

DRAFT Jobs-Housing Balance Technical Report

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Introduction

Expected population growth will pose tremendous challenges for the northeastern Illinois region in the decades to come. Among these challenges is the mismatch between where people live and where they work. This imbalance is felt most significantly on every major roadway during morning and evening rush hours. Long commutes diminish quality of life by straining the region's infrastructure and natural environment, creating economic burdens for employers and residents, and exacerbating social inequities across the region. By 2040, the region is expected to add an additional 2.8 million people and 1.8 million jobs. This growth provides both an opportunity, in that it allows us to plan for a future where jobs and housing are balanced within communities, and a challenge, in that we must plan proactively to prevent the continuation of current trends.

CMAP's study area is the seven-county northeastern Illinois region, which is made up of Cook, DuPage, Kane, Kendall, Lake, McHenry and Will counties, shown in the map on the following page. The region encompasses 7,035 square miles and as of 2006, 8.5 million people. All counties in the region gained population between 1990 and 2006, with the highest growth rates in Kane, Kendall, McHenry and Will counties.

Table 1. Population Change by County 1990-2006

County	Total Population			% Change
	1990	2000	2006	1990-2006
Cook	5,093,221	5,376,741	5,288,655	3.84%
DuPage	781,666	904,161	932,670	19.32%
Kane	317,471	404,119	493,735	55.52%
Kendall	39,413	54,544	88,158	123.68%
Lake	516,418	644,356	713,076	38.08%
McHenry	183,241	260,077	312,373	70.47%
Will	357,313	502,266	668,217	87.01%
Total	7,288,743	8,146,264	8,496,884	16.58%

Population and employment growth is expected to continue. The *GO TO 2040* plan, a long-range plan for the region, is meant to plan for this growth so that it can have positive consequences for the region. This report is one of a series being prepared as part of this long-range planning process. More information on the process and other reports can be found at www.goto2040.org.

CMAP Region

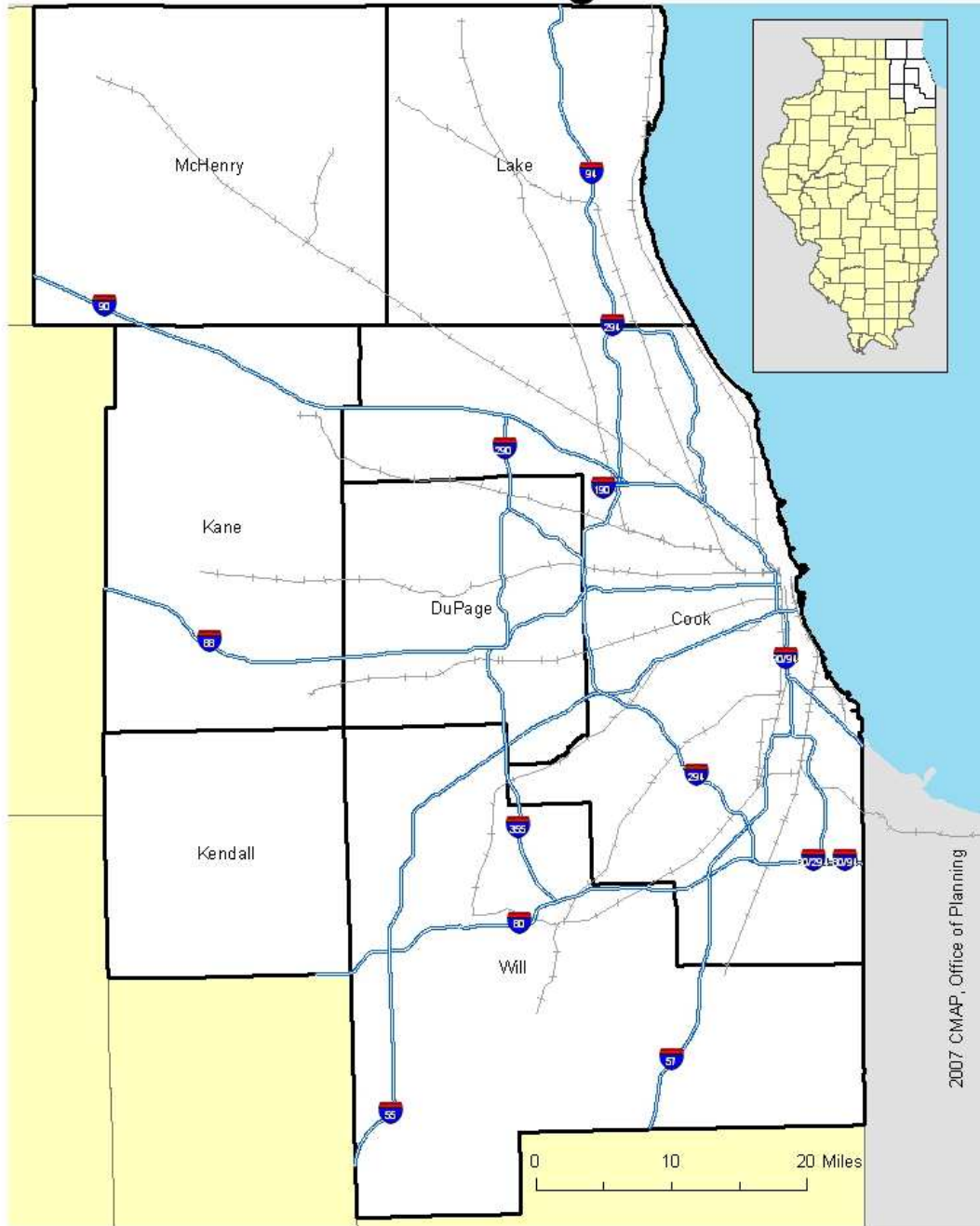


Figure 1. CMAP Region: Study Area

What is Jobs-Housing Balance?

2.1 Defining Jobs-Housing Balance

Exploring the simple ratio of jobs to housing is the first step in determining the extent to which there is a jobs and housing imbalance. Figure 3 shows the jobs-housing ratio by municipality for the seven-county region. The map identifies portions of the region where there are high concentrations of jobs as compared to households, and vice versa. Many of the jobs-rich areas are located in central Chicago or along interstate corridors, most prominently in north and northwest Cook, southern Lake, and DuPage counties. Housing-rich areas are more prominent in southern Cook County and the collar counties of McHenry, Kane, Kendall and northern Lake. This map shows that jobs and housing are not evenly distributed throughout the region.

2.2 Why Jobs-Housing Balance Should Be Addressed

Achieving a jobs and housing balance, however, is more complicated than a simple numerical ratio of jobs to households. If the jobs in a community do not match the labor skills of the workforce then workers will still have to come from other places, and residents will have to go other places to work. In the same vein, if jobs are available but housing values do not mesh with what workers can afford, there is still a mismatch. Further chapters of this report provide more information on housing, jobs, and the transportation links between them. Improving the regional balance between jobs and housing will require communities to individually assess the jobs and housing ratio, labor force, and employment sector to develop the most appropriate strategies accordingly.

Much new residential development happens in undeveloped parts of the region where land values are low but public transit service simply does not exist. As families with moderate incomes move further out in search of housing that is safe and affordable, transportation costs also rise, leading to huge cost burdens in transportation expenses (Center for Neighborhood Technology, 2006). Higher commuting costs fall hardest on lower income residents and families who have less choice in where they are able to live. As residents make the move to more affordable housing on the fringe, the imbalance between jobs and housing is exacerbated and for many, the savings in cheaper housing is not realized.

The mismatch of jobs and housing creates economic and quality of life burdens on the region's residents. According to the 2006 study "Heavy Load" conducted by the Center for Housing Policy, seventy-nine percent of low and moderate income households commute by private vehicle and spend, on average, fifty-five percent of income on housing and transportation costs. Many families searching for housing that is more affordable find themselves living very far from employment centers. These families often discover that the additional transportation costs do not offset the savings in housing. The research also found that income is closely related to housing and transportation cost burden; households that earn less spend a greater share of their salaries on both housing and transportation.

The jobs and housing imbalance also threatens the economic vitality of the region. As employees' commute increases, employers experience decreased productivity, increased absenteeism, increased turnover, and fewer labor pool options. Employees face limited job opportunities, less personal time, and economic stresses due to increased transportation costs. Furthermore, the ability to afford stable and adequate housing greatly affects the composition of the region's workforce. If young, educated and talented individuals cannot afford decent housing in the region, they will move to other regions. While the region remains affordable relative to other major metropolitan areas, policies should ensure that it remains affordable and that quality of life is not diminished by high housing costs or overly long commutes.

A jobs-housing imbalance also takes a toll on the natural environment. The outward expansion of development and the spatial imbalance of jobs and housing has led to greater automobile dependence, the result of which is increasing air pollution and fuel consumption. In 2007, only 12.6% of the region's residents commuted to work by public transit. Other research links auto dependence to increased health risks such as obesity, due to decreased physical activity, or heart disease and asthma due to poor air quality (Squires, 2007).

With the emergence of new service sector jobs located throughout the region, but highly concentrated near newer employment sub-centers, affordable housing opportunities have not followed the same pattern. Affordable housing continues to be concentrated in primarily older industrial locales hard hit by the decline in manufacturing jobs and where recent job growth has been minimal—resulting in income and racial stratification of residents. At the same time, as jobs that pay living wages become increasingly hard to find, the concentration of poverty has increased in older urban communities (Squires, 2007).

Communities in the region that have the highest concentrations of affordable housing continue to experience disinvestment as jobs and a viable tax base funnel out to other communities. These areas find it difficult to attract economic development as the infrastructure ages with little tax revenue to support improvements. Elsewhere, local land use policies and market constraints often prevent the addition of more affordable housing.

Jobs-housing research cannot fully account for preferences that contribute to residential location decisions such as school quality, proximity to family, or other factors. Households with two wage-earners may have to compromise between different job locations. From a regional perspective, however, it is clear that an approach that improves the transportation system to accommodate shifts in commute patterns, while part of the solution, will not by itself solve the jobs-housing balance problem. In addition, there is a need to reduce the necessity for long commutes. This will require more deliberate planning that attempts to bring strategic economic development opportunities to areas in the region that currently have an abundance of affordable housing but few job prospects, and housing opportunities to jobs-rich areas where entry level jobs exist but affordable housing opportunities do not.

2.3 Previous Policy Support for Addressing Jobs-Housing Balance

The northeastern Illinois region has established balancing jobs and housing as a major priority in past plans. Both CATS and NIPC, the agencies that were merged to form CMAP, supported jobs-housing balance in past plans.

The NIPC Framework Plan, published in 2005, identified achieving a balance between jobs and housing as a key implementation strategy to “reduce vehicle miles traveled, temper roadway congestion and commute times while at the same time reduce air pollution and improve quality of life.” The Regional Framework Plan recommends several strategies to bring affordable housing closer to jobs and jobs closer to affordable housing including: implementing employer assisted housing, providing more affordable housing opportunities near jobs, and building flexibility into local code to allow for more housing types. Also, the CATS 2030 Regional Transportation Plan supports a jobs and housing balance as a means to reduce congestion and pressure on the transportation infrastructure.

Ratio of Jobs to Households by Census Tract, 2000

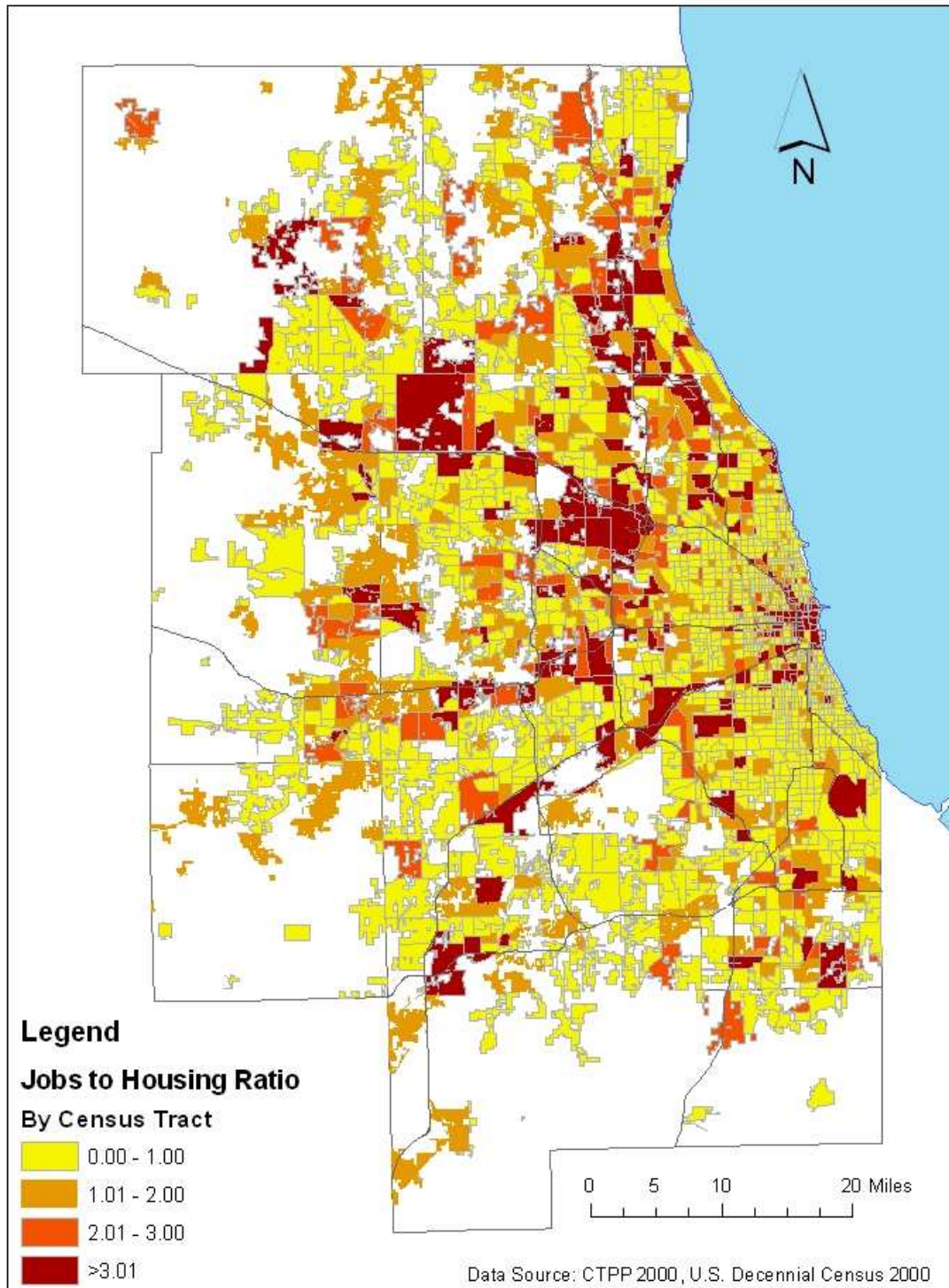


Figure 2. Ratio of Jobs to Households by Census Tract

Historical Overview – Decentralization of Jobs and Housing

The mismatch of jobs and housing is the result of several interrelated changes in land development over the course of many decades. Shifts in economic production, expanded transportation networks, and changes in consumer preferences are among the factors that have caused current development patterns. These shifts have resulted in significantly different land use patterns. For many residents, living close to where they work is not an option simply because there are no jobs near where they live, or housing close to job centers is priced beyond their means.

The suburbanization of the region is not a new phenomenon. Rail lines, roads and waterways have shaped the development of the region and its many suburban cities since the mid-nineteenth century. For example, in the later part of the nineteenth century with the completion of the Outer Belt Railroad line in 1887, cities like Elgin, Aurora, Chicago Heights and Joliet boomed as freight hubs for industrial development. As early as the 1920's, suburban cities were growing faster than the city due to new transportation options that allowed people and industry to disperse rather than remain densely concentrated (Hirsch, Chicago Encyclopedia, 2004). During this time, however, people tended to live near work, or street cars provided an easy commute (Erbe, Chicago Encyclopedia, 2004). It was not until the 1950's and 1960's with the construction of the interstate highways that the decentralization of employment and residences really intensified.

The following paragraphs provide a brief overview of the shifts in employment and population that have occurred in the last several decades. In addition, maps on the following pages show densities of employment and population in 1970 and in 2000.

3.1 Employment Decentralization

Like many other regions in the nation, the last half of the twentieth century marked an era of great shifts in employment from the central city to suburban areas in northeastern Illinois. Some government policies promoted this shift in development (Jackson, 1985) but market forces also played a major part. As factories modernized to assembly or straight line production, new facilities were needed. Older multi-story warehouse buildings within the city no longer sufficed, and increasingly, manufacturing companies sought out single story buildings on cheaper land close to interstates.

While the region maintained some of its industrial base through the 1970's, it did so unevenly. Within the city, older manufacturing sites closed and newer facilities opened throughout the suburbs. Between 1947 and 1961, Chicago's share of the region's manufacturing jobs declined from 71 percent to 54 percent. During the 1950s, corporate headquarters, which were once predominantly located in Chicago's Loop, began to move to suburban campuses in the northwestern suburbs (Hirsch, Chicago Encyclopedia, 2004). Easy access to O'Hare, newer facilities, and cheaper rents were all factors that precipitated this out migration. Between 1972 and 1995, Chicago continued this job decline and lost approximately 350,000 jobs, but all of the suburban counties posted substantial employment gains. As a result, the city's share of total metropolitan area employment fell from 56 percent to 34 during this same period (Chicago Case Study Working Group of the Great Cities Institute, 2001).

Suburban growth has been significant for many decades, but not all suburbs have benefited equally. The steep decline in manufacturing jobs since the 1970's has left behind older industrial towns such as Aurora, Joliet, Waukegan and Elgin, whose competitive advantages were freight, interstates or port access. On the other hand, new service, retail and technology centers have emerged in the past few decades. These newer job centers such as Schaumburg and Lincolnshire are easily accessible to interstates and offer a new infrastructure to support business and office complexes.

The decentralization of jobs has followed some general patterns. Industrial development has tended to locate primarily close to O'Hare and outside Cook County. Commercial development is taking place all over the region but predominantly near highway interchanges and suburban employment centers (McMillen, 2003).

3.2 Residential Decentralization

Residential out-migration shared similar patterns. As early as the late 1800s, residents began moving out of the city to more exclusive communities on the north, west and south sides. Rail lines and commuter cars greatly facilitated this process, allowing for Chicago's more affluent residents to escape the pressures of industrial city life. Many of northeastern Illinois' communities were established as primarily residential only communities. In other communities, residential development followed the out-migration of jobs (Erbe, Chicago Encyclopedia, 2004). In 1950, the City of Chicago comprised 70 percent of the metropolitan region's population, but by 2006 that had declined to 32 percent.

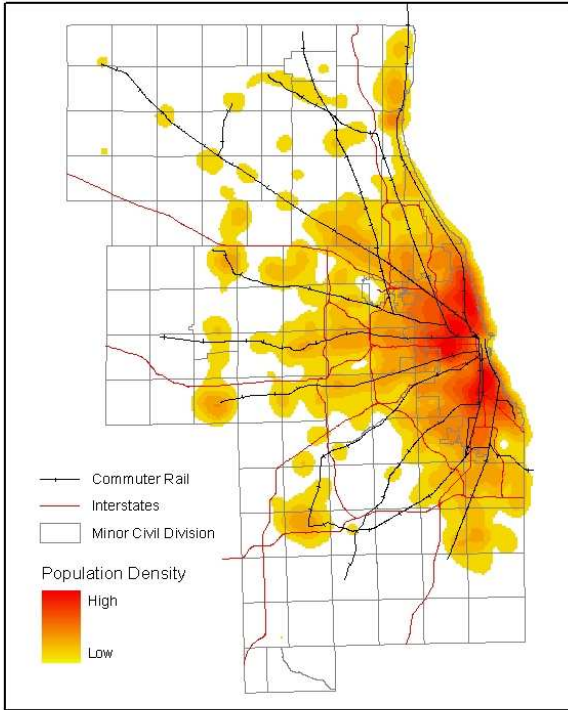
Residential development is distributed throughout the region, but housing prices and the mix of housing stock vary drastically. Income is a major driving factor in determining where families can afford to live. As jobs and housing have decentralized in the past decades, they have not necessarily done so in a complementary fashion. Today, many people live, work, shop and play in different locales throughout the region (Chicago Case Study Working Group of the Great Cities Institute, 2001).

3.3 Density

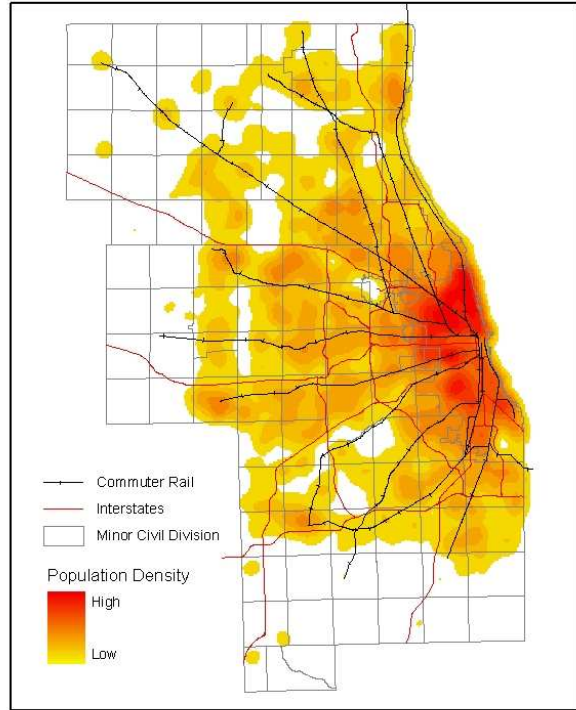
In addition to the dispersal of jobs and housing, density of development has decreased. This has led to longer distances between activities, requiring more travel. Between 1970 and 1990, the population of the metropolitan area (excluding Kendall) increased by only four percent, but the urbanized or developed land area increased by more than 47 percent (Moskovits and Shopland, 1999). As families moved to the suburbs, housing was developed on much larger lots and residential density decreased drastically. According to the National Association of Home Builders (NAHB) and the U.S. Census, the average home size in 1950 was 983 square feet. In 2006, the average size home was more than double that at 2,521 square feet. The results of this have included greater land consumption, higher infrastructure costs and a decrease in public transit ridership.

The imbalance of jobs to housing is the result of many interrelated dynamics: changing economies and expanding transportation networks, increased land consumption, and the resulting economic stratification of residential development. The result of these changing dynamics has amounted to distinct concentrations of affordable housing distant from the regions primary employment subcenters. This research will further explore the jobs and housing imbalance specifically as it relates to the location of affordable housing.

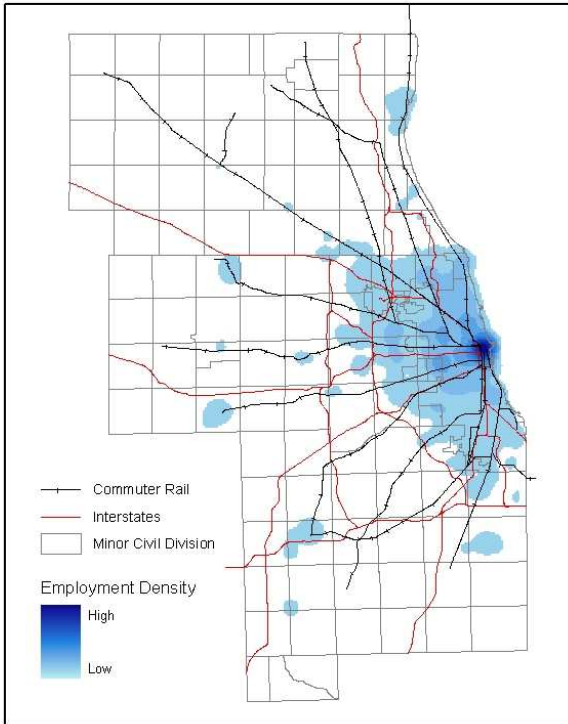
Population 1970



Population 2000



Employment 1970



Employment 2000

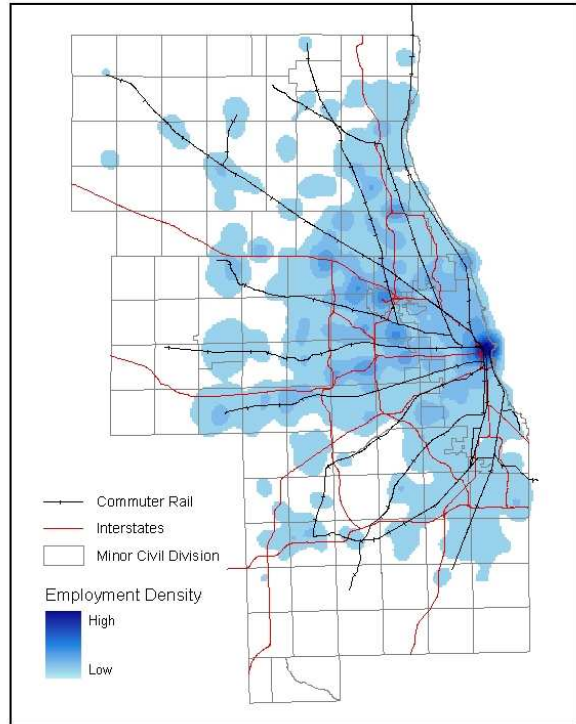


Figure 2. Population and Employment Density 1970 & 2000

Housing

The jobs and housing imbalance affects all residents of the region, but hardest hit are those in the low- and moderate-income ranges. Therefore, this regional snapshot report focuses on the location of affordable housing.

4.1 Defining Affordable Housing

Based on standards used by Illinois Housing and Development Authority (IHDA), affordable housing is housing that can be afforded by people who make less than the area median income (AMI) for the Primary Metropolitan Statistical Area (PMSA) of Chicago. In 2000, the area median income for the Chicago PMSA was \$51,680. The definition of affordability is slightly different for homeowners and renters. According to the IHDA definition, housing that can be *purchased* by people who make 80% of AMI or below and housing that can be *rented* by people who make 60% of AMI or below is affordable. The chart below shows incomes at the AMI, 80% of AMI and 60% of AMI.

According to IHDA and industry standards, the methods for determining affordable owner-occupied and rental units are as follows (please note that all data is from 2000):

- *Owner occupied* housing is considered affordable if its cost is equal to or less than triple 80% of AMI. Therefore, the maximum price for owner- occupied affordable housing is **\$124,032**.
- *Renter occupied* housing is considered affordable if it costs no more than 30% of \$31,008 (60% of AMI), which is \$9,302. Because rents are paid on a monthly basis this number is divided by 12 to get a maximum monthly rent of **\$775**.

The table below shows the income limits for affordable housing for owner occupied and renter occupied units.

Table 2. Income Limits for Affordable Housing

<i>Census 2000</i>	<i>Area Median Income</i>	<i>Owner Occupied</i>	<i>Renter Occupied</i>
Annual Income Limit	\$51,680	\$41,344 (80%) of AMI	\$31,008 (60%) of AMI
Affordable Housing Cost Limit		\$124,032 (Total cost of unit)	\$775 (Monthly rent)

Source: U.S. Census 2000

Using 2000 figures, calculations of the total number of affordable housing units in the region indicate that there were a total of 628,271 affordable rental units at or below the \$775 per month threshold in the seven-county region, which represented more than 60% of the total rental units in the seven-county region. There were 557,270 units of affordable owner-occupied housing units, which represented slightly less than 30% of all units of owner-occupied units in the region. In total, 40.6% of housing units in the region (rental and owner-occupied combined) were affordable, or 1,185,541 units.

Table 3. Affordable Housing in the Region

Housing in the Region	Rental Housing	Owner-Occupied Housing	Total
Affordable Housing units	628,271	557,270	1,185,541
Total housing units	1,031,867	1,891,079	2,922,946
Percent	60.9%	29.5%	40.6%

Source: U.S. Census 2000

4.2 Affordable Housing Clusters

These aggregate numbers presented above do not show the geography of affordable housing, which is highly concentrated in certain areas of the Chicago region. As shown in Figure 8, much of the region's affordable housing is located in the south and west sides of Chicago, south Cook County and in the satellite cities of Aurora, Elgin, Joliet and Waukegan.

To better determine the extent to which the regions affordable housing stock is concentrated in these specific areas, affordable housing clusters were identified. In Figure 9, contiguous census tracts where more than eighty percent of the housing stock is affordable are highlighted. There are eight distinct clusters in the Chicago region in which affordable housing is highly concentrated. These clusters are identified as the south and far south side areas of Chicago, portions of Aurora, Joliet, and Waukegan, and the south and far south portions of Cook County. These clusters represent a large proportion of the region's total affordable housing stock, accounting for more than 23% of all the affordable housing in the region, or about 280,000 units (see table four). As previously mentioned, these areas played a central role in the overall development of the metropolitan region. As early as the turn of the nineteenth century, Joliet, Waukegan and Aurora were all considered "satellite cities" of Chicago and represented the region's major industrial centers. However, with the decline in the manufacturing sector these areas have experienced rapid economic disinvestment coupled with an aging infrastructure (including the housing stock) that has resulted in high concentrations of low-income families residing in these areas. On one hand, these areas can be seen as opportunities because they represent places in the region that low-wage workers can afford to live. However, while the housing might be affordable, these areas are often distant from many of the region's employment opportunities.

Table 4. Affordable Housing Clusters

Affordable Housing Units within Clusters	279,595
Total Affordable Housing Units in Region	1,185,541
Percentage of Total Affordable Housing	23.6%

Source: U.S. Census 2000

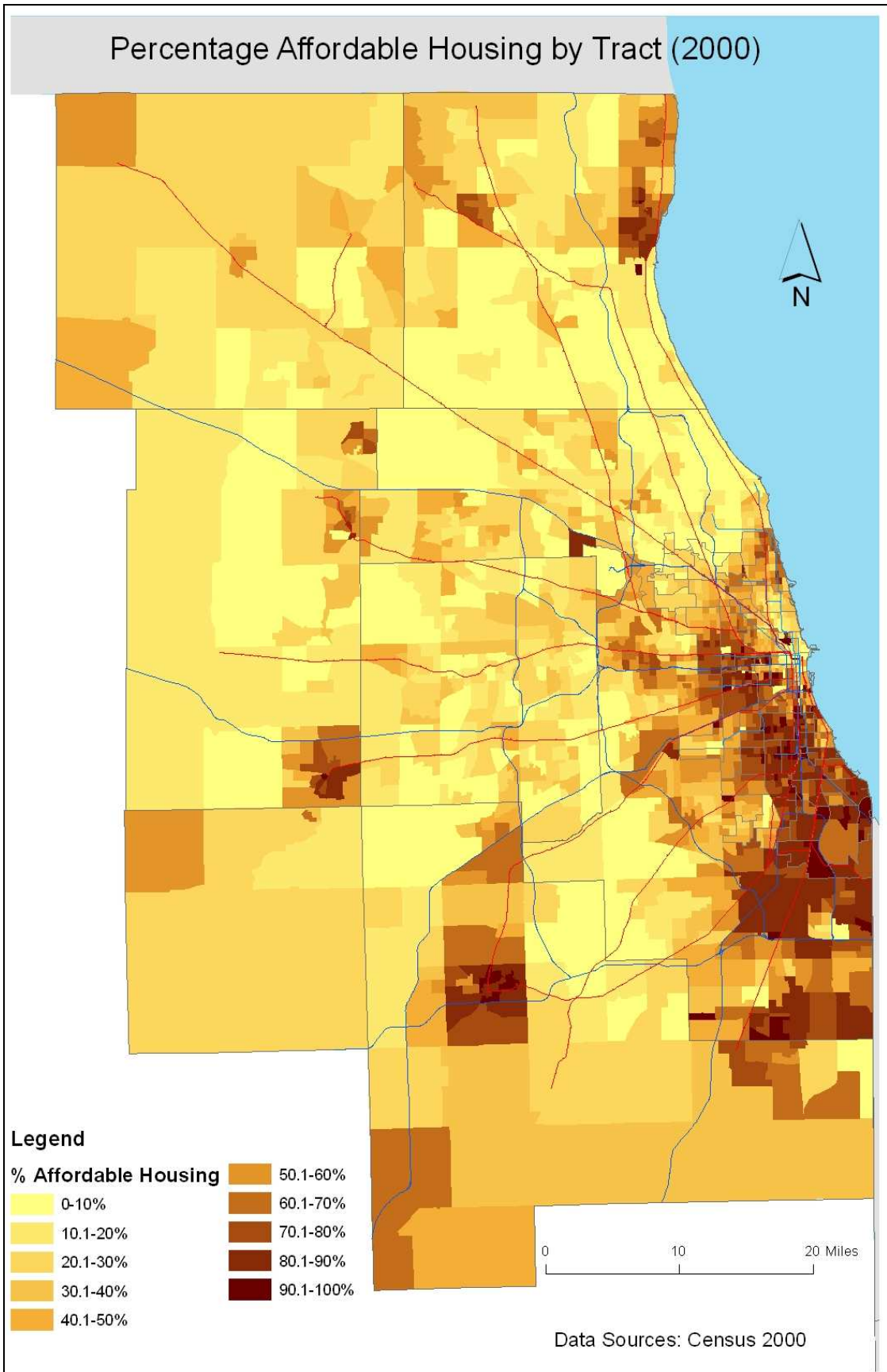


Figure 3. Percentage Affordable Housing by Tract (2000)

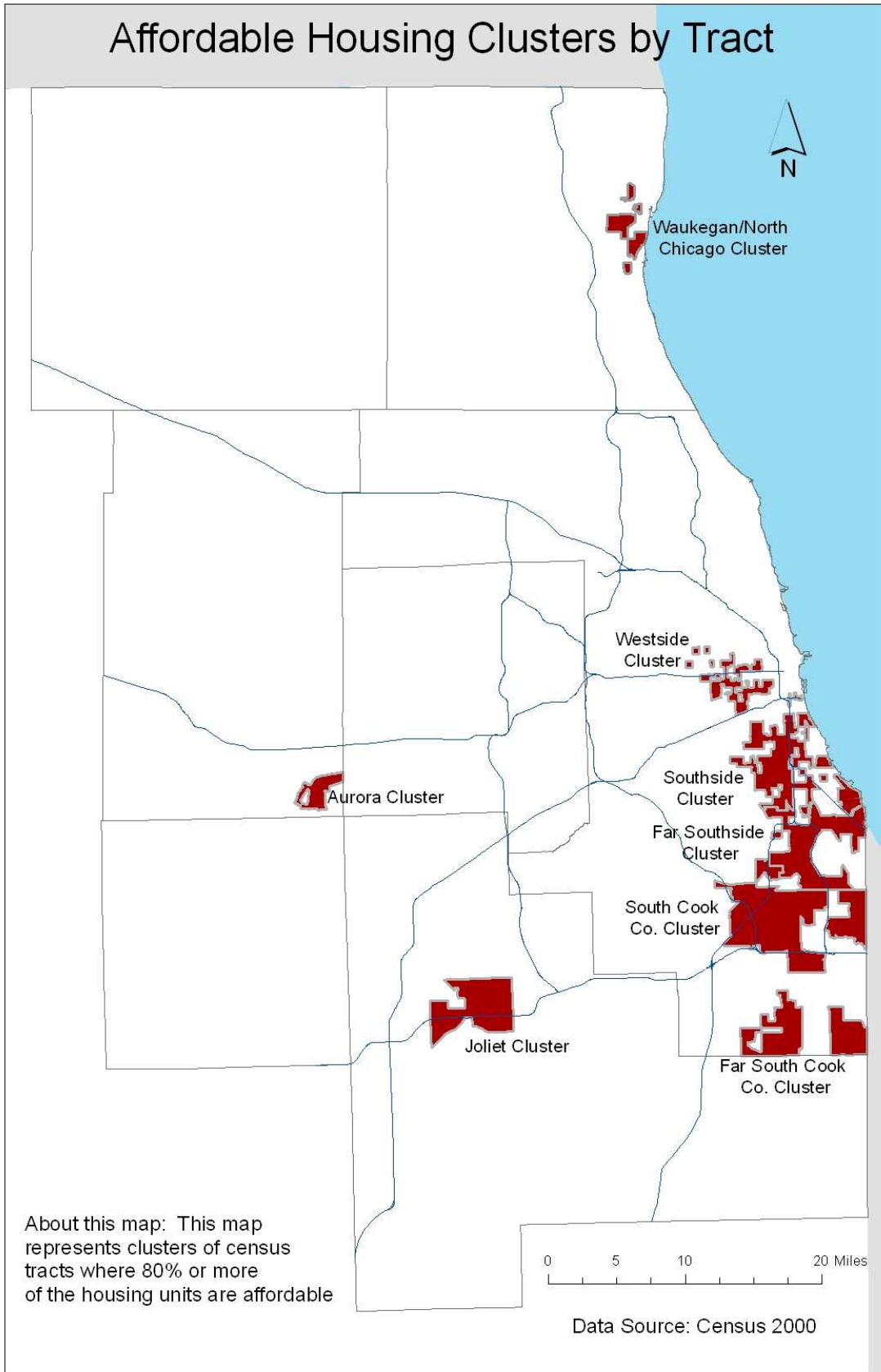


Figure 4. Affordable Housing Clusters by Tract (2000)

4.3 Housing Cost Burden

Measuring the number of units that are affordable can help researchers to determine the supply-side of affordable housing units. Another method to measure affordability is to examine housing cost burden. Housing cost burden is defined as households paying in excess of 30 percent of gross income on housing. The number of housing cost burden households in the region has drastically increased in recent decades, from 29 percent in 1990 to 42 percent in 2006. While renters have always represented a higher proportion of households that are housing cost burden, between 2000 and 2006 the percentage of housing cost burden owners increased at much more dramatic rates. Therefore, the data shows an increasing demand for more affordable housing for both renters and owners.

Table 5. Percentage of Households That Are Housing Cost Burdened

2000-2006	Renters (2000)	Owners (2000)	Renters (2006)	Owners (2006)
City of Chicago	37.8%	15.8%	50.2%	43.8%
Cook (Outside Chicago)	35.3%	19.4%	47.0%	37.9%
Cook (total)	37.1%	17.9%	49.3%	40.4%
DuPage	32.0%	20.2%	40.7%	33.9%
Kane	34.0%	22.2%	49.6%	52.0%
Kendall	23.6%	22.1%	43.9%	43.5%
Lake	34.4%	23.4%	43.4%	35.2%
McHenry	34.4%	23.0%	51.8%	36.4%
Will	32.1%	20.8%	46.7%	36.9%
Regional	36.3%	12.2%	48.2%	39.4%
Illinois Total	41.2%	11.0%	46.0%	32.3%

Source: U.S. Census 2000, American Community Survey 2006

Jobs

5.1 Defining Employment Subcenters

Jobs exist in every community throughout the region, but this report is primarily concerned with locations that have high concentrations of jobs, defined as “employment subcenters”. While employment subcenters in northeastern Illinois have existed for many decades their locations and prominence in the region have shifted, caused in part by declines in the industrial sector coupled with a rise in the service and technology industries. An employment subcenter is defined as a concentration of firms large enough to have significant effects on the overall spatial distribution of population, employment, and land prices (McMillen, 2002).

5.2 Locations of Job Centers

This report identifies thirty-two employment subcenters, identified by the quarter section using NIPC’s forecast employment and population data and land use inventory. Employment subcenters were identified as contiguous quarter sections that have at least 10,000 jobs and twenty jobs per acre (McMillen, 2002). Together these employment subcenters make up 21% of the region’s total employment (an additional 13% of the region’s jobs are in Chicago’s Loop and medical district.) Figure 11 shows the region’s employment subcenters in 2000 (the most current year data is available). The decentralization of both housing and jobs has led to a region that contains multiple economic nodes, as reflected in the spread of these subcenters.

Many areas in the region with high concentrations of affordable housing are distant from the region’s employment subcenters. For example, south Cook County has a large proportion of affordable housing stock yet none of the region’s employment subcenters. Little affordable housing surrounds jobs centers, with the exception of the satellite cities, Aurora, Elgin, Joliet and Waukegan. Figure 12 shows employment subcenters in proximity to census tracts that have sixty percent or more affordable housing. The map shows that the region’s satellite cities contain both high concentrations of affordable housing and employment subcenters. However, job centers in DuPage, northern Cook and southern Lake Counties do not have areas with high concentrations of affordable housing.

Figure 13 shows a kernel density map of affordable housing and the location of employment subcenters throughout the region. This shows that the highest densities of affordable housing are located within the city of Chicago and to a somewhat lesser extent in the satellite cities and south Cook County. Because the map measures density, it generally highlights areas where overall population densities are highest. For example, even though neighborhoods in northern Chicago such as Rogers Park and Edgewater do not have the region’s highest percentages of housing that is affordable, the overall high densities in this area mean that it actually contains the region’s highest densities of affordable housing per acre. Taken together, figures 12 and 13 provide a picture of the locations of affordable housing the region and their relation to job centers.

Employment Subcenters (2000)

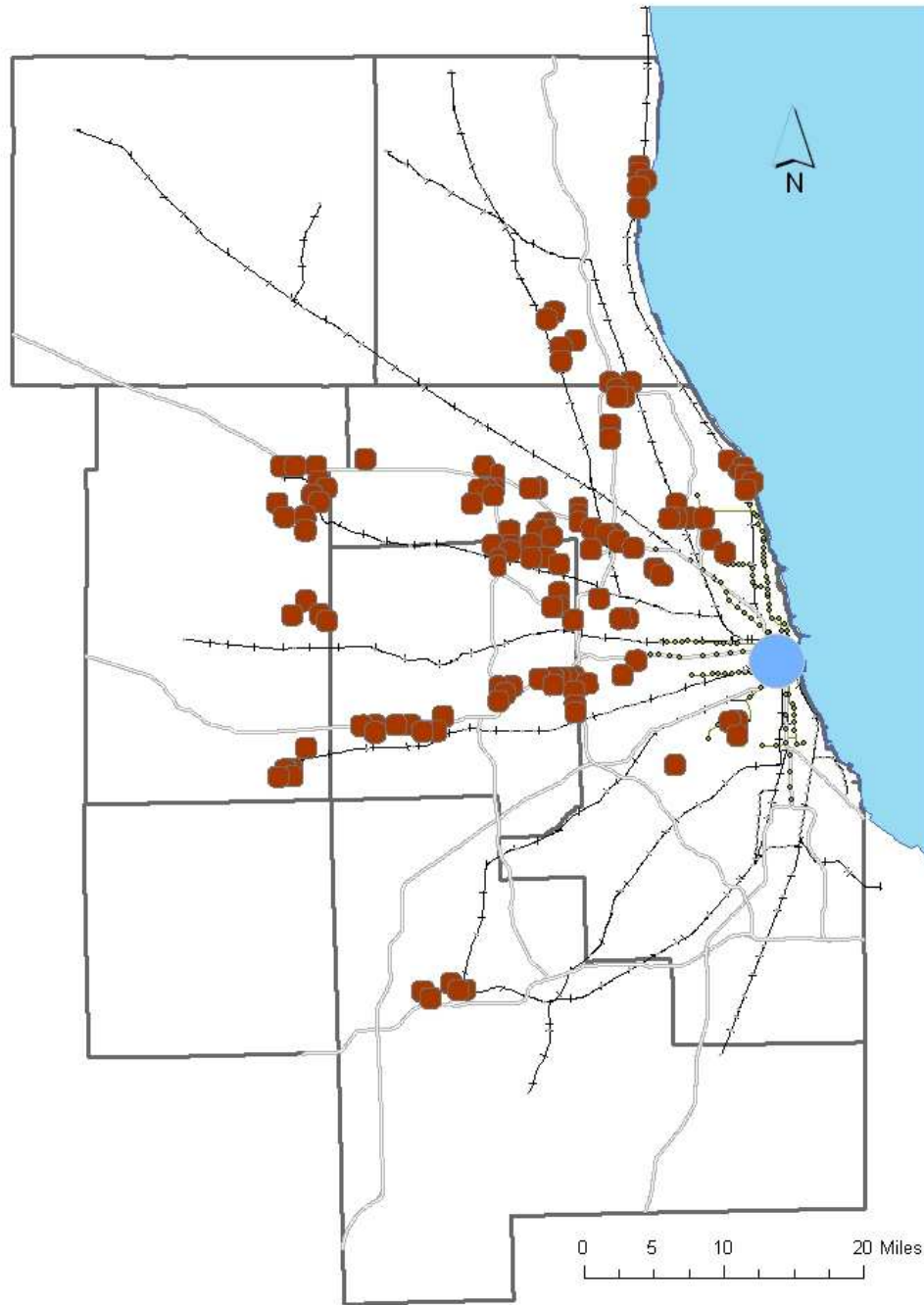


Figure 5. Employment Subcenters

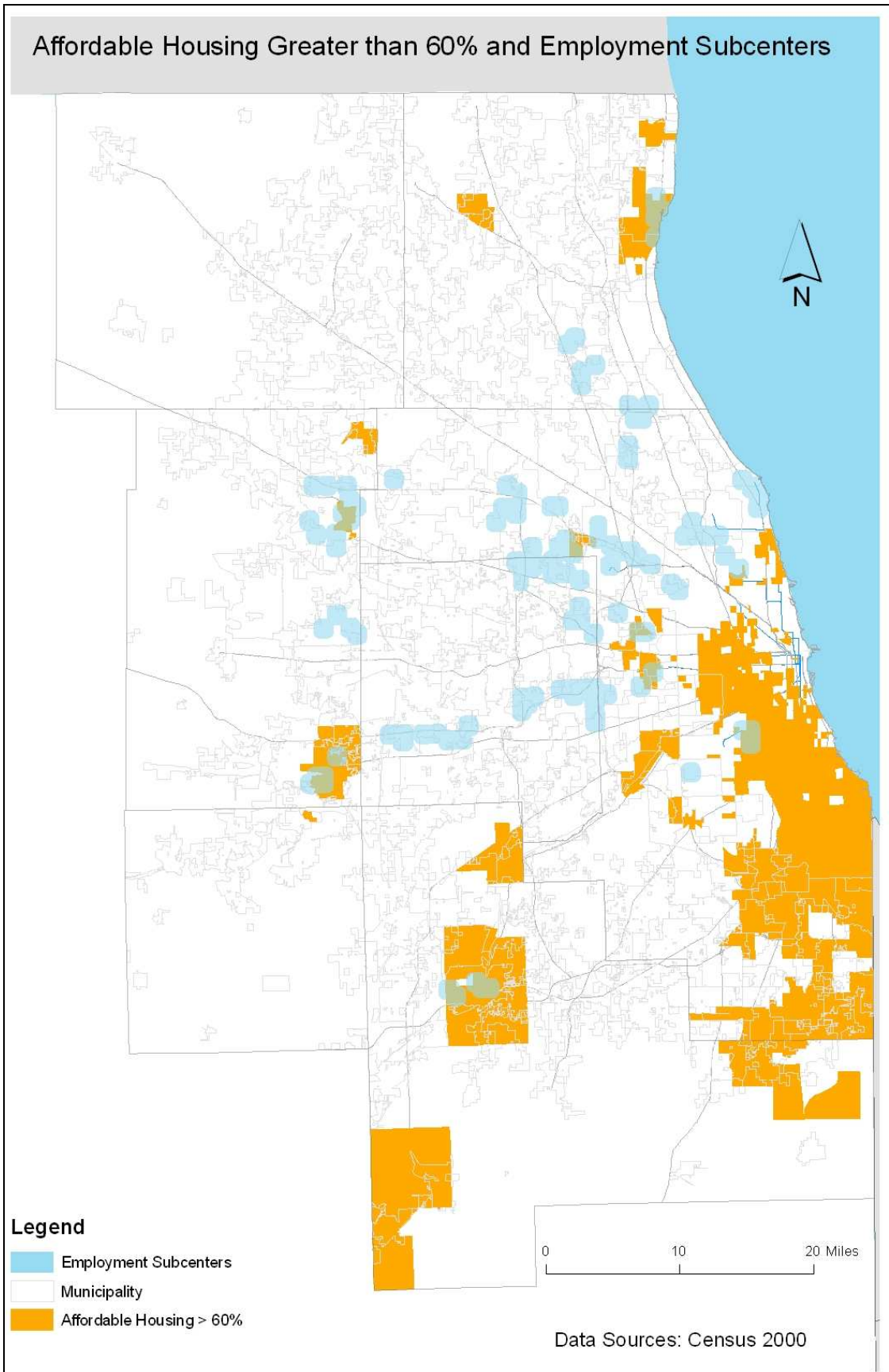


Figure 6. Affordable Housing Greater than 60% and Employment Subcenters

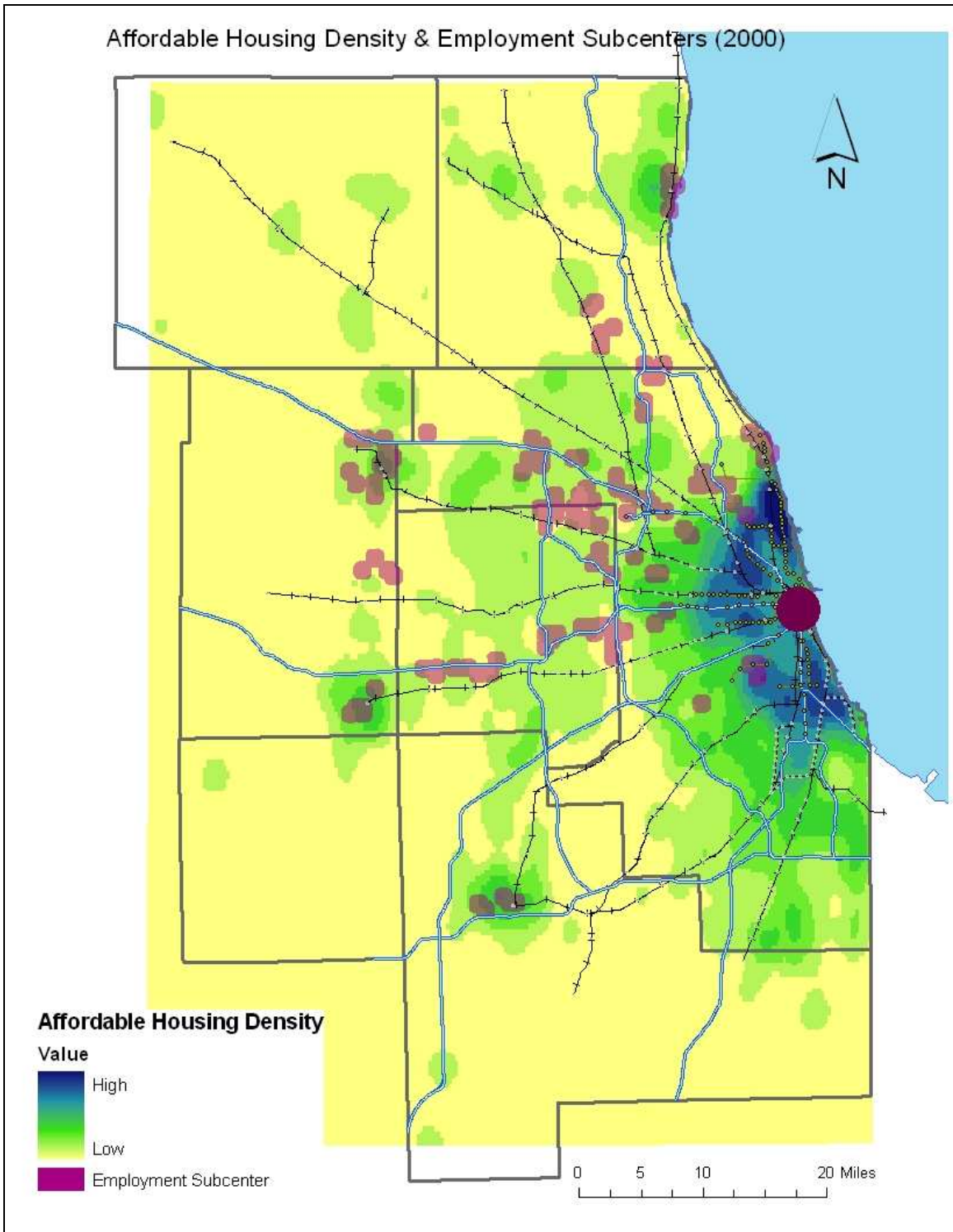
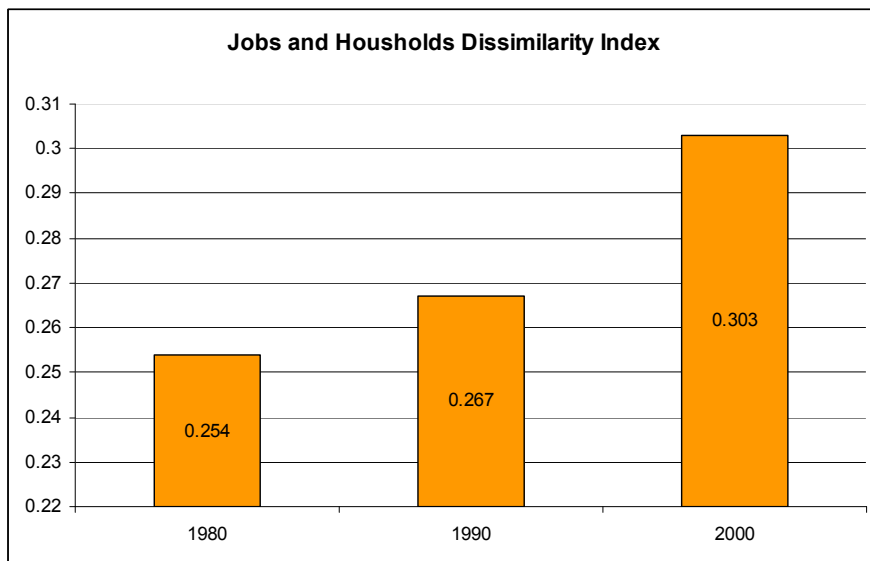


Figure 7. Affordable Housing Density & Employment Subcenters (2000)

This map was created using a kernel density estimation tool. Kernel Estimation creates a smooth surface estimate of a variable from an observed set of points (Balley and Gatrell, 1995). The kernel estimation works with the use of a moving 3-D function of a given radius. The function passes from one event (census block, in this case) to the next and weights every other point relative to its distance from the event. Clusters of census tracts with a very high density of affordable housing clusters are in blue.

5.3 Dissimilarity Index

As part of the *GO TO 2040* planning process, CMAP has developed a set of regional indicators. The purpose of the Regional Indicators Project is to track progress toward achieving the *GO TO 2040* Regional Vision. The project consists of one hundred and fifty key indicators used to better determine regional progress. As part of this process, a dissimilarity index for jobs and households was tabulated. The dissimilarity index determines the proportional spatial distribution of jobs to households. The dissimilarity index scores from 0-1 the proportion of households (or jobs) that would need to move to be evenly distributed across townships in the metropolitan area (excluding Kendall). A score of zero indicates an even distribution whereas a higher score would indicate poorer distribution. The region's dissimilarity index for jobs and housing was calculated at the township level, because of the uniformity of this geography and the availability of data over time. In 2000, the dissimilarity index in 2000 was .302 which means that 30.2% of jobs would have to move across townships in order to have a completely even distribution. As the chart below shows, the dissimilarity index is growing larger over time. The dissimilarity index shows that the spatial imbalance of jobs to housing has increased by five percent from 1980 to 2000. CMAP will continue to track the jobs to housing dissimilarity index over time to determine the extent to which the region is achieving its vision of a better balance of jobs and housing.



5.4 What Workers Get Paid

To further analyze employment in the region the Longitudinal Employer-Household Dynamics (LEHD) data for 2004 was examined. LEHD reports job wages per month by municipality in three income categories: less than \$1,200; between \$1,201 and \$3,400; and \$3,401 or more. According to this data, all high-employment municipalities contain a significant proportion of workers at all pay scales.

Table 6, shows that all of the highest-employment communities in the region contain a significant portion of employees earn under \$1,200 a month. Jobs that pay less than \$1,200 a month, which is barely minimum wage, amounts to an annual income of \$14,400 or less. This pay scale represents at least 15 percent of workers in every subcenter, and over 35 percent of workers in Aurora and 28 percent in Joliet. Workers within this pay range have limited housing choice within the region and are likely confined to areas in the region with the highest concentration of affordable housing.

There is also a large share of workers earning between \$1,201 and \$3,400 per month, or what would amount to between \$14,400 and \$40,800 annually. At least 30 percent and as much as 55 percent of all workers in these municipalities are in this pay range. High-paying jobs, at which workers earn over \$3,400 per month, range from 27 percent of the jobs in Aurora to nearly 50 percent in Arlington Heights. The LEHD data shows that high-employment communities with high concentrations of jobs have a broad array of job types, from low paying service sector jobs to upper-income jobs.

Table 6. Municipalities with Greater Than 30,000 Jobs

Municipality	% of jobs that pay \$1,200 per month or less	% of jobs that pay \$1,201 to \$3,400 per month	% of jobs that pay more than \$3,400 per month	Total Primary Jobs-LEHD
Chicago	20.20%	38.60%	41.20%	1,128,915
Schaumburg	23.20%	29.90%	46.90%	76,349
Naperville	26.40%	35.30%	38.20%	60,148
Aurora	35.90%	36.90%	27.10%	55,648
Elk Grove Village	15.30%	42.80%	41.90%	53,720
Elgin	26.90%	38.50%	34.60%	46,602
Des Plaines	17.40%	40.00%	42.60%	36,942
Joliet	28.00%	38.90%	33.10%	43,106
Arlington Heights	20.80%	29.60%	49.60%	43,072
Oak Brook	20.10%	54.90%	45.10%	38,902
Evanston	22.90%	36.50%	40.60%	37,879
Skokie	22.50%	40.20%	37.30%	32,647
Downers Grove	21.30%	38.90%	39.90%	37,742
Northbrook	20.00%	34.30%	45.70%	30,702

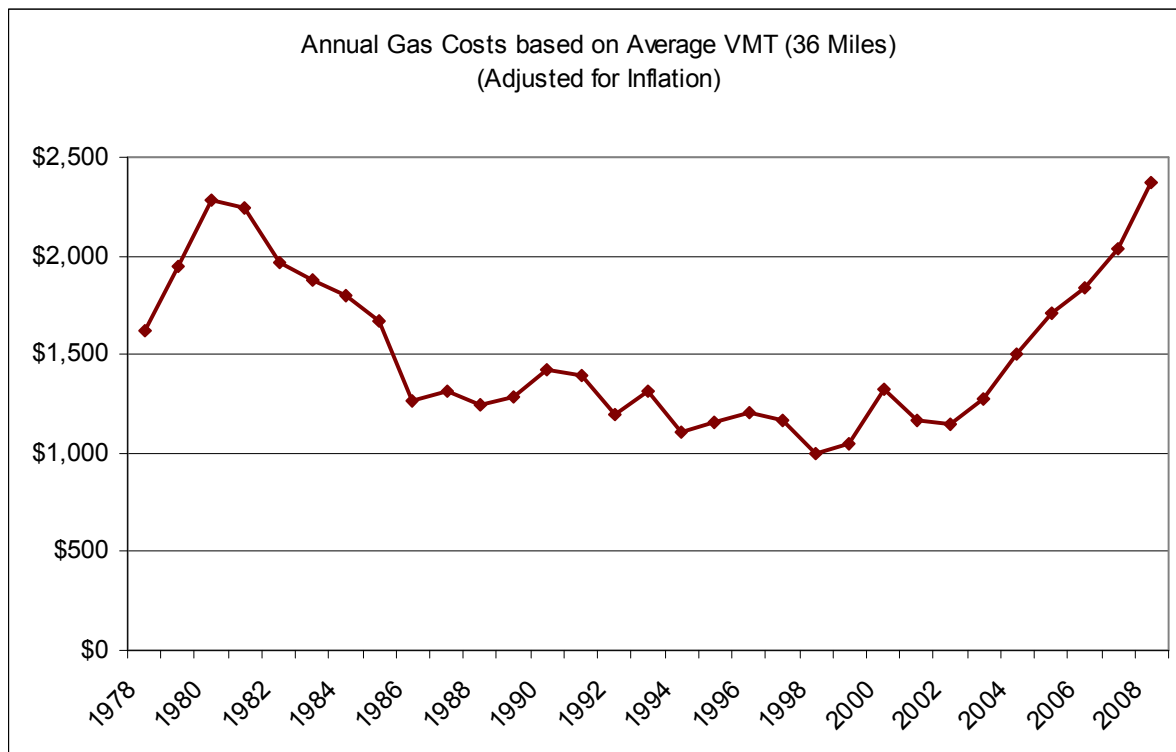
Source: LEHD 2004

Commuting

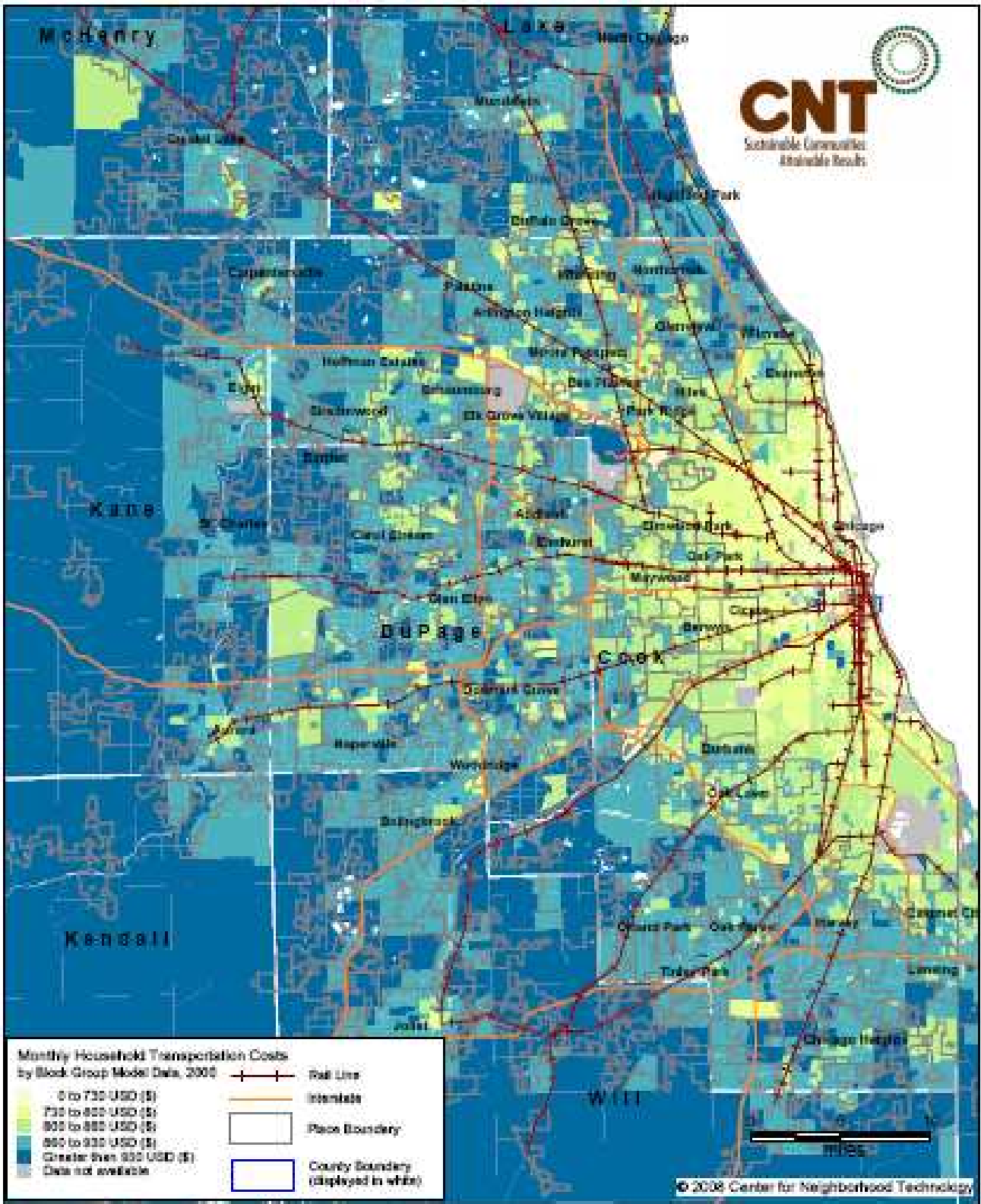
In addition to creating economic hardships on individuals, the mismatch of jobs and housing has strained the region's transportation system. Those who drive are faced with longer commute times, while those who take public transit find a system that does not adequately meet current commuting patterns. Residents are also experiencing 5.5 times more travel delays than they did twenty years ago (TTI). For public transit, the shift in employment center concentration and the expansion of residential development to the periphery has resulted in an increase in reverse commuting, suburb-to-suburb commuting, and off-peak commuting. According to "Moving Beyond Congestion" by the Regional Transportation Authority, this presents both challenges and opportunities in meeting transit ridership demand in the future. While growth in off peak travel and reverse commutes can present new opportunities to utilize existing infrastructure, suburb-to-suburb commutes where public transit does not currently exist represent a major challenge.

Households that live in areas of the region without good transit service have been especially burdened by the recent increases in fuel prices. According to data from the recent CMAP household travel survey, an "average" household travels approximately 36 miles per day by automobile. Assuming an average vehicle efficiency of approximately 20 miles per gallon and gas prices of \$4 per gallon (the average price for a gallon of gas in the region in late August 2008), this household would spend over \$2,600 per year on gasoline. Approximately 20% of the region's households travel over 50 miles per day by automobile, incurring even higher costs. As shown in the chart below, this figure has increased tremendously in recent years.

Below is a map from the Center for Neighborhood Technology on annual transportation costs throughout the region. An interactive map of the combined cost of housing and transportation produced by the Center for Neighborhood Technology is online at: <http://htaindex.cnt.org/>, though it uses a different methodology for its calculations than the description above.



Monthly Household Transportation Costs in the Chicago Metropolitan Area
 The Housing + Transportation Affordability Index - <http://htaindex.org>

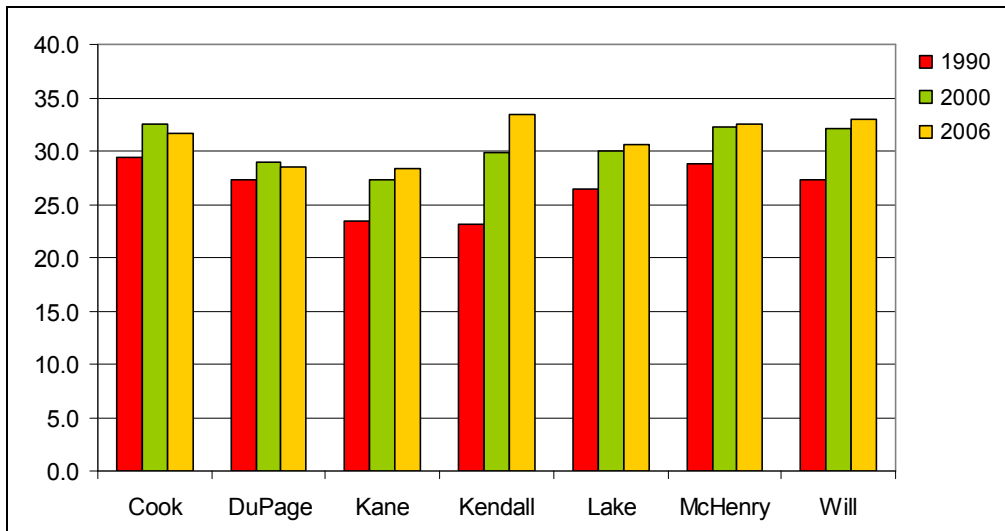


6.1 Trends in Commuting Patterns

Below are several charts and tables showing the growth in travel time and the number of residents who commute outside of their counties. As Figure 15 demonstrates, travel times have risen in every county in the region since 1990, although Cook and DuPage counties experienced slight declines between 2000 and 2006.

Part of this overall increase in travel time is caused by the increase in commuting between counties. Figure 16 shows the percentage of residents in each of the region's counties who worked in a different county than the one where they lived. As it shows, few Cook County residents, only 12% of the total, leave Cook County for work, a figure that remained unchanged between 2000 and 2006. In contrast, approximately 75% of Kendall County residents and 54% of Will County residents left their home counties for work. Between 2000 and 2006, inter-county commuting increased for DuPage, Kane, and Kendall counties, but fell for Lake, McHenry, and Will counties.

Figure 8. Average Travel Time by County 1990, 2000 and 2006



Source: U.S. Census 2000, American Community Survey 2006

Table 7. Percent of Workers 16 Years and Over Who Worked Outside County of Residence

<i>Area</i>	<i>2000</i>	<i>2006</i>
Illinois	25.2 %	27.0 %
Cook County	12.4 %	12.4 %
DuPage County	40.8 %	41.2 %
Kane County	44.1 %	46.7 %
Kendall County	69.0 %	75.3 %
Lake County	33.1 %	32.1 %
McHenry County	48.9 %	48.0 %
Will County	55.6 %	53.5 %

Source: U.S. Census 2000, American Community Survey 2006

Table 8 compares home and work locations at the municipal level, using 1980 census data and 2004 LEHD data. This shows the residence locations of individuals who work in selected high-employment municipalities. For example, using Schaumburg as an example, 8.4 percent of people who worked in Schaumburg also lived in Schaumburg in 2004, down from 21 percent in 1980. In every community, there has been a decrease in the share of local jobs that have been held by local residents. This decrease was lowest in Chicago; more than half of the jobs in Chicago continue to be held by Chicago residents. The decrease was highest in Elgin, which had 24 percent of its jobs held by local residents in 2004, down from 55 percent in 1980. These statistics show that commuting between communities has risen dramatically.

Table 8. Share of Jobs Held by Residents That Work in the Same Municipality in which They Live

<i>Areas</i>	<i>1980</i>	<i>2004</i>
Chicago	66.8%	62.1%
Schaumburg	21.0%	8.4%
Naperville	35.6%	19.5%
Aurora	48.8%	21.6%
Elk Grove Village	10.7%	4.9%
Elgin	55.3%	23.7%
Joliet	44.6%	29.4%
Evanston	42.5%	19.0%
Waukegan	45.9%	25.6%

Source: U.S. Census 1980, LEHD 2004

6.2 Commute Times from Affordable Housing

To further understand the commute patterns of those residing in affordable housing clusters, CMAP calculated the number of workers within affordable housing clusters who could reach their respective jobs within forty-five minutes by auto. The results are displayed in the following table. The data shows that high percentages of workers, particularly those in Chicago's far south side and southern Cook County, cannot reach their employment within forty-five minutes. Nearly fifty-eight percent of workers residing in Chicago's far south side affordable housing cluster travel in excess of forty-five minutes to get to work.

Table 9. Workers Who Travel to Work within 45 Minutes by Auto

Affordable Housing Clusters	Workers	Workers w/ Jobs within 45 Min by Auto	% of Workers w/ Jobs w/in 45 Min by Auto
Central Aurora	14,061	10,773	76.62%
Central Joliet	23,710	18,700	78.87%
Waukegan/North Chicago	11,979	7,712	64.38%
Chicago – Westside	35,636	30,370	85.22%
Chicago – Southside	90,797	66,509	73.25%
Chicago - Far Southside	49,783	20,982	42.15%
South Cook Co. - Near Suburbs	54,427	29,267	53.77%
Far South Cook Co. - Far Suburbs	20,457	13,950	68.19%

Source: CMAP Travel Demand Model (2007), Census Transportation Planning Package (2000)

6.3 Transit Time to Employment Subcenters

To determine accessibility of employment subcenters by transit, CMAP’s 2007 Travel Demand Model was analyzed to determine from where in the region select employment subcenters are accessible by transit in less than 120 minutes during the AM peak commute time. The following maps show that access to employment subcenters by transit (Metra, PACE and CTA) for suburb to suburb commute are limited. The data shows that Oak Brook is most accessible by public transit, however, commute times can be high particularly for those commuting from south Cook County and the city of Chicago. The Aurora and Waukegan maps show that the areas immediately surrounding the job center are well served by transit and commute times are relatively low, however, commute times from downtown Chicago and other areas of the region are often in excess of ninety minutes. The Schaumburg map shows that north Cook county is well served by transit to Schaumburg but those travelling from DuPage, Lake, McHenry or Kane have limited or no transit accessibility at all.

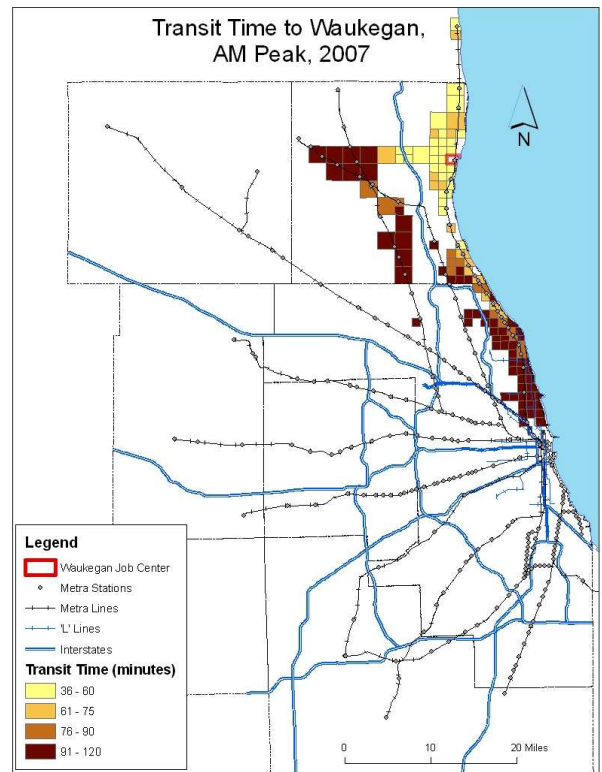
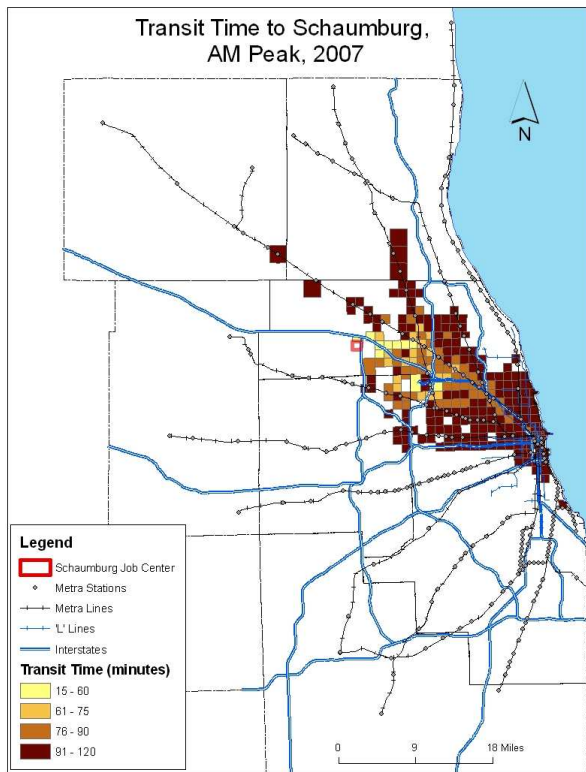
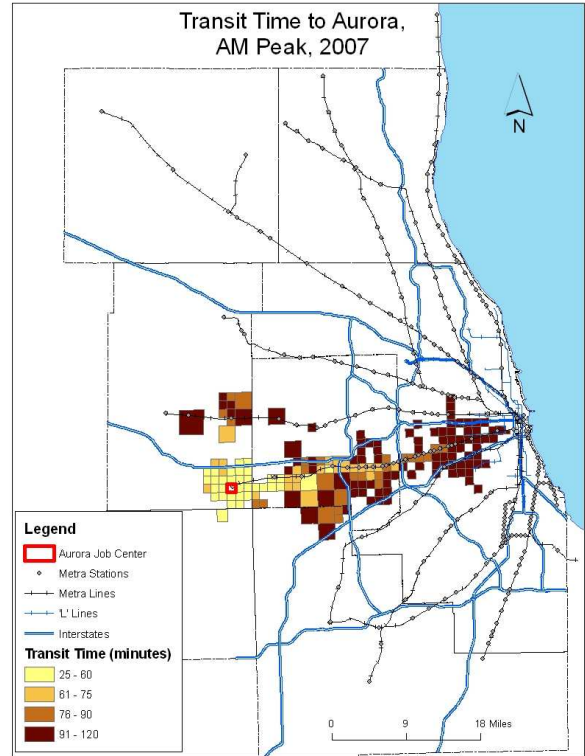
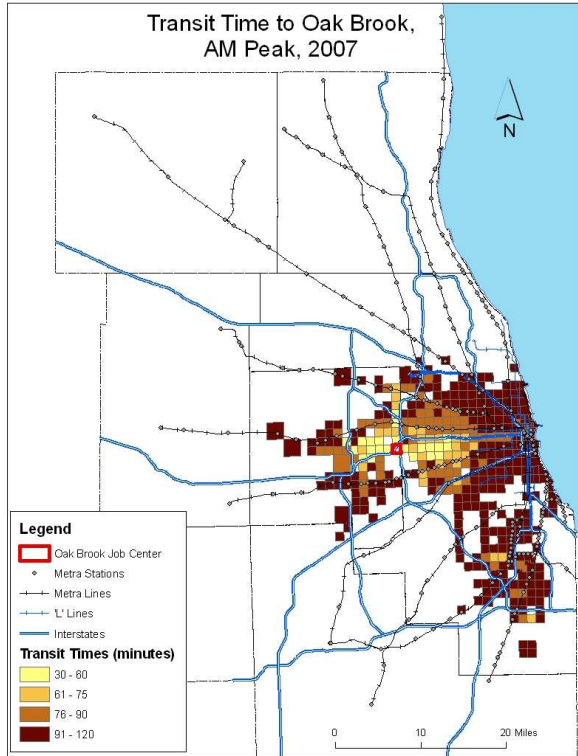
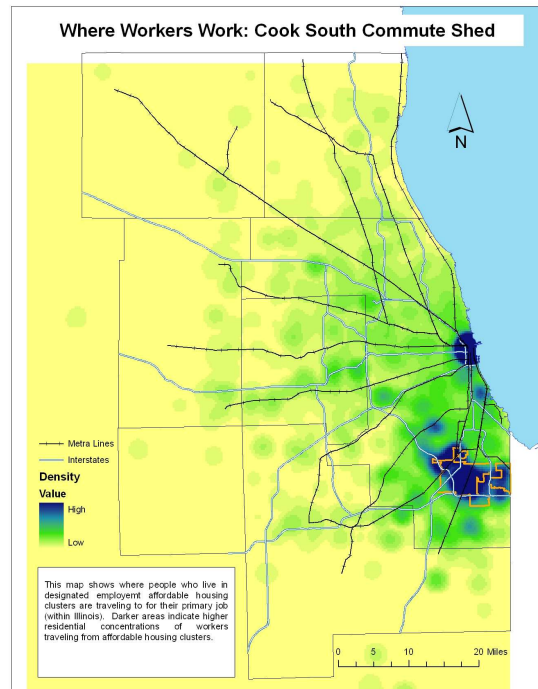
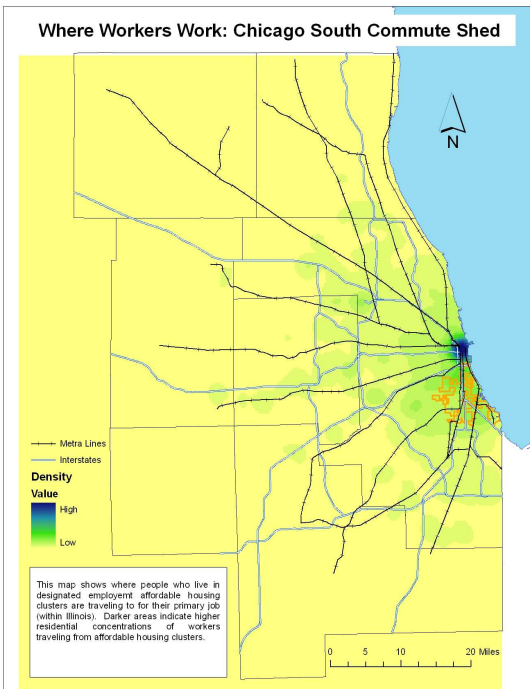
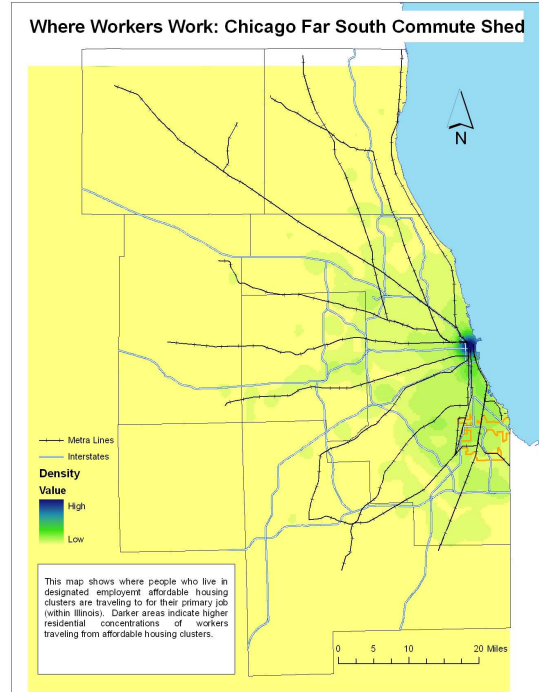
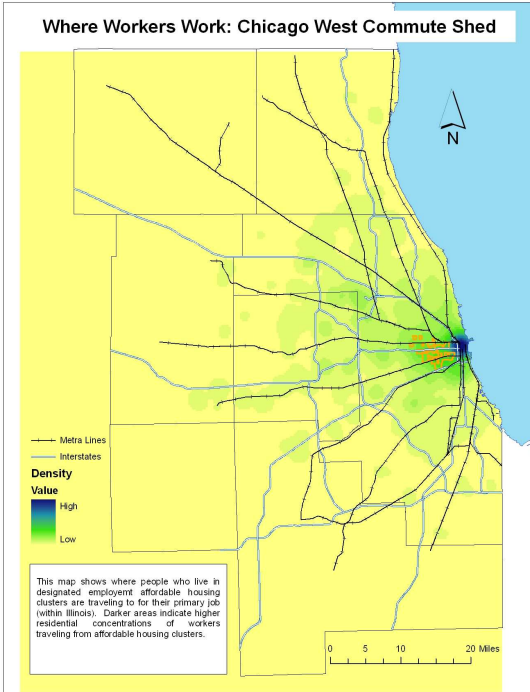


Figure 8. Transit Service Available in Less than 120 Minutes to Select Employment Subcenters

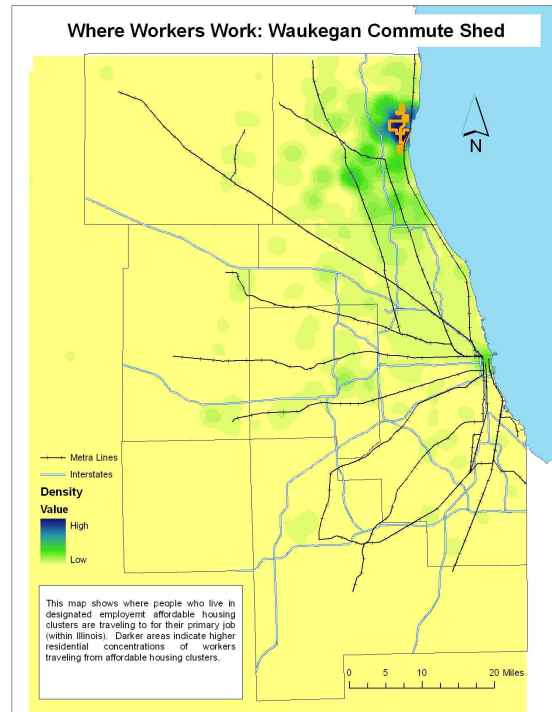
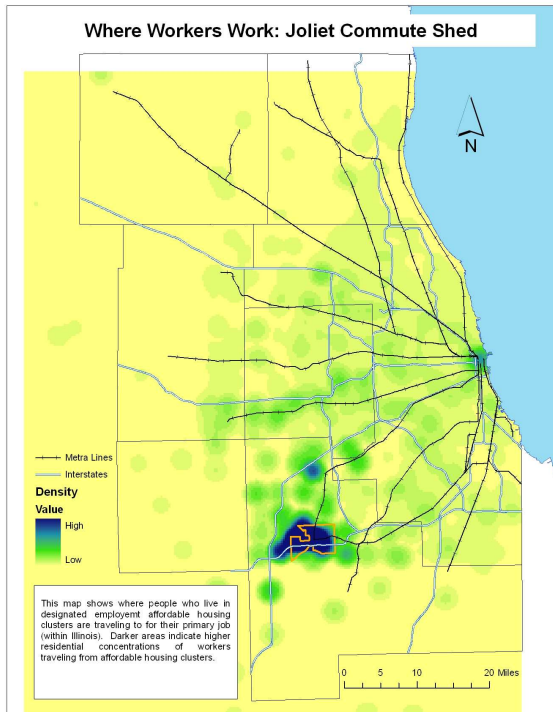
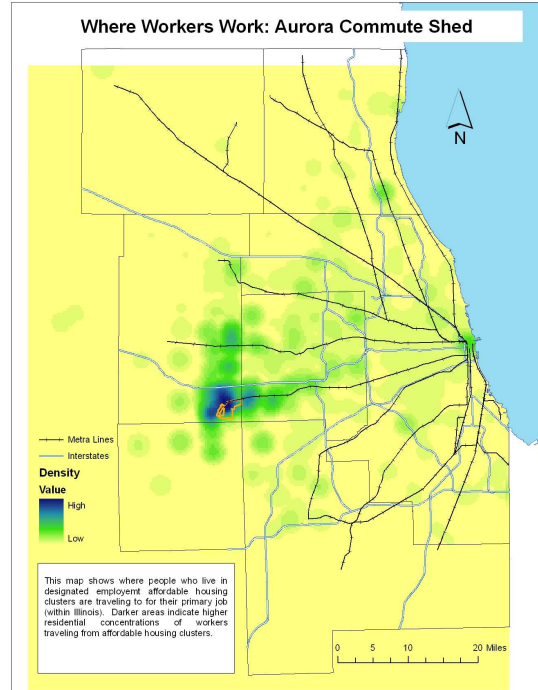
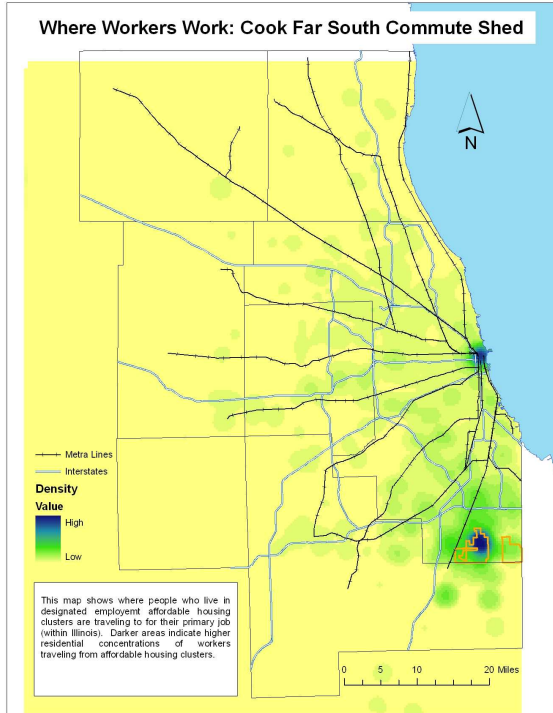
Case Studies of Jobs-Housing Balance

The results of several case studies of jobs-housing balance within communities in the region are presented in this chapter. This research further examined LEHD data to determine where people who live in affordable housing clusters travel to for work. Again, these eight clusters represent extreme concentrations of affordable housing where eighty percent or more of the total housing stock is identified as affordable. Next, this research mapped the locations where people who worked in employment subcenters lived. (Please note that the geography of the employment subcenters had to be modified to allow this analysis, as the initial subcenters were mapped as quartersections. For this analysis, all Census tracts within or adjacent to these quartersections were considered part of the employment subcenter.) The results are presented individually in the following pages.

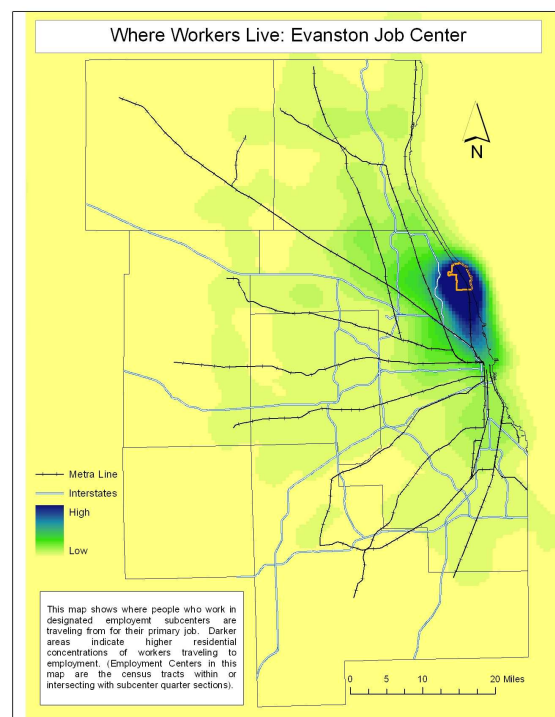
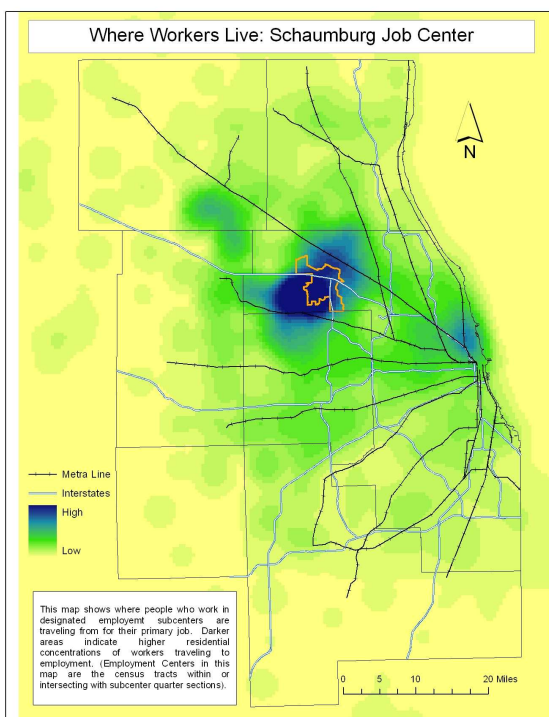
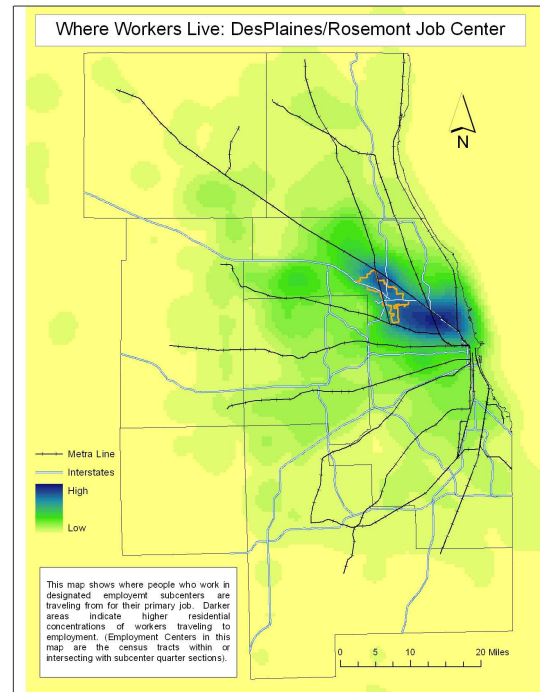
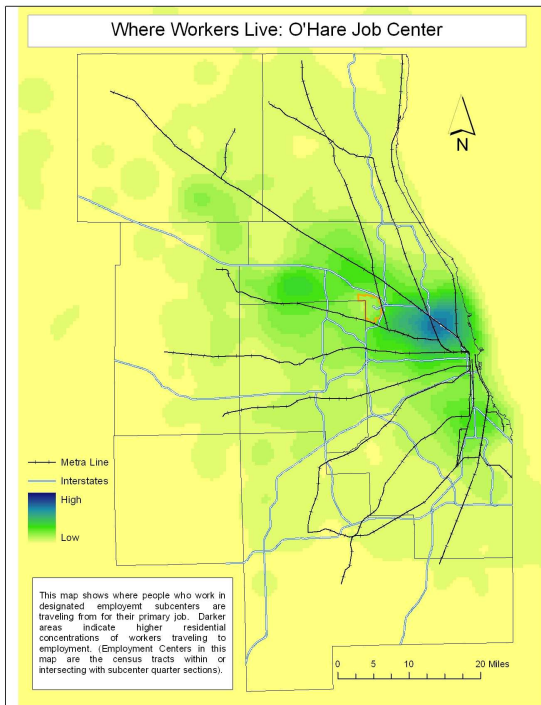
The maps below show the work locations of residents of affordable housing clusters on Chicago’s west side, south side, and far south side, as well as southern Cook County. For residents of each of these locations, downtown Chicago provides a high concentration of employment. Many residents of the south Cook County affordable housing cluster remain relatively close to their residences, in contrast to residents of the south side Chicago clusters, few of whom work near where they live. For each of these clusters, there are also some residents who commute to suburban areas for work.



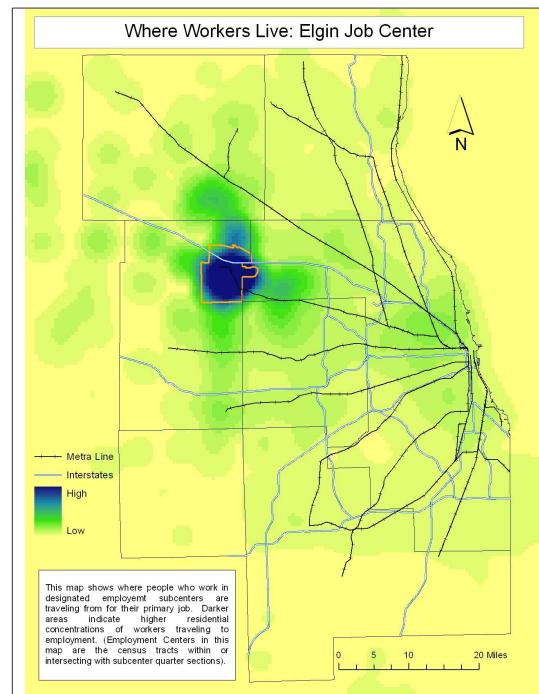
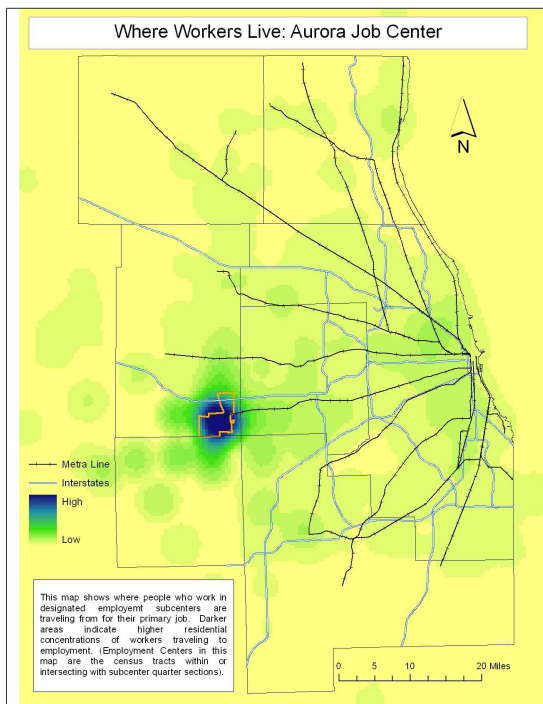
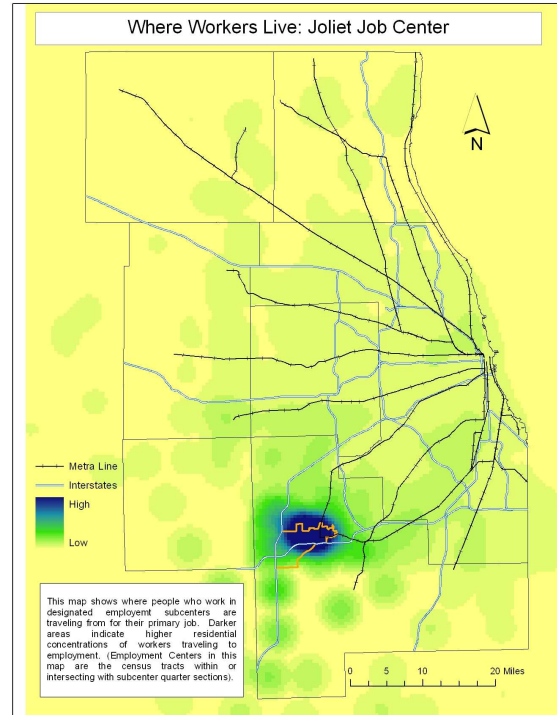
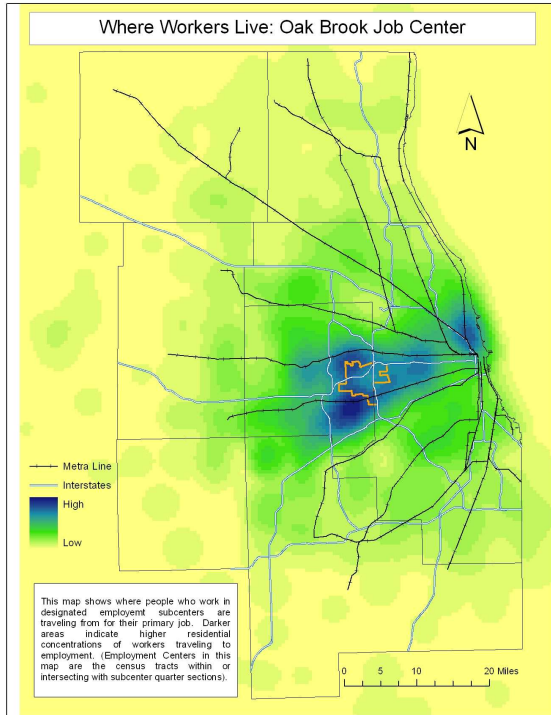
The below maps show commute patterns from affordable housing clusters in the region that are more distant from downtown Chicago. While Chicago remains an important work destination for residents of each of these clusters, a greater number of residents work in suburban areas. For example, for residents of the Waukegan affordable housing clusters, the most common work destinations are within Lake County. On the other hand, for residents of both the Aurora and Joliet affordable housing clusters, nearby job centers and the I-88 corridor are important employment locations.



The maps below show the residence locations of workers in several employment subcenters in Cook County. Similar patterns are seen in residence locations for workers in the O'Hare and Des Plaines / Rosemont job centers, although the O'Hare job center appears to attract more workers from south side neighborhoods. Schaumburg attracts a greater number of workers from northwest Cook, DuPage, and McHenry counties; although large numbers of north and northwest side Chicago residents also commute there. Evanston appears to pull workers from a smaller area, with most of its workers living in northern Cook County or on the north side of Chicago.



The maps below show commuting patterns for employment subcenters outside of Cook County. As they show, Oak Brook pulls workers from a large area. Many of its workers live in DuPage County, but large numbers also live in western Cook County and Chicago's near north side. Joliet and Aurora generally pull their workers from a smaller area, closely surrounding the employment subcenters. Elgin appears to attract a large number of its workers from the nearby areas, but also has a number of workers who live in Kane and McHenry counties along the Route 31 corridor, or in northwestern Cook County.



Potential Jobs-Housing Balance Solutions

The jobs-housing balance can be addressed by:

- Encouraging affordable housing near job centers
- Encouraging job creation in areas with large supplies of affordable housing
- Improving the transportation connections between affordable housing and job centers

8.1 Affordable Housing Opportunities near Employment Subcenters

One way to address jobs-housing balance is to encourage the creation of affordable housing near job centers. This approach allows lower-income residents who are interested in living near their workplaces to have the opportunity to do so. CMAP recognizes, however, that households have many considerations other than proximity to work when they decide where to live, and that many people will choose to continue to live at greater distances from their workplaces. In addition to proximity to jobs, many other factors, such as access to transit and necessary services, must be considered in affordable housing development strategies.

Projected growth is another important consideration. Most parts of the region have the opportunity to plan for additional affordable housing by redeveloping vacant or underutilized sites. In parts of the region that are experiencing high amounts of new growth, there are even more opportunities to provide affordable housing. Therefore, special consideration should be given to the provision of affordable housing in areas where job or population growth is projected to be high.

Many of the techniques that can be used to encourage affordable housing are well-known, however, a few initiatives are of particular interest to the region because they have been an effective strategy thus far or they have real potential to do so in the future. These are listed below.

Employer-assisted housing (EAH)- is a program designed for employers to help their employees live close to work by providing housing down payment or rental assistance near the workplace. In Illinois, the Housing Action Illinois, Metropolitan Planning Council, and several Regional Employer-Assisted Collaboration for Housing (REACH) partners facilitate the efforts for employers to offer EAH programs to their employees. For more on REACH: <http://www.reachillinois.org/>

Inter-jurisdictional Housing Initiatives- The establishment of 'sub-regional' inter-jurisdictional housing trust funds can encourage local municipalities to collaborate and consolidate resources for affordable housing initiatives such as affordable housing production, home ownership counseling, down payment programs, technical issues, as well as addressing other planning obstacles.

Revise Zoning Regulations and Building Codes- Updating local development regulations to permit a diversity of residential types including multi-family or secondary units, and higher density can help provide a better balance of housing options allowing residents to live closer to where they work. Housing code and regulatory revisions should also consider ways in which to bring the overall cost of development down.

Preservation of the Rental Housing Stock- Rental housing represents much of the region's affordable housing. Policies such as rehabilitation grants for multi-family housing can help preserve affordable housing especially near job centers. Organizations such Neighborhood Housing Services and communities such as Oak Park and Evanston offer grants for housing rehabilitation. CMAP is currently working on a housing preservation strategy report which will be available on the *GO TO 2040* website shortly: <http://www.goto2040.org/>

Housing Trust Funds- Housing trust funds (HTFs) are distinct funds established by cities, counties and states that dedicate sources of revenue to support affordable housing. Housing trust funds are usually created by legislation or ordinance and commit public sources of revenue that create dedicated, ongoing funding.

Incentive Zoning- Affordable housing creation can be encouraged through a number of zoning incentives that are intended to off-set the additional cost of building affordable units. TOD density incentives support density close to transit stations while providing incentives such decreased parking requirements or density bonuses that can be used in exchange for the creation of affordable units.

Inclusionary zoning- is strategy that supports the set-aside of a certain percentage of new units as affordable in exchange development incentives which might include among other things density bonuses or expedited permitting processes. CMAP has produced a recent strategy report on Inclusionary Zoning. To learn more: <http://goto2040.org/ideazone/forum.aspx?id=674>

Community Land Trusts- are non-profits that acquire and hold land in trust in order to make housing permanently affordable. Land Trusts lease the land but sell off the residential structure on the land. The land leases are long-term (typically ninety-nine years) and renewable.

Rehabilitation Codes- Typical building codes are written with new construction in mind, and strict application of these codes to older buildings can significantly increase renovation costs. Rehabilitation codes (sometimes known as "smart codes") help keep costs down, thereby encouraging rehabilitation of older properties.

Land Banks- Land banks are governmental or quasi-governmental entities dedicated to assembling properties – particularly vacant, abandoned, and tax- delinquent properties – and putting them to productive use. Land bank authorities acquire or facilitate the acquisition of properties, hold and manage properties as needed, and dispose of properties in coordination with city planners and in accordance with local priorities for land use.

Commercial Linkage Strategies- Commercial linkage strategies tie commercial development to the construction and maintenance of affordable housing or other community needs. Most linkage programs do this by requiring developers of new commercial properties to pay fees to support affordable housing in exchange for incentives such as building permits. These strategies ensure that the community benefits from commercial development given that commercial growth often outpaces affordable housing production.

8.2 Job Creation near Affordable Housing

One approach to better balance jobs and housing is to encourage business retention and attraction in areas with high supplies of affordable housing while focusing on job creation. This approach allows affordable housing residents to remain in their neighborhoods, but it provides more nearby job opportunities, limiting the need for long commutes. In addition, this approach promotes reinvestment in the lower-income communities that typically have large concentrations of affordable housing, which has benefits beyond addressing jobs-housing balance.

Areas with large supplies of affordable housing are generally in older areas of the region, where there is existing infrastructure and access to a variety of transportation options. Therefore, economic development activities in these areas that focus on job creation are plausible. There are serious challenges to accomplishing this, however. While these areas often have existing infrastructure, it may be aging or unsuitable for the needs of businesses. Areas with affordable housing concentrations often have low tax bases, meaning that tax rates must be relatively high to support the provision of services.

CMAP is currently researching the factors that drive business location decisions, and while this research is not complete, it is clear that the public sector has only a limited set of tools at its disposal to influence these decisions. Local governments can use incentives of various types to help attract and retain businesses, but these can strain municipal budgets and are often less important in business location decisions than regional issues like infrastructure, workforce, and tax rates. The *GO TO 2040* plan should address these regional issues, making recommendations for the creation of jobs in areas with high concentrations of affordable housing.

Redevelopment of under-utilized land- Brownfield, greyfield, and infill development – can help to bring economic development opportunities to disinvested areas thus reducing the need for land consumption on the fringe. Redevelopment costs are often offset when taking into consideration the existing infrastructure and transportation networks in which they tend to be situated. CMAP recently published a strategy paper on Brownfield Redevelopment- <http://goto2040.org/brownfields.aspx> and a regional snapshot report on Infill- <http://www.cmap.illinois.gov/snapshot.aspx>

Access to Financing for Business Formation- Capital is often needed for the creation of new business or for the expansion and operations of existing businesses. Start-up businesses can require special consideration and flexibility in lending practices. Financing programs typically include some combination of local, state and/or federal financial institutions and resources.

Community Improvement Districts (CID)- CID's are organizations, usually consisting of local businesses and other institutions, created for financing a range of facilities and services in a clearly defined area. CID's have the power to issue bonds and impose property taxes and are distinct and apart from the municipality that creates the district. However, CID's are typically created by ordinance of the municipality and may have direct organizational or operational ties to the local government. In Chicago, special service area's or SSA's , a form of community improvement districts, exist throughout the city.

Workforce Training Resources- Resources should be strategically targeted to high priority areas in which the current labor market has a demand for employees and the available workforce can fill that demand, if given adequate training. Workforce resources can range from formal educational institutions, private providers, and specialized programs from a department of labor.

Land Assembly for Redevelopment- Acquisition of distressed, vacant or abandoned properties by local government can help to encourage larger and more strategic redevelopment efforts. Land assembly can encourage infill development and help municipalities acquire key parcels for future development thus streamlining the process for developers in land acquisition time and cost.

Matching Labor Demand with Workforce Population- Assessing existing labor skills and building a community's job base around that population will supply growing businesses with immediate labor and help to diminish recruiting laborers who face long commute time and distances from other parts of the region.

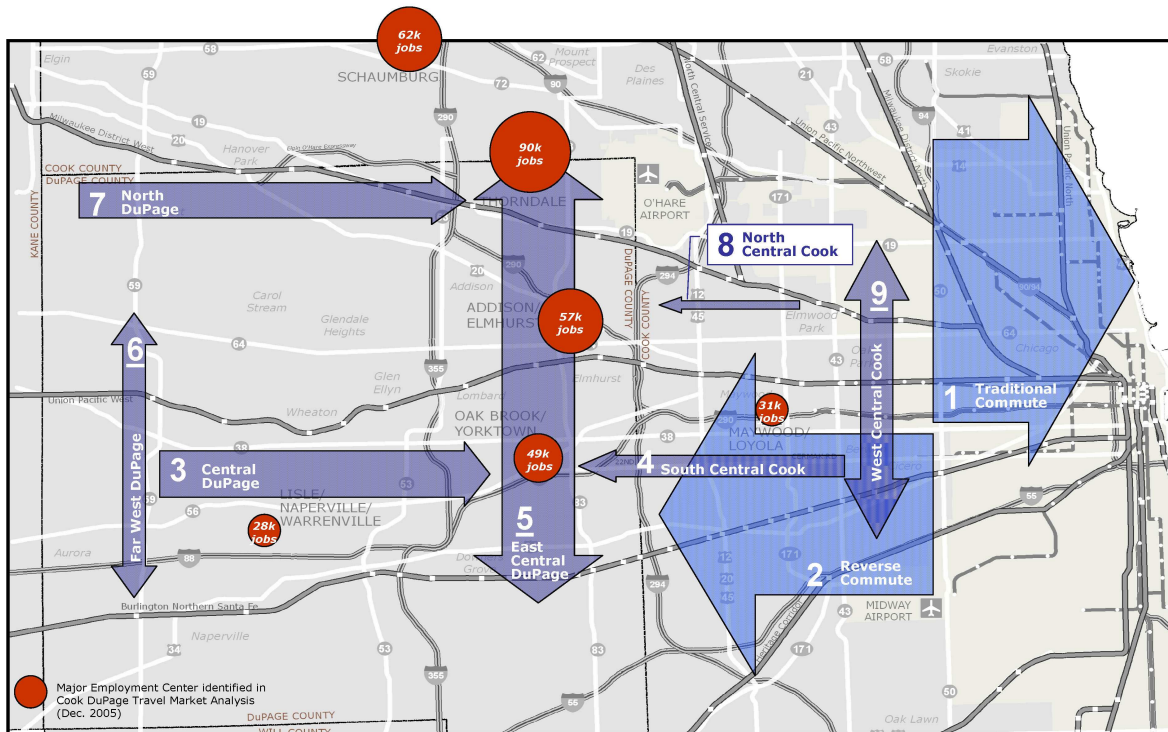
Community Benefit Agreements- CBA's are legally enforceable contracts made between a developer and community groups that set forth a range of community benefits received as part of the development agreement. The purpose of CBA's are to assure that development projects are mutually beneficial for both the community and the developer. CBA's might include provisions such as hiring local workers, the construction of affordable housing, or enforcing environmental standards.

8.3 Transportation and Accessibility

The jobs-housing mismatch exacerbates problems in commuting and congestion, driving up transportation costs for all residents of the region. To mitigate these problems, transportation planning needs to consider the changing dynamics of the region’s workforce and consider programs that address the rise in reverse, off-peak, and suburb-to-suburb commuting – in particular, the needs of lower-income residents.

The *GO TO 2040* process will use evaluation measures to weigh potential transportation investments and to develop priorities. One factor that should be considered is the degree to which an investment improves the ability of residents, particularly lower-income residents, to access jobs.

The Regional Transportation Authority (RTA) has already used a similar approach to evaluate transportation options in their Cook-DuPage corridor study. To estimate how transportation investments would improve access to jobs, the RTA used measures such as the number of jobs within a short distance of transportation facilities that provided reverse-commute or inter-suburban service, and the number of transfers required to reach employment sub-centers from major concentrations of work trip origins. The map below, prepared by the RTA for this study, illustrates employment sub-centers and major commuting flows in the Cook-DuPage corridor.



Conclusion

Each municipality faces unique challenges to bridging the gap between jobs and housing. Whether it is creating a better housing mix near employment centers, bringing economic development activity to disinvested areas or creating better transit networks between affordable housing locations and employment sub-centers, there are many potential strategies. Given the challenges, each municipality will need to evaluate their local situation as part of the greater metropolitan region. While no one-size-fits-all solution exists, the *GO TO 2040* plan will recommend a clear course of action for communities to overcome these obstacles as part of a larger regional solution.

While this Regional Snapshot report provides a definition of jobs-housing balance and describes the types of activities that would address this issue, further research on a number of subjects is needed before specific recommendations for action can be made. For example, this report has made some use of Longitudinal Employment-Household Dynamics (LEHD) data, a relatively new data source that provides a high level of detail concerning commuting patterns. Further advances in this data source will allow it to be used in additional ways.

To fully address the jobs-housing balance issue, CMAP needs a robust understanding of how businesses and households decide where to locate. Research is currently underway on this subject, and the results of this work will be released in future reports.

Also, the *GO TO 2040* plan will require a thorough understanding of the strategies that could be used to encourage job creation in areas with high concentrations of affordable housing and affordable housing near employment sub-centers. CMAP is preparing strategy reports on affordable housing and economic development approaches that could be used for these purposes. Strategy reports issued to date are available on the *GO TO 2040* website, www.goto2040.org.

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