

Comprehensive Industry Analysis

Logistics Industry

Winnebago County, Illinois



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About the Winnebago County Initiative

The *Comprehensive Industry Analysis for the Logistics Industry in Winnebago County* was commissioned the County of Winnebago to evaluate the relative strengths and weaknesses of the County's business climate for the logistics, warehousing, and transportation industry. The primary goal of this research is to provide the region with tools and information to develop a targeted marketing campaign to attract the logistics industry to the region. It is also focused on identifying and providing recommendations on how to better position the region to be competitive in attracting the logistics industry to Winnebago County.

The Comprehensive Industry Analysis and the research provided is just one step the region is taking to bolster business attraction efforts. Resources are being provided for technology that will facilitate the collection and dissemination of available industrial space to site selection consultants and companies. This technology uses satellite imagery and data mapping to inventory available sites and buildings. Another significant movement is toward regionalism. Winnebago County is considering participation in a regional economic coalition that will work collectively to access federal grants and other funding sources for special projects.

Under contract with Winnebago County, the Regional Development Institute at Northern Illinois University has prepared the following analysis and recommendation for the logistics industry in the region. Additional analysis and recommendations will be prepared in 2005 for the plastics and food processing industries.

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Executive Summary

Based on U.S. Census statistics for 1997 to 2002, the logistics industry has been one of the fastest growing industries nationwide in terms of establishments, employment and revenue. Despite a general decline in industry growth from 2002 to 2003, there are several sub sectors that continue to experience growth.

		<u>Increase</u>
482	Rail Transportation	12.9%
483	Water Transportation	.2%
485	Transit & Ground Passenger Transportation	.8%
493	Warehousing & Storage	1.8%

This trend has had a significant impact on economic development in the northern Illinois region in recent years as numerous companies evaluate the region for potential site selection. With higher overall average wages, strong productivity and wealth creation, attraction efforts targeting the logistics industry have become paramount for building the region's economic vitality.

The key site selection criterion for the logistics industry is *location*, both in relation to markets and to supply chains. Location is also important for its impact on transportation costs. Both existing employers and companies involved in site selection activities rate Winnebago County and the northern Illinois region as an excellent location in terms of access to markets. What becomes more significant within northern Illinois are other key site selection factors such as access to highways, labor costs, availability, and quality as well as construction ready sites and buildings. These are the factors upon which Winnebago County will need to capitalize to attract new logistics companies to the region.

Annual operating costs are important evaluation criteria for site selection as well. Operating costs include labor, energy, property, shipping, and land acquisition costs. An evaluation of operating costs between a select group of comparison regions indicates that Winnebago County is generally more competitive when grouped with larger communities than with smaller communities and more competitive in terms of shipping and land acquisitions costs than other regions. Winnebago County is less competitive in terms of labor and energy costs. Annual operating costs for Winnebago County, based on a construction assumption, are 2.7% higher than DeKalb County IL, 7.0% higher than Rock County WI, and 11.7% higher than Dubuque County IA.

Winnebago County has many positive attributes for attracting the logistics industry to the region, but also faces some challenges. Capitalizing on the strengths and addressing the weaknesses should be the focus of the region in the future.

Regional Strengths	Regional Weaknesses
Access to markets and low transportation costs	Lower educational attainment
Good availability and quality of labor with low labor stress	Availability of construction ready sites
Higher productivity and value added in truck transportation and warehousing/storage than Illinois or U.S.	Higher crime rates
Lower labor costs than Illinois or U.S.	Lack of coordinated regional effort toward economic development
Low labor stress in transportation/logistics occupations	
Excellent labor/management relations	
Expanding communication technology infrastructure	
Affordable housing	

In order for Winnebago County to be competitive in the logistics industry site selection process, the region needs to develop a comprehensive marketing plan that incorporates the results of this analysis into a marketing and promotion piece that can be distributed to companies and site selection consultants. In addition, it is recommended that a business attraction team be assembled to provide leadership, identify targets, build relationships, and manage site selection inquiries. Participation in the I-39 Corridor Association will further assist in site selection activities. Finally, Winnebago County should continue to provide support and advocacy for initiatives and programs that focus on building the regions infrastructure and quality of life.

Section 1 Industry Trends

About the Logistics Industry

The logistics industry comprises both transportation and warehousing sectors including companies that provide transportation of passengers and cargo, warehousing and storage for goods, and support activities related to modes of transportation. The primary differential between logistics and other industries, such as manufacturing, is that logistics companies use transportation equipment or transportation facilities as a productive asset. The following describes some of the key national and international trends for the logistics industry.

National and International Industry Trends

One of the most significant trends for the logistics industry in the national and international arena is ***growth of the industry***, not only in terms of establishments, but also growth in employment and revenue. According to U.S. Census statistics for 2002, the logistics industry includes 12,637 establishments nationally representing over 639,000 employees and total gross revenues of nearly 18 billion dollars.¹ The Census Bureau's analysis also includes comparative statistics for 1997 and 2002. Nationally, the number of warehousing and storage establishments grew from 6,497 in 1997 to 12,637 in 2002, representing an increase of over 94% during this period. Total employment growth during this time period was over 480%, increasing from 109,760 in total employment to 639,174. Gross revenue growth for the industry was not as dramatic as establishment or employment growth but still increased by 68% nationwide.

Another key trend is the growing importance of a ***global business environment*** and its impact on the logistics industry. An increasing number of logistics operations in the U.S. interact not only with counterparts of the company in other countries, but also with global supply chain partners and customers. The expanding business environment requires companies to be flexible and continually evaluate the way they do business. Operating within this global environment also requires high speed connectivity and a workforce that knows how to effectively utilize the technology to maximize benefits. It also requires companies to be adaptive and flexible to meet the needs, not only of local or regional customers, but also to international customers, partners, and counter parts of organizations.

¹ U.S. Census Bureau, 2002 Economic Census. *Transportation and Warehousing Industry Series report*. November 2004.

Due in part to reduce risk and manage growth strategically, many companies are choosing to outsource the logistics portion of operations. This has resulted in the growth of **Third Party Logistics (3PL)** firms to manage transportation, warehousing and logistics operations. 3PLs provide all of the logistics, transportation, and warehousing functions for companies. This eliminates or reduces the need for capital investment on behalf of the company and is providing an attractive alternative to in-house management.

A study conducted by Northeastern University reports that 83% of Fortune 500 companies use third party logistics providers.² In 1992, the use of 3PLs represented just 2% of the logistics industry. By 2002, 3PLs have increased their market share by 8%, representing over 10% of the logistics industry.

3PLs within the logistics industry are also experiencing growth and an increase in the number of **mergers and acquisitions** leading to fewer and larger companies.³ Hence, the size of 3PLs within the industry is on the rise. Consolidation through mergers and acquisitions is a trend that will impact the decisions made by these companies that are requiring larger sites with the best access to their markets and supply chain partners. According to a study conducted by Armstrong and Associates, the largest logistics operation based on square footage was a 3PL.⁴ Based on 2003 statistics, Excel was the number one company with over 73 million square feet of warehousing space. UPS SCS came in a distant second with nearly 29 million square feet.

The impact of **financial pressures** and the need to continually meet revenue growth projections is a constant factor impacting logistics companies. In order to develop and grow, companies need to increase productivity without marked increases in costs while still providing services and support. Companies need to maintain competitive advantages to strengthen their future growth and success.

Financial pressures are also driving companies to locate in regions with multiple modes of transportation. According to Charles McSwain, vice president of CSX, “the logistics platform is changing because logistics companies have optimized the use of current resources, primarily truck-oriented, and in order to gain the next level of savings for customers, must seek to incorporate multimodalism.”⁵ It is not enough to have excellent Interstate and highway routes.

² Lieb, Robert C., Ph.D. The Use of Third Party Logistics Services by Large American Manufacturers. Northeastern University/Accenture, 2003.

³ Foster, Thomas A. *The Trends Changing the Face of Logistics Outsourcing Worldwide*. SupplyChainBrain.com, June 2004.

⁴ *An Overview of Warehousing in North America – Market Size, Major 3PLs, Benchmarking Prices, and Practices*. Armstrong and Associates, 2004.

⁵ McCurry, John W. *Global Sourcing Casts Logistics In A New Light*. Site Selection Magazine, September 2004.

For a region to be attractive in the new logistics climate, it must offer alternatives to truck transportation, including air and rail services.

Another important trend in the logistics industry is driven by higher customer expectations and the subsequent growth in demand for more services. Customer expectations are increasing the pressure on logistics companies to **provide more value added services** such as e-commerce and order fulfillment. These types of services can offer greater profitability than storage, material handling and other core logistics services.

The **expansion of technology** and its impact on business operations has not bypassed the logistics industry. The use of technology within the industry includes connectivity, in general, and the use of wireless applications, handheld computing devices, global positioning systems and the use of Internet collaboration especially with supply chain partners. A competitive necessity for any logistics company, is the use of technology to increase the value added to services and operations.

The infusion of technology into the logistics industry has led to a greater need for telecommunication infrastructures and a **skilled workforce** with knowledge and experience to maximize the value added of technology. Today's logistics workforce needs to have increasingly higher levels of computing and technology skills. All occupations within the logistics industry must have technology skills regardless of whether they are material movers, drivers, or operations supervisors and managers. To maintain competitiveness in the industry, the workforce must be technologically proficient and responsive to new and expanding applications and devices.

Industry Outlook

In a recent national study by *Logistics Management* and Reed Research Group the industry was asked to provide their perceptions on the state of the industry in general.⁶ Overall, the industry representatives participating in the study indicate concerns regarding specific business issues, but generally have a positive industry outlook. Nationally, the logistics industry is concerned with rising freight rates stemming from increasing fuel and transportation costs. Another industry concern is the impact of increased demands which leads to reduced availability of services. However, industry expectations for the coming year predict reductions in fuel and freight rates, positive short term forecasts, and stabilization of the factors contributing to higher rates and costs. The overall industry outlook for 2005 is positive.

⁶ Haughey, James. *Shippers Expect Continued Rise in Freight Rates*. Logistics Management, December 15, 2004.

Section 2 The State of the Industry In Winnebago County

Logistics Establishments

Based on 2002 data sources, Winnebago County included nearly 7,000 establishments. The logistics industry comprises 9.3% of the total number of establishments representing 650 companies and over 8,500 jobs. The majority of the logistics companies in Winnebago County are in durable and nondurable wholesale trade sub-sectors, 74.6%. The second largest industry sub sector is truck transportation, accounting for 18.3% of total logistics establishments in the region.

Total Establishments, 2002		
	Winnebago County	Percent
Total Establishment – All Industries	6,994	
Total Establishment – Logistics	650	9.3%
Wholesale trade, durable goods	390	60.0%
Wholesale trade, nondurable goods	95	14.6%
Truck transportation	119	18.3%
Transportation support activities	28	4.3%
Couriers & messengers	13	2.0%
Warehousing & storage	5	<1%
<i>Source: County Business Patterns.</i>		

Logistics Employment

Total employment within Winnebago County attributable to the logistics industry is lower than total logistics employment in Illinois and the U.S. In the U.S., the logistics industry accounts for 7.9% of total employment. Illinois has a higher overall percent of employment attributable to the logistics industry at 9.3% representing 462,819 jobs. Winnebago County accounts for over 122,000 jobs in the region. Of those jobs, 6.9% or 8,520 are attributable to the logistic industry. A description of the logistics industry sub-sectors can be found in Appendix A.

Industry Employment Comparison, 2003			
	US % of Empl.	Illinois % of Empl.	Winnebago % of Empl.
Total Employment	108,293,717	4,963,896	122,721
Total Logistics Employment	8,540,550	462,819	8,520
Percent Logistics of Total Employment	7.9%	9.3%	6.9%
Employment: Merchant Wholesalers, Durable Goods	2.7%	3.5%	3.2%
Employment: Merchant Wholesalers, Nondurable Goods	1.8%	2.2%	0.9%
Employment: Wholesale Electronic Markets, Agents, Brokers	0.6%	0.5%	0.3%
Employment: Truck Transportation	1.2%	1.3%	1.2%
Employment: Support Activities for Transportation	0.5%	0.7%	0.4%
Employment: Couriers and Messengers	0.5%	0.4%	0.6%
Employment: Warehousing and Storage	0.5%	0.7%	0.4%

Source: Economy.com. County Forecast Database.

Employment Change and Projected Growth

From 1998 to 2003, while total US employment increased by 2.2%, total US logistics employment declined by 1.7%. Illinois experienced no employment growth overall and a slightly larger decline in logistics employment, 2.3% than the U.S. Winnebago County, however, experienced total employment losses of 6.4% with significant impacts on total logistics employment. Logistics employment from 1998-2003 declined by 12.8% representing a loss of over 1,000 jobs. While this is a significant loss of jobs in the region, it represents an opportunity for the expansion of existing operations or the introduction of new companies into the region. The surplus of unemployed logistics workers can suppress wage growth in primary occupations as well. And with more unemployed logistics workers, employers seeking to fill available positions should have little difficulty filling positions with the skills and experience needed.

Logistics Employment Change, 1998-2003		
	Logistics Employment Change 1998-2003	Total Employment Change 1998-2003
United States	-1.7%	2.2%
Illinois	-2.3%	0.0%
Winnebago County	-12.8%	-6.4%

Source: Economy.com. County Forecast Database.

The reduction of logistics employment between 1998 and 2003 impacted the support activities for transportation significantly with a loss of employment of over 47%. Other sub-sectors of the logistics industry experienced employment losses including durable goods wholesalers, 16.4% and courier and messengers, 16.1%. Just one logistics sub sector experience growth during this downturn. Due in part to extensive north-south and east-west routes in Winnebago County, truck transportation grew by 9.8% from 1998-2003.

Winnebago Industry Employment Change, 1998-2003	
Industry	Percent
Total Employment	-6.4%
Total Logistics Employment	-12.8%
Merchant Wholesalers, Durable Goods	-16.4%
Merchant Wholesalers, Nondurable Goods	-3.3%
Wholesale Electronic Markets, Agents, Brokers	-1.9%
Truck Transportation	9.8%
Support Activities for Transportation	-47.6%
Couriers and Messengers	-16.1%
Warehousing and Storage	-3.1%

Source: Economy.com. County Forecast Database.

Location Quotient (LQ)

Given the significant differences in employment growth by industry sub-sectors an analysis of relative importance of these sub-sectors within the region is warranted. The Employment Location Quotient (LQ) is a ratio of the percent of employment in the region accounted for by an industry sub-sector divided by the comparable percent of employment in the U.S. Thus, the employment LQ measures the relative importance of the industry sub-sector in the region compared to the nation. In general, LQ’s over 1.5 indicate that the region is significantly more dominant in the industry sub-sector than the U.S. as a whole.

Based on the above criteria, there are a few logistics industry sub-sectors that are just slightly more prevalent in Winnebago County than in the U.S. Those industry sub-sectors include couriers/messengers and durable goods wholesalers. There were a number of industry sub-sectors that are significantly under represented in the region including nondurable goods wholesalers and wholesale electronic markets, agents, and brokers.

Despite significant employment losses, durable goods wholesalers and courier and messengers were more prevalent in Winnebago County than the U.S. Couriers and messengers have a LQ based on 2003 employment of 1.229 and durable goods wholesalers, 1.179.

Truck transportation employment is more in line with the national logistics industry distribution with a LQ of 0.958. Other logistics sub-sectors are significantly underrepresented in the region when compared to the distribution of logistics employment nationwide. Nondurable goods wholesalers and wholesale electronics markets are significantly underrepresented in Winnebago County.

Industry	2003
Merchant Wholesalers, Durable Goods	1.179
Merchant Wholesalers, Nondurable Goods	0.497
Wholesale Electronic Markets, Agents, Brokers	0.472
Truck Transportation	0.958
Support Activities for Transportation	0.738
Couriers and Messengers	1.229
Warehousing and Storage	0.740

Source: Economy.com. County Forecast Database.

Productivity

Productivity is a measure of industry output per worker or, in this analysis, total logistics industry output in Winnebago County divided by total industry employment. Winnebago County’s total industry productivity or output per worker is \$120,758. Productivity for the logistics industry a whole is lower in the county than in both Illinois and the U.S. However, productivity by industry sub-sector indicates that two of the three sub-sectors are at least as productive as Illinois and U.S.

Productivity for the truck transportation is \$29,045 higher in Winnebago County than Illinois and \$41,009 higher than the U.S. Productivity for warehousing and storage in the County is \$6,007 higher than the state and \$1,725 higher than the U.S. Wholesale Trade is the sub-sector representing lower overall productivity in Winnebago County than the state or nation.

Output Per Worker (Productivity), 2001

	United States	Illinois	Winnebago
Logistics Total	\$133,814	\$147,011	\$120,758
Wholesale Trade	\$143,255	\$160,233	\$115,821
Truck transportation	\$122,209	\$134,173	\$163,218
Warehousing & storage	\$65,006	\$60,724	\$66,731

Source: IMPLAN 2001

Value Added Per Worker

Value Added is a measure of wealth created by business in terms of total of employee compensation, rent, interest, and profit paid or earned and is an important indicator of the region's industrial sector strength. It provides a measure of relative productivity as well as relative value of employees. Value Added Per Worker is calculated by dividing the total employment within an industry by the Value Added for that industry.

An analysis of Value Added Per Worker mirrors the results of Productivity Per Worker. In terms of the industry as a whole, Value Added is significantly lower in Winnebago County than the state or the U.S. However, two of the three sub-sectors have higher Value Added Per Worker than both Illinois and the U.S. Only wholesale trade indicates lower Value Added Per Worker in the county than the state or U.S.

Value Added Per Worker, 2001

	United States	Illinois	Winnebago
Logistics Total	\$85,666	\$95,520	\$78,096
Wholesale Trade	\$96,181	\$107,975	\$77,217
Truck transportation	\$58,720	\$68,447	\$91,513
Warehousing & storage	\$49,346	\$45,782	\$50,755
<i>Source: IMPLAN 2001</i>			

Compensation Per Worker

Compensation Per Worker is calculated by taking total wages in the industry and dividing by total employment. Using this ratio, Compensation Per Worker for logistics employment is significantly lower in Winnebago County compared to the state and U.S., -14% and -10% respectively. For the logistics industry as a whole, Compensation Per Worker was \$34,593 in 2003, compared to \$38,539 in the U.S. and \$41,670 in Illinois.

A review of Compensation Per Worker based on logistics sub-sectors indicates just one sub-sector where Winnebago County wages were higher than Illinois or the U.S. Wholesale electronic markets have significantly higher Compensation Per Worker in Winnebago County at \$79,000 than compared with Illinois or the U.S. On the reverse side, Compensation Per Worker in durable goods wholesale is nearly 20% lower and couriers/messengers 42% lower in Winnebago County than Illinois.

Logistics Wages, 2003			
	United States	Illinois	Winnebago
Average Wage	\$38,539	\$41,670	\$34,593
Total Logistics	\$46,023	\$48,394	\$41,410
Merchant Wholesalers, Durable Goods	\$55,078	\$60,670	\$48,653
Merchant Wholesalers, Nondurable Goods	\$47,995	\$46,565	\$41,958
Wholesale Electronic Markets and Agents and Brokers	\$46,069	\$48,223	\$79,000
Truck Transportation	\$36,721	\$34,993	\$32,659
Support Activities for Transportation	\$38,164	\$43,111	\$25,720
Warehousing and Storage	\$32,153	\$31,492	\$25,037
Couriers and Messengers	\$33,635	\$37,103	\$21,471
<i>Source: Economy.com. County Forecast Database.</i>			

Section 3 Regional Strengths and Weaknesses

Existing regional logistics employers provided a first-hand account of the state of the business climate for logistics employers in Winnebago County. Approximately 22% of the region’s logistics employers were contacted to gauge their perceptions of the region’s business climate and workforce characteristics. Employer interviews contained questions that focused on perceptions of Winnebago County as a place to do business and on ratings of the regions strengths and weaknesses based on site selection criteria. Site selection professionals utilize a wide variety of data and information to analyze various potential locations. Employers were asked to rate Winnebago County based on these key criteria and other significant factors used in site selection activities. Information on labor quality was also collected. Analysis was conducted based on both primary and secondary site selection criteria.

In addition to existing Winnebago County employers, several companies considering locations in northern Illinois for new warehousing and logistics facilities were interviewed for this study. These companies were asked to gauge the relative importance of various site selection criteria in their quest to identify the ideal location for operations.

Below is a summary analysis of both the importance of site selection criteria and employer ratings of Winnebago County. While the summary indicates the county has more strengths than weaknesses in terms of important logistics industry criteria, there are areas for improvement such as access to rail services. Still, some of these site selection criteria are perhaps outside the scope of impact that can be generated by coordinated regional efforts. Detailed analysis of these site selection criteria is the focus of the following section of this report.

Key Site Selection Criteria	<u>Importance</u> 1 = not important 10 = very impt	<u>Rating</u> 1 = poor 10 = excellent	Strength + Weakness -
Access to markets	10.0	7.0	+++
Access to Interstate Highways	9.7	9.3	++++
Access to rail services	7.7	5.6	+
Labor costs	8.7	6.8	++
Labor availability	9.1	6.0	++
Electric power costs	7.6	5.1	+
Transportation costs	9.8	7.3	+++
Fuel costs	9.4	5.8	+
Availability of sites (>50 acres)	7.8	8.4	++++
Availability of buildings	9.0	7.7	+++
Labor/management relations	10.0	10.0	++++
Employment taxes	8.2	4.3	-
Labor regulations on drivers	10.0	8.0	++++
Technology infrastructure	9.2	6.7	++

Primary Site Selection Criteria

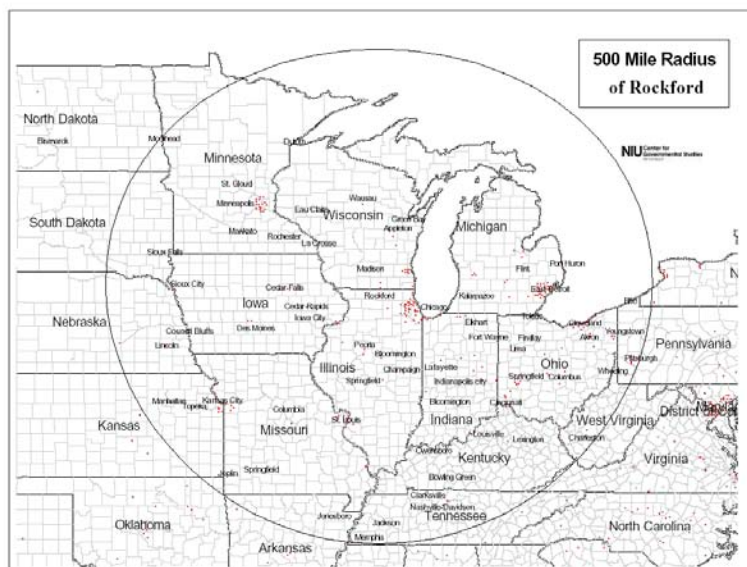
Access to Markets and Transportation Costs

Two of the most significant factors impacting site selection decisions are access to markets and transportation costs. These two elements cannot be separated because one directly impacts the other. The farther a company is from both the supply and demand side of its operations, the higher the transportation costs.⁷ And since higher transportation costs increase labor costs, the most significant consideration for any company is location.

One could argue that no single municipality, county or local government can impact the attractiveness of a specific geographic location based on access to markets. These entities cannot directly affect the location of a company's customers or suppliers at a macro level. However, if a location is centrally located within a broader region, it can increase the likelihood that it may, in fact, be an attractive location for specific companies. It is, therefore, important to capitalize on the inherent attractiveness of the region based on its location.

Based on interviews with companies actively interested in the northern Illinois region, nothing is more paramount than location. In general these companies select a relatively broad geographic region based on access to supply and demand chains. Another location factor that can impact the broader location selection is the distance or proximity to existing facilities.

Proximity to the Chicago Metro area, while significant in terms of markets, is often not enough to qualify a municipality, county or region for site selection consideration. While Winnebago County sits just 90 miles outside of the Chicago Metro area, it has much more to offer in terms of location. The total population within a 500 mile radius of the region is nearly 76 million. The region is within one or two days of many other significant markets such as Cleveland, Detroit, Kansas City, Louisville,



⁷ Transportation costs include fuel, labor and other costs required to moving goods from one location to another. While toll costs are highly visible transportation costs, their overall impact is marginal on total transportation costs.

Milwaukee, Minneapolis, and St. Louis. The central proximity of the entire northern Illinois region to broader markets has made the region attractive to numerous companies due in large part to this factor. The increase in companies locating in this region over the past decade is evidence of the importance of location and the attractiveness the region. Once site selection activities have identified in a broader geographic region for consideration, municipalities, counties, and regions can have a genuine impact on specific location consideration and selection.

Travel Distance and Time from Winnebago County			
City	Highway Miles	Days by Truck	Time in Hours
Atlanta	804	2	12.5
Chicago	90	< ½	1.5
Cleveland	432	1	7.0
Dallas	924	2	15.0
Denver	961	2	14.5
Detroit	370	< 1	6.0
Kansas City	482	< 1	7.5
Los Angeles	1974	4	30.0
Louisville	422	< 1	6.5
Milwaukee	97	< ½	1.5
Minneapolis	336	< 1	5.0
New Orleans	976	2	14.5
New York	878	2	13.5
St. Louis	295	< 1	4.5

Labor Costs and Availability

The availability of an appropriately skilled workforce at a reasonable cost is one of the key site selection criteria. In terms of importance, labor costs were rated at 8.7 and labor availability at 9.1 based on a 10 point scale with 10 representing excellent. While these two criteria are indeed important site selection factors, they are not as significant as access to markets and highways. Labor costs in Winnebago County are low in comparison to other metropolitan areas but high in relation to non metropolitan areas. A more detailed comparison of select regions is provided in Section 4.

Regional employers rated labor costs for Winnebago County at 6.8 and labor availability at 6.0. Recent manufacturing closures and layoffs are contributing to increased availability of workers and may be having an impact on suppressing regional wages. However, employers report that the specific skills and experience of the dislocated manufacturing workforce does not necessarily translate into the skills and experience needed by logistics employers.

Electric Power Costs

While electric power costs are considered important by logistics employers, they are not as significant for site selection considerations as other factors. Regional employers rated the importance of electric power costs at 7.6 and Winnebago County in comparison with other regions as average. A more detailed comparison of electric power costs by select regions is provided in Section 4.

Access to Highways (within 15 miles)

A component part of access to markets is access to interstate highways. Regional logistics employers rated the importance of access to interstate highways at 9.7 and Winnebago County at 9.3. Not only is this an important criterion for site selection consideration, but Winnebago County offers an abundance of transportation corridors with easy access.

The Winnebago County region is well endowed with both north-south and east-west corridors. In addition to its importance as a north-south corridor, Interstate 39 links the region to numerous other corridors including I90/94, I80, I88, and I74. While not every area within the county has easy access to interstate highways, particularly within the City of Rockford, there are a number of growing industrial areas outside the city's boundaries that offer land availability and easy interstate access.

Availability of Sites and Buildings (50-250 acres/40,000sf)

The availability of land and/or buildings is also important, however, site selection companies are looking for more. Most companies considering larger operational facilities are looking for parcels that have the needed infrastructure, such as sewer and power to site, or are located within municipalities or counties that are able to demonstrate the ability to respond quickly to the needs of the interested companies.

Regional logistics employers and active site selection companies agree that Winnebago County has good availability of land and buildings for logistics companies. However, the lack of coordinated marketing efforts to promote the construction-ready locations makes it difficult for interested companies to gather the information needed to make site selection decisions. The region would benefit greatly by inventorying and cataloging parcels and buildings that provides companies with easy access to information on the level of readiness of the various sites.

Companies involved in site selection considerations in the region and existing employers considering expansion note that the region has relatively good access to buildings for smaller operations, but lacks buildings for medium and larger operations. This may not be a significant drawback for Winnebago County since many companies planning larger operations prefer to build their own building and simply need the availability of land that is or could be construction ready within a specified time frame.

Rail Services

The importance of rail services is dependent upon the needs of the individual company. Overall employers rated the importance of access to rail services at 7.7 and Winnebago County at 5.6. Many employers noted that the Rochelle intermodal hub is viewed as a positive feature for attracting companies to the region. However, companies agree that the use of the facility has not yet reached its potential. Based on reactions from existing and interested companies, the rail hub may not be the key for attracting logistics companies to the region, but it does play an important role.

Labor/Management Relations

For unionized companies, labor management relations are critical to successful operations. Contentious labor management relations can significantly impact productivity, labor costs and availability. Measuring and rating existing labor management relations for unions associated with the logistics industry included both first-hand accounts from unionized employers and historical interactions.

Employers in the region report strong and positive labor management relations. Positive relations are due, in part, to the economic downturn. Both labor and management know that there is a tenuous line between providing employees with adequate wages and benefits, and financial pressures that can impact decisions to relocation to other, less expensive regions.

Secondary Site Selection Criteria

Access to Air Service

For select operations, access to air service is critical. In addition to close proximity (within 1.5 hours) to Chicago's O'Hare Airport, Winnebago County has its own airport service at the Northwest Chicago Land Regional Airport at Rockford (RFD) which is a valuable asset to regional logistics companies. RFD has the distinction of being the nation's 23rd largest air cargo airport. RFD offers many benefits to cargo operations including excellent facilities, a congestion-free airspace, and proximity to a major intermodal transportation hub. In addition, RFD is a US Customs Port of Entry and home to Foreign Trade Zone 176.

Rockford's UPS Air Hub was constructed at RFD in 1994 as a key component in the global UPS network. RFD is home to the second largest air hub sorting facility in United Parcel Service's system. The Rockford UPS facility serves over 200 countries and territories and sorts an average 130,000 to 170,000 packages nightly. In addition, Airborne Express and BAX Global have smaller facilities at RFD.

Technology Infrastructure

The expanding use of technology for daily logistics operations places greater importance on the technology infrastructure a region can offer. Regional logistics companies rate the importance of communications and technology infrastructure at 9.2, but rate Winnebago County at 6.7. The development of Rocknet and future plans for connection to NIU NET are important for Winnebago County's ability to be positioned to compete with other larger metropolitan areas, not only for the logistics industry, but all industry attraction efforts.

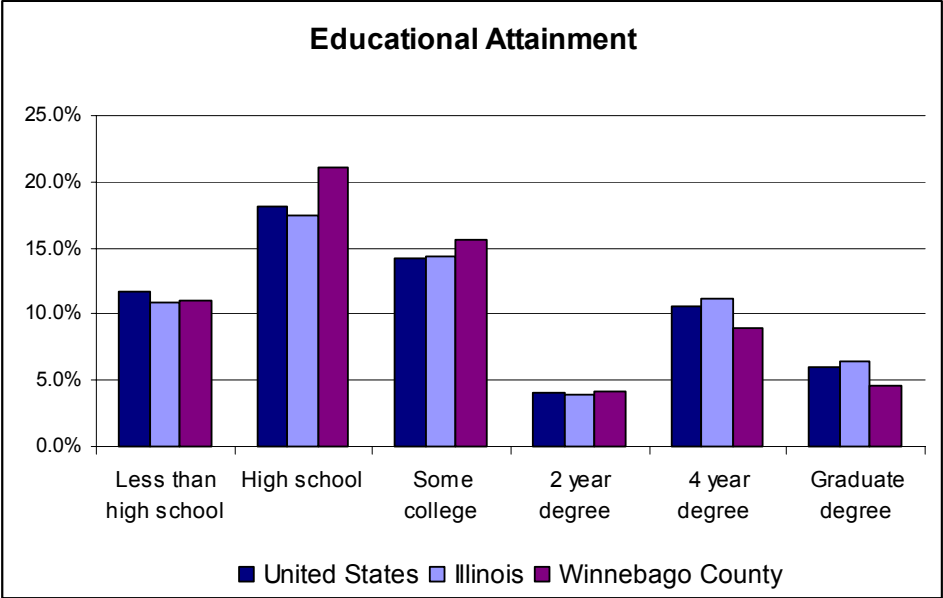
Quality of Life

Quality of life is important, not necessarily by itself, but for its impact on labor availability and quality. A region with higher quality of life factors will be better able to attract and maintain a high quality workforce. Key quality of life factors include access to higher education, overall educational attainment, cost of living, housing affordability and crime rates.

Access to higher education in a region is important for site selection as it implies a higher quality labor pool with better employment skills and work ethic. The County has number of 2 year degree granting institutions such as Rock Valley College and Rockford Business College. While Winnebago County does not have a four year degree granting institution headquartered

within its borders, it does offer secondary higher education sites such as NIU Rockford which provides bachelor degree programs and graduate courses as well as partnerships with other four year universities who supplement access to four year degree programs.

In terms of educational attainment, Winnebago County has fewer residents age 25 or older with a four year or graduate level degree than the state or U.S. A greater percent of the county’s population has a high school diploma or some college courses.



According to the Consumer Price Index for cost of living factors, Winnebago County mirrors the national average. In other words, the cost of products and services in Winnebago County is the same for the nation as a whole.

Cost of Living - Consumer Price Index (1967=100)			
	United States	Winnebago, IL	Winnebago / United States
Cost of Living			
CPI: All Items - CPI (1982-84):	180.5	179.3	99.34
CPI: Apparel CPI:	123.5	127.1	102.91
CPI: Education and Communications CPI:	106.6	105.5	98.97
CPI: Food and Beverages CPI:	177.7	177.5	99.89
CPI: Other Goods and Services CPI:	299.2	305.5	102.11
CPI: Housing CPI:	180.5	177	98.06
CPI: Medical Care CPI:	287.4	286.9	99.83
CPI: Recreation CPI:	105.1	103.4	98.38
CPI: Transportation CPI:	153.7	153.4	99.80

Source: Easy Analytic Software, Inc. (EASI)

Another important quality of life factor is crime within a region. For site selection purposes particularly for the warehousing/storage sub sector of the logistic industry, it is important to distinguish between business crime and traditional crime. Business crime relates to employee theft and focuses on the integrity of the workforce, whereas traditional crime rates capture overall crime rates. Business crime or employee theft has a greater impact on site selection than overall crime rates; however, it is not easily measured.

Employer interviews indicate a high level of workforce integrity with no significant business theft issues. Employers report a zero tolerance for any lack of workforce integrity and believe the regions higher than average unemployment and general economic downturn are promoting a more dedicated workforce than other regions.

Winnebago County is more challenged in terms of traditional crime rates which can impact the region’s ability to attract and retain a quality workforce. The overall quality of life index rating for Winnebago County is average which means it ranks in the 40% - 60% range for counties based on U.S. averages. While the county scored second lowest in the forcible rape index, all other scores were above average in frequency when compared to the national average.

Quality of Life, Winnebago County		
QLife: EASI Quality of Life Index (US Avg=100):	90	C
QLife: EASI Total Crime Index (US Avg=100; A=High):	125	B
QLife: Aggravated Assault Index (US Avg=100; A=High):	121	A
QLife: Burglary Index (US Avg=100; A=High):	89	A
QLife: Motor Vehicle Theft Index (US Avg=100; A=High):	99	A
QLife: Larceny Index (US Avg=100; A=High):	104	A
QLife: Murder Index (US Avg=100; A=High):	129	A
QLife: Forcible Rape Index (US Avg=100; A=High):	158	D
QLife: Forcible Robbery Index (US Avg=100; A=High):	89	A
A = top 20% highest B = next 20% second highest C = next 20% average D = next 20% second lowest E = bottom 20% lowest Source: Easy Analytic Software, Inc. (EASI)		

Housing affordability is an important criterion for evaluating potential site locations because it is often associated with lower overall labor costs. Winnebago County’s median rent is just \$434 which is \$109 lower than the state and \$104 lower than the U.S. Median housing value is also significantly lower than Illinois and the U.S. The median housing value in Winnebago County is \$94,690 which is \$36,038 lower than the state and \$20,866 lower than the U.S.

Housing			
	United States	Illinois	Winnebago County
Housing, Median Rent (\$)	\$ 538	\$ 543	\$ 434
Housing, Median Value Owner Households (\$)	\$115,826	\$130,728	\$ 94,690
<i>Source: Easy Analytic Software, Inc. (EASI)</i>			

Section 4 Labor Market Analysis

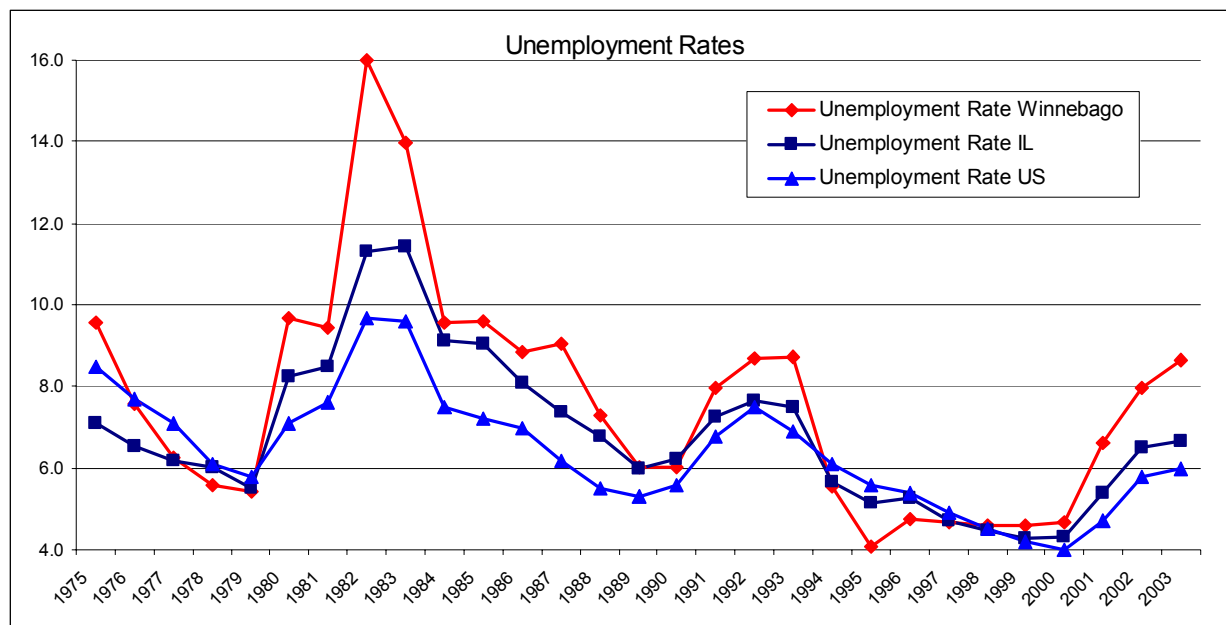
In 2002, total employment in Winnebago County included over 126,000 jobs. The logistics industry accounted for 6.6% of total employment representing 8,310 jobs. Job losses during the 1998 – 2002 period totaled 4.3%, however the logistics industry experienced more dramatic job losses. Logistics industry’s warehousing/storage and transportation support activities sub-sectors experienced the most significant percent declines in employment with job losses of 24.4% and 20.3% respectively.

Industry	Employment 2002	Employment Change 1998-2002
Total	126,354	-4.3%
Total Logistics	8,310	
Wholesale trade, durable goods	4,879	-5.7%
Wholesale trade, nondurable goods	1,350	-8.1%
Truck transportation	1,493	-4.5%
Transportation support activities	365	-20.3%
Couriers & messengers	192	-2.0%
Warehousing & storage	31	-24.4%

Data Source: County Business Patterns

A historical review of unemployment rates in the region shows that during only a few of the past 30 years have Winnebago County’s rates been lower than Illinois or the U.S. More recently, Winnebago County’s unemployment rates during the 1994 – 1996 period were actually lower than the state or nation. However, after 1996, unemployment rates in Winnebago County began rising as Illinois and U.S. rates dropped. Unemployment rates in 2003 were at a 10 year high at just under 9%.

A significant contributing factor to the climbing unemployment rates is the continued decline of manufacturing employment in the County. Plant closing, downsizing, and relocations have been driving up the number of displaced workers in the region. In some cases, this displaced workforce accepts employment that does not match with their skills. Underemployed workers include those currently employed in an occupation which is not considered their primary field and would be interested in alternative job opportunities that may become available. Since there is a great deal of overlap between manufacturing and logistics industries, the available workforce for new logistics companies extends beyond the unemployed workforce.



* Illinois Department of Employment Security statistics at the county level is currently unavailable due to calculation problems. The anticipated release date for county level unemployment statistics is June 30, 2005.

Workforce Shortages and Training Needs

Another key element in site selection decisions is the extent to which the potential labor market region is experiencing labor stress within the particular industry. A region with an overload of logistics operations is likely to experience significant labor stress for the critical occupations as workers are more likely to transition from one company to another. However, the decline of logistics establishments and employment suggests labor stress should not be problematic for the region.

Interviews with existing logistics employers indicate that, in general, labor availability in the region is good. According to employers, the ability to fill material handling, general office and driving occupations is relatively easy. Occupations that are more difficult to fill include management positions such as general managers, operations managers and transportation/distribution supervisors. Nevertheless, most companies generally promote internally for management and supervisory positions and rarely look externally for these skills.

The most significant training needs for this industry are related to technology and computer skills. All workers from the warehouse floor to upper management need to have basic computer skills and the ability to utilize distribution and warehousing technology and devices. Most companies in the region provide in-house training on software and systems, therefore requiring little assistance from education and training provider. However, basic computer skills and understanding are crucial to the trainability of the workforce.

Occupational Growth

The largest cluster of industry employment within the region is in laborers and material movers (4,493) and drivers (3,859). These two occupations account for 72.5% of total employment in logistics occupations and are expected to experience the most significant growth through 2010. Labor and material moving occupations are expected to experience 167 average annual job openings during this period. Of those occupations, 25 are anticipated annually due to new positions while 142 will be attributed to job turnover. See Appendix B for a complete listing of logistics occupations in Winnebago County.

Title	Empl. 2000	Empl. 2010	Employment Change		Average Annual Job Openings		
			2000-2010		Growth	Separations	Total
			Number	Percent			
Laborers and Material Movers, Hand	4,493	4,741	248	5.52	25	142	167
Driver/Sales Workers and Truck Drivers	3,859	4,284	425	11.01	43	53	95
Industrial Truck and Tractor Operators	773	802	29	3.75	3	11	14
Bus Drivers	503	549	46	9.15	5	13	18
Miscellaneous Transportation Workers	250	272	22	8.80	2	10	12
Refuse and Recyclable Material Collectors	209	235	26	12.44	3	9	12
Parking Lot Attendants	182	209	27	14.84	3	3	6
First-Line Supvrs/Mgrs of Trans & Material-Moving	161	179	18	11.18	2	3	5
Miscellaneous Material Moving Workers	159	181	22	13.84	2	5	8
First-Line Supvrs/Mgrs of Hlprs, Laborers, & Material Mover	155	162	7	4.52	1	3	4

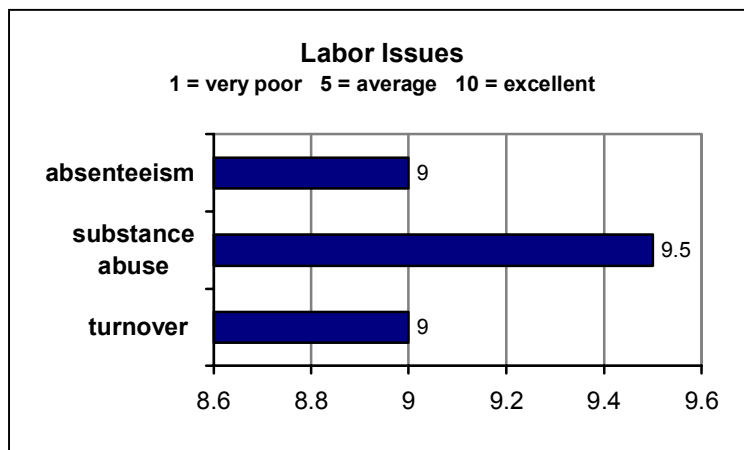
Source: Illinois Department of Employment Security (IDES)

Labor Quality

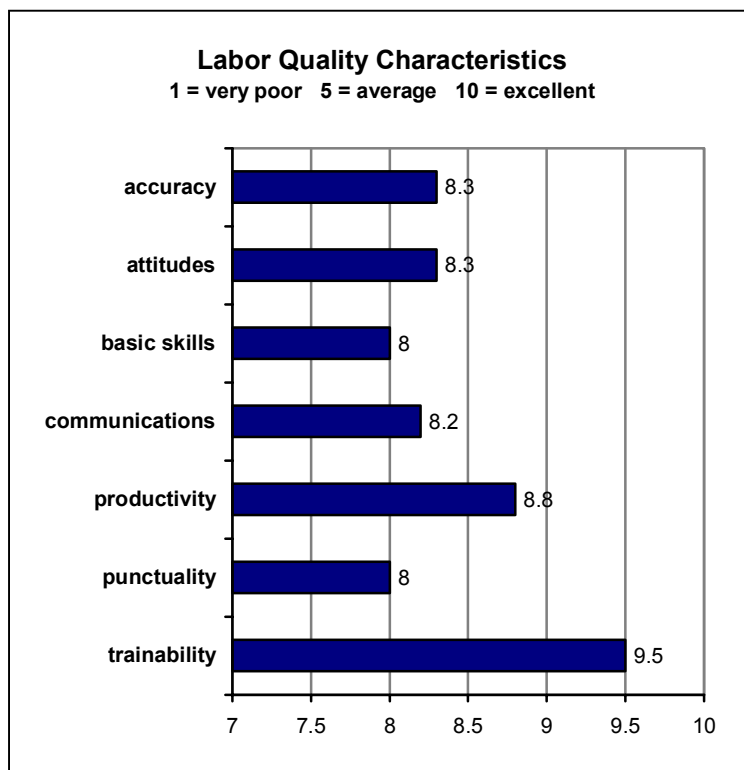
Interviews included a component designed to ascertain feedback on the quality of the existing workforce. Labor quality was measured based on two components. The first component of labor quality is labor issues including absenteeism, turnover, and substance abuse. The second component of labor quality is labor characteristics, such as attitudes, trainability, etc. Labor issues and characteristics were rated by area employers based on a 1 to 10 point scale (1 = poor; 10 = excellent). In addition to measuring labor quality characteristics, the interviews identified significant labor availability trends for the area.

In terms of labor issues, regional employers rated the existing workforce as “excellent” with all issues scoring a 9.0 or higher. Comparisons with other regional labor market studies conducted in the past several years shows that Winnebago County ratings of labor issues are more positive than in other Illinois regions. Employers report very low turnover, absenteeism,

and substance abuse among the workforce. Many attribute the lack of problems with labor issues to the impacts of the economic downturn in the region and loss of many large employers over the past several years. There is an increase in competition for the jobs that are available in the region which leaves no room for deficient work ethics.



Employers were asked to rate their workforce based on a variety of labor quality characteristics as well. Once again, the region's logistics employers rated their workforce very high in all characteristics including punctuality and basic skills. Employers rated the trainability of the region workforce as *excellent*, 9.5. The workforce was rated 8.8 for productivity as well.



Section 5 Cost of Doing Business

An important objective of this study is to evaluate the cost of doing business for logistics companies in Winnebago County compared to other select regions. Regions were selected for comparison based on their proximity to Winnebago County and their perceived attractiveness to the logistics industry. The comparative regions selected for this analysis include:

- | | |
|--------------------|-----------------|
| DeKalb County, IL | Minneapolis, MN |
| Dubuque County, IA | Rock County, WI |
| Indianapolis, IN | St. Louis, MO |

A comparison of these six regions and Winnebago County was done based on number of logistics companies, location coefficient, employment, employment change, and wages. Finally, a detailed operating cost comparison was conducted for these regions by the Boyd Company, Inc.⁸ and includes more detailed comparisons of labor, energy, property and shipping costs.

In terms of total establishments, Winnebago ranks as the 4th largest comparison region. With 5.6 percent of Winnebago County’s establishments in Wholesale Trade, Durable Goods, the County has a higher proportion of establishments in this sub-sector than the other regions. The county also ranks among the highest in the proportion of Transportation Support Activities, only ranking behind the St. Louis Region. Winnebago ranks the lowest among the comparison region in Wholesale, nondurable goods, with only 1.4% of its total establishments in this sub-sector.

Total Establishments, 2002							
	Winnebago County	DeKalb County, IL	Dubuque County, IA	Indianapolis, IN	Minneapolis St. Paul, MN	Rock County, WI	St. Louis, MO
Total	6,994	1,978	2,631	40,053	87,843	3,425	69,818
Wholesale trade, durable goods	390	39	115	1,994	4,489	104	3,020
Wholesale trade, nondurable goods	95	38	53	765	1,886	61	1,475
Truck transportation	119	43	86	622	1,126	93	1,210
Transportation support activities	28	6	7	160	346	9	347
Couriers & messengers	13	1	7	105	193	6	129
Warehousing & storage	5		4	49	71	4	83

Source: County Business Patterns

⁸ The Boyd Company, Inc. is a location consultant specializing in comparative business cost analysis utilizing proprietary operating cost data bank. This study utilized the Boyd Company Inc.’s report *A Comparative Operating Cost Analysis for Distribution Warehousing* for some of the comparative regions and contracted with the company for supplemental regions not included in the original report.

Winnebago County also ranks 4th in terms of total employment among the comparison regions. Although Winnebago County has the highest proportion of establishments in the Wholesale Trade, Durable Goods sub-sector, it doesn't hold its rank when comparing the region in terms of employment proportions. Only 3.9% of Winnebago's total employment falls in the sub-sector. Winnebago County, De kalb County, and the St. Louis Region, on average, have less employment per establishment in the Wholesale Trade, Durable Goods sub-sector, with 12.5, 10.6 and 12.4 employees per establishment, respectively. Rock County has an employment per establishment rate of 27.7 for the Wholesale Trade, Durable Goods sub-sector.

Employment, 2002							
	Winnebago County	DeKalb County, IL	Dubuque County, IA	Indianapolis, IN	Minneapolis St. Paul, MN	Rock County, WI	St. Louis, MO
Total	126,354	25,561	47,196	749,915	1,591,041	57,417	1,219,777
Wholesale trade, durable goods	4,879	415	1,662	27,397	64,028	2,883	37,577
Wholesale trade, nondurable goods	1,350	228	684	13,906	31,477	1,041	24,938
Truck transportation	1,493	496	1,146	13,670	13,083	1,075	15,809
Transportation support activities	365	54	83	2,455	4,054	42	4,733
Couriers & messengers	192	1	62	13,055	8,745	42	7,183
Warehousing & storage	31		17	1,884	1,395	148	1,295

Source: County Business Patterns

The period of 1998 – 2002 was a period of economic decline in the United State, Illinois and Winnebago County. All of the defined logistics sub sectors experienced losses in employment for Winnebago County during the period. The greatest percent loss was in the Warehousing & Storage sub-sector. The largest raw employment loss was in the Wholesale Trade, Durable Goods sub-sector, with a loss of 278 employees.

Employment Change, 1998 - 2002							
	Winnebago County	DeKalb County, IL	Dubuque County, IA	Indianapolis, IN	Minneapolis St. Paul, MN	Rock County, WI	St. Louis, MO
Total	-4.3%	5.2%	-0.8%	4.7%	3.4%	-4.8%	0.4%
Wholesale trade, durable goods	-5.7%	-15.0%	27.6%	-0.2%	-5.8%	17.6%	-10.6%
Wholesale trade, nondurable goods	-8.1%	-38.5%	-4.5%	-1.0%	-2.1%	2.6%	0.3%
Truck transportation	-4.5%	81.7%	64.2%	12.2%	6.2%	29.5%	8.5%
Transportation support activities	-20.3%	17.4%	27.7%	-16.5%	15.3%	2.4%	15.8%
Couriers & messengers	-2.0%	-85.7%	-15.1%	24.6%	-7.4%	-6.7%	0.3%
Warehousing & storage	-24.4%		13.3%	44.5%	89.3%	252.4%	38.2%

Source: County Business Patterns

Winnebago County had among the highest Wholesale Trade, Durable Goods LQ in comparison group. None of the comparison regions have LQ's above 1 for the Wholesale Trade, Nondurable Goods or Transportation support activities Sub-sectors. Although Winnebago County Transportation Support Activities LQ is below 1, it still ranks among the highest of the comparison regions.

US Employment Location Quotient (LQ), 2002							
	Winnebago County	DeKalb County, IL	Dubuque County, IA	Indianapolis, IN	Minneapolis St. Paul, MN	Rock County, WI	St. Louis, MO
Wholesale trade, durable goods	1.260	0.530	1.149	1.192	1.314	1.639	1.006
Wholesale trade, nondurable goods	0.497	0.415	0.674	0.863	0.920	0.843	0.951
Truck transportation	0.996	1.636	2.047	1.537	0.693	1.578	1.093
Transportation support activities	0.683	0.499	0.416	0.774	0.602	0.173	0.917
Couriers & messengers	0.309	0.008	0.267	3.537	1.117	0.149	1.196
Warehousing & storage	0.185		0.271	1.890	0.660	1.939	0.799
<i>Source: County Business Patterns</i>							

Operating Cost Comparison

A comparative operating cost analysis was compiled by the Boyd Company Inc. based on the regions selected for this study.⁹ This analysis was based on a 350,000 square foot distribution warehouse employing 150 nonexempt workers and includes all major geographically-variable operating costs except start up and relocation. The detailed tables which were compiled from the two Boyd Company, Inc. reports are included in Appendix C.

A summary analysis was prepared from the Boyd tables based on four primary cost categories: labor, energy, property, and shipping costs. A scored cost comparison was completed for each of these four categories as well as total annual operating costs for lease and construction assumptions. The scores were based on the total costs for each category in each region which were then used to rank each region on a scale from 1 to 7 with 1 representing the lowest cost region and 7 the highest cost region. No weighting was completed based on degrees of differences between regional costs.

⁹ The Boyd Company, Inc. *Comparative Operating Cost Analysis for Distribution Warehousing* plus NIU Addendum, BizCosts, (2005).

Overall, Winnebago County ranked the 6th highest out of the 7 comparison regions in terms of total annual operating costs for both lease and construction assumptions. Dubuque and Indianapolis were the least expensive regions and Minneapolis was the most expensive region. Winnebago County ranked 4th in terms of shipping costs but 7th in energy costs which include electric, natural gas, and heating/air conditioning costs.

Scored Cost Comparison							
1 = lowest cost; 7 = highest cost	Winnebago County	DeKalb County, IL	Dubuque County, IA	Indianapolis, IN	Minneapolis St. Paul, MN	Rock County, WI	St. Louis, MO
Size of region	4	1	2	5	7	3	6
Labor Costs	6	2	1	5	7	3	4
Energy Costs	7	6	4	1	3	5	2
Property Costs	5	6	2	1	7	3	4
Shipping Costs	4	3	5	2	7	6	1
Annual Operating Costs - construction	6	5	2	1	7	3	4
Annual Operating Costs - lease	6	5	1	2	7	4	3

Source: The Boyd Company, Inc. – BizCosts Reports.

The comparison regions vary significantly in terms of both number of establishments and total employment. DeKalb County is the smallest comparison region with 1,978 establishments and 25,561 total employment. Minneapolis is the largest region with 87,843 establishments and 1,591,041 total employment. Winnebago County is in the middle of the range with 6,994 establishments and 126,354 total employment.

Evaluating comparison regions based on number of establishments and total employment indicates that Winnebago County is generally more competitive when grouped with smaller communities than with larger communities. When compared to smaller regions, Winnebago is competitive in property and shipping costs but still higher in labor and energy costs. When compared to larger communities, Winnebago County is 3rd highest out of the four regions.

Scored Cost Comparison, Small Regions				
1 = lowest cost; 4 = highest cost	Winnebago County	DeKalb County, IL	Dubuque County, IA	Rock County, WI
Size of region	4	1	2	3
Labor Costs	4	2	1	3
Energy Costs	4	3	1	2
Property Costs	2	4	1	3
Shipping Costs	2	1	3	4
Annual Operating Costs - construction	4	3	1	2
Annual Operating Costs - lease	4	3	1	2

Source: The Boyd Company, Inc. – BizCosts Reports.

Scored Cost Comparison, Large Regions				
1 = lowest cost; 4 = highest cost	Winnebago County	Indianapolis , IN	Minneapolis St. Paul, MN	St. Louis, MO
Size of region	1	2	4	3
Labor Costs	3	2	4	1
Energy Costs	4	1	3	2
Property Costs	3	1	4	2
Shipping Costs	3	2	4	1
Annual Operating Costs - construction	3	1	4	2
Annual Operating Costs - lease	3	1	4	2

Source: NIU and The Boyd Company, Inc. – BizCosts Reports.

One drawback to evaluating regional difference utilizing the ranked scoring method in the previous section, is that it does not provide information on the degree of difference between locations. Winnebago County may be ranked as one of the most expensive of the seven regions, but the range of differences between regions may be very narrow indicating little different between regions in cost.

An alternative analysis is to calculate the percentage difference in costs between regions. In order to capture degrees of difference in costs, the following analysis takes the lowest cost region for each category and uses it as the base location. The difference in cost between the base location and other comparison regions is then calculated to determine the percentage higher than the base. For instance, Dubuque is the base location for labor costs because they have the lowest

total labor costs. Winnebago County is 12.7% higher than Dubuque and DeKalb is 7.0% higher than Dubuque. The percentage difference between Winnebago and DeKalb County is just 5.7%.

What is important to realize from this analysis is that while the individual cost categories vary significantly in percent differences, the overall Total Annual Operating costs are not significantly different. In terms of total operating costs, Indianapolis and Dubuque are the lowest cost regions for both construction and lease assumptions respectively. However, Winnebago County is just slightly higher overall in terms of total operating costs at 11.8% higher for construction assumption and 10.2% higher for lease assumption. Still these margins can have an impact on final site selection decisions when considered in conjunction with other criteria.

Percentage Cost Comparison							
	Winnebago County	DeKalb County, IL	Dubuque County, IA	Indianapolis, IN	Minneapolis St. Paul, MN	Rock County, WI	St. Louis, MO
Labor Costs	\$5,044,838	\$4,792,596	\$4,477,294	\$5,021,191	\$5,312,845	\$4,930,541	\$4,997,543
percent higher than base location	12.7%	7.0%	0.0%	12.1%	18.7%	10.1%	11.6%
Energy Costs	\$1,413,705	\$1,388,055	\$1,286,460	\$930,370	\$1,172,290	\$1,292,679	\$947,319
percent higher than base location	52.0%	49.2%	38.3%	0.0%	26.0%	38.9%	1.8%
Property Costs	\$4,752,861	\$4,860,963	\$3,794,048	\$3,700,352	\$4,952,608	\$3,956,906	\$4,428,033
percent higher than base location	28.4%	31.4%	2.5%	0.0%	33.8%	6.9%	19.7%
Shipping Costs (7)	\$2,607,601	\$2,588,235	\$2,634,033	\$2,521,800	\$2,741,652	\$2,648,826	\$2,437,959
percent higher than base location	7.0%	6.2%	8.0%	3.4%	12.5%	8.6%	0.0%
Total Annual Geographically-Variable Operating Costs (10)	\$12,506,505	\$12,177,350	\$11,194,335	\$11,186,713	\$12,947,396	\$11,691,452	\$11,753,854
percent higher than base location	11.8%	8.9%	0.1%	0.0%	15.7%	4.5%	5.1%
Annual Operating Costs - lease	\$10,741,144	\$10,596,387	\$9,745,287	\$9,760,360	\$10,808,787	\$10,259,546	\$9,820,621
percent higher than base location	10.2%	8.7%	0.0%	0.2%	10.9%	5.3%	0.8%

Source: Northern Illinois University and the Boyd Company, Inc.

Section 6 Conclusions and Recommendations

Winnebago County is inherently well positioned within the broader Midwest region in terms of both access to major markets and transportation infrastructure. However, location alone is not sufficient for successful business attraction efforts. The region must be more proactive in efforts to target and attract business to the County through more comprehensive development activities such as partnerships and relationship development, marketing programs, and advocacy for growing the regions infrastructure and higher education opportunities.

Over the past decade Winnebago County has developed and improved characteristics that can provide a regional competitiveness for business attraction. Some of these characteristics include the improvements and expansion of the Northwest Chicagoland Regional Airport at Rockford, the expansion of the rail port hub in nearby Rochelle, the proposed expansion of broadband telecommunications infrastructure through NIU NET and ROCK NET, and further development of higher education opportunities. Yet the region has been experiencing significant losses, not only in employment, but also in business closures and relocations. These events contribute to a higher unemployed and underemployed workforce, which can also be positive in terms of labor availability. Based on the preceding analysis, this section includes recommendations on actions and initiatives that could expand the opportunities for successful attraction of the logistics industry to Winnebago County.

Regional Strengths

- Access to markets and low transportation costs
- Good availability and quality of labor with low labor stress
- Higher productivity and value added in truck transportation and warehousing/storage than Illinois or U.S.
- Lower labor costs than Illinois or U.S.
- Low labor stress in transportation/logistics occupations
- Excellent labor/management relations
- Expanding communication technology infrastructure
- Housing affordability

Regional Weaknesses

- Lower educational attainment
- Conveying the value of education and its link to economic development
- Availability of construction ready sites
- Higher crime rates
- Lack of coordinated effort toward economic development

Recommendations

Recommendation 1: *Select targets for industry attraction*

There are several approaches to identifying targets for logistics industry attraction to the region. The first approach seeks to identify individual companies that may be interested in locating to the region either by evaluating the sub sectors continuing growth and drilling down to company names, or by detailed company analysis. The second approach is to work through site selection consultants who specialize in the logistics industry. The third approach is to target real estate developers who may be contacts for site selection representatives from individual companies.

Selecting specific companies for targets should start by selecting the industry sub sectors that have been and continue to experience growth. Despite an overall decline in logistics industry growth from 2002 to 2003, the warehousing and storage sub sector has continued growth nationally. Existing employers in the warehousing and storage sub sectors include Carson Pirie Scott, General Electric, and Murphy Leek Warehousing.

Winnebago County – Warehousing & Storage Companies (422 SIC/493 NAICS)

Company	City	SIC Code	Sales	Employees	Type
Bell Rock Self Storage	Cherry Valley	4225-0000	\$200K	4	single location
Weberg & Son Roofing & Siding	Cherry Valley	4225-0000	unknown	2	branch
J & J Storage	Pecatonica	4225-0000	\$100K	2	single location
Prairie Warehouses Service	South Beloit	4225-0000	\$100K	2	single location
Store It	Rockford	4225-0000	\$100K	2	single location
GE	Rockford	4225-0000	unknown	83	branch
Warehouse	Rockford	4225-0000	unknown	10	branch
Rock River Wtr Reclamation Dst	Loves Park	4225-0000	unknown	11	branch
Island Rental Inc	Cherry Valley	4225-9901	unknown	2	single location
Jacobson Warehouse Company Inc	Rockford	4225-9901	unknown	11	branch
Murphy-Leek Warehouses Inc	Rockford	4225-9901	\$1.3M	25	single location

Carson Pirie Scott	Rockford	4225-9901	unknown	300	branch
Menasha Corporation	Rockford	4225-9901	unknown	3	branch
Murphy-Leek Warehousing Inc	Rockford	4225-9901	unknown	4	branch
Littfeld Ralph Whl Siding Inc	Rockford	4225-9901	unknown	2	branch
Food & Vending	Rockford	4225-9901	unknown	27	branch
Parkside Warehouse Inc	Rockford	4225-9901	\$600K	11	single location
Forshay Mini Warehouses	Roscoe	4225-9902	unknown	2	branch

Site selection consultants are a rich and valuable source of information both to the location seeking attraction and the companies looking for sites. For this reason, it is recommended that Winnebago County develop relationships with site selection consultants specializing in the issues and requirements of the logistics industry. These relationships can generate an awareness of companies that will be or are currently evaluating expansion opportunities. They can also be used as a resource for strategies to increase the attractiveness of a region. Site selection consultants are often the driving force behind short lists of alternative locations for logistics companies. Some of the more prominent site selection consultants include:

- Carter Burgess, Inc.
- Deloitte & Touche
- Fluor Global Location Strategies
- IBM Business Consulting Services
- Location Management Services
- Moran, Stahl, and Boyer
- The Pathfinders
- The Boyd Company, Inc.
- Trammell Crow Company
- Wadley-Donovan Group Ltd

Recommendation 2: *Develop a comprehensive marketing plan for industry attraction*

In order to effectively recruit logistics companies to the region, Winnebago County should develop a comprehensive marketing plan that addresses targets audiences, marketing materials, relationship development and implementation. The marketing plan should include the following key components:

- 1) Environmental Scan
- 2) Competitive Regional Analysis
- 3) Marketing Objectives and Strategy
- 4) Action/Implementation Plan

The environmental scan and competitive regional analysis are the focus of this report and provide the background and information that shape and impact site selection decisions. The next step in this process is to formalize marketing objectives and develop an appropriate marketing strategy. The county should identify not only who they want to target (companies, site selection consultants, real estate developers), but the role of various marketing approaches (direct mail, trade shows, relationship development, etc.). The marketing strategy should include identification of the audience, selection and role of media and materials, and area of focus for content. For example, content could emphasize the regions location, construction ready sites, workforce, and labor productivity. The last component to the marketing plan is the action or implementation plan. This part of the overall plan identifies the activities or tasks that need to be accomplished and the individual(s) who are charged with the activity. A set of goals may accompany the implementation plan such as dates, timelines, interviews and the like.

Recommendation 3: Develop an incentive package and expertise in funding opportunities

An important element of the region's industry attraction program is a comprehensive incentive package. Incentive packages are not exclusively focused on tax reductions, tax abatements, and the like. The county needs to develop knowledge of and expertise in the grant programs and other funding sources available at the regional, state and federal level that can be leveraged to assist local government and companies in infrastructure and construction costs. This includes not only identification of grant funding opportunities, but also assistance in completions of grant applications and business agreements as needed. Increased involvement with organization such as the I-39 corridor, can be beneficial in identifying the opportunities available.

Recommendation 4: Develop an industrial space inventory database

Already being planned is the development of an industrial space inventory which will use satellite imagery combined with layers of data to provide a resource to site selection firms and companies. The inventory database should identify available land parcels in the county with 50 or more developable acres and include ratings on construction readiness such as availability of power to site, roads, and other infrastructure information. This component of site selection is most critical when the company has narrowed its search to specific regions. Those regions that have construction ready sites or a solid, attainable plan to get sites construction ready will have a competitive advantage over those that do not. Once completed, the inventory database should be used as part of the larger marketing and business attraction program identified in Recommendation 1.

Recommendation 5: *Participate in regional logistics initiatives*

Winnebago County should actively participate in regional efforts targeted toward the logistics industry such as the I-39 Logistics Corridor Association. The I-39 Logistics Corridor emphasizes proximity, specifically proximity to everything of vital importance to logistics, manufacturing and other companies analyzing site criteria for the Chicago area. This regional coalition can be instrumental in identifying the companies to target, serving as the contact for site selection experts, and developing the content for marketing and promotional materials. The I-39 Corridor Association currently includes representatives from local and regional government entities, developers, utility companies, construction, economic development groups and logistics companies in the region.

Recommendation 6: *Advocacy and involvement in other regional initiatives*

There are a number of initiatives currently underway that will significantly impact the region's ability to increase business attraction efforts. Winnebago County and the entire Rock River Valley region will benefit from the expansion of high speed telecommunications infrastructure. Advocacy or direct involvement in the planning and implementation of Rocknet and NIU NET will assist the County in utilizing and maximizing this resource. Another important initiative is the development of regional higher education initiatives and offerings. The value and importance of higher education to economic development is paramount.

Overall, Winnebago County has many inherent features that make it an attractive location for the logistics industry including location, access to markets, and workforce. However, in order to be competitive in logistics industry site selection, the region needs to develop a comprehensive marketing plan that incorporates the results of this analysis into a marketing strategy and plan. To accomplish these activities will require a team from local/regional government, economic development, and the logistics industry to work together towards providing overall leadership, identifying targets, developing marketing strategy, building relationships, and managing site selection inquiries. To become a player in the site selection arena requires planning, initiative, and regional coordination all of which will be necessary for Winnebago County to successfully attract not only logistics companies but other industries.

Appendix A Industry Sub-sectors

423 Merchant Wholesalers, Durable Goods

Industries in the Merchant Wholesalers, Durable Goods sub-sector sell capital or durable goods to other businesses. Merchant wholesalers generally take title to the goods that they sell; in other words, they buy and sell goods on their own account. Durable goods are new or used items generally with a normal life expectancy of three years or more. Durable goods merchant wholesale trade establishments are engaged in wholesaling products, such as motor vehicles, furniture, construction materials, machinery and equipment (including household-type appliances), metals and minerals (except petroleum), sporting goods, toys and hobby goods, recyclable materials, and parts.

Business-to-business electronic markets, agents, and brokers primarily engaged in wholesaling durable goods, generally on a commission or fee basis, are classified in Sub-sector 425, Wholesale Electronic Markets and Agents and Brokers.

424 Merchant Wholesalers, Nondurable Goods

Industries in the Merchant Wholesalers, Nondurable Goods sub-sector sell nondurable goods to other businesses. Nondurable goods are items generally with a normal life expectancy of less than three years. Nondurable goods merchant wholesale trade establishments are engaged in wholesaling products, such as paper and paper products, chemicals and chemical products, drugs, textiles and textile products, apparel, footwear, groceries, farm products, petroleum and petroleum products, alcoholic beverages, books, magazines, newspapers, flowers and nursery stock, and tobacco products.

The detailed industries within the sub-sector are organized in the classification structure based on the products sold.

Business to business electronic markets, agents, and brokers primarily engaged in wholesaling nondurable goods, generally on a commission or fee basis, are classified in Sub-sector 425, Wholesale Electronic Markets and Agents and Brokers.

425 Wholesale Electronic Markets and Agents and Brokers

Industries in the Wholesale Electronic Markets and Agents and Brokers sub-sector arrange for the sale of goods owned by others, generally on a fee or commission basis. They act on behalf of the buyers and sellers of goods. This sub-sector contains agents and brokers as well as business to business electronic markets that facilitate wholesale trade.

484 Truck Transportation

Industries in the Truck Transportation sub-sector provide over-the-road transportation of cargo using motor vehicles, such as trucks and tractor trailers. The sub-sector is subdivided into general freight trucking and specialized freight trucking. This distinction reflects differences in equipment used, type of load carried, scheduling, terminal, and other networking services.

General freight transportation establishments handle a wide variety of general commodities, generally palletized, and transported in a container or van trailer. Specialized freight transportation is the transportation of cargo that, because of size, weight, shape, or other inherent characteristics require specialized equipment for transportation.

Each of these industry groups is further subdivided based on distance traveled. Local trucking establishments primarily carry goods within a single metropolitan area and its adjacent non-urban areas. Long distance trucking establishments carry goods between metropolitan areas.

The Specialized Freight Trucking industry group includes a separate industry for Used Household and Office Goods Moving. The household and office goods movers are separated because of the substantial network of establishments that has developed to deal with local and long-distance moving and the associated storage. In this area, the same establishment provides both local and long-distance services, while other specialized freight establishments generally limit their services to either local or long-distance hauling.

488 Support Activities for Transportation

Industries in the Support Activities for Transportation sub-sector provide services which support transportation. These services may be provided to transportation carrier establishments or to the general public. This sub-sector includes a wide array of establishments, including air traffic control services, marine cargo handling, and motor vehicle towing.

The Support Activities for Transportation sub-sector includes services to transportation but is separated by type of mode serviced. The Support Activities for Rail Transportation industry includes services to the rail industry (e.g., railroad switching and terminal establishments).

Ship repair and maintenance not done in a shipyard are included in Other Support Activities for Water Transportation. An example would be floating dry-dock services in a harbor.

Excluded from this sub-sector are establishments primarily engaged in providing factory conversion and overhaul of transportation equipment, which are classified in Sub-sector 336, Transportation Equipment Manufacturing. Also, establishments primarily engaged in providing rental and leasing of transportation equipment without operator are classified in Sub-sector 532, Rental and Leasing Services.

492 Couriers and Messengers

Industries in the Couriers and Messengers sub-sector provide intercity and/or local delivery of parcels. These articles can be described as those that may be handled by one person without using special equipment. This allows the collection, pick-up, and delivery operations to be done with limited labor costs and minimal equipment. Sorting and transportation activities, where necessary, are generally mechanized. The restriction to small parcels partly distinguishes these establishments from those in the transportation industries. The complete network of courier services establishments also distinguishes these transportation services from local messenger and delivery establishments in this sub sector. This includes the establishments that perform intercity

transportation as well as establishments that, under contract to them, perform local pick-up and delivery. Messengers, which usually deliver within a metropolitan or single urban area, may use bicycle, foot, small truck, or van.

493 Warehousing and Storage

Industries in the Warehousing and Storage sub-sector are primarily engaged in operating warehousing and storage facilities for general merchandise, refrigerated goods, and other warehouse products. These establishments provide facilities to store goods. They do not sell the goods they handle. These establishments take responsibility for storing the goods and keeping them secure. They may also provide a range of services, often referred to as logistics services, and related to the distribution of goods. Logistics services can include labeling, breaking bulk, inventory control and management, light assembly, order entry and fulfillment, packaging, pick and pack, price marking and ticketing, and transportation arrangement. However, establishments in this industry group always provide warehousing or storage services in addition to any logistic services. Furthermore, the warehousing or storage of goods must be more than incidental to the performance of services, such as price marking.

Bonded warehousing and storage services and warehouses located in free trade zones are included in the industries of this sub sector.

Source: The official **2002 US NAICS Manual** *North American Industry Classification System--United States, 2002.*

Appendix B Winnebago County Occupational Growth

Standard Occupational Classification (SOC)		Base Year Empl. 2000	Proj Year Empl. 2010	Employment Change 2000-2010		Average Annual Job Openings		
Code	Title			Number	Percent	Due to Growth	Due to Separations	Total
53-7060	Laborers and Material Movers, Hand	4,493	4,741	248	5.52	25	142	167
53-3030	Driver/Sales Workers and Truck Drivers	3,859	4,284	425	11.01	43	53	95
53-7050	Industrial Truck and Tractor Operators	773	802	29	3.75	3	11	14
53-3020	Bus Drivers	503	549	46	9.15	5	13	18
53-6090	Miscellaneous Transportation Workers	250	272	22	8.80	2	10	12
53-7080	Refuse and Recyclable Material Collectors	209	235	26	12.44	3	9	12
53-6020	Parking Lot Attendants	182	209	27	14.84	3	3	6
53-1030	First-Line Supvrs/Mgrs of Trans & Material-Moving Machine & Vehicle	161	179	18	11.18	2	3	5
53-7190	Miscellaneous Material Moving Workers	159	181	22	13.84	2	5	8
53-1020	First-Line Supvrs/Mgrs of Hlprs, Laborers, & Material Movers, Hand	155	162	7	4.52	1	3	4
53-3090	Miscellaneous Motor Vehicle Operators	149	162	13	8.72	1	3	4
53-6030	Service Station Attendants	119	103	-16	-13.45	0	6	6
53-3040	Taxi Drivers and Chauffeurs	77	89	12	15.58	1	1	2
53-7030	Dredge, Excavating, and Loading Machine Operators	75	90	15	20.00	2	2	4
53-2010	Aircraft Pilots and Flight Engineers	68	66	-2	-2.94	0	2	2
53-7020	Crane and Tower Operators	65	64	-1	-1.54	0	2	2
53-7010	Conveyor Operators and Tenders	46	45	-1	-2.17	0	1	1
53-3010	Ambulance Drivers and Attendants, Except Emergency	30	36	6	20.00	1	0	1
53-7040	Hoist and Winch Operators	22	23	1	4.55	0	1	1
53-1010	Aircraft Cargo Handling Supervisors	21	25	4	19.05	0	1	1
53-4040	Subway and Streetcar Operators	20	22	2	10.00	0	0	1
53-6050	Transportation Inspectors	18	23	5	27.78	1	1	1
53-4090	Miscellaneous Rail Transportation Workers	17	17	0	0.00	0	1	1
53-2020	Air Traffic Controllers and Airfield Operations Specialists	12	14	2	16.67	0	1	1
53-4010	Locomotive Engineers and Operators	10	11	1	10.00	0	0	0
53-7120	Tank Car, Truck, and Ship Loaders	9	9	0	0.00	0	0	0
53-7070	Pumping Station Operators	8	8	0	0.00	0	0	0
53-4030	Railroad Conductors and Yardmasters	7	7	0	0.00	0	0	0
53-6010	Bridge and Lock Tenders	6	4	-2	-33.33	0	0	0
		11,523	12,432	909	193.95	95	274	369

Source: Illinois Department of Employment Security (IDES)

Appendix C
The Boyd Company Inc
Comparative Operating Cost Analysis Tables

Scored Cost Comparison

	Winnebago County	DeKalb County, IL	Dubuque County, IA	Indianapolis, IN	Minneapolis St. Paul, MN	Rock County, WI	St. Louis, MO
Scale 1 = lowest cost; 7 = highest cost							
Weighted Average Hourly Earnings	\$12.80	\$12.16	\$11.36	\$12.74	\$13.48	\$12.51	\$12.68
Annual Base Payroll Costs	\$3,655,680	\$3,472,896	\$3,244,416	\$3,638,544	\$3,849,888	\$3,572,856	\$3,621,408
Fringe Benefits	\$1,389,158	\$1,319,700	\$1,232,878	\$1,382,647	\$1,462,957	\$1,357,685	\$1,376,135
Labor Costs	\$5,044,838	\$4,792,596	\$4,477,294	\$5,021,191	\$5,312,845	\$4,930,541	\$4,997,543
ranking	6	2	1	5	7	3	4
amount higher than base location	\$567,544	\$315,302	\$0	\$543,897	\$835,551	\$453,247	\$520,249
percent higher than base location	12.7%	7.0%	0.0%	12.1%	18.7%	10.1%	11.6%
Electric Power Costs (3)	\$345,348	\$345,348	\$293,148	\$249,192	\$267,936	\$282,624	\$230,364
Natural Gas Power Costs (4)	\$346,500	\$346,500	\$313,740	\$254,520	\$253,680	\$323,820	\$367,500
Heating and Air Conditioning Costs (9)	\$721,857	\$696,207	\$679,572	\$426,658	\$650,674	\$686,235	\$349,455
Energy Costs	\$1,413,705	\$1,388,055	\$1,286,460	\$930,370	\$1,172,290	\$1,292,679	\$947,319
ranking	7	6	4	1	3	5	2
amount higher than base location	\$483,335	\$457,685	\$356,090	\$0	\$241,920	\$362,309	\$16,949
percent higher than base location	52.0%	49.2%	38.3%	0.0%	26.0%	38.9%	1.8%
Amortization Costs (5)	\$2,242,460	\$2,339,470	\$1,878,088	\$2,118,338	\$2,366,045	\$2,057,758	\$2,433,690
Property and Sales Tax Costs (6)	\$1,197,901	\$1,068,993	\$918,460	\$595,014	\$1,354,563	\$761,648	\$937,343
Lease Costs (8)	\$1,312,500	\$1,452,500	\$997,500	\$987,000	\$1,232,000	\$1,137,500	\$1,057,000
Property Costs	\$4,752,861	\$4,860,963	\$3,794,048	\$3,700,352	\$4,952,608	\$3,956,906	\$4,428,033
ranking	5	6	2	1	7	3	4
amount higher than base location	\$1,052,509	\$1,160,611	\$93,696	\$0	\$1,252,256	\$256,554	\$727,681
percent higher than base location	28.4%	31.4%	2.5%	0.0%	33.8%	6.9%	19.7%
<i>Source: NIU and The Boyd Company, Inc.</i>							

	Winnebago County	DeKalb County, IL	Dubuque County, IA	Indianapolis, IN	Minneapolis St. Paul, MN	Rock County, WI	St. Louis, MO
Shipping Costs (7)	\$2,607,601	\$2,588,235	\$2,634,033	\$2,521,800	\$2,741,652	\$2,648,826	\$2,437,959
ranking	4	3	5	2	7	6	1
amount higher than base location	\$169,642	\$150,276	\$196,074	\$83,841	\$303,693	\$210,867	\$0
percent higher than base location	7.0%	6.2%	8.0%	3.4%	12.5%	8.6%	0.0%
Total Annual Geographically-Variable Operating Costs (10)	\$12,506,505	\$12,177,350	\$11,194,335	\$11,186,713	\$12,947,396	\$11,691,452	\$11,753,854
Annual Operating Costs - construction	6	5	2	1	7	3	4
amount higher than base location	\$1,319,792	\$990,637	\$7,622	\$0	\$1,760,683	\$504,739	\$567,141
percent higher than base location	11.8%	8.9%	0.1%	0.0%	15.7%	4.5%	5.1%
Annual Operating Costs - lease	\$10,741,144	\$10,596,387	\$9,745,287	\$9,760,360	\$10,808,787	\$10,259,546	\$9,820,621
Annual Operating Costs - lease	6	5	1	2	7	4	3
amount higher than base location	\$995,857	\$851,100	\$0	\$15,073	\$1,063,500	\$514,259	\$75,334
percent higher than base location	10.2%	8.7%	0.0%	0.2%	10.9%	5.3%	0.8%

Source: NIU and The Boyd Company, Inc.

EXHIBIT I: COMPARATIVE ANNUAL OPERATING COST SIMULATION SUMMARY (1)

	Winnebago County	DeKalb County, IL	Dubuque County, IA	Indianapolis, IN	Minneapolis St. Paul, MN	Rock County, WI	St. Louis, MO
Nonexempt Labor (2)							
Weighted Average Hourly Earnings	\$12.80	\$12.16	\$11.36	\$12.74	\$13.48	\$12.51	\$12.68
Annual Base Payroll Costs	\$3,655,680	\$3,472,896	\$3,244,416	\$3,638,544	\$3,849,888	\$3,572,856	\$3,621,408
Fringe Benefits	\$1,389,158	\$1,319,700	\$1,232,878	\$1,382,647	\$1,462,957	\$1,357,685	\$1,376,135
Total Annual Labor Costs	\$5,044,838	\$4,792,596	\$4,477,294	\$5,021,191	\$5,312,845	\$4,930,541	\$4,997,543
Electric Power Costs (3)	\$345,348	\$345,348	\$293,148	\$249,192	\$267,936	\$282,624	\$230,364
Natural Gas Power Costs (4)	\$346,500	\$346,500	\$313,740	\$254,520	\$253,680	\$323,820	\$367,500
Amortization Costs (5)	\$2,242,460	\$2,339,470	\$1,878,088	\$2,118,338	\$2,366,045	\$2,057,758	\$2,433,690
Property and Sales Tax Costs (6)	\$1,197,901	\$1,068,993	\$918,460	\$595,014	\$1,354,563	\$761,648	\$937,343
Shipping Costs (7)	\$2,607,601	\$2,588,235	\$2,634,033	\$2,521,800	\$2,741,652	\$2,648,826	\$2,437,959
Lease Costs (8)	\$1,312,500	\$1,452,500	\$997,500	\$987,000	\$1,232,000	\$1,137,500	\$1,057,000
Heating and Air Conditioning Costs (9)	\$721,857	\$696,207	\$679,572	\$426,658	\$650,674	\$686,235	\$349,455
Total Annual Geographically-Variable Operating Costs (10)	\$12,506,505	\$12,177,350	\$11,194,335	\$11,186,713	\$12,947,396	\$11,691,452	\$11,753,854
Total Annual Geographically-Variable Operating Costs (11)	\$10,741,144	\$10,596,387	\$9,745,287	\$9,760,360	\$10,808,787	\$10,259,546	\$9,820,621

Source: The Boyd Company, Inc.

(1) Includes all major geographically-variable operating costs. Start-up and relocation costs not considered.

(2) See Exhibit II.

(3) See Exhibit III.

(4) See Exhibit III.

(5) See Exhibit IV.

(6) See Exhibit V.

(7) See Exhibit VI.

(8) See Exhibit VII.

(9) See Exhibit VII.

(10) Warehouse construction assumption.

(11) Warehouse lease assumption.

Source: NIU and The Boyd Company, Inc.

Appendix D

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