Chicago Metropolitan Agency for Planning

GO TO 2040

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Infill

CMAP Regional Snapshot

About this Snapshot…

Between now and 2040, northeastern Illinois will grow by 2.8 million people and 1.8 million jobs. Without good planning, this growth could strain the region's infrastructure, consume its natural resources, and overwhelm its social systems. But if we plan effectively as a region, the additional people and jobs can strengthen our communities and contribute to a thriving economy. Successful management of regional growth may depend on how much redevelopment happens on infill sites within established communities where roads, water treatment facilities, and public services are available, as opposed to new development beyond the urban fringe where such infrastructure does not already exist.

With its *GO TO 2040* comprehensive regional plan to be issued in 2010, the Chicago Metropolitan Agency for Planning (CMAP) intends to help the region accommodate projected growth. *GO TO 2040* will articulate a vision of regional prosperity looking toward 2040 and beyond, with clear strategies to implement that vision. CMAP is publishing a series of Regional Snapshot reports that cover major topics that need to be addressed in the *GO TO 2040* plan. These reports are designed to establish links between CMAP's policy areas, to gather background data, and to initiate discussions on major regional issues early in the planning process.

The purpose of this Regional Snapshot is to begin answering the question of how much growth between now and 2040 can be expected to occur on infill sites within existing communities. Using three case studies to illustrate the concept of infill, the report attempts to identify potential infill opportunities, including a baseline description of where infill potential exists currently across the region. This report does not, however, make specific redevelopment proposals or recommend immediate actions. Recommendations of this type will be made in the *GO TO 2040* plan in coordination with local decision makers. This Regional Snapshot is meant to inspire discussion between CMAP, its partners, and other stakeholders concerning the benefits and desired levels of infill and redevelopment.

Main Street Promenade is a recent development that exemplifies the values of the community, with architectural detailing that helps maintain the traditional scale and proportion of downtown Naperville. Photo courtesy of the City of Naperville, Planning Services Team.

The Need to Address Infill

Redeveloping infill sites can offer substantial benefits. It can revitalize stressed communities, increase tax revenues, provide opportunities to create affordable housing, preserve natural resources in undeveloped areas, and effectively use existing infrastructure and services. From an economic perspective, infill development can be a win-win strategy. Added residents and businesses contribute to tax revenue without creating much additional demand for new municipal infrastructure such as roads, sewers, or electrical lines. For example, after significant transit-oriented development (TOD) and infill, Evanston increased its total equalized assessed value by 191 percent from 1985 to 2004 and has seen its lowest tax rates since 1971. From an environmental perspective, infill development prevents consumption of valuable agricultural land, improves air quality by reducing vehicle miles traveled, and reduces energy consumption. Also, infill development can improve equity, as it often involves reinvestment in communities with declining tax bases.

The northeastern Illinois region has embraced the concept of infill in past plans. Before being merged with the Chicago Area Transportation Study (CATS) to form CMAP, the Northeastern Illinois Planning Commission's Regional Framework Plan published in 2005 identified infill and redevelopment as a key implementation strategy, recommending that future plans identify potential infill sites and support the redevelopment of these sites. Also, the CATS 2030 Regional Transportation Plan supports infill as a means to reduce pressure on transportation infrastructure.

Despite the benefits of infill and the support of past plans for this development strategy, challenges remain in developing these sites. Obstacles to infill development include difficulty consolidating parcels, general apprehension toward increased density, and often higher private development costs. Additionally, some areas have outdated regulations, such as excessive parking requirements, that make it easier to develop greenfields than to build on infill sites.

Defining Infill

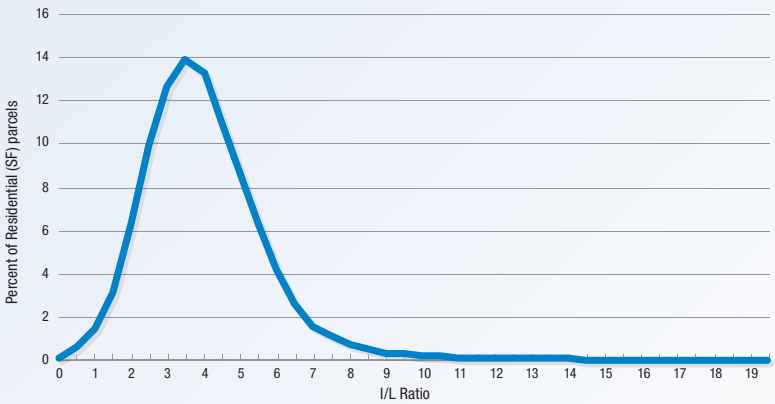
Infill development can range from a single parcel to a large-scale development project. As defined in this report, potential infill parcels must lie within current municipal boundaries, have an area greater than 2,000 square feet, and cannot be designated as open space or agriculture.

In particular, CMAP has identified two types of parcels as having infill potential. First, parcels fitting the above criteria and classified as vacant by tax assessor data were selected as good candidates for redevelopment. Second, CMAP used a method that has been implemented in various cities across the nation: the "Improvement-to-Land Value Ratio." This I/L ratio identifies parcels where the assessed land value is higher than the assessed value of the improvements, or built structures, on it.

Land values that are much higher than improvement values can be an indication that the parcel is likely to be redeveloped. Different cut-off points to identify these parcels were used depending on the assessed use. The following analysis counts total acreage of vacant and potentially underutilized land without consideration for parcel groupings or size. (The data source is 2007 tax assessor records, by county.)

For example, the chart below shows the distribution of Improvement-to-Land Value Ratios for single-family homes within Cook County. As this shows, the average single-family home in Cook County is assessed at approximately four times the value of the land on which it sits, and very few homes are worth less than their land. For a complete set of charts and more details on methodology, please see the longer technical report available online at: http://www.cmap.illinois.gov/snapshot.aspx.

Frequency Distribution for Residential Single Family Improvement/Land Value Ratios



Source: Cook County Tax Assessor Data, 2007

This chart shows the distribution of Improvement-to-Land Value for single-family homes in Cook County. The average home in Cook County has an I/L ratio of 4.1, meaning that the assessed value of the home is slightly over four times the assessed value of the parcel.

Regional Totals and Conclusions

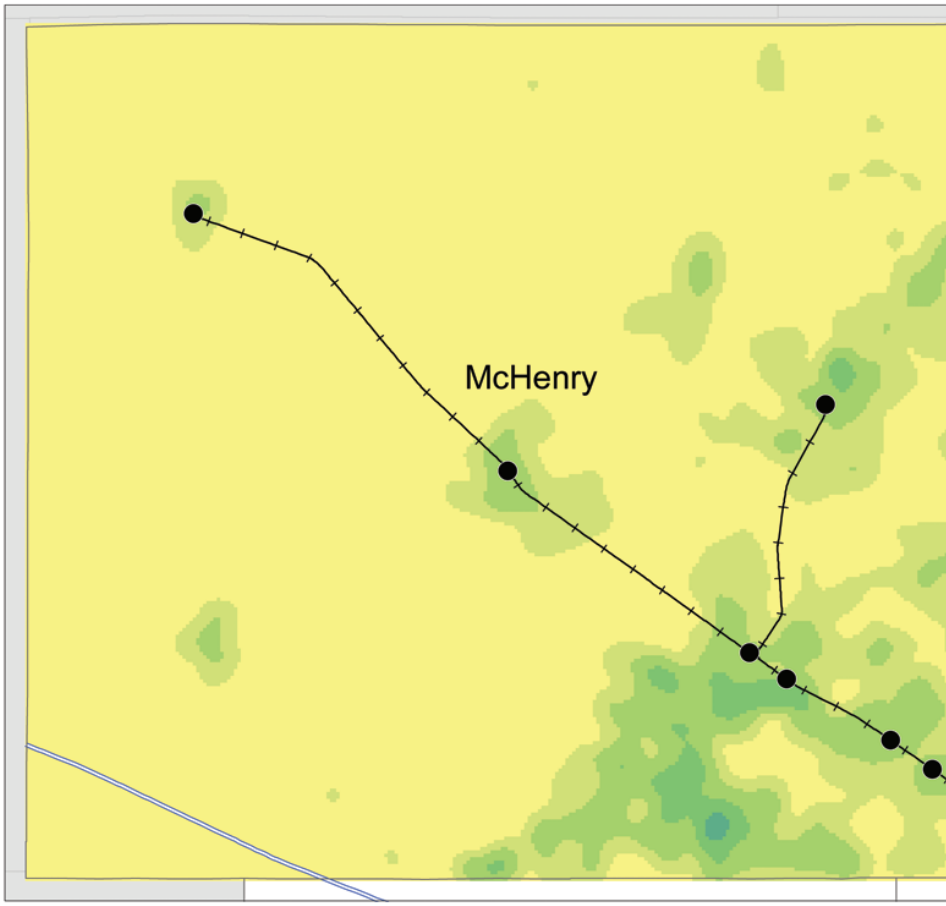
As the chart below shows, over 180,000 acres regionally within municipal boundaries are vacant or have low I/L ratios. Of these, approximately 100,000 acres are located in sites that are near public transit, near job centers, or in areas of moderate to high density. The remainder, 80,000 acres, is within municipal boundaries but does not have these characteristics. Some of these areas present redevelopment opportunities, while others are on land that has been annexed by municipalities in anticipation of future development.

County	Total Infill Acres	Infill sites near transit, job centers, or in denser areas	Infill sites not near transit, job centers, or in denser areas
Cook	55,512	46,935 / 85%	8,577 / 15%
DuPage	15,052	13,306 / 88%	1,746 / 12%
Kane	18,076	9,084 / 50%	8,992 / 50%
Lake	39,941	23,723 / 59%	16,218 / 41%
McHenry	13,825	4,774 / 35%	9,051 / 65%
Will	35,235	9,897 / 28%	25,338 / 72%
Kendall	7,326	1,360 / 19%	5,966 / 81%
Total	**184,967**	**109,079 / 59%**	**75,888 / 41%**

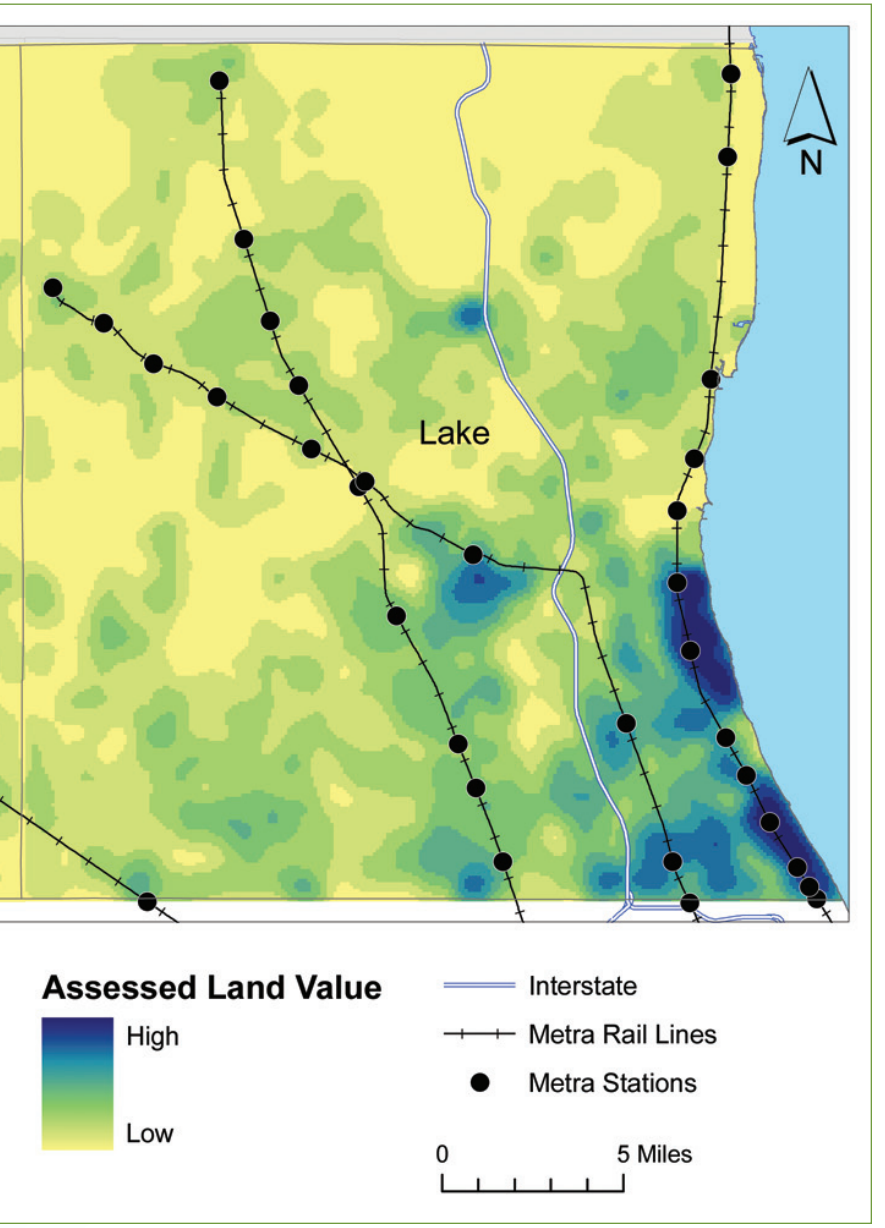
Additionally, parcels owned by tax-exempt organizations are not included in these totals because they are not assessed. These parcels may include land that has been purchased by a government agency for the purpose of redevelopment, parking lots near municipal buildings or train stations, and others. Redevelopment efforts in these areas should weigh the benefits of redevelopment with the need of local governments and transportation agencies to provide adequate parking at their facilities. The amount of potential infill land in these areas can only be calculated by thorough examination with the help of local governments.

Maps on the following pages show some of this Regional Snapshot report's findings. The first map illustrates the assessed value of land across the region. The second highlights parcels of land that are vacant or have low I/L ratios.

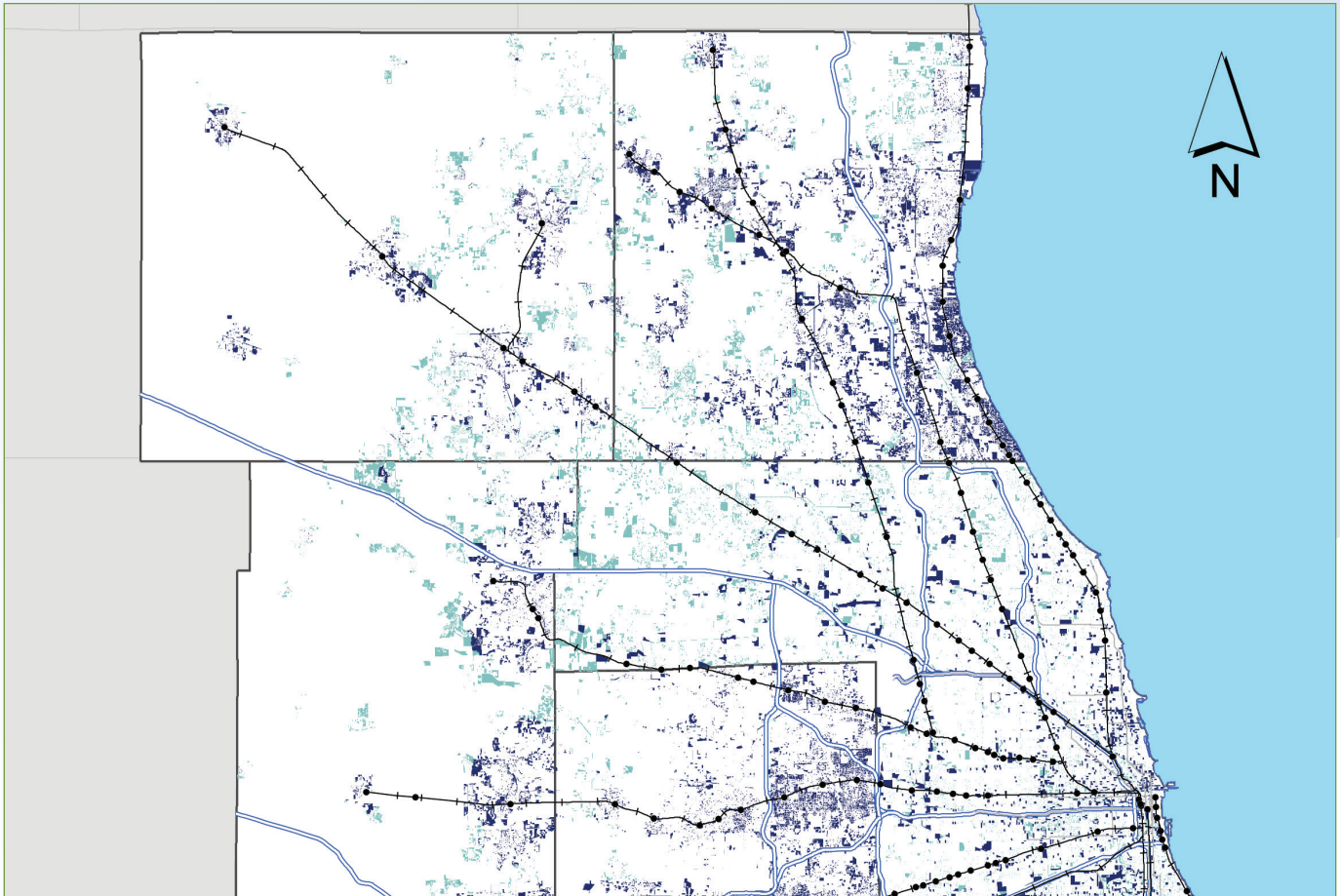
Assessed Land Value in Northeastern Illinois: McHenry & Lake Counties

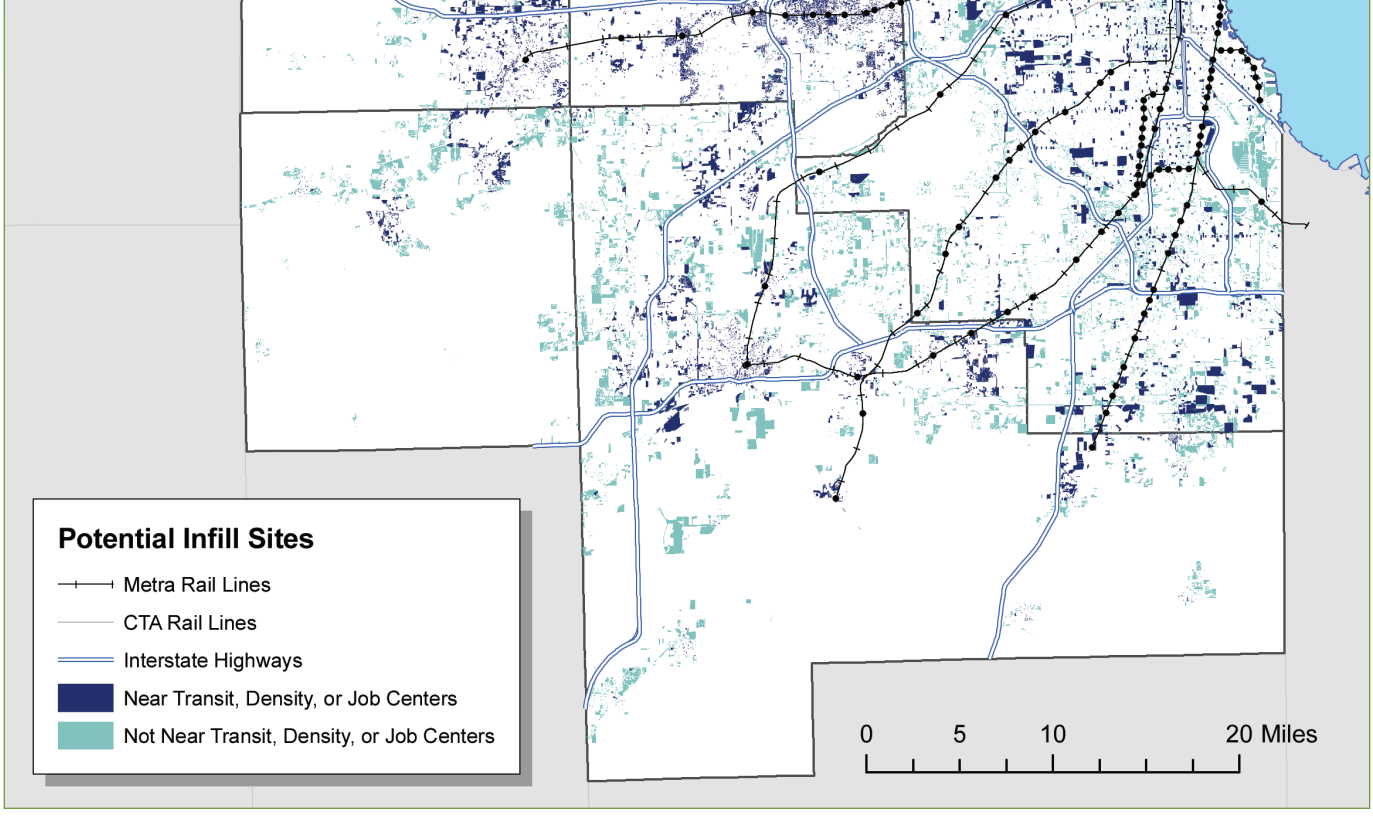


This map was created using a kernel estimation tool. Kernel estimation creates a smooth surface estimate of a variable from an observed set of points (Bailey and Gatrell, 1995). The kernel estimation works with the use of a moving 3-D function of a given radius. The function passes from one event (parcel, in this case) to the next and weighs every other point relative to its distance from the event. Clusters of parcels with very high assessed land values are shown in dark blue.


N
Lake
Assessed Land Value
High
Low
Interstate
Metra Rail Lines
Metra Stations
0
5 Miles

Composite Infill Potential for Northeastern Illinois





In the northeastern Illinois region, there are over 180,000 acres within municipal boundaries that are vacant or have low I/L ratios. Of these, approximately 100,000 acres are in sites that are near public transit, near job centers, or in areas of moderate to high density. In this map, those areas are shown in dark blue. The remaining 80,000 acres do not fall into any of these categories, and are shown in teal.

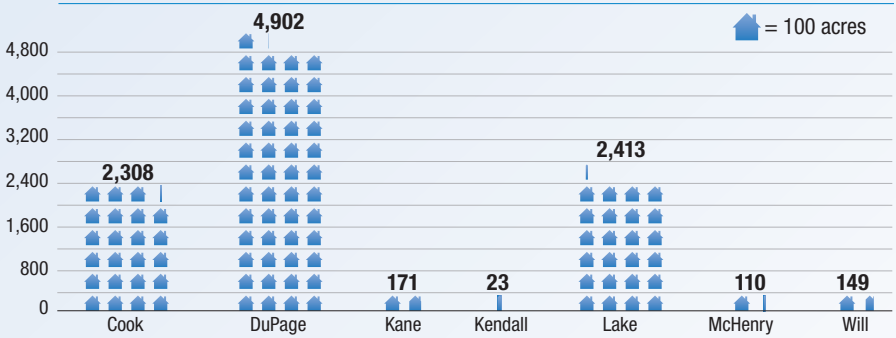
Analysis and Case Studies

Interpretation of the data can vary between different parts of the region. Identifying an infill site can mean very different things in such diverse communities as Chicago, Naperville, or Waukegan, and CMAP welcomes the local involvement that is necessary to accurately interpret this report's results.

In some locations, infill sites could be redeveloped with affordable and market-rate housing to address local needs. Areas close to transit stations might consider mixed-use TOD districts to increase the local tax base. In others, commercial, office, or industrial development will be critical for the local economy. On the other hand, some locations would benefit more from the preservation or creation of open space — which has environmental, health, and community benefits — than from additional development. Vacant parcels can be an opportunity for providing new open space.

In contrast, our analysis has also identified sites where redevelopment may not be desirable, but where it is likely to occur due to market pressure. In some areas, existing housing stock has been identified as having low I/L ratios. This could indicate that moderately-priced single family housing — which is an increasingly scarce but important commodity — may be under threat to be redeveloped. The chart below shows the potential in different parts of the region for "teardowns," the replacement of viable single-family housing stock with larger and more expensive homes. While the new development is in many respects a benefit to the community, there are associated costs, including the loss of relatively affordable housing that can help meet the needs of the local workforce.

Potential Teardown Risk, by county



Source: Chicago Metropolitan Agency for Planning, 2008

Please note that this report's analysis should not be interpreted as recommending the redevelopment of all identified parcels. In some cases, action may be needed to preserve affordable housing or other desirable features that may be under pressure to redevelop. To develop recommendations that reflect both regional needs and local conditions, CMAP plans to convene workshops with municipalities that have infill redevelopment opportunities, as detailed in the "Next Steps" section of this report.

The next several pages present case studies of sites that were identified as potential infill locations. As these case studies indicate, the treatment of sites that are vacant or under pressure to redevelop depends heavily on their local context.

Case Study 1: Chicago

The City of Chicago takes a proactive approach to the identification, acquisition, and redevelopment of vacant and underutilized land. The map below shows an area near Washington Park that has been targeted for redevelopment. In collaboration with the Chicago Transit Authority, the City of Chicago identified this area as a candidate for TOD, using publicly owned parcels located within walking distance of the Green Line's Garfield station. The City is leveraging TOD around stations to generate tax revenue and increase CTA ridership. Part of the process involves selling city-owned vacant property to developers, and offering incentives such as transfers of air rights, with the goal of increasing density, creating a vibrant mix of uses, and improving connections between development and transit. The creation of compact, mixed-use developments with adequate open space, around transit stations is part of the plan to increase the vitality of struggling neighborhoods in Chicago.

This map shows an area near Washington Park along Garfield Boulevard, close to the red and green CTA Garfield "El" stops. All of the blocks shown in shades of red to yellow have parcels with low I/L ratios. The red blocks have more parcels with very low I/L ratios. The publicly-owned vacant parcels are shown in light gray.

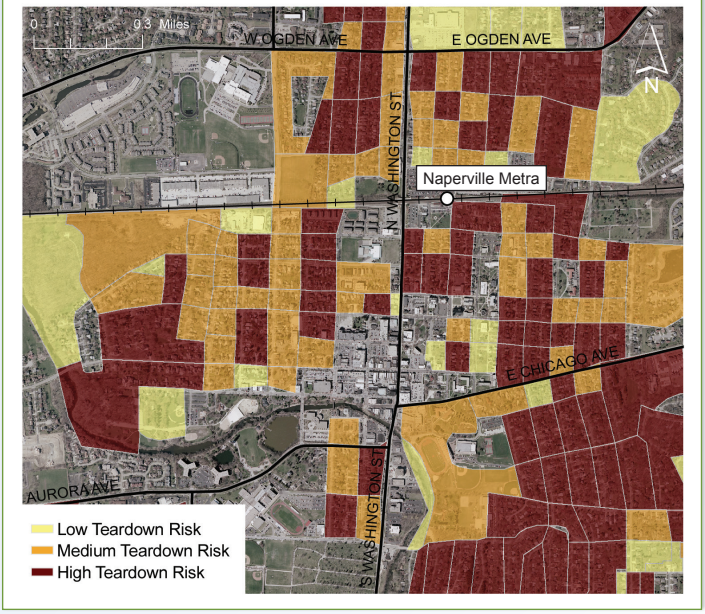
This area near Washington Park has experienced disinvestment and loss of population and jobs, but it has excellent transportation access and nearby cultural assets. The areas shown on the map feature blocks that have groups of parcels with low I/L ratios and vacant land that has already been acquired by the City for the purposes of redevelopment.

Case Study 2: Naperville

The City of Naperville has a thriving downtown, a strong employment base, and a growing population. In the vicinity of Naperville's downtown, some established neighborhoods are experiencing redevelopment pressure due to factors such as neighborhood preferences, household income, and proximity to the downtown — including the train station, shopping, and cultural amenities. The map below is centered on an area just north of the downtown and also shows nearby residential areas. Here and in similar areas across the region, teardowns are common as older but still viable single-family homes are replaced with newer and larger ones. In the shaded areas below, the assessed values of many homes in these areas are less than the assessed value of the land, indicating that these are likely areas for teardowns to occur.

Communities experiencing teardown activity take a variety of approaches to the issue. For example, the City of Naperville tracks teardown activity and has established separate zoning regulations to address height and bulk of teardowns. The City has also established a public and builder education process as well as a partnership with Community First, a grass roots organization that promotes compatible building and site design.

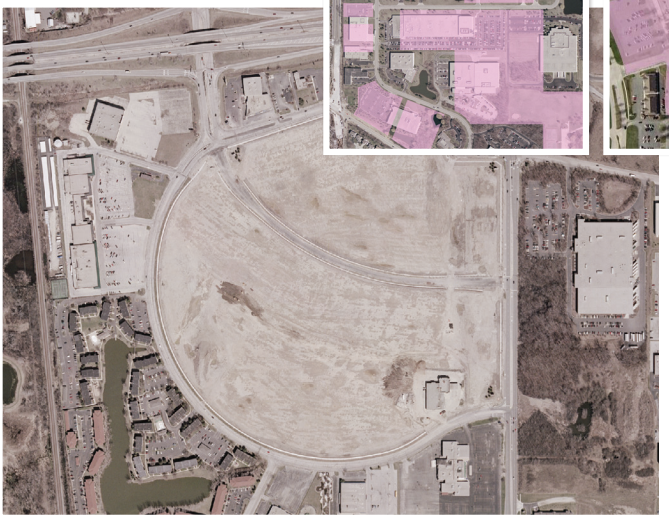
In some cases, the presence of teardowns can be a signal that increased density or mixed-use development should be considered. Communities facing teardown pressure should study the affected areas to plan for the long-term future, whether this includes denser development, production or preservation of affordable housing, preservation of existing community character, or other approaches.



This map shows the area of downtown Naperville. All of the blocks shown in shades of red to yellow have parcels with low I/L ratios. The red blocks have more parcels with very low I/L ratios. These findings coincide with increasing rates of teardowns in the area.

Case Study 3: Parking Lots

Throughout the region, CMAP has found at least one constant: large surface parking lots have considerable redevelopment potential. This Regional Snapshot identifies a number of areas similar to the ones shown below, where commercial buildings are surrounded by acres of asphalt. The pink areas in these images provide a good example of the opportunity to use shared parking. Parking demand varies by time of day and week for different localities. If compatible businesses and tenants can share parking spaces, total parking area can be minimized. This can create opportunities for additional development, or for natural landscaping that can reduce the amount of impervious surface area and mitigate "heat-island" effects.



The images above show groups of commercial parcels, from around the region, that have low I/L ratios, primarily from the abundance of surface parking lots. The larger image to the left is the "greyfield" site previously known as Lakehurst Mall, which is being redeveloped as a mixed-use development.

Some such areas could be considered "greyfields," which are commercial or retail sites that have become old, obsolete, or abandoned. The large image above is from the site once known as Lakehurst Mall. This greyfield site was purchased in 2003, all buildings were demolished, and it is being redesigned into a mixed-use development. On sites such as these, municipalities should balance environmental sensitivity with considerations such as housing, employment, and economic development. In addition using infill to make effective use of land, greyfield redevelopment can create a more pedestrian-friendly commercial center that may also encourage some shoppers to arrive on foot or by bike, either of which has health benefits and helps reduce congestion.

Next Steps: Local Expertise

Substantial challenges stand in the way of the development of many infill sites, and those impediments may vary significantly between municipalities or between multiple sites in a single municipality. While no one-size-fits-all solution exists, the *GO TO 2040* plan will recommend a clear course of action for communities to overcome these obstacles and promote infill development.

CMAP will host a series of workshops, such as the one above, to understand different opportunities and challenges facing our unique communities. The image to the left shows a screenshot of the Centers Toolkit, one of the agency's planning tools available as a resource to local planners.

CMAP needs to understand the different opportunities and constraints that each part of the region faces in addressing infill. Therefore, the agency will hold a series of workshops with municipalities and counties in 2008-09 to discuss the initial findings of this Regional Snapshot report and the prospects for infill development in each community. These conversations should cover likely sites for infill, market pressures that may affect the pattern of development, infrastructure capacity, and challenges or constraints to infill development that must be overcome. The results of these meetings will be used as part of CMAP's process for forecasting future population and employment.

CMAP also has a variety of planning tools that can be used to facilitate discussions of infill potential. The agency's Centers Toolkit, shown above, can be used by local officials, planners, developers, and residents to help identify important characteristics of communities and choose the most appropriate planning strategies.

Next Steps: Further Research

In addition to understanding local conditions, CMAP will ensure that the *GO TO 2040* plan is grounded in thorough research of different options available to address challenges related to infill development and other planning strategies. Visit http://www.GOTO2040.org/strategy_papers.aspx for a series of new CMAP strategy research papers. These reports are posted in interactive format that encourages comments from CMAP's stakeholders and the general public. In the examples below, italicized words indicate that a strategy report on this issue has been posted on this website or is expected to be posted in spring 2008.

For example, that website has a strategy report on *teardowns*, which are identified in this report as an important issue. Depending on local conditions, these may signify that higher-density development would be beneficial, or they may indicate to communities that need *housing preservation* strategies to preserve the existing affordable housing stock. Alternatively, *inclusionary zoning* programs can help to ensure that if infill sites are used for housing development, they include housing to meet the needs of the local workforce.

In other areas, *brownfields* can present serious challenges for development if potential infill sites have been environmentally damaged by previous uses. Some communities may see potential infill sites as excellent opportunities to increase access to *parks and open space* by planning new facilities here, while other communities will favor job creation. Many of the parcels identified in this analysis are surface parking lots, which could be used more efficiently through a variety of *parking strategies*. In all infill sites, the application of *urban design* techniques is encouraged to create walkable communities.

CMAP's understanding of the strategies identified above can be greatly increased through the comments of our stakeholders, and we encourage readers of this report to visit the above website and contribute to the online discussions.

About CMAP

The Chicago Metropolitan Agency for Planning (CMAP) is the comprehensive regional planning organization for the seven counties of northeastern Illinois. By state and federal law, CMAP is responsible for producing the region's official, integrated plan for land use and transportation. The agency's innovative go to 2040 planning campaign will develop and implement strategies to address projected population and employment growth and its serious implications for transportation, housing, economic development, open space, the environment, and other quality-of-life issues. See www.cmap.illinois.gov and www.GOTO2040.org for more information.

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Image courtesy of
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