

TARGET strategy for Southwest Minnesota

(Targeting Assets for Regional Growth and Economic Transformation)

By creating detailed economic and workforce profiles for selected industry sectors in our region, we can increase and complement our collective understanding of the sectors that drive our local economies.

From this shared understanding, we can identify opportunities and challenges facing those sectors in terms of economic and workforce development, with the ultimate goal being the creation and alignment of regional solutions and investments to support these sectors.

Workforce investment boards can use these reports to provide guidance to the business service specialist initiative in the region, while business service specialists can use this data to guide their interviews with employers in each sector. Their business interview reports may also assist other regional stakeholders as they prioritize investments and programs. Whether it's monetary investments, new training programs, the focused attention of staff, or other resources; using TARGET in this way will help close the skills gap in the region.

This is a concerted joint effort of the WorkForce Center staff in Southwest Minnesota, including but not limited to labor market information staff, business service staff, and the regional administrator. This strategy will help guide workforce investment board, workforce center staff, and business service staff discussion and activities.

Industry Description of Manufacturing and Important Manufacturing Sectors

The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction.

Establishments in the Manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. However, establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as bakeries, candy stores, and custom tailors, may also be included in this sector. Manufacturing establishments may process materials or may contract with other establishments to process their materials for them. Both types of establishments are included in manufacturing.

The materials, substances, or components transformed by manufacturing establishments are raw materials that are products of agriculture, forestry, fishing, mining, or quarrying as well as products of other manufacturing establishments. The materials used may be purchased directly from producers, obtained through customary trade channels, or secured without recourse to the market by transferring the product from one establishment to another, under the same ownership.

The new product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become an input for an establishment engaged in further manufacturing. For example, the product of the alumina refinery is the input used in the primary production of aluminum; primary aluminum is the input to an aluminum wire drawing plant; and aluminum wire is the input for a fabricated wire product manufacturing establishment.

The subsectors in the Manufacturing sector generally reflect distinct production processes related to material inputs, production equipment, and employee skills. In the machinery area, where assembling is a key activity, parts and accessories for manufactured products are classified in the industry of the finished manufactured item when they are made for separate sale. For example, a replacement refrigerator door would be classified with refrigerators and an attachment for a piece of metal working machinery would be classified with metal working machinery. However, components, input from other manufacturing establishments, are classified based on the production function of the component

manufacturer. For example, electronic components are classified in Subsector 334, Computer and Electronic Product Mfg. and stampings are classified in Subsector 332, Fabricated Metal Product Mfg.

Industries in the Food Manufacturing subsector transform livestock and agricultural products into products for intermediate or final consumption. The industry groups are distinguished by the raw materials (generally of animal or vegetable origin) processed into food products.

The food products manufactured in these establishments are typically sold to wholesalers or retailers for distribution to consumers, but establishments primarily engaged in retailing bakery and candy products made on the premises not for immediate consumption are included.

Industries in the Wood Product Manufacturing subsector manufacture wood products, such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, manufactured homes (i.e., mobile homes), and prefabricated wood buildings. The production processes of the Wood Product Manufacturing subsector include sawing, planing, shaping, laminating, and assembling of wood products starting from logs that are cut into bolts, or lumber that then may be further cut, or shaped by lathes or other shaping tools. The lumber or other transformed wood shapes may also be subsequently planed or smoothed, and assembled into finished products, such as wood containers. The Wood Product Manufacturing subsector includes establishments that make wood products from logs and bolts that are sawed and shaped, and establishments that purchase sawed lumber and make wood products.

The Chemical Manufacturing subsector is based on the transformation of organic and inorganic raw materials by a chemical process and the formulation of products. This subsector distinguishes the production of basic chemicals that comprise the first industry group from the production of intermediate and end products produced by further processing of basic chemicals that make up the remaining industry groups. This industry group includes ethanol production.

Industries in the Plastics and Rubber Products Manufacturing subsector make goods by processing plastics materials and raw rubber. The core technology employed by establishments in this subsector is that of plastics or rubber product production. Plastics and rubber are combined in the same subsector because plastics are increasingly being used as a substitute for rubber; however the subsector is generally restricted to the production of products made of just one material, either solely plastics or rubber.

Industries in the Machinery Manufacturing subsector create end products that apply mechanical force, for example, the application of gears and levers, to perform work. Some important processes for the manufacture of machinery are forging, stamping, bending, forming, and machining that are used to shape individual pieces of metal. Processes, such as welding and assembling are used to join separate parts together. Although these processes are similar to those used in metal fabricating establishments, machinery manufacturing is different because it typically employs multiple metal forming processes in manufacturing the various parts of the machine. Moreover, complex assembly operations are an inherent part of the production process.

In general, design considerations are very important in machinery production. Establishments specialize in making machinery designed for particular applications. Thus, design is considered to be part of the production process for the purpose of implementing NAICS. The NAICS structure reflects this by defining industries and industry groups that make machinery for different applications. A broad distinction exists between machinery that is generally used in a variety of industrial applications (i.e., general purpose machinery) and machinery that is designed to be used in a particular industry (i.e., special purpose machinery). Three industry groups consist of special purpose machinery--Agricultural, Construction, and Mining Machinery Manufacturing; Industrial Machinery Manufacturing; and Commercial and Service Industry Machinery Manufacturing. The other industry groups make general-purpose machinery: Ventilation, Heating, Air Conditioning, and Commercial Refrigeration Equipment Manufacturing;

Metalworking Machinery Manufacturing; Engine, Turbine, and Power Transmission Equipment Manufacturing; and Other General Purpose Machinery Manufacturing.

Industries in the Fabricated Metal Product Manufacturing subsector transform metal into intermediate or end products, other than machinery, computers and electronics, and metal furniture, or treat metals and metal formed products fabricated elsewhere. Important fabricated metal processes are forging, stamping, bending, forming, and machining, used to shape individual pieces of metal; and other processes, such as welding and assembling, used to join separate parts together. Establishments in this subsector may use one of these processes or a combination of these processes.

Industries in the Computer and Electronic Product Manufacturing subsector group establishments that manufacture computers, computer peripherals, communications equipment, and similar electronic products, and establishments that manufacture components for such products. The Computer and Electronic Product Manufacturing industries have been combined in the hierarchy of NAICS because of the economic significance they have attained. Their rapid growth suggests that they will become even more important to the economies of all three North American countries in the future, and in addition their manufacturing processes are fundamentally different from the manufacturing processes of other machinery and equipment. The design and use of integrated circuits and the application of highly specialized miniaturization technologies are common elements in the production technologies of the computer and electronic subsector. Convergence of technology motivates this NAICS subsector. Digitalization of sound recording, for example, causes both the medium (the compact disc) and the equipment to resemble the technologies for recording, storing, transmitting, and manipulating data. Communications technology and equipment have been converging with computer technology. When technologically-related components are in the same sector, it makes it easier to adjust the classification for future changes, without needing to redefine its basic structure. The creation of the Computer and Electronic Product Manufacturing subsector assists in delineating new and emerging industries because the activities that will serve as the probable sources of new industries, such as computer manufacturing and communications equipment manufacturing, or computers and audio equipment, are brought together. As new activities emerge, they are less likely therefore, to cross the subsector boundaries of the classification.

Industries in the Transportation Equipment Manufacturing subsector produce equipment for transporting people and goods. Transportation equipment is a type of machinery. An entire subsector is devoted to this activity because of the significance of its economic size in all three North American countries. Establishments in this subsector utilize production processes similar to those of other machinery manufacturing establishments - bending, forming, welding, machining, and assembling metal or plastic parts into components and finished products. However, the assembly of components and subassemblies and their further assembly into finished vehicles tends to be a more common production process in this subsector than in the Machinery Manufacturing subsector. NAICS has industry groups for the manufacture of equipment for each mode of transport - road, rail, air and water. Parts for motor vehicles warrant a separate industry group because of their importance and because parts manufacture requires less assembly, and the establishments that manufacture only parts are not as vertically integrated as those that make complete vehicles

Industries in the Furniture and Related Product Manufacturing subsector make furniture and related articles, such as mattresses, window blinds, cabinets, and fixtures. The processes used in the manufacture of furniture include the cutting, bending, molding, laminating, and assembly of such materials as wood, metal, glass, plastics, and rattan. However, the production process for furniture is not solely bending metal, cutting and shaping wood, or extruding and molding plastics. Design and fashion trends play an important part in the production of furniture. The integrated design of the article for both esthetic and functional qualities is also a major part of the process of manufacturing furniture. Design services may be performed by the furniture establishment's work force or may be purchased from industrial designers.

The Importance of Manufacturing to Region 8

Because of the manufacturing industry's unique combination of high numbers of jobs and high wages, the Southwest Minnesota WorkForce Council (SWMNWFC) has decided to study the manufacturing industry in order to better address the economic and workforce development issues. One of the first steps taken by the SWMNWFC was to request a report on the current status of manufacturing in the region, as well as recent trends and future projections.

With 10,020 jobs at 179 business establishments, manufacturing is the largest employing industry sector in Region 8 - which includes Cottonwood, Jackson, Lincoln, Lyon, Murray, Nobles, Pipestone, Redwood, and Rock counties. Comprising 18.5 percent of total covered employment in the region, as compared to 13 percent statewide and 11.5 percent in the Twin Cities metropolitan area, manufacturing is an important part of the regional economy. Health care and social assistance provided 8,484 jobs (15.7% of total employment), retail trade offered 6,638 jobs (12.3%), educational services provided 4,448 jobs (8.2%), and accommodation and food services offered 3,644 jobs (6.7%).

Perhaps more important, manufacturing has the largest industry payroll in Region 8, with nearly \$350 million in total wages in 2007. In fact, manufacturing provided 22.4 percent of the covered wages paid in Region 8, as compared to the 15.4 percent provided by the industry statewide. Health care and social assistance provides 13.7 percent of total covered wages in Region 8, educational services provides 9.3 percent, and retail trade provides only 8.5 percent. Average weekly wages are 21.4 percent higher in manufacturing than the total of all industries, a nearly \$6,150 difference over the course of a year.

Beyond the 179 covered manufacturing firms, Region 8 also has 144 manufacturing "non-employers" – primarily self-employed individuals with no paid employees – providing nearly \$4.6 million in sales receipts in 2006. All told, almost 10,200 people are directly employed in manufacturing industries in Region 8, not to mention indirect effects. According to Alliance for American Manufacturing, each manufacturing job supports as many as four other jobs.

Industry Sectors

The largest manufacturing industry sectors in Region 8 include food manufacturing (4,540 jobs), machinery manufacturing (1,846 jobs), wood product manufacturing (758 jobs), furniture and related product manufacturing (514 jobs), computer and electronic product manufacturing (453 jobs), chemical manufacturing (441 jobs), transportation equipment manufacturing (387 jobs), fabricated metal product manufacturing (338 jobs), and printing and related support activities (300 jobs). Region 8 has approximately 2.0% of total covered employment in the state of Minnesota, but 2.9% of statewide manufacturing jobs, giving the region a location quotient of 1.5 in manufacturing. The region has high concentrations of food manufacturing (5.3 location quotient) and machinery manufacturing jobs (2.7 location quotient), including 24.1 percent of the state's animal slaughtering and processing jobs (12.0 location quotient) and 21.5 percent of the state's agriculture, construction, and mining machinery manufacturing jobs (10.7 location quotient). Region 8 also has a high concentration of wood product manufacturing (2.6 location quotient), chemical manufacturing (2.2 location quotient), and furniture and related product manufacturing (2.1 location quotient). (See Table 1.)

The highest paying manufacturing sectors include pharmaceutical and medicine manufacturing (\$779 average weekly wages), agriculture, construction, and mining machinery manufacturing (\$765), machinery manufacturing (\$748), chemical manufacturing (\$737), and wood product manufacturing (\$709). Only two of the region's manufacturing sectors – printing and related support activities (\$543 average weekly wages) and machine shops (\$361) – had lower average weekly wages than the total of all industries in 2007, which was \$551. This again demonstrates manufacturing's relatively high wages.

NAICS Industry Title	NAICS Code	2007 Firms	2007 Jobs	2007 Total Payroll	Avg. Weekly Wage	Percent of MN Industry Employment	Location Quotient
Total, All Industries	0	4,132	54,129	\$1,551,781,354	\$551	2.0%	1.0
Manufacturing	31	179	10,020	\$348,372,908	\$669	2.9%	1.5
Food Manufacturing	311	35	4,540	\$156,279,410	\$662	10.6%	5.3
<i>Animal Slaughtering & Processing</i>	<i>3116</i>	<i>17</i>	<i>3,749</i>	<i>\$111,984,793</i>	<i>\$619</i>	<i>24.1%</i>	<i>12.0</i>
Wood Product Manufacturing	321	16	758	\$27,964,678	\$709	5.1%	2.6
<i>Other Wood Product Manufacturing</i>	<i>3219</i>	<i>11</i>	<i>553</i>	<i>\$19,070,981</i>	<i>\$663</i>	<i>4.8%</i>	<i>2.4</i>
Printing & Related Support Activities	323	12	300	\$8,486,854	\$543	1.0%	0.5
Chemical Manufacturing	325	11	441	\$16,877,052	\$737	4.4%	2.2
<i>Pharmaceutical & Medicine Mfg.</i>	<i>3254</i>	<i>4</i>	<i>184</i>	<i>\$7,430,001</i>	<i>\$779</i>	<i>6.1%</i>	<i>3.0</i>
Plastics & Rubber Product Manufacturing	326	5	68	\$2,041,811	\$574	0.4%	0.2
Nonmetallic Mineral Product Mfg.*	327	15*	110*	\$3,567,919*	\$621*	1.1%	0.5
Fabricated Metal Product Manufacturing	332	19	338	\$10,974,135	\$625	0.8%	0.4
<i>Machine Shops & Threaded Products</i>	<i>3327</i>	<i>8</i>	<i>25</i>	<i>\$469,692</i>	<i>\$361</i>	<i>0.2%</i>	<i>0.1</i>
Machinery Manufacturing	333	14	1,846	\$71,770,379	\$748	5.4%	2.7
<i>Agrl., Constr., & Mining Machinery Mfg.</i>	<i>3331</i>	<i>6</i>	<i>1,624</i>	<i>\$64,626,249</i>	<i>\$765</i>	<i>21.5%</i>	<i>10.7</i>
Computer & Electronic Product Mfg.	334	8	453	\$13,628,782	\$579	0.9%	0.4
Transportation Equipment Manufacturing	336	8	387	\$13,323,278	\$662	2.8%	1.4
Furniture & Related Product Manufacturing	337	12	514	\$14,969,937	\$560	4.2%	2.1
Miscellaneous Manufacturing	339	14	99	\$2,959,238	\$574	0.4%	0.2

Source: DEED Quarterly Census of Employment & Wages (QCEW) program (- 2005 Annual Data)*

Many of the manufacturing firms in the region are considered small businesses, having fewer than 50 employees. However, 11.9 percent of the manufacturing companies in the region had 100 more employees, which was a higher percentage than the state as a whole (9.4%). In contrast, 39.0 percent had between 1 and 4 employees, and another 18.9 percent had between 5 and 9 employees. In sum, 82.4 percent of manufacturing employers in Region 8 had less than 50 employees. Statewide, 35.1 percent of manufacturers had 1 to 4 employees, and 83.2 percent had less than 50 employees.

Despite a national and statewide slowdown in 2007, the region has been adding new jobs in the last two years. Total employment in the region increased 0.5 percent from 2005 to 2007, an increase of 262 net new jobs, while average weekly wages jumped 7.8 percent. Manufacturing employment also held steady over the last two years, gaining 135 net new jobs, in contrast to manufacturing job losses suffered in some other parts of the state. However, average weekly wages did not go up as quickly in manufacturing as in the total of all industries over that time period, rising 7.6 percent.

In Region 8, the largest manufacturing sector saw notable job growth from 2005 to 2007. Food manufacturing added 164 net new jobs, a 3.7 percent increase. But the animal slaughtering and processing specialty added 555 net new jobs, and wages increased 8.0 percent. Machinery manufacturing, the next largest manufacturing sector, saw job losses including -237 jobs in agriculture, construction, and mining machinery manufacturing. However, average weekly wages jumped about 15 percent. The fastest growing sector was pharmaceutical and medicine manufacturing, which jumped 21.1 percent from 2005 to 2007. Fabricated metal product manufacturing, furniture and related product manufacturing, and miscellaneous manufacturing, all gained jobs from 2005 to 2007. No doubt hurt by the housing construction slowdown, wood product manufacturing lost -80 jobs over that timeframe. (See Table 2.)

NAICS Industry Title	NAICS Code	2007 Firms	2007 Jobs	Avg. Weekly Wage	Change from 2005 to 2007			
					Firms	Jobs	Jobs	Wages
Total, All Industries	0	4,132	54,129	\$551	-13	262	0.5%	7.8%
Manufacturing	31	179	10,020	\$669	3	135	1.4%	7.6%
Food Manufacturing	311	35	4,540	\$662	-4	164	3.7%	7.6%
<i>Animal Slaughtering & Processing</i>	<i>3116</i>	<i>17</i>	<i>3,749</i>	<i>\$619</i>	<i>0</i>	<i>555</i>	<i>17.4%</i>	<i>8.0%</i>
Wood Product Manufacturing	321	16	758	\$709	2	-80	-9.5%	7.6%
<i>Other Wood Product Manufacturing</i>	<i>3219</i>	<i>11</i>	<i>553</i>	<i>\$663</i>	<i>1</i>	<i>-65</i>	<i>-10.5%</i>	<i>5.9%</i>
Printing & Related Support Activities	323	12	300	\$543	-3	-33	-9.9%	3.4%
Chemical Manufacturing	325	11	441	\$737	ND	ND	ND	ND
<i>Pharmaceutical & Medicine Mfg.</i>	<i>3254</i>	<i>4</i>	<i>184</i>	<i>\$779</i>	<i>0</i>	<i>32</i>	<i>21.1%</i>	<i>2.9%</i>
Plastics & Rubber Product Manufacturing	326	5	68	\$574	ND	ND	ND	ND
Nonmetallic Mineral Product Mfg.*	327	15*	110*	\$621*	ND	ND	ND	ND
Fabricated Metal Product Manufacturing	332	19	338	\$625	0	55	19.4%	-0.6%
<i>Machine Shops & Threaded Products</i>	<i>3327</i>	<i>8</i>	<i>25</i>	<i>\$361</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>
Machinery Manufacturing	333	14	1,846	\$748	0	-198	-9.7%	14.5%
<i>Agri., Constr., & Mining Machinery Mfg.</i>	<i>3331</i>	<i>6</i>	<i>1,624</i>	<i>\$765</i>	<i>-2</i>	<i>-237</i>	<i>-12.7%</i>	<i>15.9%</i>
Computer & Electronic Product Mfg.	334	8	453	\$579	1	2	0.4%	-6.8%
Transportation Equipment Manufacturing	336	8	387	\$662	ND	ND	ND	ND
Furniture & Related Product Manufacturing	337	12	514	\$560	1	17	3.4%	2.6%
Miscellaneous Manufacturing	339	14	99	\$574	3	14	16.5%	9.1%

Source: DEED Quarterly Census of Employment & Wages (QCEW) program (- 2005 Annual Data)*

Long term, most manufacturing sectors in the 23-county Southwest Minnesota planning region are still projected to see employment increases. Most notably, chemical manufacturing is expected to add over 200 net new jobs from 2004 to 2014, a 37.3 percent ascent. Within that sector, pharmaceutical and medicine manufacturing is expected to keep growing another 29 percent from 2004 to 2014. Printing is also expected to be a fast growing industry in the planning region, but that employment is primarily located in the South Central (Region 9) area and will not likely have an impact in Region 8. Growth is expected to be steady in major regional sectors like food manufacturing (5.9% projected job increase), including more than 670 net new jobs in animal slaughtering and processing, machinery manufacturing (5.4% increase), including 229 net new jobs in agriculture, construction, and mining machinery manufacturing, and fabricated metal product manufacturing (13.7% increase). On the other hand, the region is expected to see declines in transportation equipment manufacturing (-5.7% projected job decline), plastics and rubber product manufacturing (-3.9% decline), computer and electronic manufacturing (-2.7% decline) and miscellaneous manufacturing (-16.7% decline). (See Table 3.)

NAICS Industry Title	NAICS Code	2004 Estimated Employment	2014 Projected Employment	Change in Jobs, 2004-2014	
Total, All Industries	0	209,742	225,258	7.4%	15,516
Manufacturing	31	32,918	35,008	6.3%	2,090
Food Manufacturing	311	9,940	10,531	5.9%	591
<i>Animal Slaughtering & Processing</i>	<i>3116</i>	<i>4,427</i>	<i>5,100</i>	<i>15.2%</i>	<i>673</i>
Wood Product Manufacturing	321	1,256	1,358	8.1%	102
<i>Other Wood Product Manufacturing</i>	<i>3219</i>	<i>939</i>	<i>1,100</i>	<i>17.1%</i>	<i>161</i>
Printing & Related Support Activities	323	4,472	5,600	25.2%	1,128
Chemical Manufacturing	325	565	776	37.3%	211
<i>Pharmaceutical & Medicine Mfg.</i>	<i>3254</i>	<i>186</i>	<i>240</i>	<i>29.0%</i>	<i>54</i>
Plastics & Rubber Product Manufacturing	326	1,286	1,236	-3.9%	-50

Nonmetallic Mineral Product Manufacturing	327	1,015	1,176	15.9%	161
Fabricated Metal Product Manufacturing	332	1,654	1,880	13.7%	226
<i>Machine Shops & Threaded Products</i>	<i>3327</i>	<i>566</i>	<i>670</i>	<i>18.4%</i>	<i>104</i>
Machinery Manufacturing	333	3,874	4,082	5.4%	208
<i>Agri., Constr., & Mining Machinery Mfg.</i>	<i>3331</i>	<i>2,541</i>	<i>2,770</i>	<i>9.0%</i>	<i>229</i>
Computer & Electronic Product Manufacturing	334	2,731	2,657	-2.7%	-74
Transportation Equipment Manufacturing	336	1,585	1,494	-5.7%	-91
Furniture & Related Product Mfg.	337	721	814	12.9%	93
Miscellaneous Manufacturing	339	699	582	-16.7%	-117
<i>Source: DEED 2004-2014 Employment Projections program</i>					

The manufacturing workforce tends to be younger in Region 8 than in the state, thanks to a much higher proportion of workers aged 34 years and younger (40.5% vs. 29.3%). Consequently, the region had a much smaller percentage of workers in the 35 to 54 year old age groups than the state (46.9% vs. 54.6%). This would appear to suggest that manufacturers in the region are doing a good job of getting younger workers into the industry, although turnover rates in the younger age groups are very high. From that point on, once they get established in the industry, they tend to stay long term. The region has a much smaller percentage of workers nearing or in retirement age, with only 12.4 percent of the workforce aged 55 years and over, as compared to 16.2 percent statewide. Also, the workforce is predominantly male (69.0%), leaving an opportunity for females to enter the field. (See Table 4.)

	Region 8	Percent of Workforce	Turnover	State of Minnesota	Percent of Workforce	Turnover
Total Workforce	9,391	100.0%	9.0%	343,954	100.0%	7.4%
14-18 years	149	1.6%	27.6%	3,687	1.1%	22.6%
19-21 years	411	4.4%	23.5%	10,858	3.2%	20.5%
22-24 years	764	8.1%	15.1%	17,068	5.0%	14.2%
25-34 years	2,477	26.4%	11.4%	68,815	20.0%	9.1%
35-44 years	2,238	23.8%	7.6%	89,470	26.0%	6.5%
45-54 years	2,165	23.1%	5.0%	98,316	28.6%	5.4%
55-64 years	1,003	10.7%	4.9%	48,154	14.0%	5.2%
65-99 years	157	1.7%	7.8%	7,585	2.2%	7.8%
Male	6,480	69.0%	8.9%	238,677	69.4%	7.2%
Female	2,908	31.0%	9.2%	105,276	30.6%	7.9%
<i>Source: LEHD Quarterly Workforce Indicators</i>						

According to the 2nd Quarter 2008 Job Vacancy Survey, some of the occupational groups that are showing current demand in the region include production occupations, which had 222 openings and a median wage offer of \$9.20. Of those, about half are for assemblers and fabricators, which had 111 vacancies and a \$8.00 median wage offer; and the other half are for food processing workers, which had 101 vacancies with a \$9.20 median wage offer. Other openings exist for transportation and material moving occupations, which had 44 job vacancies and a median wage offer of \$23.12; installation, maintenance, and repair occupations, which offered 21 vacancies and an \$11.00 median wage offer; and office and administrative support occupations, which had 94 openings and a \$11.42 median wage offer.

The largest occupations in this industry, according to the Industry-Occupation Employment Matrix (which tracks the number of jobs in each industry), include the typical manufacturing occupations, such as slaughterers and meat packers, meat and poultry cutters, packaging and filling machine operators, machinists, computer-controlled machine tool operators, first-line supervisors of production and operating workers; welders, cutters, solderers, and brazers, lathe and turning machine tool setters; grinding,

lapping, polishing, and buffing machine tool setters, and milling and planning machine setters; as well as office jobs like general and operations managers, bookkeeping, accounting, and auditing clerks; general office clerks; shipping, receiving, and traffic clerks, sales representatives, and secretaries. Career possibilities range from low paying, low skills jobs like janitors and cleaners, team assemblers, and production helpers to high paying, high skill jobs like industrial engineers, tool and die makers, industrial production managers, and numerical tool and process control programmers. (See Table 5, 6, 7, and 8.)

Table 5: Occupations in Demand in Animal Slaughtering & Processing

Occupational Title	Industry Percent Dist.	Median Hourly Wage	Median Annual Wage	Regional Jobs	Percent Change	Replace Hires	Total Hires	Common Education
Slaughterers and meat packers	22.7	\$12.95	\$26,936	550	18.6%	180	328	Moderate-term on-the-job training
Meat, poultry, and fish cutters and trimmers	18.2	\$10.89	\$22,651	280	20.2%	160	305	Short-term on-the-job training
Helpers--Production workers	6.0	\$10.75	\$22,360	330	7.6%	270	342	Short-term on-the-job training
Laborers & freight, stock, & material movers	3.9	\$11.72	\$24,378	670	-1.5%	710	710	Short-term on-the-job training
Packers and packagers, hand	3.6	\$7.35	\$15,288	350	8.3%	340	492	Short-term on-the-job training
Packaging and filling machine operators	3.4	\$15.57	\$32,386	520	-9.0%	200	200	Short-term on-the-job training
First-line mgrs. of production & oper. workers	3.1	\$20.16	\$41,933	410	9.3%	340	492	Work experience in a related occupation
Butchers and meat cutters	2.8	\$17.01	\$35,381	80	-5.0%	50	50	Long-term on-the-job training
Maintenance and repair workers, general	2.5	\$14.66	\$30,493	310	7.9%	300	422	Moderate-term on-the-job training
Cleaners of vehicles and equipment	1.8	\$10.93	\$22,734	240	8.4%	240	297	Short-term on-the-job training
Inspectors, testers, sorters, weighers	1.7	\$14.15	\$29,432	200	6.8%	200	260	Moderate-term on-the-job training
Production workers, all other	1.6	\$11.22	\$23,338	360	-9.1%	250	250	Short-term on-the-job training
Food batchmakers	1.5	\$13.48	\$28,038	480	2.8%	100	112	Short-term on-the-job training
Industrial truck and tractor operators	1.5	\$13.14	\$27,331	260	3.8%	160	192	Short-term on-the-job training
Team assemblers	1.5	\$12.29	\$25,563	640	8.2%	550	723	Moderate-term on-the-job training
Janitors and cleaners	1.4	\$10.05	\$20,904	720	ND	ND	ND	Short-term on-the-job training
Truck drivers, heavy and tractor-trailer	1.2	\$16.48	\$34,278	1200	12.7%	740	1,312	Moderate-term on-the-job training
Industrial machinery mechanics	1.2	\$14.94	\$31,075	260	13.6%	160	266	Long-term on-the-job training
Food cooking machine operators and tenders	1.1	\$11.75	\$24,440	110	0.8%	30	31	Short-term on-the-job training
Farmworkers, farm and ranch animals	1.0	\$12.50	\$26,000	110	1.3%	80	84	Short-term on-the-job training

Table 6: Occupations in Demand in Other Wood Product Manufacturing

Occupational Title	Industry Percent Dist.	Median Hourly Wage	Median Annual Wage	Regional Jobs	Percent Change	Replace Hires	Total Hires	Common Education
Team assemblers	14.5	\$12.29	\$25,563	640	8.2%	550	723	Moderate-term on-the-job training
Woodworking machine setters	11.3	ND	ND	ND	-26.6%	40	40	Moderate-term on-the-job training
Carpenters	6.1	\$15.63	\$32,510	130	8.0%	390	583	Long-term on-the-job training
Sawing machine setters	5.4	\$14.06	\$29,245	100	ND	ND	ND	Moderate-term on-the-job training
Cabinetmakers & bench carpenters	4.9	\$13.32	\$27,706	140	ND	ND	ND	Long-term on-the-job training
Laborers & freight, stock & material movers	4.7	\$11.72	\$24,378	670	-1.5%	710	710	Short-term on-the-job training
Helpers--Production workers	4.1	\$10.75	\$22,360	330	7.6%	270	342	Short-term on-the-job training
First-line mgrs. of production & oper. workers	3.6	\$20.16	\$41,933	410	9.3%	340	492	Work experience in a related occupation
Industrial truck and tractor operators	3.0	\$13.14	\$27,331	260	3.8%	160	192	Short-term on-the-job training
Machine feeders and offbearers	2.6	\$10.03	\$20,862	30	-10.5%	140	140	Short-term on-the-job training
Sales representatives, wholesale & mfg.	2.4	\$19.75	\$41,080	480	9.4%	320	435	Moderate-term on-the-job training
Assemblers and fabricators	1.9	\$14.84	\$30,867	110	0.5%	150	153	Moderate-term on-the-job training
Truck drivers, heavy & tractor trailer	1.6	\$16.48	\$34,278	1200	12.7%	740	1,312	Moderate-term on-the-job training
General & operations managers	1.3	\$31.21	\$64,917	560	11.3%	390	622	Bachelor's plus experience ⁸

Cutting, punching, & press machine setters	1.3	\$14.32	\$29,786	120	ND	ND	ND	Moderate-term on-the-job training
Inspectors, testers, sorters, weighers	1.3	\$14.15	\$29,432	200	6.8%	200	260	Moderate-term on-the-job training
Maintenance and repair workers, general	1.3	\$14.66	\$30,493	310	7.9%	300	422	Moderate-term on-the-job training
Office clerks, general	1.2	\$11.26	\$23,421	1,140	4.4%	1,040	1,245	Short-term on-the-job training
Construction laborers	1.1	\$13.52	\$28,122	190	5.4%	100	139	Moderate-term on-the-job training
Bookkeeping, accounting, & auditing clerks	1.1	\$12.82	\$26,666	650	1.0%	630	662	Moderate-term on-the-job training
Woodworkers, all other	1.1	ND	ND	ND	ND	ND	ND	Moderate-term on-the-job training
Shipping, receiving, & traffic clerks	1.0	\$13.11	\$27,269	280	5.4%	190	239	Short-term on-the-job training

Table 7: Occupations in Demand in Agriculture, Construction, and Mining Machinery Manufacturing

Occupational Title	Industry Percent Dist.	Median Hourly Wage	Median Annual Wage	Regional Jobs	Percent Change	Replace Hires	Total Hires	Common Education
Welders, cutters, solderers, and brazers	11.7	\$16.08	\$33,446	200	4.4%	320	370	Long-term on-the-job training
Team assemblers	10.3	\$12.29	\$25,563	640	8.2%	550	723	Moderate-term on-the-job training
First-line mgrs. of production & oper. workers	3.5	\$20.16	\$41,933	410	9.3%	340	492	Work experience in a related occupation
Computer-controlled machine tool operators	3.4	\$15.94	\$33,155	80	11.3%	50	85	Moderate-term on-the-job training
Engine and other machine assemblers	3.2	\$10.95	\$22,776	40	-4.8%	10	10	Short-term on-the-job training
Structural metal fabricators and fitters	2.4	\$14.68	\$30,534	70	-1.8%	30	30	Moderate-term on-the-job training
Mechanical engineers	2.2	\$30.78	\$64,022	100	ND	ND	ND	Bachelor's degree
Laborers & freight, stock, & material movers	2.1	\$11.72	\$24,378	670	-1.5%	710	710	Short-term on-the-job training
Cutting, punching, and press machine setters	2.1	\$14.32	\$29,786	120	ND	ND	ND	Moderate-term on-the-job training
Inspectors, testers, sorters, samplers	2.0	\$14.15	\$29,432	200	6.8%	200	260	Moderate-term on-the-job training
Industrial truck and tractor operators	1.8	\$13.14	\$27,331	260	3.8%	160	192	Short-term on-the-job training
Sales representatives, wholesale and mfg.	1.6	\$19.75	\$41,080	480	9.4%	320	435	Moderate-term on-the-job training
Helpers--Production workers	1.6	\$10.75	\$22,360	330	7.6%	270	342	Short-term on-the-job training
Maintenance and repair workers, general	1.5	\$14.66	\$30,493	310	7.9%	300	422	Moderate-term on-the-job training
Shipping, receiving, and traffic clerks	1.4	\$13.11	\$27,269	280	5.4%	190	239	Short-term on-the-job training
Welding, soldering, brazing machine setters	1.4	\$13.60	\$28,288	40	22.2%	50	87	Moderate-term on-the-job training
Production, planning, and expediting clerks	1.3	\$16.72	\$34,778	70	8.1%	70	92	Short-term on-the-job training
General and operations managers	1.3	\$31.21	\$64,917	560	11.3%	390	622	Bachelor's plus experience ⁸
Bookkeeping, accounting, and auditing clerks	1.3	\$12.82	\$26,666	650	1.0%	630	662	Moderate-term on-the-job training
Purchasing agents	1.2	\$23.47	\$48,818	100	10.6%	80	112	Work experience in a related occupation
Industrial engineers	1.1	\$29.60	\$61,568	130	ND	ND	ND	Bachelor's degree
Mechanical drafters	1.1	\$20.13	\$41,870	50	ND	ND	ND	Postsecondary vocational award
Industrial machinery mechanics	1.0	\$14.94	\$31,075	260	13.6%	160	266	Long-term on-the-job training

Table 8: Occupations in Demand in Pharmaceutical and Medicine Manufacturing

Occupational Title	Industry Percent Dist.	Median Hourly Wage	Median Annual Wage	Regional Jobs	Percent Change	Replace Hires	Total Hires	Common Education
Packaging & filling machine operators	7.0	\$15.57	\$32,386	520	-9.0%	200	200	Short-term on-the-job training
Chemists	5.2	\$32.75	\$68,120	90	ND	ND	ND	Bachelor's degree
Mixing & blending machine setters	3.6	\$16.97	\$35,298	120	-1.1%	70	70	Moderate-term on-the-job training
Chemical equipment operators	3.5	ND	ND	ND	8.6%	10	13	Moderate-term on-the-job training
Medical scientists	3.4	\$30.27	ND	30	ND	ND	ND	Doctoral degree
Inspectors, testers, sorters, samplers	3.0	\$14.15	\$29,432	200	6.8%	200	260	Moderate-term on-the-job training
First-line mgrs. of production & oper. workers	2.6	\$20.16	\$41,933	410	9.3%	340	492	Work experience in a related occupation
Biological technicians	2.5	\$20.16	\$41,933	30	5.3%	1	1	Associate degree
Chemical technicians	2.3	\$19.58	\$40,726	10	5.4%	20	24	Associate degree

Maintenance and repair workers, general	2.1	\$14.66	\$30,493	310	7.9%	300	422	Moderate-term on-the-job training
Sales representatives, wholesale & mfg.	2.0	\$19.75	\$41,080	480	9.4%	320	435	Moderate-term on-the-job training
Separating, filtering & still machine operators	1.9	\$14.60	\$30,368	190	33.3%	40	77	Moderate-term on-the-job training
Business operations specialists, all other	1.8	\$18.74	\$38,979	1,010	22.6%	420	972	Bachelor's degree
Executive secretaries	1.7	\$17.51	\$36,421	470	6.1%	170	224	Moderate-term on-the-job training
Team assemblers	1.7	\$12.29	\$25,563	640	8.2%	550	723	Moderate-term on-the-job training
General and operations managers	1.6	\$31.21	\$64,917	560	11.3%	390	622	Bachelor's plus experience ⁸
Laborers & freight, stock & material movers	1.6	\$11.72	\$24,378	670	-1.5%	710	710	Short-term on-the-job training
Biochemists & biophysicists	1.4	\$23.60	\$49,088	30	ND	ND	ND	Doctoral degree
Machine feeders & offbearers	1.4	\$10.03	\$20,862	30	-10.5%	140	140	Short-term on-the-job training
Packers & packagers, hand	1.4	\$7.35	\$15,288	350	8.3%	340	492	Short-term on-the-job training
Shipping, receiving, & traffic clerks	1.4	\$13.11	\$27,269	280	5.4%	190	239	Short-term on-the-job training
Customer service representatives	1.4	\$13.18	\$27,414	510	19.3%	310	708	Moderate-term on-the-job training
Secretaries & administrative assistants	1.3	\$14.73	\$30,638	230	-9.4%	170	170	Moderate-term on-the-job training
Industrial production managers	1.3	\$35.58	\$74,006	110	7.6%	60	82	Bachelor's degree

Source: Bureau of Labor Statistics Industry by Occupation Matrix; DEED Salary Survey

Although the region has a higher percentage of younger workers, many employers feel that the pipeline of new skilled workers into the industry has been declining in recent years. There are two postsecondary institutions located within the nine-county Region 8 area: Minnesota West Community & Technical College, with campuses in Jackson, Pipestone, and Worthington (as well as other locations in Canby and Granite Falls); and Southwest Minnesota State University in Marshall. According to data from the National Center for Education Statistics, there were just over 155 program completers in manufacturing-related programs in the 2006-2007 school year, although nearly one-third were certificate completers in the popular farm and ranch management program at Minnesota West. Exclude that program, and most of the other manufacturing related programs are much smaller, including computer technology (7 completers), machine tool technology/machinists (7 completers), robotics technology (8 completers), hydraulics and fluid power technology (4 completers), and biology laboratory technician (2 completers). Southwest Minnesota State has successful programs in biological sciences (12 completers), environmental science (6 completers), and chemistry (7 completers). (See Table 9.)

Table 9: Completions 2006-2007				
Minnesota West Community & Technical College				
	1 Year Certificate	1 to 2 Year Certificate	Associate	2 to 4 Year Certificate
Agribusiness/Agricultural Business Operations			2	
Agricultural & Food Products Processing	5		4	
Agricultural Production Operations			3	
Agriculture, General			5	
Farm & Ranch Management	49	8		
Computer Technology			7	
Hydraulics & Fluid Power Technology			1	3
Manufacturing Technology			2	
Robotics Technology			2	6
Machine Tool Technology/Machinist		7		
Biology Technician/Biology Laboratory Technician			2	
Southwest Minnesota State University				
	Associate	Bachelors	Masters	
Agribusiness/Agricultural Business Operations		5		
Biological Sciences		12		
Accounting	2	23		
Environmental Science		6		
Chemistry		7		

Source: National Center for Education Statistics

According to the InfoUSA Employer Database, some of the largest manufacturing firms in the region include food manufacturers like the Schwan Food Co. in Marshall, Swift & Co. in Worthington, PM Beef Holdings in Windom, T&T Turkeys in Morgan, Ellison Meat Co. in Pipestone, Gold 'N Plump in Luverne, Turkey Valley Farms in Marshall, Farley's & Sathers Candy Co. in Round Lake, and Highland Manufacturing in Worthington; wood product manufacturers like Universal Forest Products in Minneota, Jonti-Craft in Wabasso, Fullerton Building Systems in Worthington, Marshall Truss Systems in Marshall, and Extreme Panel Technologies in Cottonwood; printers like Page 1 Printers in Slayton and Livewire Printing of Jackson; chemical manufacturers like Heron Lake Bioenergy in Heron Lake, Agri-Energy in Luverne, ADM in Marshall, Country Pride Service Co-op in Bingham Lake, Intervet in Worthington, and Monsanto Co. in Redwood Falls; plastic and rubber product manufacturing firms like Fey Industries in Edgerton and Sailor Plastics in Adrian; wiredrawing firms like Technical Services-Electronics in Jackson; agriculture machinery manufacturers like AgCo in Jackson, Balzer Inc. in Mountain Lake, and Bedford Industries in Worthington; computer and electronic product manufacturers like BH Electronics in Marshall, Hi Rel Systems in Marshall, and Cable Time in Marshall; transportation equipment manufacturers like Midwest Fire Equipment & Repair in Luverne and Redwood Metal Works in Redwood Falls; cabinet manufacturers like Mid Continent Cabinetry in Cottonwood and Country Cupboard in Luverne; and miscellaneous manufacturers like Universal Packaging Solutions in Edgerton, Big Game Products in Windom, ActiveAid Rehab Equip. Manufacturing in Redwood Falls, Suzlon Rotor Corporation in Pipestone, and Daktronics in Redwood Falls; among many more.

Business Visit Information

- 1. In the specific sector, what are the main workforce development issues? Are the workforce issues the same for large versus small employers?*

The main workforce development issue for **food manufacturing** would be the ability to recruit and retain entry level and skilled workers and language barrier. The issues are pretty much the same for large and small employers.

The main workforce development issues for **metal product manufacturing** would be recruitment of skilled workers and the ability to retain them. The larger employers do not experience the extreme shortage as the smaller business as they have the ability to pay a higher wage and may have benefits or better benefits. **Smaller businesses deal with turnover due to area competitors offering higher wages and/or benefits.** If training is provided by the employer on-site, it is more than likely to be the larger employer would be the one doing it.

Computer and electronic product manufacturing struggle with recruitment of highly skilled workers, such as engineers and electronics technicians. It is difficult to convince candidates to relocate in southwest Minnesota.

- 2. Are there any specific occupations they're having a hard time filling? If so, why do they think they're having a hard time? If different, why do you think they're having a hard time?*

Positions hard to fill include production workers, maintenance mechanics, and lead workers. **Food manufacturing** does have a lower retention rate that other industries and businesses are very aware of it. Production workforce has a tendency to be a bit more migratory. Industry has experienced line workers not wanting to become supervisors or lead workers and fewer people in the maintenance occupations. Thus, they have had to increase pay in order to recruit demand positions.

Positions most difficult to recruit in the **metal manufacturing and computer and electronic product manufacturing** industry would include: welders, fabricators, machinists, supervisors, technicians, designers and/or engineering positions. 6W counties and **some Region 8 counties** have experienced declines in population as well as fewer individuals participating in training for these occupations.

Industry has an image problem; seen as dirty and no room for advancement; also little marketing is done to high school students and adults to promote career opportunities in this industry. Seems that there is less familiarity about the availability of positions – many of the individuals currently in the occupation had a farm background with some general knowledge of what is involved in doing these jobs. Engineer or design positions are a bit different. It is just difficult to recruit some of the high level people to greater Minnesota.

3. *Do they have any concerns about bringing in or retaining younger workers? If so, what are they doing to address it? (i.e. job fairs, career days at schools, scholarships, internships, etc.)*

Food, metal and computer and electronic manufacturing all have concerns regarding recruiting and retaining younger workers. Most of the larger businesses do participate in job fairs, work with the school system, sponsor Junior Achievement classrooms and provide volunteers, and work with technical colleges for training when the opportunity is there. There is a general feeling that there should be more information sharing between business, general public and education about employment opportunities in the region.

They have concerns about bringing in and retaining younger workers. They have experienced a “disconnect” in a certain age group (early 20’s to lower 30’s) in the younger workers that just have a different work ethic. They don’t stay in one place for very long. All areas of manufacturing are concerned with the work ethic and retention of their younger workforce.

4. *Do they have any concerns about bringing in or retaining older workers? If so, what are they doing to address it? (i.e. succession planning, mentoring, etc.)*

Many of the businesses do have a number of older workers and may be able to retain them to an older age due to the need to maintain healthcare coverage. Due to the labor shortage, many businesses are providing internal training at various degrees. In most cases, the “older” more experienced workers are providing this training in a much less formal type of mentoring.

5. *How is their business currently performing? Are they growing, holding steady, or declining?*

Demand for food has remained very strong and continues to grow even with increasing costs of food. **Food manufacturing** businesses in these counties are either holding steady or continuing to grow.

Some of the **metal fabricating** businesses are growing and others are just holding their own. This has somewhat reduced the higher demand to recruit skilled workers as some businesses have been able to shift employees from area to area to better meet their manufacturing demand.

With the ever increasing and changing costs of commodities and fuel, businesses in all industries have been forced to change pricing and in some cases decrease profits. There are new opportunities for the businesses out pursuing them, but difficult to get materials to get jobs done.

6. *What are their business plans for the future? Are they planning to expand or contract?*

Food manufacturing businesses are looking to the future for potential growth.

Considering the volatile market and the changing economy this can vary with size and location, smaller **metal fabricating manufacturers** will be happy to maintain what they have. We have a couple larger manufacturing businesses that have purchased facilities overseas to accommodate labor costs and assist their supply chain. **However, with the overseas businesses, some are experiencing quality issues with the product and long waiting periods for products or parts. Many smaller**

businesses stated they could expand or accept more business ; however they did not have the workforce to deliver the product.

7. Are they introducing new technology? Do they seek outside money for the equipment?

Food manufacturing is continually looking at new technology to increase efficiencies. They look for money anywhere they can get it for equipment. Department of Agriculture, DEED, EDA local revolving loan funds, regional development commissions and financial institutions are all included.

Larger **metal manufacturing** businesses are continuing to introduce new technology and lean processes and are not necessary seeking outside money for equipment.

8. Do they spend money or time on incumbent worker training? Is it handled in-house or through local education partners? If so, who do they work with?

All **manufacturers** are doing some kind of incumbent worker training in order to meet their workforce demands. A couple of the larger manufacturers have made more of a commitment (probably because they can) to do their own in-house training. One specifically developed their own customized training program (local technical college) for welders and paid for the entire costs. About half of the participants were new employees and half were incumbent workers. Another example is a business that has its own on the job training program in place to train their future welders and machine operators. Many of the smaller employers will make due with what they have and work more overtime.

ESL through Adult Basic Education and the local technical colleges are instrumental in any of the skills training done in the region.

9. What have we (DEED, PIC, etc.) done to help them?

We are working with job training providers to develop some incumbent worker quality training. We have connected business with adult basic education for ESL, and the SBDC for business planning and finance options (SBDC also coordinates with SWIF for their loan programs).

Business services staff brought a group of metal manufacturing businesses from west central and southwestern Minnesota together in July to identify their greatest issues and concerns and provide them with information about what other businesses are doing, training options through customized training and apprenticeship program, services available to them through Adult Basic Education, and labor market information. DEED also provides Job bank availability, WOTC, connecting business with customized training opportunities, and SBDC and AURI for research.

10. What have other government agencies done to help – or hinder – them?

Governmental issues that most often come up: Workers' Compensation costs and taxes.