Pool that are offered the benefit from their current employers.

Three benefits stand out. Good Salary or Hourly Pay shows an 11.4% difference. That is, 89.9% of the entire Pool consider this an important benefit to change jobs, while 78.5% of the working members of the Pool report that their employers offer this benefit.

On-the-Job (OJT) or Paid Training stands out with a 10.6% percent difference between Pool members considering this an important benefit (86.3%) and working Pool members offered this benefit (75.7%).

Finally, childcare stands out as well. Only 8.3% of the working members of the Pool report being offered this benefit, while almost 20% consider this an important benefit for taking a new job (representing an 11.6% difference).

**Table 5: Desired Benefits and Current Benefits Offered**

	Benefit Important to Change Jobs Percent	Benefit Currently Offered Percent	<i>Difference (Offered-Desired)</i>
Good Salary/Hourly Pay	89.9	78.5	-11.4
OJT or Paid Training	86.3	75.7	-10.6
Good Health Benefits	83.4	82.4	-1.0
Good Retirement Benefits	83.2	75.4	-7.8
Good Vacation Benefits	77.0	76.8	-0.2
Flexible Hours/Flex-Time	74.2	67.5	-6.7
Good Education Assistance	51.5	44.3	-7.2
Transportation Assistance	27.0	20.4	-6.6
Child Care Assistance	19.9	8.3	-11.6

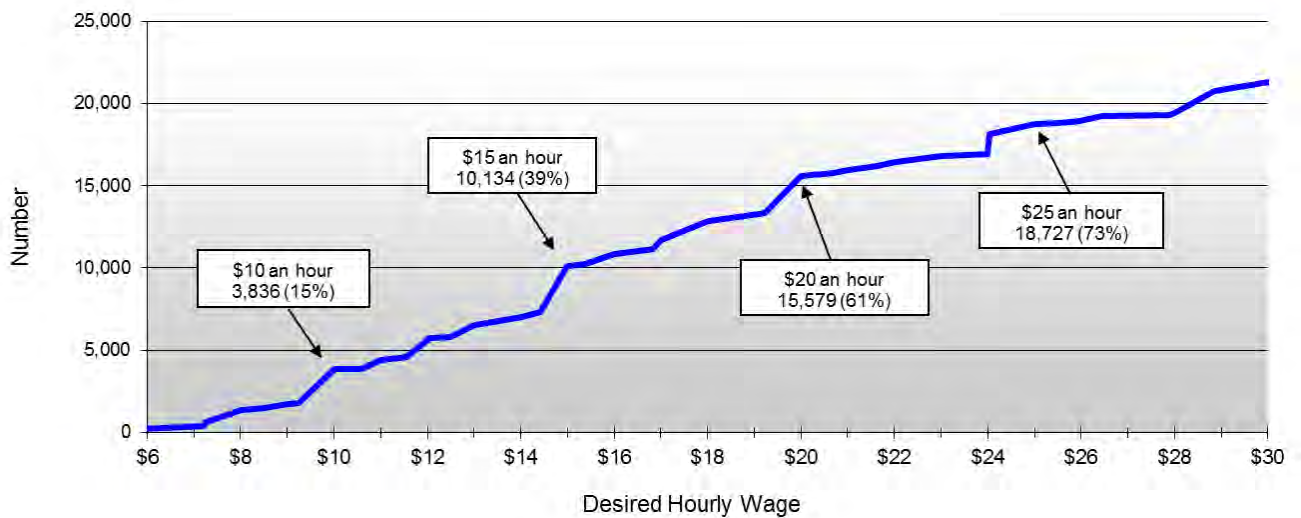
## Desired Wages of Available Labor Pool

Desired wages are another important consideration for employers and economic developers. Figure 12 shows desired wages for members of the Available Labor Pool. It is estimated that 18,727 people (or 73% of the available labor) are interested in a new job at \$25 an hour<sup>4</sup>.

An estimated 15,579 (61%) members of the Pool are interested in new employment opportunities at \$20 an hour, while 10,134 (39%) are interested at \$15 an hour.

Finally, an estimated 3,836 people (15%) are interested in a new job at \$10 an hour.

**Figure 12: Available Labor by Desired Hourly Wage**



<sup>4</sup> See Appendix I for an hourly wage/annual salary conversion chart.

## **Subsets of the Available Labor Pool**

The previous portion of the report addressed the entire Available Labor Pool. The remainder of the report addresses two subsets of the Available Labor Pool, as well as a group of survey respondents (including Available Labor Pool members and non-Pool survey respondents).

The three subsets/groups are the following:

- 1 Those residing Within the Necessary Commute Time
- 2 Underemployed Available Labor Pool Workers
- 3 Survey Respondents Using and Needing Childcare Services.

## Subset 1: Within Necessary Commute Time

To present an even more refined picture regarding the number of workers who would seriously consider a new employment opportunity, the data in this section includes *only those respondents* that are determined to reside “within the necessary commute time.”

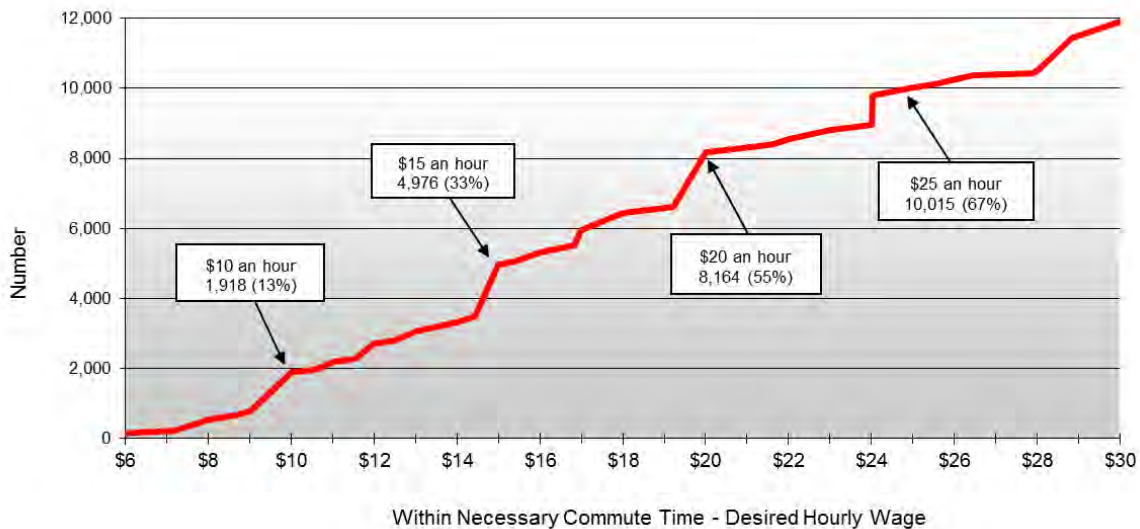
**Necessary Commute Time** is defined as a commute time stated by the respondent that is equal to or greater than the commute time necessary for the respondent to travel from his or her ZIP code of residence to the ZIP code at the center of the labor basin. For example, a respondent that is willing to travel for 30 minutes, one-way, for a new or different job opportunity and that lives an estimated 15 minutes from the center of the labor basin is considered to be “willing to travel the necessary commute time” for a new job.

Those within the necessary commute time number 14,913 individuals.

### Desired Wages of those Within Necessary Commute Time

Figure 13 shows the wage demands for the Available Labor Pool members that are “within the necessary commute time.” An estimated 10,015 people (or 67% of this subset) are interested in a new job at \$25 an hour. An estimated 8,164 (55%) are interested in new employment opportunity at \$20 an hour, and 4,976 (33%) are interested in a new job at \$15 an hour. Finally, an estimated 1,918 people (13%) are interested in a new job at \$10 an hour.

**Figure 13: Available Labor by Desired Hourly Wage (for those Within Necessary Commute Time)**



The previous figure suggests the obvious: that the higher the wage, the larger the pool of available labor. As noted, 4,976 members of the “within the necessary commute time” subset of the labor pool are available for a new or different job at \$15 an hour. At \$14 an hour there are 2,281 members of the pool available. As such, an increase of \$1 per hour from \$14 to \$15 represents an increase of 1,640 workers and potential workers.

The graph also highlights various “wage preference plateaus” that may be of interest to current and potential employers. A wage preference plateau is a situation in which an increase in wage results in an insignificant or small increase in available labor. For example, 1,918 members of this subset are interested in a job at \$10 an hour. At \$11 an hour there are an estimated 2,188 individuals available. So, while there is certainly an increase in the number of available workers at this higher wage rate, the increase is only 270 individuals – a relatively small increase.

Additional wage plateaus exist between \$8 and \$9 an hour (252), and \$15 and \$16 an hour (334).

***Desired Wages by Occupational Sector for those within Necessary Commute Time***

Table 6 shows the four main occupational sectors (employed only) of those within the necessary commute time subset of the Available Labor Pool. The table shows that 19% of the general laborers will take a new or different job at a wage of at \$12 an hour, while 23% are available for new employment at a wage of \$15 an hour. Of the skilled laborers, none are available for new employment at a wage of \$12 an hour or \$15 an hour. In fact, only 8% are available at \$21 an hour.

Regarding service workers, 16% are available at a wage of \$12 an hour, while 31% are available at a wage of \$15 an hour. Of the professional workers, none are available at a wage of \$12 an hour, while 11% are available at a wage of \$15 an hour.

**Table 6: Cumulative Desired Wages by Occupational Sector**

	General Labor		Highly Skilled Labor		Service Sector		Professional	
	(N= 48 ) (+/- 14.1% MoE)		(N= 12 ) (+/- 28.4% MoE)		(N= 101 ) (+/- 9.7% MoE)		(N= 47 ) (+/- 14.2% MoE)	
	Number	Cumulative	Number	Cumulative	Number	Cumulative	Number	Cumulative
\$30 <	2,800	100%	692	100%	5,896	100%	2,755	100%
\$30	2,443	87%	461	67%	5,259	89%	1,138	41%
\$27	2,264	81%	403	58%	4,861	82%	839	30%
\$24	1,966	70%	231	33%	4,064	69%	779	28%
\$21	1,966	70%	58	8%	3,745	64%	719	26%
\$18	1,370	49%	0	0%	2,709	46%	479	17%
\$15	655	23%	0	0%	1,833	31%	299	11%
\$12	536	19%	0	0%	956	16%	0	0%
\$9	357	13%	0	0%	159	3%	0	0%
\$6	60	2%	0	0%	0	0%	0	0%

Table 6 (previous page) shows data for working members of the Pool that are within the necessary commute time, with each occupational sector shown *independently* and excluding non-working pool members.

Table 7 (below) includes working service sector Pool members, working general labor Pool members, and non-working Pool members that are within the necessary commute time.<sup>5</sup>

Additionally, in Table 7, general laborers and service sector workers are classified in both sectors shown *if* they are willing to change fields of employment (see Figure 9, page 17).

In other words, Table 7 allows general laborers, service sector workers, and non-workers to “transfer” between employment sectors – providing much larger numbers of workers available for general labor and service sector jobs at various wages than is shown in Table 6.

Specifically, Table 7 *includes* data from respondents that:

- 1 are willing to commute the necessary distance from his/her community to the center of the labor basin, *and*
- 2 are willing to change their primary field of employment (for example: service sector employment to general labor employment), *and*
- 3a are currently non-employed, *or*
- 3b are employed as general laborers or service sector employees.<sup>6</sup>

**Table 7: Cumulative Desired Wages Allowing for Transfer Between Sectors**

	General Labor		Service Sector	
	(N= 134 ) Number	(+/-8.5% MoE) Cumulative	(N= 145 ) Number	(+/- 8.1% MoE) Cumulative
\$30 <	7,791	100%	8,431	100%
\$30	6,919	89%	7,559	90%
\$27	6,512	84%	7,035	83%
\$24	5,524	71%	6,047	72%
\$21	5,291	68%	5,698	68%
\$18	4,070	52%	4,361	52%
\$15	2,384	31%	2,558	30%
\$12	1,512	19%	1,628	19%
\$9	465	6%	465	6%
\$6	58	1%	58	1%

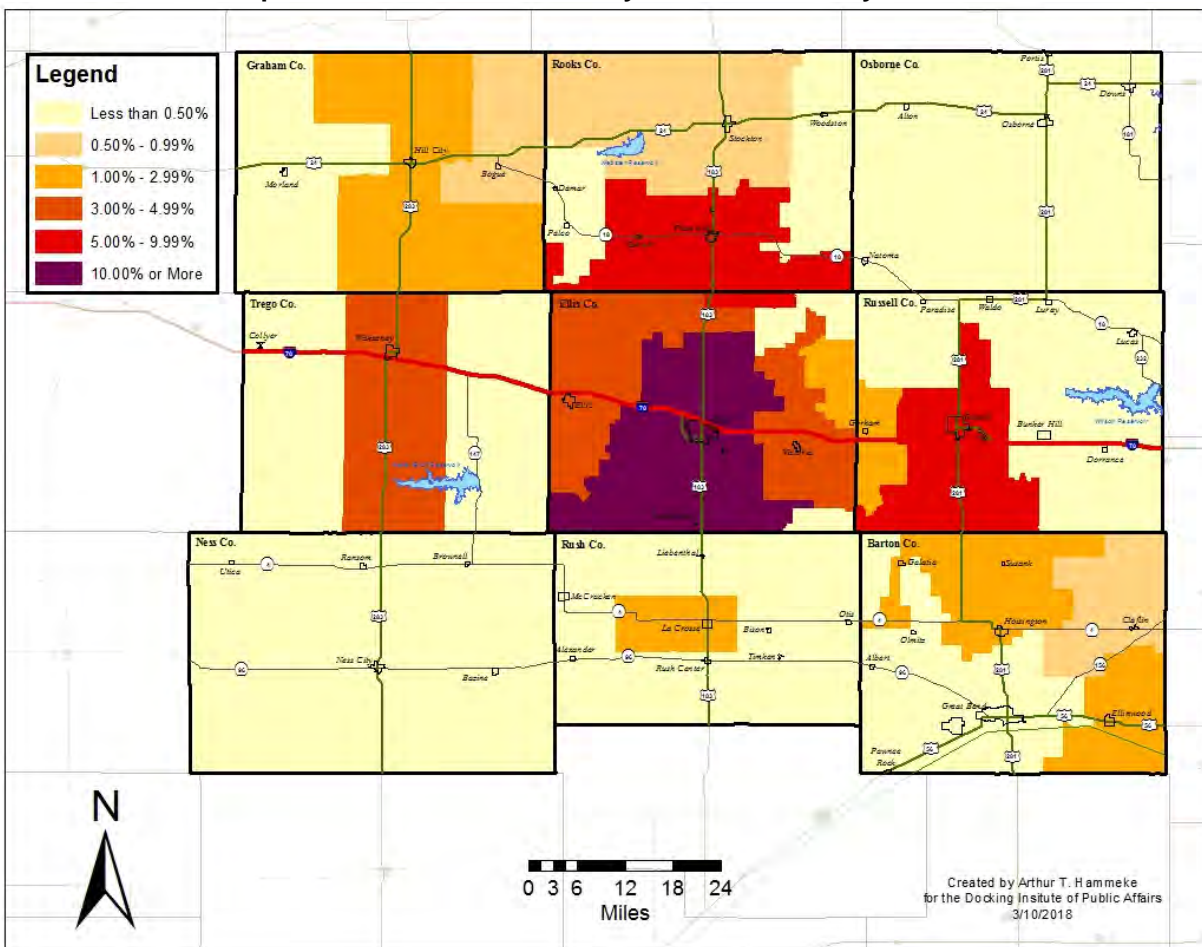
<sup>5</sup> It is assumed that non-working Pool members will take jobs (all things being equal) in either general labor or service sectors.

<sup>6</sup> High skill blue-collar workers and professional white-collar workers are excluded from Table 7 because it is assumed that, as a general rule, people in occupations such as Doctors, Lawyers, Engineers, Professors, Machinists, Electricians, etc. are unlikely to transfer into lower-skill general labor and service/support occupations. In addition, it is assumed that, because professional and high skill occupations require extensive education and/or training, lower-skilled general laborers and service sector workers are unable to transfer to higher-skill labor or professional positions – at least in the near term.

Map 4 shows how each ZIP code area compares to all other ZIP code areas in terms of the percent of the *within the necessary commute time subset* of the Available Labor Pool. The map shows the following:

- Ten percent or more of this subset are located in ZIP code areas within Ellis County. (See purple area in the map.)
- Between 5% and 9.99% of this subset are located in ZIP code areas within Rooks, Russell, and Trego Counties. (See red area on the map.)
- ZIP code areas in Ellis and Trego contain 3% to 4.99% of this subset. (See dark orange areas in the map.)
- ZIP code areas in Barton, Graham, Rush and Rush contain 1% to 2.99% of this subset. (See light orange areas on the map.)
- Finally, less than 1% of this subset is located in ZIP code areas in the remaining Counties of the labor basin. (See light green and light yellow areas on the map.)

**Map 4: Percent within Necessary Commute Time by ZIP Code**





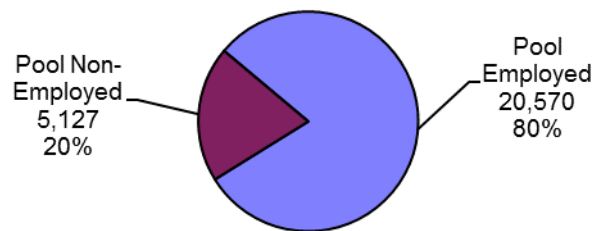
## Subset 2: Underemployed Available Labor Pool Workers

Underemployment (individuals possessing skills and/or training levels that exceed the responsibilities of their current job) is a significant issue in many communities. To assess underemployment in the Ellis County Labor Basin, *employed members of the Available Labor Pool* were presented with a scenario describing underemployment.<sup>7</sup> They were then asked a series of questions assessing if they perceive themselves as underemployed because 1) their skill levels are greater than their current job requires, 2) they possess higher levels of education than are required on the job, 3) they earned a higher income at a similar job previously, or 4) they are limited in the number of hours that they may work.

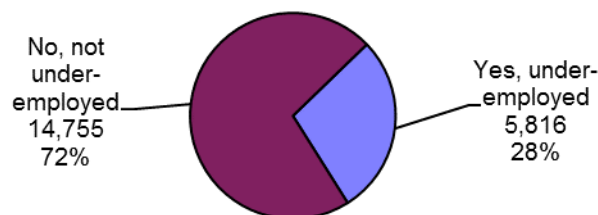
Of the 20,570 *employed members* of the Available Labor Pool (shown in Figure 14), almost a third (see Figure 15) answered “yes” to one or more of the questions presented above. These Pool members are considered “underemployed.”

Figure 15 shows that the underemployed workers represent 28% (or 5,816 individuals) of the employed members of the Pool.

**Figure 14: Employed and Non-Employed Members of the Available Labor Pool**



**Figure 15: Underemployed Workers**



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<sup>7</sup> “Because of circumstances, some workers have jobs that do not fully match their skills, education, or experiences. For example, a master plumber taking tickets at a movie theater would be a mismatch between skill level and job requirements. Do you consider yourself an underemployed worker because...?”

Figure 16 shows the percentages of the positive responses (i.e., “yes” answers) to the various measures of underemployment.

About 24% of this subset possess education levels exceeding those needed for their current jobs. About 21% possess skills not used currently on the job, and about 18% also earned more money at a past but similar job. About 12% are unable to work as many hours as desired.

**Figure 16: Reasons for Underemployment**

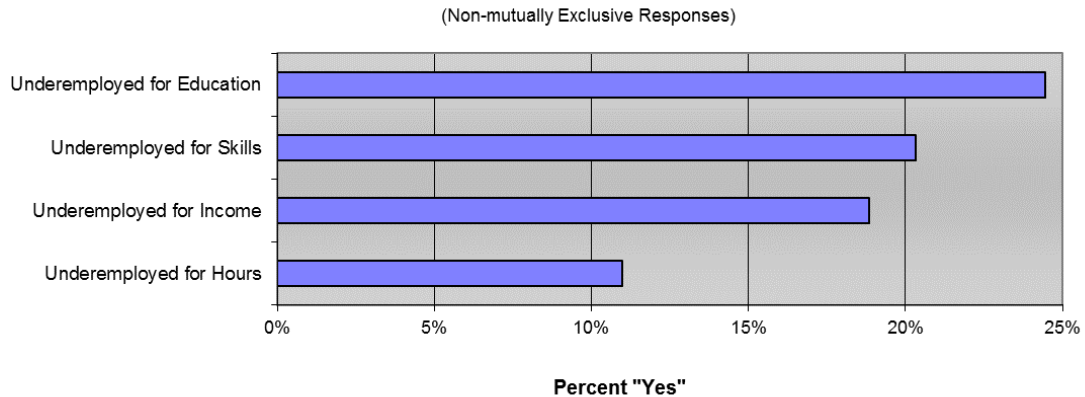


Table 8 shows that the education levels of the underemployed workers differ somewhat from the overall Available Labor Pool. For example, the percentage of underemployed workers with Bachelor’s Degrees is 35.6%, while the percentage of Pool members as a whole is 30.2%. On the other hand, the percentage of underemployed workers with high school diplomas is 13.8%, while the percentage of Pool members as a whole is 16.5% (see Table 1, page 5).

**Table 8: Highest Level of Education Achieved among Underemployed**

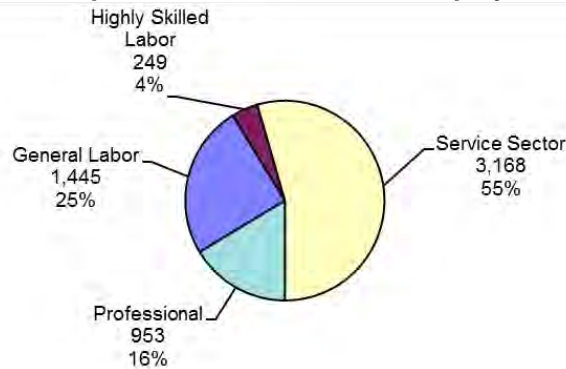
	Number	Percent	Cumulative Percent
Doctoral Degree	71	1.2	1.2
Masters Degree	792	13.6	14.8
Bachelors Degree	2,072	35.6	50.5
Associates Degree	1,280	22.0	72.5
Some College	778	13.4	85.9
High School Diploma Only	800	13.8	99.6
Less HS Diploma	22	0.4	100.0
<b>Total</b>	<b>5,816</b>	<b>100</b>	

### **Occupational Sectors and Categories of Underemployed Workers**

Figure 17 shows that 25% of the underemployed workers are general laborers, and 4% are highly skilled blue-collar workers. Most underemployed workers are employed as service sector workers (55%), while 16% hold professional positions.

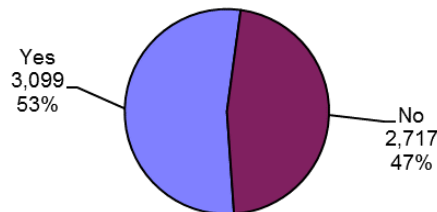
Comparing Figure 17 with Figure 2 (page 6) suggests that fewer professional and highly skilled laborers but more general laborers and service sector employees consider themselves underemployed. Figure 2 (page 6) shows that the subset of working Available Labor Pool members consists of 22% general laborers, 7% highly skilled laborers, 50% service workers, and 21% professionals.

**Figure 17: Occupational Sectors of Underemployed Workers**



Underemployed workers were asked if they “are available for a new or different job because they are underemployed?” Figure 18 shows that more than half (53% or 3,099 individuals) of the underemployed workers are seeking new employment to address underemployment.

**Figure 18: Seeking New Employment to Address Underemployment**



### **Group 3: Those Using and Those Needing Childcare Services**

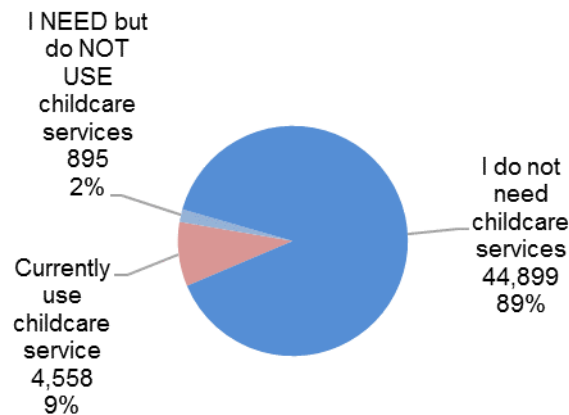
This portion of the report addresses childcare issues. The figures and table in this section represent survey respondents who are Available Labor Pool members and non-Pool members. All survey respondents were presented with the following question:

“I have a few questions about childcare. To begin, which one of the following statements best represents your situation?”

- 1 I currently use the services of a childcare provider
- 2 I currently NEED but do NOT USE the services of a childcare provider
- 3 I do not use nor need the services of a childcare provider

Figure 19 shows that 4,558 (9%) of all survey respondents report using childcare services presently, and 895 (2%) report needed childcare services but not using childcare services. A vast majority of survey respondents (89%) report not needing childcare services.

**Figure 19: Childcare Usage and Needs**



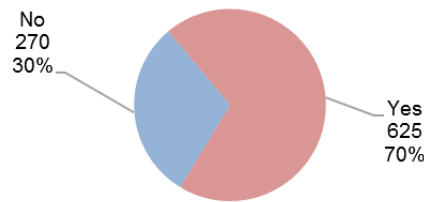
The rest of this section of the report addresses the subgroups of all survey respondents using childcare services (the 9% in Figure 19) and needing childcare services (the 2% in Figure 19).

Figure 20 shows response to the question asked of those respondents reporting that they need but lack childcare:

“Thinking back over the past 3-5 years or so, would you say that a lack of childcare has prevented you from searching for new or different employment?”

The figure shows that of the 2% that needing but lacking childcare (895 individuals), 70% answered “yes” to this question.

**Figure 20: Lack of Childcare Prevents Seeking Employment**



Respondents answering “yes” to the question shown in Figure 20, were asked “what type of job would you be interested in searching for assuming childcare were available?” Table 9 shows responses collapsed into categories.

Table 9 shows that many (43.5%) would work in the customer service field. An additional 18.5% would work as a nurse or nurse aid.

**Table 9: Type of Work**

	Number	Percent
General Labor/Delivery	111	12.4
Customer Service	389	43.5
Office or Dept Manager	111	12.4
Health Aid/Nurse	166	18.5
Education Aid/Teacher	117	13.1
<b>Total</b>	<b>894</b>	<b>100</b>

Figure 21 shows responses to the following question:

“People face different situations regarding childcare. Which of the following reasons apply to you? For each statement please tell me if you STRONGLY AGREE, AGREE, DISAGREE, or STRONGLY DISAGREE.”

- I cannot afford childcare for my children
- I cannot find a childcare provider who will work with my schedule
- I cannot find a childcare provider who I am comfortable with or that is adequate for my children

**Figure 21: Reasons for Difficulty in Finding Childcare**

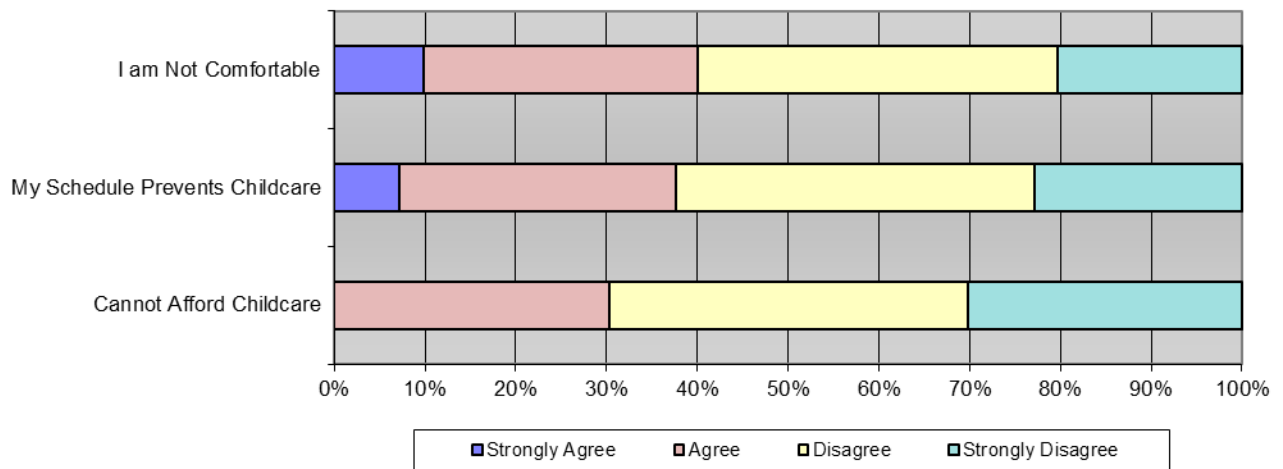


Figure 21 (above) shows that 40% agree/strongly agree that they have not been able to find a childcare provider that they are comfortable with. About 37% agree/strongly agree that their schedules prevent obtaining a childcare provider. Finally, 30% agree with the statement that they cannot afford childcare.

The next two tables show responses from survey respondents who need childcare and who have childcare. As a reminder, those that need childcare represent 9% of survey respondents, and those that need but do not use childcare represent 2% of survey respondents.

Table 10 shows responses to questions asking when childcare is needed (for those lacking childcare) and when childcare is used (for those with childcare).

The table shows that childcare is most needed and most used during the entire workday. Respondents lacking but needing childcare report needing childcare during portions of the day as well, with 50.4% needing childcare during mornings, 56.5% needing childcare during afternoons, and 30.9% needing childcare during weekends.

The table also shows that those respondents with childcare, use childcare services primarily during the entire workday, but that some use childcare services during the mornings and afternoons. Few use childcare services during evening hours, overnight, or during the weekend.

**Table 10: Time Periods Childcare is Used and Needed**

	<b>Need Childcare (895)</b>	<b>Have Childcare (4,558)</b>
	<i>Percent "Yes"</i>	
Entire Workday	70.9	90.6
During Mornings	50.4	11.5
During Afternoons	56.5	16.4
During Evenings	6.1	6.6
Overnight	12.4	5.3
During Weekends	30.9	6.2

Table 11 shows the average fees reported as affordable (by respondents needing childcare) and paid (by respondents with childcare).

**Table 11: Childcare Monthly Fees**

	<b>Need Childcare (895)</b>	<b>Have Childcare (4,558)</b>
<i>Monthly Fee</i>	<i>Can Afford</i>	<i>Currently Pay</i>
Mean	\$236	\$626
Median	\$225	\$500
Range	\$50 to \$600	\$100 to \$1,400

Table 11 shows that the mean average monthly fees paid for childcare service (by those with childcare) is \$626, while the median average is \$500. Reported fees range from a low of \$100 a month to a high of \$1,400 a month.

For those needing by lacking childcare, the mean average amount reported as “affordable” is \$236 a month, and the median average reported as affordable is \$225 a month. Reported fees range from a low of \$50 a month to a high of \$600 a month.

## Comparative Analysis (2004, 2012, and 2018 Reports)

The Docking Institute of Public Affairs conducted a similar labor study in the Ellis Labor Basin and provided reports in 2004 and 2012. This section of the report compares some of the data collected from all three studies (including 2018).

Table 12 shows population, Civilian Labor Force, employment, average unemployment rate, and Available Labor Pool data presented in the three reports.

The population of the Ellis County Labor Basin has decreased by 839 individuals from 2004 to 2018, while the Civilian Labor Force has decreased by about 851 workers during that same period.

The number of employed people in the labor basin has also decreased over the 14 years by 1,334. The unemployment rate increased from 2004 to 2012 (2.9% to 4.6%) but is now about 4.0%.

The table also shows the Available Labor Pools for each year. The Pool increased by 2,704 people from 2004 to 2012, and again by 4,573 from 2012 to 2018.

**Table 12: Key Population and Employment Indicators**

	2004 Report	2012 Report	2018 Report
Basin Population	83,669	84,147	82,830
Civilian Labor Force	46,218	50,720	45,367
Employed	44,866	48,393	43,532
Average Unemployment Rate	2.9%	4.6%	4.0%
Available Labor Pool	18,420	21,124	25,697



The configuration of the Available Labor Pool has fluctuated a bit over the past 14 years.

Figure 22 shows that there was a smaller percentage of non-employed Pool members in 2004 compared to other years. However, the “employed but looking” was smallest in 2012.

Those “employed but interested” increased for each study.

**Figure 22: Available Labor Pool Comparison**

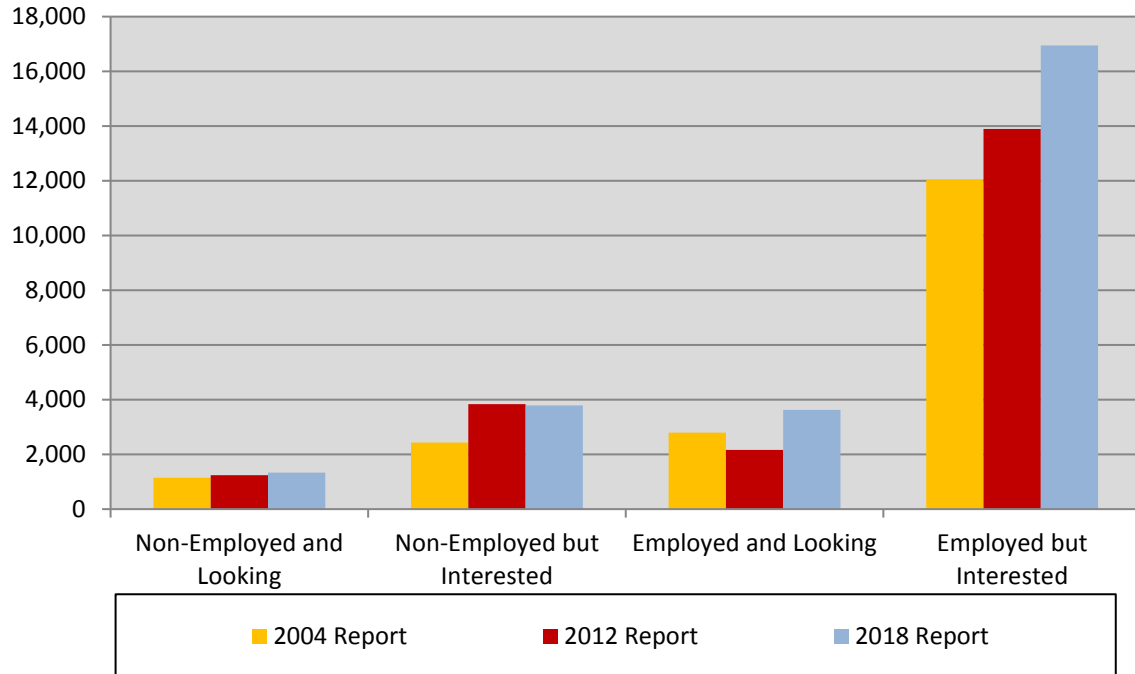


Table 13 compares occupational sectors and education levels from the three studies. The 2012 study stands out with the highest percentage of non-working pool members. The 2018 Pool has the highest percentage of service sector workers, while the 2004 Pool had the highest percentage of professional employees.

The education levels among the three pools vary somewhat. The 2018 Pool has the highest percentage of educated workers, with more than two-fifths (46.7%) holding at least bachelor's degrees (see cumulative columns).

**Table 13: Available Labor Pool Occupational Sectors and Education Levels Comparison**

<i>Labor Sector</i>	2004 Report		2012 Report		2018 Report	
	Number	Percent	Number	Percent	Number	Percent
General Labor	4,157	22.6	5,074	24.0	4,538	17.7
High Skill Labor	1,218	6.6	1,079	5.1	1,303	5.1
Service Sector	5,161	28.0	7,078	33.5	10,347	40.3
Professional	4,300	23.3	2,825	13.4	4,382	17.1
Non-Working	3,584	19.5	5,068	24.0	5,127	20.0
<b>Total</b>	<b>18,420</b>	<b>100</b>	<b>21,124</b>	<b>100</b>	<b>25,697</b>	<b>100</b>

<i>Highest Education</i>	2004 Report			2012 Report			2018 Report		
	Number	Percent	Cumulative Percent	Number	Percent	Cumulative Percent	Number	Percent	Cumulative Percent
Doctoral Degree	364	2.0	2.0	345	1.6	1.6	526	2.0	2.0
Masters Degree	1,311	7.1	9.1	2,200	10.4	12.1	3,711	14.4	16.5
Bachelors Degree	3,568	19.4	28.5	4,474	21.2	33.2	7,750	30.2	46.7
Associates Degree	3,058	16.6	45.1	3,494	16.5	49.8	5,154	20.1	66.7
Some College	5,097	27.7	72.7	5,081	24.1	73.8	4,129	16.1	82.8
High School Diploma	4,368	23.7	96.4	4,602	21.8	95.6	4,231	16.5	99.2
Less HS Diploma	655	3.6	100	927	4.4	100	196	0.8	100
<b>Total</b>	<b>18,421</b>	<b>100</b>		<b>21,124</b>	<b>100</b>		<b>25,697</b>	<b>100</b>	

Table 14 shows the numbers and percentages of those “willing to take a job outside of their primary field.” The table also shows responses to questions regarding various work shifts.

The table shows that the percentage of Pool members willing to take a job outside of their primary field varies from 86.2% (2004) to 77.7% (2018).

**Table 14: Willing to Work Outside of Field and Work Shift Comparison**

	2004 Report		2012 Report		2018 Report	
	Number	Percent	Number	Percent	Number	Percent
Willing to Take Job Outside of Primary Field?	15,885	86.2	17,913	84.8	19,988	77.7
Will Work 2nd or Night Shift?	n/a	n/a	10,478	49.6	11,467	44.6
Will Work Weekends?	n/a	n/a	10,837	51.3	13,087	50.9
Will Work Rotating Shifts?	n/a	n/a	9,855	46.7	11,011	42.8

Figure 23 shows a comparison of “minutes willing to commute” for the three studies.

The patterns are similar, while the “drop-off” between 30 minutes and 35 minutes seems the most dramatic in the 2018 study.

**Figure 23: Available Labor by Commute Minutes Comparison**

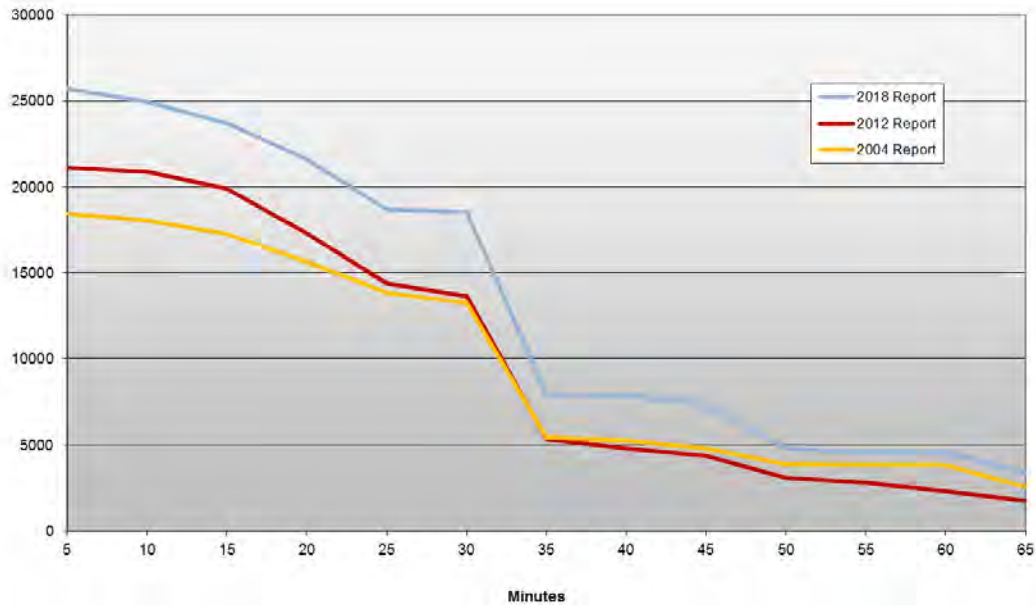


Table 15 shows desired benefits to take a new or a different job for each labor study, ranked in order by 2018 data. The table shows that “good salary/hourly pay” is the most important benefit in the 2018 study, but that “good health benefits” ranked highest in 2004 and 2012.

The items of greatest change between 2004 and 2018 is “good educational assistance,” with 69.0% indicating this was a “very important” benefit in 2004 but 51.5% considering it “very important” in 2018.

**Table 15: Important Benefits to Change Employment Comparison**

Ranked by 2018 Report	2004 Report	2012 Report	2018 Report	Change '18 - '15
	Percent Responding "Yes"			
Good Salary/Hourly Pay	82.6	81.6	89.9	7.3
OJT or Paid Training	88.2	82.1	86.3	-1.9
Good Health Benefits	88.6	85.0	83.4	-5.2
Good Retirement Benefits	88.2	82.3	83.2	-5
Good Vacation Benefits	77.8	76.9	77.0	-0.8
Flexible Hours/Flex-Time	74.6	66.8	74.2	-0.4
Good Education Assistance	69.0	54.4	51.5	-17.5
Transportation Assistance	n/a	31.5	27.0	n/a
ChildCare Assistance	n/a	n/a	19.9	n/a

Figure 24 shows a comparison of the desired wages of the three study groups. The desired wage line shows larger proportions of the 2004 and 2012 Pools are available for work below about \$14 an hour, compared to the 2018 Pool.

**Figure 24: Available Labor Pool by Hourly Wage Comparison**

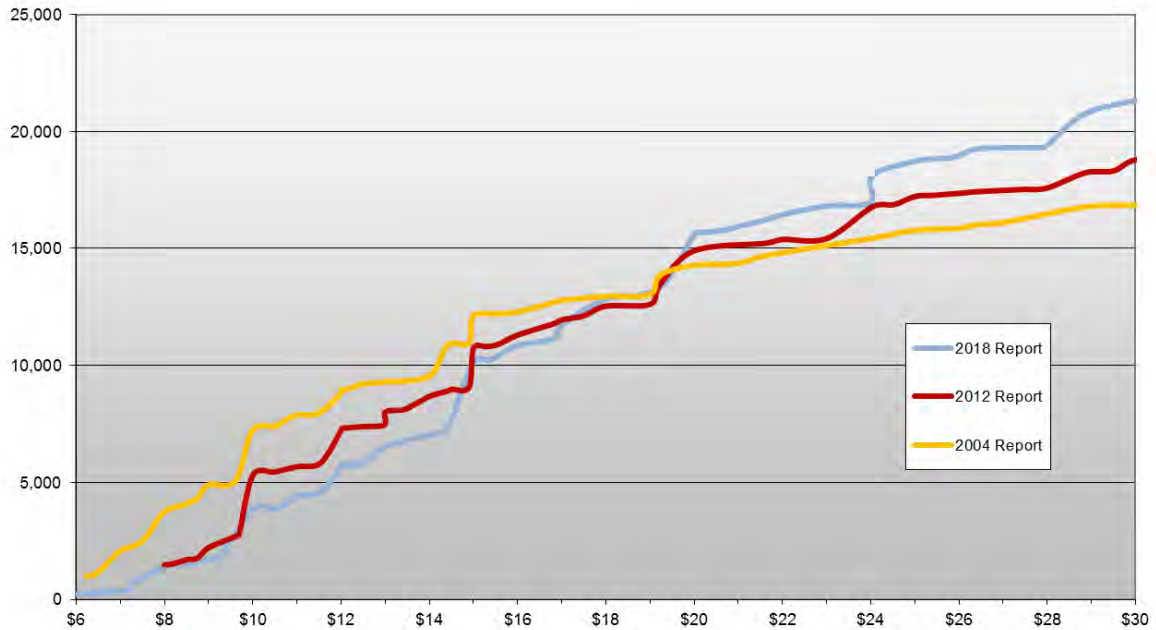


Table 16 shows a comparison of the underemployed members of the Available Labor Pools for the three studies.

The percentage of underemployed workers was largest in 2004 (51%) and the smallest in 2012 (27.1%). The 2004 and 2018 Pools had the largest percentage of employed members (80.5% and 80.0%, respectively) and 2012 had the smallest (76%).

The percentage of underemployed workers in general labor occupations is largest in 2012 (43.9%) and smallest in 2004 (22.1%). The percentage of underemployed professional workers is smallest in 2012 (8.6%) but largest in 2018 (16.4%).

Examining the cumulative percentage columns in the educational attainment (Highest Education) section of the table shows that 72.5% of the underemployed workers in 2018 had associates degrees at least, while these percentages are smaller for the other study periods.

**Table 16: Underemployed Workers Occupational Sectors and Education Levels Comparison**

	2004 Report		2012 Report		2018 Report				
	Number	Percent	Number	Percent	Number	Percent			
Employed of Pool	14,837	80.5	16,056	76.0	20,570	80.0			
<b>Underemployed Wrkrs</b>	<b>7,567</b>	<b>51.0</b>	<b>4,351</b>	<b>27.1</b>	<b>5,816</b>	<b>28.3</b>			
Willing to Change Job to Address Status	6,621	87.5	3,207	73.7	3,099	53.3			
<b>Labor Sector</b>									
	Number	Percent	Number	Percent	Number	Percent			
General Labor	1,675	22.1	1,911	43.9	1,445	24.9			
High Skill Labor	2,369	31.3	166	3.8	249	4.3			
Service Sector	2,773	36.6	1,902	43.7	3,168	54.5			
Professional	751	9.9	372	8.6	953	16.4			
<b>Total</b>	<b>7,568</b>	<b>100</b>	<b>4,351</b>	<b>100.0</b>	<b>5,816</b>	<b>100</b>			
<b>Highest Education</b>									
	Number	Percent	Cumulative Percent	Number	Percent	Cumulative Percent	Number	Percent	Cumulative Percent
Doctoral Degree	117	1.6	1.6	119	2.7	2.7	71	1.2	1.2
Masters Degree	587	7.8	9.3	319	7.3	10.1	792	13.6	14.8
Bachelors Degree	1,349	17.8	27.1	1,029	23.6	33.7	2,072	35.6	50.5
Associates Degree	1,584	20.9	48.1	929	21.3	55.0	1,280	22.0	72.5
Some College	2,112	27.9	76.0	1,021	23.5	78.5	778	13.4	85.9
High School Diploma	1,408	18.6	94.6	800	18.4	96.9	800	13.8	99.6
Less HS Diploma	411	5.4	100	135	3.1	100	22	0.4	100
<b>Total</b>	<b>7,567</b>	<b>100</b>		<b>4,351</b>	<b>100</b>		<b>5,816</b>	<b>100</b>	

## Methods

The Ellis County Labor Basin has a total population 82,830, and a Civilian Labor Force of 45,367. The unemployment rate was about 4.0% at the time of the study. The basin contains an Available Labor Pool of 25,697 individuals.

### ***Explaining the Civilian Labor Force***

Traditional methods of assessing the dynamics of the labor force have concentrated on what the Bureau of Labor Statistics calls the Civilian Labor Force. The Civilian Labor Force represents “the civilian non-institutional population, 16 years of age and over classified as employed or unemployed.” The BLS defines “non-institutional civilians” as those individuals who are not inmates in institutions and who are not on active duty in the Armed Forces; and “unemployed civilians” as civilians available for work and who had “made specific efforts to find employment” in the previous four weeks.

While a review of Civilian Labor Force statistics represents the starting point for understanding labor force dynamics in the Ellis County Labor Basin, there are some limitations associated with these statistics. These limitations occur because the Civilian Labor Force *excludes* individuals who may be willing and able to be gainfully employed but have not made specific efforts to find employment in the last four weeks. These individuals may include full-time students, homemakers, unemployed who are no longer seeking employment, military personnel who may be leaving military employment in the near future, and retired individuals who may be available for work but have not been looking for work recently.

In addition, most new employers draw their workforce from those who are presently employed, not those who are unemployed. As such, Bureau of Labor Statistics data (such as the Civilian Labor Force) do not specifically address the possibility of workers moving from one industry to another in search of other employment opportunities.

### ***Defining the Available Labor Pool***

An alternative to the Civilian Labor Force is the “Available Labor Pool.”<sup>8</sup> The Available Labor Pool is composed of workers categorized as either 1) currently not working *and* looking for employment, 2) currently not working *but* interested in employment given the right opportunities, 3) currently working *and* looking for other employment, and 4) currently working and not looking, *but* interested in different employment for the right opportunities.

There are two key differences between the Civilian Labor Force and the Available Labor Pool. First, the Available Labor Pool methodology expands the pool of potential workers by including workers excluded from the Civilian Labor Force.<sup>9</sup> Secondly, the number of potential workers is

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<sup>8</sup> The Available Labor Pool includes potential workers excluded from the Civilian Labor Force (such as full-time students willing to take a job, homemakers who have not yet sought employment, military personnel who may be leaving military employment in the near future, and retired individuals who may be willing and able to be gainfully employed).

<sup>9</sup> The number that is added to the Civilian Labor Force is derived by taking from the survey the total number of full-time students, homemakers, military, retirees, and long-term unemployed, who state that they are seeking or available for employment, and dividing this number by the total number of respondents. This quotient is then multiplied by the total number of people in the labor basin who are 18 to 65 years old.

then *restricted* to those individuals who indicate that they are looking for work or are interested in new employment. The advantage of this methodology is that it allows researchers to examine those members of the labor pool who have a propensity to consider a job opportunity given their employment expectations. Even with these restrictions, it should be noted that, in practice, not all members of the Available Labor Pool would apply for a new job opportunity. However, the Available Labor Pool figure for a labor basin reveals to current employers and potential employers better information about the quantity and quality of the labor pool than do Civilian Labor Force data and unemployment statistics. The Available Labor Pool represents a substantial number of workers and potential workers for employers to draw upon in the Ellis County Labor Basin.

### ***Description of Survey Research Methods***

Data for the 2018 study were collected from a random digit telephone survey of adults living in nine counties in northwest Kansas: Barton, Ellis, Graham, Ness, Osborne, Rooks, Rush, Russell and Trego.<sup>10</sup> Surveying took place from in mid-2017, using a Computer Assisted Telephone Interviewing (CATI) system. A total of 1,524 households were successfully contacted during the data collection period, and a randomly selected adult in each was asked to participate in the study.<sup>11</sup> In 1,017 households the selected adult agreed to be interviewed. This represents a cooperation rate of 66.7% and a margin of error of +/-3.07%.

Survey respondents that were 65 years of age or older, retired and not looking for work nor interested in a new or different job were not asked the entire battery of survey questions and are not included in the analysis of this report. The remaining respondents (all other working and non-working respondents) total to 866 and are considered eligible respondents. Of these respondents, 442 or (51%) are looking for work or are interested in new or different employment. This subgroup is the Available Labor Pool for the study region. The Margin of Error for the region-wide Available Labor Pool is +/- 4.66%.

Data collection for the 2004 and 2012 labor studies used the same methods. The study sponsors and Institute personnel agreed upon the survey items used, with the former identifying the study objectives and the latter developing items and methodologies that were valid, reliable and unbiased. Question wording and design of the survey instrument are the property of the Docking Institute.<sup>12</sup>

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<sup>10</sup> Cell-phone and land-line telephone numbers were assembled by randomly generating suffixes within specific area codes and prefixes. As such, unlisted numbers were included in this sample, minimizing the potential for response bias. Known business, fax, modem, and disconnected numbers were screened from the sample in efforts to reach households only (and to minimize surveyor dialing time). Up to eight attempts were made to contact each respondent during three calling periods (10 AM to Noon, 2 PM to 4 PM, and 6 PM to 9 PM). Initial refusals were re-attempted by specially trained "refusal converters," which aided in the cooperation rate.

<sup>11</sup> When a land-line number was called, surveyors requested to "speak with an adult over the age of 17 that has had the most recent birthday." When a cell-phone number was called, the respondent was asked if they were over the age of 17.

<sup>12</sup> A detailed summary of the method of analysis used in this report can be found in Joseph A. Aistrup, Michael S. Walker & Brett A. Zollinger, "The Kansas Labor Force Survey: The Available Labor Pool and Underemployment." *Kansas Department of Human Resources*, 2002.

## Glossary of Terms

**Ellis County Labor Basin** – The Ellis County Labor Basin includes Barton, Ellis, Graham, Ness, Osborne, Rooks, Rush, Russell and Trego Counties in northwest Kansas.

**Civilian Labor Force** – The Civilian Labor Force represents “the civilian non-institutional population, 16 years of age and over classified as employed or unemployed.” The Bureau of Labor Statistics defines “non-institutional civilians” as those individuals who are not inmates in institutions and who are not on active duty in the Armed Forces; and “unemployed civilians” as civilians available for work and who had “made specific efforts to find employment” in the previous four weeks.

**Available Labor Pool** – The Available Labor Pool is composed of workers and potential workers categorized as either 1) currently not working *and* looking for employment, 2) currently not working in any manner *but* interested in a new or different job given the right opportunities, 3) employed (full- or part-time) *and* looking for other employment, and 4) currently employed and not looking, *but* interested in different employment given the right opportunities.

**Desired Wage** – The desired wage is the hourly wage that a respondent would consider accepting to take a new or different job given the right opportunities. If a respondent offers a yearly salary instead of an hourly wage, a wage is computed by dividing the salary by 2,080.

**Minutes Willing to Travel** – “Minutes Willing to Travel” indicates the minutes that a respondent is willing to travel, one-way, for a new or different job opportunity given the right opportunities.

**Within the Necessary Commute Time** – “Necessary Commute Time” is the number of minutes that a respondent is willing to travel that is equal to or greater than the estimated travel time necessary for the respondent to actually commute from his or her ZIP code of residence to the ZIP code at the center of the labor basin. For example, a respondent who is willing to travel for 30 minutes, one-way, for a new or different job and that lives an estimated 15 minutes from the center of the labor basin is considered to be “within the necessary commute time” for a new job.

**Underemployment** – Individuals who perceive themselves as possessing skills and/or training levels that exceed the responsibilities of their current job, have educations that exceed those necessary for their current job, have earned a higher salary/hourly wage for a previous but similar job, or are unable to work as many hours as desired at their current job.

**Job Sectors** – “Job sectors” include the following (with examples shown):

- **General Labor** includes occupations such as cleaning, construction, delivery, and maintenance.
- **High-Skill Blue Collar** includes occupations such as police, fire-fighting, postal worker, welder, high-skilled mechanic, computer technician, and lab technician.
- **Service Sector** includes occupations such as clerical worker, waitress, retail sales clerk, bookkeeper, para-professional, certified nurse’s assistant, nurse, teacher and small business manager.
- **Professional White Collar** includes occupations such as administrator, business executive, professional salesperson, doctor, lawyer, professor, and engineer.



## Appendix I: Hourly Wage to Annual Salary Conversion Chart

Hourly Wage	Annual Salary	Hourly Wage	Annual Salary
\$5.00	\$10,400	\$30.50	\$63,440
\$5.50	\$11,440	\$31.00	\$64,480
\$6.00	\$12,480	\$30.50	\$63,440
\$6.50	\$13,520	\$31.00	\$64,480
\$7.00	\$14,560	\$31.50	\$65,520
\$7.50	\$15,600	\$32.00	\$66,560
\$8.00	\$16,640	\$32.50	\$67,600
\$8.50	\$17,680	\$33.00	\$68,640
\$9.00	\$18,720	\$33.50	\$69,680
\$9.50	\$19,760	\$34.00	\$70,720
\$10.00	\$20,800	\$34.50	\$71,760
\$10.50	\$21,840	\$35.00	\$72,800
\$11.00	\$22,880	\$35.50	\$73,840
\$11.50	\$23,920	\$36.00	\$74,880
\$12.00	\$24,960	\$36.50	\$75,920
\$12.50	\$26,000	\$37.00	\$76,960
\$13.00	\$27,040	\$37.50	\$78,000
\$13.50	\$28,080	\$38.00	\$79,040
\$14.00	\$29,120	\$38.50	\$80,080
\$14.50	\$30,160	\$39.00	\$81,120
\$15.00	\$31,200	\$39.50	\$82,160
\$15.50	\$32,240	\$40.00	\$83,200
\$16.00	\$33,280	\$40.50	\$84,240
\$16.50	\$34,320	\$41.00	\$85,280
\$17.00	\$35,360	\$41.50	\$86,320
\$17.50	\$36,400	\$42.00	\$87,360
\$18.00	\$37,440	\$42.50	\$88,400
\$18.50	\$38,480	\$43.00	\$89,440
\$19.00	\$39,520	\$43.50	\$90,480
\$19.50	\$40,560	\$44.00	\$91,520
\$20.00	\$41,600	\$44.50	\$92,560
\$20.50	\$42,640	\$45.00	\$93,600
\$21.00	\$43,680	\$45.50	\$94,640
\$21.50	\$44,720	\$46.00	\$95,680
\$22.00	\$45,760	\$46.50	\$96,720
\$22.50	\$46,800	\$47.00	\$97,760
\$23.00	\$47,840	\$47.50	\$98,800
\$23.50	\$48,880	\$48.00	\$99,840
\$24.00	\$49,920	\$48.50	\$100,880
\$24.50	\$50,960	\$49.00	\$101,920
\$25.00	\$52,000	\$49.50	\$102,960
\$25.50	\$53,040	\$50.50	\$104,000
\$26.00	\$54,080	\$51.00	\$105,040
\$26.50	\$55,120	\$51.50	\$106,080
\$27.00	\$56,160	\$52.00	\$107,120
\$27.50	\$57,200	\$52.50	\$108,160
\$28.00	\$58,240	\$53.00	\$109,200
\$28.50	\$59,280	\$53.50	\$110,240
\$29.00	\$60,320	\$54.00	\$111,280
\$29.50	\$61,360	\$54.50	\$112,320
\$30.00	\$62,400	\$55.00	\$113,360

End of Report

