



**Figure 17:** Eastern Prairie Fringes Orchid

The geography of McHenry County, who lives here, and the types of jobs they hold are important demographics to study in a transportation plan. These demographics illustrate why certain types of transportation infrastructure are in place. They also provide the analytical foundation for making future transportation recommendations. This chapter provides the geographic, population, and jobs statistics used to develop this plan.

## GEOGRAPHY

McHenry County is located in northeastern Illinois along the Wisconsin and Illinois border approximately 20 miles to the west of Lake Michigan, 20 miles to the northwest of Chicago O'Hare International Airport, 20 miles to the east of Rockford International Airport, and 35 miles to the southwest of Milwaukee General Mitchell International Airport. It is over 611 miles square. In order of magnitude, approximately 61% of the County is agricultural, 16% is residential, 11% is designated open space (parks, golf courses, neighborhood open space), 2% is government/institutional, 1% is mining (gravel pits), 1% is industrial, and 1% is commercial. Over 5% of the County is considered vacant.

The County's geography is environmentally and culturally unique. Its rolling hills, marshes, streams, and oak groves offer jaw-dropping views. Many of its town centers are emulated by architects and envied by other communities. The County is also located within a region that is strategically advantageous to many industries.

## ENVIRONMENTAL UNIQUENESS

The quality and diversity of McHenry County's environment suggests a bright future for the many flora and fauna that call the County home, as well as the residents, businesses, and tourists who will come to the County because of its biodiversity. According to the Illinois Natural Resource Inventory of the state's most rare natural areas, McHenry County has one of the largest numbers of remaining undisturbed areas. McHenry County is 1% of the state's territory but has 5% of the state's rare natural areas. The McHenry County Green Infrastructure Plan adopted by the County Board in July 2012 provides a detailed

analysis and discussion regarding McHenry County's natural infrastructure. It identified many of the benefits of the County's diversity of plant and animal species including improved water quality and groundwater recharge. It then recommended opportunities and suggested policy approaches to enhance and protect those benefits.

The Green Infrastructure Plan recommended a regional trails network linking municipalities, existing trails, communities, and open space areas. This network of bicycle and hiking trails was recommended to provide important links between the community and natural areas. These links should be designed to promote intercommunity travel, good environmental stewardship, and allow other species the ability to travel along natural corridors with less chance of conflicting with high-speed motorized traffic.

Also in July of 2012, the U.S. Department of the Interior created the Hackmatack National Wildlife Refuge straddling the Illinois and Wisconsin border between Woodstock, Alden, Lake Geneva, Richmond, and Wonder Lake. The boundaries of the authorized 11,200 acre refuge were determined based on watersheds, existing conservation areas, habitat requirements of desired wildlife species, public roads, and public comments. This area includes habitat suitable for 57 plant and animal species that are listed by the State of Illinois as being nearly extinct in Illinois. One of these, the Eastern Prairie Fringes Orchid (see Figure 17), is listed by the United States as a species that is under threat of becoming extinct. This beautiful orchid is rare in part because it is pollinated by a unique moth called the Hawk Moth.

## COMMUNITY UNIQUENESS

The characteristics of communities in McHenry County change with the landscape. In the east, the Fox River provided transportation and early industrial power and now provides recreational opportunities. The communities of Algonquin and McHenry have older town centers along the river built when industry relied on water power for mills and milling. Outside of these older centers, residential areas built up along the river to take advantage of the recreational opportunities. This also occurred in communities like Barrington Hills, Fox River Grove, Trout Valley, Holiday Hills, Port Barrington, Johnsburg, and Fox Lake. The nearby communities of Wonder Lake, McCullum Lake, Oakwood Hills, Lake in the Hills, and Crystal Lake developed early vacation homes and recreational areas along their lake shores. In the case of Wonder Lake, the lake was created to encourage this type of housing and vacation opportunities.

The Fox River Valley area is typified by hilly topography with flat flood plains along river inlets. The built environment includes a mixture of old industrial centers, temporary vacation homes made permanent, newer luxury estate homes with boat launches, and pockets of farmland, parks, and equestrian areas. As a whole, the Fox River Valley in McHenry County has ample recreational opportunities (including the Nordic Ski Jump facility in Fox River Grove and the Moraine Hills State Park) and has areas that are difficult to access and traverse given the water features and rolling terrain.

Moving west away from the Fox River, the County is urban in the south where flat farmland and closer proximity to the Interstate Highway favored large scale conversion of land to residential and commercial uses. Huntley, Lake in the Hills,

western Algonquin, and southern Crystal Lake exploded in terms of population and urban foot-print since the mid-1990's. In the heart of this area lies the Exner Marsh Nature Preserve.

Unlike earlier decades of construction, these areas were built with considerable attention given to open space, environmental conservation, and storm water management. Instead of tight neighborhoods built on a linear grid with adequate storm sewer capacity and little open space, this area is typified by large subdivisions with curving roadways, large storm water detention ponds, and planned areas of open space. This geography concentrates traffic onto a few regional roadways while limiting trip choices and increasing average trip distances.

To the north and west of the urban cluster and Fox River Valley, the cities of Woodstock, Harvard, Marengo, Union, Hebron, Richmond, and Spring Grove are dispersed and separated by the County's remaining large agricultural operations. The cores of these communities were built along railroads and still retain a central town square/main street atmosphere. The Woodstock Square, which was built to accommodate the work of the County seat and commercial needs of the community during the late 19th century, is perhaps the most vibrant expression of a rail-centric community in the County. With the construction of the State and U.S. Highways connecting these communities, industrial development in particular became more prominent on the outskirts. Manufacturing plants and freight traffic are as common in these communities as bicyclists and farm tractors.

Other communities such as Bull Valley, Greenwood, Ringwood, Wonder Lake, Lakewood, and Prairie Grove have developed without town centers or community focal points. These communities have zoning and building codes that transition between the urban areas and the type of residential and commercial development occurring in the unincorporated areas. This includes legacy farmsteads, newer large estate housing, and limited commercial areas. While these incorporated communities do not currently have a central area, the unincorporated communities of Ridgfield, Alden, Hartland, and Chemung do have a town center.

Throughout the County, there are small agricultural operations and large row crop areas. A few agricultural operations can be found even along the County's busiest commercial strip, Randall Road. Another industry common to all areas of the County is earth extraction or gravel pits. Unique glacial deposits across the County that support biodiversity also supply local building material for the Chicago region. Over the last 100 years, gravel mining has transformed areas of McHenry County creating transportation barriers in some cases and recreational opportunities in other cases. Illinois Route 31, Rakow Road, and Randall Road handle incredible traffic loads in part because gravel pit operations have dramatically reduced the ability of a network of roadways to be built between Crystal Lake and Algonquin. In the same area, the City of Crystal Lake has been able to reclaim the Vulcan Lakes mining operation and transform it into the Three Oaks Recreational Center.



**Figure 18:** Three Oaks Recreational Area

## STRATEGIC LOCATIONS ADVANTAGE

In addition to McHenry County's unique environmental and cultural resources, the County lies within the most prosperous and productive area of the northern plains of North America. The quality of soils for crop production in this area is greater than the vast majority of soils on the planet. Unlike most of the planet, the soils found in McHenry County and most of the northern plains of North America have very few properties that would limit crop production (See Food and Agriculture Organization of the United Nations: <http://www.fao.org/docrep/u8480e/u8480e0b.htm>). Approximately 89% of the world's soils are not very productive. McHenry County is part of the 11% that produces almost all of the planet's food crops. The extremely productive conditions of these soils and the need to hedge future seed and yield prices require the services of a futures market. These services have been provided by the Chicago Board of Trade and satellite commodities exchanges throughout the Midwest. The unique financial and legal skills required to manage these types of markets coupled with the vast transportation network necessary to distribute food from America's breadbasket to the world helped elevate the Chicago region to be a key player in the world's global economy. The region's infrastructure has been scaled up to meet this international stature.

Over the last two centuries, billions and billions of dollars worth of transportation infrastructure has been built in the region surrounding McHenry County. Most of this infrastructure has been oriented strategically toward Chicago and the south end of Lake Michigan. The County's remaining active railroads, U.S. Routes 12, 14, and 20, and Interstate 90 cross McHenry County based on this orientation. The center of the County is within 35 miles of 5 Interstate Highways, 5 metropolitan areas, and two international shipping channels via the Great Lakes and the Mississippi River. Within 70 miles, the County has access to 5 commercial airports

including O'Hare Airport which provides approximately 100 direct flights to 57 international destinations each day (see Figure 19 below). Intermodal yards in Rochelle and Joliet serve the rail and truck freight industry by taking advantage of standard containerization and the numerous intercontinental railroads that cross the region. Given these investments, Chicago is the transportation hub of North America. According to Dr. Jean-Paul Rodrigue of Hofstra University in New York, the intermodal yards outside of Joliet alone create the largest freight logistics center in North America (The Geography of Transport Systems, 2013).

that is required to access the Chicago central business district, "the Loop". The Loop is home to one of the world's largest and most diverse pool of business and financial experts, as well as incredible cultural attractions. McHenry County also has unparalleled access to the entire world. Within an hour drive and a 10 hour flight, one can eat dinner in Rome outside the Italian parliament. In addition to having excellent Interstate Highway and Transit access to Chicago and the O'Hare Airport area, McHenry County is surrounded by the industrial and research centers of Milwaukee, Madison, and DeKalb and the industrial centers of Janesville, Rockford, Belvidere, Elgin, Gary, Waukegan, Kenosha and Racine.

For McHenry County businesses and residents, a comfortable train ride is all



Figure 19: Summary of County's access

### POPULATION TRENDS

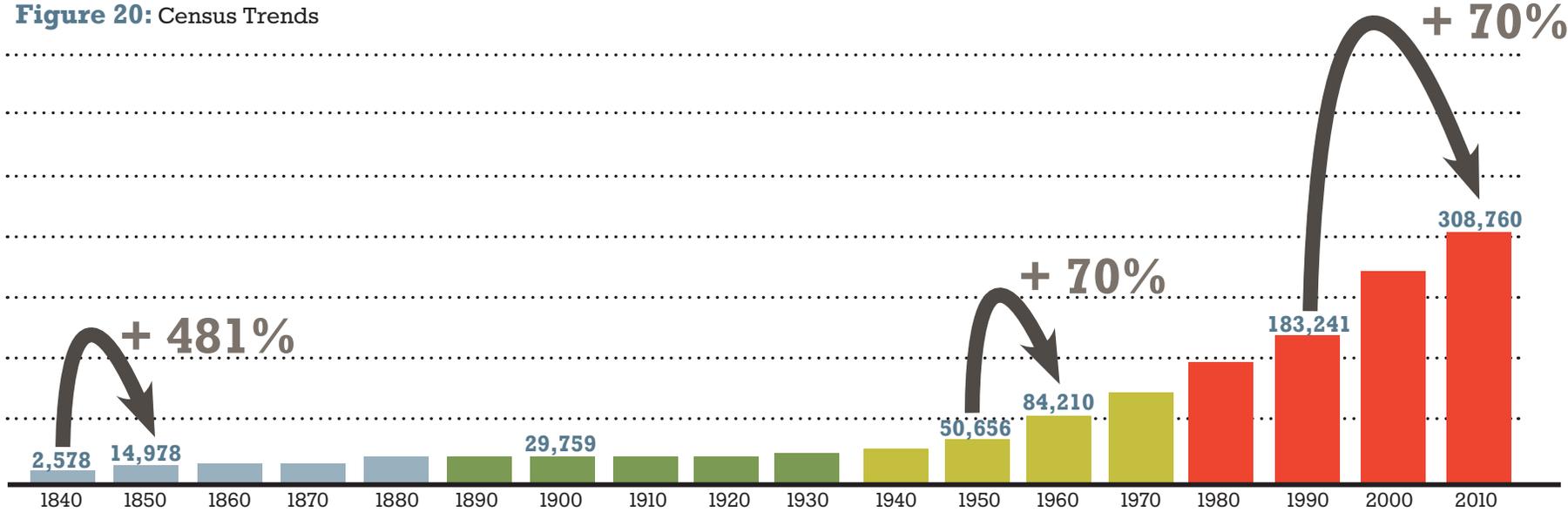
McHenry County is now the sixth most populous county in the fifth largest state. According to the 2010 Census, Cary (2,914 people/mile<sup>2</sup>), Lake in the Hills (2,791 people/mile<sup>2</sup>), and Algonquin (2,457 people/mile<sup>2</sup>) are the most densely populated communities in the County. Since the 1840's the County has experienced three waves of population growth, the largest of which occurred between 1990 and 2010. These waves correspond with changes in transportation technology and the growth of the Chicago housing market.

The first spike in population growth in McHenry County occurred when passenger rail service stretched out from Chicago in the 1840's. Between 1840 and 1850, the County's population exploded 481% from 2,578 to 14,978 (See Figure 20 below). For the next hundred years, population growth in the County occurred at steady rate in and around the communities served by passenger rail. The second great

spike in population growth occurred as are result of the construction of the Toll Highway in the 1950's and O'Hare Airport in the 1960's. The completion of these projects corresponds with a jump in population growth in the County that continued until 2010.

Approximately 90% of the County's current population growth occurred between 1950 and 2010. The Toll Highway and employment opportunities near O'Hare Airport provided more families access to the outdoors, affordable housing, and great communities while being able to access employment opportunities found in the region encompassing Chicago, Milwaukee, Gary, Madison, Janesville, Rockford, and DeKalb. A third wave of population growth occurred between 1990 and 2010. The region between Chicago and the County had been built-out, pushing the housing market to reach further out into McHenry County. At the same time,

Figure 20: Census Trends



housing developers and banks created financial tools to limit the risks associated with the construction of large (200 to 2,000 unit) residential subdivisions. This combination of factors helped facilitate 70% population growth.

During the last wave of growth, the population in McHenry County became older, more ethnically diverse, and poorer. The aging of the baby-boomer generation had been anticipated for some time. This generation resulted from depressed birth rates during World War II changing to very high birth rates following the conclusion of conflicts. However, the ethnic diversification of areas such as McHenry County, and the growth in poverty rates in these areas are new trends. Urban and global financial experts such as Saskia Sassen theorize that the new trends are likely a result of Chicago's rise as a dominant global economic center.

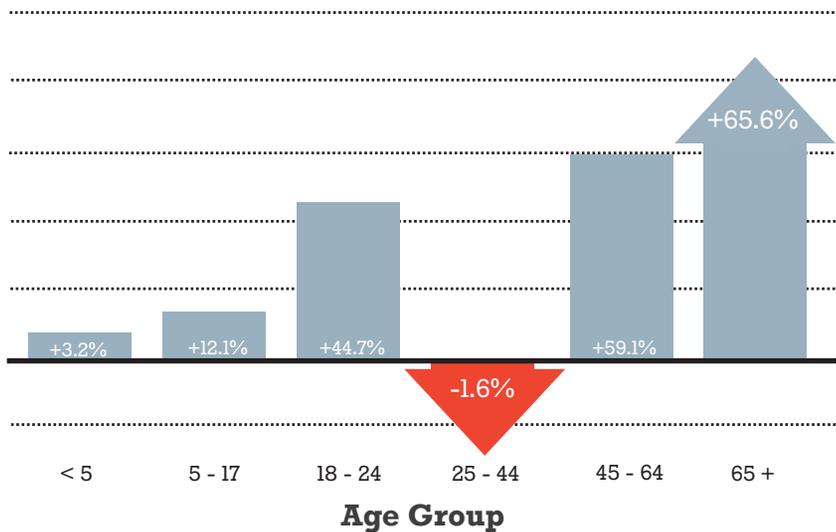


Figure 21: Age Overview

Source: McHenry County 2010 Healthy Community Study

### SENIOR BOOM

The number of individuals over the age of 45 in the County has grown faster than any other age group. From 2000 to 2009, the population 45 to 64 years old increased by 59% and 65 and older increased by 66%. The senior population is more prevalent in outlying areas, surrounding Marengo, Huntley and southeast of Harvard. The population of 25 to 44 year old individuals actually decreased. This has risen the median age, as measured by the U.S. Census, from 34 years in 2000 to 38 years in 2010.

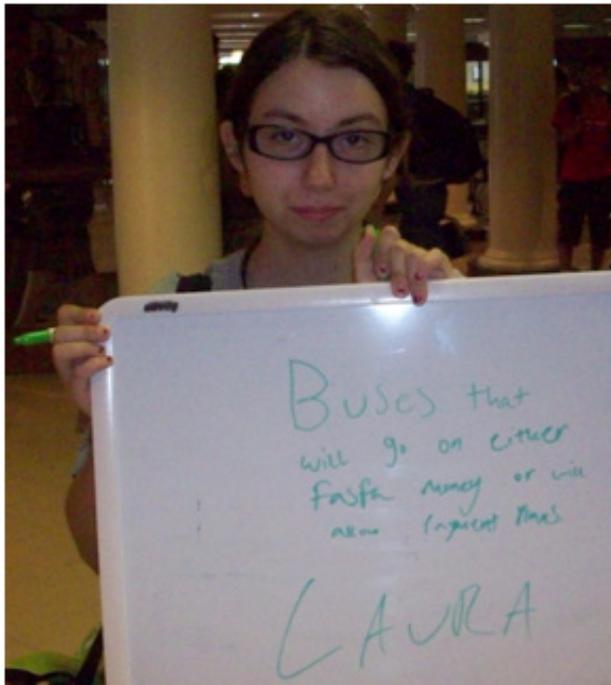
### MORE ETHNICALLY DIVERSE

McHenry County is becoming more ethnically diverse. Large immigrant populations offer greater access to global trade and cultural networks. To the degree new immigrants have different transportation infrastructure experiences, they also have different transportation expectations.

Today, those who consider themselves to be non-Hispanic Whites comprise 84% of population in McHenry County (down from 89.6 in 2000). Those identifying as Hispanics make up 11%. New immigrants and emigrants to the Chicago region are increasingly living outside of Chicago. Between 2002 and 2009, the Black or African American (+162%), Asian (132%), and Hispanic (85%) groups grew by the largest percentage in McHenry County.

### GROWING ECONOMIC HARDSHIPS

The United States now has a great disparity between the rich and poor when compared to other industrialized countries. In order to measure poverty in a country compared to its wealth, the World Bank created a GINI index that tracks income differences between families. The GINI index is named after its developer, Corrado Gini, an Italian statistician. A lower score indicates less difference in family incomes. In 2007, The United States had a GINI rating of 45.0 comparable to the country of China today (47.4). This GINI score for the United States is up from 40.8 in 1997 which is comparable with Russia, which scored a 41.7 in 2011. The income disparity in the United States is very different than the



**Figure 22:** McHenry County College Student Requests Bus Services that Accept Federal Student Aid Money or Payment Plans

countries of Sweden which scored a 23.0 in 2005 and Germany, 27.0 in 2006. The effects of an economic restructuring are evident in McHenry County. According to the U.S. Census Bureau, the poverty rate in McHenry County has grown from 3.7% of the population in 2000 to 7.0% of the population in 2009. During the same period, persons living in extreme poverty (incomes less than 50 percent of the poverty level) increased from 1.7% of the population to 3.5%. In McHenry County, the minimum hourly wage required for ones most basic needs for an adult living alone is \$10.48, as calculated using the “Living Wage Calculator” by Dr. Amy K. Glasmeier of the Massachusetts Institute of Technology Department of Urban Studies (<http://livingwage.mit.edu>). An adult supporting one child would have to work full time for \$20.86 per hour. The typical hourly wages for most occupations in McHenry County do not pay enough for an adult to support one child (See Figure 23 to the right).

The national trend of growing income disparity, increase in local poverty rates, and typical wages below cost of living levels, suggests that a growing number of families may be searching for lower cost forms of transportation. It is possible

Occupational Area	Typical Hourly Wage
Food Preparation and Serving Related	\$9.09
Personal care and Services	\$9.93
Building and Grounds Cleaning and maintenance	\$11.14
Healthcare Support	\$11.68
Sales and Related	\$11.78
Farming, Fishing and Forestry	\$13.16
Transportation and Material Moving	\$13.65
Production	\$14.77
Office and Administrative Support	\$15.09
Protective Service	\$18.39
Community and Social Services	\$19.14
Arts, Design, Entertainment, Sports and Media	\$20.12
Installation, Maintenance and Repair	\$20.59
Education, Training and Library	\$23.48
Construction and Extraction	\$26.24
Healthcare Practitioner and Technical	\$28.25
Business and Financial Operations	\$28.75
Life, Physical and social Science	\$31.48
Architecture and Engineering	\$32.84
Computer and Mathematical	\$34.61
Management	\$41.95
Legal	\$42.09

**Figure 23:** Working wages and occupations in McHenry County

that many households in the County are already challenged to maintain a motor vehicle and/or are abandoning the prospect of owning a motor vehicle.

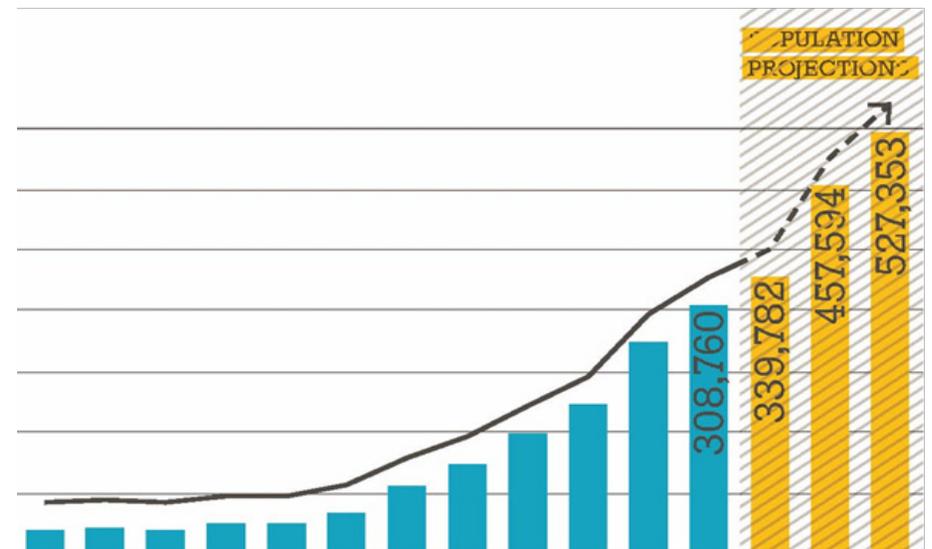
## POPULATION FORECASTS

Between now and 2040, population and employment in McHenry County will continue to be driven by a desire for people to have a high quality of life as well as access to world-class academic, cultural, research, financial, and industrial institutions. The challenge for transportation planners and engineers is to balance the need for additional transportation access with the need to preserve and enhance natural areas, to keep housing affordable, and to keep our communities unique and inviting. This challenge will require an ever-changing and flexible approach to the problems as the County's demographics change over time.

The Chicago Metropolitan Agency for Planning (CMAP) makes population and employment forecasts in the Chicago region for transportation planning purposes. CMAP forecasts have proven to be within 10% of the actual census for McHenry County. By 2040, CMAP forecasts the population of McHenry County will be approximately 525,000 (see Figure 24). Recent declines in population measured across the County by the United States Census Bureau suggest that rapid population growth period first spurred by the Interstate Highway and O'Hare Airport and then accelerated by the housing boom might be over. If so, it is possible that the County might experience the type of flat or slow growth similar to what it experienced between 1850 and 1950.

On the other hand, several projects currently underway will greatly improve the County's access between Chicago and new markets and thereby encourage more population growth in the County. These projects are of national and international significance including the National High-Speed Rail Initiative, the Chicago Region Environmental and Transportation Efficiency Program (CREATE), and the O'Hare Modernization Program and projects of regional significance including the UPNW Metra Line New Starts project, the western access highway to O'Hare Airport, and improvements to I-90. New transportation infrastructure and services will be needed to mitigate highway congestion and lack of transit coverage as a result of these projects leading to population growth.

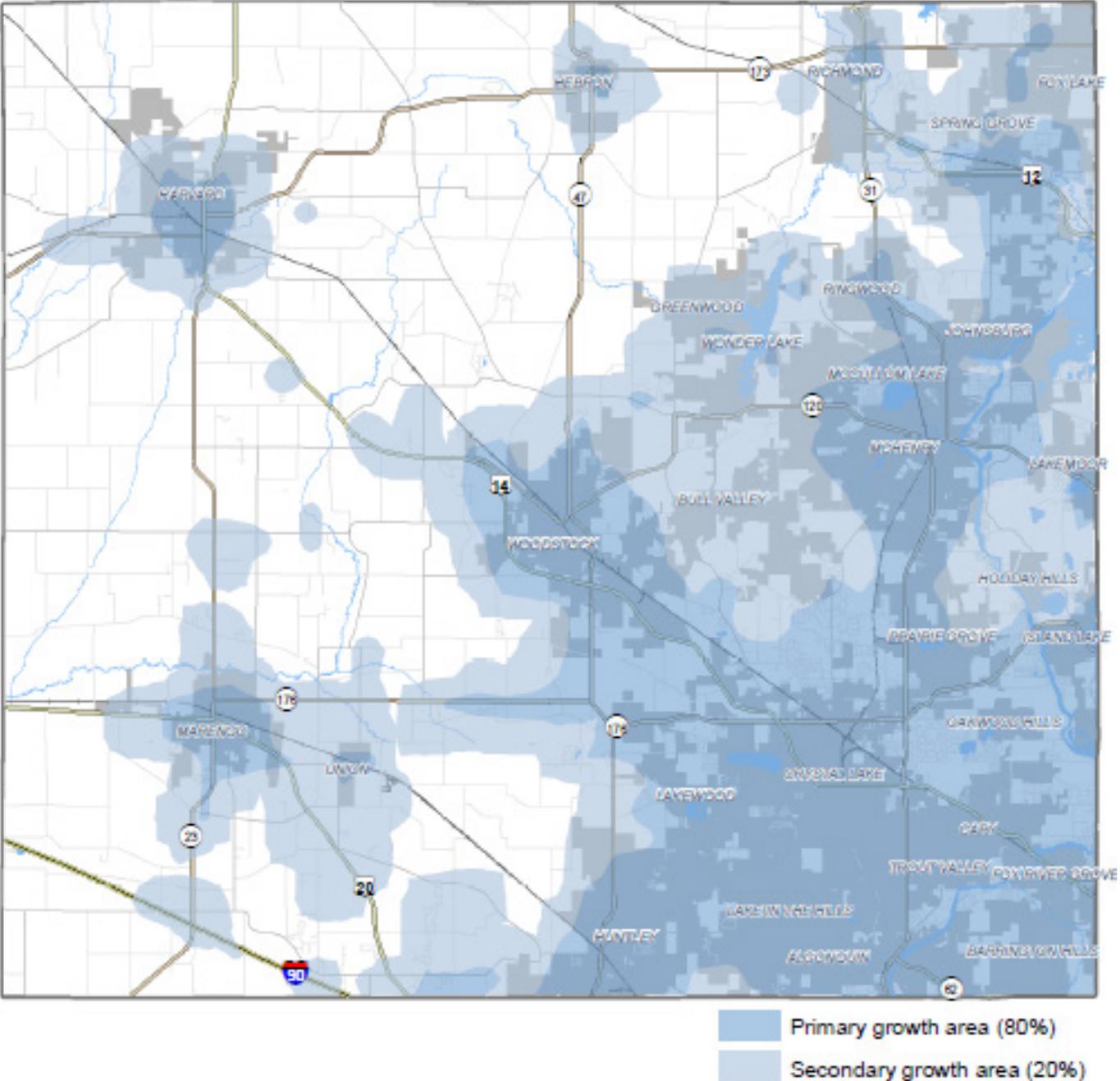
As part of the County's 2030 Comprehensive Land Use Plan efforts, the University of Illinois in Champaign-Urbana created a land use model to illustrate potential demand for new residential, commercial, and industrial development in the County. The Land Use Evolution and Impact Assessment Model, LEAM model, indicated that between today and 2030, much of the growth in the County will likely occur between Woodstock and Crystal Lake along the U.S. 14, IL 47, and IL 176 corridors and between McHenry, Crystal Lake, and Algonquin along the IL 31 corridor (See Figure 25 on the following page from the McHenry County Comprehensive Land Use Plan). The model indicates that by 2040, the southeastern corner of the County will likely be more densely populated, with more multi-family housing units and more single family housing units on smaller lots.



**Figure 24:** 2020, 2030, and 2040 population projection

Source: U.S. Census. CMAP 2020, 2030, and 2040 forecasts.

Figure 25: LEAM Growth Areas Map



## EMPLOYMENT TRENDS AND FORECASTS

In order to understand local travel patterns, it is important to measure changes in the number and type of jobs held by residents and changes in the number and type of jobs in the County. For many industries, the ability to maximize weight limits (80,000 lbs for 65 foot long wide-body semi-trailers) and access reliable arterial highways leading to interstate highways and rail yards is critically important to their expansion and creation of jobs. Manufacturing, wholesale trade, transportation and warehousing, agriculture, and mining (gravel pits) industries require infrastructure for reliable deliveries and shipments.

For other industries, the number of vehicles is more important than the load bearing ability of a roadway. Retailers, accommodation (hotels), foods services (restaurants), arts, entertainment, and recreation industries prefer and seek busy roadways with direct access and high visibility. Other industries generate heavy loads and heavy volumes. The construction industry pushes up the average number of trips generated in an area as numerous trade workers and supervisors access multiple residential subdivisions in one day. Concrete trucks and trucks delivering lumber and other building materials increase the wear and tear on local roads. As construction declines, local road traffic begins to stabilize as new residents establish regular travel patterns and the wear and tear of local roads becomes more predictable.

In 2011, McHenry County had 92,904 jobs (See Figure 26 Jobs in McHenry County table) while 154,137 residents (See Figure 27 Jobs Held by Residents Table) of McHenry County had jobs. The gap between the workforce in the County and the number of jobs in the County creates high demand for commuter rail services and arterial and expressway highways to employment and population centers located outside of the County. At the same time, as the population and employment in the County grows, these regional travel demands will conflict more and more with local traffic.

In McHenry County, over half of the jobs are in four industrial sectors of the North American Industry Classification System (NAICS). Fifty-two percent of all jobs in McHenry County in 2011 were in manufacturing, retail trade, educational services, and in health care/social assistance (See Jobs in McHenry County Table). Between December 2007 and June 2011, McHenry County had 3,950 fewer manufacturing jobs and 3,189 fewer construction jobs. Despite these losses, manufacturing remains the dominant industrial sector in McHenry County. Well beyond the year 2040, manufacturing activity in the County will require a well-maintained arterial highway network and efficient railroad access to handle the freight volume and loads. This need will have to be balanced with accommodations for local trips. In particular, greater local traffic to school and medical offices is predictable as growth occurs in the educational services and health care/social assistance industries. It is also important to note that employment in construction dropped by the greatest percentage between 2007 and 2011 (37.7% less jobs). In 2006, the County had its highest number of construction jobs (9,286 jobs in the County and 11,331 residents employed in construction). If home construction returns to pre-recession levels in the future, it will create spikes in local and regional traffic demand as contractors and materials move to and from trade shops.

CMAQ forecasts there will be approximately 190,000 jobs in the County by 2040. Although it is not known which sectors of the economy will be strongest in the year 2040, McHenry County's current diversity of trained workforce and industrial composition will help the County adapt to the ever-changing global economy. The transportation infrastructure choices made today can help by allowing for adaptive growth and repurposing of land uses.

**Figure 26:** Jobs in McHenry County by Industry Sector (NAICS)

Industry Sector (NAICS)	2011		2007		2007 to 2011 Change	
	#	%	#	%	#	%
Manufacturing	15,900	17.1%	19,850	20.0%	-3,950	-19.9%
Retail Trade	11,770	12.7%	11,654	11.7%	116	1.0%
Educational Services	10,960	11.8%	9,411	9.5%	1,549	16.5%
Health Care and Social Assistance	9,973	10.7%	9,383	9.5%	590	6.3%
Accommodation and Food Services	6,752	7.3%	6,677	6.7%	75	1.1%
Wholesale Trade	5,721	6.2%	5,625	5.7%	96	1.7%
Administration & Support, Waste Management and Remediation	5,721	6.2%	6,022	6.1%	-301	-5.0%
Construction	5,271	5.7%	8,460	8.5%	-3,189	-37.7%
Public Administration	4,102	4.4%	3,959	4.0%	143	3.6%
Professional, Scientific, and Technical Services	3,722	4.0%	3,918	3.9%	-196	-5.0%
Other Services (excluding Public Administration)	3,268	3.5%	3,289	3.3%	-21	-0.6%
Finance and Insurance	2,243	2.4%	2,228	2.2%	15	0.7%
Arts, Entertainment, and Recreation	2,211	2.4%	1,967	2.0%	244	12.4%
Transportation and Warehousing	1,370	1.5%	1,671	1.7%	-301	-18.0%
Information	1,235	1.3%	1,579	1.6%	-344	-21.8%
Utilities	872	0.9%	1,488	1.5%	-616	-41.4%
Management of Companies and Enterprises	717	0.8%	634	0.6%	83	13.1%
Real Estate and Rental and Leasing	654	0.7%	728	0.7%	-74	-10.2%
Agriculture, Forestry, Fishing and Hunting	406	0.4%	597	0.6%	-191	-32.0%
Mining, Quarrying, and Oil and Gas Extraction	36	0.0%	71	0.1%	-35	-49.3%
	92,904		99,211		-6,307	-6.4%

**Figure 27:** Jobs Held by McHenry County Residents by Industry Sector (NAICS)

Industry Sector (NAICS)	2011		2007		2007 to 2011 Change	
	#	%	#	%	#	%
Manufacturing	19,620	12.7%	23,486	14.6%	-3,866	-16.5%
Retail Trade	18,443	12.0%	18,648	11.6%	-205	-1.1%
Educational Services	15,774	10.2%	14,922	9.3%	852	5.7%
Health Care and Social Assistance	15,243	9.9%	13,737	8.5%	1,506	11.0%
Accommodation and Food Services	11,319	7.3%	11,308	7.0%	11	0.1%
Wholesale Trade	10,679	6.9%	10,656	6.6%	23	0.2%
Administration & Support, Waste Management and Remediation	10,110	6.6%	10,818	6.7%	-708	-6.5%
Construction	9,363	6.1%	10,480	6.5%	-1,117	-10.7%
Public Administration	7,375	4.8%	7,514	4.7%	-139	-1.8%
Professional, Scientific, and Technical Services	7,027	4.6%	10,826	6.7%	-3,799	-35.1%
Other Services (excluding Public Administration)	6,154	4.0%	5,536	3.4%	618	11.2%
Finance and Insurance	5,310	3.4%	5,785	3.6%	-475	-8.2%
Arts, Entertainment, and Recreation	5,230	3.4%	4,995	3.1%	235	4.7%
Transportation and Warehousing	3,359	2.2%	2,663	1.7%	696	26.1%
Information	3,172	2.1%	3,685	2.3%	-513	-13.9%
Utilities	3,157	2.0%	2,970	1.8%	187	6.3%
Management of Companies and Enterprises	1,661	1.1%	1,850	1.1%	-189	-10.2%
Real Estate and Rental and Leasing	599	0.4%	439	0.3%	160	36.4%
Agriculture, Forestry, Fishing and Hunting	465	0.3%	528	0.3%	-63	-11.9%
Mining, Quarrying, and Oil and Gas Extraction	77	0.0%	158	0.1%	-81	-51.3%
	154,137		161,004		-6,687	-4.3%

### EXISTING TRANSPORTATION NETWORK

The transportation network in McHenry County is comprehensive and increasingly accommodating to all users. However, missing system gaps, lack of capacity, and operational constraints limit system efficiency and pit user groups against each other. McHenry County has approximately 2,400 miles of paved roadways, commuter rail service with 7 stations, three bus routes, multiple demand-response transit services, and 41 miles of regional trails. Less than 10 miles of roadway in the County is unpaved. Bicyclists and pedestrians are legal users of over 99% of all roadways, except for the 9 miles of Interstate 90 located in the County. For most users, the current transportation system provides reliable access to local commercial centers, the commuter rail stations, and nearby interstate highways. The system is always a work in progress with adjustments being made each year by the several government transportation agencies with jurisdiction in the County.

The system's multiple layers reflect the County's history. The introduction of railroad service in the late 19th century promoted town centers built around a station on a tight grid street pattern. These areas remain as the County's most active pedestrian zones. In the late 20th century large residential subdivisions, commercial strips, and industrial parks, built along major roadways to leverage

the widespread ownership and use of motorized vehicles, greatly expanded the urban footprint of the County.

Since the last transportation plan was adopted by the County Board in 2005, the transportation network in McHenry County has seen significant improvements. Recent capacity improvements for motorized traffic in Huntley, Lake in the Hills, Algonquin, and Crystal Lake have greatly improved driving conditions on Illinois Route 47, Algonquin Road, and Rakow Road. Additional capacity for motorized traffic is currently being added to Illinois Route 31 in Algonquin, Charles J. Miller Road in McHenry, and Johnsburg Road in Johnsburg. Bicyclists and pedestrians have seen increased capacity in many areas as well. Crystal Lake added approximately 7 miles of bike lanes, a new path has been built to the McHenry County Community College, a side path along U.S. 14 to Woodstock is planned, a side path was built along Walkup Road to the Prairie Ridge High School, and a bridge for the Prairie Trail was built over Rakow Road. Transit users have seen two additional runs between McHenry and Woodstock added to the 807 bus route, and dial-a-ride services in Crystal Lake, McHenry, and Woodstock have been coordinated into a single service known as MCRide.

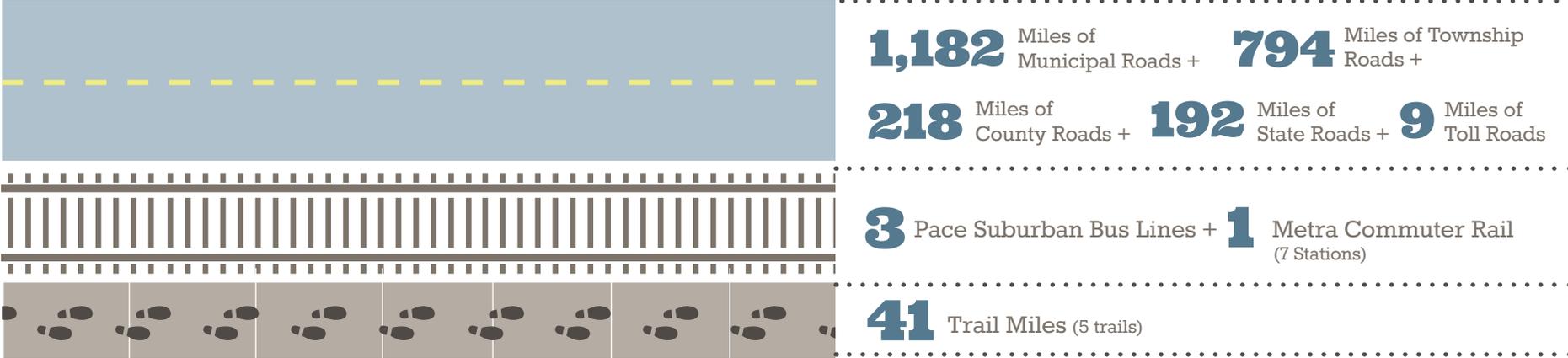


Figure 28: Roads, Transit and Trails in Place

## EXISTING TRAVEL PATTERNS

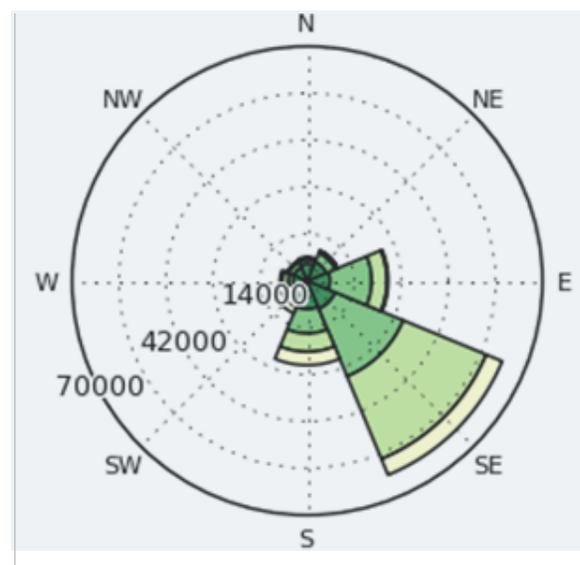
Commuter travel patterns have been the focus of transportation planning in the Chicago region for at least the last century. The existing transportation network in the region resulting from this planning enables a very mobile workforce. McHenry County residents in particular work in a dispersed area encompassed by Milwaukee, Madison, Rockford, DeKalb, and Chicago. Workers come into McHenry County from these same areas. According to the U.S. Census Bureau, the greatest percentage of McHenry County residents (34%) work in McHenry County, with Cook County a close second (See Figure 29). A large number of residents, (12,216 in 2011) travel over 50 miles to work (See Figure 31).

McHenry County's workforce comes from a more diverse area than where McHenry County residents work. McHenry County residents make up over

**Figure 29:** Where McHenry County Residents Work by County

	2011		2010		2002	
	County	%	County	%	County	%
McHenry County, IL	51,752	33.6%	51,866	34.5%	54,932	38.2%
Cook County, IL	45,593	29.6%	45,190	30.1%	43,007	29.9%
Lake County, IL	19,801	12.8%	18,531	12.3%	17,609	12.3%
Kane County, IL	11,886	7.7%	11,806	7.9%	10,405	7.2%
DuPage County, IL	9,949	6.5%	9,899	6.6%	9,345	6.5%
Will County, IL	2,173	1.4%	2,134	1.4%	1,075	0.7%
Winnebago County, IL	1,939	1.3%	1,851	1.2%	1,318	0.9%
Sangamon County, IL	752	0.5%	581	0.4%	582	0.4%
DeKalb County, IL	733	0.5%	729	0.5%	603	0.4%
Walworth County, WI	711	0.5%	679	0.5%	576	0.4%
All Other Locations	8,848	5.7%	7,059	4.7%	4,220	2.9%
	154,137	100%	150,325	100%	143,672	100%

fifty-five percent of the workforce (Figure 34 on following page). Large numbers (6,700 to 8,200) workers come from Cook, Lake, and Kane counties. Less, (2,400 to 2,600) come from Will and DuPage County; and, fewer (1,450 to 1,825) come from Will, Kenosha, Walworth and Boone Counties.

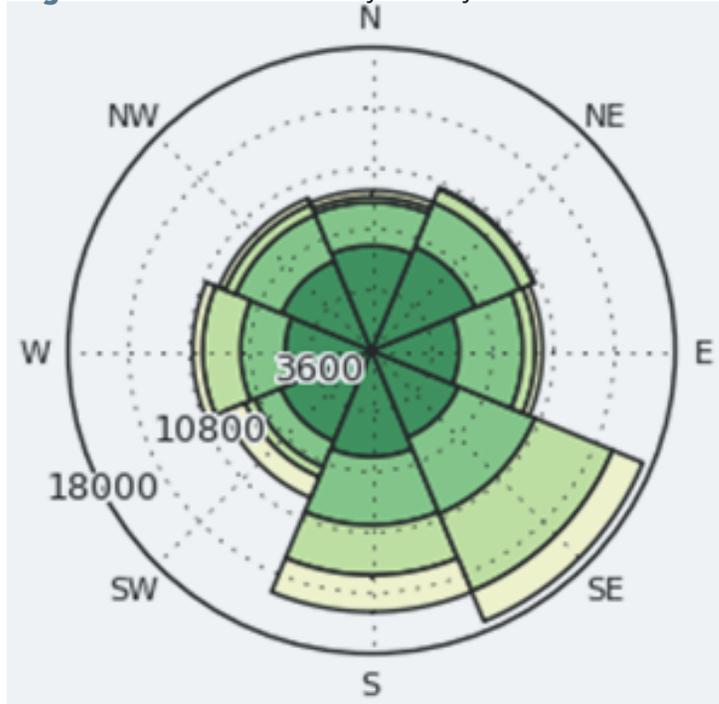


**Figure 30:** Where McHenry County Residents Work

**Figure 31:** How Far Residents Lived from Jobs in 2011

	County	Share
Total Primary Jobs	143,125	100.0%
Less than 10 miles	46,286	32.3%
10 to 24 miles	47,096	32.9%
25 to 50 miles	37,527	26.2%
Greater than 50 miles	12,216	8.5%

**Figure 32:** Where McHenry County Workers Live



	County	Share
Total Primary Jobs	85,390	100.0%
Less than 10 miles	42,686	50.0%
10 to 24 miles	23,667	27.7%
25 to 50 miles	12,298	14.4%
Greater than 50 miles	6,739	7.9%

**Figure 33:** How Far Workers Lived from Jobs in 2011

**Figure 34:** Where McHenry County Workers Live by County

	2011		2010		2002	
	County	%	County	%	County	%
McHenry County, IL	51,752	55.7%	51,866	56.0%	54,932	61.3%
Cook County, IL	8,195	8.8%	8,099	8.7%	8,501	9.5%
Lake County, IL	7,115	7.7%	6,936	7.5%	5,947	6.6%
Kane County, IL	6,765	7.3%	6,453	7.0%	5,188	5.8%
DuPage County, IL	2,525	2.7%	2,626	2.8%	2,266	2.5%
Will County, IL	2,430	2.6%	2,343	2.5%	1,947	2.2%
Winnebago County, IL	1,824	2.0%	1,767	1.9%	1,865	2.1%
Sangamon County, IL	1,688	1.8%	1,736	1.9%	2,012	2.2%
DeKalb County, IL	1,556	1.7%	1,474	1.6%	1,336	1.5%
Walworth County, WI	1,473	1.6%	1,602	1.7%	1,214	1.4%
All Other Locations	7,581	8.2%	7,730	8.3%	4,414	4.9%
	92,904	100.0%	92,632	100.0%	89,622	100.0%

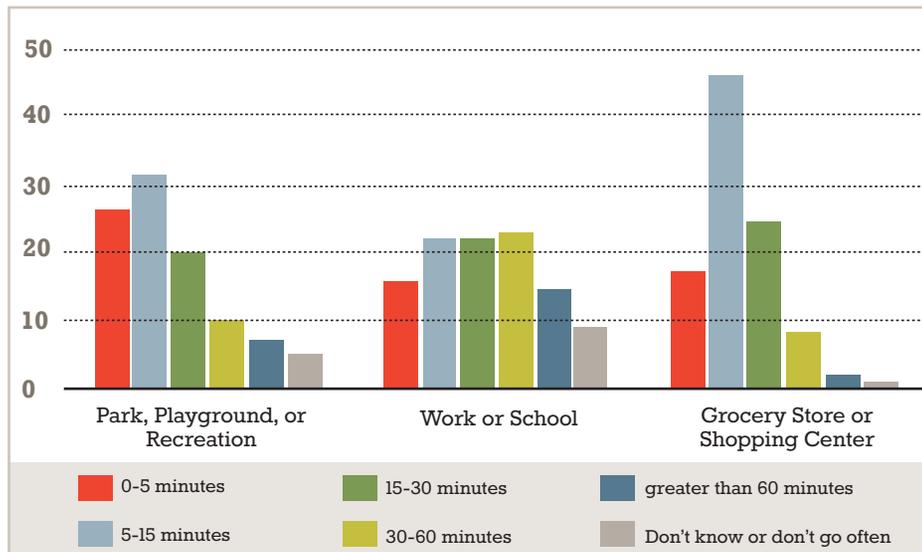
Given that over a third of McHenry County residents and over one-quarter of the workers in the County travel more than 25 miles, it is very likely that workers would drive alone, carpool, or use commuter rail. The most recent census data and a survey conducted by CMAP indicate this to be the case in McHenry County. The American Community Survey conducted in 2005, 2006 and 2007 conducted by the Census Bureau suggests that 90% (see Figure 35 of next page) of all work trips were done by driving along or carpooling. The next most important mode of travel to work was using transit, predominately Metra commuter rail. CMAP completed a comprehensive travel and activity survey for northeastern Illinois between January 2007 and February 2008. This survey is consistent with the results of the American Community Survey.

To gain a better understanding of the amount of time McHenry County residents spend traveling, special display boards were set up in eight libraries across the

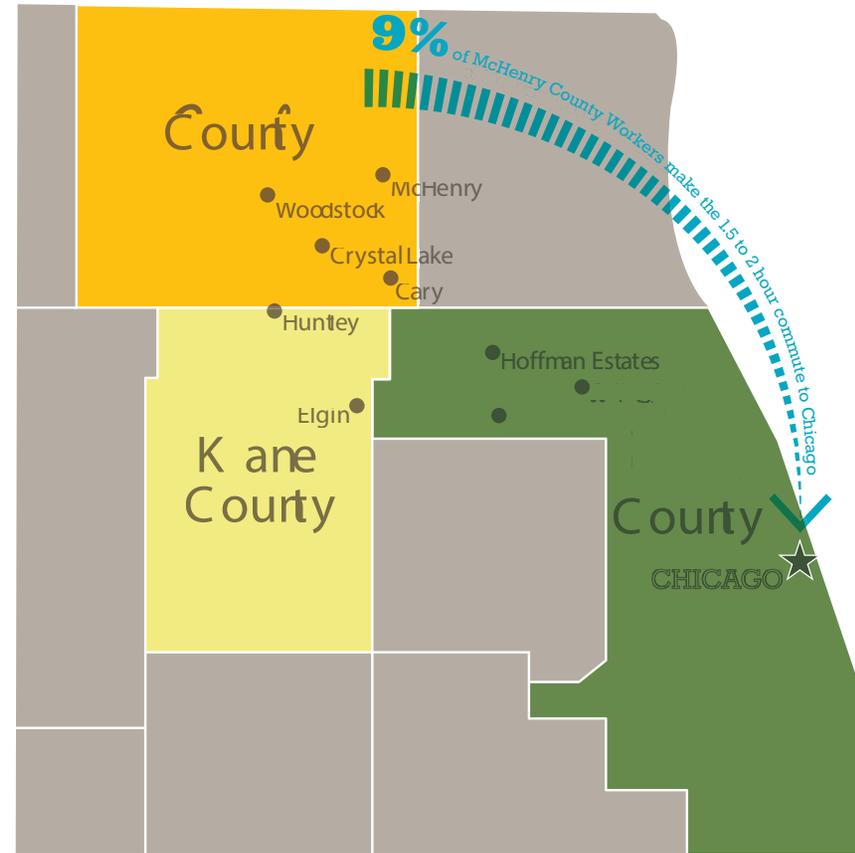
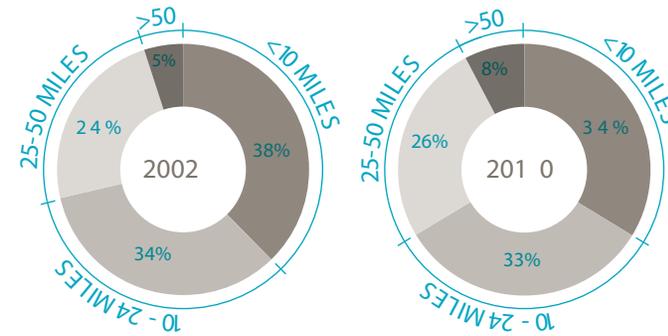
County allowing patrons to note their travel times to general locations. Over 10 percent noted traveling more than an hour to work (see Figure 36 below). This is consistent with the census data indicating almost 9% percent of commuters from the County travel over 50 miles to work. An even greater percentage reported traveling less than 5 minutes to work or school. Given this short amount of time to work or school, it could be that the American Community and CMAP surveys on journey to work are under-reporting the number of individuals that walk or ride a bicycle to work or that other factors are deterring people from making short bicycle or pedestrian trips.

	ACS (2005-2007)	CMAP (2008)
Motorized Vehicle	89.8	94.5
Transit Services	3.0	3.7
Walk/Bicycle	1.5	1.6
Other	5.7	0.2

**Figure 35:** Journey to Work by Transportation Mode



**Figure 36:** Results of Travel Time Library Display Boards



**Figure 37:** Job and Housing Balance

There is a mismatch between the residents of the County and the jobs in the County. Increasingly, local jobs are being held by non-residents while residents work outside the County. As such, the distance between jobs and workers is increasing. For instance, the overall percentage of people traveling greater than 25 miles increased from 2002 to 2010.