



Blue Island Community Profile

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**UPP 502 Final Project
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**COLLEGE OF
URBAN
PLANNING AND
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1. Introduction

Founded in 1835, Blue Island is an old railroad suburb that straddles the Little Calumet River, 16 miles southwest of downtown Chicago. Situated at the end of a glacial ridge, the flower-covered area appeared to float above the surrounding plains, earning the town its picturesque name (Encyclopedia of Chicago, 2005). Like other communities on the Far South Side, Blue Island was an industrial town in the early twentieth-century, famous for brick manufacturers, freight yards, and other heavy industries (Encyclopedia of Chicago, 2005). However, the Great Recession signaled the end of an era. According to the Chicago Metropolitan Agency for Planning (CMAP), “by 2009 there were 25 percent fewer Blue Island residents working in manufacturing than in 2000” (CMAP, 2011, p. 34).

While Blue Island has suffered from economic challenges, the community has the potential to thrive in coming years. The city’s varied housing stock provides affordable options for people seeking to own or rent and is not projected to face meaningful pressure from population growth. Current residents’ skill sets are well-matched to existing land uses, offering the promise of middle-class jobs in logistics, green manufacturing, and healthcare. Blue Island’s historic downtown, access to Chicago via commuter rail, and proximity to the Cal-Sag Trail (a 26-mile multi-use trail that is currently under construction) should also be attractive to white-collar professionals looking for a place to raise their family (Cal-Sag Trail, 2018).

2. Demographic Profile

23,361 people live in Blue Island according to 2016 Census estimates. 48.9 percent of city residents are Hispanic, 27.8 percent are Black, and 20.2 percent are White, making the city far more diverse than the overall metropolitan region, in which 22.5 percent of residents are Hispanic, 16.9 percent are Black, and 51.9 percent are White (US Census Bureau, 2016). American Community Survey (ACS) 5-Year figures for 2012-2016 also indicate that the city's median household income of \$41,305 is significantly lower than the regional median income of \$66,020 (Data USA, 2018). As demonstrated in Table 2.1, Blue Island is less well educated than the Chicagoland as a whole. About 38 percent of adults in the metropolitan have a bachelor's degree or more, but this rate is only 16 percent among Blue Islanders.

Table 2.1 – Educational Attainment for Adults 25+ Years Old in Blue Island, 2012-16 ACS (5-Year Averages)

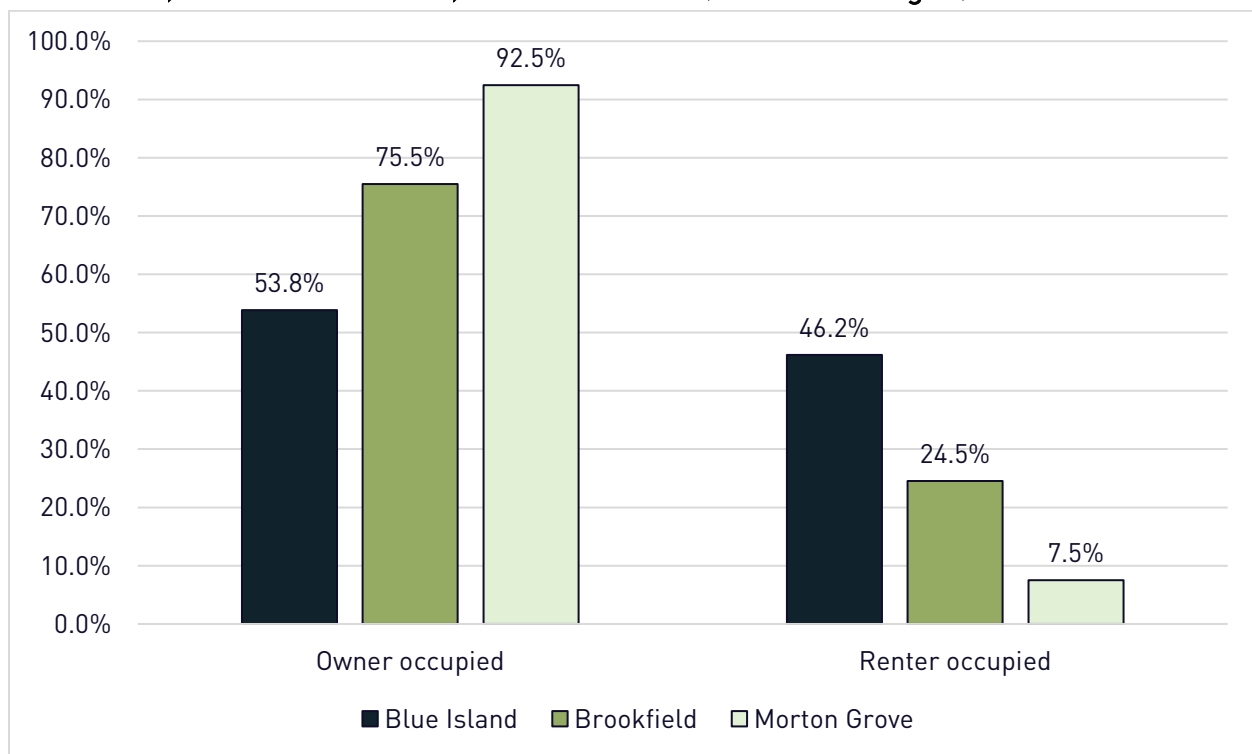
Educational Attainment	Less than High School Graduate (%)	High School Graduate (%)	Some College (%)	Associate Degree (%)	Bachelor's Degree (%)	Graduate Degree (%)	Total
Blue Island	3,129 (21.0%)	4,708 (31.7%)	3,346 (22.5%)	1,316 (8.8%)	1,545 (10.4%)	830 (5.6%)	14,874
Chicago Metropolitan Region	714,537 (12.6%)	1,322,237 (23.3%)	1,120,468 (19.7%)	390,333 (6.9%)	1,300,121 (22.9%)	838,350 (14.7%)	5,686,046

Source – U.S. Census Bureau, 2012-16 American Community Survey. Accessed Sept. 24, 2018, from <https://factfinder.census.gov>

Blue Island's housing tenure and stock is atypical of a small suburb with commuter rail access to downtown Chicago. Figure 2.1 compares the town (represented by blue bars) to the similarly sized bedroom communities of Brookfield and Morton Grove. Blue Island is friendly to both owners and renters, with about 54

percent of occupied units owned by current inhabitants, and 46 percent occupied by renters. In contrast, the other two municipalities are heavily geared towards homeowners. This is reflected in the broader affordability of each town; median property values in Blue Island are \$114,200 compared to \$227,400 and \$283,700 in Brookfield and Morton Grove respectively (US Census Bureau, 2016).

Figure 2.1 – Owner vs Renter Occupied Household Rates in Blue Island, Brookfield, and Morton Grove, 2012-2016 ACS (5-Year Averages)



Source – U.S. Census Bureau, 2012-16 American Community Survey. Accessed Sept. 24, 2018, from <https://factfinder.census.gov>

3. Population Trends

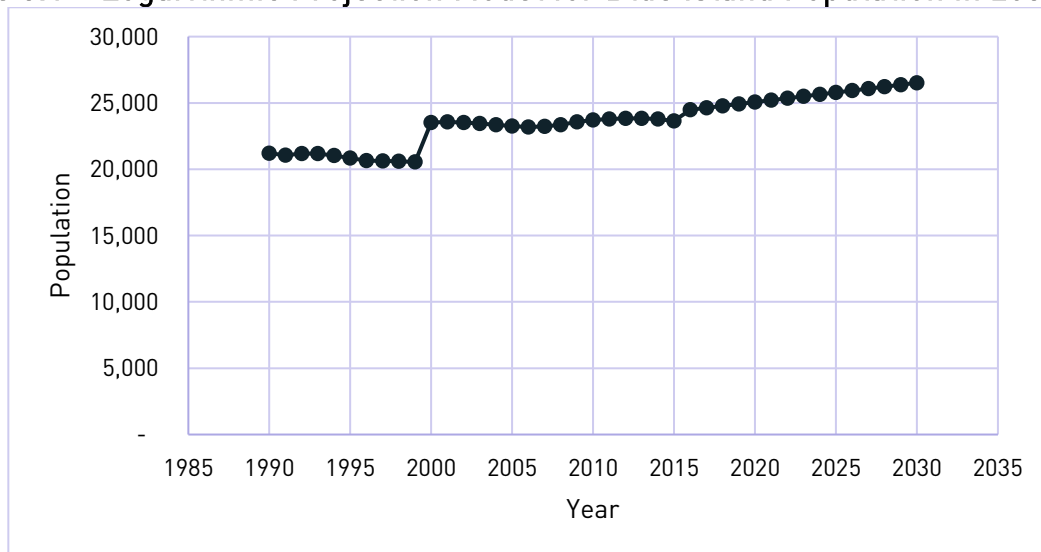
Demographics provide a current snapshot of Blue Island, but only population projections offer insight into the future makeup of the city. Estimates produced by broad-strokes trend extrapolation and detailed cohort-component analysis both suggest that the city will experience low to moderate growth over the next decade, most likely resulting in an older population than they presently have.

Trend extrapolation is somewhat self-explanatory; one predicts future population using past data under the assumption that trends from the last few years will continue going forward. A sizable training set is required to project out to 2030 with any accuracy. This analysis uses intercensal and ACS population figures from 1990 to 2015. In Decennial Census years (1990, 2000, 2010), census figures were somewhat different from the estimates, so the hard counts were inserted instead.

Several different models (polynomial, exponential, and logarithmic) were tested, but there were serious concerns about overfitting to early 1990s data. The Census Bureau revised their annual methodology around the 2000 Census. Blue Island is a mature suburb that has grown (albeit slowly) over the last 25 years and has great access to the central business district via the Metra Electric and Rock Island lines. Because of these factors, one might reasonably expect Blue Island to continue to grow, but at a slower rate, making the logarithmic model the most logical choice – annual estimates are shown in Figure 3.1. The formula suggests that Blue Island will have a

total population of 26,523, a 12 percent increase compared to the city's estimated population of 23,652 in 2015.

Figure 3.1 – Logarithmic Projection Model for Blue Island Population in 2030*



Source – US Census Bureau. 1991-1999, 2001-2009 Intercensal Estimates; 1990, 2000, 2010 Decennial Census; 2011-2015 American Community Survey. Accessed Oct. 14, 2018, from <https://factfinder.census.gov>

** $R^2 = 0.7073$, $y = 293,486.2823\ln(x) - 2,208,607.1368$*

As the results above indicate, trend extrapolation allows for planners to quickly forecast a community's population. Of course, the method's simplicity can also be a weakness. Cohort-component projection is a more advanced technique. Rather than using overall totals, cohort-component breaks the population into 5-year groups (0-4, 5-9, etc.) and examines how these change over time due to three factors: births, deaths, and net migration. Statewide birth and death rates can be obtained from the Illinois Department of Public Health Statistics. Migration rates, however, must be back-casted from the 2000 Census; essentially, this process isolates any change from

2000 to 2010 not explained by birth or death rates, and then calculates the migration rate to apply in the future from this residual.

After compiling the necessary rate data, one can calculate Blue Island's 2030 population by cohort. Table 3.1 outlines the specific figures for each gender. In total, Blue Island is expected to contain 23,738 people in 2030, a very slight 0.36 percent increase compared to the city's estimated population of 23,652 in 2015. This figure is much more conservative than the trend extrapolation model, probably due to the trendline's over reliance on the growth experienced by the municipality in the 1990s.

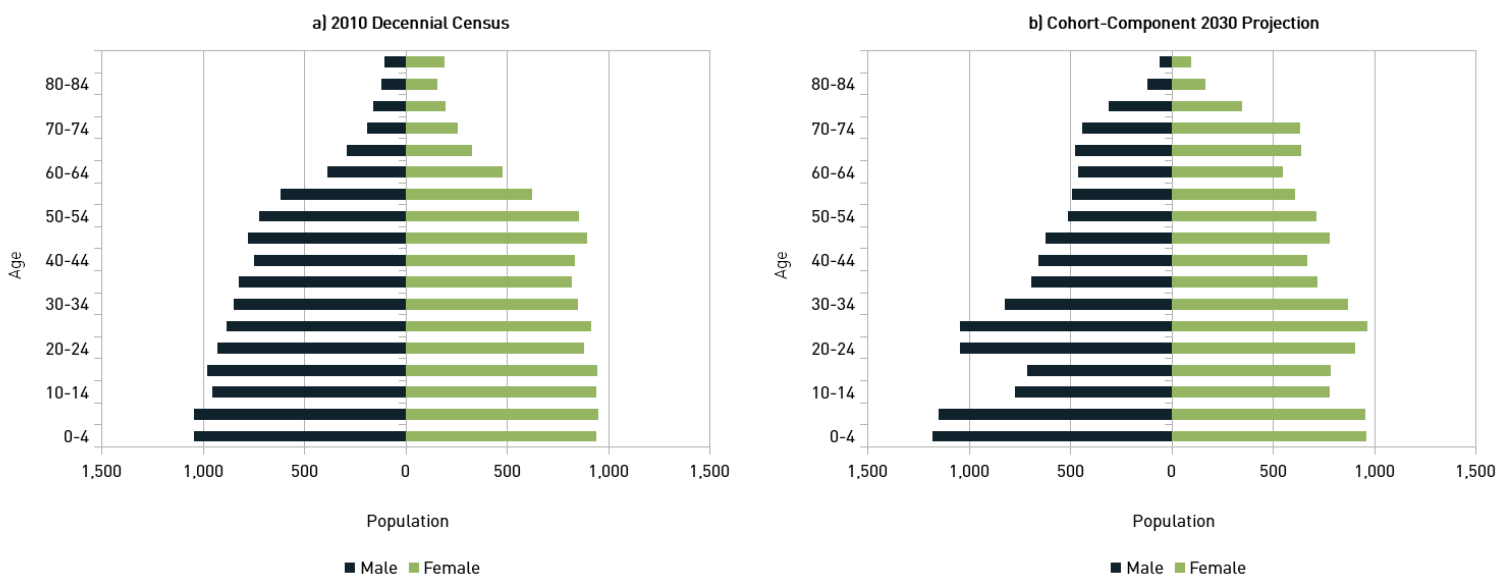
Table 3.1 – Cohort-Component Projection for Blue Island Population in 2030

Age	Male	Male (%)	Female	Female (%)	All	All (%)
0-4	1,179	10.19%	961	7.90%	2,140	9.02%
5-9	1,151	9.95%	955	7.85%	2,106	8.87%
10-14	775	6.70%	783	6.43%	1,557	6.56%
15-19	711	6.15%	787	6.47%	1,498	6.31%
20-24	1,042	9.01%	905	7.43%	1,947	8.20%
25-29	1,041	9.00%	969	7.96%	2,010	8.47%
30-34	825	7.13%	874	7.18%	1,699	7.16%
35-39	693	5.99%	718	5.90%	1,411	5.94%
40-44	659	5.69%	673	5.53%	1,332	5.61%
45-49	624	5.39%	780	6.41%	1,403	5.91%
50-54	510	4.41%	715	5.87%	1,225	5.16%
55-59	493	4.26%	609	5.00%	1,102	4.64%
60-64	460	3.98%	549	4.51%	1,009	4.25%
65-69	473	4.09%	639	5.25%	1,113	4.69%
70-74	441	3.82%	637	5.23%	1,078	4.54%
75-79	311	2.69%	349	2.87%	660	2.78%
80-84	121	1.04%	170	1.40%	291	1.22%
85+	60	0.52%	98	0.81%	158	0.67%
Total	11,567	100%	12,171	100%	23,738	100%

Sources – Illinois Department of Public Health Statistics. Illinois Vital Statistics 2003, Accessed Oct. 14, 2018, from <http://www.idph.state.il.us/health/statshome.htm>; US Census Bureau. 2000, 2010 Decennial Census. Accessed Oct. 14, 2018, from <https://factfinder.census.gov>

While this projection model forecasts minimal growth for Blue Island, it predicts a dramatic shift in the makeup of the community by age and gender. In Figure 3.2, one can see that the city is expected to age dramatically in the coming years. Fully 13.9 percent of Blue Island is projected to be 65 or older in 2030; the rate in 2010 stood at only 8.5 percent. The relative increase in elderly people might lead to a strain on public services as less Blue Island citizens are of working age, however, there might be a silver lining. The middle segment of the predicted 2030 population is skewed ever so slightly to young professional cohorts (20-24, 25-29, 30-34) – 23.8 percent versus 22.4 percent in 2010.

Figure 3.2 – Population Pyramids for Blue Island: 2010 Census, Cohort-Component 2030 Projection



Sources – Illinois Department of Public Health Statistics. Illinois Vital Statistics 2003, Accessed Oct. 14, 2018, from <http://www.idph.state.il.us/health/statshome.htm>; US Census Bureau. 2000, 2010 Decennial Census. Accessed Oct. 14, 2018, from <https://factfinder.census.gov>

4. Economic Conditions

This section will examine the economic activity of Blue Island, measured by both its residents and the town itself. Location quotient indicates that city residents are particularly specialized in the transportation and warehousing industries, while shift-share analysis suggests that Blue Island businesses were able to power through job losses in manufacturing, retail, and accommodation services by expanding opportunity in wholesale trading and healthcare.

Location quotient (LQ) allows decision-makers to identify similarities and differences between communities, even if they differ drastically in size. Table 4.1 compares Blue Island to the United States using ACS industry figures from 2011 to 2015. The LQ for a given field is calculated by taking the ratio of the rate of concentration in the community of interest to the rate of concentration in the reference region. Highly concentrated industries ($LQ > 1.25$) are highlighted in green and especially low concentrations ($LQ < 0.5$) in red. Before interpreting these results, it is important to understand that ACS statistics reflect the jobs held by **residents** of Blue Island, and not businesses in Blue Island.

Given the city's history as a railroad town and its access to the Little Calumet River, it is no surprise that Blue Island specializes in transportation and warehousing, concentrated at a rate close to double the national average. Blue Island is also unique in terms of the high degree to which residents are employed in the construction, administrative, waste management, accommodation, and food services sectors.

**Table 4.1 – Blue Island Location Quotient, U.S. as Reference Region, 2011-2015
ACS (5-Year Estimates)**

Industry	Blue Island	Percent (%)	Location Quotient	United States	Percent (%)
Agriculture, forestry, fishing and hunting, and mining:	8	0.08	0.04	2,852,402	1.96
Agriculture, forestry, fishing and hunting	8	0.08	0.06	1,965,530	1.35
Mining, quarrying, and oil and gas extraction	0	0.00	0.00	886,872	0.61
Construction	831	8.52	1.37	9,027,391	6.19
Manufacturing	949	9.73	0.93	15,171,260	10.41
Wholesale trade	279	2.86	1.05	3,968,627	2.72
Retail trade	1,328	13.61	1.18	16,835,942	11.55
Transportation and warehousing, and utilities:	853	8.74	1.76	7,226,063	4.96
Transportation and warehousing	756	7.75	1.89	5,985,784	4.11
Utilities	97	0.99	1.17	1,240,279	0.85
Information	139	1.42	0.67	3,094,143	2.12
Finance and insurance, and real estate and rental and leasing (FIRE):	677	6.94	1.06	9,578,175	6.57
Finance and insurance	568	5.82	1.24	6,828,010	4.68
Real estate and rental and leasing	109	1.12	0.59	2,750,165	1.89
Professional, scientific, and management, and administrative and waste management services:	833	8.54	0.77	16,074,502	11.03
Professional, scientific, and technical services	287	2.94	0.44	9,741,705	6.68
Management of companies and enterprises	0	0.00	0.00	116,291	0.08
Administrative and support and waste management services	546	5.60	1.31	6,216,506	4.27
Educational services, and health care and social assistance:	1,908	19.55	0.84	33,739,126	23.15
Educational services	685	7.02	0.75	13,607,206	9.34
Health care and social assistance	1,223	12.53	0.91	20,131,920	13.81
Arts, entertainment, and recreation, and accommodation and food services:	1,051	10.77	1.12	13,984,957	9.60
Arts, entertainment, and recreation	44	0.45	0.21	3,147,080	2.16
Accommodation and food services	1,007	10.32	1.39	10,837,877	7.44
Other services, except public administration	558	5.72	1.16	7,198,201	4.94
Public administration	344	3.53	0.73	6,996,990	4.80
Total	9,758	100	1.00	145,747,779	100

Source – US Census Bureau. 2011-2015 American Community Survey 5-Year Estimates. Accessed Oct. 24, 2018 <https://factfinder.census.gov>

Unfortunately, these industries do not offer the highest wages for workers looking to secure a foothold in the middle class. A rough calculation – average median earnings across these sectors – indicates that the standard employee from Blue Island makes \$25,182 (see Table 4.2). The city is particularly weak in high-paying industries: finance and insurance, and real estate and rental and leasing (FIRE); professional, scientific, and technical services; information; and wholesale trade. The average salary for a Blue Island resident involved in any of these sectors is estimated to be \$46,805. Local government should pursue policies that will connect citizens to greater economic opportunity.

**Table 4.2 – Blue Island Average Median Earnings Across Industries, 2011-2015
ACS (5-Year Estimates)**

Industry	Average Median Earnings
Construction; transportation and warehousing; administrative and support and waste management services; accommodation and food services	\$25,182
Finance and insurance, and real estate and rental and leasing; professional, scientific, and technical services; information; wholesale trade	\$46,805

Source – US Census Bureau. 2011-2015 American Community Survey 5-Year Estimates. Accessed Oct. 24, 2018 <https://factfinder.census.gov>

Location quotient identifies a city’s existing economic strengths and weaknesses. While a sector may be booming today, an examination of trends over time may reveal that the industry is already in decline. Shift-share analysis is a perfect tool for looking at panel data because it allows one to separate national and industrial movements from local economic changes. The data presented below is based on the Economic Census, which is different to the ACS in two critical aspects: it is conducted once every five years

rather than annually, and it captures employment at business establishments in a geographic area rather than employment patterns of residents.

Table 4.4 displays the shifts in Blue Island's economy indexed to the United States from 2007 to 2012. Other than the different unit of analysis, the time lag – the most recent Economic Census available lags three years behind the ACS data examined in Tables 4.1-4.3 – is a significant concern. The national context cannot be stressed enough. 2007 marks the economic peak before the Great Recession and the country was still a long way from full recovery in 2012, which can be seen in the negative national shift numbers across the board. Blue Island was especially hard hit in manufacturing, retail trade, and accommodation and food services – the local economy underperformed by more than 150 jobs in each sector. On the other hand, Blue Island excelled by adding over 300 jobs a piece in wholesale trade and health care and social assistance in this period after accounting for external factors. The city's strong performance in these industries suggests that overall Blue Island weathered the economic downturn remarkably well, as local conditions accounted for 353 new jobs in the five-year period.

Table 4.4 – Blue Island Shift-Share, U.S. as Reference Region, 2007 Economic Census and 2012 Economic Census

NAICS	Industry	Blue Island			United States			National Shift	Industry Mix	Local Shift
		2012	2007	Percent	2012	2007	Percent			
31-33	Manufacturing	756	1,287	-41.26	11,214,165	13,395,670	-16.29	-27	-183	-321
42	Wholesale trade	655	337	94.36	5,881,913	6,227,389	-5.55	-7	-12	337
44-45	Retail trade	269	548	-50.91	14,703,529	15,515,396	-5.23	-11	-17	-250
53	Real estate and rental and leasing	39	32	21.88	1,923,770	2,188,479	-12.10	-1	-3	11
54,56	Professional and administrative services	1,352	1,299	4.08	17,977,997	18,121,369	-0.79	-27	17	63
62	Health care and social assistance	2,914	2,033	43.33	18,414,757	16,792,074	9.66	-42	239	685
72	Accommodation and food services	512	670	-23.58	12,007,689	11,600,751	3.51	-14	37	-182
81	Other services, except public administration	202	194	4.12	3,430,711	3,479,011	-1.39	-4	1	11
--	Total	6,699	6,400	4.67	89,859,995	91,774,522	-2.09	-134	80	353

Source – US Census Bureau. 2007 Economic Census and 2012 Economic Census. Accessed Oct. 24, 2018, from <https://factfinder.census.gov>

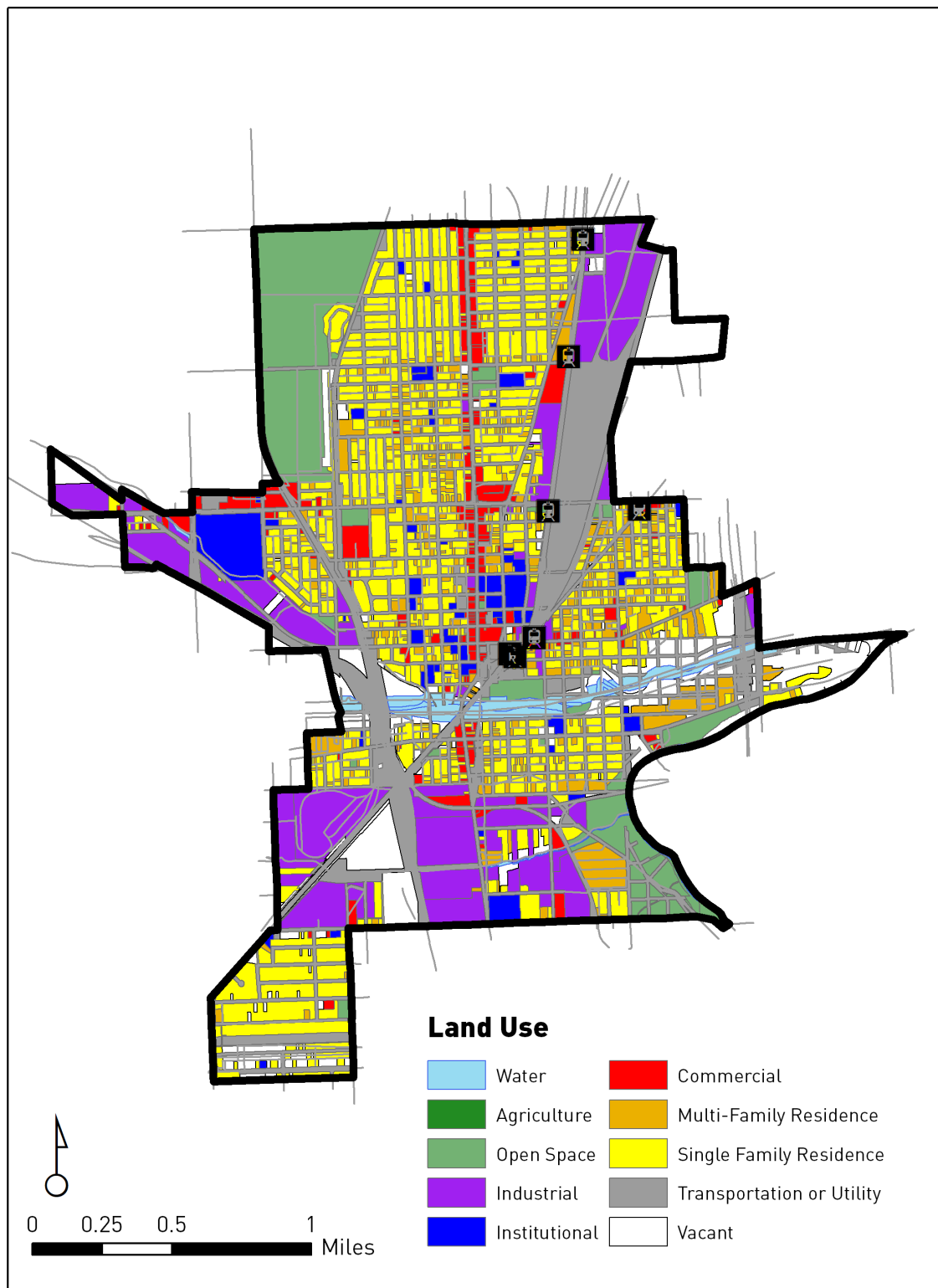
According to the ACS, city residents are concentrated in the construction, administrative, waste management, accommodation, and food services industries. Economic Census data, however, reveals that the city has improved as an environment for wholesale trade and health care and social assistance businesses in recent years. Blue Island policymakers should pursue strategies to better align citizen talent with emerging local industries, especially health care. Leaders should search for more up to date establishment level data to provide additional guidance on local opportunities that have developed since 2012.

5. Land Use

Blue Island's demographic and economic future depends upon and influences its land use and development. How space is used has complex consequences, requiring dedicated analysis. Land use data was obtained from CMAP's Land Use Inventory for Northeast Illinois, specifically the 2005 and 2010 vintages. Blue Island is

Figure 5.1 presents the more recent approximation of land use patterns in 2010. Transportation or utility catches the eye immediately. At 30 percent of the city's footprint, this category accounts for the largest land use share. Individual streets contribute to this field, but the two major rail corridors, which appear like streaks of gray slashing a "X" across Blue Island, are the largest individual features. Given the transportation infrastructure's prominence, it is not surprising to see industrial businesses (purple) clustered around the railway nodes, particularly in the southwest. Industrial land accounts for just under 13 percent of the land in Blue Island. Commercial land use (red) seems to indicate that Western Avenue is the only retail corridor in town. The land use pattern is so distinct that even readers who are completely unfamiliar with the region should recognize Blue Island's downtown, illustrated as a nexus of transportation, commercial, and institutional land – gray, red, and blue – just north of the Little Calumet River. Close to 7 percent of the city's land is dedicated to multi-family residences (orange), but most land set aside for housing is single-family (yellow), which clocks in at 23 percent.

Figure 5.1 – Blue Island Land Use, CMAP Land Use Inventory 2010



Source – Chicago Metropolitan Agency for Planning. 2010 Land Use Inventory for Northeast Illinois. Accessed Nov. 20, 2018, from <https://www.cmap.illinois.gov/data/land-use>

Table 5.1 consolidates information from 2005 and 2010 to calculate relative changes in Blue Island's development pattern. Before examining the table, please note that some shifts are more dramatic than the situation on the ground would suggest due to data discrepancies. CMAP's 2005 data does not include polygons for street rights-of-way (ROW), which resulted in an artificially low baseline. This difference affects all other land uses, particularly single-family, commercial and industrial. 2010 data is far more reliable, most likely due to a change in methodology that resulted in CMAP compiling their inventory using parcel-level data rather than aerial photography.

Table 5.1 – Blue Island Land Use, CMAP Land Use Inventories for 2005 and 2010

Land Use	2005 Area (Ft ²)	2005 Area (%)	2010 Area (Ft ²)	2010 Area (%)	2005-2010 (%)
Commercial	7,677,351	6.6%	4,441,964	3.8%	-42.1%
Industrial	12,659,208	10.9%	14,601,194	12.6%	15.3%
Institutional	4,308,568	3.7%	3,735,816	3.2%	-13.3%
Multi-Family Residence	5,038,216	4.3%	8,038,188	6.9%	59.5%
Open Space	12,151,819	10.5%	10,625,066	9.2%	-12.6%
Other	--	--	857,072	0.7%	--
Single Family Residence	46,669,066	40.3%	26,240,085	22.6%	-43.8%
Transportation or Utility	12,384,448	10.7%	35,772,237	30.9%	188.8%
Vacant	12,306,802	10.6%	8,978,419	7.7%	-27.0%
Water	2,708,169	2.3%	2,613,606	2.3%	-3.5%
Total	115,903,647	100%	115,903,648	100%	0.0%

Source – Chicago Metropolitan Agency for Planning. 2005, 2010 Land Use Inventory for Northeast Illinois. Accessed Nov. 20, 2018, from <https://www.cmap.illinois.gov/data/land-use>

With these caveats in mind, Blue Island's land use patterns mostly remained stable over the 2005-2010 period in an absolute sense. Some significant trends, however, do exist. Industrial land grew as a proportion of total city acreage to 12.6

percent in 2010, probably due to the transformation of two large parcels (located at the southwest and northeast corners of the city) into industry or manufacturing from depot space. Also, multi-family residence land use increased by a substantial amount. The lack of granular parcel data and ROW polygons in 2005 may have led to some undercounting, but there appears to be more multi-family units scattered across the north and east sides in 2010.

Blue Island's biggest advantage going forward is its access to downtown Chicago by rail. The Rock Island and Metra Electric lines offer six stations within city limits for central business district-bound passengers (CMAP, 2011). Population projections conducted earlier in the profile suggest that the city will experience decent growth over the next 10 years, although the population will skew older. Growth could be concentrated around the station – there are plenty of parcels that could be used for multi-family rather than single family – in a way that anchors working-age commuters and provides seniors with the option to age in place.

While transportation access can be attractive to college graduates with jobs in the core, solid middle-class opportunities are embedded into the fabric of Blue Island. Location quotients calculated in Section 4 indicate that the city's residents specialize in transportation and warehousing relative to the national average, which aligns with current land use priorities – over 40 percent of land is dedicated to transportation, utilities, or industrial.

One of the factors threatening Blue Island's future is the lack of park space. CMAP data from 2010 estimates that 9.2 percent of city acreage is dedicated to open space, but this is misleading; the patch of green space on the southeast side is a forest preserve, while the tract on the northwest side is a cemetery. Vacant land and excess surface parking lots should be converted into pocket parks. As Little Calumet River cleanup efforts continue, the city has an opportunity to turn the riverfront into a great space. The city should implement the bicycle and pedestrian improvements outlined by Active Transportation Alliance to link residents to the Cal-Sag Trail and increase connectivity between the north and south sides (2012).

Finally, the city must ensure that the historic uptown business district along Western Avenue remains healthy and vibrant. Land use patterns suggest that it is the only retail corridor in the city. A handful of businesses going bankrupt along this stretch during the next recession could dramatically affect the walkability and sense of place of Blue Island's downtown. Municipal officials should focus on maintaining building facades and a sense of architectural cohesion, as well as consider expanding the boundaries of the Olde Western Avenue Historic District (City of Blue Island, 2018).

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