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 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 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.

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.

The Importance of Manufacturing to Region 6W

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 2,677 jobs at 90 business establishments, manufacturing is the second largest employing industry sector in Region 6W - which includes Big Stone, Chippewa, Lac qui Parle, Swift, and Yellow Medicine counties – behind only health care and social assistance. Comprising 14.3 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 3,685 jobs (19.6% of total employment), educational services offered 1,800 jobs (9.6%), and retail trade provided 1,740 jobs (9.3%).

Perhaps more important, manufacturing has the largest industry payroll in Region 6W, with nearly $100 million in total wages in 2007. In fact, manufacturing provided 18.0 percent of the covered wages paid in Region 6W, as compared to the 15.4 percent provided by the industry statewide. Health care and social assistance provides 17.8 percent of total covered wages in Region 6W, educational services provides 9.9 percent, and retail trade provides only 5.1 percent. Average weekly wages are 26.2 percent higher in manufacturing than the total of all industries, a nearly $8,000 difference over the course of a year.

Beyond the 90 covered manufacturing firms, Region 6W also has 55 manufacturing "non-employers" – primarily self-employed individuals with no paid employees – providing nearly $1.9 million in sales receipts in 2006. All told, more than 2,700 people are directly employed in manufacturing industries in Region 6W, 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 6W include food manufacturing (656 jobs), machinery manufacturing (582 jobs), fabricated metal product manufacturing (367 jobs), and computer and electronic product manufacturing (301 jobs). Region 6W has approximately 0.7% of total covered employment in the state of Minnesota, but 0.8% of statewide manufacturing jobs, giving the region a location quotient of 1.1 in manufacturing. The region has high concentrations of food manufacturing (2.2 location quotient) and machinery manufacturing jobs (2.5 location quotient), including 6.4 percent of the state's agriculture, construction, and mining machinery manufacturing jobs (9.2 location quotient). Region 6W also has a high concentration of machine shops (2.8 location quotient), despite having only an average amount of fabricated metal manufacturing jobs. (See Table 1.)

The highest paying manufacturing sectors include computer and electronic product manufacturing ($1,069 average weekly wages), chemical manufacturing ($973), plastics and rubber product manufacturing ($844), and machinery manufacturing ($761). Only two of the region's manufacturing sectors – miscellaneous manufacturing ($548 average weekly wages) and printing and related support activities ($296) – had lower average weekly wages than the total of all industries in 2007, which was $565. This again demonstrates manufacturing's relatively high wages.

Table 1: Industry Employment Statistics and Competitive Situation

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	1,643	18,763	$551,500,441	$565	0.7%	1.0
Manufacturing	31	90	2,677	$99,244,248	$713	0.8%	1.1
Food Manufacturing	311	15	656	$19,492,545	$571	1.5%	2.2
Printing & Related Support Activities	323	5	9	$130,755	$296	0.0%	0.0
Chemical Manufacturing	325	3	95	$4,815,507	$973	0.9%	1.3
Plastics & Rubber Product Manufacturing	326	3	129	$5,649,762	$844	0.8%	1.2
Nonmetallic Mineral Product Mfg.*	327	10*	36*	$1,063,018*	$569*	0.3%	0.5
Fabricated Metal Product Manufacturing	332	16	367	$12,725,667	$667	0.8%	1.2
Machine Shops & Threaded Products	*3327*	*11*	*270*	*$8,667,561*	*$617*	*1.9%*	*2.8*
Machinery Manufacturing	333	12	582	$23,013,265	$761	1.7%	2.5
Agri., Constr., & Mining Machinery Mfg.	*3331*	*6*	*487*	*$19,963,473*	*$788*	*6.4%*	*9.2*
Computer & Electronic Product Mfg.	334	4	301	$16,719,703	$1,069	0.6%	0.8
Miscellaneous Manufacturing	339	7	30	$845,622	$548	0.1%	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. In fact, only 7.3 percent of the manufacturing companies in the region had between 100 and 249 employees, and none had 250 or more employees. In contrast, 41.5 percent had between 1 and 4 employees, and another 22.0 percent had between 5 and 9 employees. In sum, 87.8 percent of manufacturing employers in Region 6W had less than 50 employees. Statewide, 9.4 percent of manufacturers had 100 or more employees, and 83.2 percent had less than 50 employees.

Despite a national and statewide slowdown in 2007, the region has been consistently adding new jobs in the last two years. Total employment in the region increased 2.3 percent from 2005 to 2007, an increase of 429 net new jobs, while average weekly wages jumped 10.6 percent. Manufacturing employment held steady over the last two years, gaining 2 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 7.7 percent.

In Region 6W, the largest manufacturing sectors were seeing notable job growth. Food manufacturing added 48 net new jobs, a 7.9 percent increase, from 2005 to 2007. However, wages increased just 2.5 percent. Fabricated metal product manufacturing gained one new business establishment and 44 net new jobs, as well as a 6.4 percent increase in average weekly wages. And machinery manufacturing enjoyed a 4.9 percent job expansion, netting 27 new jobs from 2005 to 2007. Computer and electronic product manufacturing held steady in the region over the last two years, but saw a significant jump in wages. Miscellaneous manufacturing and printing both saw slight job declines. (See Table 2.)

Table 2: Industry Employment Statistics and Conditions from 2005 to 2007								
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	1,643	18,763	$565	-48	429	2.3%	10.6%
Manufacturing	31	90	2,677	$713	2	2	0.1%	7.7%
Food Manufacturing	311	15	656	$571	0	48	7.9%	2.5%
Printing & Related Support Activities	323	5	9	$296	-1	-1	-10.0%	3.1%
Chemical Manufacturing	325	3	95	$973	ND	ND	ND	ND
Plastics & Rubber Product Manufacturing	326	3	129	$844	ND	ND	ND	ND
Nonmetallic Mineral Product Mfg.*	327	10*	36*	$569*	ND	ND	ND	ND
Fabricated Metal Product Manufacturing	332	16	367	$667	1	44	13.6%	6.4%
Machine Shops & Threaded Products	*3327*	*11*	*270*	*$617*	ND	ND	ND	ND
Machinery Manufacturing	333	12	582	$761	2	27	4.9%	4.7%
Agri., Constr., & Mining Machinery Mfg.	*3331*	*6*	*487*	*$788*	ND	ND	ND	ND
Computer & Electronic Product Mfg.	334	4	301	$1,069	0	0	0.0%	11.8%
Miscellaneous Manufacturing	339	7	30	$548	0	-7	-18.9%	19.1%
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. 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 6W. Growth is expected to be steady in major regional sectors like food manufacturing (5.9% projected job increase), machinery manufacturing (5.4% increase), and fabricated metal product manufacturing (13.7% increase). On the other hand, the region is expected to see declines in computer and electronic manufacturing (-2.7% projected job decline) and miscellaneous manufacturing (-16.7% decline). (See Table 3.)

Table 3: Southwest Minnesota Industry Employment Projections, 2004-2014					
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
Printing & Related Support Activities	323	4,472	5,600	25.2%	1,128
Chemical Manufacturing	325	565	776	37.3%	211
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
Machine Shops & Threaded Products	*3327*	*566*	*670*	*18.4%*	*104*
Machinery Manufacturing	333	3,874	4,082	5.4%	208
Agri., Constr., & Mining Machinery Mfg.	*3331*	*2,541*	*2,770*	*9.0%*	*229*
Computer & Electronic Product Manufacturing	334	2,731	2,657	-2.7%	-74
Miscellaneous Manufacturing	339	699	582	-16.7%	-117
Source: DEED 2004-2014 Employment Projections program					

The manufacturing workforce tends to be younger in Region 6W than in the state, thanks to a much higher proportion of workers aged 34 years and younger (35.9% vs. 29.3%). Consequently, the region had a much smaller percentage of workers in the prime 25 to 54 year old age groups than the state (69.3% vs. 74.6%). 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. Also, the workforce is predominantly male (69.5%), leaving an opportunity for females to enter the field. (See Table 4.)

Table 4: Workforce Demographics in Manufacturing, 2006-2007						
	Region 6W	Percent of Workforce	Turnover	State of Minnesota	Percent of Workforce	Turnover
Total Workforce	2,156	100.0%	8.0%	343,954	100.0%	7.4%
14-18 years	33	1.5%	25.9%	3,687	1.1%	22.6%
19-21 years	108	5.0%	23.4%	10,858	3.2%	20.5%
22-24 years	141	6.5%	15.2%	17,068	5.0%	14.2%
25-34 years	494	22.9%	9.0%	68,815	20.0%	9.1%
35-44 years	486	22.5%	6.8%	89,470	26.0%	6.5%
45-54 years	516	23.9%	5.5%	98,316	28.6%	5.4%
55-64 years	304	14.1%	3.3%	48,154	14.0%	5.2%
65-99 years	52	2.4%	9.6%	7,585	2.2%	7.8%
Male	1,498	69.5%	8.5%	238,677	69.4%	7.2%
Female	657	30.5%	7.0%	105,276	30.6%	7.9%
Source: LEHD Quarterly Workforce Indicators						

According to the 2nd Quarter 2008 Job Vacancy Survey, some of the occupational groups that are showing current demand in the region include transportation and material moving occupations, which had 32 job vacancies and a median wage offer of $10.40; installation, maintenance, and repair occupations, which offered 7 vacancies and a $21.64 median wage offer; and office and administrative support occupations, which had 15 openings and a $10.00 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	$12.46	$25,917	40	18.6%	180	328	Moderate-term on-the-job training
Meat, poultry, and fish cutters and trimmers	18.2	$11.31	$23,525	10	20.2%	160	305	Short-term on-the-job training
Helpers--Production workers	6.0	$9.49	$19,739	70	7.6%	270	342	Short-term on-the-job training
Laborers & freight, stock, & material movers	3.9	$13.30	$27,664	180	-1.5%	710	710	Short-term on-the-job training
Packers and packagers, hand	3.6	$10.84	$22,547	100	8.3%	340	492	Short-term on-the-job training
Packaging and filling machine operators	3.4	$13.67	$28,434	90	-9.0%	200	200	Short-term on-the-job training
First-line mgrs. of production & oper. workers	3.1	$19.05	$39,624	130	9.3%	340	492	Work experience in a related occupation
Butchers and meat cutters	2.8	$16.57	$34,466	15	-5.0%	50	50	Long-term on-the-job training

Maintenance and repair workers, general	2.5	$14.62	$30,410	120	7.9%	300	422	Moderate-term on-the-job training
Cleaners of vehicles and equipment	1.8	$8.71	$18,117	60	8.4%	240	297	Short-term on-the-job training
Inspectors, testers, sorters, weighers	1.7	$12.29	$25,563	50	6.8%	200	260	Moderate-term on-the-job training
Production workers, all other	1.6	$10.85	$22,568	80	-9.1%	250	250	Short-term on-the-job training
Food batchmakers	1.5	$12.60	$26,208	30	2.8%	100	112	Short-term on-the-job training
Industrial truck and tractor operators	1.5	$12.55	$26,104	70	3.8%	160	192	Short-term on-the-job training
Team assemblers	1.5	$12.83	$26,686	240	8.2%	550	723	Moderate-term on-the-job training
Janitors and cleaners	1.4	$10.50	$21,840	270	ND	ND	ND	Short-term on-the-job training
Truck drivers, heavy and tractor-trailer	1.2	$14.31	$29,765	320	12.7%	740	1,312	Moderate-term on-the-job training
Industrial machinery mechanics	1.2	$17.78	$36,982	60	13.6%	160	266	Long-term on-the-job training
Food cooking machine operators and tenders	1.1	$12.41	$25,813	5	0.8%	30	31	Short-term on-the-job training
Farmworkers, farm and ranch animals	1.0	$11.09	$23,067	5	1.3%	80	84	Short-term on-the-job training

Table 6: Occupations in Demand in Machine Shops & Threaded Products

Occupational Title	Industry Percent Dist.	Median Hourly Wage	Median Annual Wage	Regional Jobs	Percent Change	Replace Hires	Total Hires	Common Education
Machinists	26.3	$19.82	$41,226	70	8.2%	90	120	Long-term on-the-job training
Computer-controlled machine tool operators	7.7	$25.95	$53,976	40	11.3%	50	85	Moderate-term on-the-job training
First-line mgrs. of production & oper. workers	5.5	$19.05	$39,624	130	9.3%	340	492	Work experience in a related occupation
Welders, cutters, solderers	4.3	$13.48	$28,038	80	4.4%	320	370	Long-term on-the-job training
Lathe & turning machine tool setters	3.6	$17.59	$36,587	10	4.5%	20	24	Moderate-term on-the-job training
General & operations managers	2.6	$28.99	$60,299	190	11.3%	390	622	Bachelor's plus experience8
Grinding, lapping, polishing, & buffing machine tool setters	2.4	$16.32	$33,946	60	0.0%	20	20	Moderate-term on-the-job training
Bookkeeping, acctg., & auditing clerks	2.2	$13.20	$27,456	220	1.0%	630	662	Moderate-term on-the-job training
Milling & planing machine setters, metal	2.1	ND	ND	ND	4.5%	1	1	Moderate-term on-the-job training
Inspectors, testers, sorters, samplers	2.0	$12.29	$25,563	50	6.8%	200	260	Moderate-term on-the-job training
Office clerks, general	1.9	$10.34	$21,507	420	4.4%	1,040	1,245	Short-term on-the-job training
Helpers--Production workers	1.8	$9.49	$19,739	70	7.6%	270	342	Short-term on-the-job training
Drilling & boring machine tool setters, metal	1.7	ND	ND	ND	8.3%	10	14	Moderate-term on-the-job training
Team assemblers	1.5	$9.99	$20,779	280	8.2%	550	723	Moderate-term on-the-job training
Cutting, punching, & press machine setters	1.5	$15.13	$31,470	40	ND	ND	ND	Moderate-term on-the-job training
Shipping, receiving, & traffic clerks	1.5	$13.44	$27,955	80	5.4%	190	239	Short-term on-the-job training
Sales representatives, wholesale & mfg.	1.4	$19.18	$39,894	160	9.4%	320	435	Moderate-term on-the-job training
Multiple machine tool setters, metal & plastic	1.4	ND	ND	ND	ND	ND	ND	Moderate-term on-the-job training
Secretaries	1.3	$14.10	$29,328	80	-9.4%	170	170	Moderate-term on-the-job training
Tool & die makers	1.3	$20.17	$41,954	20	ND	ND	ND	Long-term on-the-job training
Numerical tool & proc. control programmers	1.3	ND	ND	ND	9.1%	1	1	Long-term on-the-job training
Industrial production managers	1.2	$33.83	$70,366	30	7.6%	60	82	Bachelor's degree
Maint. & repair workers, general	1.1	$14.62	$30,410	120	7.9%	300	422	Moderate-term on-the-job training
Janitors & cleaners	1.0	$10.50	$21,840	270	ND	ND	ND	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	$13.48	$28,038	80	4.4%	320	370	Long-term on-the-job training
Team assemblers	10.3	$9.99	$20,779	280	8.2%	550	723	Moderate-term on-the-job training
First-line mgrs. of production workers	3.5	$19.05	$39,624	130	9.3%	340	492	Work experience in a related occupation
Computer-controlled machine tool operators	3.4	$25.95	$53,976	40	11.3%	50	85	Moderate-term on-the-job training

Engine and other machine assemblers	3.2	ND	ND	ND	-4.8%	10	10	Short-term on-the-job training
Structural metal fabricators and fitters	2.4	ND	ND	ND	-1.8%	30	30	Moderate-term on-the-job training
Mechanical engineers	2.2	ND	ND	ND	ND	ND	ND	Bachelor's degree
Laborers & freight, stock, & material movers	2.1	$13.30	$27,664	180	-1.5%	710	710	Short-term on-the-job training
Cutting, punching, and press machine setters	2.1	$15.13	$31,470	40	ND	ND	ND	Moderate-term on-the-job training
Inspectors, testers, sorters, samplers	2.0	$12.29	$25,563	50	6.8%	200	260	Moderate-term on-the-job training
Industrial truck and tractor operators	1.8	$12.55	$26,104	70	3.8%	160	192	Short-term on-the-job training
Sales representatives, wholesale and mfg.	1.6	$19.18	$39,894	160	9.4%	320	435	Moderate-term on-the-job training
Helpers--Production workers	1.6	$9.49	$19,739	70	7.6%	270	342	Short-term on-the-job training
Maintenance and repair workers, general	1.5	$14.62	$30,410	120	7.9%	300	422	Moderate-term on-the-job training
Shipping, receiving, and traffic clerks	1.4	$13.44	$27,955	80	5.4%	190	239	Short-term on-the-job training
Welding, soldering, brazing machine setters	1.4	ND	ND	ND	22.2%	50	87	Moderate-term on-the-job training
Production, planning, and expediting clerks	1.3	$15.40	$32,032	20	8.1%	70	92	Short-term on-the-job training
General and operations managers	1.3	$28.99	$60,299	190	11.3%	390	622	Bachelor's plus experience8
Bookkeeping, accounting, and auditing clerks	1.3	$13.20	$27,456	220	1.0%	630	662	Moderate-term on-the-job training
Purchasing agents	1.2	$19.79	$41,163	40	10.6%	80	112	Work experience in a related occupation
Industrial engineers	1.1	$25.01	$52,021	40	ND	ND	ND	Bachelor's degree
Mechanical drafters	1.1	$17.89	$37,211	20	ND	ND	ND	Postsecondary vocational award
Industrial machinery mechanics	1.0	$17.78	$36,982	60	13.6%	160	266	Long-term on-the-job training

Table 8: Occupations in Demand in Semiconductor & Other Electronic Product Manufacturing

Occupational Title	Industry Percent Dist.	Median Hourly Wage	Median Annual Wage	Regional Jobs	Percent Change	Replace Hires	Total Hires	Common Education
Electrical & electronic equipment assemblers	10.9	ND	ND	ND	-5.2%	230	230	Short-term on-the-job training
Semiconductor processors	8.2	ND	ND	ND	ND	ND	ND	Associate degree
Team assemblers	4.5	$9.99	$20,779	280	8.2%	550	723	Moderate-term on-the-job training
Electrical & electr. engineering technicians	4.1	ND	ND	ND	-0.6%	40	40	Associate degree
Inspectors, testers, sorters, samplers	3.9	$12.29	$25,563	50	6.8%	200	260	Moderate-term on-the-job training
Electronics engineers, except computer	3.9	$27.54	$57,283	160	12.8%	30	49	Bachelor's degree
First-line mgrs. of production workers	2.8	$19.05	$39,624	130	9.3%	340	492	Work experience in a related occupation
Electrical engineers	2.6	$27.54	$57,283	160	12.8%	30	49	Bachelor's degree
Industrial engineers	2.5	$25.01	$52,021	40	ND	ND	ND	Bachelor's degree
Engineering managers	2.3	$43.49	$90,459	30	12.0%	30	45	Bachelor's plus experience8
Electromechanical equipment assemblers	1.7	ND	ND	ND	-8.8%	30	30	Associate degree
Computer software engineers	1.5	ND	ND	ND	52.0%	30	160	Bachelor's degree
Production workers, all other	1.3	$10.85	$22,568	80	-9.1%	250	250	Short-term on-the-job training
Shipping, receiving, and traffic clerks	1.3	$13.44	$27,955	80	5.4%	190	239	Short-term on-the-job training
Purchasing agents	1.3	$19.79	$41,163	40	10.6%	80	112	Work experience in a related occupation
Production, planning, and expediting clerks	1.2	$15.40	$32,032	20	8.1%	70	92	Short-term on-the-job training
General and operations managers	1.2	$28.99	$60,299	190	11.3%	390	622	Bachelor's plus experience8
Coil winders, tapers, and finishers	1.1	ND	ND	ND	-19.4%	20	20	Short-term on-the-job training
Machinists	1.1	$19.82	$41,226	70	8.2%	90	120	Long-term on-the-job training
Industrial production managers	1.0	$33.83	$70,366	30	7.6%	60	82	Bachelor's degree
Maintenance and repair workers, general	1.0	$14.62	$30,410	120	7.9%	300	422	Moderate-term on-the-job training
Industrial production managers	1.2	$33.57	$69,826	100	23.2	20	42	Bachelor's degree
Maint. & repair workers, general	1.1	$16.55	$34,424	310	20.6	260	536	Moderate-term on-the-job training
Janitors & cleaners	1.0	$10.61	$22,069	730	28.1	860	2,140	Short-term on-the-job training

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. The only postsecondary institution located within the five-county Region 6W area is Minnesota West Community & Technical College, with campuses in Granite Falls and Canby (as well as other locations in Jackson, Pipestone, and Worthington). According to data from the National Center for Education Statistics, there were just over 100 program completers in manufacturing-related programs in the 2006-2007 school year, although nearly half were certificate completers in the popular farm and ranch management program. 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). (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	

Source: National Center for Education Statistics

According to the InfoUSA Employer Database, some of the largest manufacturing firms in the region include Friendship Homes of Minnesota in Montevideo, Case CNH in Benson, MicroDynamics in Montevideo, SL Montevideo Technology in Montevideo, HoffCo in Wood Lake, Associated Milk Producers in Dawson, Chandler Industries in Montevideo, Redball in Benson, SMI & Hydraulics in Porter, Impact Innovations in Clara City, Future Products in Benson, Ag processing in Dawson, Par Piping & Fabrication in Granite Falls, Chippewa Valley Ethanol Co. in Benson, Granite Falls Community Ethanol in Granite Falls, Tebben Enterprises in Clara City, Municipal Castings in Madison, and 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. 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 have experienced declines in population as well as fewer individuals participating in training for these occupations. 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.

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?

Not aware of specifics for this industry.