



*McHenry County, Illinois*  
**TRANSIT COMPONENT**  
**MCHENRY COUNTY 2040 TRANSPORTATION PLAN**



*EXISTING CONDITIONS REPORT*

January 2012

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## I. Introduction

### A. Study Background

McHenry County is in the process of developing a 2040 Long Range Transportation Plan. The Long Range Transportation Plan will identify needed transportation infrastructure and transit operations, prioritize those needs, and develop a financially constrained plan to meet these needs using the year 2040 as the planning horizon. The 2040 Plan will examine key data about traffic conditions, transit, bicycle and pedestrian patterns, and examine community demographics to determine how growth in the County can be addressed through transportation improvements. In addition, the study will explore the restructuring of the existing transit services in the County to meet current and future mass transit needs.

In 2010, McHenry County applied for and was awarded funding from the Unified Work Program (UWP) administered by the Chicago Metropolitan Agency for Planning (CMAP) to undertake the public involvement portion of the 2040 County Long Range Transportation Plan update. In addition, the County received funding from the Sub-Regional Planning Grant administered by the Regional Transportation Authority (RTA) to undertake the “transit component” of the Plan. This report addresses the transit component, taking into consideration findings from the public involvement process. The results of the transit component will be merged with the part of the Plan that addresses highway and roadway improvements. The overall result will be a comprehensive Plan that details recommendations on how to improve transportation for all types of modes- vehicles, transit, bicyclists and pedestrians.

The Plan will be adopted by the McHenry County Board with input from Pace, Metra, RTA and IDOT. The Plan will be implemented and updated each year through the County’s Five Year Highway Improvement Program that is approved annually by the Transportation Committee of the County Board and adopted by the County Board.

### B. Goal of the Transit Plan

The goal of the Transit Plan will be to assess the existing market for public transportation and to identify where transit improvements are needed. It builds off the findings in the McHenry County Transit Plan adopted in 2005, as well as findings from multiple, up-to-date data sources. The study will identify performance measures that can be used to identify underserved and un-served areas in the County and to identify what type of transit is most appropriate in these areas. The study will also provide a comprehensive review of the Pace fixed routes currently serving the County in order to determine if any route restructuring needs to occur.

The study will identify any conditions in the County that have changed since the completion of the 2005 Transit Plan. This analysis will be based on a variety of factors, including demographics, changes in paratransit services, focus group discussions, and public involvement activities. These changes will be used to either reinforce or revise the prior Plan recommendations.

This Plan will be built off of a very extensive public involvement process that is currently on-going in the County. Using a variety of public involvement tools, the public involvement process is taking the “pulse” of the County to determine what the mobility issues are in McHenry County and to identify how people desire to move around the County. These opinions are being gathered at community events, through focus groups and stakeholder interviews, via a project website, and other forms of public communication. As the study progresses, a summary of these comments will be evaluated in order to determine what public sentiment is towards public transportation.

Another main component of the study will be to identify appropriate performance measures for different levels of service. Performance measures that are used at other transit agencies throughout the country will be reviewed to determine their applicability to McHenry County. Performance measures will be developed that best reflect the various densities in the County, from those areas of the County that are more rural in nature to areas of higher density that can support more fixed route services.

This report, Existing Conditions, will begin the groundwork for Plan recommendations. The report contains the following chapters:

- I. Introduction
- II. Prior Studies
- III. Demographics and Land Use
- IV. Travel Patterns
- V. Existing Transit Services
- VI. Roadway Conditions
- VII. Public Involvement

## II. Prior Studies

### A. McHenry County 2005 Transit Plan

The purpose of this plan, completed in 2005, was to take a comprehensive view of the non-automobile needs of McHenry County residents and workers. It aimed to overcome existing mobility barriers, connect to the regional transit network, and improve options for accessing jobs.

In addition to a Summary Report, additional documents included in the plan were:

- Existing Conditions Report
- Labor Market Analysis
- Public Involvement Plan and Materials
- Transit Plan Technical Memorandum
- Paratransit Coordination: Existing Services and Needs
- Paratransit Coordination: Evaluation of Coordination Strategies

The final report contained implementation strategies and a phasing plan over 20 years divided into Immediate Term, Short Term, Medium Term, and Long Term.

The plan was designed to produce a transit system in the long term that was built on early successes and in an incremental manner. Given the existing conditions of low density development in the County, the plan emphasized non-traditional transit options in the Immediate and Short terms including demand response or dial-a-ride service. The basis of the recommended system was a general public demand response service coordinated with human service agency transportation providers. Over time, the plan called for traditional fixed route connections to be established with some express bus services connecting McHenry County to and from employment centers in Kane, Northwest Cook, and Lake Counties. Within the County, a network of transit centers and park and ride lots were recommended to allow for growth in community based transportation and connections to regional services.

### B. CMAP GO TO 2040

GO TO 2040, completed in 2010, is the long-range comprehensive plan for the Chicago region that includes McHenry, Cook, DuPage, Kane, Kendall, Lake, and Will counties. GO TO 2040 emphasizes an increased commitment to public transit. With its regional scope, the plan focuses on large transportation investments and states that they should be prioritized and implemented wisely. It says that expensive new capacity projects should only be built if they yield benefits that outweigh their costs. Maintaining and modernizing existing infrastructure should take priority.

The plan provides a fiscally-constrained list of recommended capital projects that includes 18 projects for the northeastern Illinois region. Two of these projects involve change in McHenry County:

- Metra Union Pacific North West (UP-NW) Line Improvements/Extension
  - The existing Metra UP-NW Line travels through the center of McHenry County. Metra UP-NW improvements include infrastructure upgrades and a 1.6 mile extension to Johnsborg from the City of McHenry. Infrastructure upgrades include

improvements to the existing signal system and additional crossovers and other track improvements to increase the operating capacity and reliability. The extension to Johnsburg will allow improved operations on the entire line. New yards are planned for the Woodstock and Johnsburg areas. Two additional infill stations will be added to the line: Prairie Grove on the McHenry branch and Ridgefield on the Woodstock branch.

- I-90 Managed Lanes
  - There is a proposal to add managed lanes on I-90, which travels through the southwest corner of McHenry County. This project could include a variety of methods to mitigate traffic congestion on the expressway.

There are several projects in the CMAP GO TO 2040 Plan that are not included in the fiscally-constrained priority list. Some of these unconstrained projects lack sufficient study thus far. Others were considered too costly for the benefits provided unless innovative financing were secured to significantly change the funding outlook. These projects in McHenry County include:

- McHenry-Lake Corridor
  - The McHenry-Lake Corridor project would create a new expressway through McHenry and western Lake Counties, from the terminus of the US 12 freeway at the Wisconsin border to the upgraded IL 120 roadway. This project is in early stages of planning and would serve northeastern McHenry County.
- Metra Milwaukee District West (MWD-W) Line Improvements
  - The Metra MD-W Line Extension project would extend the Metra MD-W Line from its current terminus in Elgin to Marengo in McHenry County. An extension along a different route to Hampshire is also under consideration. A feasibility study of the Marengo extension was completed. This project is in early stages of planning. This project would serve the southern portion of McHenry County.

In addition to these projects, GO TO 2040 states that I-90 interchange access improvements are recommended in the McHenry County 2030 Comprehensive Plan.

GO TO 2040 emphasizes that transit-oriented land use planning is critical to successful transit. The need for walkable communities applies to bus-supportive land use in addition to rail. The plan points to the need for affordable housing near job centers so that transit is a viable option for commuters. Growth needs to emphasize access to transit and other transportation alternatives. The plan supports small-scale transit improvements and providing regional planning support for local transit supportive land use.

CMAP recommends requiring supportive land use planning before new transit investments are made. It states that RTA, Pace, CTA, and Metra should prioritize investments, particularly for new service, to those areas that have or are planning for land use that supports transit. It states that investments of all types should consider multimodal needs including those of transit users, bicyclists, and pedestrians.

## C. Pace Vision 2020

The Vision 2020 plan, completed in 2001, outlines a blueprint for Pace's service improvements to the year 2020. It calls for a network of new services, infrastructure improvements, and a decrease in travel times. In McHenry County, the plan proposes community transportation centers, arterial route corridors, and community-based service areas.

- **Community Transportation Centers** – Transportation centers provide comfortable, convenient locations for customers to make connections between various transit services. Transportation centers are typically located at and integrated with rail stations, community downtowns, shopping centers, and other major activity centers, and offer community transit-oriented development opportunities. These can include off-street bus bays, sheltered and heated boarding areas, electronic passenger information systems, facilities for bus drivers and bus layovers, and access enhancements such as sidewalks or park and ride lots. The plan identifies over 150 transportation centers throughout northeastern Illinois. Those proposed in McHenry County include:
  - Algonquin, near IL-31/IL-62
  - Existing McHenry Metra UP-NW Station
  - Richmond, at planned Metra UP-NW Station
  - Existing Crystal Lake Metra UP-NW Station
  - Existing Woodstock Metra UP-NW Station
  - Huntley, at planned Metra MD-W Station
  - Existing Cary Metra UP-NW Station
  - Existing Fox Lake Metra Milwaukee District North(MD-N) Station
  - Existing Harvard Metra UP-NW Station
  - Existing Fox River Grove Metra UP-NW Station
- **Arterial Route Corridors** – These fixed routes provide a backbone of inter-suburban transit service connecting transportation centers. Arterial route corridors proposed in the plan for areas of McHenry County include:
  - IL-31 from Aurora Transportation Center to McHenry Transportation Center, serving Algonquin
  - Belvidere Road from Waukegan Transportation Center to Woodstock Transportation Center, serving Prairie Crossing, Round Lake, and McHenry
  - Johnsburg Road from Fox Lake Transportation Center to McHenry Transportation Center
  - Grand Avenue, from Waukegan Transportation Center to Fox Lake Transportation Center, serving Gurnee Mills
  - Rand Road, from Des Plaines Transportation Center to Fox Lake Transportation Center
- **Community-Based Service Areas** - Community-based services include many service types from demand-response in some markets to fixed routes in others, with a customized mix of service types in each community. Fixed-routes, employer shuttles, historic trolleys, community circulators, flexible routes, van services, and subscription routes aim to provide short-distance mobility within communities. The plan identifies more than 90 such service areas for further study in partnership with communities. Proposed community-based service areas in McHenry County, some of which overlap with adjacent counties, include:

- Algonquin/Carpentersville/East Dundee/West Dundee/Sleepy Hollow/Spring Mill Mall/Elgin
- Crystal Lake/Algonquin/McHenry/Woodstock
- Huntley/Algonquin/Crystal Lake
- McHenry/Crystal Lake/Fox Lake
- Woodstock/Crystal Lake/McHenry
- Richmond
- Hampshire/Huntley/Elburn
- Cary/Fox River Grove
- Lake Villa/Fox Lake/Round Lake Beach
- Volo/Lakemoor/Round Lake Park/Fox Lake
- Harvard
- Wauconda/Island Lake

Since Vision 2020 was completed a decade ago, the study team will work with Pace while planning alternatives for future service in McHenry County. Successes and challenges during Vision 2020's implementation will be considered.

### **D. Metra UP-NW Line Alternatives Analysis**

In 2007, Metra completed a Locally Preferred Alternative Report as part of the Federal Transit Administration's alternatives analysis process. The report detailed analysis of the Union Pacific Northwest (UP-NW) Line due to the need for additional capacity. The study included extensive public input from county mayors, technical committees, and the general public. Goals of the study included:

- Increase capacity to central Chicago
- Increase transit ridership
- Decrease travel times and increase frequency of service, including reverse commutes
- Avoid or minimize negative impacts to environment
- Provide compatibility with transit-supportive development
- Increase operating efficiency
- Be constructed, maintained, and operated within the local financial capacity

Infrastructure improvements of the preferred alternative include:

- 1.6 miles of new commuter rail track extending past McHenry station to Johnsburg
- New stations at Ridgefield, Prairie Grove, and Johnsburg
- Signal upgrades on McHenry branch and main line
- New yards at Woodstock, Johnsburg; upgraded yard at Harvard
- Additional crossovers
- Additional parking capacity and station improvements at several stations

### **E. Metra Marengo Extension Commuter Rail Feasibility Study**

Metra completed this study in 2010 to evaluate the feasibility of extending commuter rail service on the Milwaukee District West (MD-W) Line from the City of Elgin (Big Timber Road station) to the vicinity of the City of Marengo. The study focused on the 26-mile portion of the UP-owned railroad

between Elgin and the McHenry-Boone County line, traveling through the communities of Elgin, Gilberts, Huntley, Union, and Marengo.

The study determined that there would be significant capital costs involved with providing new commuter rail service to Marengo. Construction of two segments of a new second main line would be required to handle the additional train traffic on the potential UP-owned portion of an extended MD-W Line. Installation of new signalization would also be a significant cost of the project. There would be wetland and environmental issues within the corridor that would need to be studied further. In addition, the study states that ridership will need to be studied further to evaluate capacity.

Additional discussions would have to take place with the Union Pacific Railroad as the owners of this portion of railroad. The freight railroad would have to approve any capital improvements and any commuter rail service on its right-of-way. Since this document was a feasibility study, it provided initial consideration of a commuter rail extension, but much additional analysis and stakeholder involvement is needed.

Independent of this study, both the communities of Marengo and Huntley received Regional Transit Assistance Program (RTAP) grants from the RTA to prepare transit oriented development (TOD) plans around proposed Metra stations. Both communities prepared and adopted preferred plans for their community.

## **F. McHenry County 2030 Comprehensive Land Use Plan**

The McHenry County Board adopted a 2030 Land Use Plan in 2010. It referred to the County's 2005 Transit Plan, Pace's Vision 2020 Plan, Metra's UP-NW upgrades, and future Metra service to Huntley, Marengo, and Richmond. The plan also included recommendations for transit signal prioritization (TSP) and queue jump lanes to help implement bus rapid transit in the County. The plan also called for the deployment of clean technology with no street level emissions, smoother rides, and matching transit equipment appropriately in high pedestrian areas. It addressed existing and forecasted roadway congestion issues, and set the groundwork for future improvements.

### **III. Demographics and Land Use**

#### **A. Introduction**

McHenry County located in the northwest portion of the Chicago Metropolitan Area is home to over 300,000 residents. Since 2000, the County has grown by nearly 20% with the majority of residents living in the eastern side of the County. As a comparison, the state of Illinois has experienced 3% population growth since 2000. As population has grown, especially over the past 10 years, the travelling needs of the community have changed as well. Greater population has spurred commercial, medical and office growth within the County. The mix and change of land uses indicates that transit service and the highway system may need to be supplemented. They are currently designed for commuter travel heading eastbound towards Cook County and downtown Chicago in the AM peak hour and reverse in the PM peak hour. Additional reverse commute transit services during the peak, additional midday transit services and highway capacity additions, may be needed to best meet the travelling needs of McHenry County residents.

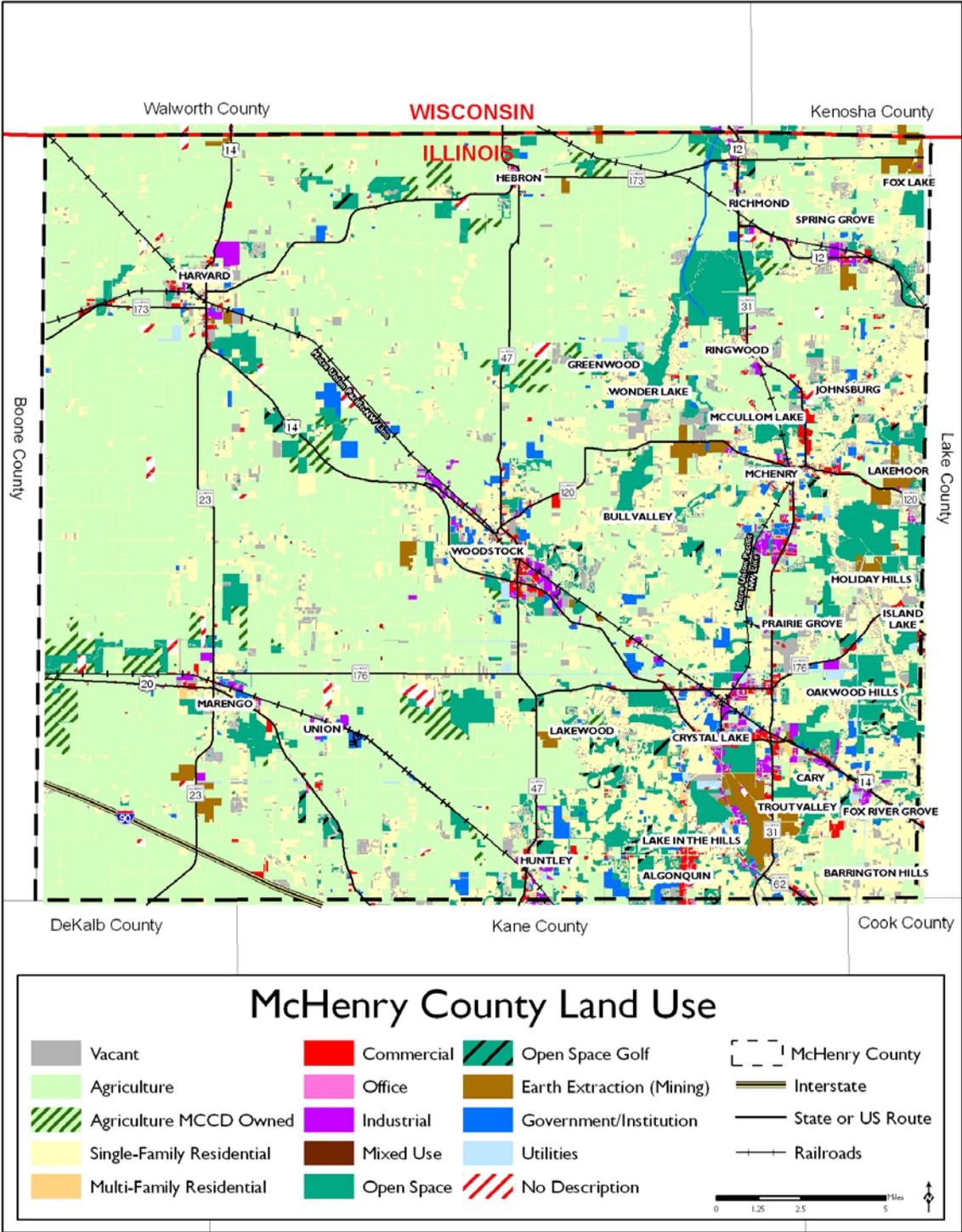
A number of demographic factors contribute to how and where transit service should be provided. These demographic factors include land use, population, age of population, employment and socioeconomic characteristics. All of these factors should be considered when planning for transit service as they can be an indicator of the propensity to use transit service. As an example, lower concentrations of residential and commercial activity in uncongested highway corridors are often most effectively covered by demand-response or deviated fixed route service. Higher concentrations of residential and commercial activity in congested highway corridors are often served by higher capacity, fixed transit service.

The following subsections illustrate the existing land use and demographic conditions of McHenry County as they relate to the provision of transit service.

#### **B. Land Use**

McHenry County contains 603 square miles. It is comprised of a mixture of uses as shown on the 2010 land use map from McHenry County (Figure 1). The western half of the County is largely agricultural with single family residential dispersed along the major roadways. The greatest concentration of land uses is in the eastern side of the County with the largest amount of land being used for single family residential. Commercial and office land uses are somewhat limited overall in the County, but have individual concentrations in Crystal Lake, Algonquin, McHenry, Woodstock, Cary, Huntley, and Lake in the Hills.

Most of the County's municipalities were settled in the late 19th century along railroad lines. The cores of these municipalities consist of pedestrian friendly mixed-use development. These municipalities include those with Metra service today such as Crystal Lake, McHenry, and Woodstock, and many that have not had rail service in decades such as Marengo, Algonquin, Huntley, and Richmond. Municipalities off of rail lines such as Lake in the Hills and Lakewood and newer areas of the other communities do not have these transit-oriented features.



**Figure 1**

**Source: McHenry County GIS Data**

Several communities have created transit-oriented development plans with assistance from the Regional Transportation Authority (RTA) under the Community Planning grants. Woodstock Transit-Oriented Development Study and Fox River Grove Downtown Redevelopment Plan aim to create land use patterns that support transit around existing Metra UP-NW line stations. The Prairie Grove Town Center and TOD Development Plan addresses the area surrounding a planned new station along the McHenry branch of the Metra UP-NW Line. The Marengo Station Area Plan focuses on the area around a proposed station along the proposed Metra MD-W Line Extension. Each of these plans proposes dense, mixed-use development that is more transit-supportive than most of the existing land use patterns throughout the County.

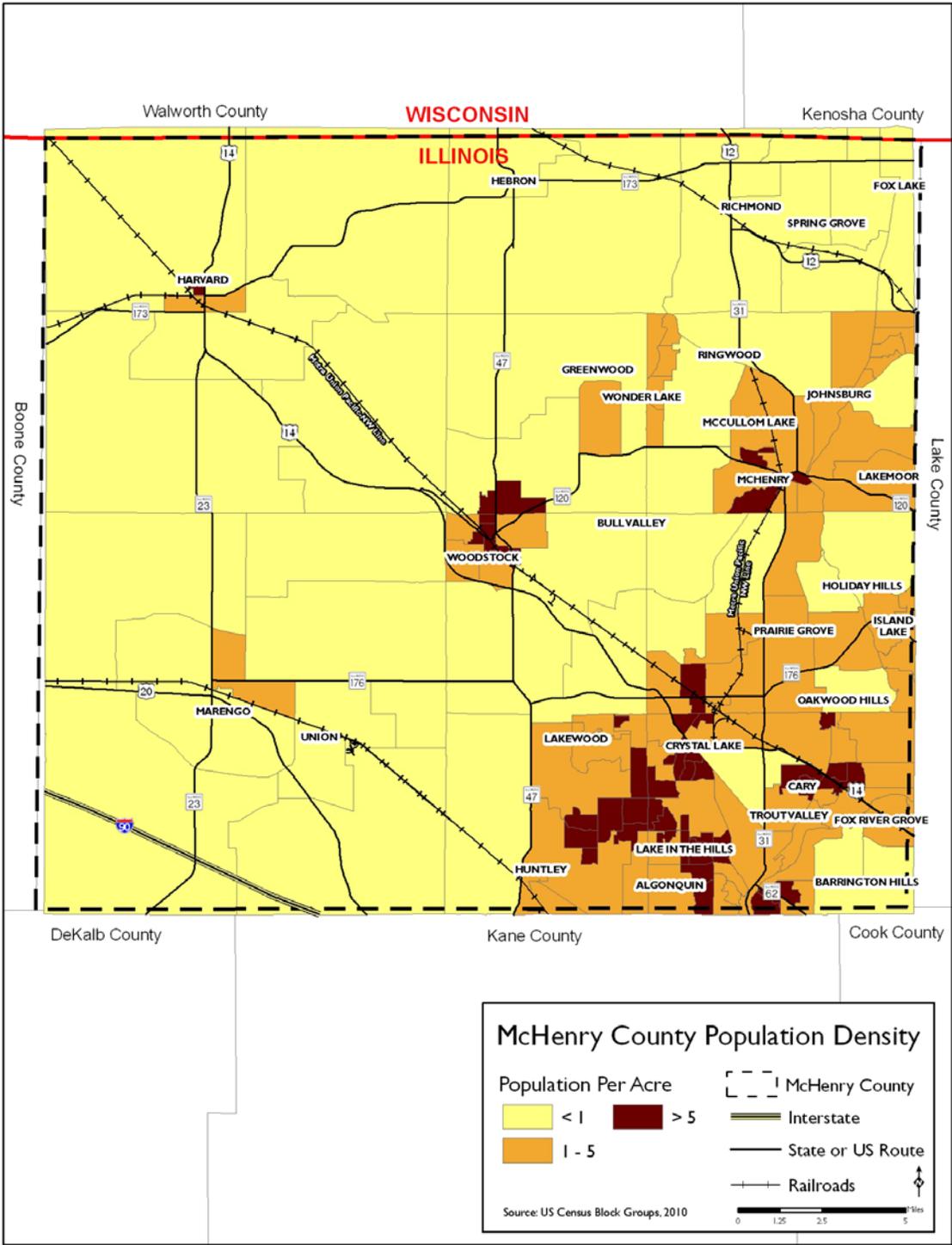
The way that the built environment is organized based on the types of land uses is a factor in the travel patterns for McHenry County residents. Residential land uses will typically generate the beginning point of a travel trip, or the origin; commercial, office and industrial land uses typically end up being the destination point of a trip. Additionally, McHenry County residents will have travel needs inside and outside the County, especially for trips to and from work.

### **C. Existing Population of McHenry County**

McHenry County's population growth has remained strong and steady since 1950, with nearly 20% increase in population since the year 2000, to over 300,000 residents. Population as it relates to transit service is often considered in terms of the density of population, with a higher density typically being an indicator of transit use. The majority of McHenry County residents live in the eastern side of the County. See Figure 2. The Woodstock, Marengo and Harvard areas also have higher population densities.

Table 1 details how population growth has occurred across the majority of municipalities in the County since the year 2000. Municipalities with over 10,000 residents in 2010 have grown between 7% (Crystal Lake) and 323% (Huntley) during that time. Huntley alone grew by over 18,000 residents.

The southeastern part in the Crystal Lake, Cary and Lake in the Hills areas also have the highest household density of the County. Figure 3 illustrates the household density of the County. The areas of the highest density are more than 2 households per acre with the lowest density (in lighter yellow) having a density of less than .5 households per acre.



**Figure 2**

**Table I: Municipality Populations**

Municipality	Population		
	2000	2010*	Percent Change 2000-2010
Crystal Lake	38,000	40,743	7.2%
Algonquin	23,276	30,046	29.1%
Lake in the Hills	23,152	28,965	25.1%
McHenry	21,501	26,992	25.5%
Woodstock	20,151	24,770	22.9%
Huntley	5,730	24,291	323.9%
Cary	15,531	18,271	17.6%
Fox Lake	9,178	10,579	15.3%
Harvard	7,996	9,447	18.1%
Island Lake	8,153	8,080	-0.9%
Marengo	6,355	7,648	20.3%
Johnsburg	5,391	6,337	17.5%
Lakemoor	2,788	6,017	115.8%
Spring Grove	3,880	5,778	48.9%
Fox River Grove	4,862	5,335	9.7%
Barrington Hills	3,915	4,181	6.8%
Lakewood	2,337	3,586	53.4%
Wonder Lake	1,345	3,239	140.8%
Richmond	1,091	2,325	113.1%
Oakwood Hills	2,194	2,178	-0.7%
Prairie Grove	960	1,733	80.5%
McCullom Lake	1,038	1,312	26.4%
Bull Valley	726	1,226	68.9%
Hebron	1,038	1,181	13.8%
Ringwood	471	820	74.1%
Port Barrington	788	788	0.0%
Holiday Hills	831	686	-17.4%
Union	576	651	13.0%
Trout Valley	599	577	-3.7%
Greenwood	244	155	-36.5%

Source: U.S. Census

\*Populations below 5,000 are 2005-2009 U.S. Census estimates

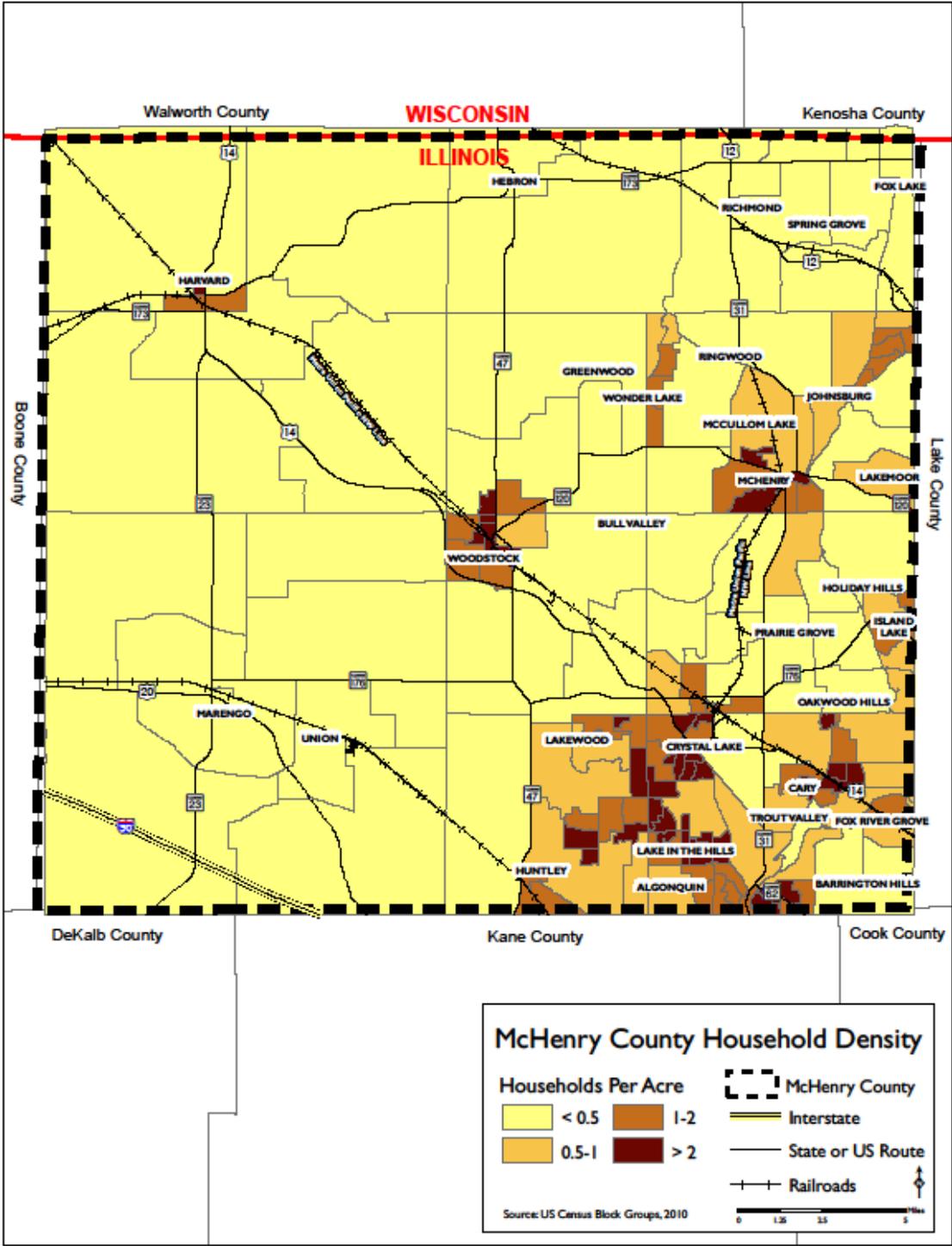


Figure 3

## **D. Densities of Transit Dependent Populations**

### **1. Youth and Seniors**

Of the County's 309,000 population (2010 U.S. Census), approximately 40,000 people are youth between 10-17 years old (13%). Youth population is concentrated in the eastern part of the County. The higher concentration of youth population has a direct impact on transit needs. First, youth are generally more reliant on others for transportation so there is likely a greater need for transit service. However, there may be a complexity in the types of trips that are necessary because parents may be making trips to day care, schools, or afternoon activities that complicate or preclude transit service. See Figure 4.

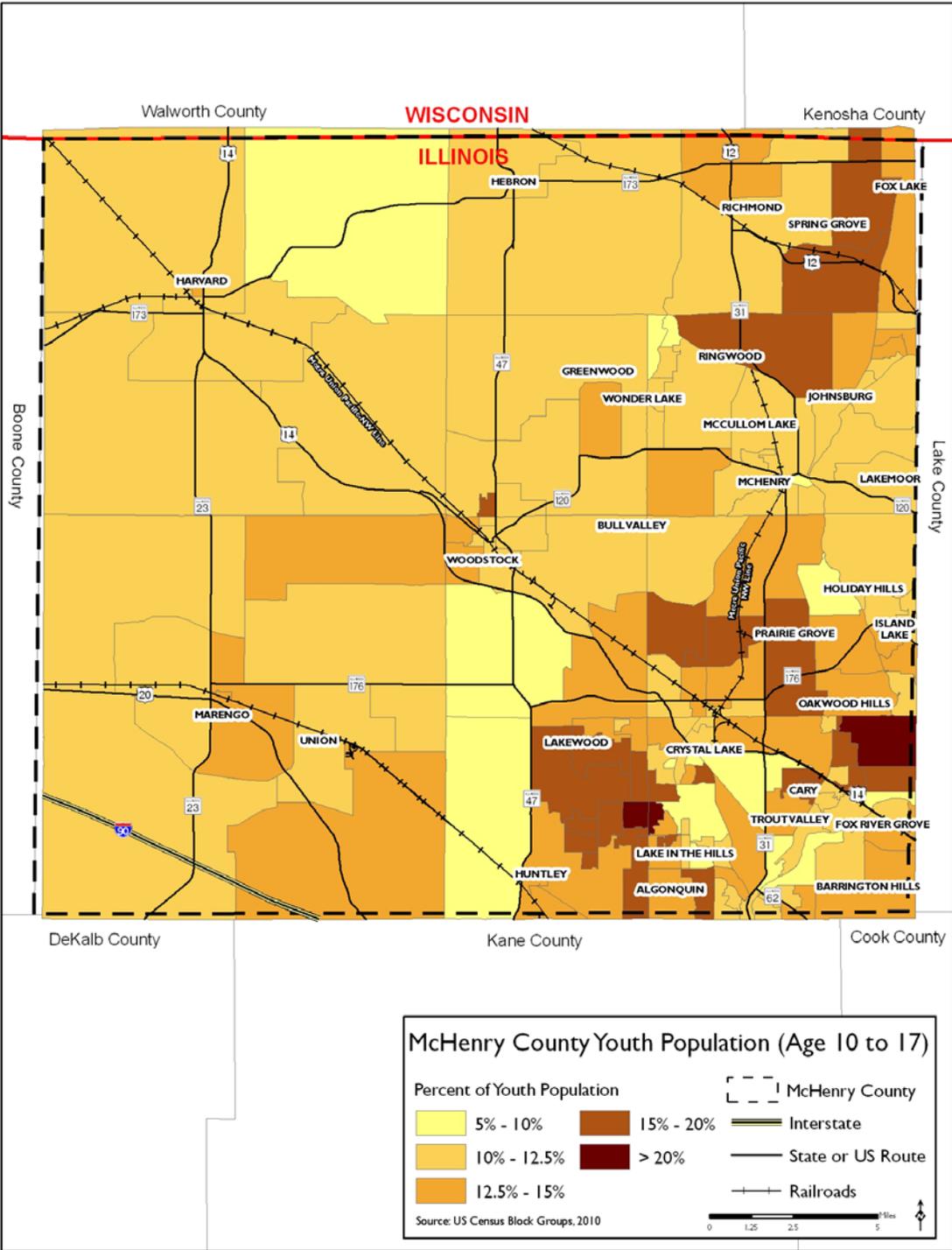
Approximately 31,000 people are seniors, or 10% of the County's population. Seniors over 65 years are concentrated in the western and northern parts of the County as shown in Figure 5. This portion of the County is largely residential and has a lower household density as compared to the rest of the County. Senior populations generally have a strong need for transit service, especially for medical and shopping services. These travel needs may or may not mirror commuting patterns for the McHenry County residents who are travelling to and from the surrounding counties for work.

### **2. People with Disabilities**

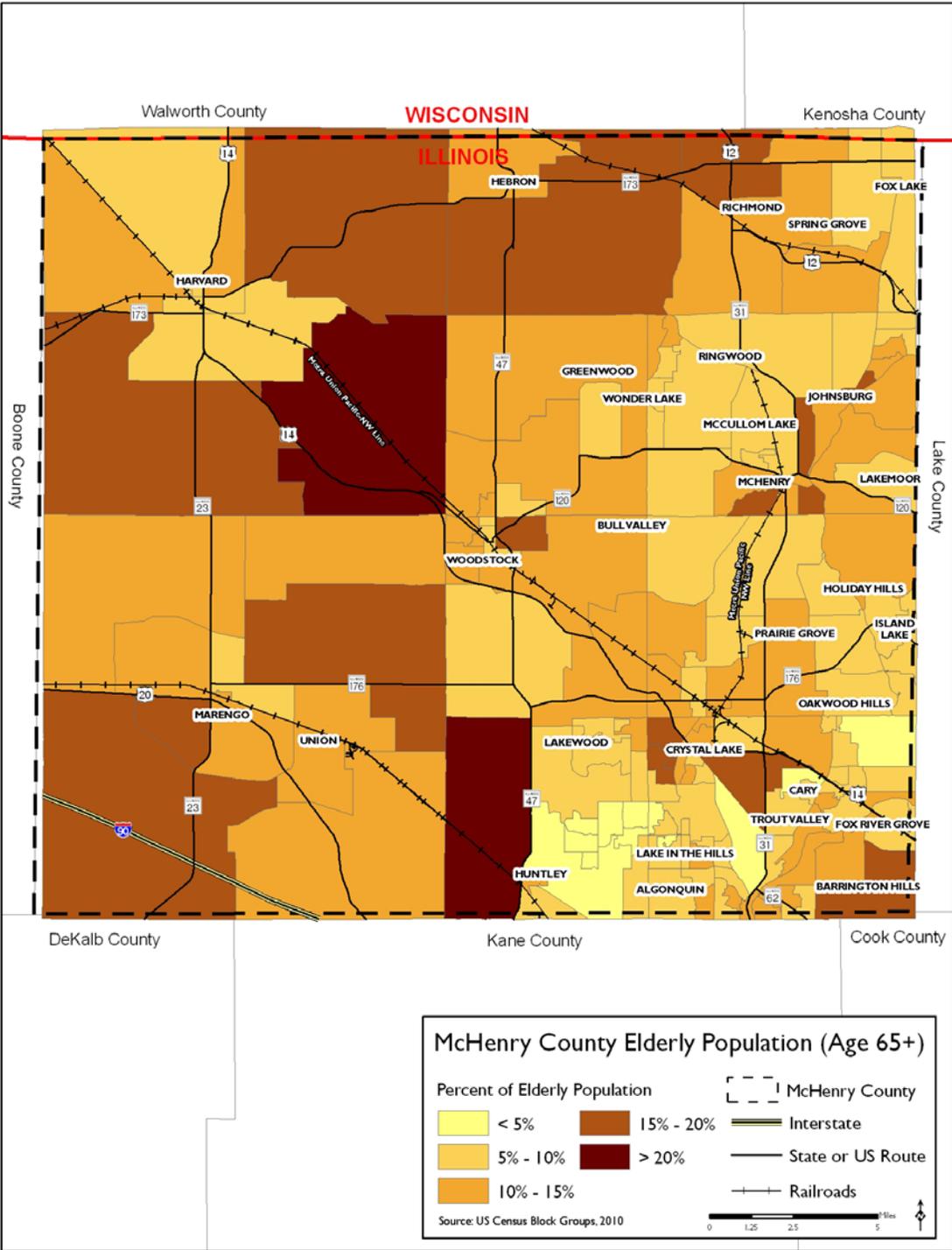
People who have a disability that limits their ability to drive are typically highly reliant on transit service. Also, some people may by the nature of their disability be unable to use fixed route transit service and thereby rely on dial-a-ride or paratransit service. Approximately 25,000 residents have a disability, or 8% of the County's population. People with a disability are dispersed throughout the County, with some concentration (more than 15% of the population in that area) in the south west and central parts. See Figure 6.

### **3. Limited Vehicle Households**

There are nearly 107,000 households in McHenry County and of those households there are approximately 24,000 that have one vehicle or less. The number of vehicles in a household is another factor for transit service because either all the members of the household need to use transit service (for zero vehicle households) or some of them do. There are pockets where there are high concentrations of low vehicle ownership in the County around Woodstock, Marengo, and McHenry. These areas have 15% or more of the households with zero or one vehicle. See Figure 7.



**Figure 4**



**Figure 5**

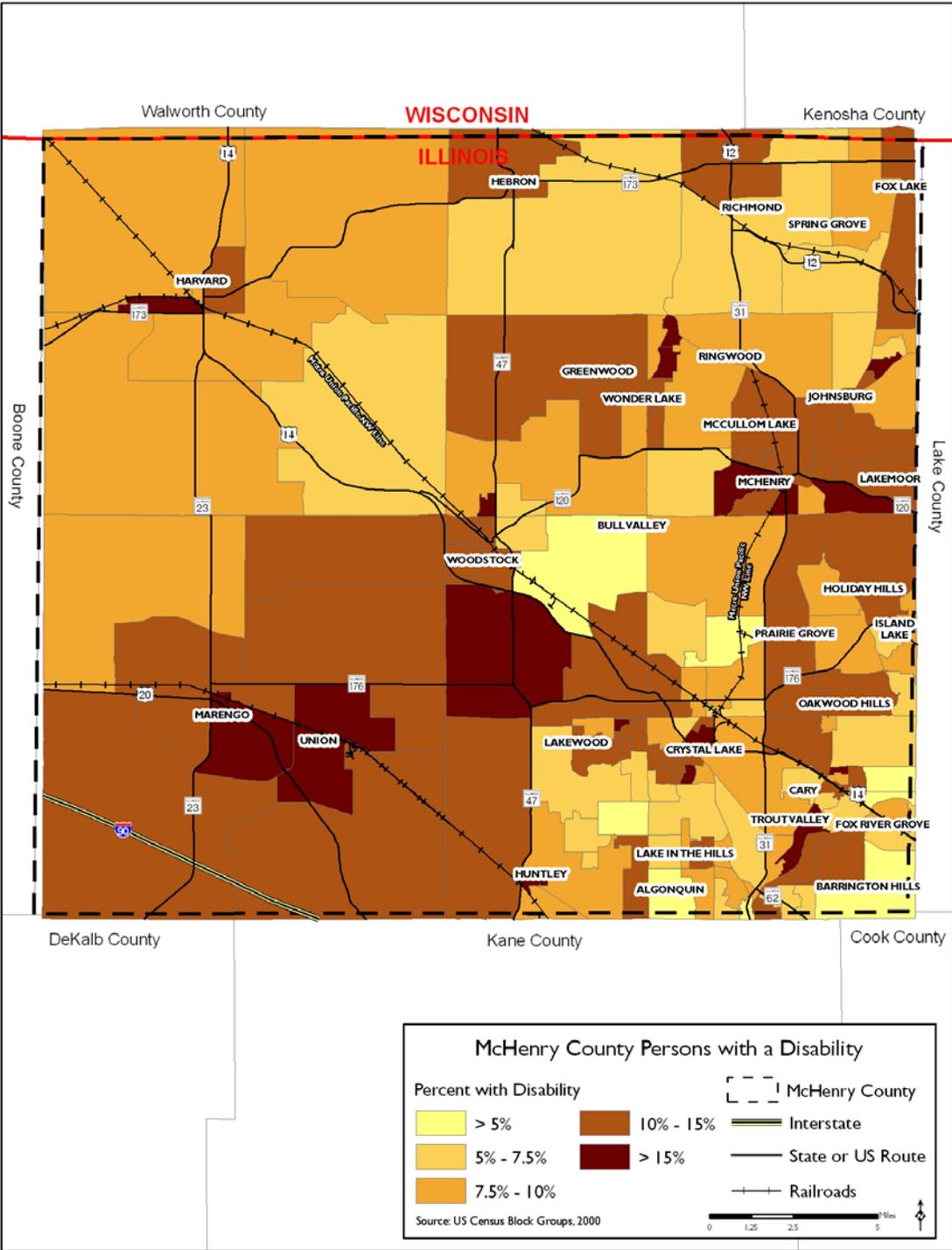
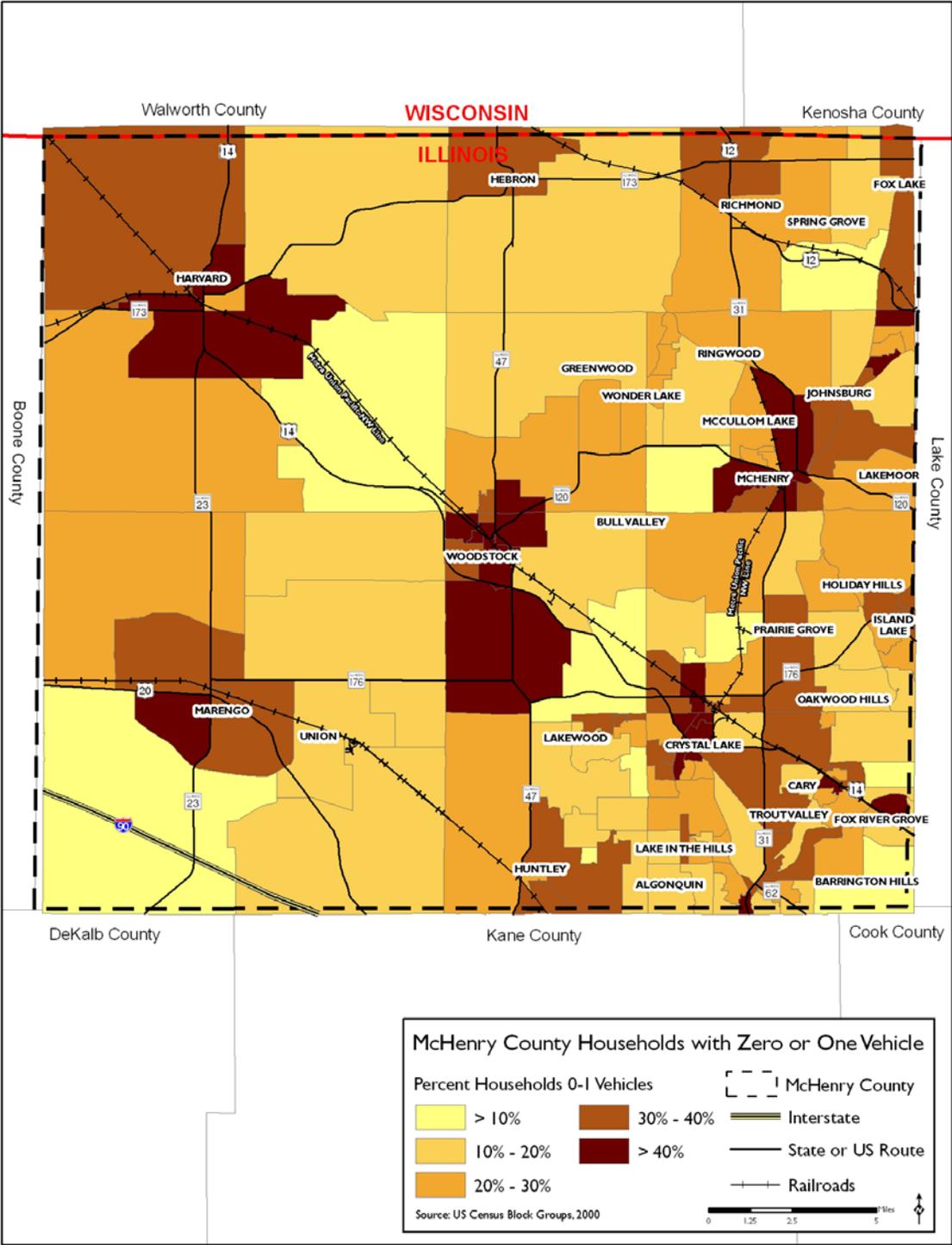


Figure 6



**Figure 7**

## **E. Household Income**

McHenry County's population can also be analyzed by household income, with a focus on households that fall below the poverty level. This category often indicates a population that may be dependent on transit due to limited means and low vehicle ownership. Overall, the County has approximately 7% of residents below poverty level compared to 13% for the state of Illinois. There are a few areas in McHenry County that have 10% or more households falling below the poverty level. These areas are just south of Harvard, on the southern side of the Metra Line between Woodstock and Lakewood and the area north of Barrington Hills. Refer to Figure 8.

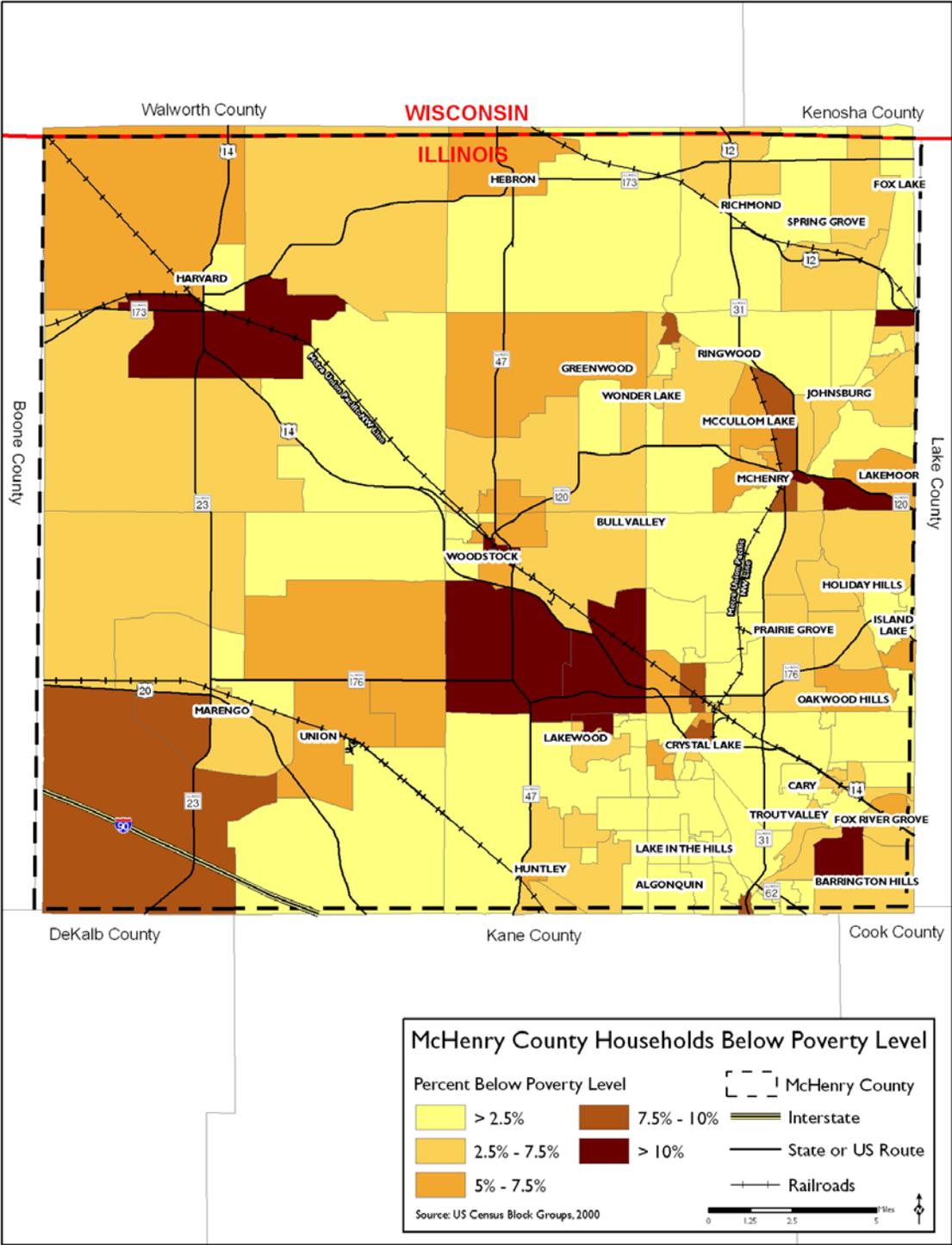


Figure 8

## F. Existing Employment

McHenry County is home to a number of employment sites. Employers with over 100 employees are listed in Table 2 and displayed in the map in Figure 9. These employment sites have the highest concentration of jobs in the County and in most cases coincide with areas of high residential and commercial activity.

**Table 2: Major Employers**

Employer	Address		Employees
Advocate Good Shepherd Hospital	500 S. Main St.	Crystal Lake	1717
Brown Printing	11595 McConnell Rd.	Woodstock	650
Camfil Farr, Inc.	500 S. Main St.	Crystal Lake	100
Catalent Pharma Solutions	2200 Lake Shore Dr.	Woodstock	830
Centegra Health System	385 Millennium Dr.	Crystal Lake	2800
Centegra Hospital - McHenry	4201 W. Med. Ctr. Dr.	McHenry	695
Community Cons. School Dist. #47	300 Commerce Dr.	Crystal Lake	1039
Community High School Dist. #155	One S. Virginia Rd.	Crystal Lake	687
Covidien	815 Tek Dr.	Crystal Lake	450
City of Crystal Lake	100 W. Woodstock St.	Crystal Lake	250
Family Srv & Community Mental Health Ctr.	4100 Veterans Pkwy.	McHenry	110
General Kinematics Corp.	5050 Rickert Rd.	Crystal Lake	153
Holiday Inn Crystal Lake Conf. Ctr.	800 S. IL Rt. 31	Crystal Lake	100
Home State Bank N.A.	40 Grant St.	Crystal Lake	174
Knaack, LLC	420 E. Terra Cotta Ave.	Crystal Lake	260
Mario Tricoli	625 Cog Cir.	Crystal Lake	100
McHenry County College	8900 US Hwy. 14	Crystal Lake	309
McHenry County Sheriff's Office	2200 N. Seminary Ave.	Woodstock	430
McHenry County Government (Includes Div. of Transportation, Health Dept., & Valley-Hi staff at other locations)	2200 N. Seminary Ave.	Woodstock	1400
Northwest Herald	7717 S. IL Rt. 31	Crystal Lake	220
Pioneer Center for Human Services	4001 W. Dayton St.	McHenry	250
Precision Dormer, LLC	301 Industrial Avenue	Crystal Lake	300
Sage Products, Inc.	3909 Three Oaks Rd.	Cary	500
Sam's Club	5670 Northwest Hwy.	Crystal Lake	177
Sherman Health	1425 N. Randall Rd.	Elgin	2200
Snap-On Tools	3011 IL Rt. 176	Crystal Lake	450
The Fountains at Crystal Lake	965 N. Brighton Cir. W.	Crystal Lake	100
Walmart Stores, Inc.	1205 S. IL Rt. 31	Crystal Lake	165

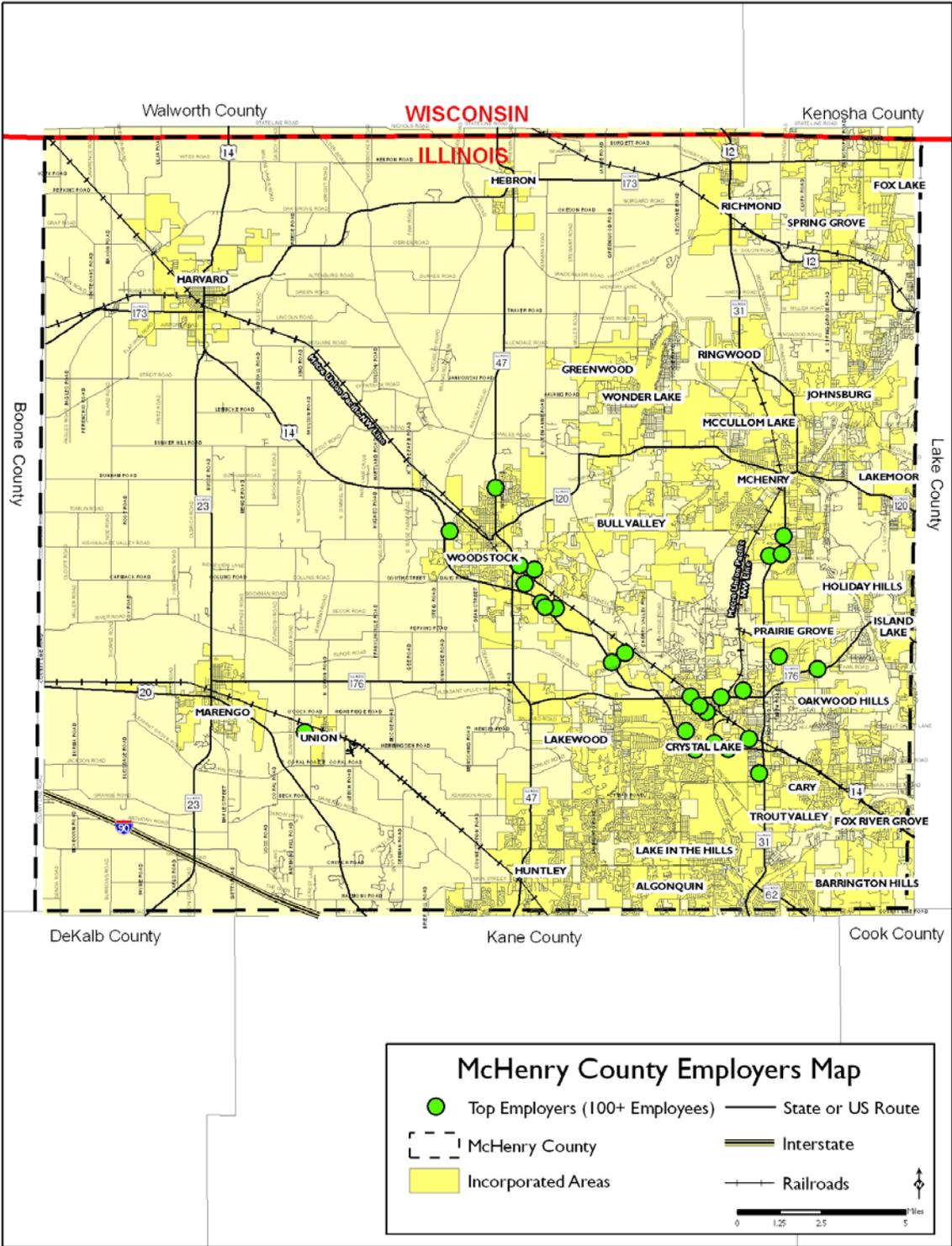
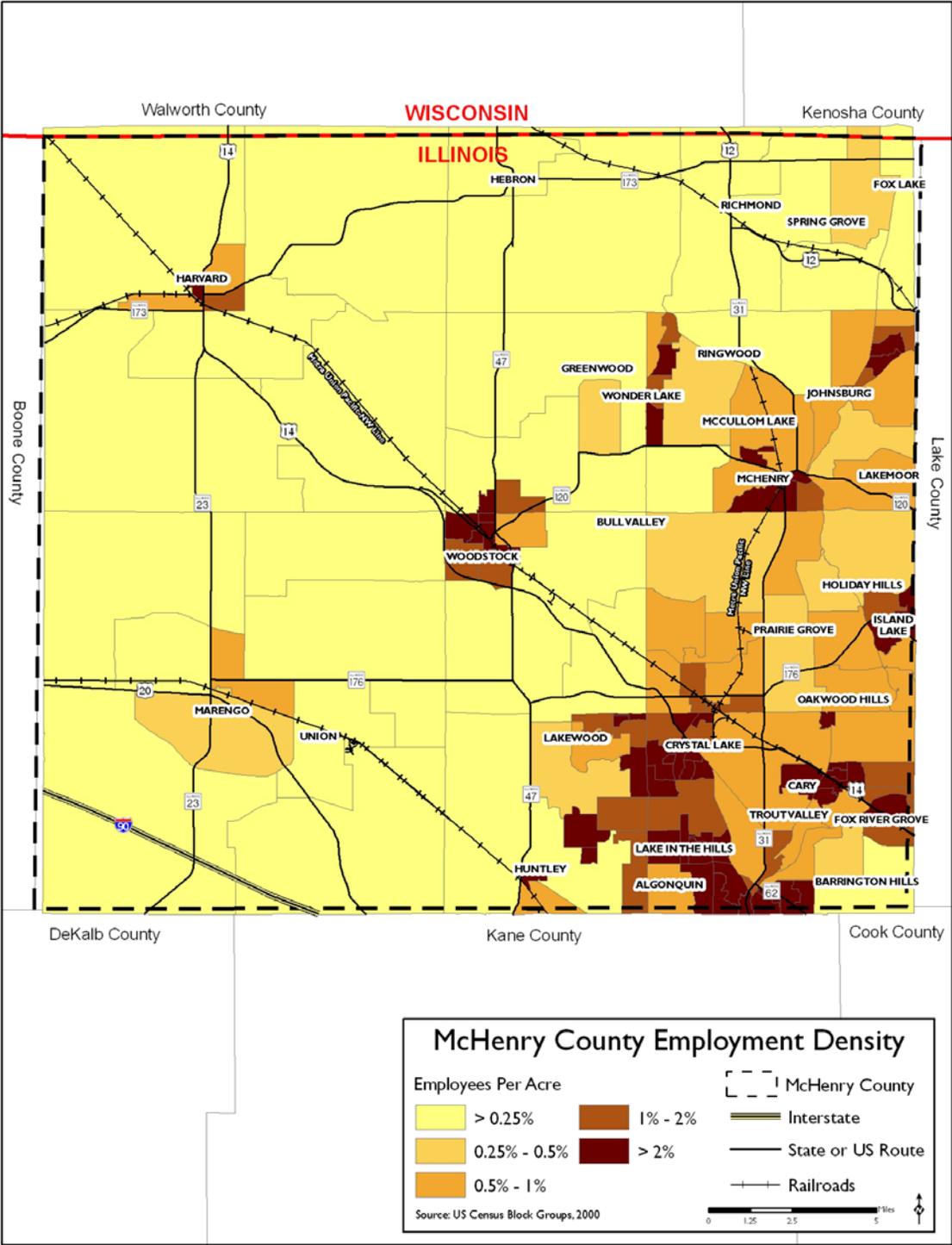


Figure 9

In McHenry County, the areas with a higher population density are also similarly high in employment density. The areas with the greatest concentration of jobs are around Woodstock, Harvard, Crystal Lake and Lake in the Hills. In the northwestern area, there is also a concentration of jobs around Wonder Lake and McHenry. Refer to Figure 10.

Table 3 highlights that Crystal Lake has the most employees of any municipality in the County, followed by McHenry and Woodstock. Jobs in these municipalities grew between 8% and 41% between 2000 and 2010. Smaller villages experienced dramatic growth in employment during that time period as well.



**Figure 10**

**Table 3: Employment in Municipalities**

Municipality	Employment		
	2000	2010	Percent Change 2000-2010
Crystal Lake	25,549	28,813	13%
McHenry	15,340	21,658	41%
Woodstock	14,945	16,206	8%
Algonquin	2,404	9,879	311%
Cary	6,432	8,270	29%
Huntley	935	4,886	423%
Fox Lake	41	4,432	10711%
Lake in the Hills	3,071	4,152	35%
Marengo	5,642	4,024	-29%
Spring Grove	812	3,907	381%
Harvard	2,528	3,107	23%
Richmond	640	2,505	291%
Johnsburg	1,340	2,466	84%
Port Barrington	1	1,659	165833%
Prairie Grove	349	1,624	365%
Barrington Hills	200	1,347	573%
Union	0	1,311	n/a
Wonder Lake	50	1,211	2323%
Fox River Grove	748	1,160	55%
Lakemoor	215	1,033	381%
Island Lake	154	998	548%
Ringwood	230	939	308%
Hebron	268	662	147%
Lakewood	68	387	469%
Bull Valley	90	387	330%
Trout Valley	263	352	34%
Oakwood Hills	2	260	12880%
McCullom Lake	35	114	226%
Greenwood	39	94	140%
Holiday Hills	20	86	328%

Source: U.S. Census, CMAP

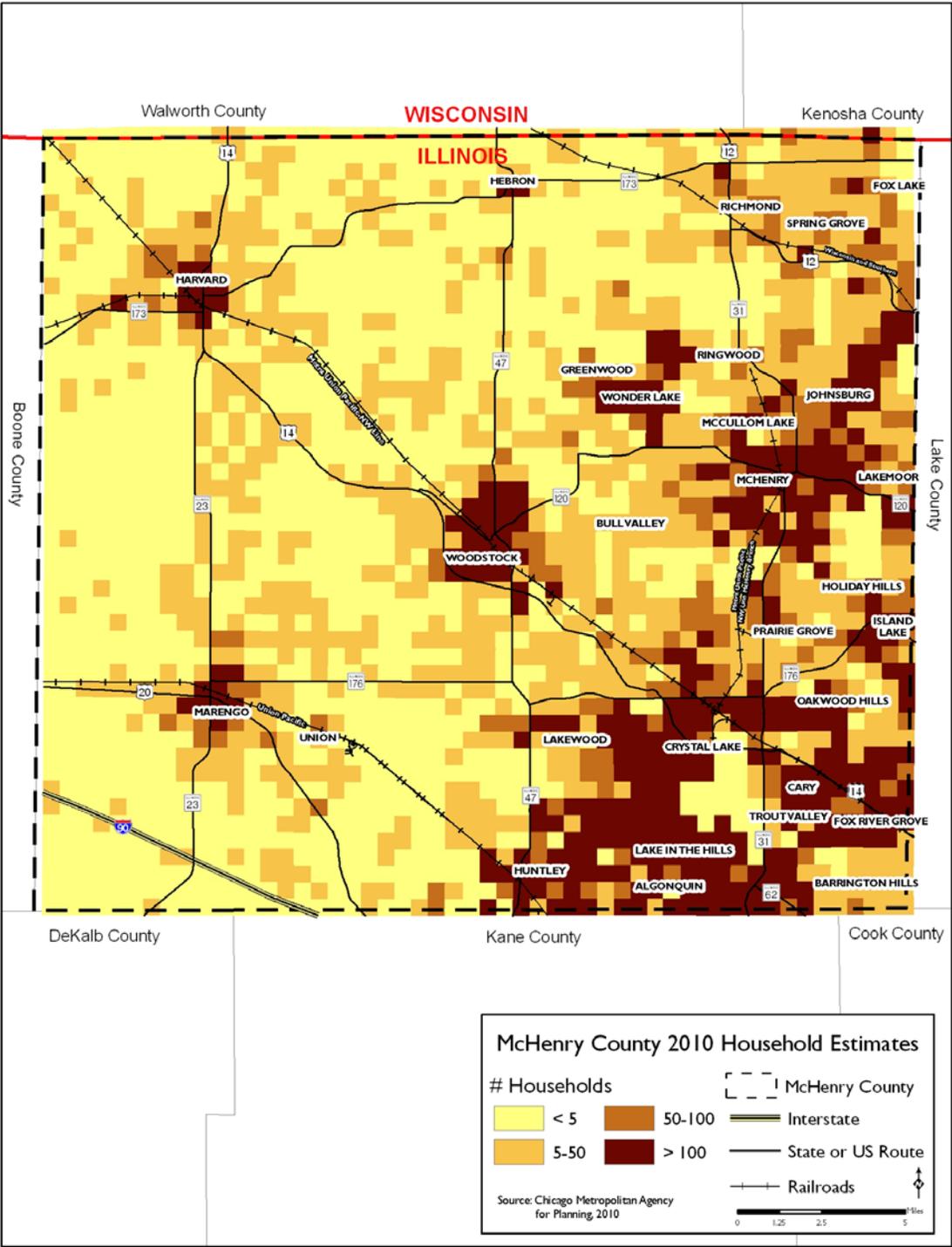
## **G. Household and Employment Forecasts**

### **1. Household Projections**

In addition to the current location of McHenry County households and population, estimates about where people will be living in the next 30 years have been developed. The map from 2010 in Figure 11 shows the concentration of households in the eastern and southeastern portion of the County. There are also pockets of dense population in Harvard, Marengo, and Woodstock. Looking forward to 2040, the concentrations of households are in similar locations, but are projected to intensify and grow larger as show in Figure 11.

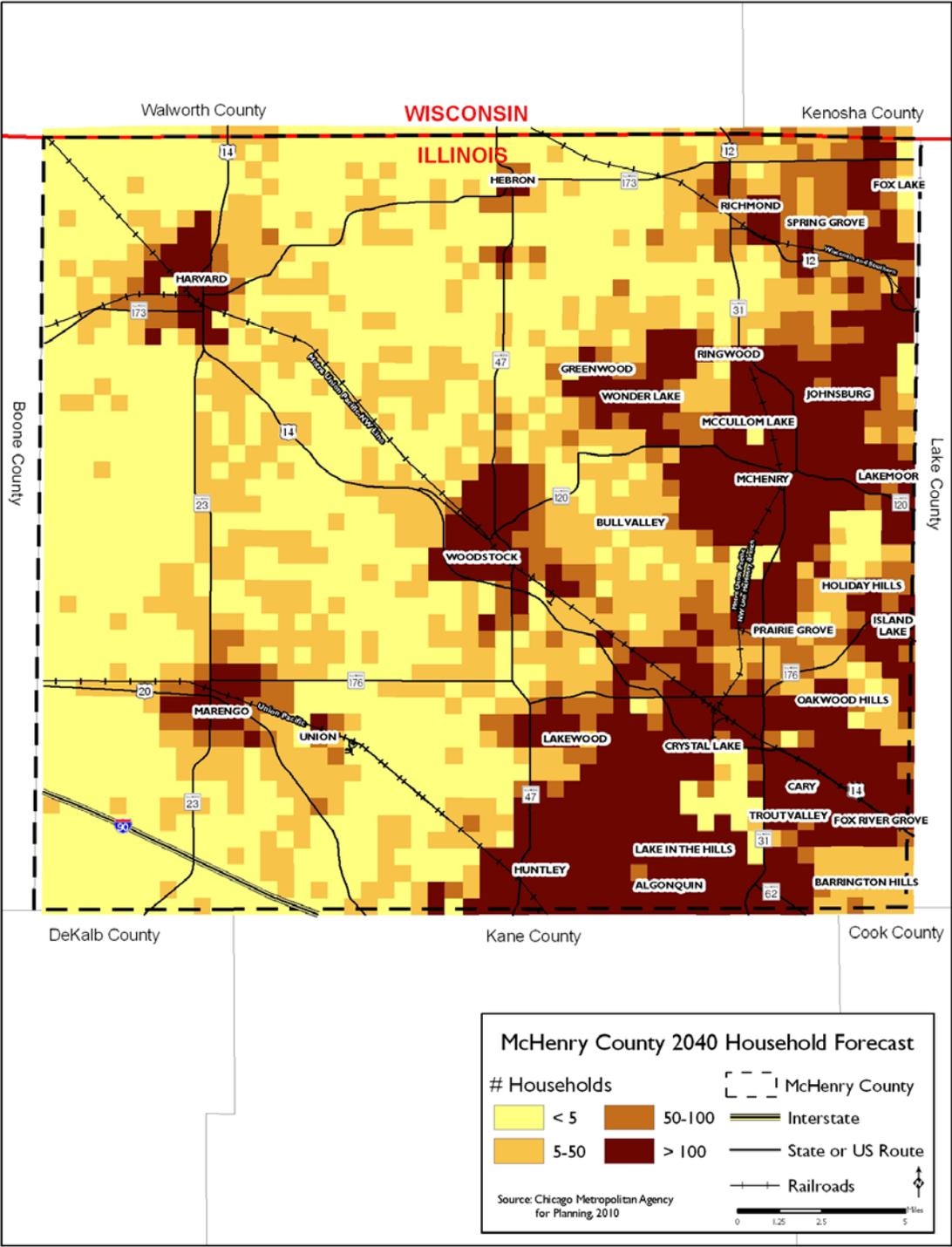
### **2. Employment Projections**

Estimates about McHenry County's employment have also been projected out to 2040. Based on the current projections, the general areas of employment sites appear to remain consistent between 2010 and 2040. However, the number of jobs increases and the location of those jobs expands outward from existing job centers. The greatest concentration of employment is in the eastern and southeastern part of the County. Also, there is some employment concentration in Harvard and Marengo. One key difference between the 2010 Employment Estimates and the 2040 Employment Forecast is along US 14 and the Metra UP-NW Line. Employment expands along this corridor in the 2040 forecasts. Refer to Figures 12 and 13.



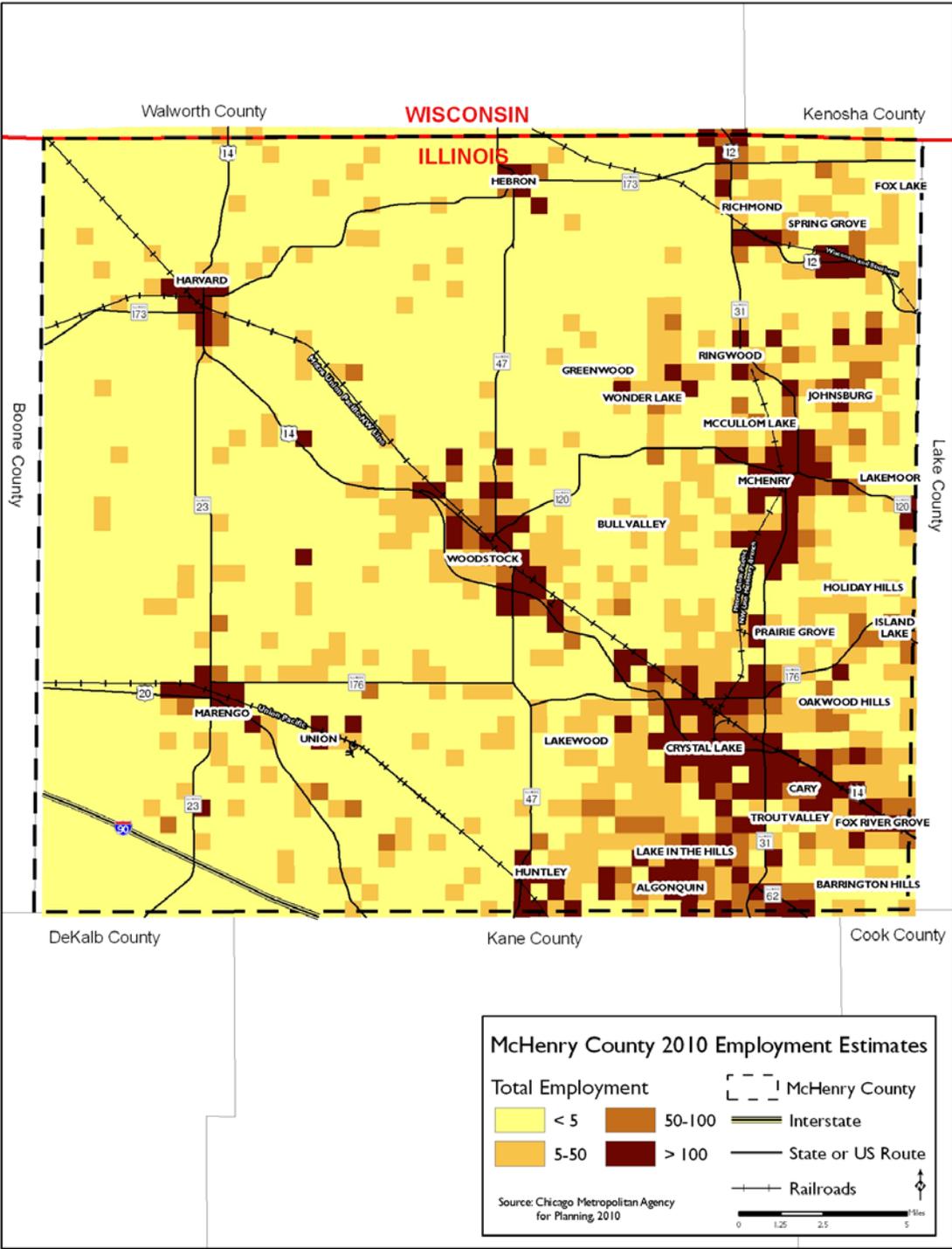
**Household Estimates by Quarter Section**

**Figure 11**



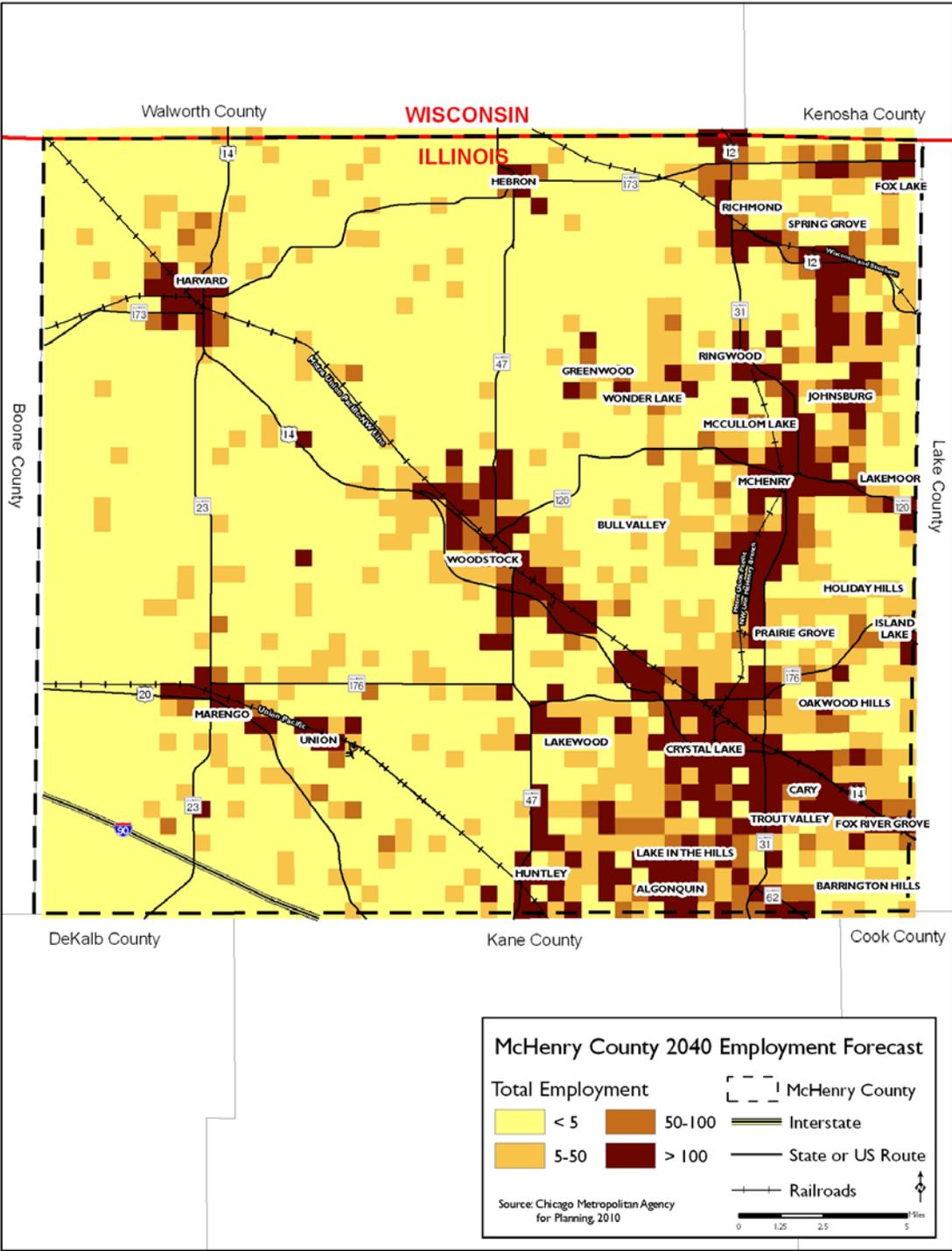
**Household Forecasts by Quarter Section**

**Figure 12**



**Employment Estimates by Quarter Section**

**Figure 13**



Employment Forecasts by Quarter Section

Figure 14

## IV. Travel Patterns

In order to better understand the potential for transit services, it is important to look at where people travel within and outside of the County, both for work trips and other purposes. In order to do so, Journey to Work data from the U.S. Census and information from the Chicago Metropolitan Agency for Planning (CMAP) was analyzed. CMAP's Household Travel Inventory information from 2008 provided information about why McHenry County residents travel as they do. The following sections summarize these travel patterns.

### A. Employment and Residence Locations

The mean travel time to work in McHenry County is approximately 34 minutes, compared to 28 minutes for Illinois. Year 2000 Journey to Work data currently remains the most reliable census data regarding travel patterns. Table 4 shows the five counties with the largest number of McHenry County residents working in them. The majority of McHenry County residents (51%) work within the County. Cook County, which includes Chicago and other major employment areas, draws 24% of the workers from McHenry County. Lake County, which is directly east of McHenry County, draws 13% of all McHenry County workers.

**Table 4: Employment Locations of McHenry County Residents**

Work County	% of Total Working McHenry County Residents
McHenry County	51%
Cook County	24%
Lake County	13%
Kane County	7%
DuPage County	3%

Source: U.S. Census

Table 5 shows the counties with the highest totals of residents working in McHenry County. The majority of workers (70%) in McHenry County are residents.

**Table 5: Residence Locations of McHenry County Workers**

<b>Residence County</b>	<b>% of Total Workers in McHenry Co.</b>
McHenry County	70%
Lake County	6%
Cook County	5%
Kane County	5%
Walworth County (WI)	3%
Boone County	3%
Winnebago County	2%
Kenosha County (WI)	2%

Source: U.S. Census

## B. Intra-County Work Flows

Figures 15 and 16 display the origin and destination zones of major flows of work trips by automobile within McHenry County. From Figure 15, the following intra-county travel patterns can be seen:

- The area around Crystal Lake, Algonquin and Cary generates many local work trips;
- McHenry and Woodstock also generate significant numbers of work trips;
- Hebron, Harvard, and Marengo display flows of workers to Woodstock;
- Johnsburg shows flows to McHenry; and
- Marengo shows flow to Huntley.

Many of the major flows occur along the Route 14 corridor, demonstrating the importance of this corridor for travel in the County.

By 2030, many of the same overall flow patterns can be seen occurring in McHenry County. However, there is a significant increase in the levels and areas where the major flows originate. In the future, there are still major flows in the Crystal Lake/ Algonquin/ Huntley area. In addition to the local trips between these areas, there is also a large number of trips to this area from McHenry, Wonder Lake, and Woodstock. Also, there are increased trips in the future from Harvard to Woodstock and from Marengo to Woodstock and the Route 14 corridor in general. New areas of trip origins seen in 2030 are in both the north central area and the northeast area of the County. The north central area trips flow to Woodstock, and the northeast trips flow to the McHenry area. In the future, it is apparent that growth is expected in both the level of employment in existing employment areas, as well as population growth in many parts of the County.

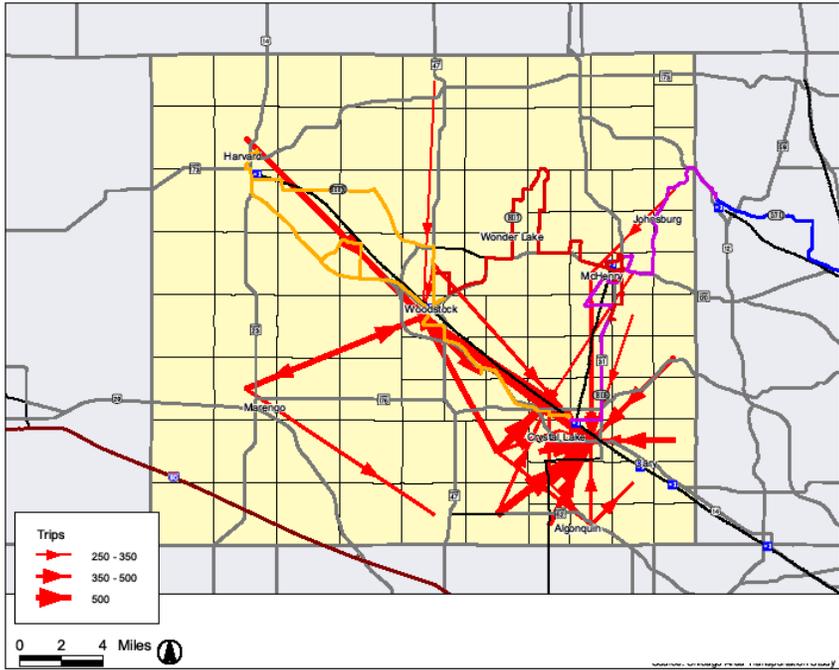


Figure 15: Home to Work Flows in McHenry County, 1999

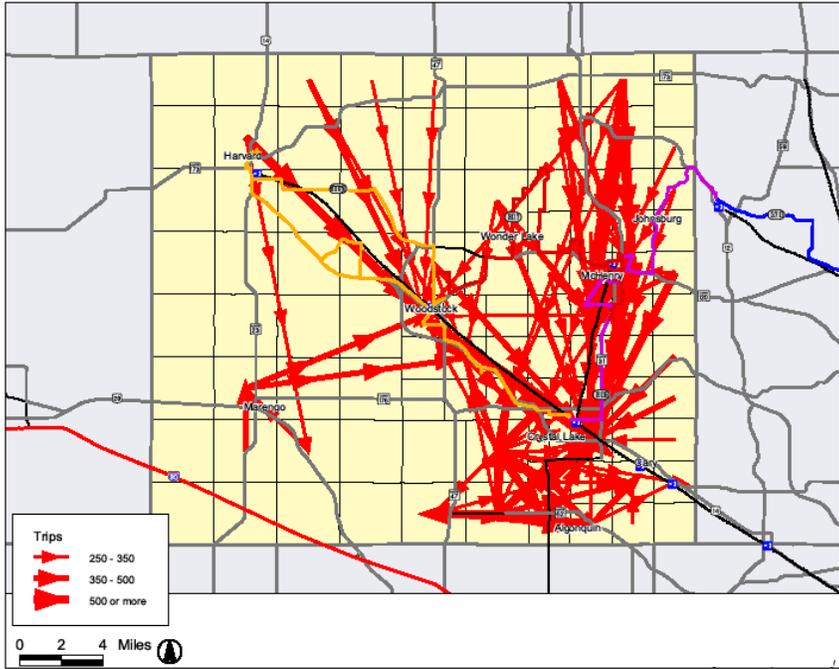


Figure 16: Home to Work Flow in McHenry County, 2030

### **C. Non-Work Travel**

People travel within McHenry County not only to drive to work, but also to drive to destinations for non work trips (shopping, medical appointments, etc.) The origins and destinations of these flows in 1999 and 2030 are shown in Figures 17 and 18. In 1999, the non-work auto trips center around four locations: Marengo, Woodstock, McHenry and the Crystal Lake/ Algonquin/Cary area. Each of these zones has significant numbers of trips occurring in and around the area, as well as trips between areas. The only exception is the Village of Marengo which only has large numbers of trips occurring in the surrounding area.

By 2030, the four locations from 1999 are still major attractors of non work trips. However, there are also new locations attracting and generating large numbers of trips. In 2030, Harvard appears as both a generator and attractor. Trips from the surrounding area are attracted to Harvard, and trips go to Woodstock, Marengo, and locations outside of the County from Harvard. Woodstock, McHenry, and the Crystal Lake / Algonquin / Cary / Fox River Grove area continue to be both generators and attractors of non-work trips. By 2030, the flows and the number of origin zones have increased, due to an increase in population and an increase in trip attractors in these places. Also in 2030, Johnsburg and other areas in the northeast corner of the County have appeared as areas generating significant numbers of non-work trips, mainly to McHenry.

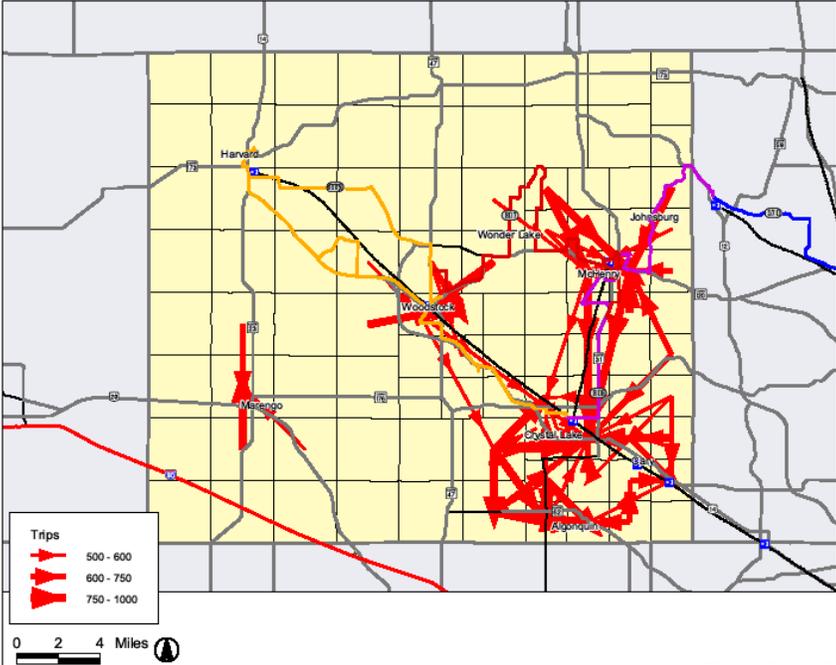


Figure 17: Home to Other Flows in McHenry County, 1999

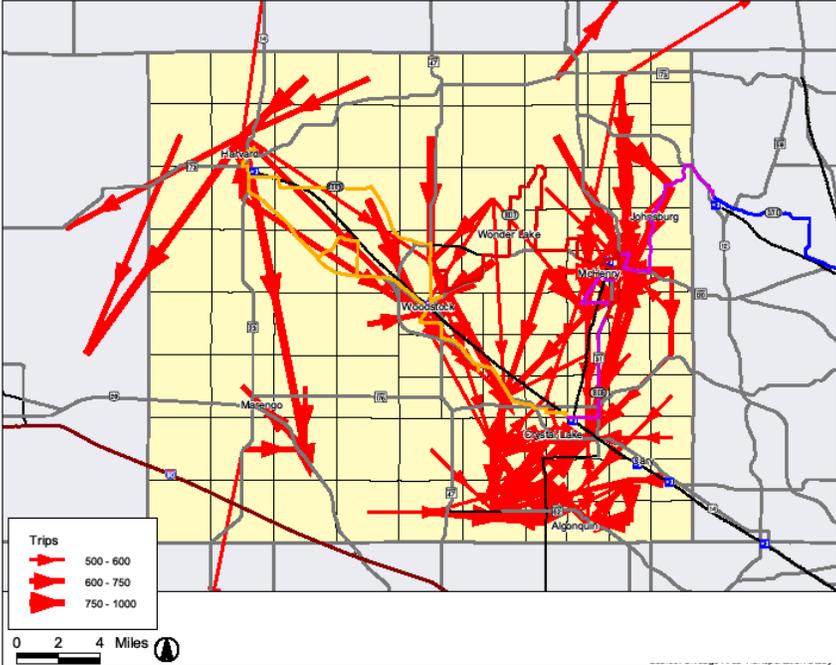
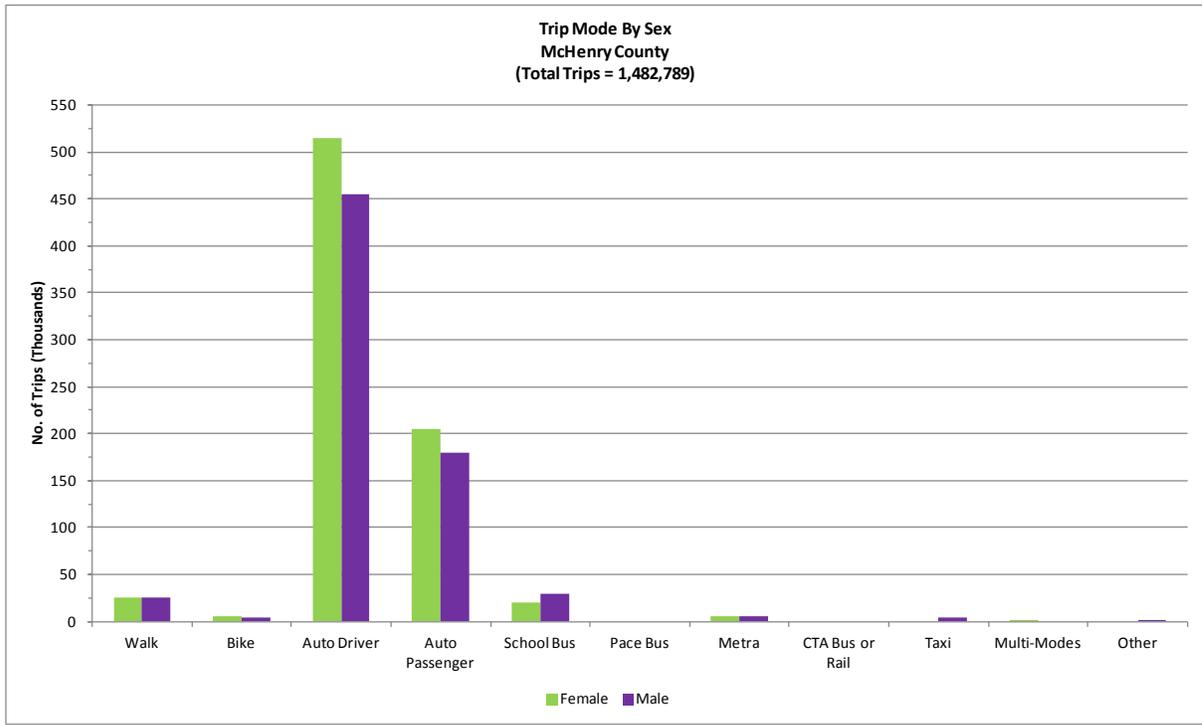


Figure 18: Home to Other Flow in McHenry County, 2030

### D. Household Travel Inventory

CMAP completed a comprehensive travel and activity survey for northeastern Illinois between January 2007 and February 2008. A total of 10,552 households participated in either a 1-day or 2-day survey, providing a detailed travel inventory for each member of their household on the assigned travel day(s). The resulting distribution of the sampled population closely matched northeastern Illinois' household population by County. The survey aimed to determine large-scale travel patterns throughout the Chicago region.

Figure 19 shows the mode of travel that McHenry County residents use. Auto driver is the primary mode, followed by auto passenger, walking, and school bus.

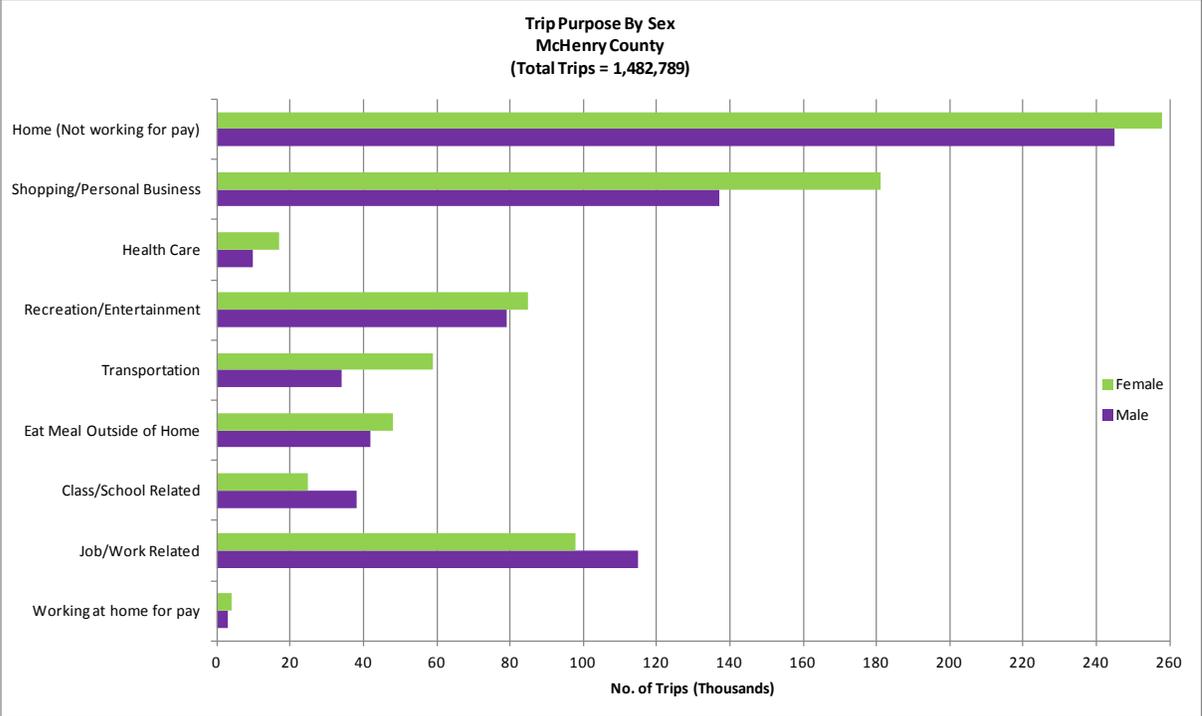


Source: CMAP Travel Tracker Survey Summary, 2010

**Figure 19**

CMAP's survey found that in McHenry County, Pace's biggest mode share is for health care trips. Metra's greatest mode share is for work-related trips. County residents primarily use an automobile for travel regardless of the reason for a trip.

In contrast to Figure 19, Figure 20 displays the trip purpose regardless of mode. Trips to home are predominant, followed by shopping/personal business, work-related, and recreation/entertainment. Health care trips are minimal compared to other trip purposes.



Source: CMAP Travel Tracker Survey Summary, 2010  
**Figure 20**

The travel survey conducted by CMAP allows comparisons between McHenry County and other northeast Illinois counties. Table 6 shows that McHenry County has the greatest percentage of travelers driving alone with 84%. Metra is used by 3.3% of McHenry County residents, while the bus is used by 0.2%.

**Table 6: Journey to Work Mode Choice 2008 Survey by Worker’s County of Residence**

County of Residence	Drove alone	Carpool	Bus	CTA Train	Metra	Bicycle	Walk to Work	Other
Cook County	58.6%	14.3%	8.0%	7.6%	5.4%	1.6%	4.0%	0.5%
DuPage County	76.5%	9.8%	1.1%	0.4%	9.5%	0.6%	2.0%	0.1%
Grundy County	*	*	*	*	*	*	*	*
Kane County	79.0%	16.4%	1.1%	0.1%	2.7%	0.2%	0.4%	0.1%
Kendall County	*	*	*	*	*	*	*	*
Lake County	76.8%	14.9%	0.8%	0.0%	6.1%	0.0%	1.2%	0.2%
McHenry County	84.0%	10.5%	0.2%	0.2%	3.3%	0.0%	1.6%	0.2%
Will County	75.4%	17.4%	0.2%	0.1%	5.3%	0.2%	0.3%	1.0%
Region	66.2%	14.0%	5.1%	4.7%	5.7%	1.1%	2.9%	0.4%

Source: CMAP Chicago Regional Household Travel Inventory

Table 7 shows that the CMAP travel survey mode choice results are similar to census data at the county level.

**Table 7: Comparison of Decennial Census and American Community Survey**

	Cook		DuPage		Kane		Kendall		Lake		McHenry		Will	
	CTPP	ACS	CTPP	ACS	CTPP	ACS	CTPP	ACS	CTPP	ACS	CTPP	ACS	CTPP	ACS
Total Workers (thousands)	2,371	2,378	469	466	193	235	28	44	317	342	133	154	242	315
Drove alone	62.9	63.9	79.6	79.3	79.8	79.1	82.8	84.1	76.4	78.7	82.4	81.6	82.9	81.3
Carpool	12.2	10.0	7.6	7.2	11.5	11.3	8.8	7.9	10.2	8.4	8.6	8.2	8.3	8.6
Bus	7.8	8.9	0.3	0.4	0.9	0.6	0.2	0.2	0.6	0.8	0.3	0.4	0.4	0.4
CTA Rail	5.7	5.3	0.2	0.4	0.1	0.0	0.0	0.4	0.1	0.3	0.1	0.2	0.2	0.3
Metra	3.2	3.2	6.1	5.5	1.8	2.0	1.9	2.3	3.7	2.8	2.7	2.4	3.4	3.7
Bicycle	0.4	0.6	0.3	0.4	0.2	0.4	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2
Walked	4.0	3.9	1.8	1.7	1.6	1.6	1.1	0.8	2.9	2.3	1.3	1.3	1.1	1.0
Other means	1.2	1.2	0.6	0.8	0.9	0.9	0.2	0.6	1.8	1.5	0.6	0.6	0.6	0.9

Sources: 2000 Decennial Census (CTPP) and 2005-2007 American Community Survey (ACS).

Source: CMAP

The travel patterns in McHenry County pose challenges to successful transit service in the County. Given that the automobile is the primary mode of travel, transit improvements can fill needs for those who cannot travel by automobile or would prefer to use alternative modes. At the same time, however, it is difficult to attract people who are used to driving to their destinations to use transit instead.

## V. Existing Transit Services

### A. Pace Fixed Route Services

Pace operates three fixed route buses in McHenry County (see Figure 21). These routes have been operating in McHenry County since the 1960s prior to the creation of Pace. They are:

- **Route 806- Crystal Lake to Fox Lake** – This route provides rush hour service during the weekday between Crystal Lake and Fox Lake via McHenry and Johnsburg. Service is provided to Horizons, Pioneer Center, Centegra Medical Center, McHenry H.S. West Campus, McHenry H.S. East Campus and Fox Lake Town Centre. The Metra Stations in Crystal Lake and Fox Lake are also served by this route. Midday service is provided by Paratransit. There is no weekend service.
- **Route 807 – Woodstock to McHenry via Wonder Lake** – This route provides weekday rush hour service between Woodstock and McHenry via Wonder Lake. Service is provided to McHenry County Courthouse, McHenry City Hall, McHenry Commons, McHenry Market Place, Marion Central High School and the Metra Stations in Woodstock and McHenry. Midday service is provided by Paratransit. There is no weekend service.
- **Route 808- Crystal Lake to Harvard** – This route provides rush hour service between Crystal Lake and Harvard via Woodstock. Service is provided to Harvard Community Hospital, Memorial Hospital (Woodstock), McHenry County Senior Citizens Council, McHenry County College and the Metra Stations in Harvard, Woodstock and Crystal Lake. Midday service is provided by Paratransit. There is no weekend service.

Table 8 shows the service frequency of each of the routes:

**Table 8: Fixed Route Service Frequency**

<b>Pace Route Service Frequency</b>	
	<b>Weekday</b>
<b>Route 806- Crystal Lake to Fox Lake</b>	AM Peak: Three trips PM Peak: Two trips Midday: Paratransit service
<b>Route 807 – Woodstock to McHenry via Wonder Lake</b>	AM Peak: Two trips EB, three trips WB PM Peak: Two trips Midday: Paratransit service
<b>Route 808- Crystal Lake to Harvard</b>	AM Peak: Three trips PM Peak: Three trips EB, four trips WB Midday: Paratransit service

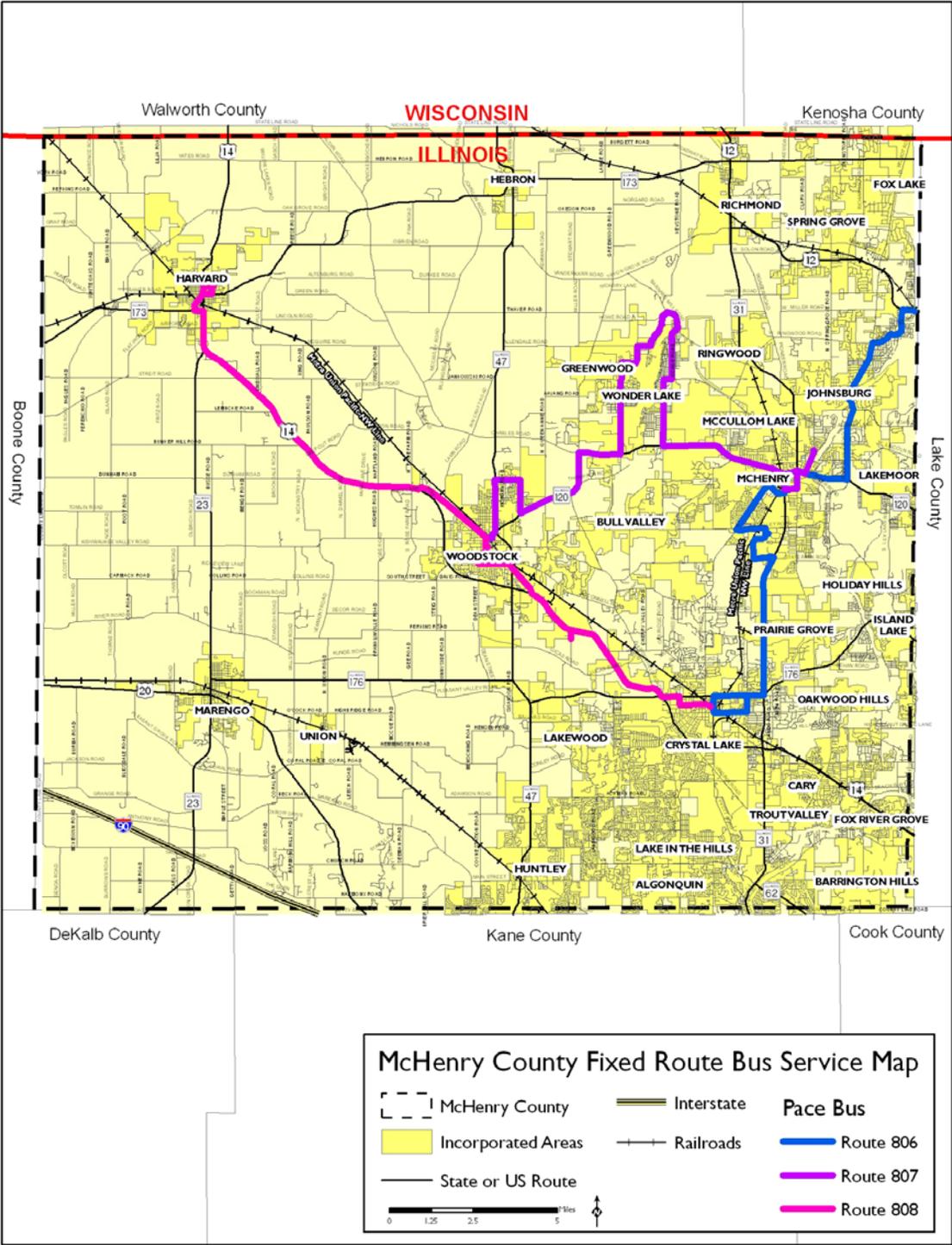


Figure 21

Monthly ridership for 2010 and 2011 on the three Pace routes is shown in Table 9. As shown, ridership on all three of the routes has increased between 2010 and 2011 between 17 and 18 percent for the period January to October. Overall ridership for 2011 is the lowest on Route 806 at 13,089 total riders for the ten month period. Ridership on Route 807 is slightly higher than ridership on Route 208.

Pace currently operates a flag stop system for bus routes within the study area. Buses may stop upon signal to the driver at any intersection along the route where it is safe to do so. Heavier utilized stops are typically marked with a bus stop sign and sometimes a passenger shelter. However, Pace is moving away from the flag stop system and will be implementing a designated stop only system in the near future.

Manual on-off counts for each of these routes are available and will be analyzed during the next phase of the study to determine where there are more boardings and alightings along the route. This information will be used to recommend any routing adjustments to the fixed route services.



**Table 9: Total Monthly Ridership 2010-2011 on Pace Fixed Routes**

Route	Year	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Sub Total	Nov	Dec	TOTAL
806	2010	951	1,006	1,116	1,073	967	1,139	1,159	1,139	1,309	1,370	11,229	1,200	1,427	13,856
806	2011	1,090	947	1,201	1,304	1,382	1,529	1,387	1,514	1,484	1,251	13,089	<b>Not Available</b>		
	% Change	+14.6	-5.9	+7.6	+21.5	+42.9	+34.2	+19.7	+32.9	+13.4	-8.7	+16.6			
807	2010	1,614	1,552	1,510	1,400	1,270	1,074	1,333	1,074	1,491	1,608	13,926	1,613	1,436	16,975
807	2011	1,699	1,504	1,844	1,585	1,843	1,568	1,395	1,656	1,684	1,636	16,414	<b>Not Available</b>		
	% Change	+5.0	-3.0	+22.1	+13.2	+45.1	+46.0	+4.6	+54.2	+12.9	+1.7	+17.9			
808	2010	1,217	1,330	1,413	1,417	1,096	1,154	1,247	1,154	1,739	1,814	13,581	1,702	1,491	16,774
808	2011	1,543	1,528	1,831	1,603	1,673	1,337	1,176	1,481	2,026	1,824	16,022	<b>Not Available</b>		
	% Change	+26.8	+14.9	+29.5	+13.1	+52.6	+15.9	-5.7	+28.3	+16.5	+6	+18.0			

## **B. Demand Response Services**

Demand response service requires that a passenger reserve a ride in advance. Unlike fixed-route service, in which buses travel the same route in a regular pattern and pick up any waiting passengers, demand response vehicles make only pre-arranged trips for riders who are eligible for the particular service. Demand response services in McHenry County are shown in Figures 22-24. A series of three maps is used for clarity to clearly show services that overlap one another.

There are two types of demand response service, listed below operating in McHenry County: dial-a-ride and ADA Paratransit. Pace sponsors some demand response services completely. For other local townships and municipality operated service, Pace provides some subsidy. Pace-operated demand response services in McHenry County are dispatched centrally from a facility in McHenry.

### **I. Pace Operated Dial-a-Ride Services**

Pace operates the following dial-a-ride services in McHenry County:

- City of Crystal Lake Dial-A Ride
- City of Marengo
- City of McHenry
- McHenry County Pilot Program
- Midday Intercommunity Dial-A Ride
- Pioneer Center
- Southeast McHenry County
- City of Woodstock

Funding for these services vary. The Pioneer Center purchases the service from Pace. For the municipal services of Crystal Lake, City of McHenry, Southeast McHenry, Marengo and Woodstock, Pace operates the service but the municipalities cost share and provide subsidies. For the McHenry County Pilot Program, the McHenry County Department of Transportation pays for the service. Pace pays for the Midday Intercommunity service and the Southeast McHenry County service.

Pioneer Center rides are strictly for their clients and mainly for work trips. The rest of the services are provided for the general public for any trip destination. For all of these services, Pace provides “cutaway vans” for service. These vans seat 12 persons and have a wheelchair lift.

Table 10 displays all of the data on the Pace operated dial-a-ride services. Additional information is provided after the table for the Midday Intercommunity Dial-a Ride service and the McHenry County Pilot Program.

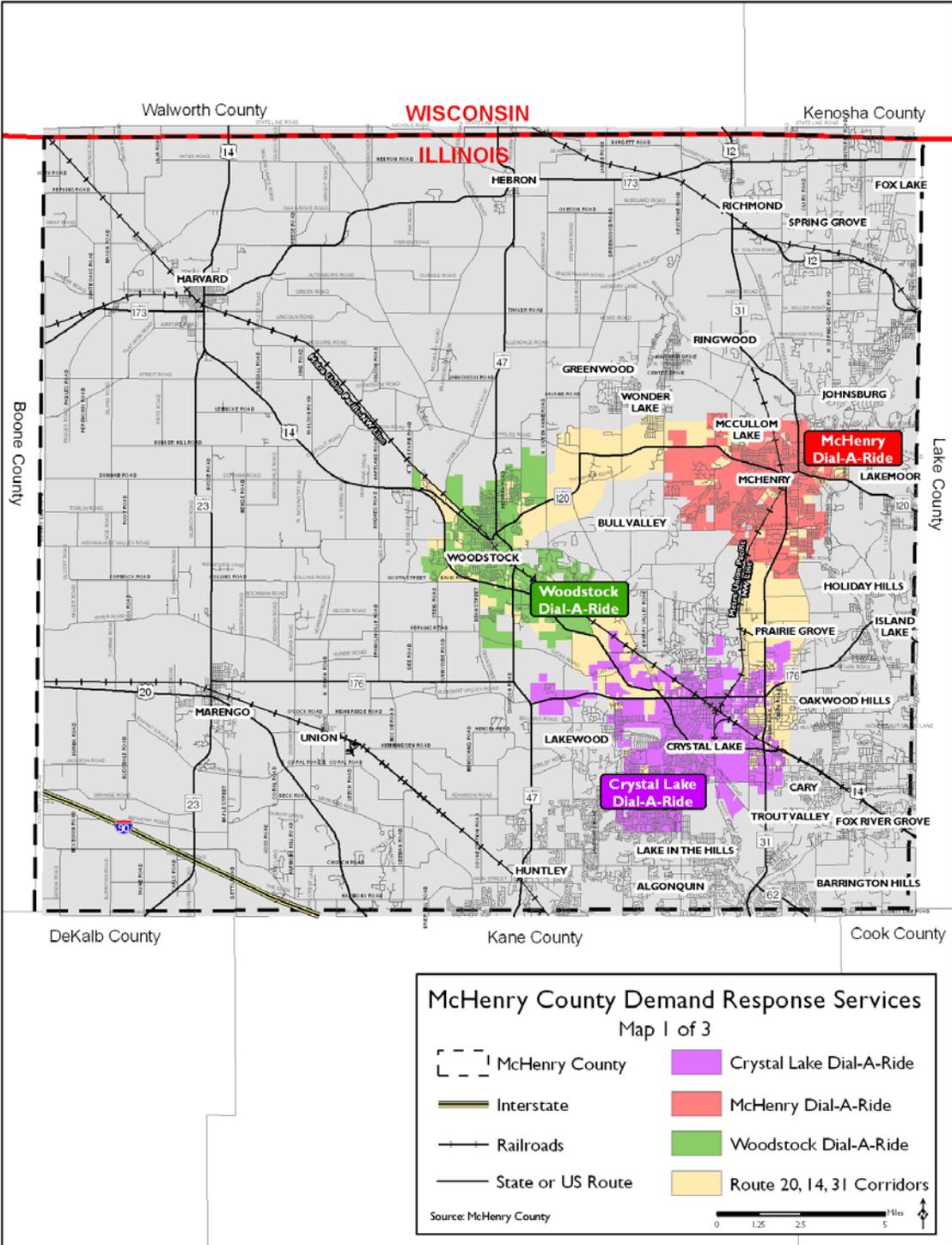
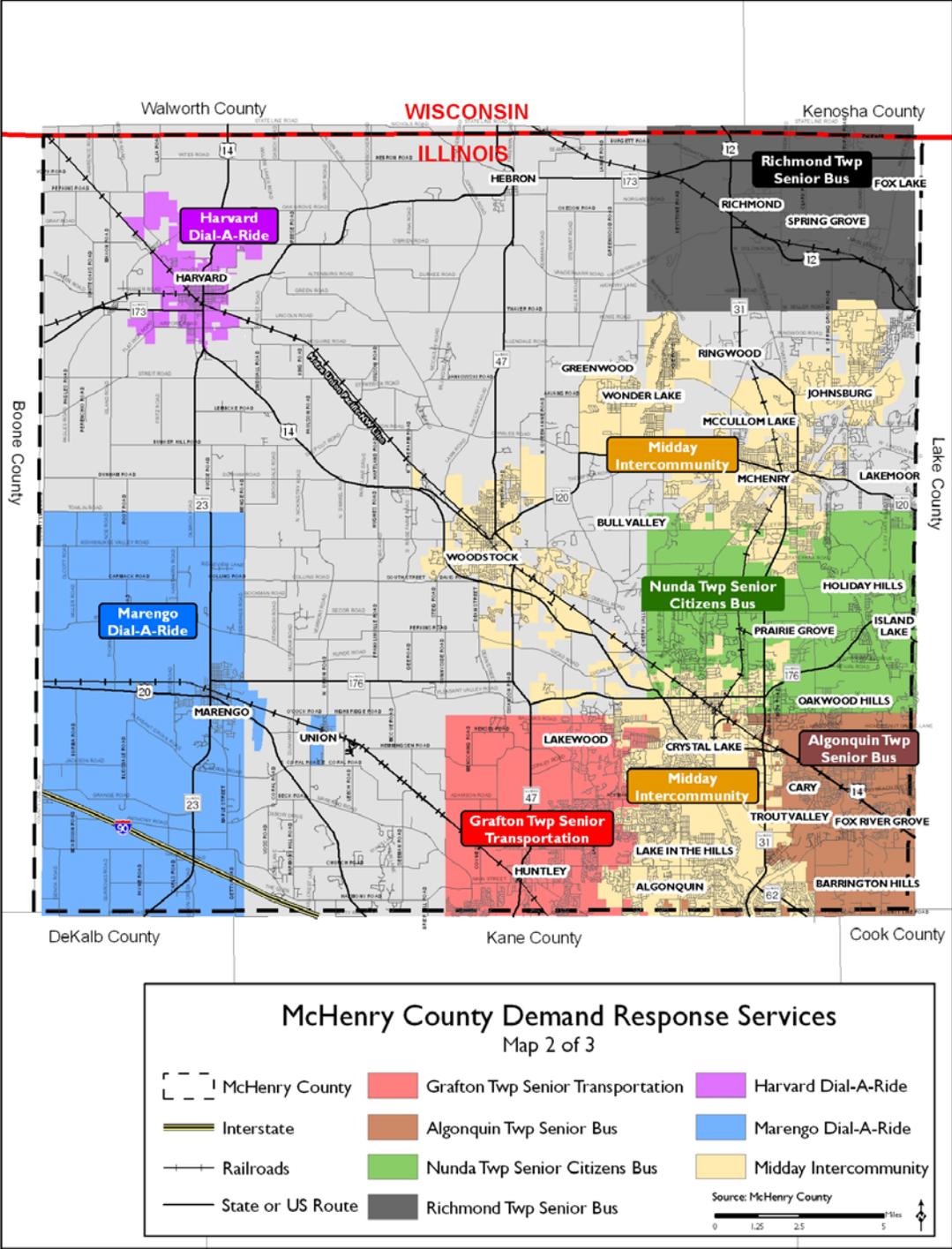


Figure 22



**Figure 23**

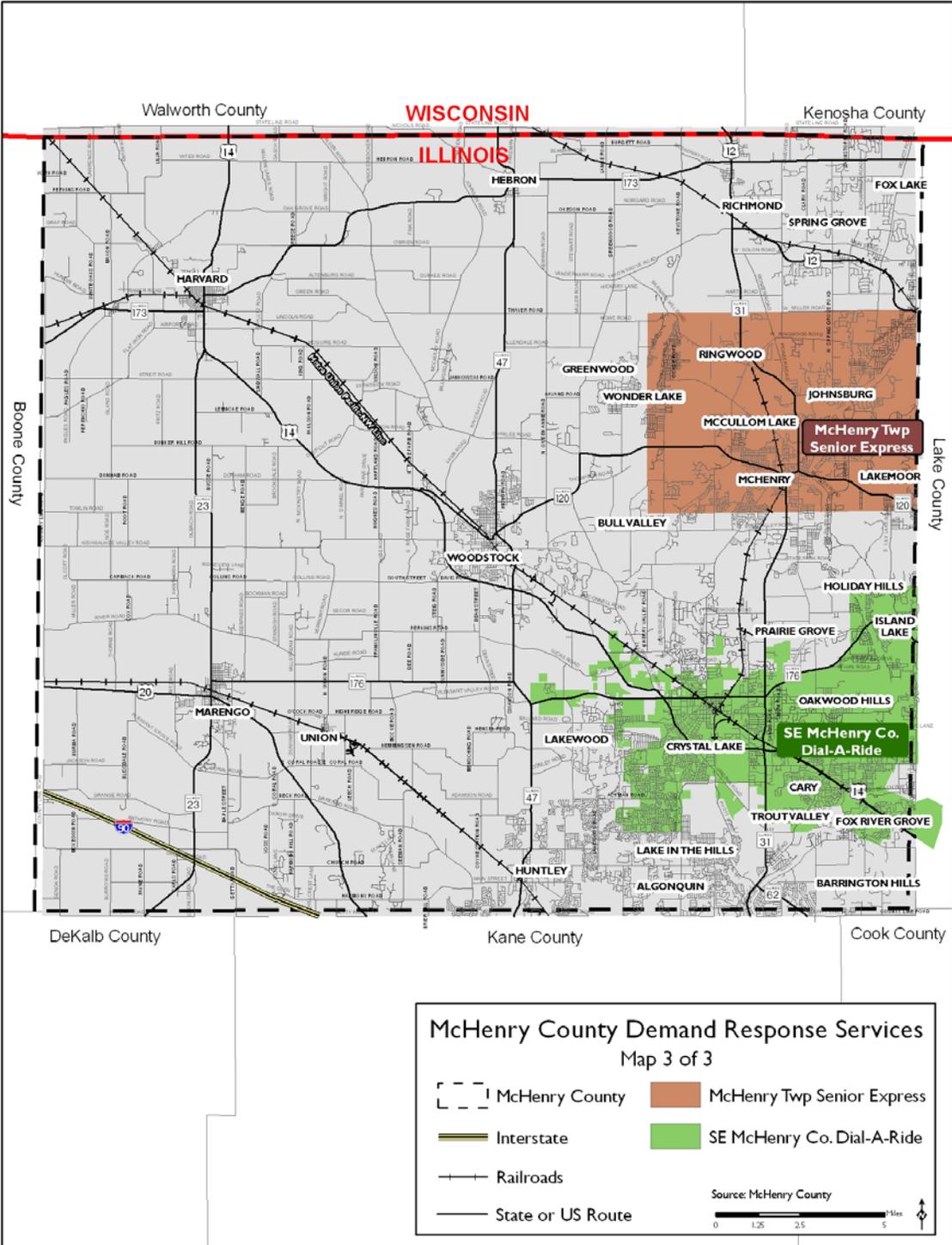


Figure 24

**Table 10: Pace Dial-a-Ride Services**

SERVICE NAME	SERVICE AREA	SERVICE HOURS	ELIGIBILITY	FARES	ADVANCED CALL-IN REQUIREMENTS
City Crystal Lake	City of Crystal Lake	M-F, 6:00 AM-6:30 PM; Sat. 9:00-4:30 PM	General Public	Seniors/disabled/students: \$0.75; others: \$1.50	30 minutes
City of Marengo	City of Marengo, Marengo Township, Riley Township, Village of Union	M-F, 9:00 AM-5:00 PM SAT, 8:00 AM-12:00 PM	General Public	Seniors/disabled/students: \$0.75; others: \$1.50	1 hour weekday 1 day Saturdays
City of McHenry	City of McHenry and portions of McHenry Township	M-F, 6:30 AM-6:00 PM; Sat. 9:00 AM-4:30 PM (city only)	General Public	Seniors/disabled/students: \$0.75; others: \$1.75	1 hour
McHenry County Pilot Program	City of Crystal Lake, City of McHenry, City of Woodstock, Dorr Township, McHenry Township, Fox Lake Metra Station, Valley-Hi Nursing Home, McHenry County Division of Transportation, and points in between	M-F, 6:00 AM-7:00 PM; Sat. 9:00 AM-5:00 PM	General Public; Disabled and Senior only for Dorr Township and McHenry Township	\$3.00	M-F, up to 7 days in advance
Midday Intercommunity	Between Crystal Lake and Spring Hill Mall, including Algonquin and Lake-in-the-Hills east of Frank Road only; between Crystal Lake and McHenry; between Woodstock, McHenry, Wonder Lake and Crystal Lake; and between Woodstock and Crystal Lake	M-F, 9:00 AM-3:00 PM	General Public	Seniors/disabled/students: \$1.00; others: \$2.00	1 day
Pioneer Center	Throughout the County	M-F, 6:30 AM – 5:30 PM	Clients of Pioneer Center	\$2.00	Subscription service
Southeast McHenry County	Within and between Cary, Fox River Grove and the area defined as west of the McHenry/Lake County border, north of Three Oaks Road, east of Pingree Road, and a line south and east of Route 176, Hiline Road and Sunset Drive, to and from Crystal Lake	M-F, 6:00 AM-5:00 PM	General Public	Seniors/disabled/students: \$1.00; others: \$2.00	1 day
City of Woodstock	City of Woodstock	M-F, 6:00 AM-4:30 PM SAT, 9:00 AM-2:30 PM	General Public	Seniors/disabled: \$1.00; students: \$1.50; others: \$2.00	1 day, M-F SAT- reservation made M-F

### ***Midday Intercommunity Service***

The Midday Intercommunity service is a dial-a-ride service provided during the midday for the communities whom are normally served by Pace fixed route. Historically, there has not been enough demand to provide fixed route all day. This service operates between Crystal Lake and Spring Hill Mall, including Algonquin and Lake in the Hills (east of Frank Road only); between Crystal Lake and McHenry; between Woodstock, McHenry, Wonder Lake, and Crystal Lake; and between Woodstock and Crystal Lake.

### ***McHenry County Pilot Program***

The pilot program began service in February 2010 as part of the implementation of the 2005 McHenry County Transit Plan in response to a need to provide services between communities. This program is an overlay service between existing community dial-a-rides operated by Pace for the communities of Crystal Lake, McHenry and Woodstock, and is available to the general public. The service also provides additional opportunities for seniors and people with disabilities in McHenry Township and unincorporated Dorr Township. The overlay service enables more options for travel between those areas and expands the service area and hours of service. Community dial-a-rides in each of those communities continue to operate independently of the pilot program. The hours of operation for the county service are Monday – Friday, 6:00 AM to 7:00 PM and Saturday from 9:00 AM to 5:00 PM. There is no Sunday service. Users of the service must be on the County’s registration list.

Ridership for 2010 and the first 10 months of 2011 for the Pace operated services is shown in Table 11. Ridership in Crystal Lake and Woodstock is down significantly. The drop in ridership in these two communities is most likely the result of the County Pilot Program which serves both of these communities and provides residents with the opportunity to travel outside their communities and thus allowing for more flexibility and longer service hours. Ridership for the City of McHenry which also is served by the Pilot Program, however, has increased 6.6%. Ridership has increased for all other services.

Figure 25 shows the trips that were made on the Pilot Program for the month of September, 2011. As shown, the trips with the greatest number (over 850 trips) are between Woodstock and Crystal Lake. Other significant trip patterns (300 to 850) are between McHenry and Woodstock, McHenry and Crystal Lake, McHenry and Wonder Lake, and Wonder Lake to Johnsburg.

## **2. MCRide Service**

In February 2012, the County’s Pilot Program and the dial-a-ride services in Crystal Lake, McHenry, and Woodstock were combined into a new service called MCRide. This service is supported through Job Access and Reverse Commute and New Freedom grants administered by the RTA. Trip reservations are allowed between 24 hours and one hour in advance. Service hours are weekdays 6:00 AM – 7:00 PM and Saturdays 9:00 AM – 5:00 PM. With this combined service, the general public is able to travel to and from incorporated areas of Crystal Lake, McHenry, and Woodstock; Valley Hi Nursing Home and McHenry County Division of Transportation; Fox Lake Metra station; and within three-quarters of a mile of Route 120 between Woodstock and McHenry, Route 14 between Woodstock and Crystal Lake, and Route 31 between Crystal Lake and McHenry. In addition, seniors and people with disabilities are eligible for trips to all the previously mentioned

service areas, as well as to Greenwood Township, McHenry Township, and Unincorporated areas of Dorr Township.

Transit Component  
McHenry County 2040 Transportation Plan  
**Existing Conditions Report**

**Table 11: 2010-2011 Total Monthly Ridership January to September**

Service	Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	SUBTOTAL
Crystal Lake	2010	4,287	3,953	3,986	3,496	3,132	3,393	3,454	3,842	3,659	3333,202
	2011	3,677	3,189	3,618	3,098	2,828	2,759	2,544	3,022	3,246	27,981
	% change	-14.2	-19.3	-9.2	-11.4	-9.7	-18.7	-26.3	-21.3	-11.3	-15.8
Marengo	2010	236	211	237	270	209	209	214	208	215	2,009
	2011	251	182	244	188	240	230	229	232	247	2,043
	% change	+6.4	-13.7	+3.0	-30.4	+14.8	+10.0	+7.0	+11.5	+14.9	+1.7
City of McHenry	2010	2,648	2,617	2,893	2,846	2,695	2,929	2,855	2,928	2,777	25,188
	2011	2,765	2,508	3,192	2,876	2,869	3,075	2,680	3,163	2,984	26,112
	% change	+4.4	-4.2	+10.3	+1.1	+6.5	+5.0	-6.1	+8.0	+7.5	+3.7
McHenry County Pilot Program	2010	N/A	229	626	665	691	799	709	819	875	5,413
	2011	692	726	881	830	788	881	850	992	1,025	6,973
	% change	N/A	+217.0	+40.7	+24.8	+14.0	+10.3	+19.9	+21.1	+17.1	+28.8
Midday Intercommunity	2010	979	856	902	734	675	307	785	770	677	6,685
	2011	1,057	946	1,303	1,161	1,204	1,265	1,343	2,047	1,857	12,183
	% change	+8.0	+10.5	+44.5	+58.1	+78.4	+312.0	+71.1	+165.8	+174.3	+82.2
Pioneer Center	2010	3,300	3,403	3,329	3,508	3,327	3,600	3,671	3,634	3,584	31,356
	2011	3,418	3,049	3,992	3,457	3,427	3,697	3,257	3,842	3,462	31,601
	% change	+3.6	+10.4	+19.9	-1.5	+3.0	+2.7	-11.3	+5.7	-3.4	+0.8
Southeast McHenry	2010	517	534	612	588	613	586	487	522	627	5,086
	2011	574	530	674	614	608	544	501	646	678	5,369
	% change	+11.0	-0.7	+10.1	+4.4	-0.8	-7.2	+2.9	+23.8	+8.1	+5.6
Woodstock	2010	2,572	2,111	1,916	1,855	1,669	1,513	1,605	1,486	1,586	16,313
	2011	1,579	1,371	1,482	1,370	1,405	1,365	1,248	1,344	1,468	12,632
	% change	-38.6	-35.0	-22.7	-26.2	-15.8	-9.8	-22.2	-9.6	-7.4	-22.6

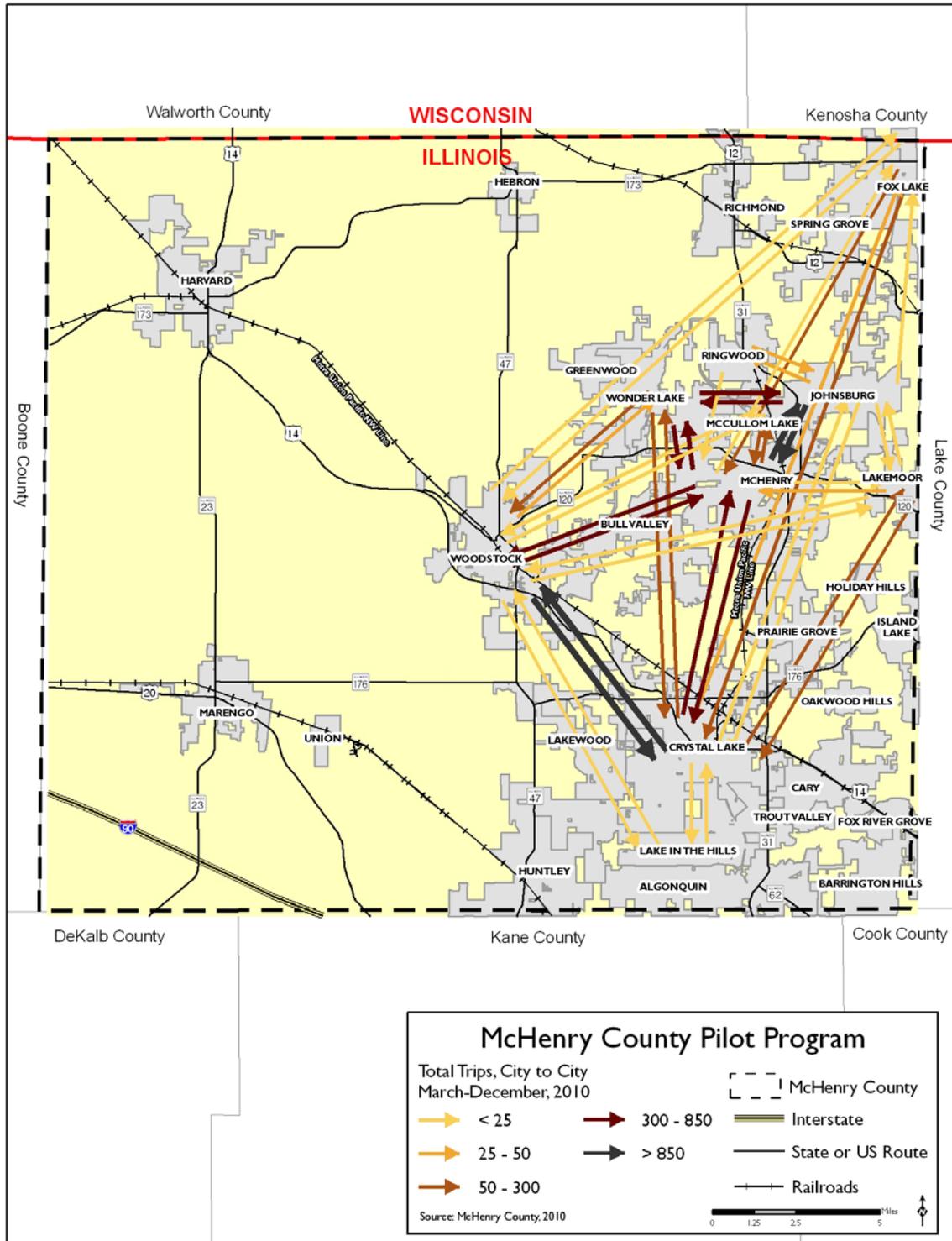


Figure 25

### **3. Other Dial-A-Ride Services**

Other communities and townships in the County pay for and operate their own dial-a-ride services. These services are listed below and their service characteristics are listed in Table 12.

- Algonquin Township Senior Bus
- Grafton Township Senior Transportation
- City of Harvard
- McHenry Township Senior Express
- Nunda Township Senior Citizens Bus
- Richmond Township Senior Bus

For the Harvard service, the city operates the service but Pace provides a small annual subsidy and one vehicle to use to operate the service. For the McHenry Township Senior Express service, Pace provides the vehicles and also takes the reservation calls in their call center.

**Table 12: Other Dial-a-Ride Services**

SERVICE NAME	SERVICE AREA	SERVICE HOURS	ELIGIBILITY	FARES	ADVANCED CALL-IN REQUIREMENTS
Algonquin Township Senior Bus	Algonquin Township	M-F, 7:00 AM-4:00 PM	Seniors and Disabled	\$2.00 one way	Minimum 24 hrs in advance
Grafton Township Senior Transportation	Grafton Township and Village of Huntley	M-F, 9:00 AM-3:00 PM	Seniors and Disabled	\$1.00-\$3.00 one way based on destination	Minimum 24 hrs in advance
Harvard Dial-A-Ride	City of Harvard	T-TH, 9:00 AM-3:00 PM	General Public	Seniors/disabled/students: \$1.00; others: \$2.00	30 minutes
McHenry Township Senior Express	McHenry Township area	M-F, 8:00 AM-3:00 PM	Seniors	\$1.00 one way	Minimum 24 hrs in advance
Nunda Township Senior Citizens Bus	Nunda Township	M-F, 7:00 AM-2:00 PM	Seniors and Disabled	\$1.00 one way	Minimum 24 hrs in advance
Richmond Township Senior Bus	Richmond Township	M-F, 8:00 AM-3:30 PM	Seniors	\$2.00-\$5.00 round trip based on destination	Minimum 24 hrs in advance

#### 4. Specialized Services

In addition to the dial-a-ride services provided by Pace, townships, and municipalities, there are a variety of non-profit or social service agencies that also provide paratransit services for their clients. These specialized services are shown in Table 13. They provide service during various hours and locations throughout the County.

**Table 13: Information on Specialized Services**

<b>Service Name</b>	<b>Service Area</b>	<b>Eligibility</b>
Centegra Patient Express	varies	Centegra Health Systems Patients.
Faith in Action	McHenry County/Sun City	Seniors
Family Alliance Transportation	McHenry County	Clients of day health services
Family Alliance Medcar and Service Car	McHenry County-from home to medical appointments	Public aid certified clients in McHenry County
Good Shepherd Courtesy Van	Home to Good Shepherd Hospital	Patients of Good Shepherd Hospital in wheelchairs
Hebron Community Bus Service	Village of Hebron and surrounding area	General public, 16 years and older
Northern IL Special Recreation Association	varies	Participants in NSRA programs
Pioneer Center and PADS Transportation	varies	Clients
Senior Services Associates	varies	Seniors
Veterans Assistance Commission	To North Chicago VA Hospital	Honorably discharged veterans living in McHenry County

## 5. ADA Paratransit

ADA paratransit service is required by the federal Americans with Disabilities Act. Only persons who are certified by the Regional Transportation Authority as a person with a disability are eligible to ride this service. Trips are only provided at the same times and within the same geographic areas as fixed route bus service. ADA paratransit service operates within a ¾ mile corridor around each fixed route, and is available during the same days and hours as the fixed route bus service.

This service is very limited in actual numbers of trips provided in McHenry County most likely because most demand is covered by the other dial-a-ride services in the County. Pace reports that the ADA paratransit service only accommodates one or two riders per day.

## C. Metra Services

Metra provides commuter service in the six county area. The Union Pacific-Northwest (UP-NW) Line provides service between Downtown Chicago and McHenry County. The train line operates from the Ogilvie Transportation Center to the City of Crystal Lake at which point it divides into two branches, with one branch continuing to travel northwest with a terminal station at Harvard and the other branch traveling directly north with a terminal station at McHenry. Refer to Figure 26.

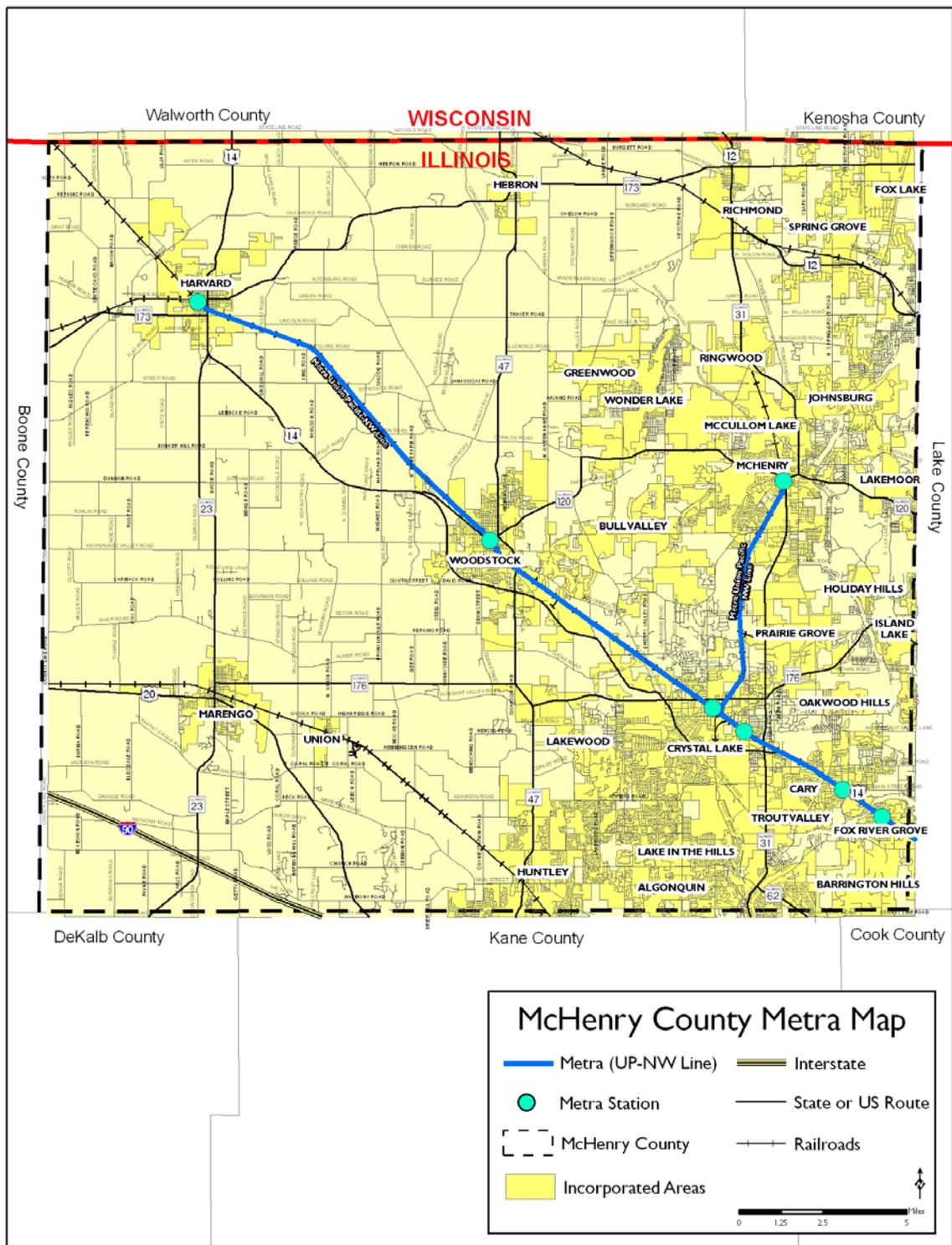


Figure 26

Stations along the UP-NW Line in McHenry County are located in Harvard, Woodstock, Crystal Lake, Pingree Road, McHenry, Cary, and Fox River Grove.

Service operates daily inbound to Chicago starting at 4:47 AM, 5:47 AM, and 5:50 AM, from Crystal Lake, Harvard, and McHenry, respectively. Service from Crystal Lake inbound to Chicago is provided on a very frequent basis during the AM peak period and then hourly during the midday through evening until 9:00 PM, at which point there is a three hour gap with the last train leaving from Crystal Lake to Downtown at 12:15 AM. Service beginning at the terminal stations of Harvard and McHenry is not offered as frequently as from Crystal Lake. Service is approximately every 45 minutes in the AM peak leaving Harvard and then every three hours during the midday. Service from McHenry is only offered via three inbound trains in the AM during the weekday. There is no other service offered from the City of McHenry during any other parts of the day or evening.

Inbound service on Saturdays is provided on an hourly basis from Crystal Lake, every one to two hours from Woodstock, and at a similar frequency from Harvard. Service is provided every two hours on Sundays from Harvard. The train does not serve the McHenry Station on either Saturdays or Sundays.

Outbound service on the Metra UP-NW Line from the Ogilvie Transportation Center begins at 5:55 AM, arriving in McHenry at 7:30 AM. The first train to serve Harvard leaves Ogilvie Transportation Center at 7:30 AM arriving Harvard at 9:20 AM. Service is provided hourly outbound throughout the midday, and then increases during the PM peak with the last outbound train leaving Downtown at 12:30 AM arriving in Harvard at 2:20 AM. Eleven outbound trains serve the Harvard Station. There is very limited service to McHenry with only two PM outbound trains serving that station. On Saturdays, service is provided every hour to two hours to Harvard, with the last train leaving Downtown at 12:30 AM arriving in Harvard at 2:20 AM. Outbound service on Sundays is every two hours starting at 10:30 AM from Ogilvie Transportation Center with the last train leaving at 12:30 AM arriving at Harvard at 2:20 AM. No trains stop at McHenry Station on the weekends.

The Metra Milwaukee District North (MD-N) Line provides service through Lake County which is adjacent to McHenry County on the east. There is a station stop in Fox Lake, a village which is partially in McHenry County and partially in Lake County. The station is located at Nippersink Boulevard and Grand Avenue. The first inbound train leaves Fox Lake at 4:46 AM arriving downtown at 6:19 AM. Service is frequent during the AM rush but tapers down significantly during the midday and evening hours with a three hour gap between trains. Service inbound on Saturday is approximately every hour until 4:45 PM at which time there is a nearly four hour gap in service until the next train. The last inbound train leaves Fox Lake at 10:25 PM. On Sundays, service during the morning and afternoon from Fox Lake varies between every hour to two hours, until 4:45 PM when there is nearly a four hour gap until the evening service resumes at 8:25 PM.

The first outbound train leaving Chicago Union Station during weekday mornings with a terminus in Fox Lake is at 7:01 AM arriving in Fox Lake at 8:36 AM. Trains continue to serve Fox Lake every two hours in the AM until 4:40 PM when outbound trains to Fox Lake become more frequent during the PM rush, leaving from approximately every five minutes to twenty minutes. In the evening, service becomes hourly, with the last train leaving Downtown at 12:25 AM arriving at 1:59 AM. On Saturdays, outbound service is every hour to two hours with the first train leaving Downtown at 8:35

AM and the last train leaving at 12:25 AM. On Sundays, service is approximately every two hours, with the same range of service as on Saturdays.

## **I. Ridership**

Table 14 shows weekday ridership from 2006 on the Union Pacific–NW Line. As shown, of the seven McHenry County stations, ridership is greatest out of the Crystal Lake Station. The other communities rank as following for greatest to least inbound boardings:

- Crystal Lake
- Cary
- Pingree Road
- Woodstock
- Fox River Grove
- Harvard
- McHenry

Table 15 shows Average Daily Boardings Over Time. Boardings over time show that average daily boardings in 2006 are significantly greater than boardings in 1983 except at McHenry when boardings are the same. Ridership at most of the stations continued to grow consistently between 1983 and 2006. The Pingree Road Station opened in 2006.

**TABLE 14: 2006 Weekday Ridership on Metra UP-NW Line**

Station	Mile Post	Inbound Trains		Outbound Trains		All Trains	
		Ons	Offs	Ons	Offs	Ons	Offs
Harvard	63.1	274	0	0	280	274	280
Woodstock	51.6	443	8	13	416	456	424
McHenry	Branch 50.6	101	0	0	94	101	94
Crystal Lake	43.2	1,337	39	33	1,360	1,370	1,399
Pingree Road	41.7	573	11	8	590	581	601
Cary	38.6	969	22	19	918	988	940
Fox River Grove	37.3	415	9	7	408	422	417
Barrington	31.9	1,642	96	82	1,703	1,724	1,799
Palatine	26.4	1,993	96	112	1,939	2,105	2,035
Arlington Park	24.4	1,531	80	83	1,554	1,614	1,634
<i>Arlington Heights Transfer</i>	22.8	0	0	89	89	89	89
Arlington Heights	22.8	2,181	122	136	2,199	2,317	2,321
Mount Prospect	20.0	1,496	85	94	1,484	1,590	1,569
Cumberland	18.6	346	56	47	368	393	424
<i>Des Plaines Transfer</i>	17.1	10	10	70	70	80	80
Des Plaines	17.1	890	229	195	833	1,085	1,062
Dee Road	15.0	427	14	19	391	446	405
Park Ridge	13.5	770	124	127	730	897	854
Edison Park	12.6	498	44	38	505	536	549
Norwood Park	11.4	245	58	44	274	289	332
Gladstone Park	10.1	102	10	1	70	103	80
Jefferson Park	9.1	416	350	370	401	786	751
Irving Park	7.0	282	224	213	303	495	527
Clybourn	2.9	290	702	479	186	769	888
Ogilvie Transportation Center	0.0	0	14,842	14,886	0	14,886	14,842
Total Passengers		17,231	17,231	17,165	17,165	34,396	34,396
Passenger Miles			403,825		425,012		828,837
Average Trip Length			23.4		24.8		24.1

Source: Metra. Count conducted Thursday, November 9, 2006 (Trip length shown in miles)

**Table 15: Metra UP-NW Line Average Daily Boardings Over Time\***

Station	MP	1983	1985	1987	1989	1991	1993	1995	1997	1999	2002	2006
McHenry	50.6	101	74	199	115	131	179	162	154	159	140	101
Harvard	63.1	84	104	112	140	170	181	235	203	222	259	274
Hartland	56.0	7	--	--	--	--	--	--	--	--	--	--
Woodstock	51.6	166	183	308	289	327	365	357	314	349	415	456
Crystal Lake	43.2	907	954	1,084	1,105	1,248	1,316	1,463	1,495	1,501	1,579	1,370
Pingree Road	41.7	--	--	--	--	--	--	--	--	--	--	581
Cary	38.6	457	478	516	615	732	853	973	899	951	1,035	988
Fox River Grove	37.3	209	195	228	321	350	367	359	370	428	449	422
Barrington	31.9	1,564	1,631	1,945	1,838	1,748	1,859	1,831	1,758	1,745	1,724	1,724
Palatine	26.4	1,632	1,586	1,919	2,104	2,010	2,092	1,957	2,092	2,091	1,894	2,105
Arlington Park	24.4	1,430	1,479	1,834	1,845	1,829	1,945	1,957	1,980	1,904	1,665	1,614
Arlington Heights	22.8	2,764	2,727	2,953	3,179	3,129	3,001	2,833	2,572	2,579	2,496	2,317
Mount Prospect	20.0	2,146	2,220	2,253	2,147	2,073	2,055	1,899	1,754	1,804	1,655	1,590
Cumberland	18.6	685	567	546	604	537	559	543	520	523	393	393
Des Plaines	17.1	1,145	1,141	1,159	1,252	1,146	1,237	1,117	1,111	1,148	991	1,085
Dee Road	15.0	397	373	432	416	403	489	428	389	438	388	446
Park Ridge	13.5	908	850	801	917	818	900	820	874	922	932	897
Edison Park	12.6	383	328	360	425	402	544	518	541	547	593	536
Norwood Park	11.4	218	195	170	244	239	307	320	273	329	269	289
Gladstone Park	10.1	81	81	67	94	97	138	119	111	129	124	103
Jefferson Park	9.1	441	434	537	548	583	736	740	706	719	749	786
Irving Park	7.0	175	196	225	248	257	407	414	376	408	451	495
Clybourn	2.9	272	261	305	466	408	486	575	460	531	529	769
Ogilvie Transportation Center	0.0	13,737	13,517	15,037	15,778	15,809	16,516	15,954	15,253	15,603	14,542	14,886
<b>Total UP Northwest</b>		<b>29,909</b>	<b>29,574</b>	<b>32,990</b>	<b>34,690</b>	<b>34,446</b>	<b>36,532</b>	<b>35,574</b>	<b>34,205</b>	<b>35,030</b>	<b>33,272</b>	<b>34,227</b>

\*Hartland Station closed in 1984 and Pingree Road Station opened in 2005

Source: Metra, 2006

Table 16 shows the trains with the greatest inbound boardings. As indicated, the three trains with the highest boardings leave Harvard at 5:47 AM, 6:22 AM, and 7:08 AM respectively.

**Table 16: Trains With Highest Inbound Boardings (2006 Ridership)**

Station	Train: Depart: Arrive Downtown: Mile Post	610		620		630	
		5:47 AM		6:22 AM		7:08 AM	
		7:22 AM		8:01 AM		8:41 AM	
		Ons	Offs	Ons	Offs	Ons	Offs
Harvard	63.1	57		51		68	
Woodstock	51.6	108	0	103	0	83	0
McHenry Branch	50.6						
Crystal Lake	43.2	214	11	164	7	186	4
Pingree Road	41.7						
Cary	38.6	176	3	160	1	132	1
Fox River Grove	37.3	88	0	79	1	53	2

Table 17 shows outbound trains in order of the highest ridership getting off in McHenry County leave downtown at 5:16 PM, 4:45 PM, and 3:45 PM respectively.

**Table 17: Trains With Highest Outbound Alightings**

		Train: 625			631			641
		Depart Downtown:	3:45 PM		4:45 PM		5:16 PM	
		Arrive:	5:24 PM		6:02 PM		6:46 PM	
Station		Mile Post	Ons	Offs	Ons	Offs	Ons	Offs
Ogilvie Transportation Center		0.0	1,078		848		1,136	
Fox River Grove		37.3	1	41	0	118		
Cary		38.6	1	90	2	224		
Pingree Road		41.7	0	63	0	112		
Crystal Lake		43.2	8	141			3	323
McHenry	Branch	50.6				68		
Woodstock		51.6	1	78			0	149
Harvard		63.1		47				82

## 2. Parking

Most stations have daily fee lots for Metra commuters. The Cary Station also has one lot that has permit spaces (170 spaces are permit spaces). Parking lots are maintained by the individual communities. Fees to park in each lot vary and are determined by the municipality. Commuter parking is free at Woodstock and McHenry Stations. Table 18 shows the number of parking spaces available at each station and the percent of spaces utilized on the day of the count. In all cases, except Pingree Road, there is additional capacity. The one parking lot at Pingree Road was reported to be 95% utilized. Most parking lots are for daily parking; at the Crystal Lake lot, cars are allowed to park overnight.

**Table 18: Commuter Parking Information**

STATION	NO. OF PARKING LOTS	NO. OF DAILY SPACES	% USED	NO. OF PERMIT SPACES	% USED
Harvard	5	221	75%	0	----
Woodstock	4	443	53%	0	----
McHenry	2	106	64%	0	----
Crystal Lake	13	1080	75%	0	----
Pingree Road	1	385	95%	0	----
Cary	4	453	76%	170	99%
Fox River Grove	4	306	76%	0	----
Fox Lake*	5	376	91%	35	34%

\* Fox Lake is on the Metra MD-N Line

Source: Metra, October 2009

### **3. Origin of Riders**

Appendix A contains Tables A1- A8 that indicate the origins of riders using each of the Metra stations in McHenry County. The Crystal Lake and the Harvard Stations pull from the most diverse areas as compared to the rest of the stations in McHenry County. This is due to Harvard being the farthest out terminal station, drawing commuters from surrounding communities that do not have commuter rail service. Crystal Lake attracts a significant number of riders from different communities due to the fact it provides significantly more service as compared to McHenry and Harvard.

The majority of riders (30%) to the Harvard Station originate in Harvard. This station also attracts commuters from Roscoe (8%), Delavan, WI (6%), Rockford (5%), Poplar Grove (4%), Fontana, WI (4%) and 22 other communities. For the Crystal Lake Station, the majority of the riders (51%) live in Crystal Lake. Other communities that this station draws from include Lake in the Hills (11%), McHenry (7%), Woodstock, (6%) and 10 other communities.

Origins of riders indicates patterns of travel to and from the Metra stations and can be used to determine if bus services, including fixed route and dial –a-ride, can provide the linkages necessary for a complete transit trip from origin to destination.

### **4. Mode of Access**

Tables 19 and 20 show the mode of access for the stations in McHenry County on the Metra UP-NW Line and the Fox Lake Station on the Metra MD-N Line. “Drive alone” is the most favored response, but for the stations of Woodstock, Harvard, and McHenry this mode is less than what is reflected along the Line. “Dropped off” is the second highest category except in the case of the Woodstock Station where 16% of the commuters are “walking”. Walking is also higher for the Fox River Grove Station (12%) and the Cary Station at 9%, as compared to the other stations in McHenry County. For the Fox Lake Station, walking accounts for 5% of the riders.

Mode of Access to a Metra Station is reflective on a variety of factors, including land use and development patterns in the community and around the Metra station, the presence of sidewalks leading to the station, the availability of other modes of transit serving the station, and the condition and safety of the surrounding roadway system for other modes, such as bicycles.

**Table 19: Mode of Access (2006) For Union Pacific – NW Line**

Station	Mile Post	Fare Zone	Walk	Bike	Drive Alone	Carpool Driver	Carpool Psngr	Dropped Off	Taxi
Fox River Grove	37.3	H	12%	0%	69%	2%	3%	14%	0%
Cary	38.6	H	9%	1%	69%	2%	2%	16%	0%
Pingree Rd.	41.7	I	1%	1%	77%	5%	4%	12%	0%
Crystal Lake	43.2	I	6%	1%	71%	3%	3%	16%	0%
Woodstock	51.6	K	16%	2%	66%	2%	4%	10%	0%
Harvard	63.1	M	8%	0%	64%	5%	6%	15%	0%
McHenry	50.6	K	7%	0%	65%	1%	2%	23%	1%
<b>TOTAL</b>			<b>8%</b>	<b>1%</b>	<b>69%</b>	<b>3%</b>	<b>3%</b>	<b>15%</b>	<b>0%</b>
<b>SYSTEM TOTAL</b>			<b>21%</b>	<b>1%</b>	<b>54%</b>	<b>2%</b>	<b>2%</b>	<b>14%</b>	<b>1%</b>

**Table 20: Mode of Access (2006) For Metra Milwaukee District North Line**

Station	Mile Post	Fare Zone	Walk	Bike	Drive Alone	Carpool Driver	Carpool Psngr	Dropped Off	Taxi
Fox Lake	49.5	J	5%	0%	68%	2%	2%	21%	0%
<b>TOTAL</b>			<b>5%</b>	<b>0%</b>	<b>68%</b>	<b>2%</b>	<b>2%</b>	<b>21%</b>	<b>0%</b>
<b>SYSTEM TOTAL</b>			<b>21%</b>	<b>1%</b>	<b>54%</b>	<b>2%</b>	<b>2%</b>	<b>14%</b>	<b>1%</b>

Source: Metra 2006 Origin-Destination Survey

Appendix A, Figures A1-A6, contain the Origins and Mode of Access Maps for each of the stations.

## VI. Roadway Conditions

### A. Roadway Network

The roadway network of McHenry County includes US highways, state routes, county roads, and local roads that form a connected system. The McHenry County 2030 Comprehensive Plan depicts the hierarchy of the roadway system, which categorizes roads according to their functions and capacities. While sources differ on the exact nomenclature, the basic hierarchy comprises freeways, arterials, collectors, and local roads. Generally the volumes, sizes, and density of the roadways follow the overall socio-demographic pattern, with the higher volumes and capacity located on the eastern side of the County. Congestion on the roadways in the County is due in a large part because there is no interstate access in the County and subsequently, traffic is delegated to the arterial network. Subsequently, the roadways are very congested and are predicted to become more congested as the population and employment centers grow. Not only is the congestion problematic for vehicular traffic, it also is problematic for transit vehicles who will have increasing difficulty serving the County in an efficient manner as the roadways become more clogged. However, better transit solutions can help alleviate roadway congestion as people begin to utilize transit and increase the transit mode share in the County.

#### 1. Interstate Routes

Only one interstate route intersects McHenry County in the southwestern corner. Highway I-90 enters McHenry at the far northwesterly part of Kane County and exits into the southern part of Boone County for a total of 9.01 miles. There are no exits within McHenry County. Access to I-90 is from northern Kane County at IL 31, Randall Road, IL 47<sup>1</sup>, and US 20.

#### 2. Arterial Roadways

Arterial roadways are major highways or streets that function within the network to connect longer-distance travel between municipalities or other activity centers. Within McHenry County, the arterial roadways generally follow a grid pattern with a few diagonal routes primarily composed of the US highways. Consistent with land use patterns, more arterial roadways are found within the eastern half of the County.

Generally the arterial roadways are two lanes wide in the western half and northeastern quarter of McHenry County. Portions of US 14, IL 31, IL 62 / Algonquin Road<sup>2</sup>, Randall Road, and other routes in and around McHenry, Algonquin, Crystal Lake, and Woodstock are four lanes or wider. The western arterials are primarily undeveloped, serving as key connectors for regional and county travel. The Illinois Department of Transportation (IDOT) designates roadways that are critical for supplementing the expressway system for long-distance, high-volume traffic within the Chicago metropolitan area as part of the Strategic Regional Arterial Network (SRA). Within McHenry

<sup>1</sup> Currently the interchange at IL 47 is only to and from the east. Illinois State Toll Highway Authority (ISTHA), with county support, anticipates completing a \$16.5m project in 2016 to add the western ramps to the interchange.

<sup>2</sup> Algonquin Road from IL 31 to IL 47 is designated as a “freeway” per Section 8 of the Illinois Highway Code to preserve the corridor right-of-way for transportation needs.

County, IDOT has designated US 20, US 14, US 12, IL 23, IL 31, IL 47, IL 120, IL 173, IL 176, and Randall Road as SRAs.

### **3. Collector Roadways**

Collector roadways are secondary roads that provide access from arterials to residential and commercial areas and local roads. Within McHenry County, they are classified as Collectors (Urban) and Major / Minor Collectors (Non-Urban). Typically the Collector Roadways in non-urban areas are County owned, with those in incorporated areas being major streets under the local jurisdiction. The collector roadways provide infill for the arterial roadways for more municipal to municipal or locality to locality travel. As major commercial areas tend to be located off of collector roads, they also serve as primary corridors for destinations within McHenry County.

With a few small exceptions in major urban areas, all collector roadways are two lanes wide.

### **4. Local Roadways**

Local roadways, both urban and non-urban, are the basic residential streets and township roads that serve to connect to people's homes. Most are under the jurisdiction of the local municipality or township; however a few are county routes. All are two lane roads that provide a lower speed and scale suitable for higher pedestrian and bicycle activity.

Refer to Figure 27 for the functional classification of the roadway system.

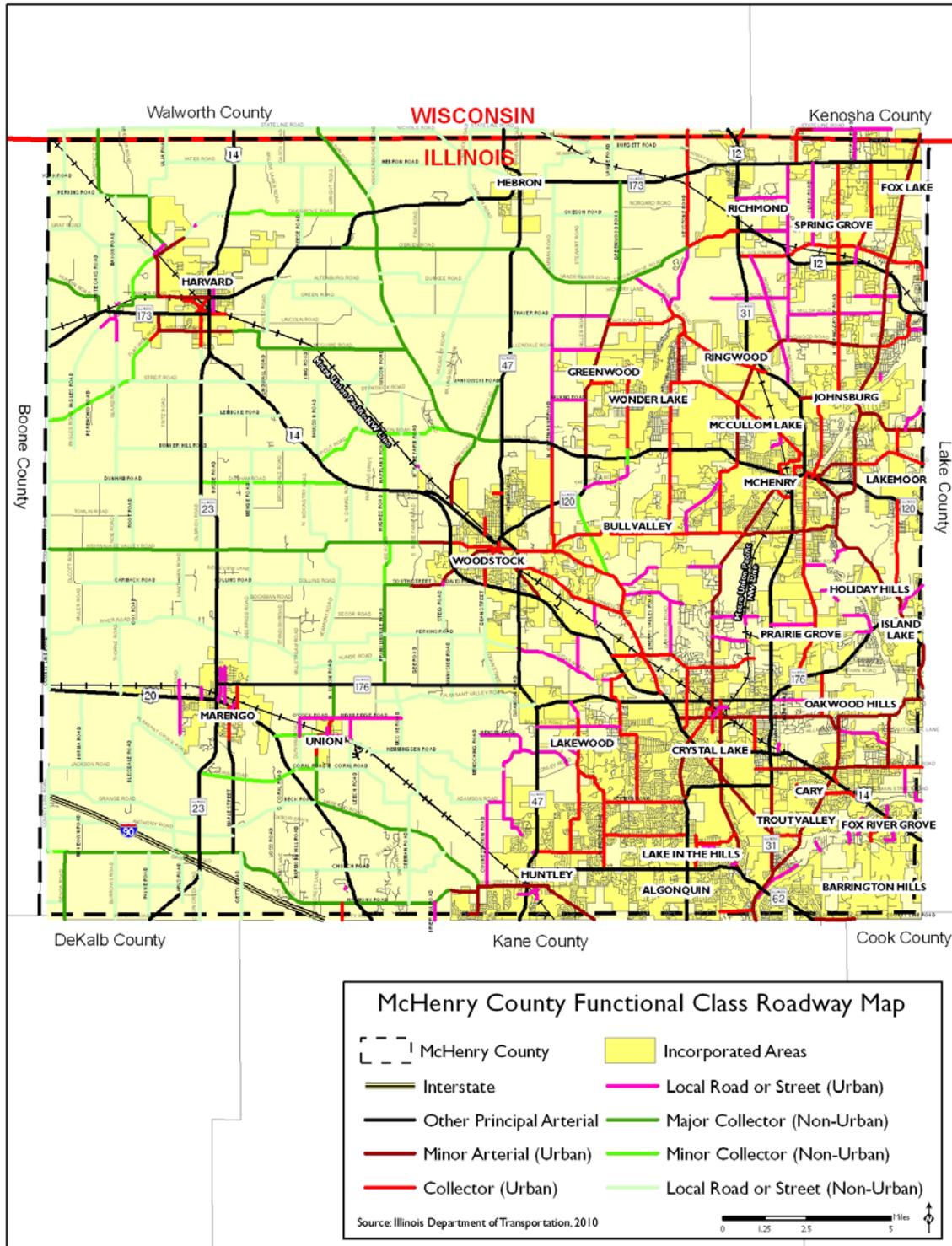


Figure 27

## **B. Traffic Volumes**

Traffic volumes in McHenry County generally reflect the density patterns with the highest volumes heading on the arterial roadways from McHenry County towards the Chicago area. Traffic tends to be directional in nature, with the morning commute out of the County and the afternoon the reverse.

Shown in Figure 28 are Average Annual Daily Traffic (AADT) counts compiled by IDOT for McHenry County. The highest volumes are on Randall Road from the County Line to Ackman Road with over 41,000 vehicles per day. This is nearly equivalent to the volumes passing thru McHenry County on I-90. Volumes above 20,000 vehicles per day are observed on US 14, IL 120, IL 31, IL 47 and Algonquin Road, primarily where they enter the County and through downtown areas. The rest of the arterials within the southeastern portion of McHenry typically have volumes exceeding 12,000 vehicles per day. In the remainder of the County, volumes tend to range between 2,000 and 8,000 vehicles per day.

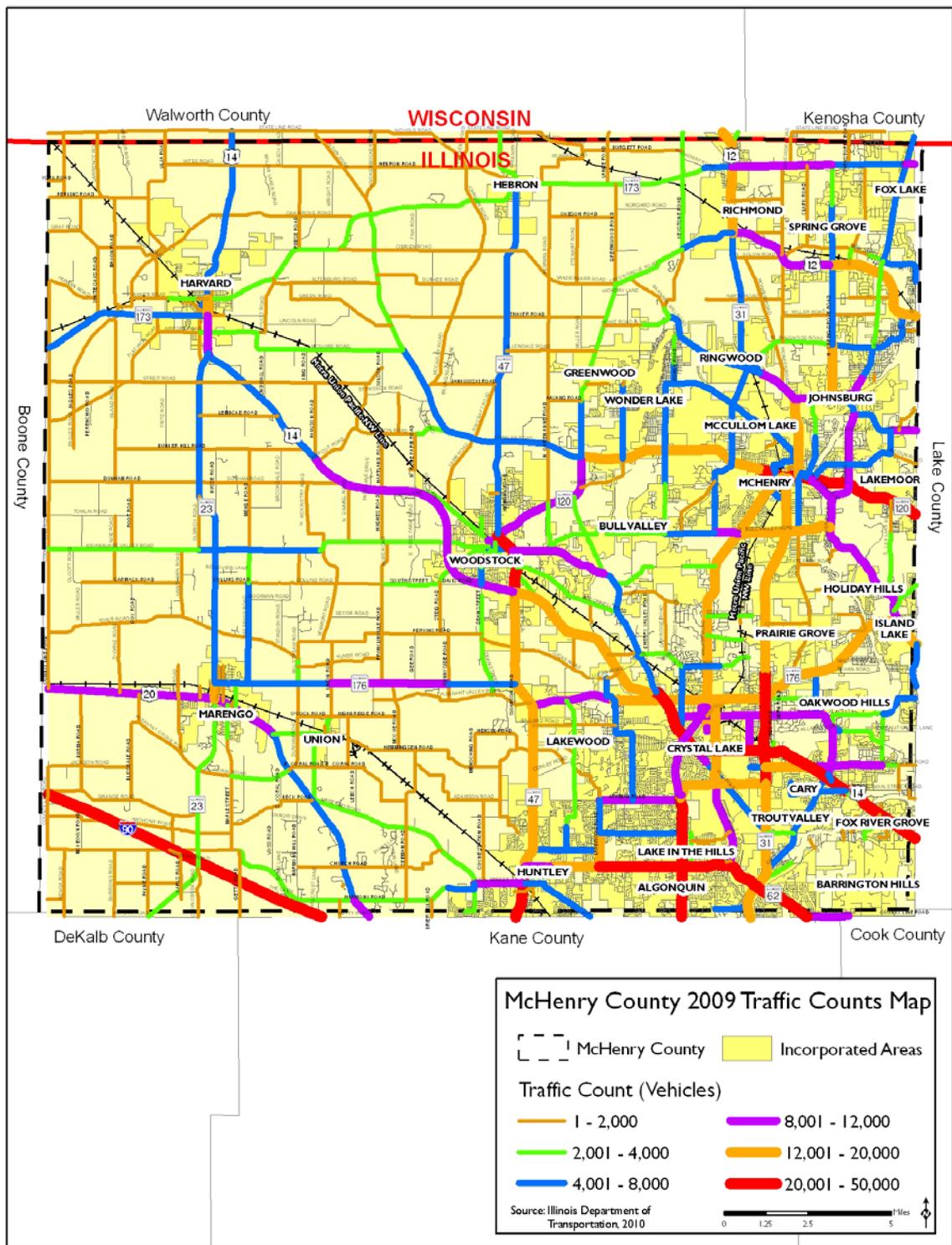


Figure 28

The higher volume areas with the heavy peaking caused by commuting are prone to congestion issues. Most of these roadways were originally farm routes and have various degrees of expansion and coordination. More recently, the congestion patterns seen in the southeast have also been experienced in the northern part around US 12 with the increase in commuting to Wisconsin and Lake County. Based on the 2008-2010 American Community Survey (ACS) 3-Year Estimates compiled by the US Census Bureau, only 50.8% of workers were employed within McHenry County.

The McHenry County 2030 Comprehensive Plan predicted that rush hour drives could take up to 88% longer than non-rush hour drives in 2030 if no improvements were made.<sup>3</sup> Any future transit improvement should be cognizant of the potential for traffic delays in the peak direction on the urban arterials within McHenry County and planned accordingly. A map showing congestion in vehicle miles of delay during peak period in 2030 is in Figure 29.

A few of the most congested highways in the County are most congested during weekday lunch hours and Saturdays. These areas include IL 47 in Woodstock and Randall Road. This marks a change in McHenry County as this type of traffic is more consistent with traditional commercial office and entertainment zones.

See Table 21 for additional information on congestion.

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<sup>3</sup> *McHenry County 2030 Comprehensive Plan*, pg 106.

**Table 21  
COUNTY WIDE PERFORMANCE MEASURES (DRAFT)**

A.M. Peak Period (2-Hour Period) Measure	2005	2020	2030	Change 2005 - 2020		Change 2020 - 2030		Change 2005 - 2030	
				Number	Percent	Number	Percent	Number	Percent
				Vehicle Miles of Travel	820,684	1,017,429	1,162,223	196,745	24.0%
Vehicle Hours of Travel	21,568	27,052	32,304	5,484	25.4%	5,252	19.4%	10,736	49.8%
Congested Vehicle Miles of Travel	101,515	131,622	190,080	30,107	29.7%	58,458	44.4%	88,565	87.2%
Vehicle Hours of Delay	2,793	3,931	5,946	1,138	40.7%	2,015	51.3%	3,153	112.9%
<b>P.M. Peak Period</b>									
P.M. Peak Period (2-Hour Period) Measure	2005	2020	2030	Change 2005 - 2020		Change 2020 - 2030		Change 2005 - 2030	
				Number	Percent	Number	Percent	Number	Percent
				Vehicle Miles of Travel	937,746	1,166,812	1,315,137	229,066	24.4%
Vehicle Hours of Travel	25,696	32,606	38,822	6,910	26.9%	6,216	19.1%	13,126	51.1%
Congested Vehicle Miles of Travel	150,032	212,297	302,495	62,265	41.5%	90,198	42.5%	152,463	101.6%
Vehicle Hours of Delay	3,930	5,736	8,525	1,806	46.0%	2,789	48.6%	4,595	116.9%
<b>Measure Definitions</b>									
Vehicle Miles of Travel	(VMT)	(volau*length)							
Vehicle Hours of Travel	(VHD)	(volau*timau)/60							
Congested Vehicle Miles of Travel	(CVMT)	((volau/ul2)>=.75)*(volau*length)							
Vehicle Hours of Delay	(VHD)	((volau*timau)/60) - ((volau*ul1)/60)							

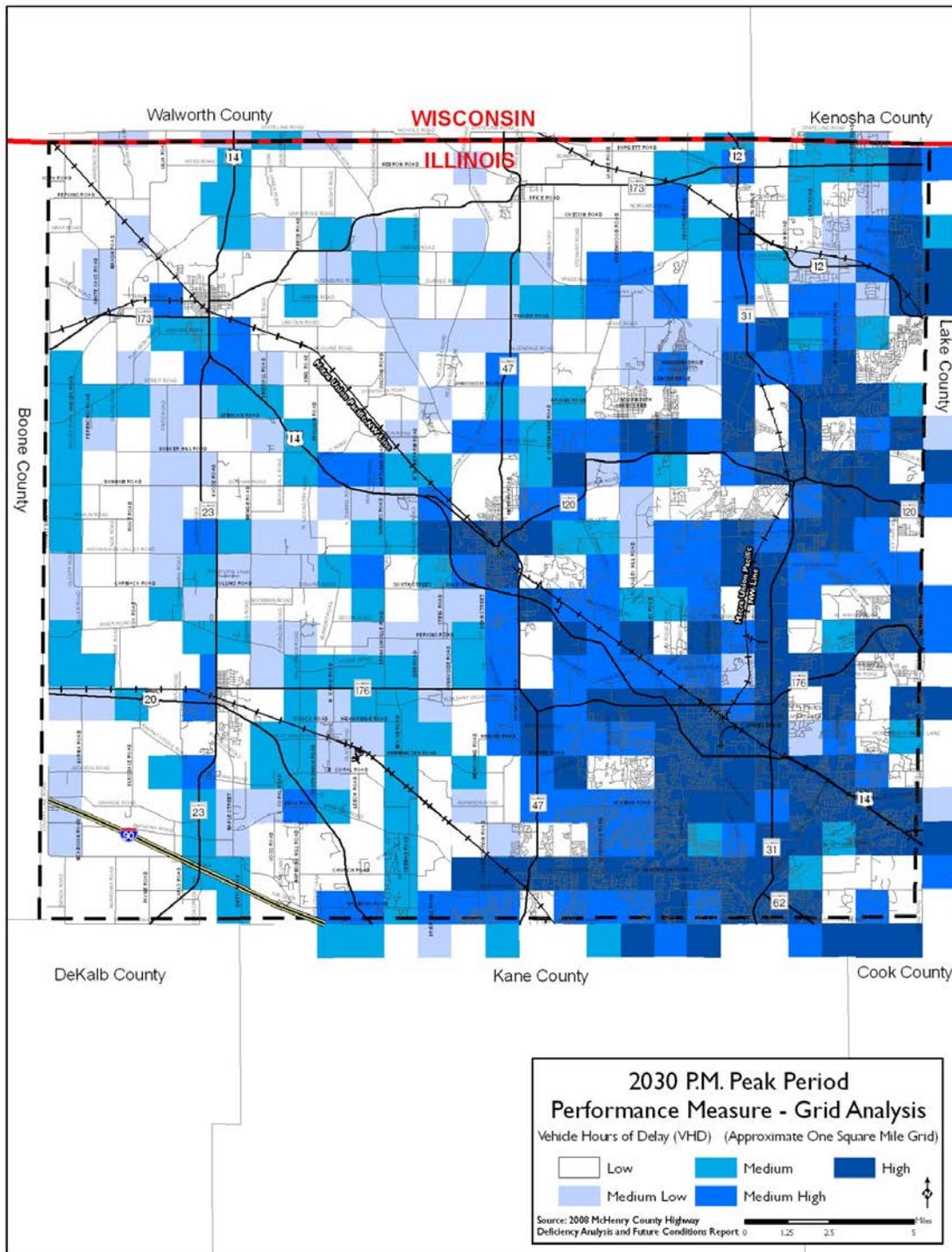
## C. Future Roadway Improvements

As discussed above, roadway improvements are performed within the jurisdiction of the maintaining authority. The following discussion includes project on the proposed highway improvement programs for IDOT and MCDOT as well as a listing of priority projects established by the McHenry County Council of Governments (MCCG).

For both IDOT and MCDOT, the programs are primarily focused on state-of-good repair, such bridge replacements and roadway resurfacing. These projects are excluded from the discussion below, which only focuses on major improvements that would improve capacity or enhance traffic flow.

### I. IDOT FY 2012-2017 Proposed Highway Improvement Program (McHenry County)

The following table, Table 22 is from the proposed FY 2012-2017 Program for McHenry County. Associated improvements may occur in adjacent counties that would have beneficial effects for McHenry.



(Source: 2008 McHenry County Highway Deficiency Analysis and Future Conditions Report)

**Figure 29**

**Table 22: Proposed FY 2012-2017 Program**

Route	Location	Improvements
US 14	W Lake Shore Drive to Lucas Road Woodstock	Additional Lanes
US 14 / Virginia Street	Lucas Road to Crystal Lake Avenue Crystal Lake	Additional Lanes
US 20 / Grant Highway	Prospect Street Marengo	Intersection Reconstruction
US 20 / Grant Highway	Marengo - Beck Road / South Union Road Coral Township	Channelization, Horizontal Realignment, Signalization
US 20 / Grant Highway	Harmony Road Coral Township	Channelization, Signalization
IL 23	Coral Road / Pleasant Grove Road Riley Township	Intersection Improvement
IL 31 / Richmond Road (IDOT Participation)	South of McCullom Lake Road to IL 120 McHenry	Additional Lanes, Intersection Reconstruction
IL 31	Ames Road & Edgewood Road Prairie Grove	Intersection Improvement
IL 31	IL 176 & Terra Cotta Road Nunda Township	Intersection Reconstruction
IL 31 / Richmond Road	Rakow Road to Algonquin Bypass Lake in the Hills	Additional Lanes (Budget Shortfall for Const)
IL 120	Fleming Road Greenwood Township	Intersection Improvement, Signalization
IL 173	Wilmot Road Burton Township	Channelization, Signalization
IL 176 (IDOT Participation)	Briarwood / Ohnstad Road Grafton Township	Intersection Improvement
IL 176 / Terra Cotta Road (IDOT Participation)	Walkup Road Crystal Lake	Intersection Improvement, Turning Lanes
IL 176	Smith Road Algonquin Township	Channelization, Signalization
IL 176	Nish Road Algonquin Township	Channelization, Signalization
Algonquin Bypass (Illinois Jobs Now!)	IL 31 Bypass Algonquin	New Construction

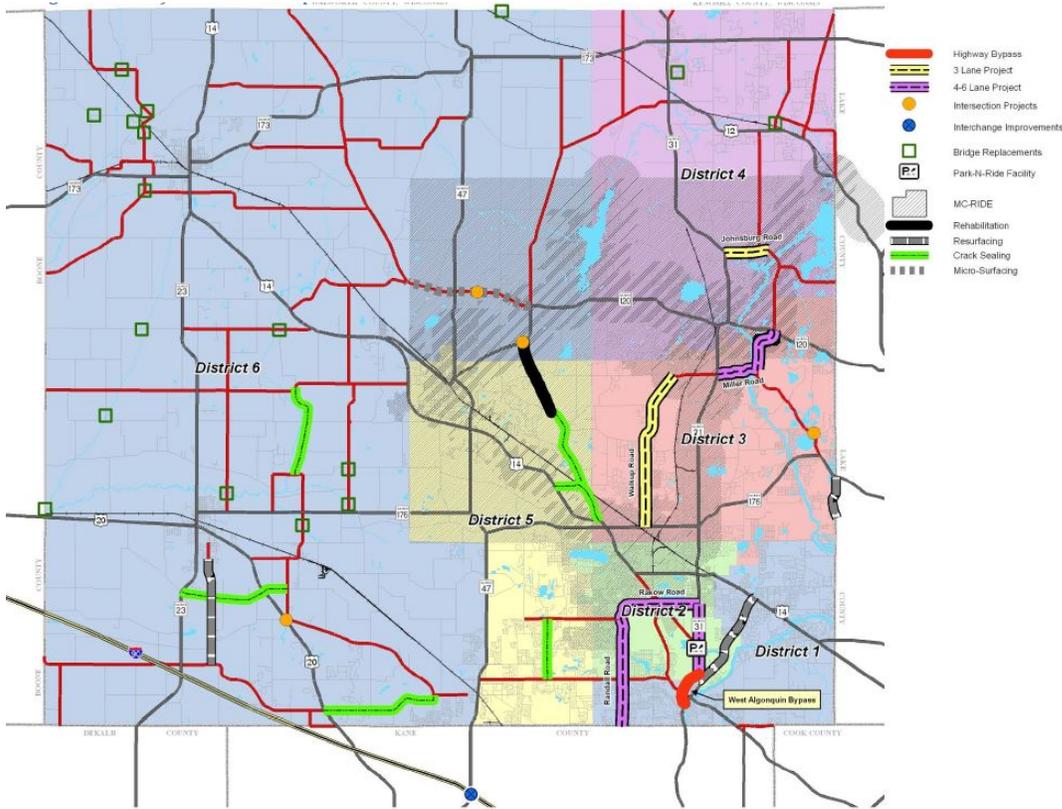
Of the above projects, the major improvement will be the construction of the first phase of the Algonquin Bypass to alleviate a major congestion point at the intersection of IL 62. The Illinois Jobs Now! bill funded this phase of the project. The full design includes extension up to Rakow Road, which is currently not funded. The other two larger projects are the additional lane construction on US 14.

## 2. McHenry County Division of Transportation 2011-2015 Highway Improvement Program

Consistent with the density of traffic and overall patterns, improvement projects in McHenry County are concentrated on the arterial roadways located in the eastern half of the County. See Table 23 and Figure 30.

**Table 23: 2011-2015 Highway Improvement Program**

<b>Route</b>	<b>Location</b>	<b>Improvements</b>
Johnsburg Road (Construction)	IL 31 to Chapel Hill Road Johnsburg	Intersection Improvements, Center Turn Lane
Walkup Road (Construction)	IL 176 to Chrystal Springs Road Crystal Lake	Continuous Left Turn Lane, Bike Path
Virginia Road (Construction)	IL 31 Lake in the Hills	Intersection Realignment, Turning Lanes
Charles Miller Road (Construction)	IL 31 to River Road McHenry and Nunda Township	Additional Lanes, Turning Lanes, Intersection Improvements, Bike Path
River Road (Engineering Only)	Charles Miller Road to IL 120 Nunda Township	Additional Lanes, Turning Lanes, Intersection Improvements, Bike Path
Randall Road (Engineering Only)	County Line to Ackman Road Algonquin, Lake in the Hills	Additional Lanes, Intersection Improvements
James R. Rakow Road (Construction)	Ackman Road to IL 31 Crystal Lake, Lake in the Hills	Additional Lanes, Intersection Improvements



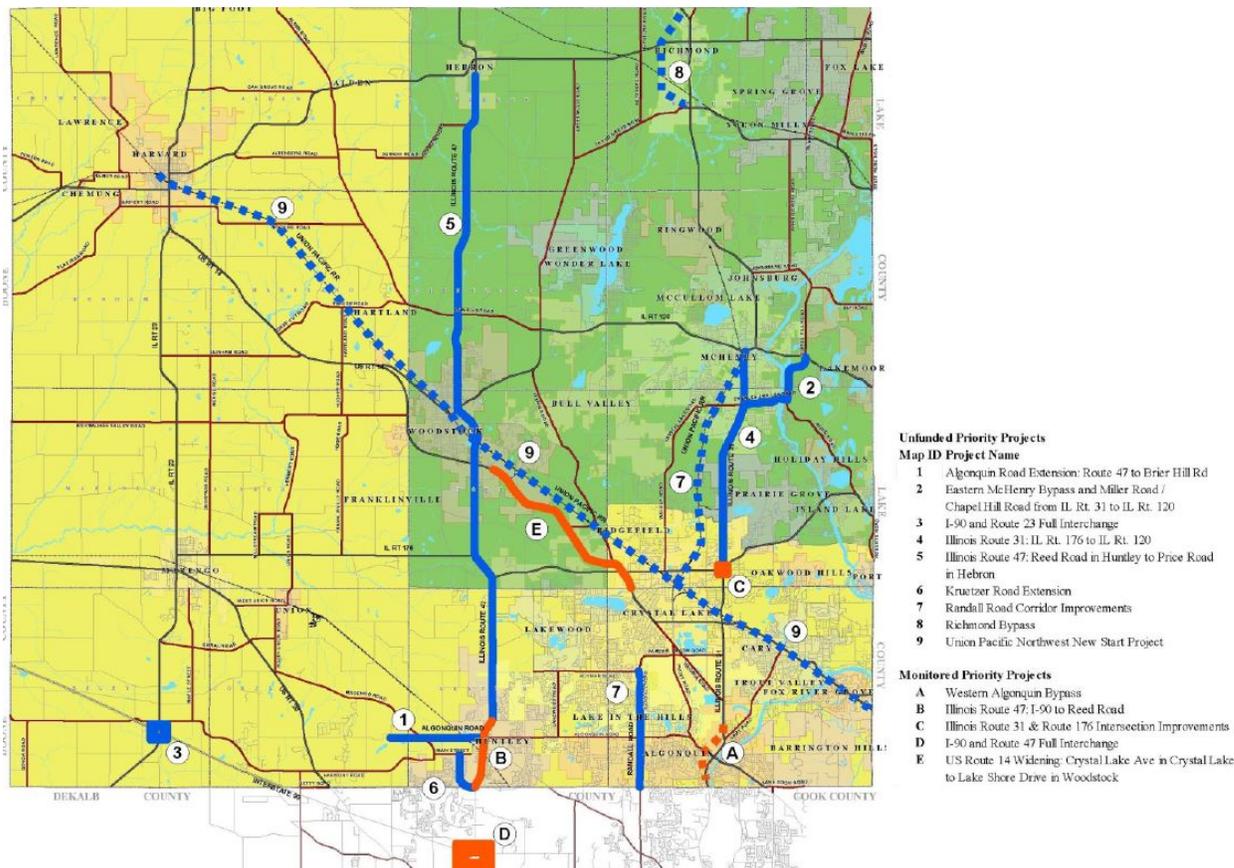
**Figure 30**  
 Source: MCDOT 2011-2015 Highway Improvement Plan, pg 10

### 3. McHenry County Council of Governments 2011 Transportation Priority Projects

An annual agenda prepared to inform state and federal government of priority transportation projects prepared by local government participants; the MCCG 2011 Transportation Priority Projects include two lists. The first list is for projects that are programmed into the Governor’s Capital Bill and the 2010-2015 IDOT Highway Improvement Program which require monitoring. These are projects included in the above listings for IDOT or MCDOT. The second list is unfunded priority projects. Both lists reflect the need for transportation enhancements that will improve quality of life and economic development potential through reduction in traffic congestion with associated air pollution, expanded public transit, or increasing access to locations in the County. Priority unfunded projects, shown in Table 24 and in Figure 31 include:

**Table 24: COG 2011 Transportation Priority Projects**

<b>Route</b>	<b>Location</b>	<b>Improvements</b>
Algonquin Road	IL 47 to Brier Hill Road Johnsburg	New Construction (Extension)
Mc Henry Bypass (Funded Partial Const / Engineering by MCDOT)	IL 31 to IL 120 McHenry and Nunda Township	Additional Lanes, Turning Lanes, Intersection Improvements, Bike Path
IL 31	IL 176 to IL 120 Prairie Grove, McHenry	Additional Lanes
IL 47 (Funded Engineering by IDOOT)	Reed Road to Price Road Huntley, Woodstock, Hebron and various townships	Various widening, realignments, intersection improvements, and frontage roads
I-90 / IL 23	I-90 / IL 93 Riley Township	New Interchange
Kreutzer Road	Main Street to IL 47 Huntley	New Construction (Extension)
Randall Road (Funded Engineering by MCDOT)	County Line to Ackman Road Algonquin, Lake in the Hills	Additional Lanes, Intersection Improvements
Richmond Bypass / US 12 (Funded Engineering by various entities)	US 12 Richmond, Richmond Township	New Construction (Bypass)



**Figure 31 MCCG Unfunded and Monitoring Priority Projects**

Source: McHenry County Council of Governments 2011 Transportation Priority Projects

## VII. Public Involvement

Extensive public involvement is included in the McHenry County 2040 Long Range Transportation Plan. As of December 2011, over 1100 people participated in the outreach process. This outreach includes traditional public meetings in addition to a variety of innovative strategies.

Collaborative maps on display boards are located at six libraries throughout the County. Residents are encouraged to stop at the display boards and place stickers on the maps to identify transportation improvements they would prefer.

A website includes information about the plan and ways that residents can participate. The website includes a blog, online surveys, and a contact form to submit comments. Visitors can subscribe to a newsletter to keep up-to-date on the project. It also has an online interactive community map in which website visitors can add markers to state needs and solutions. The website even provides links to the plan's activities on Flickr, Facebook, and Twitter.

The outreach also includes a series of “pop-up” meetings across the County. The purpose of a “pop-up” meeting is to build awareness among the County’s stakeholders about the project and to obtain general input on how they would like to see transportation improved in the County. Participants at each “pop-up” meeting were asked how they would spend money on transportation in McHenry County and to provide staff with their one big idea for improving transportation in the area. “Pop-up” meetings were held at the McHenry County Fair, the Crystal Lake and Algonquin Farmers Markets, the Hearthstone Centegra Senior Fair, the McHenry County College, among other places.

As one example, the “Piggy-Bank” results from the county fair August 3-6, 2011 are shown in Figure 32. With approximately 350 participants, residents showed that they valued bicycle facilities, public transportation, and pedestrian improvements over road improvements. These results are just one sample and will be added to all public input to get a complete sense of the community’s desires.

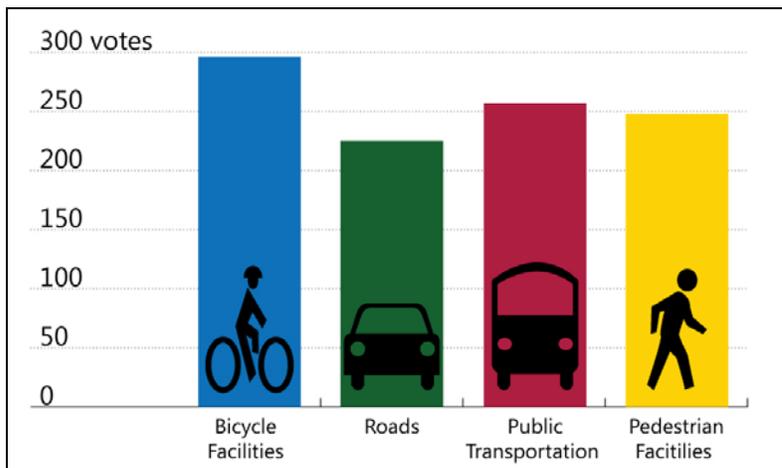


Figure 32

The variety of input from the community will inform the analysis and recommendations of the plan. As the planning process continues, additional public involvement will be sought to ensure that recommendations have support from the community. As part of this Transit Plan, focus group meetings and stakeholder meetings will be held to help gauge the support for public transit and the changes that are necessary given the existing transit services in the County.

## Appendix

### A. Metra Passenger Origin Tables

**Table A1**

<b>Origins of Riders Using Harvard Station (2006)</b>		
(weighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	17	7%
ARLINGTON HEIGHTS	1	0%
BARRINGTON	1	0%
BEAVER DAM	2	1%
BELVIDERE	4	2%
BUFFALO GROVE	1	0%
CAPRON	3	1%
CHICAGO	4	2%
CRYSTAL LAKE	2	1%
DARIEN	2	1%
DEERFIELD	2	1%
DELAVAN	13	6%
ELKHORN	2	1%
FONTANA	10	4%
HARVARD	71	30%
HEBRON	1	0%
LAKE GENEVA	4	2%
LOVES PARK	1	0%
MACHESNEY PARK	6	2%
MADISON	4	2%
MARENGO	1	0%
MILTON	2	1%
MOUNT PROSPECT	1	0%
POPLAR GROVE	10	4%
ROCKFORD	11	5%
ROCKTON	2	1%
ROLLING MEADOWS	1	0%
ROSCOE	18	8%
SAUK VILLAGE	1	0%
SHARON	2	1%
SOUTH BELOIT	6	2%
VERONA	2	1%
WALWORTH	6	2%
WARREN	1	0%
WAUKEGAN	1	0%
WESTERN SPRINGS	1	0%
WHITEWATER	3	1%
WILLIAMS BAY	8	3%
WINNEBAGO	1	0%
WOODSTOCK	1	0%
Total:	233	100%

**Table A2**

<b>Origins of Riders Using Woodstock Station (2006)</b>		
(weighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	14	4%
BELVIDERE	8	2%
BULL VALLEY	8	2%
CRYSTAL LAKE	3	1%
GARDEN PRAIRIE	2	0%
HARVARD	11	3%
HEBRON	9	2%
HEBRON TOWNSHIP	2	0%
HUNTLEY	2	0%
LAKE GENEVA	15	4%
MARENGO	11	3%
POPLAR GROVE	3	1%
ROCKFORD	5	1%
UNION	2	0%
WALWORTH	2	0%
WONDER LAKE	15	4%
WOODSTOCK	267	71%
Total:	375	100%

**Table A3**

<b>Origins of Riders Using McHenry Station (2006)</b>		
(weighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	9	9%
CRYSTAL LAKE	1	1%
ELKHORN	1	1%
JOHNSBURG	3	3%
LAKEMOOR	1	1%
MCHENRY	74	74%
RICHMOND	1	1%
RINGWOOD	1	1%
TWIN LAKES	1	1%
WONDER LAKE	4	4%
WOODSTOCK	3	3%
Total:	100	100%

**Table A4**

<b>Origins of Riders Using Crystal Lake Station (2006)</b>		
(weighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	83	7%
ALGONQUIN	29	3%
BELVIDERE	1	0%
BUFFALO GROVE	1	0%
BULL VALLEY	7	1%
CARPENTERSVILLE	1	0%
CARY	6	1%
CHICAGO	6	1%
CRYSTAL LAKE	592	51%
FONTANA	1	0%
FOX LAKE	1	0%
FOX RIVER GROVE	1	0%
GENOA CITY	1	0%
GLENVIEW	1	0%
HARVARD	4	0%
HILLSIDE	1	0%
HUNTLEY	26	2%
ISLAND LAKE	3	0%
JOHNSBURG	1	0%
KENOSHA	1	0%
LAKE GENEVA	1	0%
LAKE IN THE HILLS	124	11%
LAKE VILLA	1	0%
LAKESWOOD	39	3%
MARENGO	13	1%
MCHENRY	86	7%
POPLAR GROVE	1	0%
PRAIRIE GROVE	10	1%
RIDGEFIELD	1	0%
ROCKFORD	4	0%
SHARON	1	0%
SOUTH BELOIT	1	0%
SUGAR GROVE	1	0%
UNION	6	1%
WILLIAMS BAY	1	0%
WILMINGTON	1	0%
WONDER LAKE	22	2%
WOODSTOCK	64	6%
Total:	1,153	100%

**Table A5**

<b>Origins of Riders Using Pingree Road Station (2006)</b>		
(weighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	32	6%
ALGONQUIN	42	8%
BULL VALLEY	3	1%
CARY	6	1%
CRYSTAL LAKE	225	45%
DUNDEE	1	0%
HARVARD	1	0%
HUNTLEY	15	3%
ISLAND LAKE	7	1%
JOHNSBURG	1	0%
LAKE IN THE HILLS	79	16%
LAKEMOOR	6	1%
LAKEWOOD	7	1%
MCHENRY	38	8%
PORT BARRINGTON	1	0%
PRAIRIE GROVE	7	1%
WOODSTOCK	26	5%
Total:	499	100%

**Table A6**

<b>Origins of Riders Using Cary Station (2006)</b>		
(w eighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	61	7%
ALGONQUIN	90	10%
BARRINGTON	2	0%
CARY	536	61%
CHICAGO	6	1%
CRYSTAL LAKE	52	6%
FOX RIVER GROVE	3	0%
GARY	6	1%
HUNTLEY	9	1%
ISLAND LAKE	12	1%
LAKE IN THE HILLS	43	5%
LAKEWOOD	2	0%
MCHENRY	8	1%
OAKWOOD HILLS	24	3%
PORT BARRINGTON	6	1%
PRAIRIE GROVE	8	1%
TROUT VALLEY	6	1%
Total:	873	100%

**Table A7**

<b>Origins of Riders Using Fox River Grove Station (2006)</b>		
(w eighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	34	9%
ALGONQUIN	46	13%
BARRINGTON	17	5%
BARRINGTON HILLS	12	3%
CARPENTERSVILLE	5	1%
CARY	37	10%
CHICAGO	3	1%
CRYSTAL LAKE	2	0%
FOX RIVER GROVE	138	38%
HUNTLEY	2	0%
ISLAND LAKE	14	4%
LAKE BARRINGTON	20	6%
LAKE IN THE HILLS	3	1%
LAKE ZURICH	3	1%
MARENGO	2	0%
NORTH BARRINGTON	3	1%
PORT BARRINGTON	14	4%
WAUCONDA	10	3%
WEST DUNDEE	2	0%
Total:	368	100%

**Table A8**

<b>Origins of Riders Using Fox Lake Station (2006)</b>		
(w eighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
FOX LAKE	142	26%
SPRING GROVE	80	15%
Unincorporated / Unknown	46	8%
JOHNSBURG	46	8%
MCHENRY	33	6%
RICHMOND	27	5%
TWIN LAKES	20	4%
ANTIOCH	19	3%
BURLINGTON	16	3%
LAKE GENEVA	16	3%
GENOA CITY	12	2%
CHICAGO	11	2%
LAKE VILLA	11	2%
ROUND LAKE	8	1%
LAKEMOOR	7	1%
WONDER LAKE	5	1%
NORTHBROOK	4	1%
DEERFIELD	3	0%
GLENVIEW	3	0%
GRAYSLAKE	3	0%
ISLAND LAKE	3	0%
PELL LAKE	3	0%
SALEM	3	0%
WHITEWATER	3	0%
ELKHORN	1	0%
ELMWOOD PARK	1	0%
HEBRON	1	0%
HILLSIDE	1	0%
LIBERTYVILLE	1	0%
MILWAUKEE	1	0%
MORTON GROVE	1	0%
MUNDELEIN	1	0%
PISTAKEE HIGHLANDS	1	0%
RINGWOOD	1	0%
ROUND LAKE HEIGHTS	1	0%
SILVER LAKE	1	0%
SPRINGFIELD	1	0%
VOLO	1	0%
WAUCONDA	1	0%
WAUKEGAN	1	0%
WILDWOOD	1	0%
WILMOT	1	0%
WOODSTOCK	1	0%
<b>Total:</b>	<b>546</b>	<b>100%</b>

## B. Metra Passenger Origin Maps

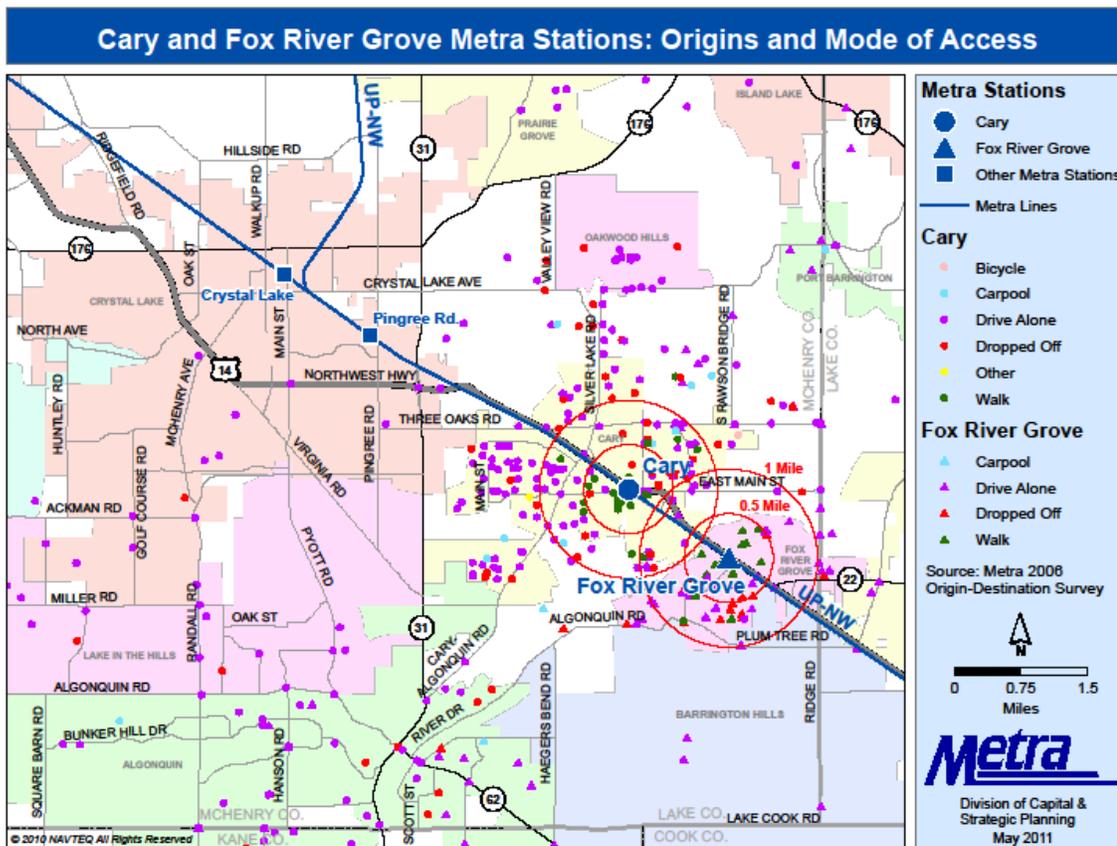


Figure A1

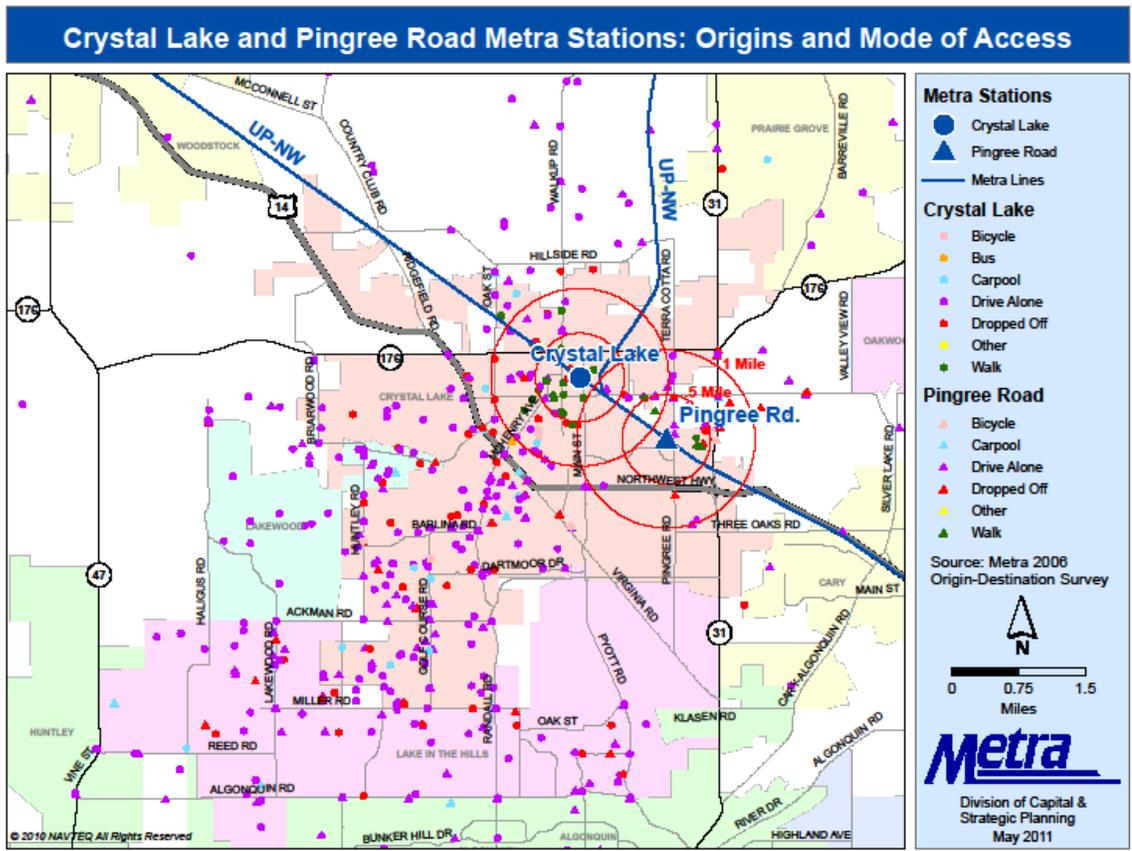


Figure A2

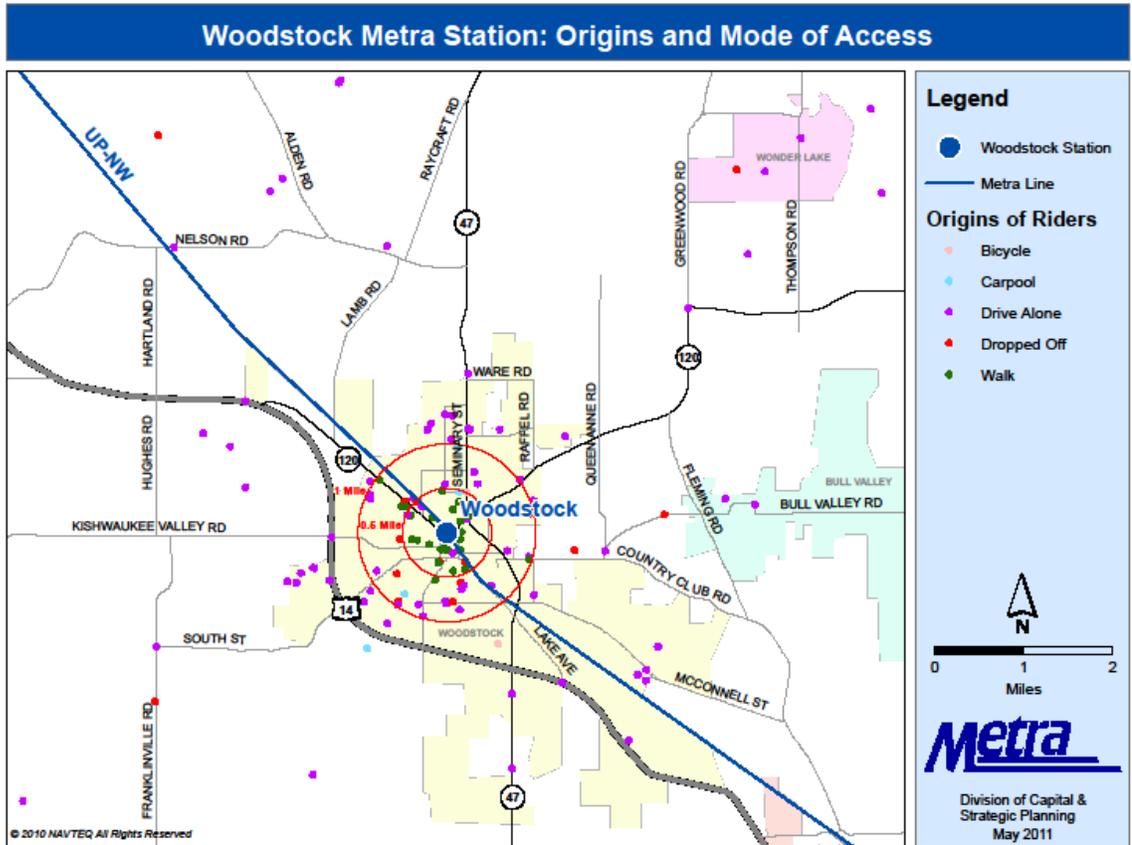
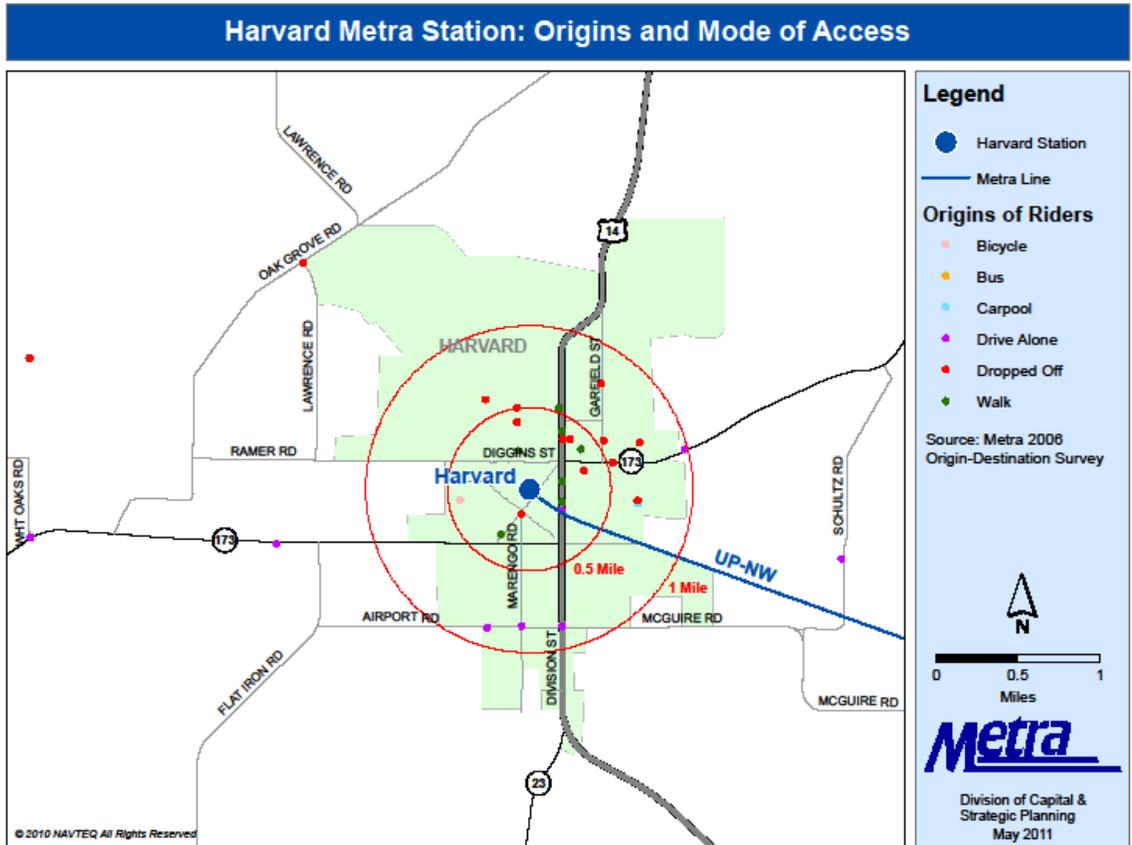
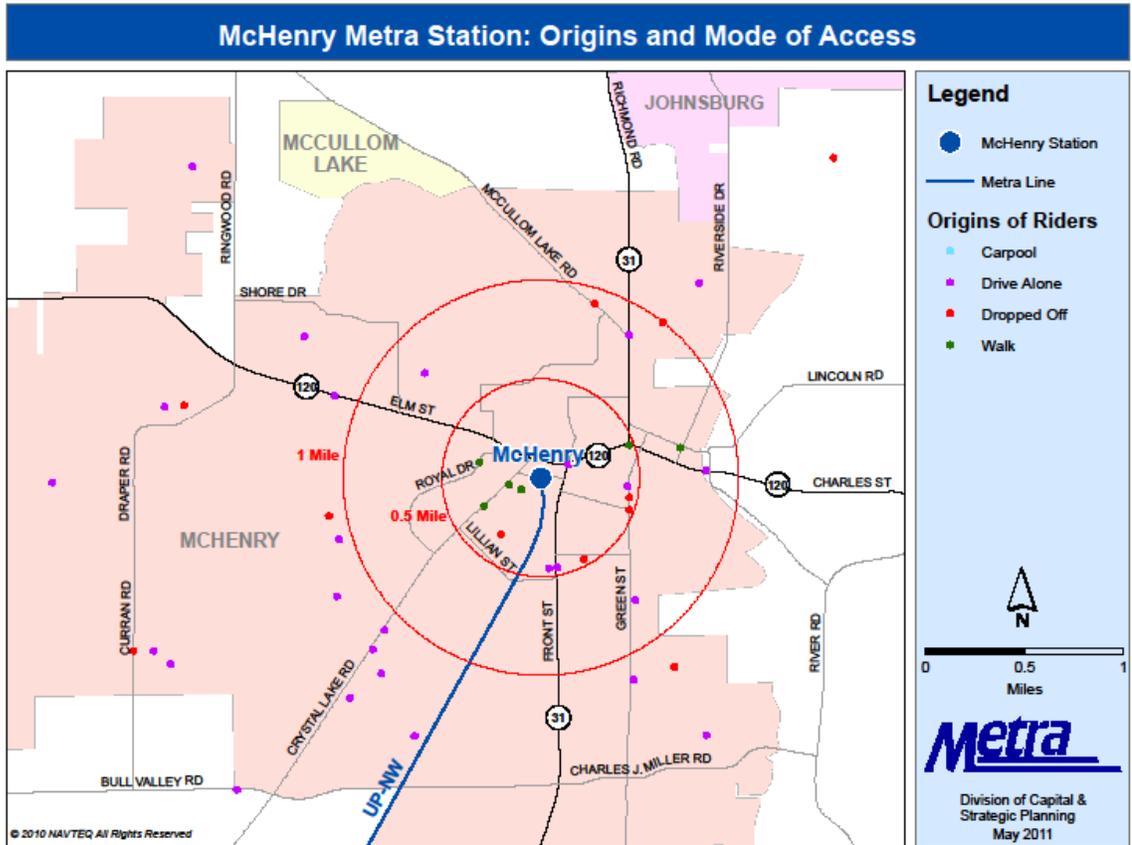


Figure A3



**Figure A4**



**Figure A5**

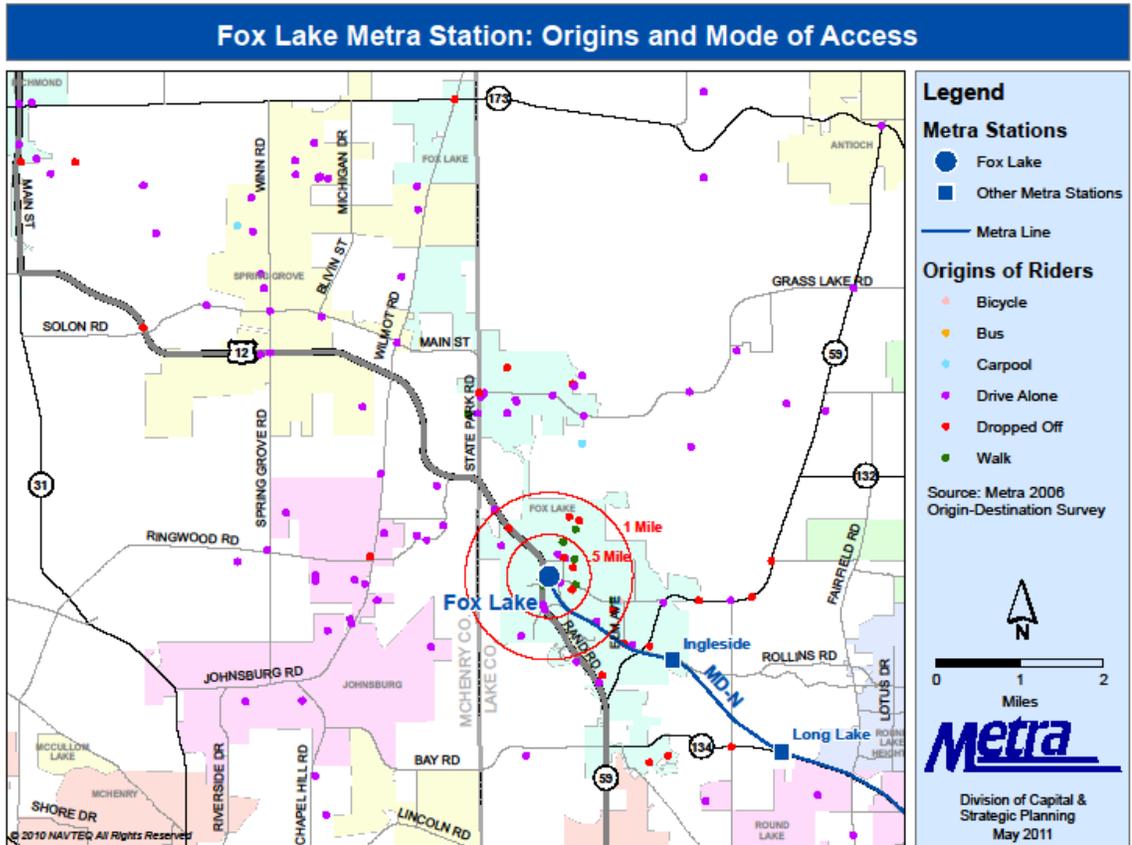


Figure A6