

CMAP



GO TO 2040

UPDATE APPENDIX

Indicator Methodology



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1. Introduction

GO TO 2040 includes a set of performance measures under each recommendation area, which are intended to serve as benchmarks for monitoring the progress of plan implementation. Indicator target values for the years 2015 and 2040 were specified in the plan as a way to quantify actual plan progress and to track how well the region is doing in achieving its goals. These targets should be considered aspirational goals based on the overarching themes of the plan – the region should strive for livable communities, a competitive regional economy, efficient governance, and a world-class transportation system. In preparation for the GO TO 2040 plan update, staff at the Chicago Metropolitan Agency for Planning (CMAP) undertook an indicator review process to collect updated data and identify improvements in the plan performance measures. This report documents the indicator review process and identifies all of the performance measures to be used in the plan update.

1.1 Indicator Review Process

CMAP has revised some of the performance measures included in the plan update to better match the agency's policy needs and the data available. Experience gained over the first few years of implementing the plan, as well as the knowledge staff developed in further analyzing the indicators, informed the selection of indicators for the plan update. The indicator review process proceeded in three phases, which are briefly described.

Phase 1: Assessment of the GO TO 2040 indicators.

CMAP staff conducted an objective evaluation of each of the plan indicators for the express purpose of determining if it could be improved upon for the plan update. Questions were asked about the measure itself, including:

- Is this a reasonable measure of what the plan hopes to achieve?
- Is this measure understandable to a non-planner?

Questions were also asked about the data supporting each of the indicators:

- Are there any concerns about the quality of the underlying data?
- What level of effort is required to update the indicator and is it a reproducible measure?
- Can the data be updated with sufficient frequency to serve as a reliable benchmark for measuring plan progress?
- Are there alternative data sets available that could be used to support the indicator?

As the performance measures are intended to track the progress of plan implementation, *a guiding principle during the assessment was the need for indicators to be based on actual measured values and not be reliant upon modeled or estimated figures.* Each GO TO 2040 indicator was considered on its own merits. While some indicators had easily identified improvements that could be made, an effort was also made to balance the data availability and capacity to maintain the indicator in determining the most appropriate measure to serve the needs of the plan update.

Phase 2: Development of proposed indicators for the plan update.

Based on the results of the indicator assessment, CMAP staff developed a list of proposed indicators for the plan update. The 28 indicators fall into three groups:

- Eight original indicators currently in GO TO 2040 that are continuing unchanged.
- Ten original indicators that are being modified from their GO TO 2040 version.
- Ten new indicators that mostly address the recommendation areas in GO TO 2040 that did not identify specific indicators (Improve Education and Workforce Development, Support Economic Innovation, and Reform State and Local Tax Policy).

The plan performance measures are intended to provide the means to objectively evaluate the progress of plan implementation. To foster this evaluation there should be indicator continuity across plan updates, to the extent possible. Therefore the decision to modify plan indicators was not taken lightly, however meeting any of the following criteria was considered an improvement to an existing indicator:

- Observed data exist that can be used to replace an indicator currently reliant on modeled data.
- Modifying an existing indicator would result in a more meaningful measure or one more easily understood by a non-planner.
- An alternative dataset is available that is released with greater frequency to create a more robust set of indicator values.
- Modifying the existing indicator would result in a significant reduction in the level of effort to maintain it without a proportional reduction in its meaningfulness.
- Modifying the existing indicator would increase its relevance to plan recommendations.

The set of proposed indicators for the plan update was presented to CMAP's various Working Committees to obtain input on the indicators related to their areas of expertise and to receive

public comment. The indicators were also presented to the CMAP Board and the MPO Policy Committee for discussion.

Phase 3: Development of new and revised indicator target values.

Following identification of the indicators to be included in the plan update, the final step in the review process was to identify short- and long-term target values for the performance measures. Including target values in the plan is essential, as they provide a benchmark against which implementation of specific goals in the plan can be quantified. The first task in developing targets was collecting the available data updates for the performance measures. For the continuing indicators, this provides a basis to determine how the region performs in meeting the short-term goals established in GO TO 2040. For the new and modified indicators being introduced, collecting the current conditions is essential for establishing baseline values and for understanding the current context of the measure.

The following summary describes the procedures used to develop indicator target values for the plan update:

- New or modified indicators:
 - Baseline conditions of the indicator were established.
 - A short-term target for the year 2020 and a long-term target for the year 2040 were developed.
 - No 2015 targets were established for these indicators, as it makes little sense to develop a one-year target for a long-range plan.
- Indicators continuing from GO TO 2040:
 - When available, updated current conditions were calculated.
 - The original short-term target value from GO TO 2040 (2015) is included in the plan update to track progress against the updated current conditions. When necessary, a revised 2015 target was developed.
 - A new short-term target value was developed for the year 2020 so that there would continue to be a quantifiable short-term goal to aim for after 2015.

More detailed descriptions of the indicators and the methods used to develop target values are included in the body of this document.

1.2 Document Layout

The remainder of the report is divided into sections that correspond to the 12 recommendation areas of GO TO 2040. Each section includes a discussion of all of the indicators in the plan

update that relate to the recommendation area in order to give the reader a holistic view of how progress is to be measured. When appropriate, it is noted which performance measures are new and which have been modified from their original version.

Visualizations of the indicator target values are included with each of the performance measures. They have three main components:

- Baseline values – These represent the original values reported in GO TO 2040 as current conditions (for continuing indicators only).
- Current conditions – These values are the most current ones available for each indicator.
- Targets values – These include the 2015 targets for continuing indicators and targets for 2020 and 2040 for all performance measures.

This report also includes several appendices:

- *Appendix A* – This discusses a set of secondary kindred indicators that will supplement the information provided by the plan performance measures. It is envisioned that the kindred indicators may be used in the narrative of the plan update and in the annual GO TO 2040 Moving Forward implementation reports to tell a more complete story of progress, as well as address data gaps in the plan performance measures.
- *Appendix B* – This documents the analysis used to develop the Regional Government Transparency Index score.
- *Appendix C* – This appendix provides a discussion of the analysis methodology used to develop the Access to Transit Index.

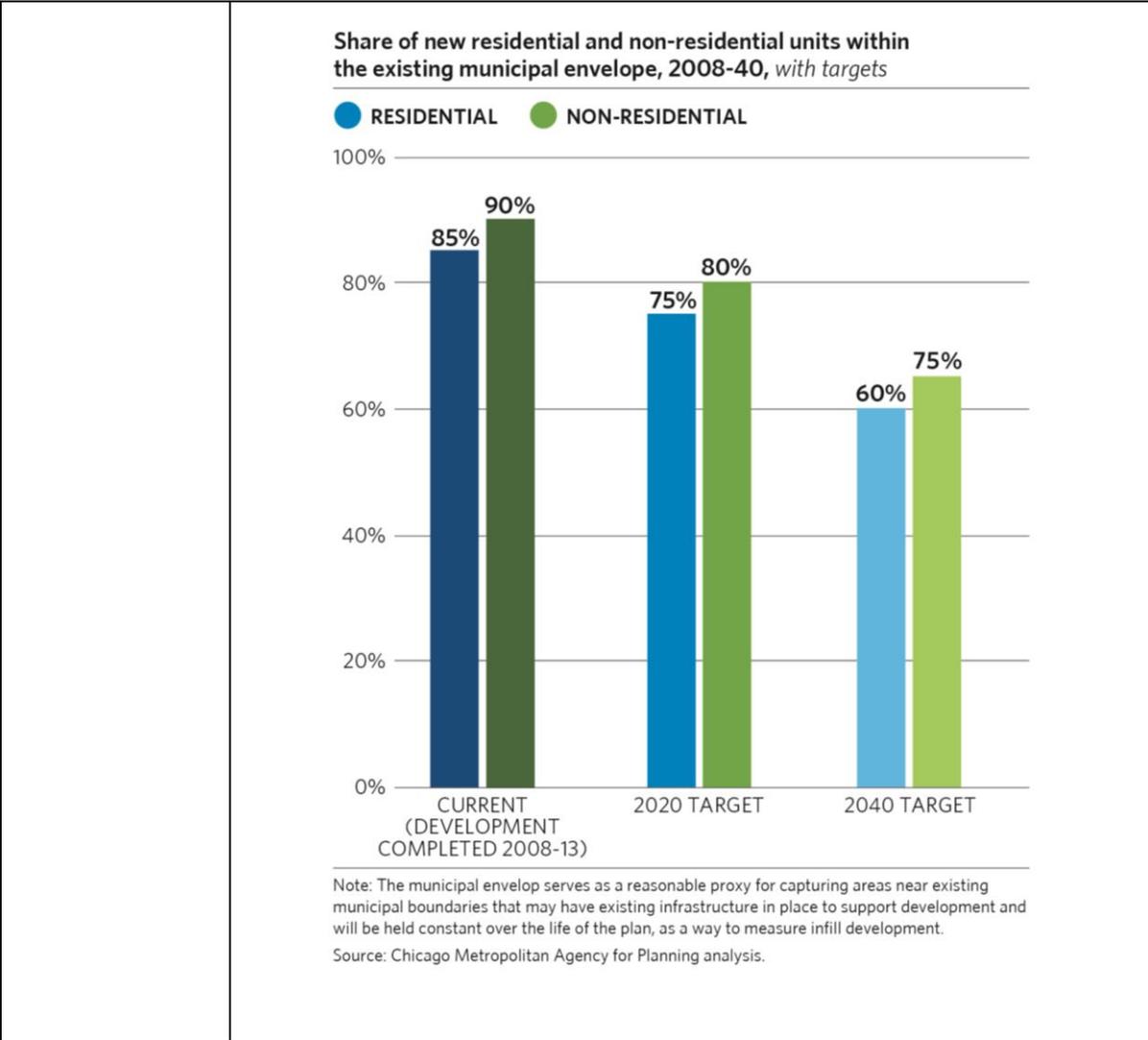
2. Achieve Greater Livability through Land Use and Housing

This recommendation area has two indicators, both of which have been modified from the original versions included in GO TO 2040.

2.1 Share of New Development Occurring within the Existing Municipal Envelope

<p>Indicator:</p>	<p>This indicator uses the Northeastern Illinois Development Database (NDD) to measure the percentage of infill development that occurred within the 2010 municipal envelope (discussed below) over the life of the plan. This measure addresses a critical element of GO TO 2040 – encouraging development in existing communities where supporting infrastructure to support it is already in place. Both residential and non-residential development will be tracked. The non-residential category covers a wide range of uses including office, retail, hotel, manufacturing, and warehousing, among others. For this indicator, the term “development” is used in a general sense to include both new development and redevelopment of existing uses.</p> <p>The NDD tracks all significant development and redevelopment in the seven-county region. Developments must meet one of the following criteria to be included in the NDD:</p> <ul style="list-style-type: none"> • Consume at least once acre of land, OR • Consist of at least ten residential units, OR • Consist of at least 10,000 square feet of non-residential space. <p>The NDD covers new construction, renovations with a change in land use (e.g., commercial to residential), and expansions of existing uses (e.g., school additions). In general, if a development results in a change of population or employment, it is included in the NDD. The database does not include individual homes that may meet the above criteria unless they are part of a larger development, renovations where there is no change in land use, or condominium conversion of existing rental buildings.</p>
<p>Targets:</p>	<p><i>Note: This indicator is modified significantly from the GO TO 2040 version, thus it will not have a 2015 target value.</i></p> <p>Due to the disparate nature of residential and non-residential development, separate target values and units of measurement will be used to track the progress of each type of development. Reporting</p>

	<p>residential development in terms of units and non-residential development in terms of square footage is the industry standard; there is no simple method to develop an equivalency between the two. In both cases, the units being reported are more meaningful than a general areal measurement such as acres, which are two-dimensional and do not necessarily reflect the intensity of use (particularly when developments are vertical in nature).</p> <p><u>Residential Development</u> 2020: 75 percent of new residential units located within the existing municipal envelope.</p> <p>2040: 60 percent of new residential units located within the existing municipal envelope.</p> <p><u>Non-Residential Development</u> 2020: 80 percent of new non-residential square footage located within the existing municipal envelope.</p> <p>2040: 65 percent of new non-residential square footage located within the existing municipal envelope.</p>
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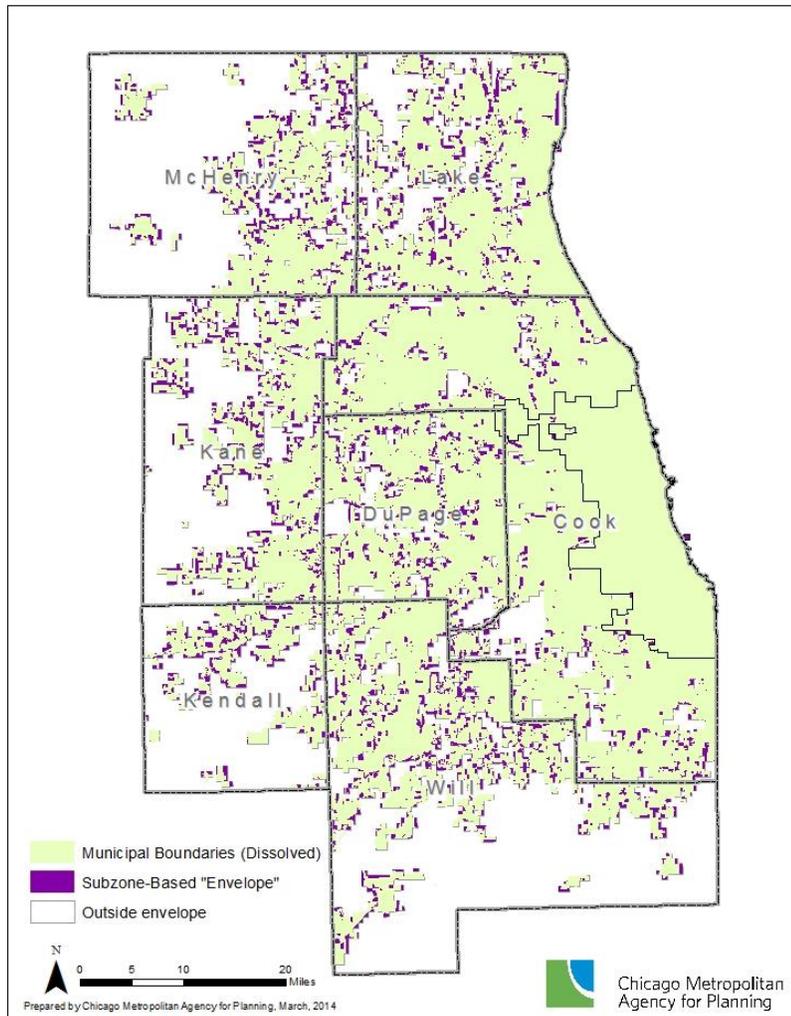


Methodology: The indicator will track the share of new residential units and the share of new non-residential square footage that occur within the existing municipal envelope over the life of the plan. While the initial concept called for measuring development within or near existing municipal boundaries, no specific threshold of “near” was defined. Rather than use an arbitrary distance from existing municipal boundaries to define the infill area, an alternative method was used to create the existing municipal envelope.

Using the dissolved 2010 municipal boundaries as a basis, the municipal envelope was created by “rasterizing” the polygons to CMAP’s subzone system; i.e., converting them to the subzone grid. Subzones are quarter-section sized geographies that CMAP uses for household and employment forecasting; generally they are one-half mile square throughout the region. A subzone was included in the municipal envelope if at least 30 percent of its area was comprised of area within the 2010 municipal boundary polygon. The following map

shows the 2010 municipal boundaries (light green) compared to the additional areas added to the municipal envelope (shown in purple) due to the subzone conversion. The 2010 municipal boundaries cover an area of 2,171 square miles, while the municipal envelope covers 2,403 square miles -- an increase in total area of 11 percent. The municipal envelope serves as a reasonable proxy for capturing areas near existing municipal boundaries.

Comparison of Municipal Boundaries and Subzone-Based "Envelope"



The municipal envelope will be held constant over the life of the plan as a way to measure infill development using a control geography representing areas with existing infrastructure in place.

Original GO TO 2040 Indicator:

The original indicator was a parcel-based analysis of the number of acres of land within existing municipal boundaries that are available for redevelopment. These are parcels that were deemed vacant or

	<p>“underutilized” commercial and residential properties. The underutilized definition was based on the ratio of the improvement value of the parcel to the land value -- residential parcels are underutilized if the ratio is less than 1.0 and commercial parcels are included if their ratio is under 0.5. Parcel data were obtained from the county assessors.</p>
<p><i>Rationale for Change:</i></p>	<p>While the “underutilized” land indicator tracked the potential for infill development, the NDD tracks actual developments occurring in the region. Replacing the indicator of available land with one tracking actual infill development is a better way to measure plan implementation progress of this recommendation area.</p>

2.2 Percentage of Income Spent on Housing and Transportation by Moderate- and Low-Income Residents

<p>Indicator:</p>	<p>This measure estimates the share of household income spent on housing and transportation costs for moderate- and low-income households. For analysis purposes, these are households with an annual income ranging from \$20,000 to \$49,999; this is consistent with the data analyzed in the original GO TO 2040 measure. Data are from the Consumer Expenditure Survey (CES), which is conducted annually by the U.S. Bureau of Labor Statistics (BLS). The survey collects information on household income and expenditures, including those for housing and transportation. Data are reported for the Chicago Metropolitan Statistical Area (MSA).</p>
<p>Targets:</p>	<p>2015: 53 percent of income spent on housing and transportation by moderate- and low-income residents.</p> <p>2020: 51 percent of income spent on housing and transportation by moderate- and low-income residents.</p> <p>2040: 45 percent of income spent on housing and transportation by moderate- and low-income residents.</p>

	<p>Percentage of income spent on housing and transportation by moderate- and low-income residents, 2010-40, with targets</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Percentage of Income Spent</th> </tr> </thead> <tbody> <tr> <td>2008</td> <td>55%</td> </tr> <tr> <td>2012</td> <td>57%</td> </tr> <tr> <td>2016</td> <td>53%</td> </tr> <tr> <td>2020</td> <td>51%</td> </tr> <tr> <td>2040</td> <td>45%</td> </tr> </tbody> </table> <p>Source: Chicago Metropolitan Agency for Planning analysis of the U.S. Bureau of Labor Statistics Consumer Expenditure Survey.</p> <p>A look at the most recent data available (2012) shows that the region lost some ground on this measure between 2010-12 -- the share of income spent on housing and transportation by low- and moderate-income households in the region increased from 55 percent to 57 percent.</p>	Year	Percentage of Income Spent	2008	55%	2012	57%	2016	53%	2020	51%	2040	45%
Year	Percentage of Income Spent												
2008	55%												
2012	57%												
2016	53%												
2020	51%												
2040	45%												
<p>Methodology:</p>	<p>The 2015 and 2040 targets are unchanged from GO TO 2040. Even though the data source being used to measure progress has changed, the 2010 baseline value using the CES data is the same as the one calculated using the Center for Neighborhood Technology's H+T Index (see the follow description). The 2020 target was developed by continuing a straight-line decrease in the share of household income spent on housing and transportation costs by moderate- and low-income residents.</p>												
<p>Original GO TO 2040 Indicator:</p>	<p>The original GO TO 2040 measure used the Center for Neighborhood Technology's Housing + Transportation (H+T) Affordability Index to estimate the share of household income spent on housing and transportation costs. The housing component is derived from U.S. Census data, while the transportation component is estimated using a multidimensional regression analysis that requires a number of</p>												

	<p>transportation and Census-based data inputs. The H+T index has been calculated using 2000 Census data and updated with data from the 2005-09 American Community Survey.</p>
<p><i>Rationale for Change:</i></p>	<p>As the CES data are released annually, they will allow for creation of a more robust dataset that can be used to track plan implementation progress in this area. Additionally, the CES public use microdata allow for a more-detailed investigation of this topic, such as the breakdown of cost by household income range.</p>

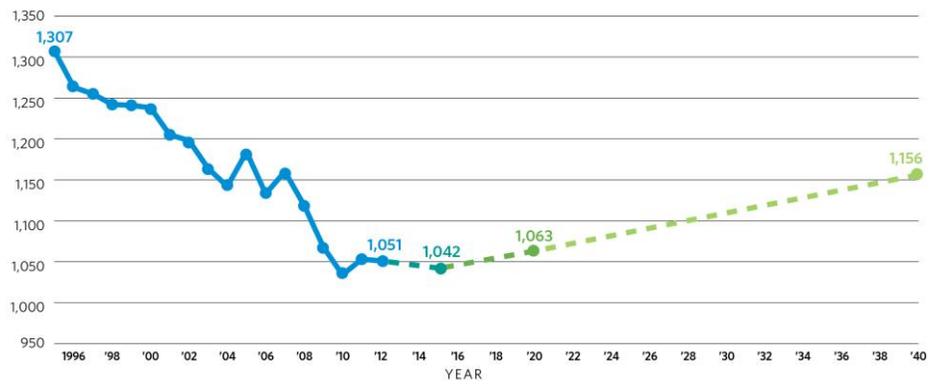
3. Manage and Conserve Water and Energy Resources

The water-related indicators have been modified from their original versions.

3.1 Public Supply Water Demand

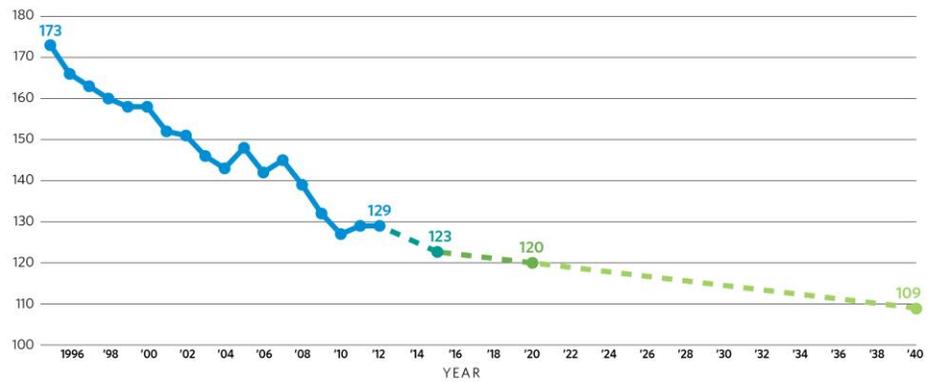
Indicator:	<p>This indicator focuses on public supply water demand provided by the Illinois State Water Survey at the University of Illinois at Urbana-Champaign and reported in millions of gallons of water used daily. Public supply water refers to water that is withdrawn, treated, and delivered to residential, industrial, commercial, governmental, and institutional users via public water supply systems. Data will be reported for the seven-county CMAP region only.</p>
Targets:	<p>This indicator will have two sets of targets -- one measuring total daily water demand and one measuring daily demand on a per capita basis. Per capita measurement allows for an examination of water conservation as an increase in total demand due to population or industrial growth can mask gains in conservation. At the same time, it is important to examine total demand because potable water is a finite resource and growth in our region is expected to increase the demand for water in 2040 above the current level of consumption.</p> <p>2015: 1,042 million gallons of water used daily 123 gallons of water used daily per capita</p> <p>2020: 1,063 million gallons of water used daily 120 gallons of water used daily per capita</p> <p>2040: 1,156 million gallons of water used daily 109 gallons of water used daily per capita</p>

Millions of gallons of water used daily, 1995-40, with targets



Note: The target values for future years are consistent with the original analysis prepared by Dziegielewski and Chowdhury (2008), but have been revised to reflect CMAP's updated socioeconomic forecast.
 Sources: Illinois State Water Survey (1995-2012); Dziegielewski and Chowdhury, 2008 (Regional Water Demand Scenarios for Northeastern Illinois: 2005-2050) for future years.

Gallons of water used daily per capita, 1995-40, with targets



Water demand sources: Illinois State Water Survey (1995-2012); Dziegielewski and Chowdhury, 2008 (Regional Water Demand Scenarios for Northeastern Illinois: 2005-50) for future years.
 Population sources: U.S. Census Bureau and Chicago Metropolitan Agency for Planning socioeconomic forecast.

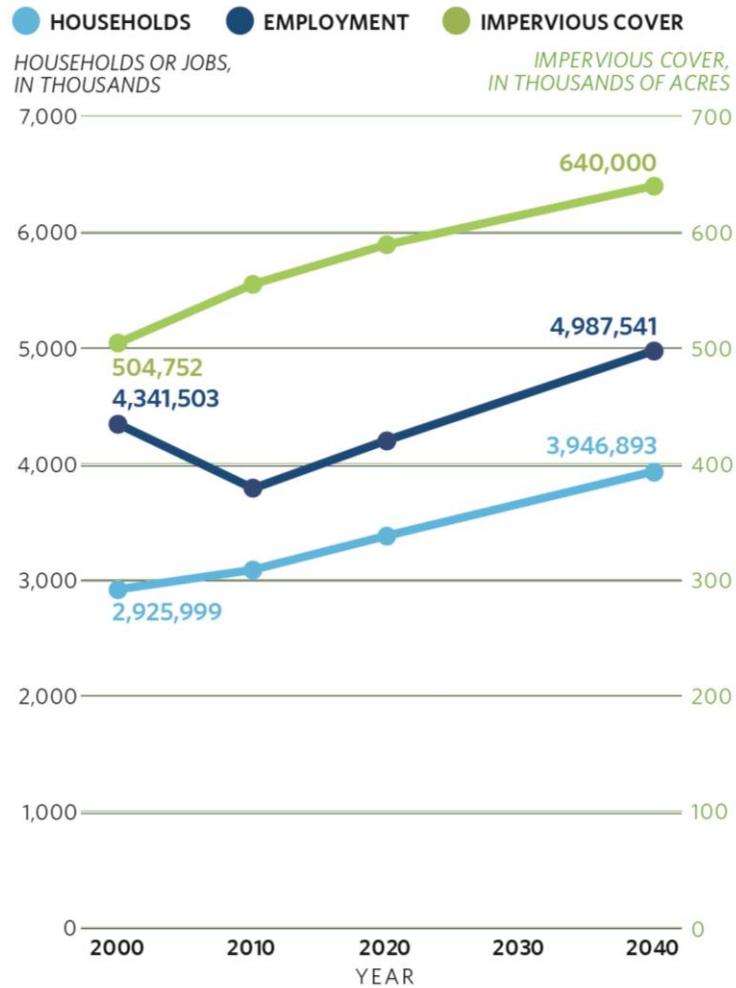
<p>Methodology:</p>	<p>Target values for per capita water demand are taken from the technical analysis (Regional Water Demand Scenarios for Northeastern Illinois: 2005-2050) conducted to support Water 2050: Northeastern Illinois Water Supply/Demand Plan. Values represent the forecasts for Public Supply water demand for the seven CMAP counties from the “Less Resource Intensive” scenario of the water plan. The future water scenarios included in Water 2050 were developed by researchers at the Department of Geography and Environmental Resources, Southern Illinois University.</p> <p>Target values for total daily water demand are based on the methodology used in the technical analysis but have been revised to reflect CMAP’s updated socio-economic forecast. To remain consistent with the original analysis methodology, the per capita public supply water demand rates developed for the years 2015, 2020, and 2040 were applied to CMAP’s revised population forecasts to develop updated daily water demand values. These per capita values are based on the population served by the public supply water systems and not the entire population of the region, as a small portion of the region’s population (less than four percent) receives water from private wells and is termed self-supplied domestic sources. For consistency, the historic values of per capita public supply water demand are estimated by removing the same share of the regional population served by self-supplied domestic systems from the population served.</p>
<p><i>Original GO TO 2040 Indicator:</i></p>	<p>The GO TO 2040 indicator measured millions of gallons of water used daily, comprised of five sectors: public supply; self-supplied industrial and commercial; self-supplied domestic; irrigation and agriculture; and power generation. These values were drawn from the “Less Resource Intensive” scenario of Water 2050 and applied to the 11-county regional water supply planning area, not just the CMAP region.</p>
<p><i>Rationale for Change:</i></p>	<p>Public supply water demand comprises 80 percent of total water demand in the 11-county water supply planning region. Modifying the indicator would reduce the effort needed to track this measure without greatly decreasing its usefulness. Limiting this measure to the seven-county CMAP region will makes its geographic scope comparable to the other plan indicators. Maintaining the indicator as used in GO TO 2040 would require continued consultant support.</p>

3.2 Acres of Impervious Area

<p>Indicator:</p>	<p>This measures the total number of acres of impervious surfaces in the region; it is the entire amount of hard surface (such as buildings, sidewalks and streets) in the landscape. Imperviousness is an important environmental indicator because it is negatively associated with various measures of the biological health and physical integrity of surface waters. The source for this data is the National Land Cover Dataset, a raster dataset with 16 land cover classifications that is published approximately every five years by the USGS.</p>												
<p>Targets:</p>	<p><i>Note: This indicator is modified significantly from the GO TO 2040 version, thus it will not have a 2015 target value.</i></p> <p>2020: 590,000 acres of impervious cover</p> <p>2040: 640,000 acres of impervious cover</p> <div data-bbox="613 923 1323 1583"> <p>Acres of impervious cover, 2001-40, with targets</p> <table border="1"> <caption>Acres of impervious cover, 2001-40, with targets</caption> <thead> <tr> <th>Year</th> <th>Acres (K)</th> </tr> </thead> <tbody> <tr> <td>2000</td> <td>504K</td> </tr> <tr> <td>2004</td> <td>537K</td> </tr> <tr> <td>2012</td> <td>556K</td> </tr> <tr> <td>2020</td> <td>590K</td> </tr> <tr> <td>2040</td> <td>640K</td> </tr> </tbody> </table> <p>Source: Chicago Metropolitan Agency for Planning analysis of U.S. Geological Survey 2011 National Land Cover Dataset.</p> </div>	Year	Acres (K)	2000	504K	2004	537K	2012	556K	2020	590K	2040	640K
Year	Acres (K)												
2000	504K												
2004	537K												
2012	556K												
2020	590K												
2040	640K												
<p>Methodology:</p>	<p>The following chart tracks the increase in households and jobs expected in the region between 2000-40 (measured on the left axis) based on CMAP’s socioeconomic forecast for 2040. These values are plotted against the expected increase in impervious area in the region (measured using the scale on the right axis). The anticipated growth rate of impervious area between 2010-40 is roughly one-half that of the increase in households and jobs in the region during the same 30-year period; this reflects the fact that the rate of growth in imperviousness</p>												

declines as development density increases.

Regional growth of households, jobs, and impervious surface, 2000-40, with targets



Population sources: U.S. Census Bureau and Chicago Metropolitan Agency for Planning socio-economic forecast. Employment sources: Illinois Department of Employment Security and Chicago Metropolitan Agency for Planning socio-economic forecast. Impervious cover source: U.S. Geological Survey National Land Cover Dataset.

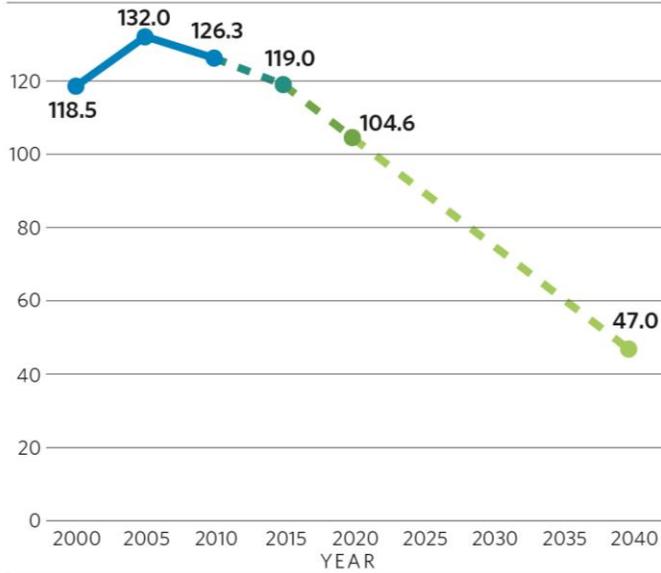
The 2020 target for impervious surfaces reflects that growth in impervious cover in the region should be no more than 60 percent of the rate of household and job growth experienced by 2020. The 2040 target reflects that the growth in impervious cover should be no more than 50 percent of the growth in households and jobs over that same period. Note that the USGS introduced an improved methodology for measuring impervious cover with the release of the 2011 National Land Cover Dataset. Using this new methodology, the USGS also released revised impervious cover data for the years 2001 and 2006; these values are used in the chart above.

<i>Original GO TO 2040 Indicator:</i>	The original GO TO 2040 measure (“Acres of Connected Impervious Area”) assumed all impervious surfaces in the region, as measured by the National Land Cover Dataset, were connected.
<i>Rationale for Change:</i>	The source dataset allows for the measurement of total impervious acres, but cannot distinguish between connected and unconnected areas. Making this change would allow the indicator to continue measuring total impervious area in the region, while keeping the underlying analysis and source data the same. It represents a more accurate depiction of the information.

3.3 Greenhouse Gas Emissions

Indicator:	This indicator measures the total of greenhouse gas (GHG) emissions produced in the CMAP region and serves as a proxy for energy consumption. GHG emissions are calculated for a number of different sectors, with the two largest contributors being building energy (i.e., electricity and natural gas) and transportation, which together comprise nearly 90 percent of GHG emissions. Emissions are reported in million metric tons of carbon dioxide equivalent (MMT _{CO₂e}).
Targets:	As with water demand, this indicator includes two sets of targets: one measuring total emissions and one measuring them on a per capita basis. 2015: 119 MMT _{CO₂e} 13.7 metric tons of CO ₂ equivalent per capita 2020: 105 MMT _{CO₂e} 11.5 metric tons of CO ₂ equivalent per capita 2040: 47 MMT _{CO₂e} 4.3 metric tons of CO ₂ equivalent per capita

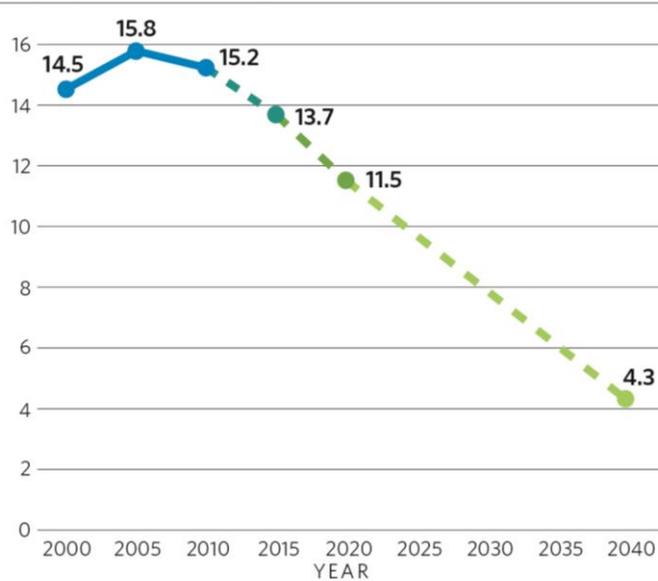
Greenhouse gas emissions, million metric tons of CO2 equivalent, 2000-40, with targets



GHG emissions sources: ICF International (2010 GHG emissions); the Center for Neighborhood Technology (GHG emissions for all other years).

Population sources: 2010 U.S. Census and Chicago Metropolitan Agency for Planning socio-economic forecast.

Greenhouse gas emissions, metric tons per capita of CO2 equivalent per year, 2000-40, with targets



GHG emissions sources: ICF International (2010 GHG emissions); the Center for Neighborhood Technology (GHG emissions for all other years).

Population sources: 2010 U.S. Census and Chicago Metropolitan Agency for Planning socio-economic forecast.

The most recent analysis (reflecting data for 2010) shows a decrease in overall GHG emissions from the base year value in 2005.

Methodology:	The 2015 and 2040 targets are unchanged from GO TO 2040. The 2020 target was developed by continuing a straight-line decrease in MMTCO _{2e} in the region.
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4. Expand and Improve Parks and Open Space

No changes are proposed for the parks and open space indicators.

4.1 Acres of Conservation Open Space

Indicator:	This indicator measures the total number of acres in the region used for conservation (i.e., preserves and natural areas). This measure does not include acres of parkland in the region, land used for golf courses, farm land, or land used for historic preservation. Information on conservation open space is gathered from a number of data sources including the Illinois Department of Natural Resources, county forest preserves or conservation districts, CMAP's Land Use Inventory, and the National Conservation Easement Database.
Targets:	2015: 275,000 acres 2020: 300,000 acres 2040: 400,000 acres

	<p style="text-align: center;">Acres of conservation open space, 2000-40, with targets</p> <p style="text-align: center;">■ = 10,000 ACRES</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Year</th> <th>Acres (Thousands)</th> </tr> </thead> <tbody> <tr> <td>2008</td> <td>254,016</td> </tr> <tr> <td>2013</td> <td>259,949</td> </tr> <tr> <td>2015 TARGET</td> <td>275,000</td> </tr> <tr> <td>2020 TARGET</td> <td>300,000</td> </tr> <tr> <td>2040 TARGET</td> <td>400,000</td> </tr> </tbody> </table> <p style="font-size: small;">Sources: Chicago Metropolitan Agency for Planning Land Use Inventory, Illinois Department of Natural Resources, County forest preserve and conservation districts, and the National Conservation Easement Database.</p>	Year	Acres (Thousands)	2008	254,016	2013	259,949	2015 TARGET	275,000	2020 TARGET	300,000	2040 TARGET	400,000
Year	Acres (Thousands)												
2008	254,016												
2013	259,949												
2015 TARGET	275,000												
2020 TARGET	300,000												
2040 TARGET	400,000												
<p>Methodology:</p>	<p>The 2015 and 2040 targets are unchanged from GO TO 2040. The 2020 target was developed by continuing a straight-line increase in acres of open space in the region. The current CMAP Land Use inventory, finalized following the adoption of GO TO 2040, is a parcel-based database which is a marked departure from the previous version. As a result of this change, the base year conservation open space value was recalculated based on the updated Land Use Inventory structure in order to ensure that this indicator is measured in a consistent manner.</p>												

4.2 Regional Access to Parks per Person in Acres

<p>Indicator:</p>	<p>This is an aggregate per capita measure of park accessibility based on proximity to park land. Values are reported as the percentage of the regional population with access to parks at the rates of four acres per 1,000 people (representing the denser parts of the region) and ten acres per 1,000 people (representing less-dense areas). The CMAP Land Use Inventory is the data source for determining park locations; subzone population data are used to calculate the per capita values.</p>
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<p>Targets:</p>	<p>The base year values for this indicator reported in GO TO 2040 were developed using the current version of the Land Use Inventory available at the time (2005) and a socioeconomic forecast of population for the year 2010. The 2010 current conditions reported below were developed using the updated 2011 Land Use Inventory and population figures from the 2010 Census. For consistency, the 2005 values were recalculated using the 2010 Census population – in effect this holds the population constant so that any changes between 2005 and 2010 are due solely to increases in the amount of parkland.</p> <p>Use of the 2010 Census population figures resulted in 2005 values that were slightly higher than those calculated for GO TO 2040. As a result, the 2010 value for the population with access to ten acres of parkland per 1,000 people is 52 percent, which is equal to the original 2015 target for this indicator. Thus the 2015 target for this indicator is revised to 54 percent for the plan update.</p> <p><u>Four acres per 1,000 people</u></p> <p>2015: 72 percent of the regional population 2020: 78 percent of the regional population 2040: 100 percent of the regional population</p> <p><u>Ten acres per 1,000 people</u></p> <p>2015: 54 percent of the regional population 2020: 57 percent of the regional population 2040: 70 percent of the regional population</p>
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	<p>Regional population with access to four and ten acres of parkland per 1,000 people, 2005-40, with targets</p> <p>Legend: ● ACCESS TO FOUR ACRES ● ACCESS TO TEN ACRES</p> <p>*Revised estimate. Population sources: U.S. Census Bureau and Chicago Metropolitan Agency for Planning socio-economic forecast. Parkland source: Chicago Metropolitan Agency for Planning Land Use Inventory</p>
Methodology:	<p>The 2015 target for the population with access to ten acres of parkland per 1,000 people is modified from its original value, as noted previously. The other 2015 target and the 2040 targets are unchanged from GO TO 2040. The 2020 targets were developed by continuing a straight-line increase in acres of parkland in the region.</p>

4.3 Trail Greenway Mileage

Indicator:	<p>Trail greenways are defined as off-street trails for walking or bicycling that connect parks or conservation areas; they exclude on-street trails. This indicator measures the number of miles of trail greenways in the Northeastern Illinois Regional Greenways and Trails Plan that have been completed or let. This information is maintained by CMAP staff in the Bicycle Information System.</p>
Targets:	<p>2015: 808 miles 2020: 916 miles 2040: 1,348 miles</p>

	<p>Miles of trail greenway, 2010-40, with targets</p> <table border="1"> <thead> <tr> <th>Year/Target</th> <th>Miles</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>700</td> </tr> <tr> <td>2013</td> <td>731</td> </tr> <tr> <td>2015 TARGET</td> <td>808</td> </tr> <tr> <td>2020 TARGET</td> <td>916</td> </tr> <tr> <td>2040 TARGET</td> <td>1,348</td> </tr> </tbody> </table> <p>Source: Chicago Metropolitan Agency for Planning analysis.</p> <p>As of 2013, 731 miles of trail greenways have been completed. In addition, another 59 miles of trail greenways have been programmed and will likely be completed by 2015 -- for a total of 790 miles, just a bit under the 2015 target.</p>	Year/Target	Miles	2010	700	2013	731	2015 TARGET	808	2020 TARGET	916	2040 TARGET	1,348
Year/Target	Miles												
2010	700												
2013	731												
2015 TARGET	808												
2020 TARGET	916												
2040 TARGET	1,348												
<p>Methodology:</p>	<p>The 2015 and 2040 targets are unchanged from GO TO 2040. The 2020 target was developed by continuing a straight-line increase in miles of trail greenways in the region.</p>												

5. Promote Sustainable Local Food

Changes are proposed for the two local food indicators drawn from U.S. Census of Agriculture data.

5.1 Acres of Land Harvesting Food for Human Consumption

<p>Indicator:</p>	<p>Data for this indicator come from the U.S. Census of Agriculture. The U.S. Department of Agriculture defines “direct consumption” as the totals found in these categories: orchards, peanuts, potatoes, sweet potatoes, and vegetables. This indicator lists the total number of acres in the region that support food for direct human consumption. This data excludes community gardens and other entities not counted in the Census of Agriculture.</p>														
<p>Targets:</p>	<p><i>Note: No targets were established for this indicator in GO TO 2040, thus it will not have a 2015 target value.</i></p> <p>2020: 5,700 acres of land harvesting food for human consumption in the region.</p> <p>2040: 8,200 acres of land harvesting food for human consumption in the region.</p> <div data-bbox="597 1196 1334 1860"> <p>Acres of land harvested for human consumption, 1997-2040, with targets</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Acres</th> </tr> </thead> <tbody> <tr> <td>1997</td> <td>10,963</td> </tr> <tr> <td>2000</td> <td>8,389</td> </tr> <tr> <td>2008</td> <td>5,588</td> </tr> <tr> <td>2012</td> <td>4,688</td> </tr> <tr> <td>2020</td> <td>5,700</td> </tr> <tr> <td>2040</td> <td>8,200</td> </tr> </tbody> </table> <p>Source: U.S. Department of Agriculture Census of Agriculture.</p> </div>	Year	Acres	1997	10,963	2000	8,389	2008	5,588	2012	4,688	2020	5,700	2040	8,200
Year	Acres														
1997	10,963														
2000	8,389														
2008	5,588														
2012	4,688														
2020	5,700														
2040	8,200														

Methodology:	<p>The goal for 2040 calls for a 75-percent increase in the number of acres in the region harvesting food for direct human consumption. This goal is directly tied to the goal for the indicator measuring the market value of agricultural products sold directly to individuals for human consumption in the region. The chart above shows a steady decline in the number of acres in the region used to harvest food for direct human consumption over the last four censuses; achieving the 2040 goal will increase the number of acres used for this purpose to a level comparable to that seen in the year 2002. The 2020 goal reflects a straight-line increase from current conditions.</p>
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5.2 Value of Agricultural Products Sold Directly to Individuals for Human Consumption

Indicator:	<p>This indicator measures the dollar value of agricultural products produced and sold directly to individuals for human consumption from establishments such as roadside stands, farmers’ markets, and pick-your-own sites in the seven-county region. The value excludes non-edible products such as nursery crops, cut flowers, and wool, but does include livestock sales. Data are from the Census of Agriculture conducted every five years and represent the best available data on food grown and consumed locally.</p> <p>This measure is adjusted for inflation to show real (not nominal) value. The values reported by the Census of Agriculture will be converted to 1997 dollars to make them directly comparable across years. Specifically, the Consumer Price Index for “Food at Home” for the Chicago-Gary-Kenosha Consolidated MSA is used to convert the values to real dollars. “Food at Home” is defined by the Bureau of Labor Statistics as “the total expenditures for food at grocery stores (or other food stores) and food prepared by the consumer unit on trips, [excluding] the purchase of nonfood items.”</p> <p>Data suppression can be an issue with this indicator; however there is no better data source available. Generally, county data are suppressed (i.e., county totals are not reported) when the actual data of a dominant entity can be ascertained fairly accurately from the aggregate data values that are reported.</p>
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Targets:

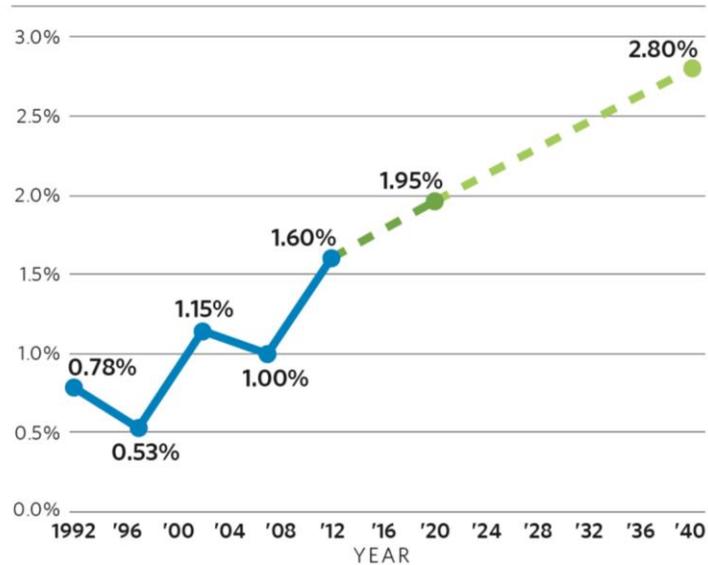
Note: No targets were established for this indicator in GO TO 2040, thus it will not have a 2015 target.

While this indicator will track the inflation-adjusted value of agricultural products sold directly to individuals for human consumption, the target values will be measured in a different manner. The targets will reflect the ratio of the market value of agricultural products sold directly to individuals for human consumption to the market value of total agricultural products produced in the region. It will track the share of total agricultural value comprised of agricultural products sold directly for human consumption.

2020: The market value of agricultural products sold for human consumption will comprise 1.95 percent of the total value of agricultural products sold in the region.

2040: The market value of agricultural products sold for human consumption will comprise 2.80 percent of the total value of agricultural products sold in the region.

Market value of agricultural products sold for human consumption as a share of total value of agricultural products in northeastern Illinois, 1992-2040, with targets



Note: Reported data were suppressed for Cook County (2007) and Kendall County (2002 and 2007) due to privacy concerns.
Source: Chicago Metropolitan Agency for Planning analysis of U.S. Census of Agriculture data.

Methodology:	<p>Reporting these data in inflation-adjusted values makes comparing the indicator values easier, and accounts for true growth or decline in the value by removing the effects of inflation. Setting target values using inflation-adjusted numbers is a bit more complicated – it requires estimating increases in value as well as future inflation rates. Rather, the targets are presented as normalized values: the target represents the market value of agricultural products sold directly for human consumption divided by the value of total agricultural products sold in the region. Thus the region will be able to track whether the relative importance of agricultural products sold directly for human consumption is increasing in the region. The goal for 2040 calls for a 75-percent increase in the share of total agricultural products sold in the region comprised of products sold for direct human consumption.</p> <p>The current share (as measured from the 2012 Census of Agriculture) is 1.6 percent of the value of total agricultural products sold in the region. The chart above tracks the change in this value since 1992. Aside from a dip in the measure from 1992-97, overall the market value of agricultural products sold for direct human consumption has increased its share of the total value of agricultural products sold in the region between 1992 and 2012 in a fairly linear fashion. Note that the values reported for 2002-07 are artificially low due to the suppression of data for Cook County in 2007, and the suppression of Kendall County data in both years.</p>
<i>Original GO TO 2040 Indicator:</i>	The original indicator reported this value directly from the Census of Agriculture.
<i>Rationale for Change:</i>	Economic comparisons, especially ones that may cover decades of data, should use real dollars as a basis for comparison. Removing the effects of inflation reveals the true growth (or decline) in value.

5.3 Percentage of Population Living in Food Deserts

Indicator:	<p>This indicator measures the percentage of the population that lives in a Census tract where the median household income is below the weighted average median income level for the seven counties (\$52,170 for GO TO 2040; \$67,329 for the updated analysis) and that has a low accessibility to large supermarkets. For the study, supermarkets are defined as full-service chains, supercenters, and local chains or</p>
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	<p>independents with at least five check-out lanes and a full line of groceries¹. Data collection and analysis were led by Daniel Block of the Fredrick Blum Neighborhood Assistance Center at Chicago State University. This analysis was recently updated to reflect conditions in 2011.</p>												
<p>Targets:</p>	<p>2015: 7 percent 2020: 6 percent 2040: 0 percent</p> <div data-bbox="609 666 1307 1365"> <p>Percentage of the population living in food deserts, 2007-40, with targets</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2008</td> <td>9.0%</td> </tr> <tr> <td>2012</td> <td>7.4%</td> </tr> <tr> <td>2016</td> <td>7.0%</td> </tr> <tr> <td>2020</td> <td>6.0%</td> </tr> <tr> <td>2040</td> <td>0.0%</td> </tr> </tbody> </table> <p>Source: Chicago State University.</p> </div>	Year	Percentage	2008	9.0%	2012	7.4%	2016	7.0%	2020	6.0%	2040	0.0%
Year	Percentage												
2008	9.0%												
2012	7.4%												
2016	7.0%												
2020	6.0%												
2040	0.0%												
<p>Methodology:</p>	<p>The 2015 and 2040 targets are unchanged from GO TO 2040. The 2020 target was developed by continuing a straight-line decrease in percentage of population living in low food access areas.</p>												

¹ Block, Daniel, Noel Chavez and Judy Birgen. (2008, June 3). *Finding Food in Chicago and the Suburbs: The Report of the Northeastern Illinois Community Food Security Assessment – Report to the Public*. Chicago: Chicago State University Frederick Blum Neighborhood Assistance Center and the University of Illinois-Chicago School of Public Health, Division of Community Health Sciences.

6. Improve Education and Workforce Development

All of the indicators under this recommendation area are new for the GO TO 2040 plan update.

6.1 Population Age 25 and Over with an Associate’s Degree or Higher

<p>Indicator:</p>	<p>This measure reports the percentage of the regional population age 25 and over that have obtained an Associate’s degree or higher. Data come from the American Community Survey (ACS) and represent the seven-county CMAP region. Educational attainment data are released annually. The inclusion of Associate’s degrees in this measure helps to highlight the important role community colleges play in improving education and workforce development, and reflects the significance of “middle-skill” jobs in our regional economy. These are jobs that require more than a high school diploma but less than a Bachelor’s degree.</p> <p>The overall level of resident education within metropolitan areas is a useful proximate measure for regional economic prosperity. Higher levels of education are generally associated with lower unemployment rates, a more innovative workforce, and a more economically vibrant region. Many jobs that previously only required a high school education are becoming more complex. Employers now seek workers with advanced skills that can raise productivity and help firms compete in the global marketplace.</p>
<p>Targets:</p>	<p><i>Note: This is a new indicator so it will not have a 2015 target value.</i></p> <p>2020: 47 percent of the population in the region age 25 and over with at least an Associate’s degree</p> <p>2040: 58 percent of the population in the region age 25 and over with at least an Associate’s degree</p>

	<p>Percentage of population age 25 and over with an associate's degree or higher, 2006-40, with targets</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2008</td> <td>40%</td> </tr> <tr> <td>'12</td> <td>43%</td> </tr> <tr> <td>'20</td> <td>47%</td> </tr> <tr> <td>'40</td> <td>58%</td> </tr> </tbody> </table> <p>Source: U.S. Census Bureau American Community Survey.</p>	Year	Percentage	2008	40%	'12	43%	'20	47%	'40	58%
Year	Percentage										
2008	40%										
'12	43%										
'20	47%										
'40	58%										
<p>Methodology:</p>	<p>Currently, about 43 percent of the regional population age 25 and over holds an Associate's degree or higher (this exceeds the national average of 37 percent). Data from the ACS show that both high school completion and higher education levels are on the rise, in the region and nationwide. Since 2006 the proportion of the region's residents holding an Associate Degree or higher has increased by roughly 0.53 percent per year, which is faster than the national average increase of 0.45 percent per year during the same time period. The goal is to maintain the current growth rate in educational attainment as it relates to higher education; this is the basis for the establishment of the 2020 and 2040 targets.</p>										

6.2 Workforce Participation

<p>Indicator:</p>	<p>This value represents the percentage of the regional population age 20-64 that is either working or actively looking for work. Data are from the American Community Survey and represent the metropolitan statistical area. There are many caveats to note when analyzing workforce participation statistics.</p> <p>An increase in workforce participation is generally viewed as a positive indicator of regional economic opportunity. Increased workforce</p>
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	<p>participation suggests a decrease in the number of discouraged workers (individuals who are able to work but are currently unemployed and have not searched for employment in the last four weeks due to a lack of suitable options or a lack of success through previous job applications). However workforce participation is a complex measure due to the fact that it tracks both the number of employed persons and unemployed persons who are currently looking for work. Thus an increase in unemployment can also register as an increase in workforce participation. Similarly, decreases in workforce participation may be due to an increase in the number of discouraged job seekers, or to an increase in the number of people choosing to retire early or leave the workforce for other reasons. Even with these caveats, an increase in workforce participation is generally indicative of a healthy economy.</p>												
<p>Targets:</p>	<p><i>Note: This is a new indicator so it will not have a 2015 target value.</i></p> <p>2020: Regional workforce participation rate of 82.8 percent</p> <p>2040: Maintain the regional workforce participation rate of 82.8 percent</p> <div data-bbox="602 1000 1354 1546"> <p>Workforce participation, 2005-40, with targets</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Rate (%)</th> </tr> </thead> <tbody> <tr> <td>2004</td> <td>79.1%</td> </tr> <tr> <td>'08</td> <td>80.8%</td> </tr> <tr> <td>'12</td> <td>80.3%</td> </tr> <tr> <td>'20</td> <td>82.8%</td> </tr> <tr> <td>'40</td> <td>82.8%</td> </tr> </tbody> </table> <p>Source: U.S. Census Bureau American Community Survey.</p> </div>	Year	Rate (%)	2004	79.1%	'08	80.8%	'12	80.3%	'20	82.8%	'40	82.8%
Year	Rate (%)												
2004	79.1%												
'08	80.8%												
'12	80.3%												
'20	82.8%												
'40	82.8%												
<p>Methodology:</p>	<p>The Chicago region experienced a 1.2 percent increase in its workforce participation rate between 2005-12. While our workforce participation rate trails those in Boston and Washington D.C., it exceeds those of the New York and Los Angeles regions. Workforce participation in the Chicago region has increased by about 0.18 percent per year since 2005. Fluctuations in participation rates over time are very similar among every major metropolitan area, suggesting that this trend is governed by macroeconomic factors.</p>												

	<p>The goal is to increase the region's workforce participation rate by 0.25 percent per year (up from 0.18 percent/year), thus achieving a rate of 82.8 percent in 2020. This level of workforce participation has been observed in other metro areas. The goal for 2040 is to maintain that workforce participation rate of 82.8 percent -- due to the multitude of factors affecting workforce participation rates and the complexities involved, it is difficult to gauge what an optimal participation rate is or looks like without further economic analysis.</p>
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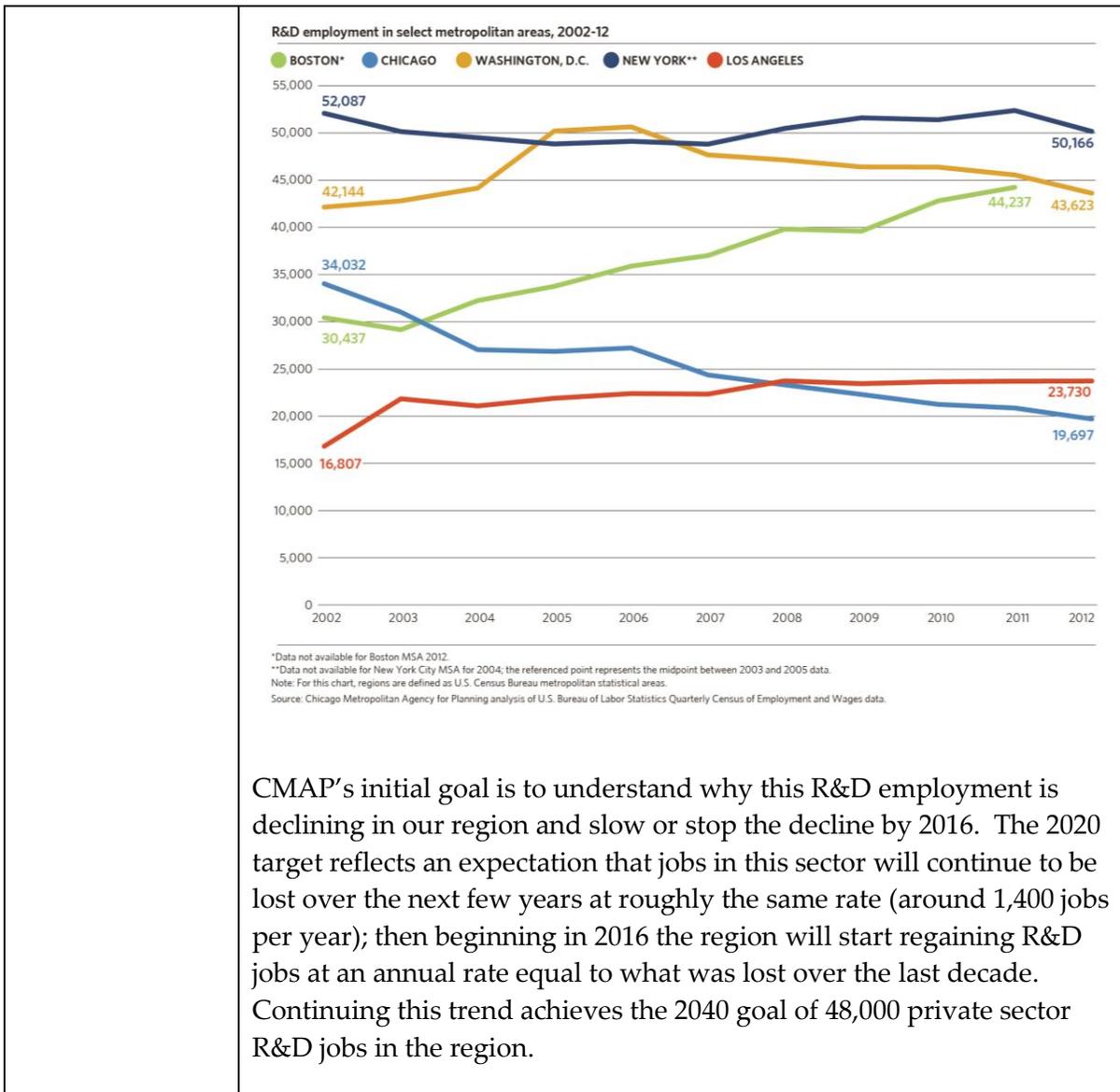
7. Support Economic Innovation

All of the indicators under this recommendation area are new for the GO TO 2040 plan update.

7.1 Private Sector Employment in Research and Development

Indicator:	<p>This indicator measures the number of people employed in research and development in the private sector. Data for private R&D employment are from the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), which collects and publishes data on jobs and wages by sector. Private R&D employment data presented here are obtained through employment reporting for the Scientific Research and Development Services (NAICS classification number 5417) sector. The data include only filled private sector positions and include both full- and part-time positions. Data are reported for the Chicago MSA and only represent private sector employment for firms whose primary function is research; people employed in research departments of firms classified under other North American Industrial Classification System (NAICS) codes are not counted.</p> <p>Private sector R&D employment is one measure of a region's capacity for innovation; a creative workforce plays an essential role in spurring economic growth.</p>
Targets:	<p><i>Note: This is a new indicator so it will not have a 2015 target value.</i></p> <p>2020: 20,000 private sector R&D jobs in the region</p> <p>2040: 48,000 private sector R&D jobs in the region</p>

	<p>Private sector research and development employment, 2002-40, with targets</p> <p>♀ = 1,000 EMPLOYEES</p> <p>The infographic displays four rows of human icons representing employment levels. The x-axis is labeled 'NUMBER OF EMPLOYEES' with markers at 0, 10,000, 20,000, 30,000, and 40,000. The 2002 row (blue icons) reaches 34,000. The 2012 row (blue icons) reaches 19,697. The 2020 target row (green icons) reaches 20,000. The 2040 target row (green icons) reaches 48,000.</p> <p>Source: U.S. Bureau of Labor Statistic Quarterly Census of Employment and Wages.</p>
<p>Methodology:</p>	<p>National trends show large increases in private sector R&D employment, which were up over 19 percent between 2003-12. While our peer metro areas have seen their levels of private sector R&D employment grow or remain at consistent levels, the Chicago region has seen a continual decline in this type of employment – losing more than 14,000 jobs over the last decade. As the region’s economy is very diverse, this decline cannot be attributed to just one or two industries – it is likely a larger, cross-sector phenomenon.</p>



7.2 Venture Capital Funding

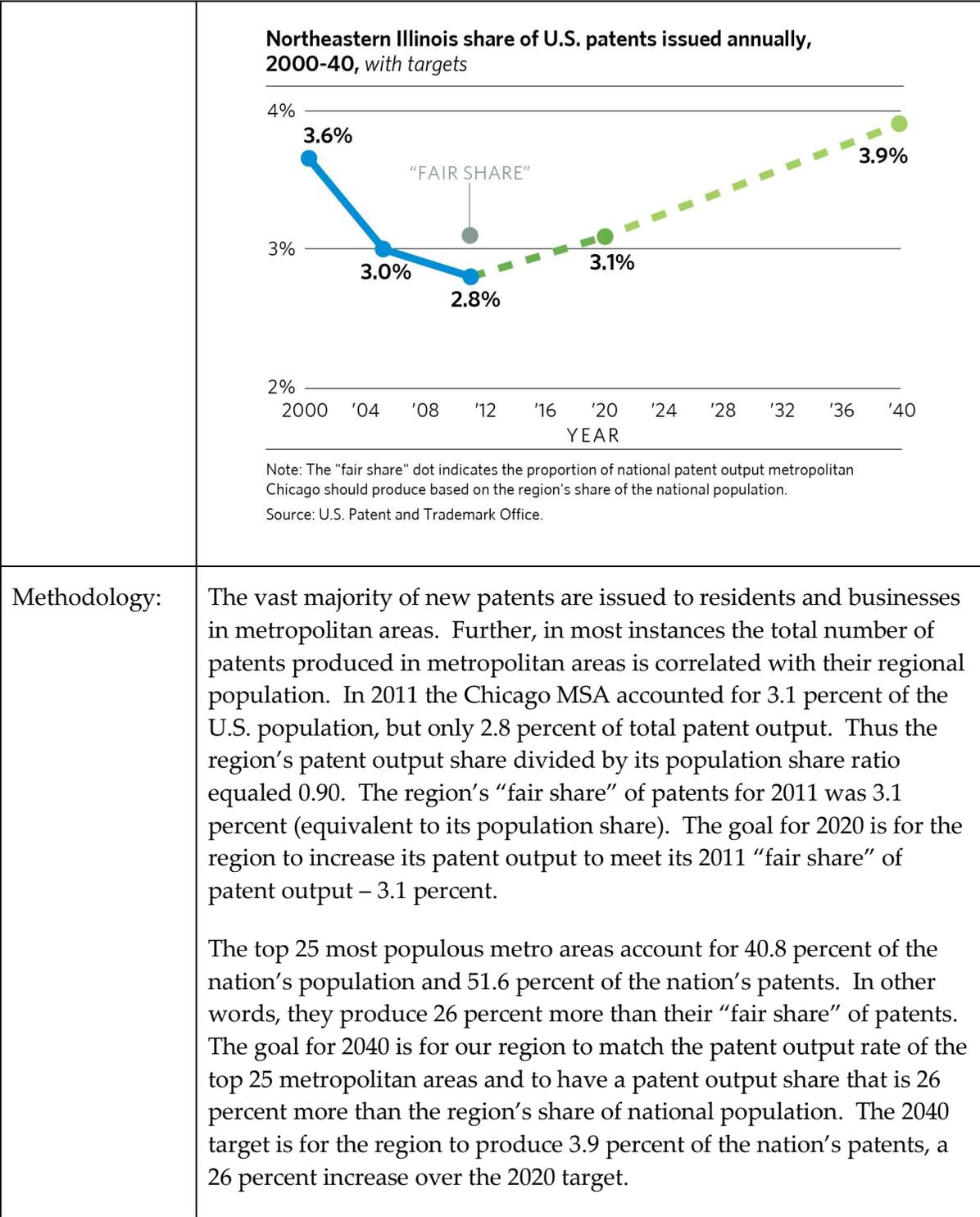
Indicator:	<p>This indicator measures the State of Illinois’ share of total U.S. venture capital deals. Innovation in new goods, services, and technologies drives economic growth, but related research, creation, and marketing costs can be substantial. Investors support high-risk, high-growth startup companies through venture capital deals.</p> <p>As a private financial transaction undertaken between two parties, venture capital funding is not tracked by government agencies. Several private organizations track venture capital activity by estimating both the number of deals made and dollar value of deals within various geographies. The data used in this indicator are produced by Thomson Reuters and published by PricewaterhouseCoopers (PWC) and the</p>
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	<p>National Venture Capital Association – they represent a “best guess” of venture capital activity by region and state. PWC does not track data specifically for the Chicago region, however most of the VC funding in the state flows to northeastern Illinois. The data behind this indicator focus on the number of VC deals rather than the value of the deals, as one or two high-value deals can significantly skew state and regional data.</p>										
<p>Targets:</p>	<p><i>Note: This is a new indicator so it does not have a 2015 target value.</i></p> <p>2020: The State of Illinois should account for 5.4 percent of all U.S. venture capital deals</p> <p>2040: No target will be established at this time</p> <p style="text-align: center;">Venture capital funding, share of national deals, 2002-20, with targets</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Share of National Deals (%)</th> </tr> </thead> <tbody> <tr> <td>2002</td> <td>2.5%</td> </tr> <tr> <td>2007</td> <td>1.7%</td> </tr> <tr> <td>2012</td> <td>2.2%</td> </tr> <tr> <td>2020 (Target)</td> <td>5.4%</td> </tr> </tbody> </table> <p>Source: Price Waterhouse Coopers Money Tree Report.</p>	Year	Share of National Deals (%)	2002	2.5%	2007	1.7%	2012	2.2%	2020 (Target)	5.4%
Year	Share of National Deals (%)										
2002	2.5%										
2007	1.7%										
2012	2.2%										
2020 (Target)	5.4%										
<p>Methodology:</p>	<p>Since the mid-1990s the state of Illinois has accounted for about 2 percent of all VC deals. Trends show that the Midwest (defined as Illinois, Missouri, Indiana, Kentucky, Ohio, Michigan, and western Pennsylvania) is accounting for an increasing proportion of total VC deals; however, Illinois’ proportion of deals has remained flat. In 2005 the Midwest accounted for 5.5 percent of all VC deals, by 2012 that proportion increased to 8.1 percent - an average growth of 0.4 percent per year. The goal for 2020 is to increase the number of VC deals in the state such that Illinois’ share of total U.S. VC deals accounts for 0.4 percent more per year than the previous year – this is equivalent to the overall growth rate experienced by the Midwest, and mirrors the increases seen by metro regions such as New York and Los Angeles.</p>										

	Establishment of a target for 2040 requires a more thorough understanding of the venture capital market, so no long-term target will be established at this time.
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7.3 Number of Patents Issued Annually

Indicator:	This indicator measures utility patent output; these are commonly referred to as “patents for invention.” According to the U.S. Patent and Trademark Office (USPTO), utility patents may be granted “to anyone who invents or discovers any new or useful process, machine, article of manufacture, or composition of matter, or any new or useful improvement thereof.” High levels of patent production generally indicate an innovative region supported by an educated workforce with a strong capacity to conduct research and development. Patent output data are available annually from the USPTO.
Targets:	<p><i>Note: This is a new indicator so it does not have a 2015 target value.</i></p> <p>While this indicator reports the number of patents issued annually in the region, the target values are measured in a slightly different manner: as the share of total U.S. patents issued in northeastern Illinois.</p> <p>2020: 3.1 percent of the nation’s patents should be issued in northeastern Illinois. This is equivalent to our region’s current “fair share” of patents (i.e., a patent output share/population share ratio equal to 1.00).</p> <p>2040: 3.9 percent of the nation’s patents should be issued in northeastern Illinois. This represents the goal of achieving 26 percent more than our region’s “fair share” of patent output (i.e., a patent output share/population share ratio equal to 1.26).</p>

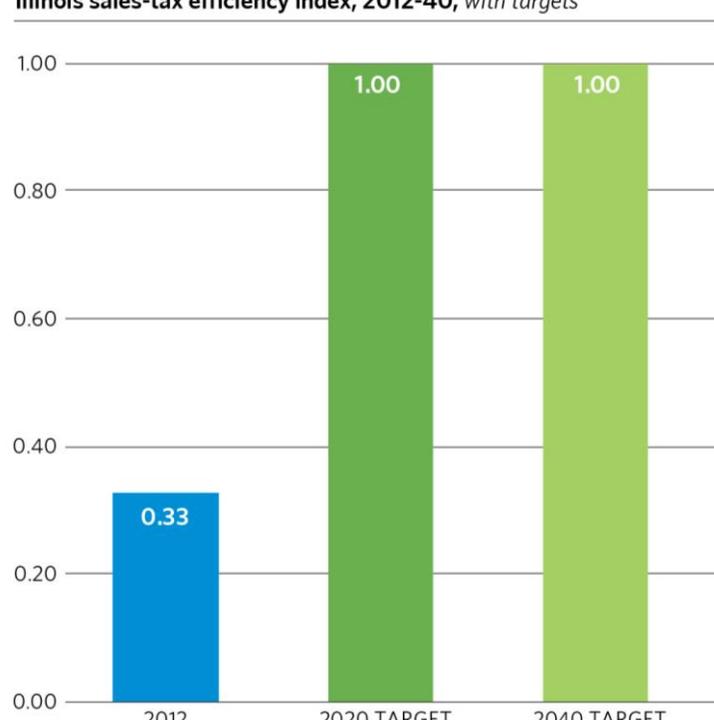


8. Reform State and Local Tax Policy

All of the indicators under this recommendation area are new for the GO TO 2040 plan update.

8.1 Sales Tax Efficiency Index

Indicator:	<p>The Sales Tax Efficiency Index compares the number of services included in the sales tax base in Illinois compared to the average number of services taxed by the remaining 49 states and Washington, D.C. The indicator will be the following ratio:</p> $\frac{\text{number of services in Illinois sales tax base}}{\text{weighted average number of services in sales tax bases of 49 states \& D.C.}}$ <p>The denominator of the index uses the number of services taxed by each locale and weights each by the size of its gross domestic product, thus reflecting the relative importance of each within the national economy.</p> <p>The data source for the number of services included in the sales tax base is the Federation of Tax Administrators Survey of Services Taxation 2007. The source for the gross domestic product values is the U.S. Bureau of Economic Analysis.</p>
Targets:	<p><i>Note: This is a new indicator so it will not have a 2015 target value.</i></p> <p>2020: The index value should equal 1.0</p> <p>2040: The index value should equal 1.0</p>

	<p style="text-align: center;">Illinois sales-tax efficiency index, 2012-40, with targets</p>  <p style="font-size: small;">Note: This index measures the ratio of services taxed in Illinois to the average number of services taxed by the remaining states and Washington, D.C. Source: Federation of Tax Administrators Survey of Services Taxation, 2007.</p>
Methodology:	<p>For 2012 the index is: $\frac{17}{52} = 0.33$. This shows that Illinois includes only one-third of the number of services in its sales tax base compared to the “average” state, thus rating it low on sales tax efficiency. The indicator will focus on a target of achieving an index value of 1.0, meaning that the number of services taxed in Illinois is the same as the weighted average of the rest of the country. The 2020 goal for this indicator is to achieve the desired index value of 1.0. The goal for 2040 is to maintain the index value at 1.0.</p>

8.2 Percentage of Municipalities with a Per Capita Sales and Property Tax Base of More than 25 Percent Below the Median

Indicator:	This indicator uses the measure described in a Policy Update ² dealing with the equity of the tax system. Equity is viewed in terms of municipalities’ ability to fund necessary services. The per capita tax
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² Chicago Metropolitan Agency for Planning. (2013, August 19). *Using Indicators to Chart Progress toward a More Equitable Regional Tax System*. <http://www.cmap.illinois.gov/policy-updates/-/blogs/using-indicators-to-chart-progress-toward-a-more-equitable-regional-tax-system>

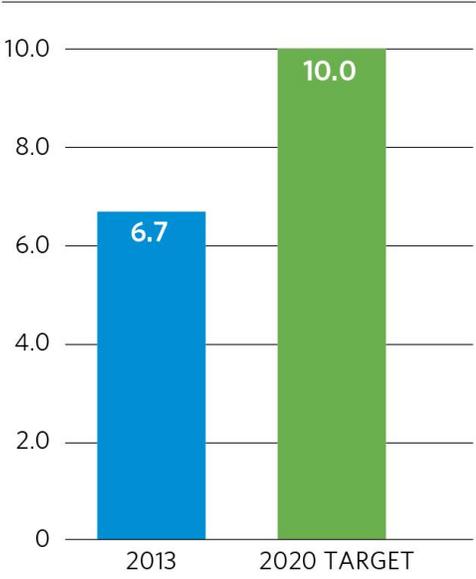
	<p>base value used to measure a community's ability to raise funds is:</p> $\frac{\text{municipal retail sales} + \text{municipal equalized assessed value for property}}{\text{municipal population}}$ <p>The tax base value is normalized by municipal population to provide a common basis for comparison. The median per capita tax base for the region (\$42,322 for 2012) was calculated and municipalities were categorized by how far above or below the median value their municipal tax base lies.</p> <p>The tax base information was derived from Illinois Department of Revenue data. Population figures are from the U.S. Census Bureau.</p>												
<p>Targets:</p>	<p><i>Note: This is a new indicator so it will not have a 2015 target value.</i></p> <p>2020: 28 percent of the region's municipalities will have a per capita sales and property tax base more than 25 percent below the regional median</p> <p>2040: 16 percent of the region's municipalities will have a per capita sales and property tax base more than 25 percent below the regional median</p> <div data-bbox="597 1153 1333 1814"> <p>Percentage of municipalities with a per capita sales and property tax base of more than 25 percent below the median, 2003-40 with targets</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2003</td> <td>32%</td> </tr> <tr> <td>2004</td> <td>28%</td> </tr> <tr> <td>2012</td> <td>33%</td> </tr> <tr> <td>2020</td> <td>28%</td> </tr> <tr> <td>2040</td> <td>16%</td> </tr> </tbody> </table> </div> <p>Source: Chicago Metropolitan Agency for Planning analysis of Illinois Department of Revenue Data and U.S. Census, 2010 decennial Census data.</p>	Year	Percentage	2003	32%	2004	28%	2012	33%	2020	28%	2040	16%
Year	Percentage												
2003	32%												
2004	28%												
2012	33%												
2020	28%												
2040	16%												

Methodology:	For 2012, 31 percent of the region’s municipalities have per capita tax bases more than 25 percent below the median. This percentage has remained fairly stable over the last decade (as shown in the graphic above). The short-term (2020) target will be to achieve a 10-percent decrease in the number of municipalities with a per capita tax base more than 25 percent below the median. That would reduce the value to 28 percent of municipalities, a number not seen since 2004. The goal for 2040 is to reduce the number of municipalities with per capita tax bases more than 25 percent below the regional median by one-half of its current value, i.e., 16 percent of the municipalities.
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8.3 Tax System Transparency Score

Indicator:	<p>This plan indicator uses the measure described in a Policy Update³ dealing with the transparency of the tax system regarding public access to local taxation and other fiscal data. CMAP developed a transparency scorecard to track the availability of ten categories of tax and finance-related documents on the websites of the seven counties (the categories are listed in the following chart). The scorecard is loosely based on the system once used by the Sunshine Review, an organization that rated governments on transparency and was recently acquired and merged into Ballotpedia.</p> <p>Each county is given one point for each category of materials that is available on their website. The total score for each county is determined and those seven values are averaged to calculate the Tax System Transparency Score for the region.</p>
Targets:	<p><i>Note: This is a new indicator so it will not have a 2015 target value.</i></p> <p>2020: A score of 10 out of 10</p> <p>2040: No target will be established at this time</p>

³ Chicago Metropolitan Agency for Planning. (2013, September 25). *Using Indicators to Chart Progress toward a More Transparent Regional Tax System*. <http://www.cmap.illinois.gov/policy-updates/-/blogs/using-indicators-to-chart-progress-toward-a-more-transparent-regional-tax-system>.

	<p>Tax system transparency score, 2013-20, with targets</p>  <table border="1" data-bbox="727 290 1203 869"> <thead> <tr> <th>Year</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>6.7</td> </tr> <tr> <td>2020 TARGET</td> <td>10.0</td> </tr> </tbody> </table> <p>Note: Transparency score values are determined by the amount of tax and financial information available on county websites. Source: Chicago Metropolitan Agency for Planning analysis of county websites in metropolitan Chicago.</p>	Year	Score	2013	6.7	2020 TARGET	10.0
Year	Score						
2013	6.7						
2020 TARGET	10.0						
<p>Methodology:</p>	<p>There are no technological barriers to achieving a perfect score of ten for the region by 2020, so it is set as the target. No target is set for 2040 - if the 2020 target is actually met, it will require revising this measure because a perfect score under this system would be the new norm.</p>						

9. Improve Access to Information

A new indicator was developed for this recommendation area for the GO TO 2040 plan update.

9.1 Regional Government Transparency Index

Indicator:	<p>This regional index is calculated as the average of all of the individual category scores (discussed below) determined by examining each of the websites of the seven counties in the CMAP region. This index measures not only the availability of on-line government information, but also the ease with which it can be accessed (as measured by the number of mouse clicks required to reach the information from the county website home page). Additionally, each county can raise their score within a given category by one increment by providing information that is beyond the norm. The intent is to measure access to government information in an objective way. The websites of the seven CMAP counties were examined to determine whether they provide information in the following ten categories:</p> <ol style="list-style-type: none">1. Government Officials and Staff Directory2. Online resources for access to open meetings & records3. Document Library4. Ways to file record requests online (FOIA)5. Access to budget and financial information6. Archives of meetings, ordinances, votes7. Links to public notices8. Access to e-government applications9. Public procurements (bids or RFPs)10. Maps and Data <p>A score was assigned to the information categories for each county based on the following scale:</p> <ul style="list-style-type: none">0 = Information not available on website.1 = Three or more mouse clicks were required to reach the information from the county homepage, or the website Search function was needed to locate the information.2 = Two mouse clicks were required to reach the information from the county homepage (or 3+ clicks plus a bonus for supplemental information).3 = One mouse click was required to reach the information from the county homepage (or two clicks plus a bonus for supplemental information).
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	<p>4 = Maximum score possible; requires one mouse click from homepage to reach information plus a bonus for having supplementary information or functionality available.</p>						
<p>Targets:</p>	<p><i>Note: This is a new indicator so it will not have a 2015 target value.</i></p> <p>2020: A score of 4 out of 4</p> <p>2040: No target will be established at this time</p> <div data-bbox="727 602 1214 1255" data-label="Figure"> <p>Regional government transparency index, 2013-20, with targets</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>3.0</td> </tr> <tr> <td>2020 TARGET</td> <td>4.0</td> </tr> </tbody> </table> </div> <p><small>Note: The index is determined based on the availability of certain information on a county's website, as well as the number of mouse-clicks it takes to access said information from the county website home page. Source: Chicago Metropolitan Agency for Planning analysis of county websites in metropolitan Chicago.</small></p> <p>More thorough documentation of this indicator is provided in Appendix B of this report.</p>	Year	Score	2013	3.0	2020 TARGET	4.0
Year	Score						
2013	3.0						
2020 TARGET	4.0						
<p>Methodology:</p>	<p>There are no technological barriers to achieving a perfect score of four for the region by 2020, so it is set as the target. No target is set for 2040 - if the 2020 target is actually met, it will require revising this measure because a perfect score under this system would be the new norm.</p>						

10. Pursue Coordinated Investments

Consistent with GO TO 2040, this section includes no specific indicators or targets. Success will be measured by tracking the level of implementation of all of the plan update recommendations.

11. Invest Strategically in Transportation

Three of the indicators in this recommendation area have been modified; one represents a new measure not available when GO TO 2040 was adopted.

11.1 Percentage of National Highway System with Acceptable Ride Quality

Indicator:	<p>This indicator measures the percentage of National Highway System (NHS) centerline miles in the region that have an “acceptable” ride quality. Ride quality is defined by an International Roughness Index (IRI) score of less than 170, which measures the cumulative deviation from a smooth surface on a mile of roadway. “Good” ride quality is defined by a score under 95 inches per mile. Ride quality provides a good measure of user experience of the facility.</p> <p>The NHS used for this analysis is the one defined in MAP-21 (Moving Ahead for Progress in the 21st Century), the current federal surface transportation act.</p>
Targets:	<p><i>Note: This indicator is modified significantly from the GO TO 2040 version, thus it will not have a 2015 target value.</i></p> <p>2020: 77 percent of NHS with acceptable ride quality</p> <p>2040: 90 percent of NHS with acceptable ride quality</p>

	<p style="text-align: center;">Percentage of national highway systems with acceptable ride quality, 2012-40, with targets</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Year/Target</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2012</td> <td>74.6%</td> </tr> <tr> <td>2020 TARGET</td> <td>77.0%</td> </tr> <tr> <td>2040 TARGET</td> <td>90.0%</td> </tr> </tbody> </table> <p style="text-align: center; font-size: small;">Source: Illinois Department of Transportation and Illinois State Tollway Highway Authority.</p>	Year/Target	Percentage	2012	74.6%	2020 TARGET	77.0%	2040 TARGET	90.0%
Year/Target	Percentage								
2012	74.6%								
2020 TARGET	77.0%								
2040 TARGET	90.0%								
<p>Methodology:</p>	<p>Nearly 75 percent of the current (2012) NHS centerline miles have an acceptable ride quality. Expanding this measure to include the entire NHS (not just principal arterials), changes the overall composition to reflect a larger portion of the system with an acceptable ride quality. This is due to the fact that the expressways generally have higher IRI scores than the arterials, as well as the fact that a number of stimulus package projects were completed in the region. The 2020 target reflects a small improvement from the current conditions – this value is slightly below a straight-line increase between 2012-40 due to the fact that the underlying pavement structures were not necessarily improved in the stimulus projects. The 2040 target reflects the goal of improving the condition of the arterial system to match that of the expressways.</p>								
<p><i>Original GO TO 2040 Indicator:</i></p>	<p>The original GO TO 2040 indicator measured ride quality only for the principal arterial system.</p>								
<p><i>Rationale for Change:</i></p>	<p>Including the expressway system along with the principal arterials would provide a more complete assessment of the quality of the region’s roadways.</p>								

11.2 Percentage of Bridges in “Structurally Deficient” Condition

<p>Indicator:</p>	<p>This indicator measures the percentage of bridges categorized by the Federal Highway Administration’s National Bridge Inventory (NBI) as “structurally deficient.” Bridges in the NBI assigned to this category are most in need of repair. These are identified through the inspection process as requiring significant maintenance, rehabilitation or replacement. This classification refers to bridges with one or more structural defects that require attention, such as significant load-carrying elements are found to be in poor condition or the waterway adequacy is not sufficient. While a bridge with this classification is in the most severe rating category, it does not necessarily mean that it is unsafe. Data are available for all bridges over twenty feet in length.</p>												
<p>Targets:</p>	<p><i>Note: This indicator is modified significantly from the GO TO 2040 version, thus it will not have a 2015 target value.</i></p> <p>2020: 7.25 percent of bridges in the region are categorized as structurally deficient</p> <p>2040: 4 percent of bridges in the region are categorized as structurally deficient</p> <div data-bbox="613 1137 1323 1801"> <p>Percentage of bridges in “structurally deficient” condition, 2001-40, with targets</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2001</td> <td>13.5%</td> </tr> <tr> <td>2004</td> <td>10.6%</td> </tr> <tr> <td>2012</td> <td>9.7%</td> </tr> <tr> <td>2020</td> <td>7.3%</td> </tr> <tr> <td>2040</td> <td>4.0%</td> </tr> </tbody> </table> <p>Source: Federal Highway Administration National Bridge Inventory.</p> </div>	Year	Percentage	2001	13.5%	2004	10.6%	2012	9.7%	2020	7.3%	2040	4.0%
Year	Percentage												
2001	13.5%												
2004	10.6%												
2012	9.7%												
2020	7.3%												
2040	4.0%												

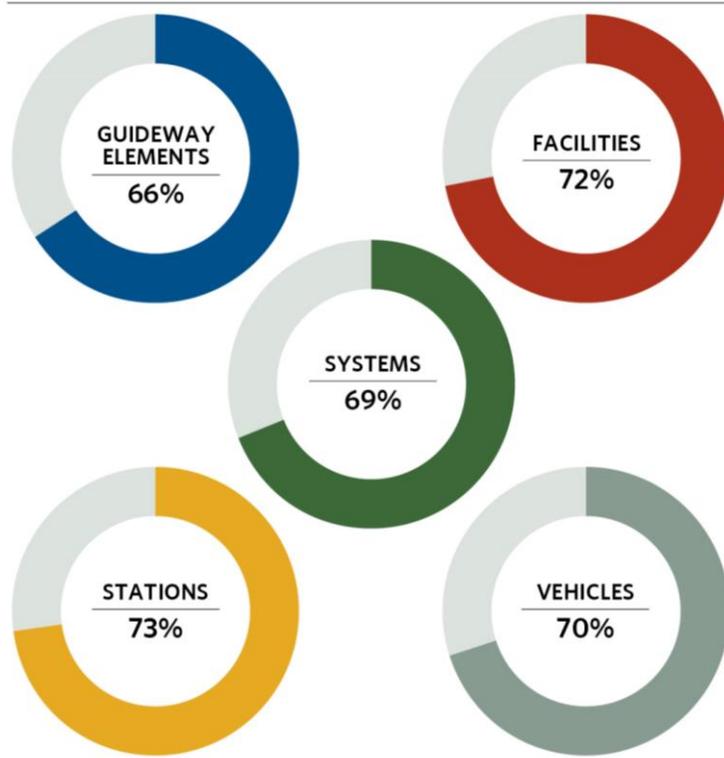
Methodology:	Current (2012) data indicate that 9.7 percent of the bridges in the region are categorized as structurally deficient. Over the last decade, the percentage of structurally deficient bridges in the region decreased by around 25 percent. The 2020 and 2040 targets reflect a continuation of this rate of improvement in bridge conditions.
<i>GO TO 2040 Indicator:</i>	The original GO TO 2040 measure examined the percentage of bridges categorized by the National Bridge Inventory as “not deficient.” By default, bridges in the inventory categorized as either “functionally obsolete” or “structurally deficient” are deemed to be “deficient” in this scheme. Functional obsolescence is used to refer to a bridge whose geometrics (such as lane widths or overhead clearance) do not meet minimum specifications under current federal design standards. A bridge with this classification may be in excellent condition or even be brand new, and localities may have legitimate reasons for not building bridges to the federal specifications.
<i>Rationale for Change:</i>	The use of the term “not deficient” in the original indicator may lead the public to believe that all other bridges must then be, by definition, “deficient,” which generally has a negative connotation. To support the public safety goals of this section of the plan, a more representative indicator would be to measure the bridges that are most in need of rehabilitation, repair, and replacement.

11.3 Percentage of Transit Assets in a State of Good Repair

Indicator:	<p>This measure tracks the region’s transit assets that are in a state of good repair. The transit asset inventory maintained by the Regional Transportation Authority (RTA) classifies assets into five categories (consistent with the Federal Transit Administration’s (FTA) reporting requirements under MAP-21):</p> <ul style="list-style-type: none"> • Facilities (buildings, equipment, storage yards) • Guideway elements (track, rail, bridges, ties) • Stations (passenger facilities, parking lots) • Systems (signals, fare collection equipment, radios, phones, interlockings) • Vehicles (both revenue and non-revenue) <p>The asset condition assessment has also adopted the transit asset decay</p>
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curves developed by the FTA, which predict the physical condition of assets based on factors such as age and maintenance history, and convert them to a standardized “5 to 1” rating scale.⁴ For reporting purposes, assets with a rating of 2.5 or higher are deemed to be in a “State of Good Repair.” The current (2011) State of Good Repair values⁵ are:

Percentage of transit assets in a state of good repair,
represented in 2011 values



Source: Regional Transportation Authority.

<p>Targets:</p>	<p><i>CMAP will work in cooperation with the RTA and representatives from the CTA, Metra, and Pace to monitor existing conditions and develop meaningful targets for the State of Good Repair of regional transit infrastructure.</i></p>
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⁴ CH2MHill, URS Corporation, Inc., Kristine Fallon Associates, Inc. and Raul Bravo + Associates, Inc. (2012, November). *Capital Asset Condition Assessment Update: Report for Calendar Year 2011*. Prepared for Regional Transportation Authority. Chicago: Regional Transportation Authority.

⁵ Regional Transportation Authority, Department of Finance & Performance Management. (2013, September). *2012 Regional Report Card Performance Measures*. Chicago: Regional Transportation Authority.

11.4 Average Congested Hours of Weekday Travel for Limited Access Highways

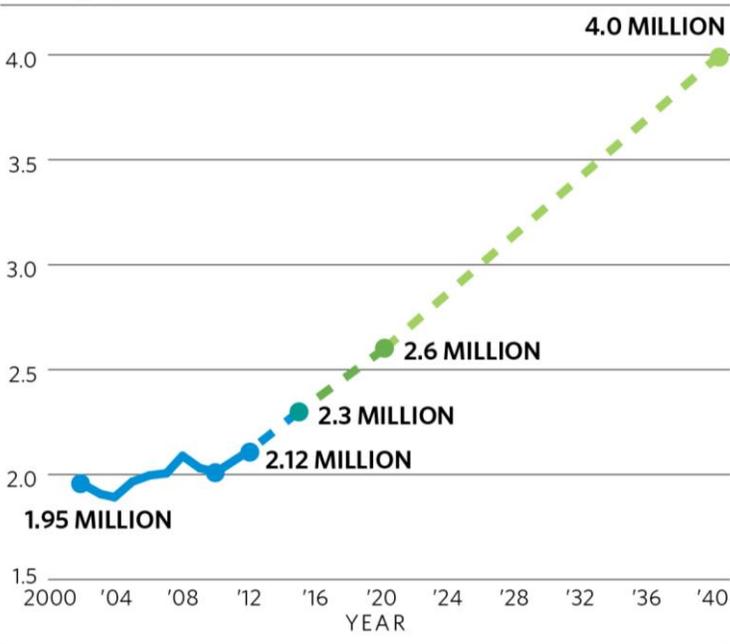
<p>Indicator:</p>	<p>This measure uses the Federal Highway Administration’s Urban Congestion Report data to track average weekday congestion. Specifically, it measures the average number of hours during weekdays when the region’s instrumented expressways are congested. Data collected from roadway sensors are used to determine the duration of time that travel speeds fall below 45 MPH on the highway segments, which is considered to be congested conditions. Only detector measurements taken between the hours of 6:00 AM and 10:00 PM are used in the analysis. These data are collected for metropolitan areas around the country as part of the U.S. Department of Transportation’s Mobility Monitoring Program and are available quarterly.</p>																		
<p>Targets:</p>	<p><i>Note: This indicator is modified significantly from the GO TO 2040 version, thus it will not have a 2015 target value.</i></p> <p>2020: 12 hours of average weekday congestion on limited access highways</p> <p>2040: 10 hours of average weekday congestion on limited access highways, reflecting no growth in congestion from 2010 conditions</p> <div data-bbox="581 1131 1360 1714"> <p>Average congested hours of weekday travel for limited access highways, 2007-40, with targets</p> <table border="1"> <caption>Data points from the chart</caption> <thead> <tr> <th>Year</th> <th>Average Congested Hours</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>2008</td> <td>13</td> <td>Historical</td> </tr> <tr> <td>2010</td> <td>10</td> <td>Historical</td> </tr> <tr> <td>2012</td> <td>9</td> <td>Historical</td> </tr> <tr> <td>2020</td> <td>12</td> <td>Target</td> </tr> <tr> <td>2040</td> <td>10</td> <td>Target</td> </tr> </tbody> </table> </div> <p>Source: U.S. Department of Transportation Mobility Monitoring Program.</p>	Year	Average Congested Hours	Type	2008	13	Historical	2010	10	Historical	2012	9	Historical	2020	12	Target	2040	10	Target
Year	Average Congested Hours	Type																	
2008	13	Historical																	
2010	10	Historical																	
2012	9	Historical																	
2020	12	Target																	
2040	10	Target																	

Methodology:	<p>The goal for 2040 is to experience no growth in the average number of hours each weekday that the region’s expressways are congested, even though the population of the region will increase. The 2040 goal reflects the same duration of average weekday congestion as 2010 -- approximately 10 hours per day. The short-term goal for 2020 allows for a 20-percent increase in the duration of average weekday congestion above the 2010 value -- this reflects the fact that roadway congestion is expected to increase as the country continues to recover from the economic downturn. The 2020 goal is consistent with pre-recession levels of congestion in the region. The lower congestion goal in 2040 reflects that it will take capital improvement projects in the region and the implementation of operational strategies like congestion pricing to address congestion in the long-term.</p>
GO TO 2040 Indicator:	<p>The original version of this indicator measured the aggregate daily congested vehicle hours of travel (VHT) derived from CMAP’s regional travel demand model.</p>
Rationale for Change:	<p>Roadway congestion is a reasonable way to measure system performance but is not easily comprehended in aggregate terms. Average Congested Hours of Weekday Travel provides a more-intuitive measure of roadway performance than aggregate VHT. Data drawn from roadway sensors will more accurately gauge the impact changes in the overall economy and highway capacity have on traffic (as evidenced in the decrease in congestion recorded during 2008) than will data from the regional model, which are dependent upon how scenarios are defined. Additionally, a guiding principal in the development of plan indicators is that they be based on observed data, not modeled or simulated values.</p>

12. Increase Commitment to Public Transit

One of the indicators under this recommendation area has been modified from its original version and one remains unchanged.

12.1 Average Weekday Unlinked Transit Trips

<p>Indicator:</p>	<p>This indicator tracks the number of average weekday unlinked transit trips (excluding paratransit). Trips are “unlinked” in that this is a total count of trips, so that an individual making one transfer is counted as two unlinked trips. This value is taken directly from the National Transit Database and unlinked trips are the only way the Federal Transit Administration reports transit service used by the public.</p>
<p>Targets:</p>	<p>2015: 2.3 million trips 2020: 2.6 million trips 2040: 4 million trips</p> <p style="text-align: center;">Average weekday unlinked transit trips, 2002-40, with targets, in millions</p>  <p style="text-align: center;">Source: Federal Transit Administration National Transit Database.</p> <p>The most recent data (2012) indicate that unlinked transit trips will need to increase by nearly 3 percent for each of the next three years in order to reach the 2015 target of 2.3 million trips.</p>

Methodology:	The 2015 and 2040 targets are unchanged from GO TO 2040. The 2020 target was developed by continuing a straight-line increase in the number of annual unlinked weekday transit trips.
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12.2 Population and Jobs with at Least Moderate Access to Transit

Indicator:	<p>This indicator will report the percentage of population and jobs with access to transit (as was done in GO TO 2040) but accessibility to transit is defined differently and calculated in a different manner. To measure the percentage of population and jobs in the region with access to transit as a means of tracking plan implementation progress, a new metric was developed – the Access to Transit Index. For a specific area, this index is intended to measure the relative level of access residents have to the transit system regardless of mode. The intent of this new index is to provide a more complete measure of how residents view access to transit by including multiple factors that contribute to one’s perception of transit accessibility, while maintaining a metric that is still easily comprehended.</p> <p>This index is not intended to measure the connectivity of the transit system as a whole, or the access to the region that it provides. It is also not intended as a means to evaluate the performance of the various transit operators nor is it a suitable tool for such an evaluation. The new index value is calculated from four component factors:</p> <ul style="list-style-type: none"> • Weekly frequency of transit service. • Activities that can be reached via a single direct transit route. • Proximity to a transit stop or station measured over the network. • Pedestrian friendliness of the surrounding area. <p>The Access to Transit Index is a uniform measure of transit level of service available during an average week. It permits the tracking of changes in transit level of service over time and presents the results in an intuitive fashion. It also offers a universal comparison of the different service levels offered across the region. The inherent loss of some of the nuances in localized service is balanced against the ability of the index to provide a relatively simple way to compare transit service over a large area over time.</p> <p>Transit service for the region is analyzed using information provided in</p>
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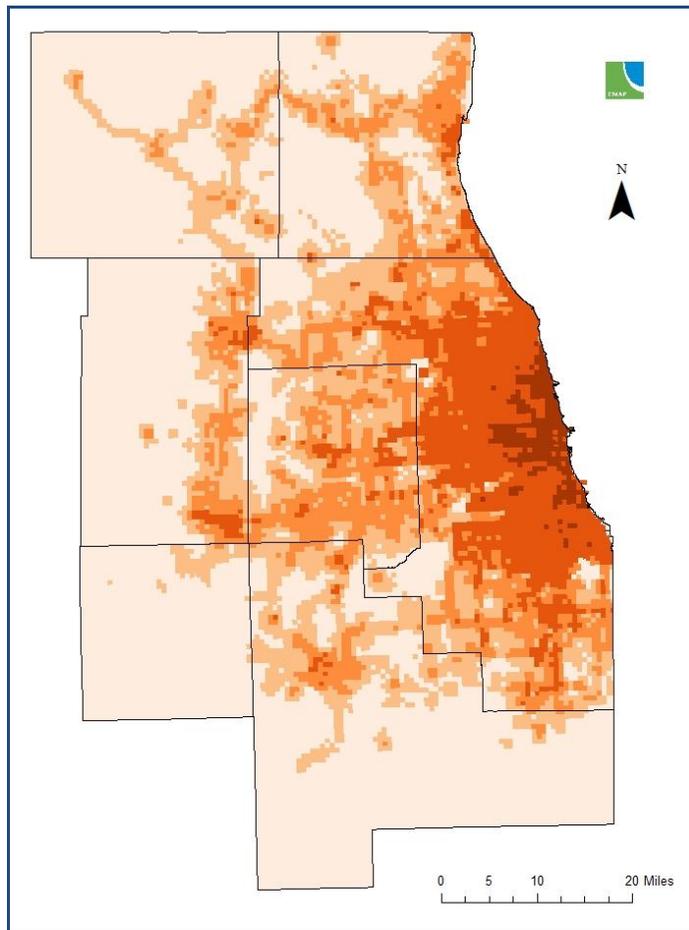
	<p>General Transit Feed Specification (GTFS) files. These are files developed and distributed by the transit operators themselves and use a standard format to provide route and schedule information to automated trip planning applications such as Google Transit. This measure analyzes transit data for the four major operators in the region: the Chicago Transit Authority, Metra, Pace, and the Northern Indiana Commuter Transportation District. This metric analyzes fixed-route transit service only – meaning service along a prescribed route that operates on a fixed schedule. It does not include demand-responsive transit service or paratransit.</p> <p>A more thorough discussion of this metric is included in Appendix C of this report.</p>												
<p>Targets:</p>	<p><i>Note: This indicator is modified significantly from the GO TO 2040 version, thus it will not have a 2015 target value.</i></p> <p>2020: 73 percent of population with at least moderate access to transit 78 percent of jobs with at least moderate access to transit</p> <p>2040: 78 percent of population with at least moderate access to transit 81 percent of jobs with at least moderate access to transit</p> <div data-bbox="646 1065 1266 1655"> <p>Share of population and jobs with at least moderate access to transit, 2010-40, with targets</p> <table border="1"> <thead> <tr> <th>Year</th> <th>POPULATION (%)</th> <th>JOBS (%)</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>71.5%</td> <td>76.8%</td> </tr> <tr> <td>2020</td> <td>73.0%</td> <td>78.0%</td> </tr> <tr> <td>2040</td> <td>78.0%</td> <td>81.0%</td> </tr> </tbody> </table> </div> <p>Source: Chicago Metropolitan Agency for Planning analysis. Note: The transit access index measure is calculated using four factors: (1) weekly frequency of transit service, (2) activities that can be reached via a single direct transit route, (3) proximity to a transit stop or station measured over the network, and (4) the pedestrian friendliness of the surrounding area. The index scores localized areas and places them in one of five categories, ranging from low to high transit access. Areas with "at least moderate access" fall within the top three index categories.</p> <p>An analysis of 2010 base year conditions show that 71.5 percent of the</p>	Year	POPULATION (%)	JOBS (%)	2010	71.5%	76.8%	2020	73.0%	78.0%	2040	78.0%	81.0%
Year	POPULATION (%)	JOBS (%)											
2010	71.5%	76.8%											
2020	73.0%	78.0%											
2040	78.0%	81.0%											

	regional population and 76.8 percent of regional jobs had at least moderate access to transit (see the following table).
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Methodology:

For this analysis, transit service attributes from the GTFS files are aggregated to the subzone-level geography for the seven-county region. Each of the four component factors listed previously is measured individually at the subzone level and an index value is assigned. The overall accessibility index value is the average of the four factor indices that were assigned to the subzone. The access to transit conditions for 2010 base year data are displayed below. The share of regional population reflects data from the 2010 Census. Values on the share of regional employment reflect data for 2010 from the Illinois Department of Employment Security.

Access to Transit Index, 2010 Conditions



Source: Chicago Metropolitan Agency for Planning analysis.

Color Code	Index Value	Subzone count	Share of Regional Population	Share of Regional Employment	Transit Access Level
	1	8,855	7.3%	5.5%	Low
	2	3,473	21.3%	17.7%	Moderately Low
	3	2,194	21.6%	26.6%	Moderate
	4	1,650	37.5%	30.7%	Moderately High
	5	271	12.4%	19.5%	High

<p>GO TO 2040 Indicator:</p>	<p>The original indicator measured the percentages of regional population and jobs with access to transit. Accessibility was defined as being within one-quarter mile of a CTA bus stop or Pace bus route, or within one-half mile of a rail station. The shares of regional population and jobs values were calculated by buffering the transit stops by the appropriate distances, then intersecting with the modeling subzones and calculating accessible values by apportioning the subzone population and employment.</p>
<p>Rationale for Change:</p>	<p>While the original spatial buffering method offers an easily-understood “back-of-the-envelope” estimate of transit access, mere proximity to transit is too simplistic a way to measure accessibility. Further, it says nothing about the transit service itself or about the variations in level of service offered throughout the region.</p>

13. Create a More Efficient Freight Network

No changes are proposed for the efficient freight network indicators.

13.1 CREATE Project Completion

<p>Indicator:</p>	<p>This performance measure provides a count of the number of Chicago Region Environmental and Transportation Efficiency Program (CREATE) projects that are complete. The count is of projects actually completed, as opposed to “underway” or “obligated.” The source for this information is the CREATE program website maintained by the Chicago Department of Transportation.</p>												
<p>Targets:</p>	<p>2015: 24 projects completed 2020: 30 projects completed 2030: 71 projects completed</p> <p style="text-align: center;">Number of CREATE projects completed, 2010-30, with targets</p> <table border="1"> <caption>Data for Number of CREATE projects completed, 2010-30, with targets</caption> <thead> <tr> <th>Year / Target</th> <th>Number of Projects</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>11</td> </tr> <tr> <td>2013</td> <td>20</td> </tr> <tr> <td>2015 TARGET</td> <td>24</td> </tr> <tr> <td>2020 TARGET</td> <td>30</td> </tr> <tr> <td>2030 TARGET</td> <td>71</td> </tr> </tbody> </table> <p style="text-align: center;">Source: Chicago Department of Transportation CREATE program.</p>	Year / Target	Number of Projects	2010	11	2013	20	2015 TARGET	24	2020 TARGET	30	2030 TARGET	71
Year / Target	Number of Projects												
2010	11												
2013	20												
2015 TARGET	24												
2020 TARGET	30												
2030 TARGET	71												
<p>Methodology:</p>	<p>The 2030 target is unchanged from GO TO 2040, reflecting completion of the entire CREATE program. The 2015 target value has been revised, as the original GO TO 2040 goal of completing 20 CREATE projects by 2015 was achieved in 2013. The 2020 target was developed by continuing a straight-line increase in the number of CREATE projects</p>												

	completed. The 2020 target was also compared to the number of CREATE projects in Phase 1 engineering and those that have received a full funding commitment through construction in order to verify its reasonableness.
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13.2 At-Grade Highway-Rail Crossing Delay

Indicator:	This indicator measures the aggregate hours of weekday delay experienced by motorists at railroad crossings in the seven-county CMAP region. The source for these data is periodic analyses conducted by the Illinois Commerce Commission.												
Targets:	<p>The original 2015 target value for this indicator was set at 10,000 hours of weekday delay in GO TO 2040. This value was developed based on the best data available at the time, which reflected the conditions in 2002. Since the adoption of GO TO 2040, an updated analysis of the rail crossing delay was completed which invalidated the original short-term goal. The target values for the plan update, including a revised 2015 target, are:</p> <p>2015: 7,675 hours of weekday delay 2020: 7,500 hours of weekday delay 2040: 5,500 hours of weekday delay</p> <p style="text-align: center;">Railroad at-grade crossing delay, 2002-40, with targets</p> <table border="1"> <thead> <tr> <th>Year/Target</th> <th>Hours per Weekday</th> </tr> </thead> <tbody> <tr> <td>2002</td> <td>10,982</td> </tr> <tr> <td>2011</td> <td>7,816</td> </tr> <tr> <td>2015 TARGET (UPDATED)</td> <td>7,675</td> </tr> <tr> <td>2020 TARGET</td> <td>7,500</td> </tr> <tr> <td>2040 TARGET</td> <td>5,500</td> </tr> </tbody> </table> <p style="text-align: center;">Source: Illinois Commerce Commission.</p>	Year/Target	Hours per Weekday	2002	10,982	2011	7,816	2015 TARGET (UPDATED)	7,675	2020 TARGET	7,500	2040 TARGET	5,500
Year/Target	Hours per Weekday												
2002	10,982												
2011	7,816												
2015 TARGET (UPDATED)	7,675												
2020 TARGET	7,500												
2040 TARGET	5,500												

Methodology:	<p>The 2040 target is unchanged from GO TO 2040. Over the last decade a number of strategies were implemented that resulted in a large reduction in weekday delay between the baseline and current analyses - these include closing lines and grade crossings, re-routing of service, and service realignments. The 2020 target was developed using the current value as a basis but recognizing that in the future such large-scale gains in reducing grade crossing delay will be more difficult to achieve, especially as freight rail traffic increases.</p>
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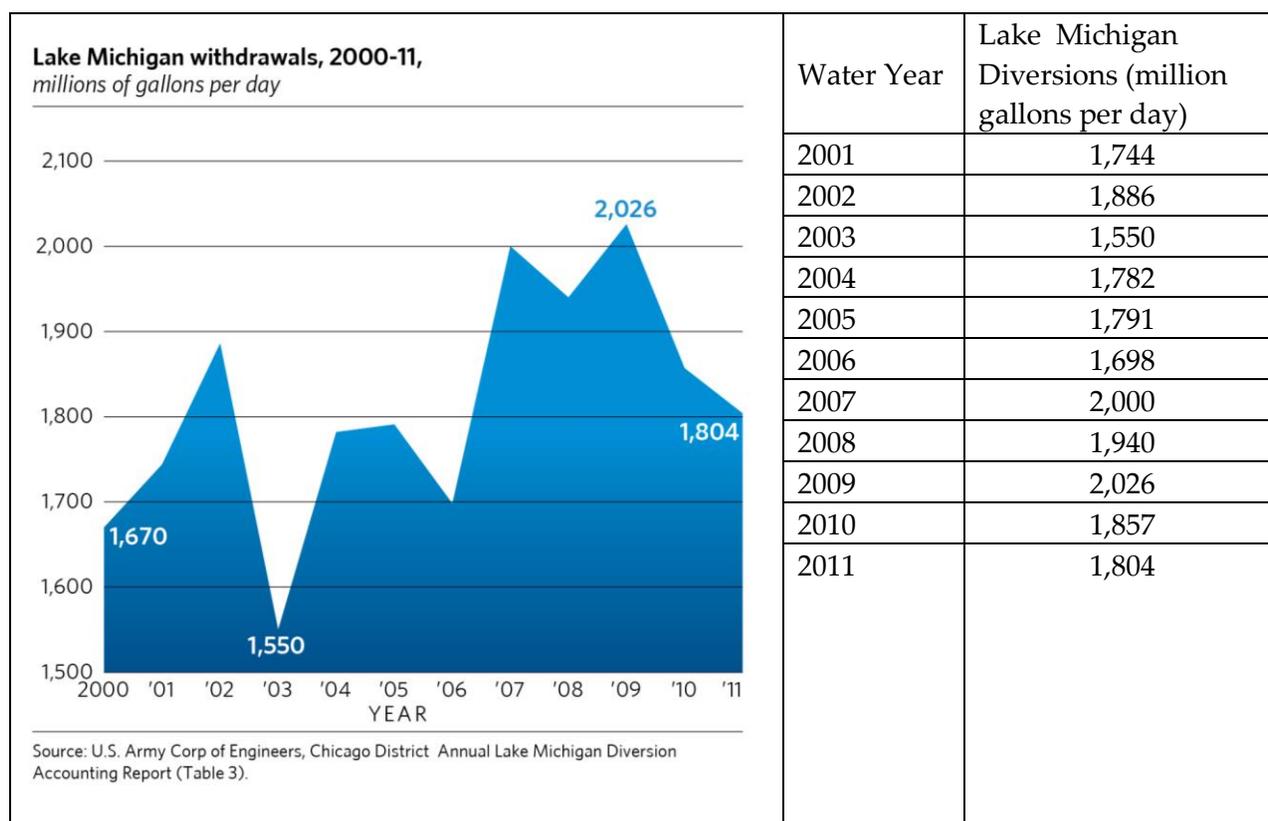
14. Appendix A: Secondary Kindred Indicators

This appendix highlights a set of secondary kindred indicators that will supplement the information provided by the plan performance measures. It is envisioned that the kindred indicators may be used in the narrative of the plan update and in the annual GO TO 2040 Moving Forward implementation reports to tell a more complete story of progress, as well as address data gaps in the plan performance measures.

14.1 Manage and Conserve Water and Energy Resources

Lake Michigan Withdrawals

- Description: In addition to overall water demand, the diversion of water from Lake Michigan is an area of interest for the CMAP region. By a U.S. Supreme Court consent decree, the State of Illinois is allowed to divert water from Lake Michigan at a rate of no more than 2,068 million gallons per day on average.
- Data Source: The [U.S. Army Corps of Engineers](#) is responsible for the official accounting of water diverted from Lake Michigan.



Deep Bedrock Aquifer Withdrawals

- Description: In addition to reporting on the diversion of water from Lake Michigan, it will also be instructive to measure total annual groundwater withdrawals from

deep bedrock aquifers (Ancell Unit of bedrock and deeper) in the CMAP region (measured in millions of gallons per day [Mgd]). This will help provide a more complete assessment of water conservation in the region.

- Data Source: The [Illinois State Water Survey](#) (housed at the University of Illinois at Urbana-Champaign) is the source for this groundwater data.

Deep Bedrock Aquifer Withdrawals

Year	Withdrawals (Mgd)	Year	Withdrawals (Mgd)
1995	55.2	2004	76.0
1996	47.9	2005	83.1
1997	43.9	2006	79.9
1998	38.5	2007	77.8
1999	43.9	2008	78.5
2000	61.0	2009	65.1
2001	52.1	2010	70.7
2002	57.1	2011	68.0
2003	74.6	2012	61.1

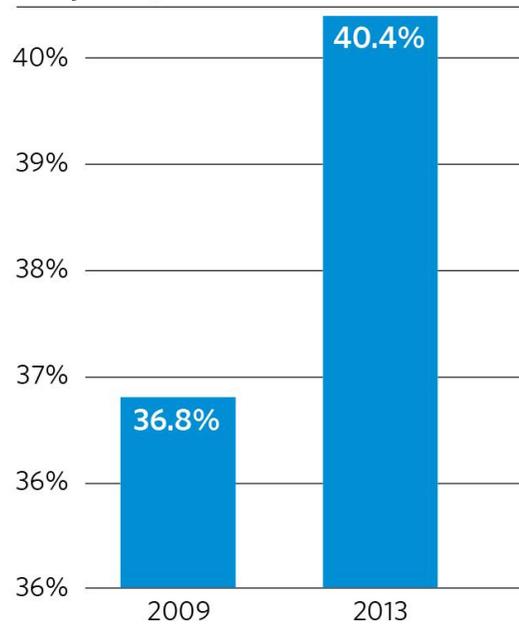
Source: Illinois State Water Survey.

14.2 Expand and Improve Parks and Open Space

Percentage of the Regional Trails Plan Completed

- Description: This indicator tracks the total miles of all trails in the [Northeastern Illinois Regional Greenways and Trails Plan](#) that are completed in the region. This is a broader measure of the trails available, as it includes on-street trails and key connector side paths and allows for analyzing trends in the entire planned trails system.
- Data Source: This information is maintained by CMAP staff in the Bicycle Information System.

Percentage of Northeastern Illinois Regional Greenways and Trails Plan completed, 2009-13



Source: Chicago Metropolitan Agency for Planning.

14.3 Promote Sustainable Local Food

Farmers' Markets in the Region

- Description: This kindred indicator tracks the number of farmers' markets operating in the region annually; a similar value (for the State of Illinois) was included in the Moving Forward 2012 implementation report. Farmers' markets offer consumers farm-fresh, affordable, convenient, and healthy products such as fruits, vegetables, cheeses, herbs, fish, baked goods, and meat in their local communities and can fill an important role in offering fresh nutritious food to under-served areas.
- Data Source: The [Illinois Department of Agriculture](#) website maintains a list of the farmers' markets occurring throughout the state. The functionality includes the ability to search by county, so the number of farmers' markets occurring in the region can be determined.

Number of Farmers' Markets in the Region

	Total Number of Farmers' Markets	
	2012	2013
Cook County	99	102
DuPage County	17	17
Kane County	13	13
Kendall County	2	2
Lake County	19	19
McHenry County	5	7
Will County	10	13
CMAP Region	165	173

14.4 Support Economic Innovation

Technology Transfer

- Description: This indicator measures the technology transfer of university research into the private market through licensing revenue, number of university startups, and university patents. In other words, the commercialization of academic research. Information is provided at the state level; with some additional work it is possible to report this information for specific universities.
 - Two examples of how these data were represented in the [August 2012 Innovation Index](#) are shown in the following charts.
- Data Source: Data are from the Association of University Technology Managers. This is proprietary data that CMAP is able to access through the Illinois Innovation Index.

Technology Licenses and Options, Top U.S. States, 2007-10 (Fiscal Years)

	2007	2008	2009	2010
California	432	466	417	461
Florida	133	133	162	177
Illinois	130	138	11	142
Massachusetts	527	476	528	494
Minnesota	145	128	131	146
North Carolina	299	243	290	237
New York	230	253	242	278
Pennsylvania	185	217	221	279
Texas	291	312	296	296

Source: Illinois Innovation Network, Illinois Innovation Index, August 2012.

Technology Transfer Activity in Chicago Region Universities

	Licenses	Invention Disclosures	Patents Issued	Startups Formed
2002	114	422	97	19
2003	124	452	132	8
2004	135	515	100	17
2005	72	526	107	13
2006	89	630	72	17
2007	95	652	108	18
2008	90	692	116	15
2009	74	617	98	11
2010	99	594	169	17
2011	143	638	180	32
2012	130	671	200	22

Source: Chicago Metropolitan Agency for Planning analysis of Association of University Technology Managers data.

Manufacturing Exports

- Description: This measure is based on CMAP’s analysis of manufacturing data (as described in its [drill-down report](#)). The use of this indicator ties in with GO TO 2040’s call for organizing the region around its clusters of specialization. Historically, manufacturing has been a key driver of economic growth in the region.
 - The geography for this data is the unique Chicago Customs District comprised of: Chicago (including Waukegan Harbor, Calumet Harbor, and Chicago River to Lockport); Peoria; Gary, IN (including Michigan City Harbor); Davenport, IA; Rock Island and Moline, IL; Greater Rockford Airport; Waukegan Regional Airport; Chicago Executive Airport (formerly Palwaukee); and Decatur User Fee Airport (Decatur, IL).

- Data Source: The data from USA Trade Online includes all goods exported by the region. Data specifically for manufactured goods can be obtained by summing the total of all manufacturing NAICS codes (31-33). The data are updated monthly, but annual data are updated in June.

Exports from Nation's Three Largest Metropolitan Regions

	2010 Exports in Million Dollars		
	Chicago	Los Angeles	New York
Machinery	\$10,886.92	\$13,613.85	\$3,583.82
Health Science	\$3,448.17	\$5,159.21	\$10,584.14
Chemicals, Plastics	\$4,794.02	\$4,855.66	\$5,691.86
Primary Metals, Minerals	\$6,626.35	\$5,651.91	\$1,629.86
Computer, Electronics	\$2,399.11	\$9,715.77	\$2,577.84
Food, Beverage	\$1,999.26	\$1,641.56	\$1,782.96
Fabricated Materials	\$1,696.71	\$1,545.49	\$829.83
Paper, Printing	\$1,032.83	\$861.51	\$1,113.10
Other	\$1,286.30	\$3,037.71	\$2,299.70

Source: Chicago Metropolitan Agency for Planning, Manufacturing Cluster Drill-Down Report, 2013.

Chicago Manufacturing Exports

Chicago Manufacturing Exports Value (\$ Billions)	
2002	22.67
2003	24.29
2004	28.87
2005	31.76
2006	33.04
2007	34.02
2008	34.63
2009	30.09
2010	33.68
2011	32.93
2012	32.86
2013	33.79

Source: U.S. Census Bureau

14.5 Invest Strategically in Transportation

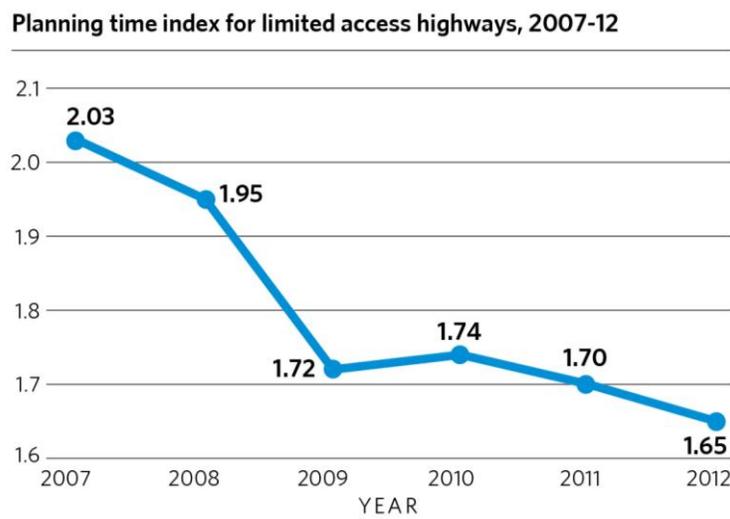
Condition Rating Survey

- Description: In addition to IRI scores, IDOT collects Condition Rating Survey (CRS) data for the state highway system. While the IRI value measures ride quality, the CRS values are a measure of overall pavement distress conditions, which is likely a more accurate measure of maintenance needs. The following categories are used to define pavement condition based on the CRS scores:

- Excellent (CRS score 7.6-9.0): low distress
 - Good (CRS score 6.1-7.5): not in immediate need of improvement
 - Fair (CRS score 4.6-6.0): will likely need improvement in the short term
 - Poor (CRS score 1.0-4.5): generally in need of improvement
- Additional documentation to the CRS can be found in the [FY13 Condition Rating Survey Summary Report](#).
- Data Source: Along with the ride quality information, IDOT collects pavement distress conditions. Data are available in the long version of the Illinois Roadway Information System, available only by special request.

Planning Time Index for Limited Access Highways

- Description: The Planning Time Index is a measure of travel time reliability. It is calculated as the ratio of the total time needed to ensure a 95 percent on-time arrival compared to the free-flow travel time. Measuring system reliability is an important component of understanding congestion, as it addresses the non-recurring causes of congestion. The Planning Time Index is a key metric included in the [U.S. DOT's Mobility Monitoring](#) program.
- Data Source: Data for this indicator are developed using the same roadway sensor information used to calculate the proposed "Average Congested Hours of Weekday Travel for Limited Access Highways" measure.



Source: U.S. Department of Transportation Mobility Monitoring Program.

14.6 Increase Commitment to Public Transportation

Average Weekday Unlinked Transit Trips per Capita

- Description: Unlinked transit trips per capita can be used to illustrate whether transit mode share is actually increasing. For instance, if population growth outpaces the increase in transit trips, the region is still losing ground in terms of shifting trips to transit. Note that the regional population includes people living in CMAP's seven-county area, while the RTA service area does not include Kendall County.
- Data Source: Transit data are from the [National Transit Database](#). Population data are from the U.S. Census Bureau.

Average Weekday Unlinked Transit Trips per Capita

Year	Weekday Transit Trips per Capita
2002	0.237
2003	0.231
2004	0.229
2005	0.237
2006	0.241
2007	0.241
2008	0.250
2009	0.242
2010	0.238
2011	0.244
2012	0.249

Sources: National Transit Database and U.S. Census Bureau.

15. Appendix B: Government Transparency Documentation

The following pages provide documentation of the Government Transparency Index category ratings for each of the seven county websites, which were reviewed during August-September 2013.

<u>Cook County</u>	
<p>Government Officials & Staff Directory <i>(Is there a link to contact info for county staff & government officials with pictures of major officials?)</i></p> <p>Users can get information about the County Board from the “Cook County Leadership” link in the “The Board” drop down menu on the main banner of the home page.</p>	3
<p>Online resources for access to open meetings & records <i>(Is there a link to a “calendar” or “upcoming meetings” or something with information about the meetings?)</i></p> <p>On the lower right side of the home page is a “Media Center” panel with interchangeable displays. User can select the “Event Calendar” button to get a schedule of upcoming events.</p>	3
<p>Document Library i.e. An area for frequently requested records and forms <i>(Is there a central location where a user could access most of the websites relevant documents and forms?)</i></p> <p>The Open Data website has a “Files and Documents” filter with about 28 objects; however it has not been updated recently.</p>	1
<p>Ways to file record request online <i>(Is there a clear link to file a FOIA request?)</i></p> <p>The top four results of a search for “FOIA” are located on different cook county websites: The Office of the President, Cook County FOIA, Cook County Treasurer, and The Cook County Clerk.</p>	1
<p>Access to budget & Financial information <i>(Is there access budget and financial information?)</i></p> <p>Within the “More Cook County Websites” drop-down menu on the main banner is link to the Cook County Budget website. Additionally, within the “Finance & Administration” drop-down menu is a link to the “Bureau of Finance” which has the 2012 financial report on its home page and other links along the right-side of the page.</p>	3
<p>Archives of meetings, ordinances, votes <i>(Are there archives of meeting minutes, ordinances, and/or votes?)</i></p> <p>Within the “The Board” drop-down menu on the main banner there are links to Cook County Legislation and Cook County Ordinances. The Ordinance drop-down menu leads to the Cook County Code of Ordinances page. The Legislation link leads to the Cook County Legislative Reference Service which allows users to search for legislation and ordinances from Cook County, Forest Preserve District, Cook County Code of Ordinances, and Forest Preserve District Code of Ordinances.</p>	3
<p>Links to public notices <i>(Is there an “alerts,” “notices,” and/or “updates” section with relevant information to the public?)</i></p> <p>At the bottom of the home page is “County News” section as well as feed of tweets from board President Toni Preckwinkle.</p>	3

<p>Access to e-government applications (<i>Are there links with clear information about/forms to pay fines, pay taxes, pay bills, and/or register to vote?</i>)</p> <p>On the home page there are “Apply or Register” and “Pay” buttons. The “Apply or Register” page contains a number of links do different applications and forms. The link to “Elections” goes to the County Clerk website’s election portal. It takes some more navigation to get to the online Voter Registration portal, which is located within the Illinois State Board of Elections webpage.</p> <p>The “Pay” page also has a number of links to places where users can pay for: Building Permits, Adoption & Child Advocacy, and Business License. There is also a link the Cook County Property Tax Portal which has contains a link to Pay Property Taxes online.</p> <ul style="list-style-type: none"> ▪ A bonus was given because users could perform these functions online. 	3*
<p>Public procurements (bids or RFPS) (<i>Is there information regarding doing business with county government, open requests for proposals, and past RFPs?</i>)</p> <p>The secondary banner contains a “Business & Lobby Center” link. Within the “Business & Lobby Center” users can select the “Browse Cook County Contracts” button to see granted contracts. The “Doing Business with Cook County” button takes users to the Chief Procurement Officer’s website where there are links to Procurement Opportunity.</p> <ul style="list-style-type: none"> ▪ A bonus was given because the Browse Cook County Contracts is a searchable dataset that users can filter and manage. It has records of contracts going as far back as 2003. 	3*
<p>Maps and Data (<i>Are there interactive maps and/or supporting data?</i>)</p> <p>The secondary banner contains a “More Cook County Websites” drop-down menu with a link to the “Open Data Portal.” There is a menu on the left side, titled “View Types.” Here users can view maps of different information with Cook County. The data portal contains datasets, charts, maps, and more. All of which is exportable.</p> <ul style="list-style-type: none"> ▪ A bonus was given because datasets can be exported as .csv, .xls, .pdf and other formats. 	4*
<p>Average Score:</p>	2.7

Note: For this assessment the <http://home.cookcountyil.gov/> website was designated as the homepage.

DuPage County	
<p>Government Officials & Staff Directory <i>(Is there a link to contact info about government officials with pictures of major officials?)</i></p> <p>Along the banner there are a series of drop down menus. There are County Board and Elected Officials drop down menus. One can click on the menu title or you can select specific individuals within the menu. It is very easy to access information about these officials.</p> <ul style="list-style-type: none"> A bonus was given because more personalized contact and background information was given for elected county board members. There are even links to election information for each elected official. Example: Paul Fitchner and his election information. 	4*
<p>Online resources for access to open meetings & records <i>(Is there a link to a "calendar" or "upcoming meetings" or something with information about the meetings?)</i></p> <p>There are multiple ways to access information about meetings; these link to one of 3 pages: the Calendar, County Board Committees' Agendas & Minutes, and the Meeting Portal.</p> <ul style="list-style-type: none"> A bonus was given because meeting agenda and supporting documents were available in advance of the meeting. Additionally, the committees section provides users with committee information. 	4*
<p>Document Library i.e. An area for frequently requested records and forms <i>(Is there a central location where a user could access most of the websites relevant documents and forms?)</i></p> <p>There is not a central location where one can access all/most documents. When the word "documents" is searched the best result is the Online Forms section within the "Services" drop-down menu.</p>	1
<p>Ways to file record request <i>(Is there a clear link to file a FOIA request?)</i></p> <p>There are multiple ways to locate information about FOIA requests. In the lower banner of the website there is a link for FOIA Requests. Within the Elected Officials drop-down menu there are links to FOIA information for: County Clerk, Auditor, Coroner, Treasurer, Circuit Court Clerk, & Recorder. Within the County board drop down menu there is a link to FOIA for County Board. Within the "I Want To..." drop-down menu there is a link to Request FOIA/Public Records.</p>	3
<p>Access to budget & Financial data <i>(Is there access budget and financial data?)</i></p> <p>The Financial & Budget Reports link on the "Quick Links" left-side panel of the home page takes users to budget reports and other information from the Finance department.</p>	3
<p>Archives of ordinances and votes; of minutes, video and/or audio records <i>(Are there archives of meeting minutes, ordinances, and/or votes?)</i></p> <p>There are multiple ways to access meeting archives. From the Calendar link users can select an event on the calendar. Within these pages users can select links to meeting agenda& minutes. The "Watch Meetings" link on the "Quick Links" left-side panel of the home page takes users to the Meeting Portal. Within, this site one can see supporting documents for past meetings.</p> <ul style="list-style-type: none"> A bonus was given because within the Meeting Portal there is a complete video archive of county meeting proceedings. 	4*
<p>Links to public notices <i>(Is there an "alerts," "notices," and/or "updates" section with relevant information to the public?)</i></p> <p>On the home page, there is a "News" link. Currently there is also a "West Nile Virus" panel indicating risk level recommendations for fighting West Nile Virus. There is also a rotating banner in the middle of the home screen with various links to information for users.</p>	3

<p>Access to e-government applications <i>(Are there links with clear information about/forms to pay fines, pay taxes, pay bills, and/or register to vote?)</i></p> <p>From the “I Want To” drop-down menu there is a “Pay” section with information about paying: highway permits, OW/OD permits, court fees, property/real estate taxes, special road & trail permits, and traffic tickets</p> <ul style="list-style-type: none"> ▪ A bonus was given because users are able to pay taxes, traffic tickets and some permit fees online. 	4*
<p>Public procurements (bids or RFPS) <i>(Is there information regarding doing business with county government, open requests for proposals, and past RFPS?)</i></p> <p>Within the “Quick Links” left-side panel there is a link to “Doing Business with DuPage” which leads to the Procurement page, this contains information for companies attempting to do business with the county. There is also a link to the Bids and RFPS website. This website can also be accessed from the “I Want To” drop down menu within the “Find” section.</p> <ul style="list-style-type: none"> ▪ A bonus was given because there was a sortable RFP database. 	4*
<p>Maps and Data <i>(Are there interactive maps and/or supporting data?)</i></p> <p>From the “I Want To” drop-down menu there is a “Find” section with a link to Online “Maps and Data.” This link leads to an interactive map of DuPage County. Users can manipulate the map and export a PDF copy of the map.</p> <ul style="list-style-type: none"> ▪ A bonus was given because users export a PDF report of the information the map displays. 	4*
Average Score:	3.4

<u>Kane County</u>	
<p>Government Officials & Staff Directory <i>(Is there a link to contact info for county staff & government officials with pictures of major officials?)</i></p> <p>Along the main banner, there is a "Government" link. This leads to a page with an organizational chart of Kane County offices and departments (each contains a link to the Department). Along the left side of this section is a link to "County Board Members" which has links and contact information for all board members.</p> <ul style="list-style-type: none"> ▪ A bonus was given because some members provided office, home and cell phone numbers. 	3*
<p>Online resources for access to open meetings & records <i>(Is there a link to a "calendar" or "upcoming meetings" or something with information about the meetings?)</i></p> <p>On the home page there is "Current Calendar Events" panel with links to upcoming County meetings. Along the main banner, there is a "Calendar" link. On this page are sections for events within the "Next 7 Days," "Next 30 Days," and "Cancelled & Rescheduled for Next 30 Days."</p> <ul style="list-style-type: none"> ▪ A bonus was given because the events lead to links with downloadable Agenda packets for the nearest meetings. (Example the Sept 26th, 2013 KANECOMM Committee meeting.) 	4*
<p>Document Library i.e. An area for frequently requested records and forms <i>(Is there a central location where a user could access most of the websites relevant documents and forms?)</i></p> <p>At the bottom of the pages within the Kane County website is a link to the county's Document Library. Another way to access the data library is from the "Government" link on the main banner. Along the left-side of this page is a link to the "Document Library."</p>	3
<p>Ways to file record request online <i>(Is there a clear link to file a FOIA request?)</i></p> <p>At the bottom of the pages within the Kane County website is a link to an "FOIA" page. This page has information about the FOIA process as well as contact information for the FOIA Officers for each department and elected official.</p> <ul style="list-style-type: none"> ▪ A bonus was given because there is Request Form PDF that users can fill out online and either print or attach to an email. 	4*
<p>Access to budget & Financial information <i>(Is there access budget and financial information?)</i></p> <p>Under the Featured Links panel on the home page, "2013 Adopted Budget" and "Your Tax Dollars" links. The budget link leads to a PDF of the 2013 Budget. "Your Tax Dollars" leads to the Kane County Finance Department. This page has expandable menus with information including Annual Financial Reports, County Budgets back to 2006, and Wage and Salary Reports.</p>	3
<p>Archives of meetings, ordinances, votes <i>(Are there archives of meeting minutes, ordinances, and/or votes?)</i></p> <p>Under the Featured Links panel on the home page, is a link to "Agendas & Meeting Minutes." This page contains links to different active committees. There's also an option to show inactive committees as well. Within these Committee page users can view PDF copies of agendas and meetings minutes. (Example: the Agriculture Committee).</p>	2

<p>Links to public notices (<i>Is there an “alerts,” “notices,” and/or “updates” section with relevant information to the public?</i>)</p> <p>Along the bottom of the home page is banner with links to different alerts, including: Emergency Alerts, Health Alerts, Traffic Advisories, Road Closures, and CodeRED (an emergency telephone alert system)</p>	3
<p>Access to e-government applications (<i>Are there links with clear information about/forms to pay fines, pay taxes, pay bills, and/or register to vote?</i>)</p> <p>On the main banner of the home page is a link to “A-Z Service.” Within the section users should select the “UVWXYZ” link. On this page users can locate “Voter Registration.” This link will take them to the Kane County Clerk’s website. Here they will find information about registering to vote. There is “Real Estate Tax Information” link; however this does not provide information about paying taxes.</p>	1
<p>Public procurements (bids or RFPS) (<i>Is there information regarding doing business with county government, open requests for proposals, and past RFPs?</i>)</p> <p>Under the Featured Links panel on the home page, is a link to “County Bids.” On this page users can see information such as “Bids & RFPs” and “Results of Bids & Proposals.”</p>	3
<p>Maps and Data (<i>Are there interactive maps and/or supporting data?</i>)</p> <p>On the main banner of the home page is a link to “Maps.” This page has links to different county maps, including an Interactive GIS Online Map. Users can print or download a PDF version of their map.</p>	2
<p>Average Score:</p>	2.8

<u>Kendall County</u>	
<p>Government Officials & Staff Directory <i>(Is there a link to contact info for county staff & government officials with pictures of major officials?)</i></p> <p>From the “County Board” drop-down menu, users can access information about the county board. Just click the “County Board” drop-down menu takes users to a page with contact information about each board member.</p> <ul style="list-style-type: none"> ▪ A bonus was given because more personalized contact and background information was given for elected county board members. Example. 	4*
<p>Online resources for access to open meetings & records <i>(Is there a link to a “calendar” or “upcoming meetings” or something with information about the meetings?)</i></p> <p>There is a Calendar link on the drop-down menu. On this page users can select meetings which contain links providing further details such as time and location.</p>	3
<p>Document Library i.e. An area for frequently requested records and forms <i>(Is there a central location where a user could access most of the websites relevant documents and forms?)</i></p> <p>There is not a data library. The closest thing is the “Kendall County Transparency” page, which can be accessed from a link at the very top, right corner of the website.</p>	1
<p>Ways to file record request online <i>(Is there a clear link to file a FOIA request?)</i></p> <p>From the drop-down menu users can either select a department-specific FOIA information or just click the “FOIA” menu and view the same options with more information about the departments. This allows users to consider which departments would have the information they desire.</p>	3
<p>Access to budget & Financial information <i>(Is there access budget and financial information?)</i></p> <p>Along the left-side panel of the home page users can select the “Financial Reports” link where users can choose from links to Audits, Fiscal Budgets, & Monthly Fund Balances. Also under the Quick Links panel, users can select the “2013 Annual Fiscal Budget” which opens a PDF copy of the 2012-2013 Budget.</p>	3
<p>Archives of meetings, ordinances, votes <i>(Are there archives of meeting minutes, ordinances, and/or votes?)</i></p> <p>From the County board drop down menu users can select the “Meeting Information” link. This provides a set of links to all of Kendall County’s committees with agendas, packets, and minutes. Under the Quick Links panel is a link to “Kendall County Ordinances” where users can view PDF copies of ordinances dating back to 2007.</p>	3
<p>Links to public notices <i>(Is there an “alerts,” “notices,” and/or “updates” section with relevant information to the public?)</i></p> <p>On the right-side of home page is an “Alerts” link. Additionally, there is a “News” panel along the center of the home page.</p>	3
<p>Access to e-government applications <i>(Are there links with clear information about/forms to pay fines, pay taxes, pay bills, and/or register to vote?)</i></p> <p>Beneath the “Quick Links” panel on the left-side of the home page is a link to “Pay Traffic /Court Case.”</p> <ul style="list-style-type: none"> ▪ A bonus was given because users can pay traffic tickets (that don’t require a court appearance) and court fees online. 	4*

<p>Public procurements (bids or RFPS) <i>(Is there information regarding doing business with county government, open requests for proposals, and past RFPs?)</i></p> <p>There is an "RFP, RFO, Call for Bids" link on the left-side panel of the home page where current RFPs and call for bids or displayed.</p>	3
<p>Maps and Data <i>(Are there interactive maps and/or supporting data?)</i></p> <p>From the "County Offices" drop-down menu users can select "Geographic Information Systems." Along the left side of this page is "GIS Links" menu from which users can select "Interactive maps" which leads them to menu of four interactive maps. Users can print the maps that they work on.</p>	2
Average Score:	2.9

Lake County	
<p>Government Officials & Staff Directory <i>(Is there a link to contact info for county staff & government officials with pictures of major officials?)</i></p> <p>From the “County Government” drop down menu users can select the “County Board” link. From the County Board users can select the “County Board Members” page. Within this one can select a board member to receive contact and background information.</p>	2
<p>Online resources for access to open meetings & records <i>(Is there a link to a “calendar” or “upcoming meetings” or something with information about the meetings?)</i></p> <p>On the right-side panel of the home page, users can select the “Public Meeting Info/Legislation” link. From This page, users can select the Meetings tab which gives users time and location for upcoming meetings.</p> <ul style="list-style-type: none"> ▪ A bonus was given because downloadable meeting details and agendas are available as the dates get closer. Additionally, there is a link on the homepage to “Watch LCTV” where users can watch live broadcast from the local access channel. 	4*
<p>Document Library i.e. An area for frequently requested records and forms <i>(Is there a central location where a user could access most of the websites relevant documents and forms?)</i></p> <p>There is not a document library; the closest thing is the Legislation tab within the “Public Meeting Info/Legislation.”</p>	1
<p>Ways to file record request online <i>(Is there a clear link to file a FOIA request?)</i></p> <p>There is link on the right-side panel to “Freedom of Info Act (FOIA).” This page has information about the process of submitting and FOIA request. There is no way to file a record request online.</p>	3
<p>Access to budget & Financial information <i>(Is there access budget and financial information?)</i></p> <p>From the right-side panel there is “Budget” link. This page contains the 2013 budget. Along the left-side panel, there are also links to Monthly Expense Reports & Budget Documents.</p>	3
<p>Archives of meetings, ordinances, votes <i>(Are there archives of meeting minutes, ordinances, and/or votes?)</i></p> <p>On the right-side panel of the home page, users can select the “Public Meeting Info/Legislation” link. From this page, users can select the Meetings tab which gives meeting details, agendas, and minute for most meetings dating back to June 2008.</p> <ul style="list-style-type: none"> ▪ A bonus was given because some archived board meetings also had video records. These videos can be accessed from the “Public Meeting Info/Legislation” link. Additionally, from the “I Want To...” drop-down menu within the “Watch” section, users can select Board Meetings to watch archives of monthly board meetings. Users can export excel, word, and PDF copies of Legislation. 	4*
<p>Links to public notices <i>(Is there an “alerts,” “notices,” and/or “updates” section with relevant information to the public?)</i></p> <p>Along the left-side of the home page there is link to “Alert Lake County.” This can also be accessed from the “I Want To...” drop-down menu in the “Check” section. The majority of the home page is occupied with Lake county news updates, with link at the bottom of the page to the County News page.</p>	3

<p>Access to e-government applications <i>(Are there links with clear information about/forms to pay fines, pay taxes, pay bills, and/or register to vote?)</i></p> <p>From the “I Want To...” drop-down menu in the “Pay” section, users can choose Fees, Property Taxes, & Water/Sewer Bills</p> <ul style="list-style-type: none"> ▪ A bonus was given had clearly accessible online access to these functions on the home screen and/or users were able to pay property taxes & water/sewer bills online. 	4*
<p>Public procurements (bids or RFPS) <i>(Is there information regarding doing business with county government, open requests for proposals, and past RFPS?)</i></p> <p>There are two ways from the home page to access information about bids and RFPS. From the “I Want To...” drop-down menu in the “Find” section users can select “Bids” which takes them to a page of sortable bids and RFPS. From the right-side panel there is a link for “Doing Business with Lake County.” from this page users can select “Invitation for Bids” or “Requests for Proposals” which lead to the same sortable bids and RFPS.</p> <ul style="list-style-type: none"> ▪ A bonus was given because the Bids and RFPS could be sorted by their current status. 	4*
<p>Maps and Data <i>(Are there interactive and printable maps and/or supporting data?)</i></p> <p>On the right-side panel of the home page, users can select the “Maps Online” link. From this page users can choose from four maps. The primary “Maps Online Map” also allows users to print and share maps that they manipulate.</p>	3
Average Score:	3.1

McHenry County	
<p>Government Officials & Staff Directory <i>(Is there a link to contact info for county staff & government officials with pictures of major officials?)</i></p> <p>From a drop-down menu that is present on most pages within the website users can access the County Board & Department Staff pages with contact information.</p> <ul style="list-style-type: none"> A bonus was given because more personalized contact and background information was given for elected county board members. Example. 	4*
<p>Online resources for access to open meetings & records <i>(Is there a link to a “calendar” or “upcoming meetings” or something with information about the meetings?)</i></p> <p>From the homepage there are a number of ways to get to the County Meetings & Monthly Calendar pages. There are clear links above the drop-down menu and search bar. Within the County Government drop-down menu there is a section for “County Meetings.”</p> <ul style="list-style-type: none"> A bonus was given because meeting agendas and supporting documents were available in advance of the meeting. 	4*
<p>Document Library i.e. An area for frequently requested records and forms <i>(Is there a central location where a user could access most of the websites relevant documents and forms?)</i></p> <p>There is a Document Library which can be found on the county board page. There is a link from the “County Government” drop-down menu to “Meet Your County Board Members,” but the average user might not realize that this section is actually a subsection of the “County Board” section of the website.</p>	1
<p>Ways to file record request online <i>(Is there a clear link to file a FOIA request?)</i></p> <p>From the County Government drop-down menu there is a link to FOIA Requests. This section has FOIA forms, possible sources of information within the website, fee information, and departments’ FOIA Officers’ contact information.</p>	3
<p>Access to budget & Financial information <i>(Is there access budget and financial information?)</i></p> <p>Located between the dropdown menu and the search bar is small white drop down menu labeled “Connect Me To...” From this users can access pages for: Bids & RFPs, the County Budget & Financial Reports, E-news Archives & Subscriptions, FOIA Request, and more.</p>	3
<p>Archives of meetings, ordinances, votes <i>(Are there archives of meeting minutes, ordinances, and/or votes?)</i></p> <p>Within the County Meetings (ref. criteria 2) site there is a complete archive of past meetings, supporting documents, minute from proceedings.</p> <ul style="list-style-type: none"> A bonus was given because within the County Meetings site there is a complete video archive of county meeting proceedings. 	4*
<p>Links to public notices <i>(Is there an “alerts,” “notices,” and/or “updates” section with relevant information to the public?)</i></p> <p>On the home page there is prominent Latest News section and an Upcoming Events section just underneath. Additionally, there is currently a bright red alert at the very top of every page alerting users that they can make flu shot appointments through the health department.</p>	3

<p>Access to e-government applications <i>(Are there links with clear information about/forms to pay fines, pay taxes, pay bills, and/or register to vote?)</i></p> <p>From the “How Do I...” drop-down menu there is link to “Pay...” This page has links to post bond, pay child support, liquor license, property tax, and traffic tickets. Additionally, within the “Services” drop-down menu there is a section for Online Services. This page provides links to a number of the resources available through the website. The FAQs page, a link is visible on the home page.</p>	3
<p>Public procurements (bids or RFPS) <i>(Is there information regarding doing business with county government, open requests for proposals, and past RFPS?)</i></p> <p>Located between the dropdown menu and the search bar is small, white drop down menu labeled “Connect Me To...” From this users can access pages for: Bids & RFPS, the County Budget & Financial Reports, E-news Archives & Subscriptions, FOIA Request, and more.</p>	3
<p>Maps and Data <i>(Are there interactive and printable maps and/or supporting data?)</i></p> <p>From the “County Government” drop-down menu users can select “Maps – Aerial (GIS).” This takes users directly to McHenry County’s interactive map where users can manipulate and print maps that they work on.</p> <ul style="list-style-type: none"> ▪ A bonus was given because users can export .csv files of parcel information that they look up. 	4*
Average Score:	3.2

<u>Will County</u>	
<p>Government Officials & Staff Directory <i>(Is there a link to contact info for county staff & government officials with pictures of major officials?)</i></p> <p>On the drop down mention there is an “Elected Officials” and a “Department Directory” drop-down menu. Clicking these menus takes user to contact information for County Elected Officials and a Department Directory, respectively.</p>	3
<p>Online resources for access to open meetings & records <i>(Is there a link to a “calendar” or “upcoming meetings” or something with information about the meetings?)</i></p> <p>There is an “Upcoming Meeting & Events” panel on the home page. On the bottom of this panel is a link to a more complete calendar with information about meetings.</p>	3
<p>Document Library i.e. An area for frequently requested records and forms <i>(Is there a central location where a user could access most of the websites relevant documents and forms?)</i></p> <p>There is not a document library. There is a Frequently Requested Forms section with four forms: Liquor Ordinance, Application for Raffle License, Solicitor Application, and FOIA Request Form.</p>	1
<p>Ways to file record request online <i>(Is there a clear link to file a FOIA request?)</i></p> <p>On the right side, just below the red banner, drop-down menu on the home page, is another drop-down menu. From this menu, users can select Freedom of Information Act (FOIA) Request. This takes users to a PDF with information about FOIA request in Will County.</p>	3
<p>Access to budget & Financial information <i>(Is there access budget and financial information?)</i></p> <p>There are multiple ways to access Will County budget and financial information. From the “Department Directory” drop-down menu, users can select the Finance Department link. On this page are links to final approved, budgets, annual financial reports, and audits. From the “Elected Officials” drop-down menu, within the “County Executive” section users can find links to county budgets back to 2010.</p>	3
<p>Archives of meetings, ordinances, votes <i>(Are there archives of meeting minutes, ordinances, and/or votes?)</i></p> <p>From the “Links” drop-down menu users can select the “County Board Minutes” link.</p>	3
<p>Links to public notices <i>(Is there an “alerts,” “notices,” and/or “updates” section with relevant information to the public?)</i></p> <p>There is a “Will County News & Services Panel” and an “Informational Links” panels on the right side of the home page. They contain links to news (Information about Cooling Centers during the summer), information (the new RTA Reduced Fare program), and updates (Election Results) for Will County.</p>	3
<p>Access to e-government applications <i>(Are there links with clear information about/forms to pay fines, pay taxes, pay bills, and/or register to vote?)</i></p> <p>From the “Property Tax Bill Information” link within the “Taxes” drop-down menu on the home page users are taken to the County Treasurer’s page. From this home page users can select links to view their Tax Bill or use the “I Need To...” drop down menu to pay Property. This drop-down menu also has link to information about paying Back and Forfeited taxes. User can select the Will County Clerk Link from the “County News & Services” panel or from the “Elected Officials” drop-down menu. It’s from the County Clerk’s website that users</p>	2

can get election information such as Results and Voter Registration .	
<p>Public procurements (bids or RFPS) <i>(Is there information regarding doing business with county government, open requests for proposals, and past RFPS?)</i></p> <p>From the “Links” drop-down menu users can select links from within the Invitations to Bid section. These links include Current Bids and past awarded bids all the way back to 2008.</p> <ul style="list-style-type: none"> This received a bonus for including a link to a sortable database of Will County Government Bids. 	4*
<p>Maps and Data <i>(Are there interactive maps and/or supporting data?)</i></p> <p>From the “Department Directory” drop-down menu users can select “GIS Department.” From the GIS Home page users can select “WISARD” to access the Will Interactive Spatial Application and Resource Depiction home page, Will County’s interactive map. On this page users can select a link to access WISARD. From this page they can launch the WISARD application. Users can print PDF versions of their maps.</p>	1
Average Score:	2.6

16. Appendix C: Access to Transit Documentation

In anticipation of the GO TO 2040 plan update, CMAP staff developed a new method of measuring transit accessibility as a means of determining the percentage of regional population and jobs with access to transit, one of the plan's indicators for measuring the progress of plan implementation. This document describes the methodology used to develop this measure and presents analysis results.

16.1 Measure Description

The transit accessibility metric included in GO TO 2040 is derived from a simple spatial analysis that relies on fixed buffers around bus stops and train stations (one-quarter mile and one-half mile, respectively) to define the accessible area. The land area ratio of buffered area divided by total area is then applied to the total population and jobs values for each Trip Generation zone (commonly referred to as subzones) to determine the final "accessible" values. This metric ostensibly measures the number of people who live and work within walking distance of fixed-route transit service, based on the underlying assumption that both population and jobs are uniformly distributed within the subzones. While this spatial buffering offers an easily-understood "back-of-the-envelope" estimate of transit access, mere proximity to transit is too simplistic a way to measure accessibility. Further, it says nothing about the transit service itself or about the variations in level of service offered throughout the region.

To measure the percentage of population and jobs in the region with access to transit as a means of tracking plan implementation progress, a new metric was developed – the Access to Transit Index. For a specific area, this index is intended to measure the relative level of access residents have to the transit system regardless of mode. The intent of this new index is to provide a more complete measure of how residents view access to transit by including multiple factors that contribute to one's perception of transit accessibility, while maintaining a metric that is still easily comprehended. The new index value is calculated from four component factors:

- Weekly frequency of transit service.
- Activities that can be reached via a single direct transit route.
- Proximity to a transit stop or station measured over the network.
- Pedestrian friendliness of the surrounding area.

The Access to Transit Index is a uniform measure of transit level of service available during an average week. It permits the tracking of changes in transit level of service over time and presents the results in an intuitive fashion. It also offers a universal comparison of the different service levels offered across the region. The inherent loss of some of the nuances in localized service is balanced against the ability of the index to provide a relatively simple way to compare transit service over a large area over time. This index also adheres to a number of tenets CMAP staff used in developing a revised set of performance measures for the GO TO 2040 plan update:

principally that the indicator use actual observed data rather than modeled values, that it is widely comprehensible and that the data are updated with sufficient frequency for the index to serve as a reasonable benchmark for measuring progress.

The index is not intended to measure the connectivity of the transit system as a whole, or the access to the region that the transit system provides. The index is not intended to reflect the actual transit service conditions one may encounter on a specific transit trip. It is also not intended as a means to evaluate the performance of the various transit operators nor is it a suitable tool for such an evaluation.

16.2 Data Description

Transit service for the region is analyzed using information provided in General Transit Feed Specification (GTFS) files. These are files developed and distributed by the transit operators themselves and use a standard format to provide route and schedule information to automated trip planning applications such as Google Transit. This measure analyzes transit data for the four major operators in the region: the Chicago Transit Authority, Metra, Pace and the Northern Indiana Commuter Transportation District. This metric analyzes fixed-route transit service only – meaning service along a prescribed route that operates on a fixed schedule. It does not include demand-responsive transit service or paratransit. The analysis also excludes seasonal and event-specific transit service that does not operate throughout the entire year. Examples of this type of service include express buses serving events at locations such as the United Center, Soldier Field, Wrigley Field, U.S. Cellular Field and Toyota Park, among others.

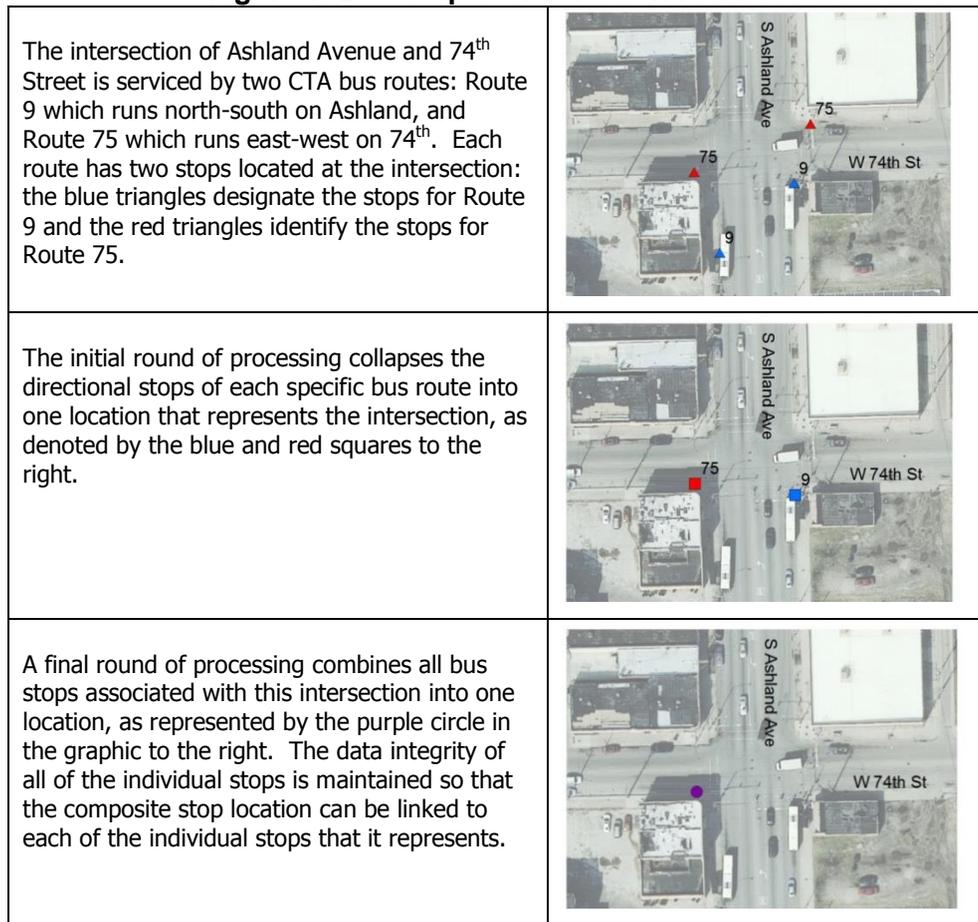
For this analysis, transit service attributes are summed at the subzone-level geography for the seven-county region. Subzones are quarter-section sized geographies that CMAP uses for household and employment forecasting; generally they are ½ mile by ½ mile square throughout the region. Subzones in the Chicago Central Business District (CBD) are generally ¼ mile by ¼ mile square due to the densities of activities and the street network in that area. For the transit accessibility analysis, buffers around the subzones were used to identify a reasonable transit service area. This was done to reflect that fact that transit stops located within a close distance of the subzone boundaries may be an acceptable choice to residents of the subzone. Due to their small size and the density of transit stops available, subzones in the CBD were buffered by a distance of 0.1 miles (equivalent to one Chicago city block). All other subzones were buffered by a distance of 0.25 miles, representing a distance that could be traversed by walking within a five-minute period, assuming a pace of three miles per hour.

Consolidation of bus stops into generalized locations

This analysis uses generalized bus stop locations representing composite levels of transit service. The GTFS files include information on the spatial location of every bus stop in the region, thus stops serving the opposite direction runs of the same bus route are physically located on different sides of the same street. Therefore, when service frequency values are attached to bus stops, it represents half of the service provided by the route because it only measures one direction. In order to place all stops (regardless of mode) on equal footing, a

method was employed to consolidate each pair of single-direction stops on every bus route into one physical location that represents the combined service of both directions. The underlying concept is that a passenger would perceive the bus stop pair as a single destination, regardless of which side of the street the stop was on. This concept was taken to the next level at intersections, where all stops at an intersection were consolidated into one location, based on the notion that travelers view an intersection containing multiple stops as one general location. During the stop consolidation process, the data integrity of each individual stop is maintained so that the individual attributes can be aggregated to the composite stop location and that the composite stop can be linked back to each of the individual stops that it represents. Figure 1 illustrates the process used to create generalized bus stop locations at an intersection.

Figure 1. Bus Stop Consolidation Process



The consolidated stops are used throughout the analysis process.

Access to Transit Components

Data files representing 2010 transit service were analyzed to develop a base year Access to Transit Index, consistent with the year GO TO 2040 was adopted. This information is presented in the body of this Indicators Appendix along with the description of this measure. Each of the four component factors was measured individually at the subzone level and an index value was assigned to each subzone. The overall accessibility index value is the average of the four factor

indices that were assigned to the subzone. The remainder of this section discusses the four component factors of the overall index.

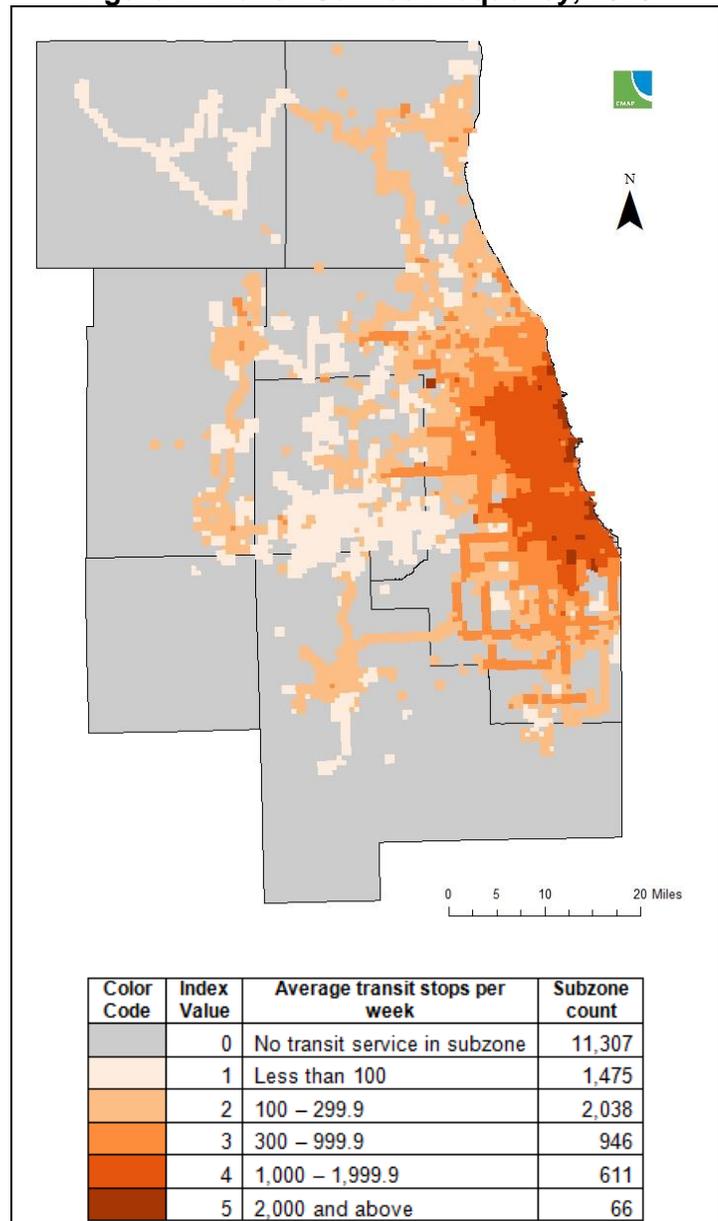
Average weekly transit service frequency

The transit service frequency component of the index measures the average number of times a stop in the buffered subzone area is visited by a fixed-route transit service vehicle during one week. The service frequency at the consolidated stop locations is the aggregate total of the service frequencies of the individual stops that comprise it.

Figure 2 shows the transit service frequency component of the overall index. The analysis methodology places all subzones without transit into Category 0, so that credit for this measure is only given if transit service is offered in the subzone. The subzones with transit service are categorized based upon actual service levels using the following categories developed by the Regional Transportation Authority based on the types of services that are operated in the Chicago region and Chapter 5 Section 2 of the [Transit Capacity and Quality of Service Manual \(TCQSM\) 3rd Edition](#):

- Category 1: Less than 100 stops per week – At the stop level, this generally represents infrequent commuter services in which passengers must consult transit schedules and adapt significantly to them. This service is operationally feasible in low density areas. Examples of this type of service include Pace routes 709 and 806.

Figure 2. Transit Service Frequency, 2010



Source: Chicago Metropolitan Agency for Planning analysis.

- Category 2: 100 to 299.9 stops per week – At the stop level, this generally represents moderately frequent commuter services in which passengers must consult transit schedules and adapt somewhat to them. This service is operationally feasible in low

density areas. Examples of this type of service include Pace route 330 and Metra's Rock Island District service.

- Category 3: 300 to 999.9 stops per week – At the stop level, this generally represents frequent commuter services in which passengers will likely consult transit schedule and adapt somewhat. This service is operationally feasible in low-to-moderate density areas. Examples of this type of service include Metra's Burlington Northern service and CTA route 84.
- Category 4: 1000 to 1999.9 stops per week – At the stop level, this generally represents relatively frequent urban service where it is not necessary to consult schedules due to the brief wait time for the next vehicle. This service is operationally feasible in moderately dense areas. Examples of this type of service include the CTA Orange Line and CTA route 9.
- Category 5: At least 2000 stops per week – At the stop level, this generally represents frequent urban service where passengers can wait without a schedule. This service is operationally feasible in high-density corridors.

Activities that can be reached via a single direct transit route

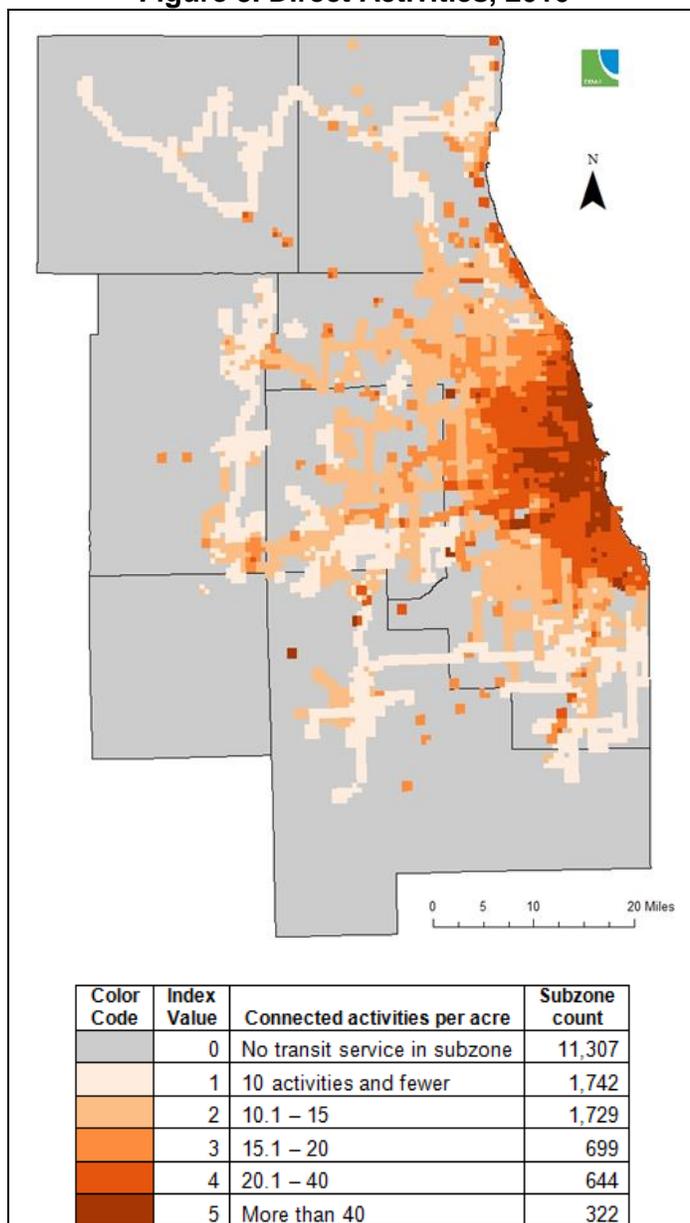
This component measures the relative value to individuals that transit service provides, measured in terms of the activities that can be reached from a subzone, using a single direct transit route. The assumption is that individuals deem a transit trip that reaches a destination without using a transfer as more accessible than one that does use a transfer. Activities are defined as the sum of the number of people residing in a subzone and the number of jobs located in a subzone. Reachable activities are calculated for each subzone by first finding all other subzones that can be reached from the buffered origin subzone using a single direct transit route. For each origin subzone, the reachable activities value is the activity density; i.e., the total activities that can be reached in the destination subzones divided by the total area of the destination subzones. The result is reported as direct activities per acre. This calculation is limited to only those destinations within the 7-county region. Figure 3 shows the direct activities index.

As with transit service frequency, all subzones without transit service are classified as Category 0. The remaining subzones are assigned to five categories of activity density, which were developed based on the ranges of densities derived from the U.S. Census Bureau's Public Use Microdata Areas.

Average proximity to transit

The proximity to transit measures the average distance one would need to travel to reach a transit stop, regardless of the mode of travel. This value is measured differently depending on whether or not the subzone being analyzed has transit service. For subzones containing transit stops, the measurement for each stop is the average network-based distance one must travel to reach that stop without encountering a closer stop. To calculate this value, a catchment area is created for each stop which represents all locations that are closer to that particular stop than to any other stop. An average distance is assigned to the stop based on the shortest distances to all

Figure 3. Direct Activities, 2010



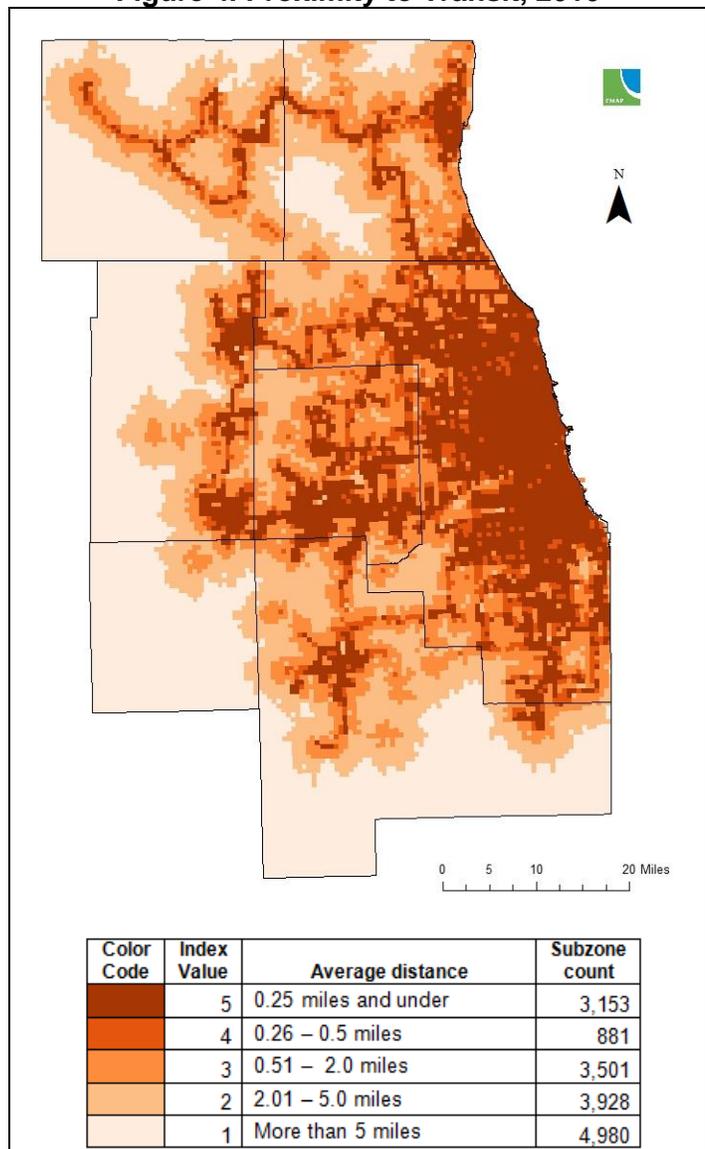
Source: Chicago Metropolitan Agency for Planning analysis.

locations within the catchment area. Finally, the stop distances are weighted by the stop's service frequency to calculate the overall subzone proximity value.

For subzones that do not contain transit stops, the measurement is simply the shortest network distance from the subzone centroid to the five nearest transit stops. A threshold value derived from the network-based distance to the closest stop is used to limit the selection of the remaining stops to ensure the group has comparable proximity to the centroid. For all subzones where the minimum distance to the closest stop is less than one mile, the remaining stops selected cannot be more than double that distance from the centroid. For the remaining subzones, the transit stops selected cannot be more than one mile farther away from the centroid than the closest stop. The proximity value for these subzones is the average of the distances to the relevant nearest stops, weighted by the stop service frequency. Subzones that only contain transit stops in their buffered area (not the core subzone) are analyzed using the same method as for subzones without transit service.

The distance values are grouped into categories based on the ranges of values shown in Figure 4. The two highest value categories represent the areas with the greatest likelihood of potential walk trips to access transit: one category with a high degree of potential walk trips to access transit (up to 0.25 miles) and a category with a somewhat lesser likelihood of potential walk trips (between 0.26 miles and 0.5 miles). As the index values decline, the presumption is the number of non-motorized trips used to access transit service will also decline.

Figure 4. Proximity to Transit, 2010



Source: Chicago Metropolitan Agency for Planning analysis.

Pedestrian environment

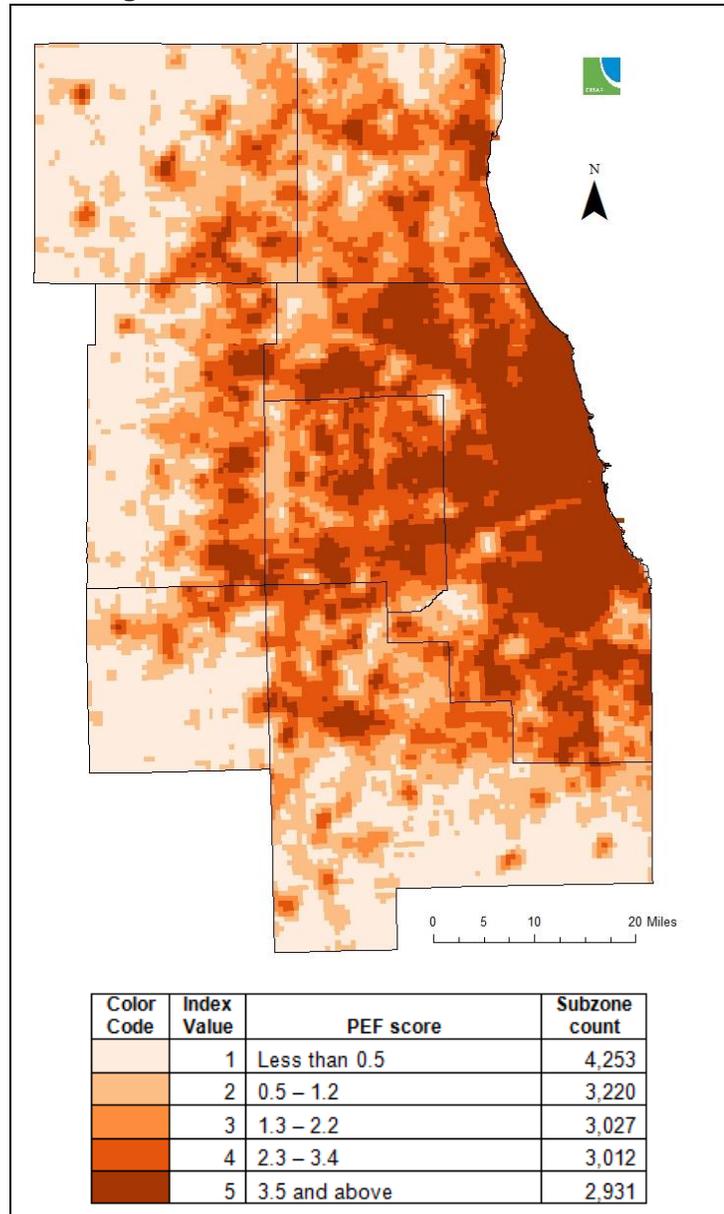
The Pedestrian Environment Factor (PEF) is a measure of walkable street density that is used in CMAP’s Trip Generation model. It serves as a proxy for the “pedestrian-friendliness” of an area. An “all-streets” network is used to perform the PEF calculation, which reports values in terms of centerline miles of roadway per subzone. Street segments identified as being unsuitable for walking are excluded from the calculation. Subzones are assigned index values based on their PEF score, as shown in Figure 5. The PEF values are used to separate the subzones into five equal-sized categories. Values for the PEF are rounded to one decimal place; this is done so that the precision of the measure is not overstated as it is only a proxy for pedestrian-friendliness.

Sensitivity to Service Changes

An important measure of whether or not the Access to Transit Index provides meaningful information is the extent to which it can reflect localized changes in transit service. To test the index’s responsiveness, CMAP staff analyzed data reflecting 2013 transit service and compared the results to the 2010 base year data. This comparison is shown in Figure 6.

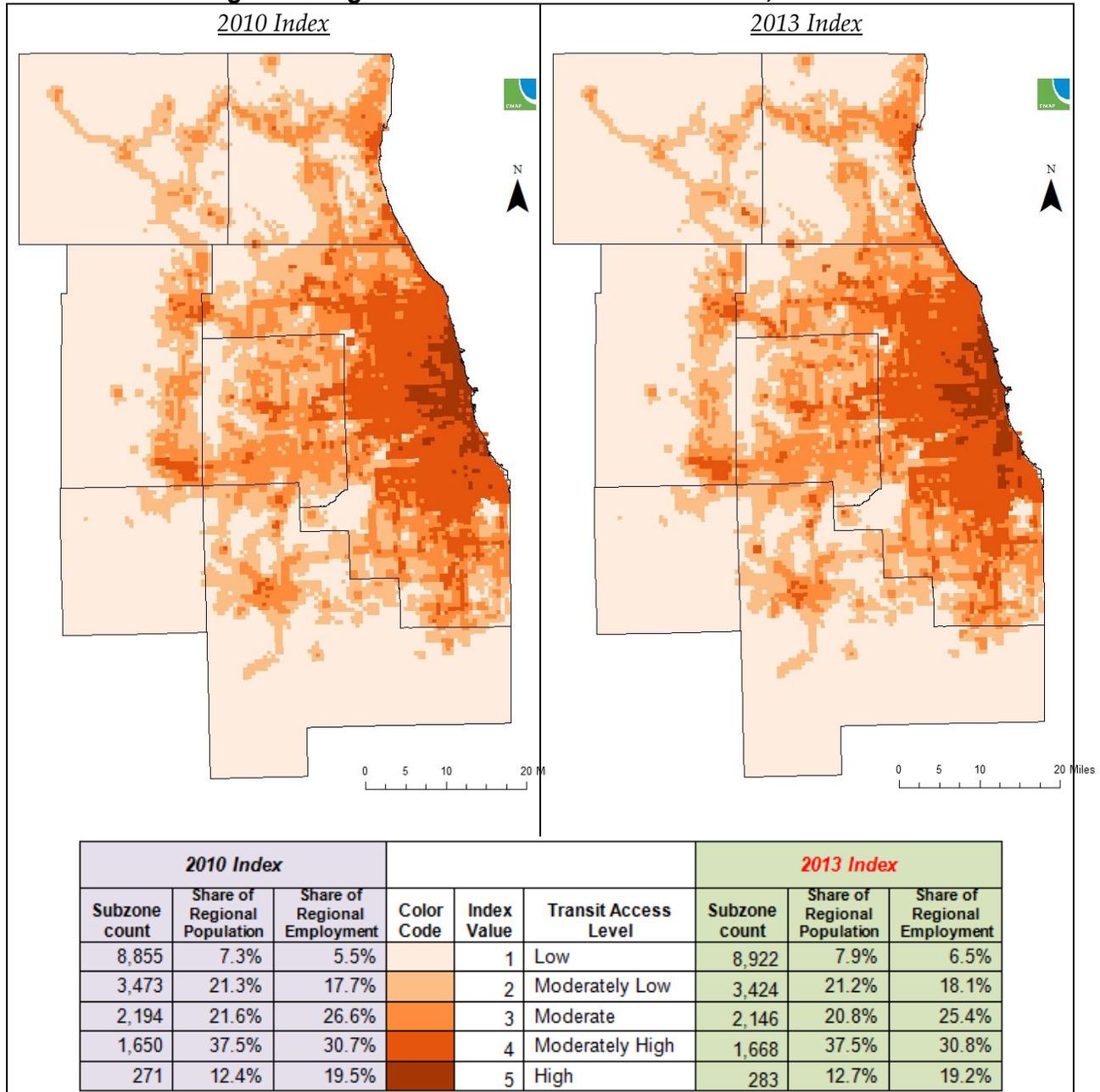
The table in Figure 6 presents a comparison of the regional population and jobs in each of the accessibility categories. The 2013 values for employment and households are CMAP estimates based on the expected growth in the region through the year 2040. The transit service data are from 2013 GTFS files. The data show that 71.5% of the regional population had at least moderate access to transit in 2010; in 2013 that value declined slightly to 71.0%. Similarly, 76.8% of regional jobs had at least moderate access to transit in 2010, with that value inching down to 75.4% in 2013.

Figure 5. Pedestrian Environment, 2010



Source: Chicago Metropolitan Agency for Planning analysis.

Figure 6. Regional Access to Transit Index 2010, vs. 2013



Source: Chicago Metropolitan Agency for Planning analysis.

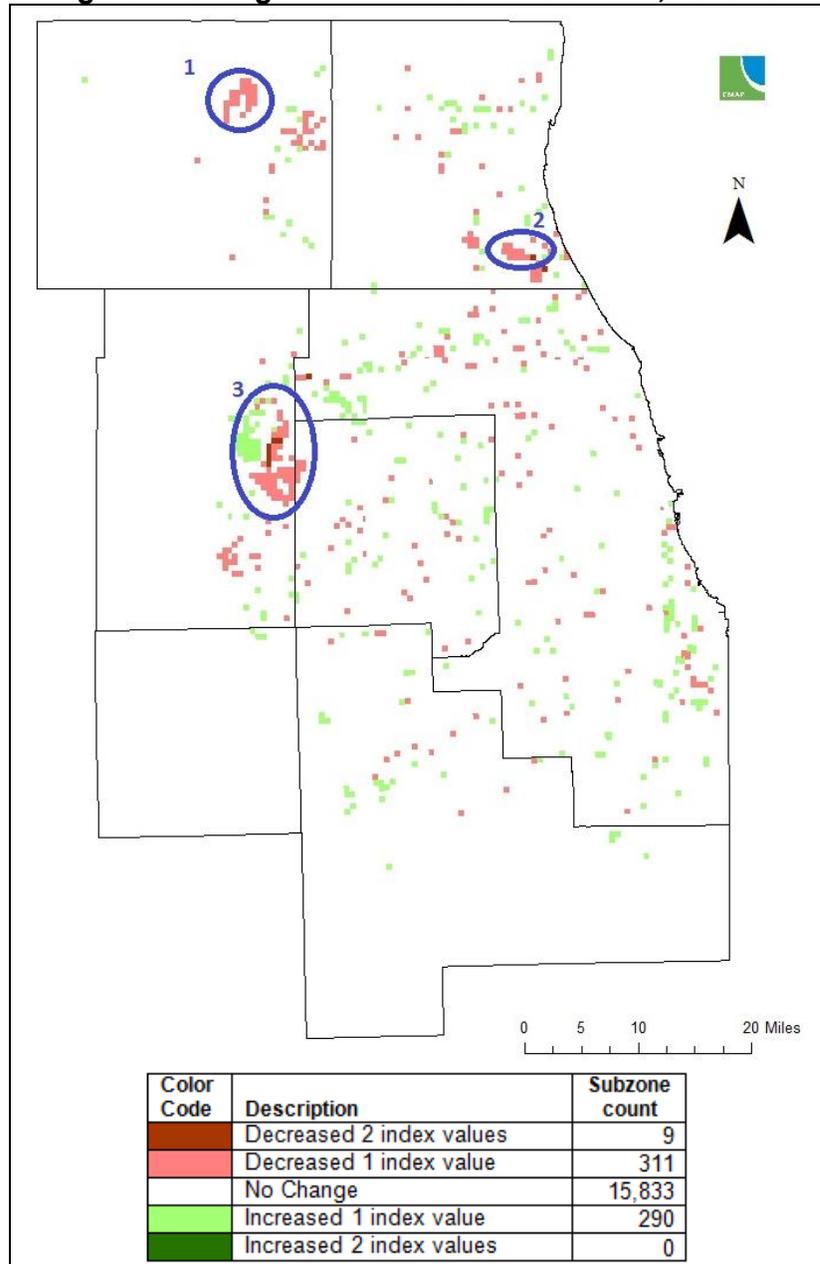
While at first glance the two maps shown in Figure 6 appear to be the same, they do contain subtle differences. To clearly illustrate those differences, Figure 7 presents the change in overall index values from 2010 to 2013. Following are brief descriptions of what occurred to cause the change in index values for three specific locations:

Location 1: This area in McHenry County shows a decrease in transit accessibility between 2010 and 2013. This change is due to a re-routing of Pace route 807. In 2010, this route traveled on IL 120, then made a loop to the north into Wonder Lake before continuing on IL 120. Effective December 2012, the loop into Wonder Lake was discontinued on the route. As this was the only transit route serving this area, the index reflects the loss of transit service in the immediate area.

Location 2: This area in southeastern Lake County also shows a decrease in transit accessibility between 2010 and 2013. This is explained by the elimination of [Shuttle Bug route 622](#), due to the withdrawal of corporate subsidies to support the service. Again, this was the only transit service provided in the affected subzones. Note that this service had an average weekday ridership of only 47 passengers in 2011.

Location 3: This area in eastern Kane County highlights a number of subzones that saw an improvement in their accessibility score, next to an equally large number that experienced a decline. This pattern of change is due to the shifting of Pace route 801 to the west. In 2010, this route traveled north-south on IL 25. By 2013, this route was using Randall Road instead.

Figure 7. Change in Access to Transit Index, 2010-13



Source: Chicago Metropolitan Agency for Planning analysis.

This brief analysis illustrates that the Access to Transit Index is sensitive enough to capture localized changes in transit service over time. As one would expect, in areas saturated with transit service, the impact of changes to a specific route are muted in the index. Conversely, transit service changes in areas with limited service available show a more significant impact.



Chicago Metropolitan
Agency for Planning

233 South Wacker Drive, Suite 800
Chicago, IL 60606

312-454-0400
info@cmap.illinois.gov

www.cmap.illinois.gov

