Critical Skill Shortages Initiative

Identification of Key Industry Sectors and Related Occupations Report

Prepared by the:

Southern Economic Development Region

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Executive Summary

The Critical Skill Shortages Initiative (CSSI) was designed to help local economic development regions in Illinois leverage state funding for training of their workforce in key industries and occupations that are facing critical skill shortages in the next ten years.

Overview of the Southern Economic Development Region's (SEDR) Response to the CSSI

Due to past successes and the desire to be a world class system, the Southern Economic Development Region (SEDR) is applying for CSSI training funds as an early bird applicant. With this initiative, the Southern Economic Development Region's partners are collaborating to ensure a prosperous future for the nineteen county area. Specifically, the workforce development system is working with economic development, local businesses, and labor organizations to identify how all stakeholder groups can work together to ensure a strong, vibrant economy in the next decade and beyond. As part of this process, the SEDR will submit documents in three phases to describe the region's needs and request training assistance:

Phase One: Identify the industry sectors and related occupations that will face skill shortages.

Phase Two: Determine the root causes of the skill shortages and develop strategies to close the skill gaps using creative funding options - including public/private partnerships.

Phase Three: Request WIA administrative set-aside funding for training to bolster the skill sets of incumbent workers in targeted industries/occupations that do not receive training assistance from other funding streams.

This document describes how the SEDR meets the requirements of Phase One of the CSSI. Specifically, this report:

- Explains the data gathering process
- Identifies the industry sectors/occupations with skill shortages that are projected to have the greatest impact on the local economy
- Provides support documentation for the industry/occupation choices including the four criteria established by the state of Illinois

The information is presented in two sections:

Section One: Description of the data gathering process

Section Two: Description of the industries/occupations chosen with detailed documentation

Section One: Gathering Data to Define Industry Sectors and Related Occupations with Projected Critical Skill Shortages

DATA GATHERING

This phase of the process involved the implementation of two key strategies:

1. Building a **regional partnership** for designing and implementing the initiative

2. **Gathering data** from multiple resources to ensure a comprehensive evaluation of skill shortages in key industry sectors/occupations in Southern Illinois.

Regional Partnership

The Southern Economic Development Region (SEDR) is a collaboration between Workforce Investment Areas 25 and 26. The Southern 14 Workforce Investment Board governs WIA 26 and Man-Tra-Con, Corp. serves as the administrative entity for the Southern Illinois Workforce Investment Board (SIWIB) of WIA 25. To ensure cooperation and involvement of both workforce areas in all components of the initiative, the following project implementation decisions were made:

1. CSSI project management responsibilities are shared by staff from both workforce areas. The board chairmen from Areas 25 and 26, Mr. Rodney Cabaness and Mr. Bill Jackson, along with Southern 14 Executive Director, Mr. Jim Murphy, and Man-Tra-Con Executive Director, Ms. Kathy Lively, collaborated on the vision and implementation of the project for the Southern Economic Development Region. They also provided oversight and management for all project activities. Additionally, the Southern 14 WIB Grants Monitor, Ms. Mary Haley, and Man-Tra-Con's Management Analyst, Ms. Lucinda Pearce, attended and/or facilitated all committee meetings and implemented all project activities. In an effort to minimize regionalism, a national workforce consultant, Sandra Hastings, was contracted with to facilitate the regional briefing and sector focus groups.

2. A Steering Committee for the CSSI project was appointed by both board chairmen to provide oversight responsibilities for the project. The Steering Committee consists of 26 members (13 from each Area) from the Southern Economic Development Region and is co-chaired by Mr. Bill Jackson, Board Chairman for LWA 26, and Mr. John Rendleman, LWA 25 Board member.

3. The Workforce Boards for Areas 25 and 26 hosted an initial regional information session in November of 2003 to provide information on the initiative and to enlist support for the project. Over 100 individuals from the 19 county region attended the session at Southeastern Illinois College in WIA 26. Committees were

organized to participate in the data gathering process and to identify the occupations and sectors vital to the economy of the SEDR. The five committees established represent: Economic Development, Business and Industry, Labor, Workforce Development, and Education. Each committee was co-chaired by an individual from Area 25 and an individual from Area 26. The committees have met a total of 13 times since the beginning of the initiative, rotating meeting sites between both workforce investment areas. Participation surveys were completed (see Appendix, Attachment A) and sign-in sheets for each meeting have been collected.

4. The Chairs of the Workforce Investment Boards from both areas presided over a regional briefing held on March 17, 2004, at John A. Logan College in WIA 25. Industry and occupation recommendations compiled from the committee work were reviewed. The briefing was attended by 75 individuals from the SEDR. At this meeting, stakeholders agreed to accept the recommendations of the consortia committees and the Steering Committee. Signatures of support were gathered (see Appendix, Attachment B).

Gathering Data from Multiple Resources

The Southern Economic Development Region used three distinct data gathering processes to target industries with critical skill shortages:

1. **Meetings of the Consortia Committees and Focus Groups of key stakeholders**
2. **Review of Community Audit findings**
3. **Review of additional data**

Meetings of the Consortia Committees and Focus Groups
(See Appendix, Attachment C, for listing of Consortia and Focus Group participants)

Five consortia committees were established to identify the vital industries and the occupations within these industries that will experience significant skill shortages. The committees formed include: Economic Development, Labor, Education, Workforce Development, and Business & Industry. The committees met a total of 13 times and identified critical skill shortages based on the knowledge they had amassed as members of the community and their relationships with local businesses.

The data from the five committees was compiled in a table (see Appendix, Attachment D, Industry/Occupation Matrix) to identify common themes. Two industry sectors and related occupations mentioned by all of the committees were recommended as part of this initiative.

Focus group meetings were hosted for distinct stakeholder groups in the 19 county region to spotlight the occupations and industries identified by the consortia

committees and to seek verification by industry partners of the shortage occupations selected. Focus groups were held in February and April of 2004 for the following stakeholders: Employers and Businesses, Labor and Union Representatives, Education, Healthcare, and Manufacturing/Distribution/Transportation/Warehousing.

Community Audit Information

In addition, data culled from the Community Audits for Areas 25 and 26 were used to validate the recommendations of the focus groups and Steering Committee about the industry/occupation skill shortages that were most important. The data used to make decisions included:

- Comparisons of national, state, and county economic and employment trends
- Review of competitive strengths
- Economic and workforce projections for Areas 25 & 26 (e.g., workforce shortfalls, migration patterns)
- Workforce skill gaps and long-term needs
- Industry Summits conducted in both areas
- Recommendations for improvement

Review of additional economic and labor market data to confirm focus group and community audit data

Additional information used to choose the industry and occupation shortages came from this group of resources:

- Five Year Development Strategy, administered by SIU-C, Office of Economic and Regional Development
- GROW Illinois (March 2003 & April 2004)
- Vital Economy Readiness Assessment for Franklin, Perry, & Williamson counties
- Southern Illinois Workforce Investment Board Survey (November 2001)
- Southern Illinois Workforce Investment Board ERISS Employer Survey (May 2003)
- Greater Egypt Regional Planning and Development Commission Report
- Potential for Industry Clusters in Illinois Delta Region prepared by the Illinois Institute for Rural Affairs and the Greater Egypt Regional Planning and Development Commission with cooperation from the

Southeastern Regional Planning and Development Commission and the Southern Five Regional Planning and Development Commission

- Southeastern Illinois Regional Planning and Development Commission Report
- Southeastern Alliance of Illinois "Quality of Labor" survey
- National Association of Manufacturers survey
- North American Industrial Classification System (NAICS)
- Standard Occupational Classification information (SOC)
- Illinois Department of Employment Security (IDES), LMI Source, for state, county and local projections
- ES 202 wage data
- ONET job descriptions
- U.S. Department of Labor, Bureau of Labor Statistics, *Occupational Outlook Handbook, 2004-2005*
- Bureau of Labor Statistics
- Training provider and enrollment data from the six local community colleges (i.e., John A. Logan, Shawnee, Rend Lake, Wabash Valley, Southeastern Illinois, and Frontier)as well as Southern Illinois University – Carbondale
- Illinois Hospital Association
- Illinois State Board of Education
- The Illinois Hospital Workforce Survey (2002)
- Illinois Board of Higher Education
- Illinois Community College Board
- WIA training provider student data
- Healthcare, Education Summits (June 2003 & February 2004)

In summary, there are focus group data, statistical data, and data from other information resources to support the inclusion of three industries and several occupations in Phase One of the SEDR's proposal.

Section Two: Defining Industry Sectors and Related Occupations with Projected Critical Skill Shortages

THREE INDUSTRY SECTORS AND RELATED OCCUPATIONS

The three industry sectors and the related occupations that are expected to have the most significant impact on the critical skills shortage in the SEDR are:

NAICS Code 62, Health Care and Social Assistance

- SOC Code 29-2060, Licensed practical nurses
- SOC Code 29-1110, Registered nurses

There are approximately 120 Healthcare employers in the 19 county Southern Economic Development Region (see Appendix, Attachment E).

Long-term shortage projections by county are found in the Appendix (see Attachment F).

NAICS Code 61, Educational Services

- SOC Code 25-2040, Special Education teachers
- SOC Code 25-2030 Secondary School teachers (math, science, and foreign language)

There are 209 public schools in the 19 county Southern Economic Development Region.

Long-term shortage projections by county are found in the Appendix (see Attachment F).

NAICS Code 31-33, Manufacturing
NAICS Code 48-49, Transportation & Warehousing

There are approximately 240 employers in the 19 county Southern Economic Development Region (see Appendix, Attachment E).

Long-term shortage projections by county are found in the Appendix (see Attachment F).

Combined Manufacturing/Logistics Cluster - the definition of this combined industry cluster occurred during three different group meetings: a February 25, 2004, Steering Committee meeting; an Employers and Business focus group meeting held on February 24, 2004; and a combined Manufacturing and Logistics focus group held on April 14, 2004. Additional research must be collected to validate these sectors' importance to the local economy and to identify the related occupations to target in the initiative. To date, data from focus groups along with information gained during discussions in a Labor/Union focus group meeting and the March regional briefing suggest that the manufacturing sector meets the critical skills shortage criteria.

Preliminary information suggests these shortages may be due to the following factors: the manufacturing workforce is aging; the difficulty in replacing retiring workers with the properly skilled workers; and the need for higher skilled and educated workers to perform advanced manufacturing functions. It is also predicted that the logistics sector will grow in response to an increase in construction jobs, new and expanding warehousing businesses, and the increase of transportation related work.

Many of the skills are similar across the industry sectors (e.g., use of handheld scanners) which is why the SEDR has grouped the two sectors together. Details about this combined sector and the related occupations will be submitted as part of the regular round of submissions for the CSSI instead of being submitted as part of the early bird application process. However, preliminary information suggests occupations to be explored as part of this initiative may include the following Production and Transportation & Material Moving Occupations:

- 51-2091 Fiberglass Laminators and Fabricators
- 51-4110 Tool and Die Makers
- 53-3032 Truck Drivers, Heavy and Tractor-Trailer
- 53-7000 Material Moving Workers including 53-7050 Industrial Truck and Tractor Operators
- Maintenance Technician positions that are included within both industries

NAICS Code 62, Health Care and Social Assistance

LMI Data to Support Healthcare as a Critical Industry Sector

Using the Substate Employment Projections provided by IDES (see Appendix, Attachment G), it is evident that Healthcare is a critical industry sector in the Southern region:

- Healthcare Services is defined as a select industry
- Healthcare Services are anticipated to have the greatest number of position changes (2,291)- Common Industries Table
- Healthcare services is ranked third on the Industry Rank by Employment table
- Healthcare services is ranked first on the Industry Rank by Number Change table
- Healthcare services is ranked ninth on the Industry Rank by Percent Change table

Occupational Projections to Support RN and LPN Skill Shortages in the Healthcare Sector

- **SOC Code 29-2060, Licensed Practical Nurses** - licensed practical nurses (LPNs), or licensed vocational nurses (LVNs), care for the sick, injured, convalescent, and disabled under the direction of physicians and registered nurses. Most LPNs provide basic bedside care, taking vital signs such as temperature, blood pressure, pulse, and respiration. They also prepare and give injections and enemas, monitor catheters, apply dressings, treat bedsores, and give alcohol rubs and massages. LPNs monitor their patients and report adverse reactions to medications or treatments. They collect samples for testing, perform routine laboratory tests, feed patients, and record food and fluid intake and output. To help keep patients comfortable, LPNs assist with bathing, dressing, and personal hygiene. In States where the law allows, they may administer prescribed medicines or start intravenous fluids. Some LPNs help deliver, care for, and feed infants. Experienced LPNs may supervise nursing assistants and aides.

  In addition to providing routine beside care, LPNs in nursing care facilities help evaluate residents' needs, develop care plans, and supervise the care provided by nursing aides. In doctors' offices and clinics, they also may make appointments, keep records, and perform other clerical duties. LPNs who work in private homes may prepare meals and teach family members simple nursing tasks. (Source: *Occupational Outlook Handbook* from the World Wide Web: http://www.bls.gov/oco/ocos102.htm)

  Upon entry into the LPN training/education component a high diploma or equivalency degree is required. In addition, applicants to the nursing program must take a pre-entrance exam and score at pre-determined levels as set by the

education agency. A graduate of the program must pass the CAT-NCLEX-PN Examination in order to be employed as a practical nurse.

- **SOC Code 29-1110, Registered Nurses** - registered nurses (RNs) work to promote health, prevent disease, and help patients cope with illness. They are advocates and health educators for patients, families, and communities. When providing direct patient care, they observe, assess, and record symptoms, reactions, and progress in patients; assist physicians during surgeries, treatments, and examinations; administer medications; and assist in convalescence and rehabilitation. RNs also develop and manage nursing care plans, instruct patients and their families in proper care, and help individuals and groups take steps to improve or maintain their health. While state laws govern the tasks that RNs may perform, it is usually the work setting that determines their daily job duties. (Source: *Occupational Outlook Handbook* from the World Wide Web: http://www.bls.gov/oco/ocos083.htm)

  Registered nurse applicants may enter a four year bachelor's degree nursing program or may enter an associate degree nursing program at a community college. A pre-entrance exam is required. A graduate of registered nursing programs must pass the NCLEX-RN exam to be employed as a registered nurse.

Within the healthcare industry sector it is also evident that healthcare providers in both Areas 25 & 26 will be challenged to fill LPN and RN positions throughout this decade. The data in the Occupational Projections Tables (Tables I-III below) demonstrate how the occupational projections data also support the Community Audit and focus group recommendations to focus on these two occupations.

TABLE I – SEDR Occupational Projections

Occupation	Short-term shortage projections for SEDR (2004-2006)	Long-term shortage projections SEDR (2000-2010)		Resource
		% Change	# Change	
RNs	See note below*	**14.3**	**489**	**IDES Report – Southern Economic**
				Dev. Region
LPNs		**9.0**	**67**	**Industry Staffing Patterns**

*Note: Did not use short-term projections per IDES Labor Market Economist, Mitch Daniel's statement at February 3, 2004 CSSI Informational Session in Springfield. "Do not use the short-term projections; data is not valid, current only through 2002."

TABLE II – LWA 25's Occupational Projections

Occupation	Short-term shortage projections for SEDR (2004-2006)	Long-term shortage projections LWA 25 (2000-2010)		Resource
		% Change	# Change	
RNs	See note below*	**15.05**	**308**	**IDES Report-Long**
				Term Occupational
LPNs		**9.38**	**42**	**Projections (2000-2010)**

*Note: Did not use short-term projections per IDES Labor Market Economist, Mitch Daniel's statement at February 3, 2004 CSSI Informational Session in Springfield. "Do not use the short-term projections; data is not valid, current only through 2002."

TABLE III – LWA 26's Occupational Projections

Occupation	Short-term shortage projections for SEDR (2004-2006)	Long-term shortage projections LWA 26 (2000-2010)		Resource
		% Change	# Change	IDES Report-
RNs	See note below*	**13.16**	**181**	**Long Term**
				Occupational
LPNs		**8.33**	**25**	**Projections (2000-2010)**

*Note: Did not use short-term projections per IDES Labor Market Economist, Mitch Daniel's statement at February 3, 2004 CSSI Informational Session in Springfield. "Do not use the short-term projections; data is not valid, current only through 2002."

These numbers are substantiated by the several other resources used to analyze the areas critical needs:

1. The Community Audit findings for Area 25 and Area 26 stress that Healthcare (especially nursing) is vital to the area's vibrant local economy because:
    - Some of the most rapidly growing jobs in the area will be concentrated in healthcare.
    - The need to replace aging Baby Boomers will create many job openings in healthcare- particularly nurses.
    - The area's healthcare cluster will boom in the face of the growing demand of a larger workforce.
2. Focus group participants unanimously identified the skill shortages in healthcare especially LPNs and RNs - as acute in the short-term as well as long-term future.
3. Healthcare survey done as part of the area 26 Community Audit results report significant shortages in LPN and RN positions and these data are supported by state and national surveys.
4. The Southern Illinois Healthcare's Web site currently has job postings for 48 RNs and 13 LPNs while the Good Samaritan Regional Health Center has job postings for 44 RNs and 2 LPNs. The administrator at the Hamilton Memorial Hospital reported such a severe shortage that he cannot discipline nurses with attendance issues because he does not have the necessary replacement workers. This

represents only a few of the hospital system employers in the area and is not representative of the total need (see Appendix, Attachment E).

5. Additional data provided in the tables on the next page support the need to address the current and anticipated shortages in these two healthcare occupations.

Training Provider Data

To augment the occupational data, the project team reviewed historical data from the Illinois Community College Board (ICCB) and the Illinois Board of Higher Education (IBHE) in Table IV.

TABLE IV - Healthcare Occupations Enrollment Data from Illinois Community College Board (ICCB) and Illinois Board of Higher Education (IBHE) for FY 2002

Occupation	Total enrolled in training program in SEDR for FY2002	Total completers in SEDR for FY 2002	Resource
RNs	282	87	ICCB/IBHE
LPNs	444	153	ICCB/IBHE

The six community colleges in the SEDR were also contacted to determine the number of LPN and RN students that are currently enrolled in either LPN or RN programs and the number of individuals expected to graduate in 2004 and 2005. This information is recorded in Tables V through VII.

TABLE V – SEDR Training Provider/Education Institution Data

Occupation	Total enrolled in training programs – SEDR	Number of openings in program on average per year	Projections of number graduating in 2004	Projections of number graduating in 2005
RNs	234*	298 full-time	164*	183*
		30 part-time		
LPNs	158*	226 full-time	124*	154*
		70-80 part-time		
Total Nursing	392*	624-634	288*	337*

*Figures represent data obtained from 5 out of 6 Community Colleges that provide training in the SEDR (John A. Logan, Shawnee, Wabash Valley, Southeastern Illinois, and Frontier).

TABLE VI – Local Workforce Area 25's Training Provider/Education Institution Data

Occupation	Total enrolled in training programs – LWA 25*	Number of Openings in Program on average per year	Projections of number graduating in 2004	Projections of number graduating in 2005
RNs	40 – John A. Logan*	100 full-time 30 part-time (for 2 colleges)	36 – JALC*	63 from JALC*
LPNs	70 – John A. Logan*	146 full-time 60 part-time (for 2 colleges)	60 – JALC*	80 from JALC*

*Data was not available from Rend Lake College.

TABLE VII – Local Workforce Area 26's Training Provider/Education Institution Data

Occupation	Total enrolled in training program on First Day of Training– LWA 26*	Number of Openings in Program on average per year	Projections of number graduating in 2004	Projections of number graduating in 2005
RNs	194	198	128	120
LPNs	88	80 full time	64	74

*Shawnee Community College, Wabash Valley College, Southeastern Illinois College, and Frontier Community College all submitted data.

The facts suggest that the shortages could be attributed, in part, to the number of enrolled nursing students that do not graduate. Root causes and solutions to this problem will be discussed in the Root Cause and Solution document.

In addition, the project team asked training providers to submit information about the number of individuals that participated in the pre-screening testing process for the nursing programs (Table VIII below) as well as the number of individuals qualified for enrollment in the nursing programs that could not attend because there were no openings (Table IX on the next page). The data suggest that the demand outstrips the supply of nursing program opportunities. Addressing this issue could contribute significantly to the reduction of the shortages.

TABLE VIII – Number of Individuals Tested for Entry into Nursing Programs

Program	SEDR	LWA #25	LWA #26
RN	433*	98 – JALC (81 eligible)	335
LPN	711*	498 – JALC (196 eligible)	213

*Figures represent data obtained from 5 out of 6 training providers in SEDR (i.e., Shawnee, Wabash Valley, Southeastern Illinois, John A Logan and Frontier Colleges. Rend Lake College data was not available).

TABLE IX – Qualified Nursing Student Applicants Not Enrolled
(Turned away or put on waiting lists)

Program	LWA #25	LWA #26	SEDR
RN	41 – JALC	92	133*
LPN	126 – JALC	87	213*

*Figures represent data obtained from 5 out of 6 training providers in SEDR (i.e., Shawnee, Wabash Valley, South Eastern Illinois, and John A Logan and Frontier Colleges. Rend Lake College did not submit information).

In addition, the workforce development system collected data to determine the number of job seekers enrolled in WIA Title I training programs that are enrolled in nursing programs. These data are in Tables X-XII.

Overall, the data suggest that:

- WIA Title I participants are enrolled in nursing programs
- WIA Title I participants are hired by local healthcare providers when they graduate
- More WIA Title I participants could be enrolled in nursing training programs if there was funding available.

TABLE X - WIA Participants Currently Enrolled in Healthcare Training Programs

	WIA 25 Participants	WIA 26 Participants
RNs	**38**	**42**
LPNs	**52**	**33**
Total Nursing	**90**	**75**

TABLE XI - WIA Participants Employed in Healthcare in 2002

	Region 25	Region 26
RNs	**12**	**9**
LPNs	**11**	**11**
Total Nursing	**23**	**20**

TABLE XII - WIA Participants with Skills and Interest Who Couldn't Obtain WIA I Training Funds for Nursing

	Region 25	Region 26
RNs	**24**	**20**
LPNs	**36**	**31**
Total Nursing	**60**	**51**

Wage Data

Wage data was also examined and it was determined that both occupations – LPNs and RNs- would provide workers with a self-sufficient wage as reported in Table XIII. In fact, both occupations, considered good paying jobs in the area, are sound career options because healthcare providers offer benefit packages as well. The Healthcare Focus Group also indicated the prevailing competitive wage for Certified Nursing Assistants (CNA) is $8.50 in the region. In addition, most of the CNA positions available in the Southern Economic Development Region include a benefit package. Further study and research of these positions should be accomplished to determine if Nursing Assistants could be included with the targeted occupations.

Table XIII - Wage Data Information for RNs and LPNs

	Region 25	**Region 26**
Entry level RN wages	$14.76/hr	$13.51
Median level RN wages	$18.54/hr	$17.32
Experienced level RN wages	$20.65/hr	$19.54
Entry level LPN wages	$9.83/hr	$9.59/hr
Median level LPN wages	$11.60/hr	$11.26/hr
Experienced level LPN wages	$12.59/hr	$12.71/hr

Source LMI IDES 2003

Employer Reported Data

Local healthcare businesses do not gather or keep data that could be used to support the identification of LPN and RN positions as "critical skill shortage" occupations. Instead, the local area healthcare businesses that employ both kinds of nurses use the national and state level data in discussions. Additionally, these organizations report ongoing, continual challenges in filling both positions and challenges with high turnover in both positions. Since they struggle with these shortages on a routine basis they have not felt the need to document their struggles. They are focused on finding the solutions to the shortages that they face as stated by Scott Seaborn at Southern Illinois Healthcare:

> "Thank you for focusing efforts on healthcare occupations. There is no question that it is a critical employment area for Southern Illinois as well as the entire country. We have seen little need to date to conduct local surveys. Our experience with lengthy vacant positions, recruitment difficulties, and anecdotal information made it clear that there was a problem and we have moved ahead without conducting any local or area-wide survey."

Because local businesses do not keep shortage data and/or they did not respond to requests for hiring/turnover data, there are no specific businesses cited with shortages.

Instead, the list of healthcare participants in the focus group discussions are used to substantiate the need for LPNs and RNs as they shared their concerns as members of the focus groups.

In addition, there was no way to determine specific short-term shortage projections because the LMI data is not accurate (as noted in the occupation tables).

Summary of Data

The national trend of critical skill shortages in the LPN and RN healthcare positions is apparent in the SEDR as well. Citing multiple sources, the SEDR has documented the critical shortage in both of these healthcare occupations and proven that:

- There is strong employment demand – a projected need for the rest of the decade
- The occupations are critical to the competitiveness of the area – it will be necessary to have a strong healthcare industry to attract new businesses and retain the businesses that are currently in the SEDR.
- The jobs provide good wages and benefits- both jobs have benefits and because of the competitiveness of the job market, many of the local care providers are already paying entry level workers more than the entry level wage reported in the LMI data.
- The jobs are appropriate for targeting – WIA Title I participants are already enrolled in nursing programs and those currently enrolled in the LPN programs can take additional classes to become RNs as part of a career ladder process. The career ladder process is not currently funded with WIA Title I funding.

NAICS Code 61, Educational Services

LMI Data to Support Education Services as a Critical Industry Sector

Using the Substate Employment Projections provided by IDES (see Appendix, Attachment G), it is evident that Education is a critical industry sector in the Southern region:

- Education Services is defined as a select industry
- Education Services are anticipated to have the second highest number of position changes (2,217)- Common Industries Table
- Education Services is ranked one on the Industry Rank by Employment table
- Education Services is ranked two on the Industry Rank by Number Change table
- Education Services is ranked fourteen on the Industry Rank by Percent Change table

Occupational Projections to Support High School Teacher (math, science, and foreign language) and Special Education Teacher Shortages in the Education Services Sector

- **SOC Code 25-2040, Special Education teachers** - Special education teachers work with children and youths who have a variety of disabilities. A small number of special education teachers work with students with mental retardation or autism, primarily teaching them life skills and basic literacy. However, the majority of special education teachers work with children with mild to moderate disabilities, using the general education curriculum, or modifying it, to meet the child's individual needs. Most special education teachers instruct students at the elementary, middle, and secondary school level, although some teachers work with infants and toddlers. (Source: *Occupational Outlook Handbook*, from the World Wide Web: http://www.bls.gov/oco/ocos070.htm)
- **SOC Code 25-2030 Secondary School teachers** (math, science, and foreign language) - Teachers act as facilitators or coaches, using interactive discussions and "hands-on" approaches to help students learn and apply concepts in subjects such as science, mathematics, or English. They utilize "props" or "manipulatives" to help children understand abstract concepts, solve problems, and develop critical thought processes. Secondary school teachers help students delve more deeply into subjects introduced in elementary school and expose them to more information about the world. Secondary school teachers specialize in a specific subject, such as English, Spanish, mathematics, history, or biology. They also can teach subjects that are career oriented. (Source: *Occupational Outlook Handbook*, from the World Wide Web: http://www.bls.gov/oco/ocos069.htm)

  Upon entry into a post-secondary education program, applicants are required to have a high school diploma or equivalent. In addition, various four year institutions have course pre-requisites and an application ranking scale for applicants into the College of Education. A graduate of an education program

from a four year institution must also pass the Illinois Certification Testing System Basic Skills test. Special education majors are required to complete coursework in specific categorical services areas.

Within the education services sector it is also evident that schools in both Areas 25 & 26 will be challenged to fill special education job openings as well as high school teacher openings for math, science, and foreign language throughout this decade. The data in the Occupational Projections Tables (Tables I-III) describe the shortages in these two occupations.

Data to Support Shortages in High School Teachers (math, science, foreign language, and industrial arts) and Special Education in the Educational Services Sector

TABLE I – SEDR Occupational Projections

Occupations	Short-term shortage projections for SEDR (2004-2006)	Long-term shortage projections for SEDR (2000-2010)		Resource
		% Change	# change	
Secondary Teachers	See Note*	**15.9**	**232**	**IDES, LMI**
Special Ed, Elem.		**32.3**	**120**	

*Note: Did not use short-term projections per IDES Labor Market Economist, Mitch Daniel's statement at February 3, 2004 CSSI Informational Session in Springfield. "Do not use the short-term projections; data is not valid, current only through 2002."

TABLE II- LWA 25's Occupational Projections

Occupations	Short-term shortage projections for Region 25 (2004-2006)	Long-term shortage projections for Region 25 (2000-2010)		Resource
		% Change	# Change	
Secondary teacher, exc. Special ed & Voc Ed	See below*	**15.89**	**161**	**IDES, LMI**
Special Ed, secondary		**21.85**	**26**	
Special Ed, middle school		**21.37**	**25**	
Special Ed, PK, Kindergarten, elementary		**32.81**	**84**	

*Note: Did not use short-term projections per IDES Labor Market Economist, Mitch Daniel's statement at February 3, 2004 CSSI Informational Session in Springfield. "Do not use the short-term projections; data is not valid, current only through 2002."

TABLE III – LWA 26's Occupational Projections

Occupations	Short-term shortage projections for Region 26 (2004-2006)	Long-term shortage projections for Region 26 (2000-2010)		Source
		% Change	# Change	
Secondary teacher, exc. Special ed & Voc Ed	See below*	15.88	71	**IDES, LMI**
Special Ed, secondary		23.08	12	
Special Ed, middle school		23.53	12	
Special Ed, PK, Kindergarten, elementary		31.30	36	

*Note: Did not use short-term projections per IDES Labor Market Economist, Mitch Daniel's statement at February 3, 2004 CSSI Informational Session in Springfield. "Do not use the short-term projections; data is not valid, current only through 2002."

Additional Data to Support Skill Shortages in the Education Services Sector – High School Teachers and Special Education Teachers

These numbers are substantiated by the several other resources used to analyze the area's critical needs:

1. The Community Audits propose that the Education Services sector is also vital to the area's vibrant local economy because:
    - Some of the most rapidly growing jobs in the area will be concentrated in education services.
    - The bulk of the teachers in the local schools are Baby Boomers that will be eligible for retirement in the next ten years.
    - Many of the graduates from SIU with teaching degrees either take jobs in private industry or take teaching jobs in other areas.
    - Recruiting and retaining enough properly educated and qualified persons to meet the growing needs for teachers will present a growing challenge in the years ahead.
2. Focus group participants unanimously identified the skill shortages in this sector- especially special education and high school teachers- as acute in the short-term as well as long-term future. In fact, a group of local Superintendents have recently joined together to address the teacher shortages in Southern Illinois (see Appendix, Attachment H).
3. State data project a need for educators at the secondary school level based on current elementary school enrollment figures. The *Educator Supply and Demand in Illinois* 2002 annual report prepared by the Illinois State Board of Education states:

    > "K-12 student enrollments are expected to continue growing but only at the secondary level. Illinois public school enrollments have been increasing since 1990 and

that overall trend is expected to continue through 2007. But all of the growth in the next few years will be at the secondary level." (page vi)

The report further states that "Illinois public schools are staffed by an aging workforce." (page vi) In 2002, 39% of Illinois teachers were at least 50 years old. Teachers are considered to be eligible to retire if they are at least 55 years old and have at least 20 years of experience. With large numbers of teachers reaching retirement age and projected secondary school enrollment increases, the combination may potentially intensify the demand for high school teachers in the state.

Additionally, the report discusses the results of surveys sent to all Illinois school districts to rate the supply for specific teaching areas. Topping the list of the positions with the most severe shortages and with the greatest number of districts experiencing shortages was Special Education teachers. Foreign language teachers and math teachers also ranked third and fourth places respectively on the list after special education teachers. Science teachers ranked held the seventh spot on the severe shortage list also.

4. Additional data provided in tables below support the need to address the current and anticipated shortages in these two healthcare occupations.

Training Provider Data

Southern Illinois University in Carbondale was contacted to gather enrollment data for special education and secondary education teachers. This information appears in Tables IV and V (see next page).

TABLE IV – SEDR Training Provider/Education Institution Enrollment
SIU-Carbondale Academic Degree Programs in Education – Source: IBHE

Program	Fall 2002 Enrollments	2002 Degrees Conferred
B.S. in Special Education	139	43
B.A. in Foreign Language & International Trade	34	9

Table V - 2002-2003 Alternative Route to Teacher Certification Program Completers – Source: SIUC, College of Education & Human Services

Program	# Completers 2003
Art	2
Biological Science	5
Business Education	7
Elementary Education	4
English	1
Health Education	1
History	1
Mathematics	2
Music	2
Physical Education	2
Social Science	2
Spanish	2
Special Education	9
Technology Education	2
Total for all programs	47

Projected admissions to Alternate Route to Teacher Certification for 2004-2005 are 30 per year.
Source: Jackie Bailey, Chief Academic Advisor, SIUC, College of Education and Human Services.

The information provided by the education institutions highlights:

- The difficulty gathering specific information because the Education Departments report the high school teacher information as a total number and do not keep records of those graduating with specialized certificates (e.g., high school math teacher)
- A response to the need for teachers is already being addressed through the Alternate Route to Teacher Certification Program

Wage Data

When wage data was examined, it was determined that both occupations would provide workers with a self-sufficient wage that is bolstered by health benefits (Table VII). Both jobs are considered good career options because of advancement opportunities and salary increases over time.

(Page break occurs here to keep the table that follows on one page)

Table VII – Wage Data For Special Education Teachers and High School Teachers

	Region 25 Yearly Wages	Region 26 Yearly Wages
Entry level Secondary Teacher wages	$26,487	$24,320
Median level Secondary Teacher wages	$35,283	$40,360
Experienced level Secondary Teacher wages	$41,894	$46,572
Entry level Special Education PK, K and Elem	$27,330	$19,806
Median level Special Education PK, K and Elem	$34,016	$31,986
Experienced level Special Education PK, K and Elem	$39,203	$40,239
Entry level Special Education Middle	$18,131	$23,250
Median level Special Education Middle	$26,046	$30,437
Experienced level Special Education Middle	$33,052	$35,422
Entry level Special Education Secondary	$37,018	$24,701
Median level Special Education Secondary	$43,539	$38,047
Experienced level Special Education Secondary	$50,084	$43,320

Source LMI IDES 2003

Employer Reported Data

The project team contacted Superintendents in the local school systems for data to support their projected shortages in special education and high school math, science, and foreign language. Unfortunately, none of the educators contacted were able to provide the information requested. Respondents (e.g., Linda Blackman from the Regional Office of Superintendents of Schools Region 20 and Kelly Stewart) stated that they did not have access to the data that was being requested. Like the healthcare providers, school superintendents are actively working to fill these positions and anticipate continued shortages in the future. In fact, superintendents have created a work group to develop recruiting activities to attract qualified teachers in math; science, special education, and foreign language (see Appendix, Attachment H).

In addition, there was no way to determine specific short-term projections because the LMI data is not accurate (as noted in the occupation tables).

Summary of Data

The shortages in the teaching profession mirror the shortages experienced across the nation. Using multiple sources of data, the SEDR has documented the area's rationale for including the Education Sector in the CSSI:

- There are anticipated shortages in these occupations across the 19 county area for the rest of the decade
- Good schools are critical as a draw for new businesses and as a draw for the in-migration of workers
- Good schools are also critical for the retention of the current workforce
- Special education jobs as well as high school teacher jobs pay well and offer benefits

Additional Rationale for Inclusion of the Education Sector

Although the SEDR will not be able to fund a four year education for WIA Title I participants as part of the CSSI initiative, the individuals serving on the committees wanted to include this industry sector because it is one of the most significant sectors in the local area. The community experts believed it was important to use the CSSI process to determine and implement solutions for the root causes. Committee members also hope to find ways to implement short-term solutions (e.g., Alternate Route to Teacher Certification) to address the acute shortages that are already impacting the educational experiences of local students.

Final Comments

The SEDR has designed and implemented an inclusive process that engaged key community stakeholders in defining the most pressing critical skill shortages in Areas 25 and 26. In fact, the project team has already convened two distinct focus groups of experts (healthcare and education) to begin to uncover the root causes and solutions that can be addressed with local public/private partnerships.

In addition, the project team is continuing to work to identify the occupations in the manufacturing/logistics sector to be submitted in the regular application cycle and will convene an additional focus group to determine root causes and solutions for these targeted industries and occupations.

Appendix