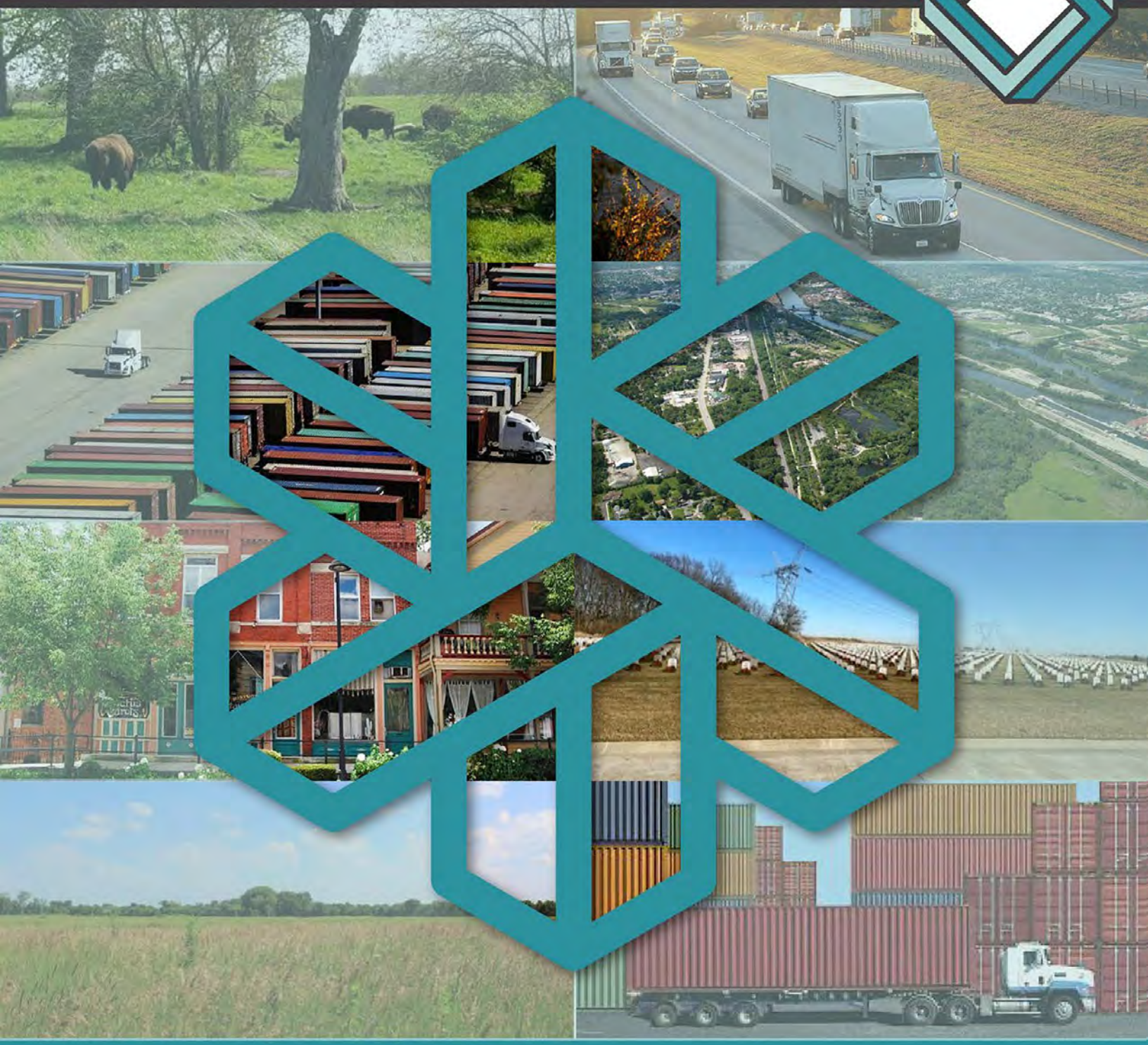
MOVING WILL COUNTY

Land Use Strategy

APPENDICES



August 2021

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Appendix A

MOVING
WILL COUNTY

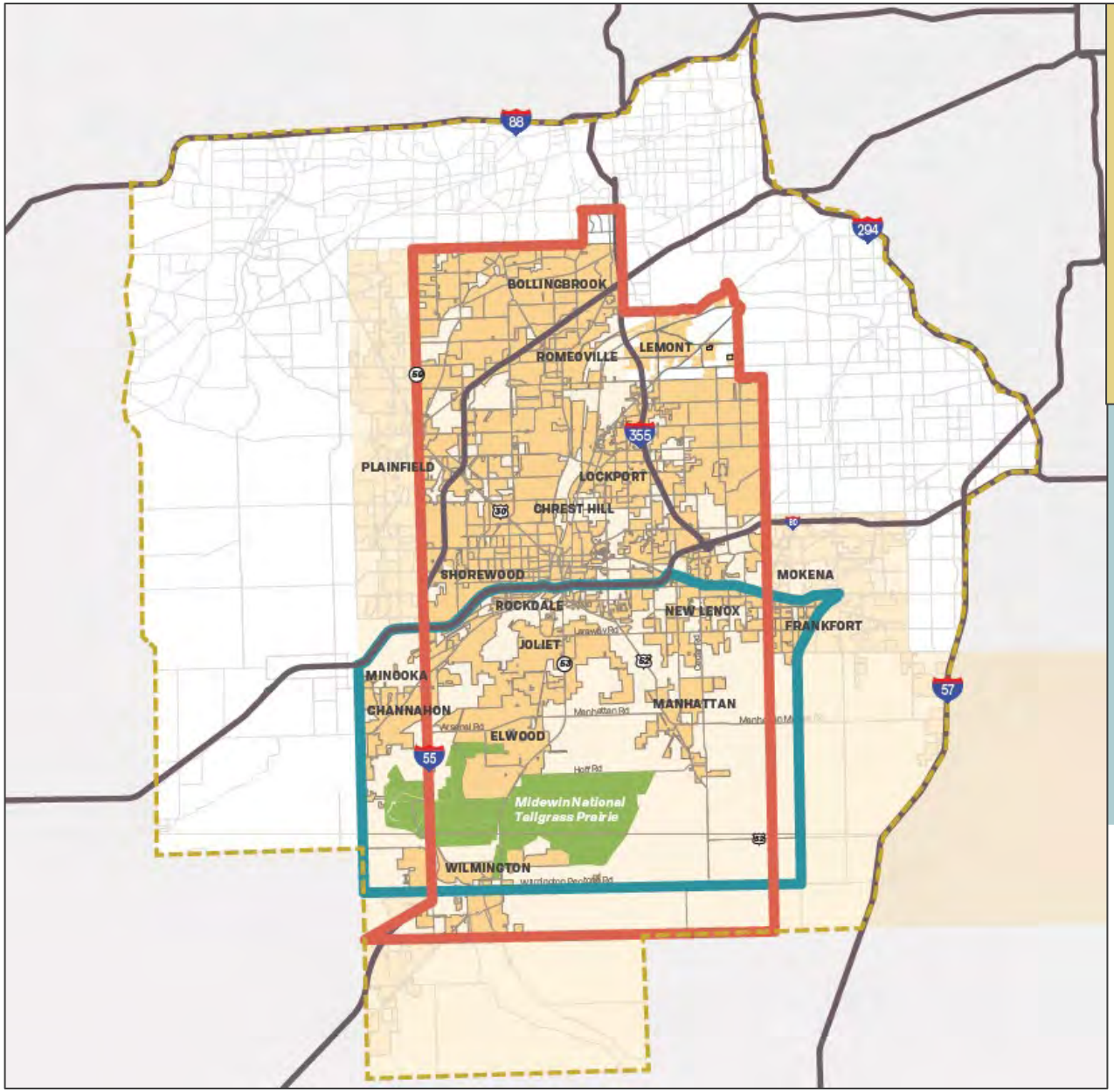
EXISTING CONDITIONS REPORT

Land Use & Market Analysis

REVISED JUNE 12, 2020

Truck Routing and Land Use Study Area Boundaries

REVISED JUNE 12, 2020



STUDY AREA

TRUCK ROUTING & COMMUNITIES STUDY AREA

TRANSPORTATION & LAND USE STRATEGY STUDY AREA

LARGER TRANSPORTATION NETWORK TO CONSIDER

- The Land Use Study Area is in the southwest corner of Will County, bound by I-80 and US 30, (Lincoln Highway) to the north, the Will County Line to the west, US 45 to the east and Wilmington Peotone Rd to the south.
- The area is approximately 167 square miles and includes ten municipalities: Joliet, Elwood, Manhattan, New Lenox, Mokena, Frankfort, Wilmington, Channahon, Minooka and Rockdale.
- Only Elwood, Rockdale and Manhattan's corporate boundaries are entirely within the Study Area.

Summary of Existing Land Uses

REVISED JUNE 12, 2020

Residential Uses

- Existing residential uses predominantly consist of owner-occupied single-family detached dwellings that are generally over 20 years old. There are minimal multifamily units in the Study Area.
- Community feedback suggests there is a need for more affordable workforce housing, senior housing, multifamily, and rental options in the Study Area.

Retail& Office Uses

- Existing retail uses in the Study Area are predominantly strip retail and small neighborhood retail centers.
- Regional retail centers are primarily along I-80 in the Village of New Lenox at the northern edge of the Study Area.
- Study Area has minimal office use.

Industrial Uses

- The majority of major industrial uses are near the intermodal facilities and the I-55 and I-80 corridors.

Civic and Institutional

- Two High Schools serve the Study Area: Joliet Central High School (in Downtown Joliet, outside the Study Area) and Lincoln Way West High School in New Lenox.

Agricultural Uses

- The majority of the Study Area currently consists of agricultural uses.
- The majority of the farmlands have prime soils according to the USDA. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops.
- Generational farms are located in the area as well as farmsteads identified as historically significant by the 2009 Rural Historic Structure Survey by the County.

Sports, Entertainment & Tourism

- Major national tourism destinations are in the Study Area, including Historic Route 66 (IL 53), the Midewin National Tallgrass Prairie, and the Abraham Lincoln National Cemetery.
- Regional destinations include the Chicagoland Speedway, Route 66 Raceway, Autobahn County Club and Hollywood Casino and Hotel, all located in the City of Joliet.

Open Spaces

- The Open Space system in the Study Area is anchored by major Federal, State, and County protected lands.
- Federal lands include the Midewin National Tallgrass Prairie and the Abraham Lincoln National Cemetery.
- State and IDNR lands include Braidwood Dunes and Savanna, Grant Creek Prairie, Hitts Siding Prairie, Sand Ridge Savanna, Wilmington Shrub Prairie, Des Plaines Dolomite Prairie Land, and Water Reserve, and Channahon State Park.
- Forest Preserve District of Will County (FPDWC) lands include Prairie Creek, Laughton, Jackson Creek and Sugar Creek Preserves, McKinley Woods, and Briscoe Mounds.

Natural Resources

- The Study Area has some of the most valuable natural resources in the County, including six watersheds around the DuPage, Kankakee and Des Plaines Rivers and Jackson, Prairie and Forked Creeks.
- According to the USDA, majority of the area has high hydric soils. Hydric soils are soils where water remains at or near the soil surface for extended time periods during the growing season. These soils are critical for the formation of many types of wetlands.

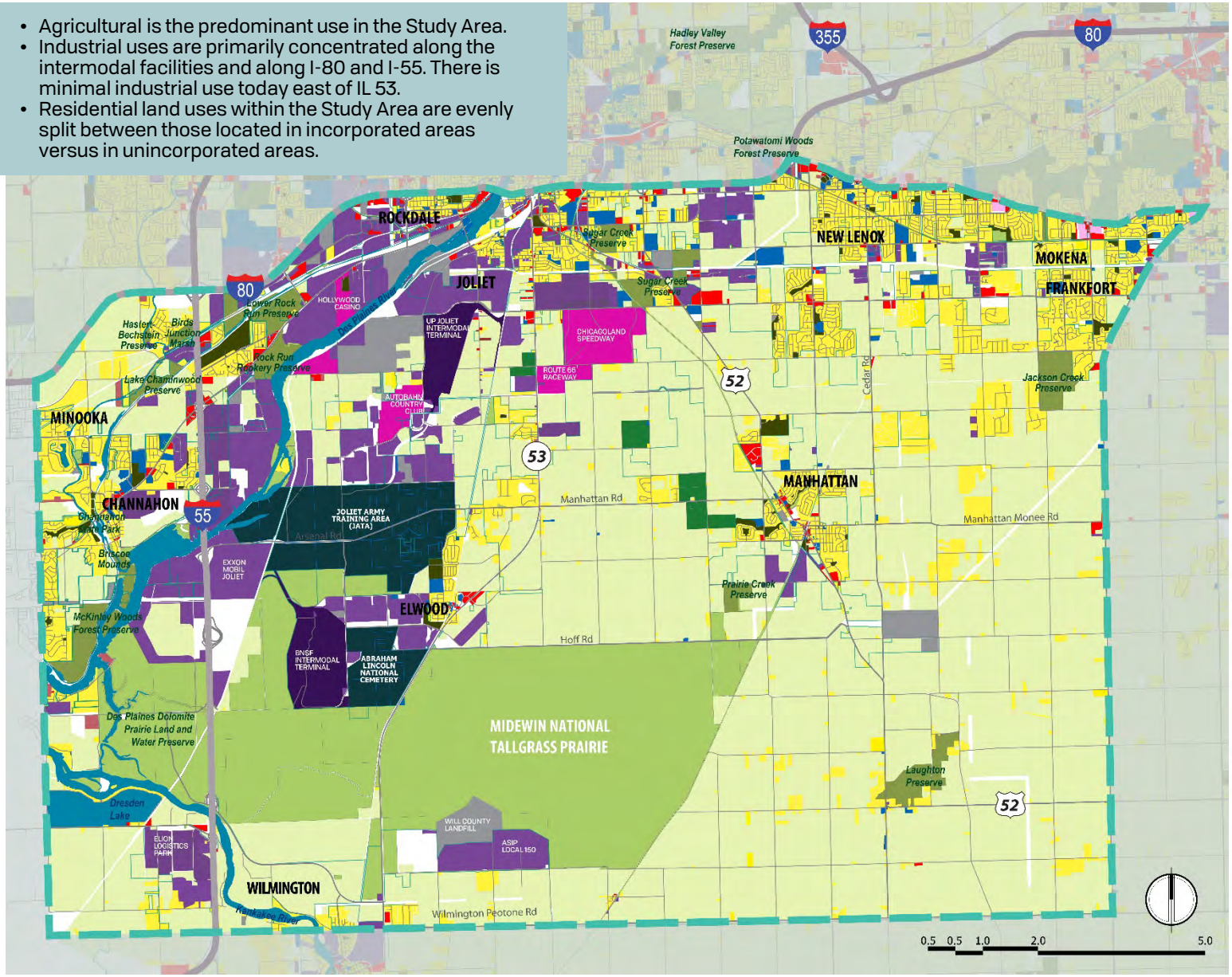
Trails

- Wauponsee Glacial Trail, I & M Canal Trail, and Old Plank Road Trail are three major regional trails that run through the Study Area. These connect to local trails in IDNR and FPDWC open spaces and Midewin National Tallgrass Prairie.
- FPDWC has significant trails planned in the Study Area to create major east west connections and corridors along creeks.

Summary Map of Existing Land Uses

REVISED JUNE 12, 2020

- Agricultural is the predominant use in the Study Area.
- Industrial uses are primarily concentrated along the intermodal facilities and along I-80 and I-55. There is minimal industrial use today east of IL 53.
- Residential land uses within the Study Area are evenly split between those located in incorporated areas versus in unincorporated areas.

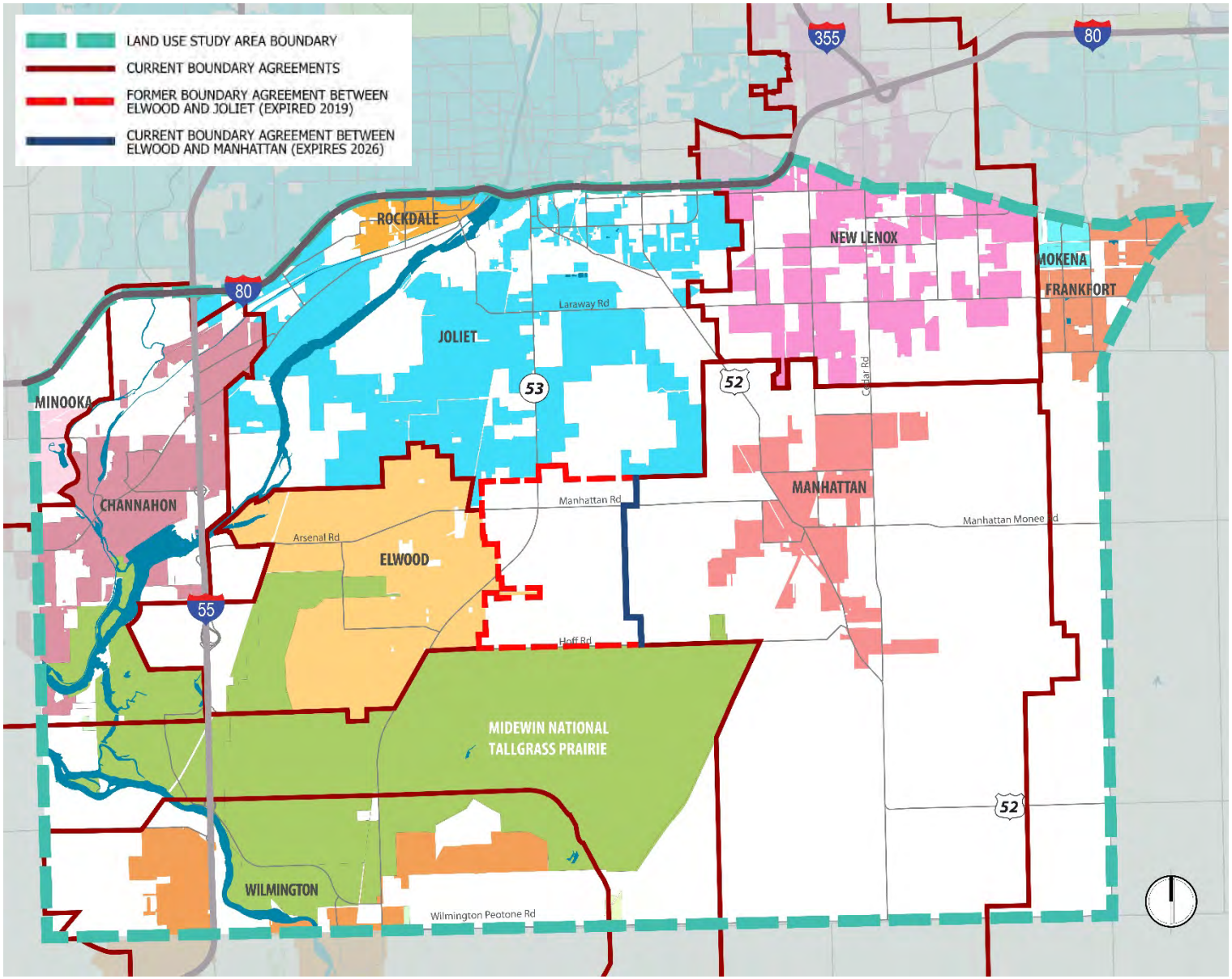


Data sources: CMAP Land Use, 2015; Satellite Imagery, 2017. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Existing Jurisdictional Boundaries and Land Uses

Existing Jurisdictional Boundaries

REVISED JUNE 12, 2020



Municipalities in the Study Area:

- City of Joliet
- Village of Elwood
- Village of Manhattan
- Village of New Lenox
- Village of Mokena
- Village of Frankfort
- Village of Wilmington
- Village of Channahon
- Village of Minooka
- Village of Rockdale

There are over ~**167 square miles** of unincorporated land (shown in white) within the overall Study Area.

Data sources: CMAP Land Use, 2015; Municipalities.

Existing Residential Uses

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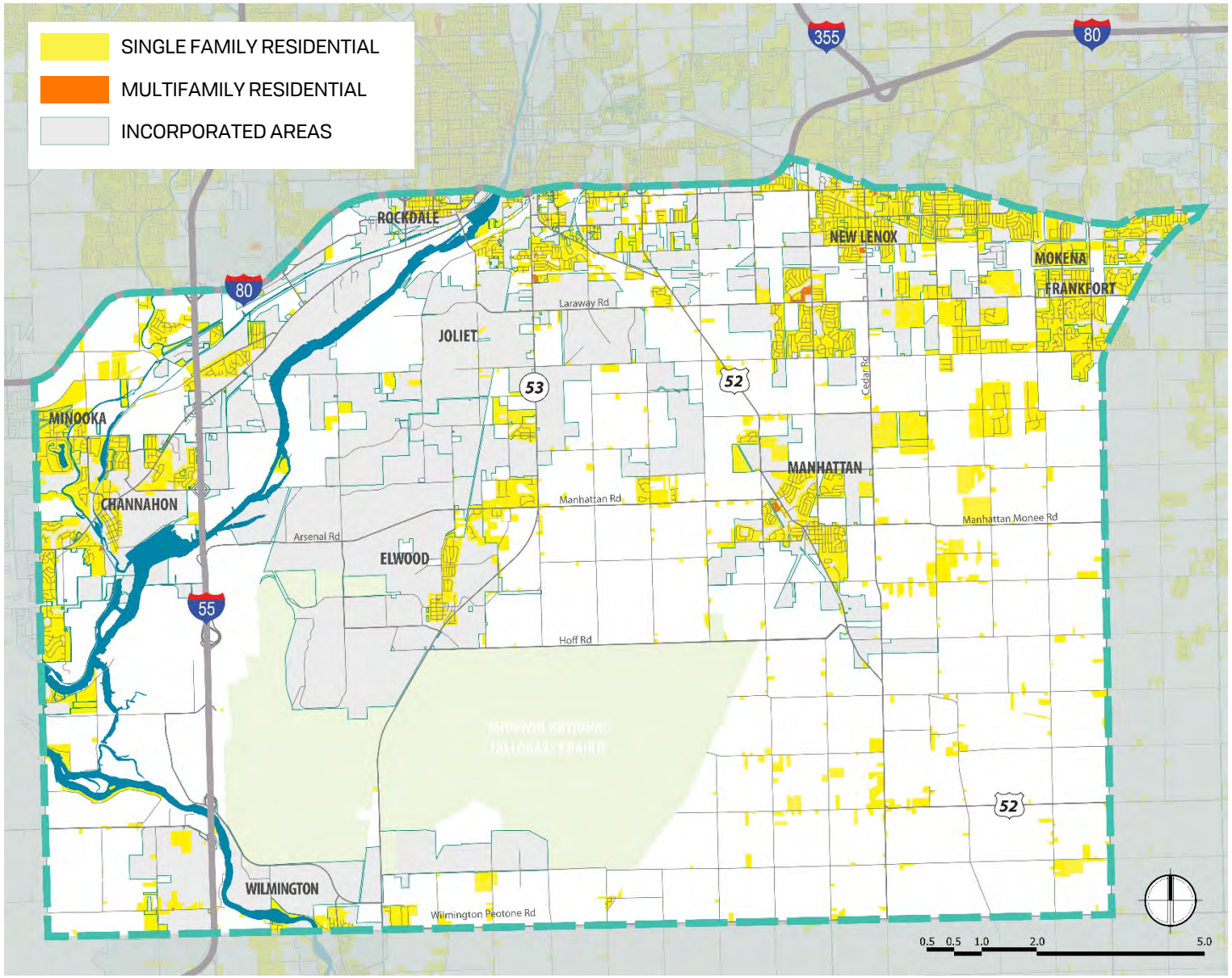

Existing residential uses predominantly consist of owner occupied single family dwellings that are generally over 20 years old.

There are minimal multifamily units in the Study Area.

Housing Tenure & Age

- From 2010 to 2019, housing tenure in the Study Area shifted slightly further toward owner occupancy (86.9% in 2010 to 87.6% in 2019)
- Only 3% of housing units were built in 2010 or later
- 47.8% were built in the 1990s and 2000s
- The oldest units, built before 1950, make up only 8.8% of the housing stock

Table 1: Total Square Miles of Residential Land Uses in Study Area

Residential	Sq. Mi.	% Total
Municipality	9.14	47.8%
Unincorporated	9.99	52.2%
Total (Land Use Study Area)	19.13	

Data sources: CMAP Land Use, 2015; Satellite Imagery, 2017. U.S. Census Bureau, Building Permits Survey. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Existing Commercial Uses

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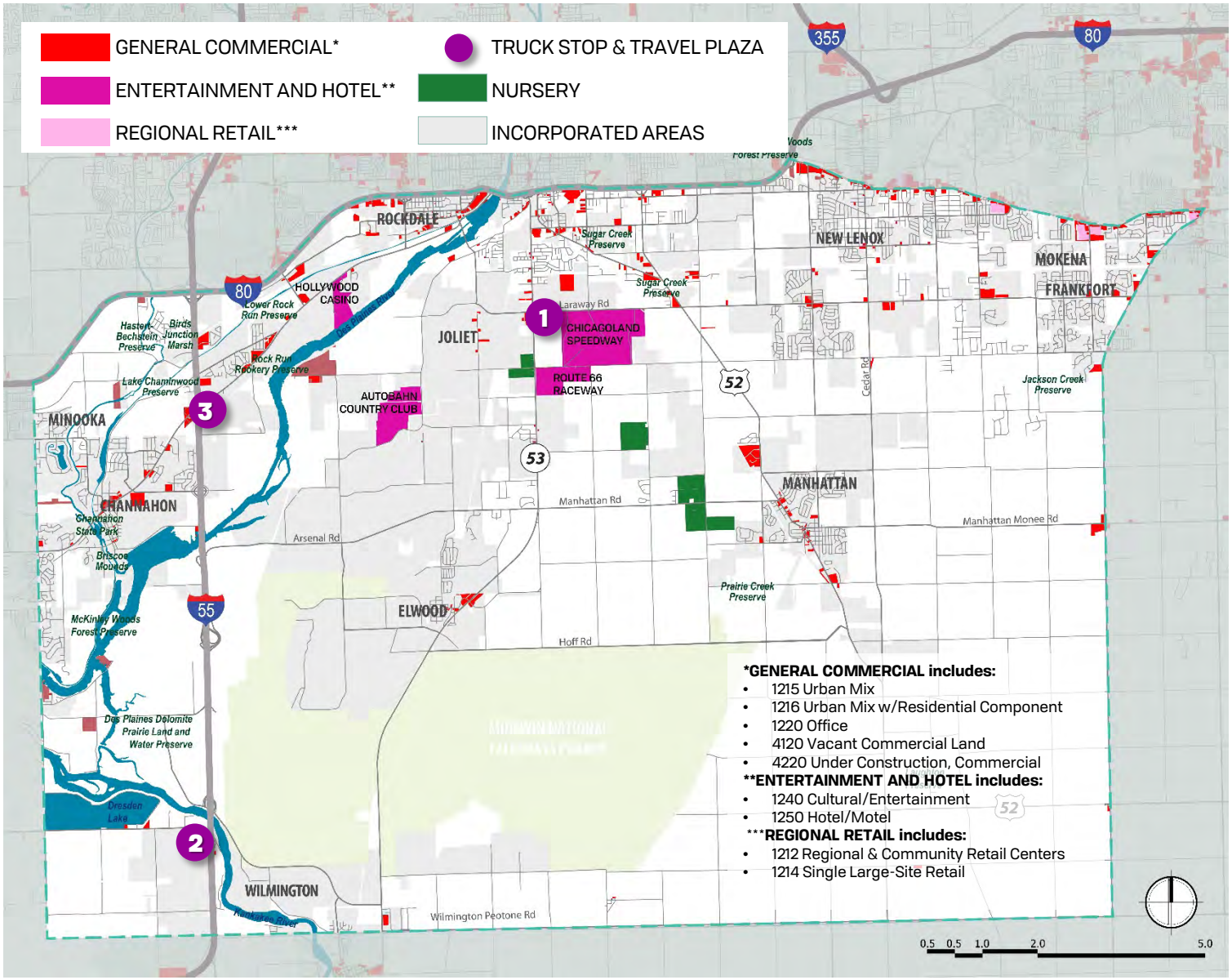

Existing retail uses in the Study Area are predominantly strip retail and small neighborhood retail centers.

Regional retail centers are primarily along I-80 in the Village of New Lenox at the northern edge of the Study Area.

There is minimal office use in the Study Area.

Major entertainment anchors include:

- Chicagoland Speedway and Route 66 Raceway
- Autobahn County Club
- Hollywood Casino & Hotel

Major truck stop related retail uses and travel plazas are concentrated at the following locations:

1. IL53 and Laraway Road
2. I-55 and Lorenzo Road
3. I-55 and Eames Street

Table 2: Total Square Miles of Commercial Land Uses in Study Area

Commercial	Sq. Mi.	% Total
Municipality	4.07	78.3%
Unincorporated	1.12	21.7%
Total (Land Use Study Area)	5.19	

Data sources: CMAP Land Use, 2015; Satellite Imagery, 2017. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Existing Residential and Commercial Uses

REVISED JUNE 12, 2020

Table 3: Top 5 Municipalities with the Highest Percentage of Residential Land Uses (in sq. mi.)

Municipality	Municipality Total Area[1]	Residential	% of Total Area
Village of Minooka	0.99	0.59	60%
Village of Mokena	8.84	4.86	55%
Village of New Lenox	15.59	6.58	42%
Village of Frankfort	15.65	6.39	41%
Village of Channahon	8.72	2.80	32%
Total: All Municipalities Within/Partially Within Land Use Study Area	140.76	42.09	30%

Table 4: Top 5 Municipalities with the Highest Percentage of Commercial Land Uses (in sq. mi.)

Municipality	Municipality Total Area[1]	Commercial	% of Total Area
Village of Mokena	8.84	1.17	13%
Village of Rockdale	1.33	0.16	12%
City of Joliet	55.00	6.01	11%
Village of Frankfort	15.65	0.97	6%
Village of Channahon	8.72	0.48	5%
Total: All Municipalities Within/Partially Within Land Use Study Area	140.76	10.33	7%

Notes for both tables:

Municipalities considered for the top 5 were those within or partially within the Land Use study area.

The total land area listed for each municipality only reflects the portion of a municipality's land area within Will County and the Study Area (e.g., Village of Minooka does not reflect the area of land that is in Kendall County or Grundy County).

Minooka, Mokena and New Lenox have the highest percentage of total area dedicated to residential uses (**Table 3**), and Mokena, Rockdale, and Joliet have the highest percentage of total land area dedicated to commercial uses (**Table 4**).

Overall, commercial accounts for a relatively small percentage of the land uses within the municipalities of the Study Area (7% of total municipal area) as well as the overall Study Area, including unincorporated and municipal areas (5%).

Data source: CMAP Land Use, 2015. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Existing Industrial Uses

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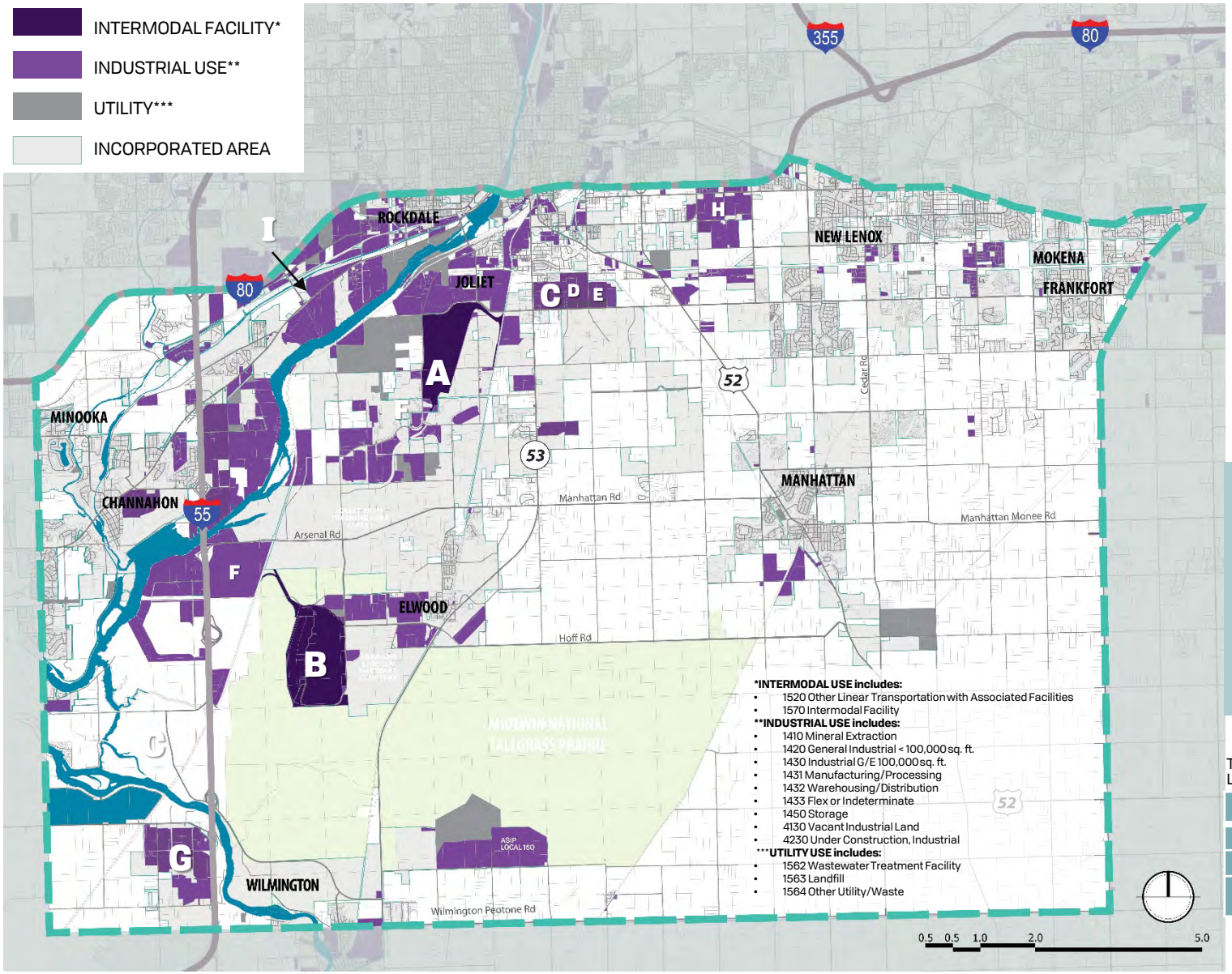

Major Existing Industrial Anchors in the Study Area include the following:

A. The Union Pacific Global IV Intermodal
B. The BNSF Logistics Park Intermodal
C. Laraway Crossing Business Park
D. Amazon Fulfillment Center
E. IKEA Distribution Center
F. Exxon Joliet
G. Elion Logistics Park
H. Cherry Hill Business Park
I. Rock Creek Logistics Center
J. Estes Truck Terminal

The majority of major industrial uses are near the intermodal facilities and the I-55 and I-80 corridor.

The amount of industrial uses on municipal land versus on unincorporated land is nearly evenly split.

Table 3: Total Square Miles of Industrial Land Uses in Study Area

Industrial	Sq. Mi.	% Total
Municipality	11.94	49.6%
Unincorporated	12.11	50.4%
Total (Land Use Study Area)	24.05	

Data sources: CMAP Land Use, 2015; Satellite Imagery, 2017. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Existing Civic and Institutional Uses

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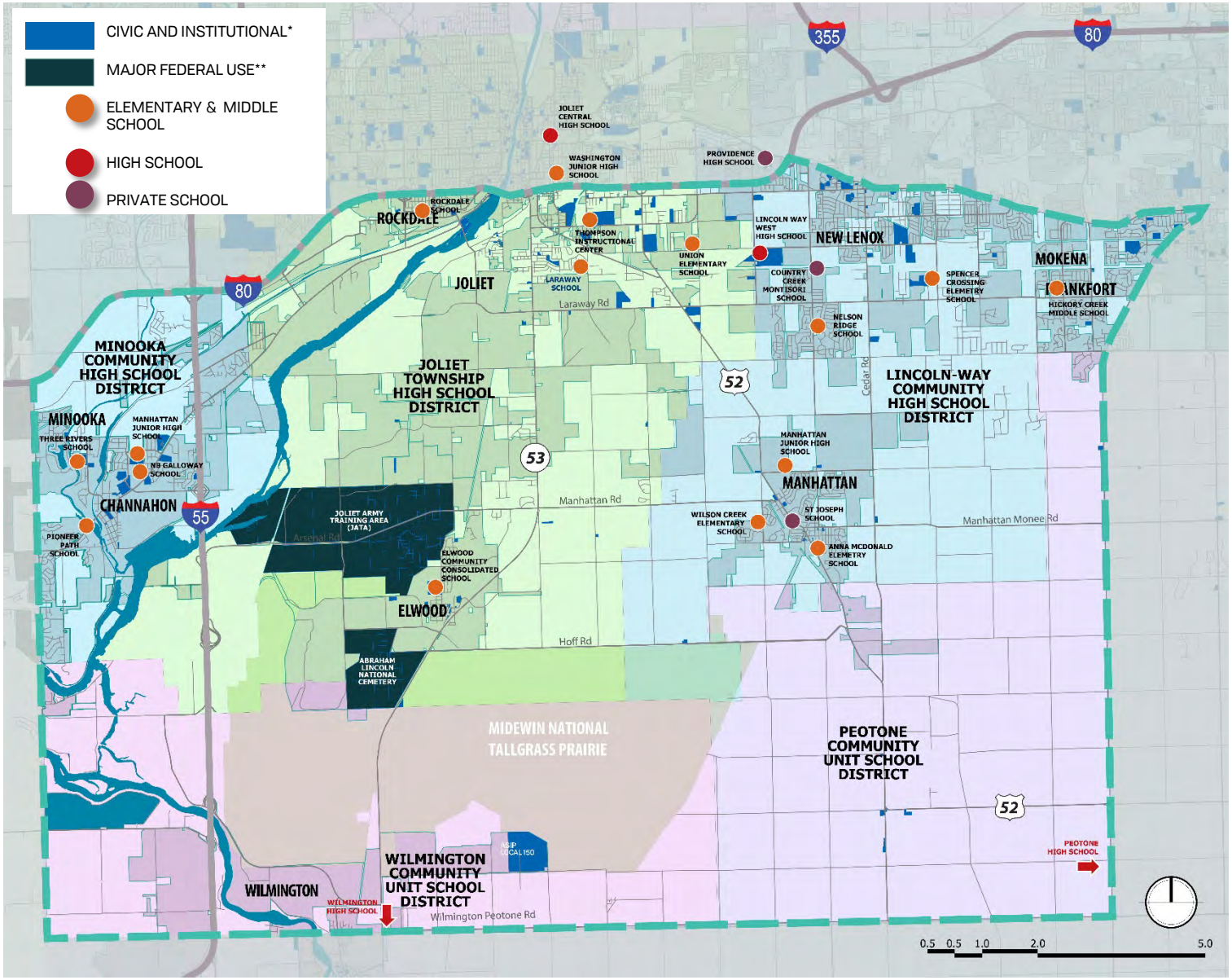

There are two High Schools serving the Study Area:

1. Joliet Central High School (in Downtown Joliet, outside the Study Area)
2. Lincoln Way West High School in New Lenox

***CIVIC AND INSTITUTIONAL includes:**

- 1310 Medical Facilities
- 1321 K-12 Educational Facilities
- 1322 Post-Secondary Educational Facilities
- 1350 Religious Facilities
- 1360 Cemeteries
- 1370 Other Institutional

****MAJOR FEDERAL USES include:**

- 1330 Government Administration and Services

Table 4: Total Square Miles of Civic/ Institutional Land Uses in Study Area

Civic/Institutional	Sq. Mi.	% Total
Municipality	4.74	64.3%
Unincorporated	2.63	35.7%
Total (Land Use Study Area)	7.37	

Data sources: CMAP Land Use, 2015; Satellite Imagery, 2017; Will County GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Existing Agricultural

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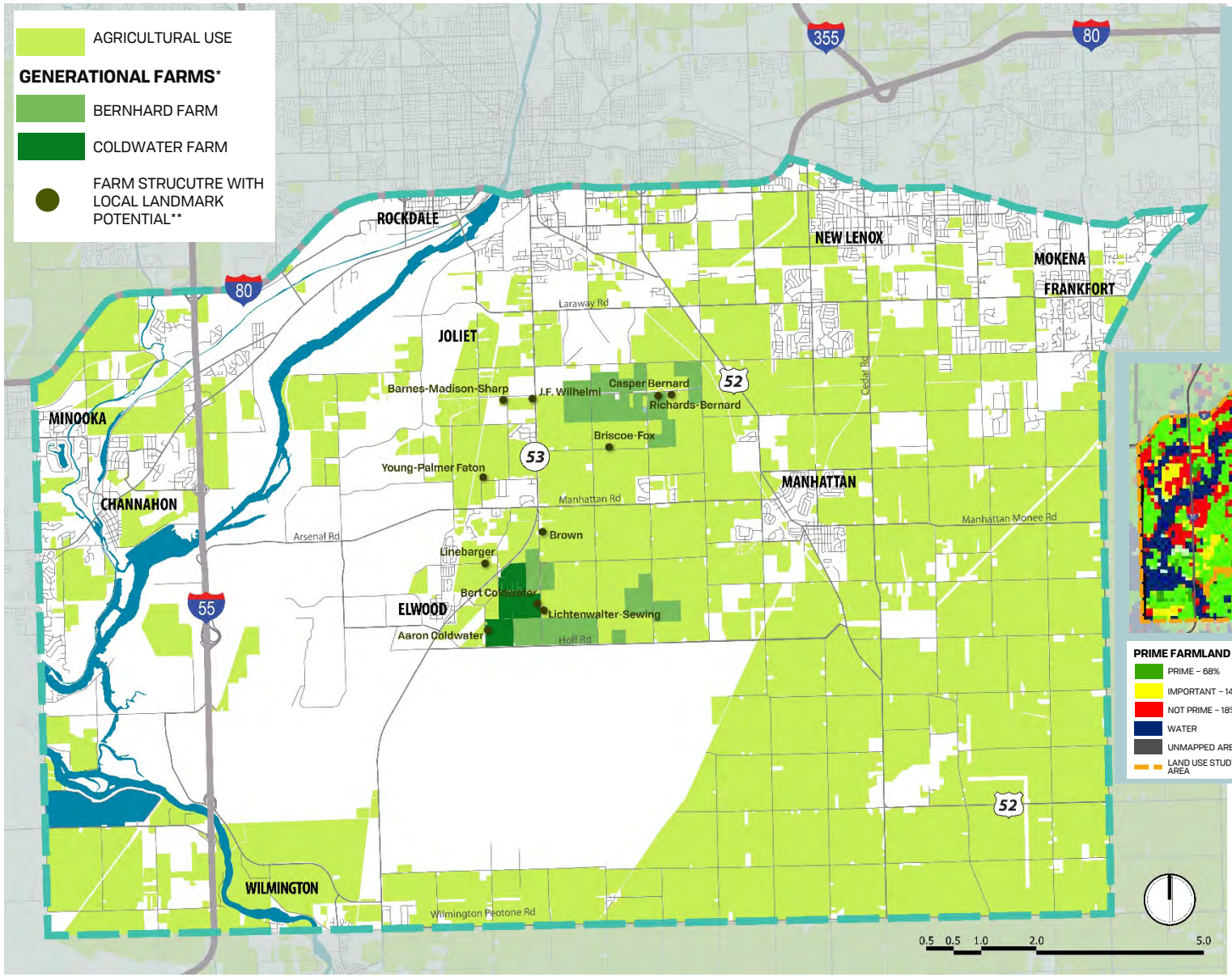
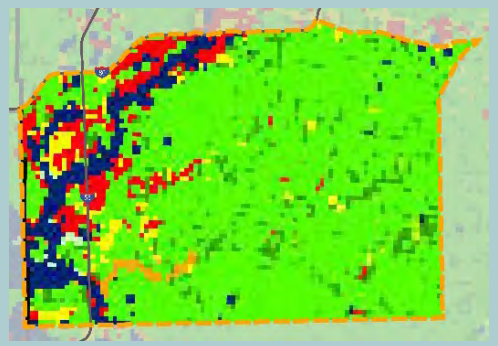


The majority of the Study Area consists of agricultural uses and is located on unincorporated land (nearly 93%).

There are generational farms in the Study Area as well as farmsteads identified as historically significant by the 2009 Rural Historic Structure Survey by the County.



Majority of the study area has Prime Farmland, according to the USDA

Table 5: Total Square Miles of Agricultural Land Uses in Study Area

Agricultural	Sq. Mi.	% Total
Municipality	9.20	7.4%
Unincorporated	114.48	92.6%
Total (Land Use Study Area)	123.68	

Data sources: * Parcel information provided by Jackson Township, **2009 Rural Historic Structure Survey, Jackson Township CMAP Land Use, 2015; Satellite Imagery, 2017. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Existing Industrial, Civic/Institutional, and Agricultural Uses

REVISED JUNE 12, 2020

Table 6: Top 5 Municipalities with the Highest Percentage of Industrial Land Uses (in sq. mi.)

Municipality	Municipality Total Area[1]	Industrial	% of Total Area
Village of Rockdale	1.33	0.91	69%
Village of Elwood	13.82	4.68	34%
Village of Channahon	8.72	2.31	27%
City of Joliet	55.00	12.34	22%
Village of Manhattan	6.33	0.96	15%
Total: All Municipalities Within/Partially Within Land Use Study Area	140.76	26.15	19%

Table 7: Top 5 Municipalities with the Highest Percentage of Civic or Institutional Land Uses (in sq. mi.)

Municipality	Municipality Total Area[1]	Civic/ Institutional	% of Total Area
Village of Elwood	13.82	3.51	25.0%
Village of New Lenox	15.59	0.63	4.0%
City of Joliet	55.00	2.03	3.7%
Village of Channahon	8.72	0.29	3.4%
Village of Frankfort	15.65	0.46	3.0%
Total: All Municipalities Within/Partially Within Land Use Study Area	140.76	7.45	5.3%

Table 8: Top 5 Municipalities with the Highest Percentage of Agricultural Land Uses (in sq. mi.)

Municipality	Municipality Total Area[1]	Agricultural	% of Total Area
Village of Manhattan	6.33	1.78	28.0%
Village of Minooka	0.99	0.14	13.8%
Village of Wilmington	14.34	1.76	12.3%
Village of Elwood	13.82	1.66	12.0%
Village of Frankfort	15.65	1.77	11.3%
Total: All Municipalities Within/Partially Within Land Use Study Area	140.76	14.19	10.1%

Rockdale, Elwood, and Channahon have the highest percentage of total area within their boundaries dedicated to industrial uses (**Table 6**).

Elwood, New Lenox, and Joliet have the highest percentage of total area within their boundaries dedicated to civic or institutional uses (**Table 7**).

Manhattan, Minooka, and Wilmington have the highest percentage of total area within their boundaries dedicated to agricultural uses (**Table 8**).

Notes for all tables:

Municipalities considered for the top 5 were those within or partially within the Land Use Study Area.

The total land area listed for each municipality only reflects the portion of a municipality's land area within Will County and the Study Area (e.g., Village of Minooka does not reflect the area of land that is in Kendall County or Grundy County).

Data sources: CMAP Land Use, 2015. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Existing Sports & Entertainment Uses

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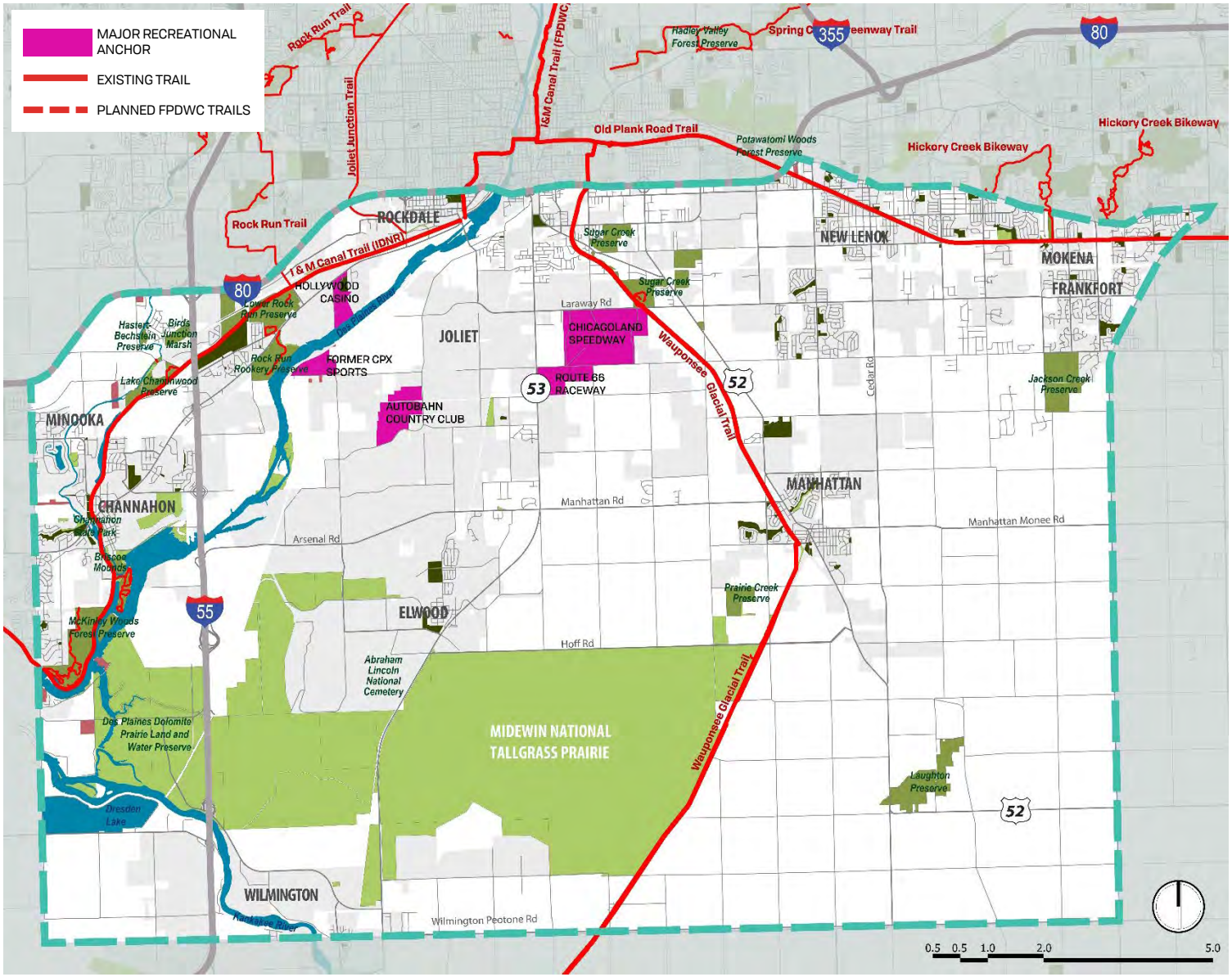

Major sports and entertainment anchors in the Study Area include:

- The Chicagoland Speedway
- Autobahn Country Club
- Hollywood Casino and Hotel
- The Midewin National Tallgrass Prairie
- Major Regional Trails, including:
  - Wauponsee Glacial Trail
  - I & M Canal Trail
  - Old Plank Road Trail

Data sources: CMAP Land Use, 2015; Satellite Imagery, 2017; FPDWC GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Existing Public Open Spaces

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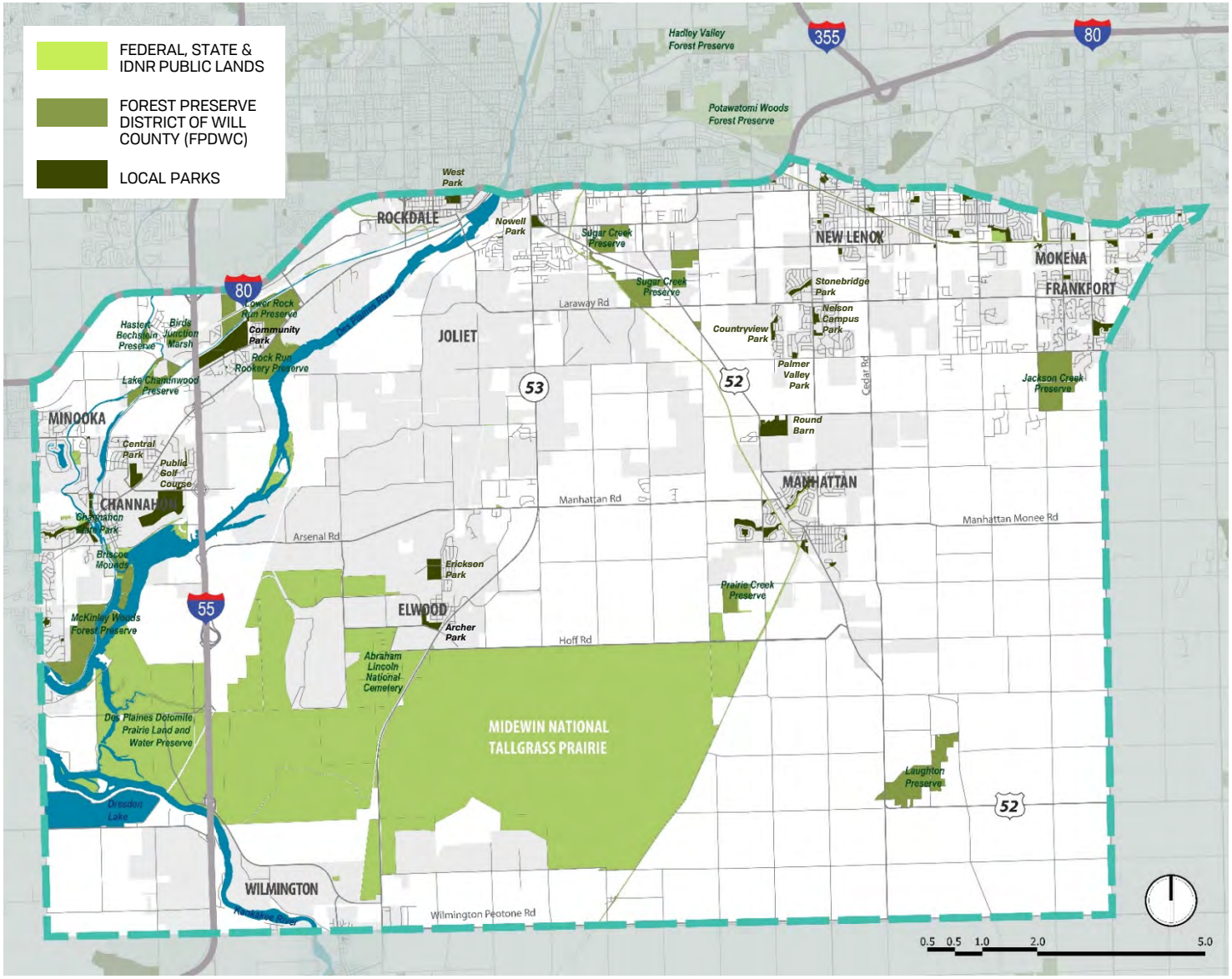

The Open Space system in the study area is anchored by major Federal, State and County protected lands.

These include the following:

Federal

- The Midewin National Tallgrass Prairie
- Abraham Lincoln National Cemetery

State and IDNR

- Braidwood Dunes and Savanna
- Grant Creek Prairie
- Hitts Siding Prairie
- Sand Ridge Savanna
- Wilmington Shrub Prairie
- Des Plaines Dolomite Prairie Land and Water Reserve
- Channahon State Park

Forest Preserve District of Will County (FPDWC)

- Prairie Creek Preserve
- Laughton Preserve
- Jackson Creek Preserve
- Sugar Creek Preserve
- McKinley Woods
- Briscoe Mounds

Table 9: Total Acreage of Parks, Forest Preserves, and Open Spaces by Jurisdiction

Jurisdiction	Sq. Mi.
Municipality/Other	1.7
County (Forest Preserves)	4.1
State (State Park)	5.7
Federal (Midewin)	29
Total	40.5

Note: This data was aggregated from several different sources: CMAP's 2015 Land Use Inventory, Will County Forest Preserve dataset, and USDA – Forest Service's National Forest Preserve dataset. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Data sources: CMAP Land Use, 2015; Satellite Imagery, 2017; FPDWC GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Park Access

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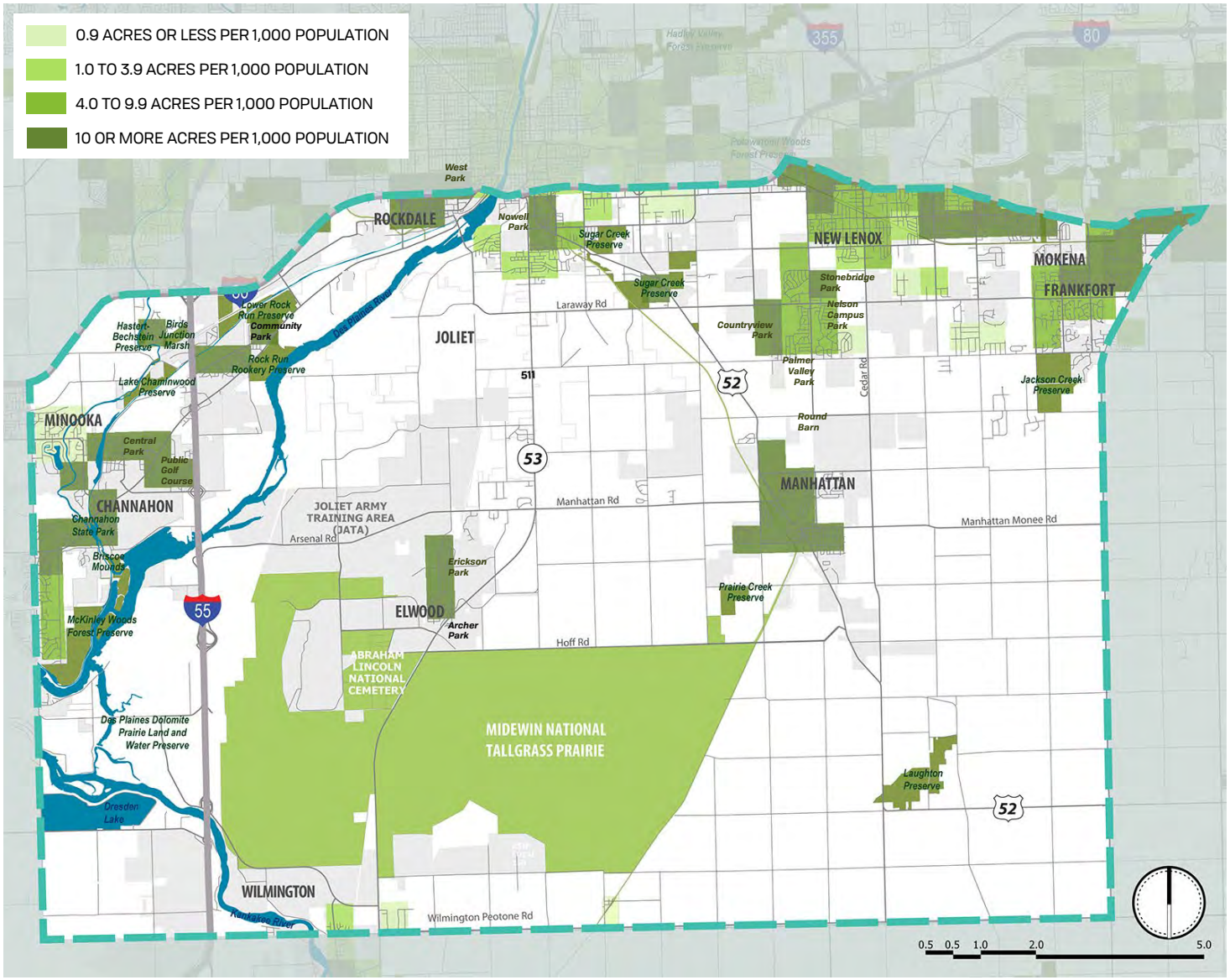

This map shows access to parks per 1,000 people based on geographic proximity to recreational open space.[1]

All the communities in the Study Area have a portion of their land where there is 10 or more acres per 1,000 population.

Table 10: Total Square Miles of Park Access per 1,000 Population in Study Area

Per 1,000 Population	Sq. Mi.	% Total
0.9 Acres or Less	2.7	1.1%
1.0 to 3.9 Acres	2.5	1.0%
4.0 to 9.9 Acres	5.8	2.4%
10.0 Acres or More	13.2	5.4%
Land Use Study Area	243	

[1]Data sources: CMAP ON TO 2050 Layer: Park Access, 2018.

Existing Infrastructure

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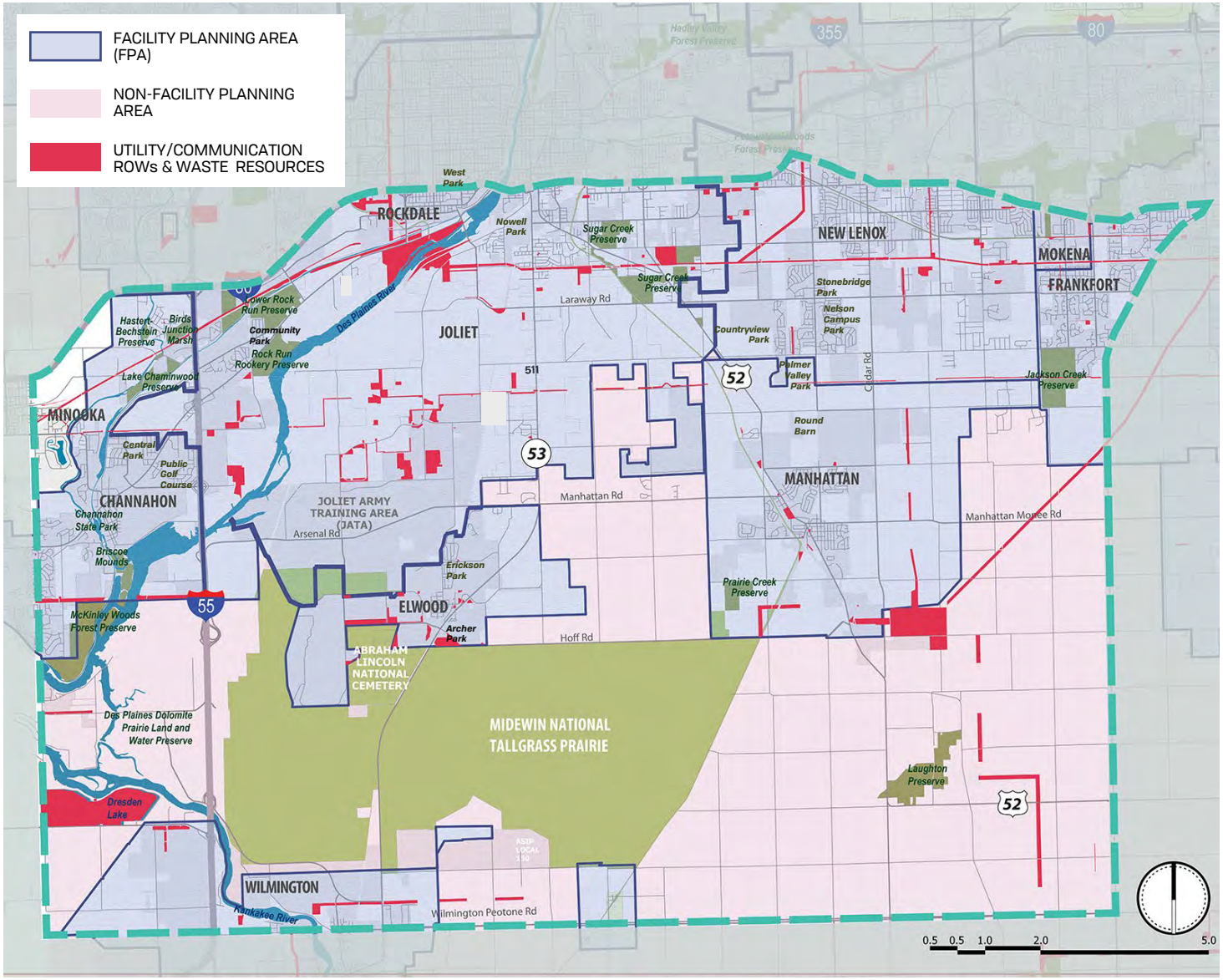

A Facility Planning Area (FPA) is defined as a *centralized sewer service area to be considered for possible wastewater treatment facilities within a 20-year planning period. These areas also include the treatment cells, storage area, and land application area for treated wastewater, if applicable.*[1]

Will County does not maintain data on existing Water and Sewer Infrastructure and to date local data has only been provided by the Village of Manhattan. Therefore, this map does not reflect local data.

The map shows Facility Planning Areas and Utility/Communication ROWs & Water Resources that include the following from CMAP's 2015 Land Use draft dataset:

- 1550 Communication
- 1561 Utility Right-of-Way
- 1564 Other Utility/Waste
- 1565 Stormwater Management

[1]CMAP, https://www.cmap.illinois.gov/programs/water/water-quality/wastewater-planning

Data sources: CMAP Land Use, 2015; CMAP Facility Planning Areas, 2016. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Water Sewer Utilities (based on Building Footprint Density)

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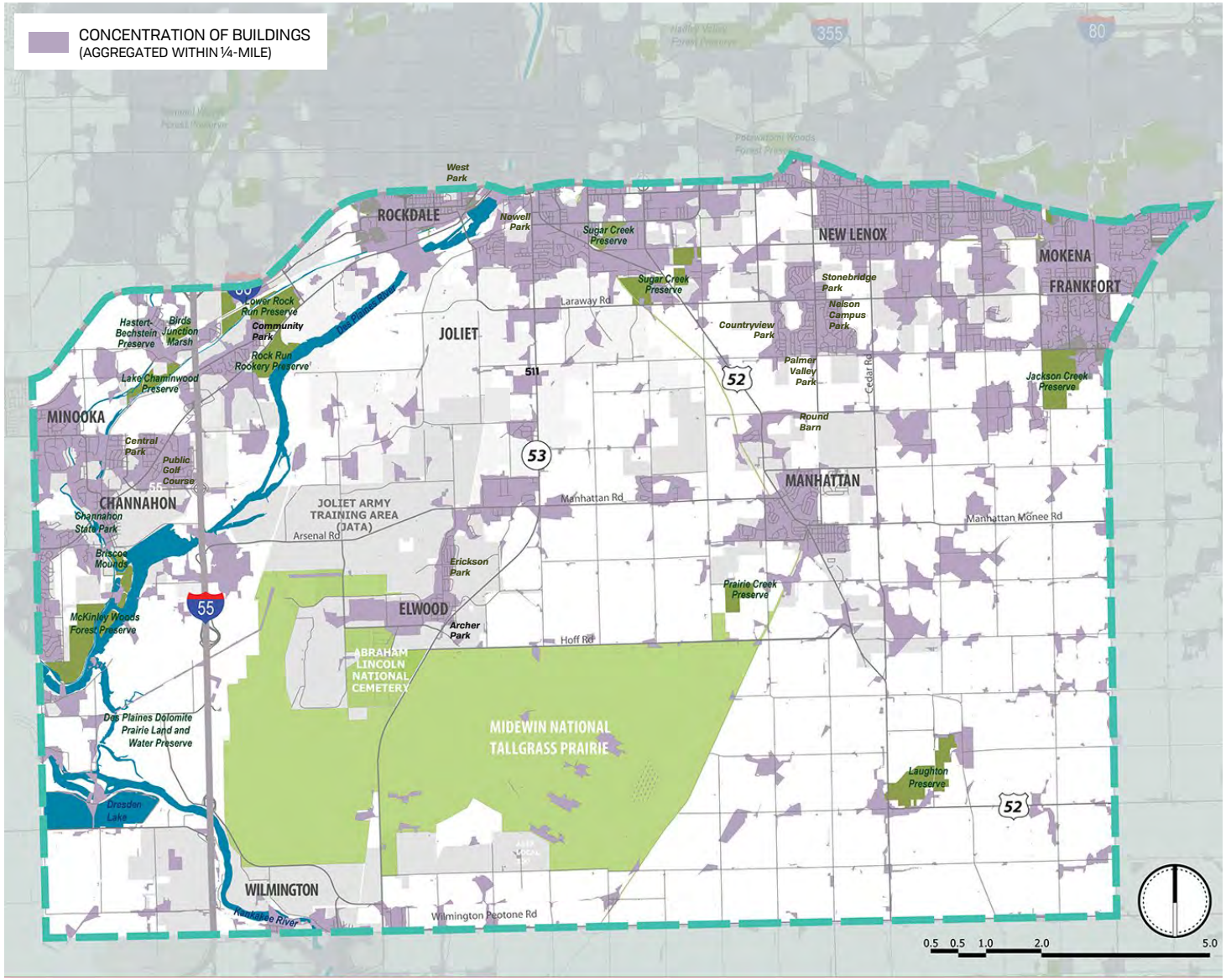

With a significant amount of open space in the Study Area, it is important to consider areas for potential infill development that are already located near existing utility services.

As a proxy for the location of water and sewer utilities, the density of building footprints was considered. Areas with concentrations of buildings (within a quarter mile of each other) were analyzed and indicated on this map.

Table 11: Total Square Miles of Building Concentration in Study Area

Building Concentration (aggregated within 1/4-mile)	Sq. Mi.	% Total
Incorporated	23.2	9.5%
Unincorporated	20.9	8.6%
Land Use Study Area	243	

Data sources: Will County: Building Footprints, 2016.

Existing Transit and Trail Connectivity

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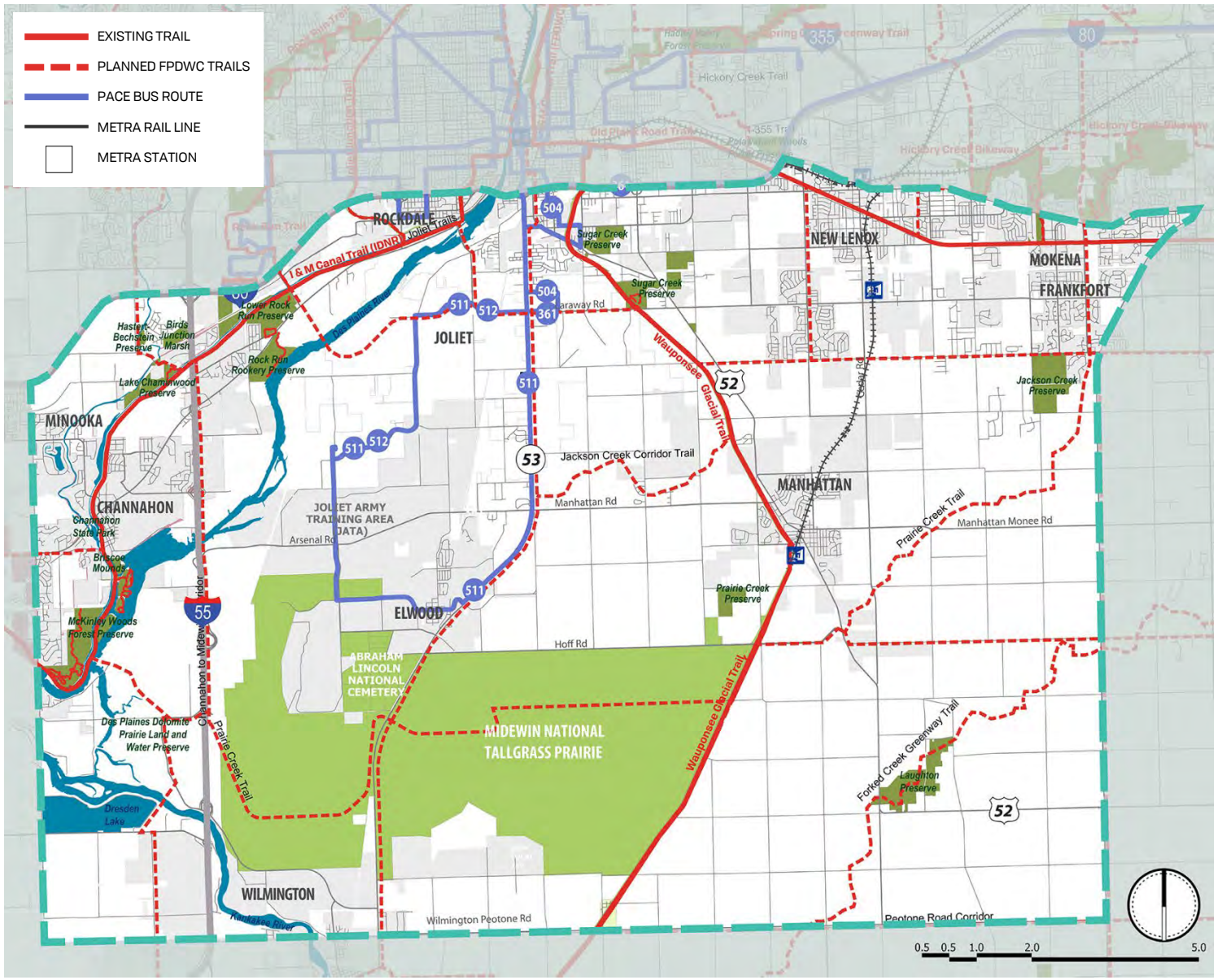

PACE operates a variety of routes within the Study Area. These five routes include both local, fixed and express services:

- Route 361 (Harvey – Laraway Crosings Express)
- Route 504 (South Joliet)
- Route 505 (West Joliet Loop)
- Route 511 (Joliet-Elwood-Centerpoint)
- Route 512 (Joliet - Centerpoint).

METRA also serves several communities within the Study Area via the SouthWest Service (SWS). Communities with a Metra station include:

- New Lenox
- Manhattan
- Joliet (with a station just north of the study area boundary in Downtown Joliet).

Besides transit, western Will County also has a network of regional bicycle trails with plans to expand the network in the future. Further details about these future expansions can be found in Will County's 2016 Bikeway Plan. Some of the more extensive trails in the Study Area include:

- Wauponsee Glacial Trail
- I & M Canal Trail
- Old Plank Road Trail
- Trails in the Midewin National Tallgrass Prairie.

Data sources: CMAP Bike Inventory, 2018; Will County FPDWC Trails, 2019; Metra, 2020; Pace, 2020; U.S. Geological Survey in cooperation with U.S. Environmental Protection Agency, 2020

Environmental and Natural Resources

Existing Natural Resources

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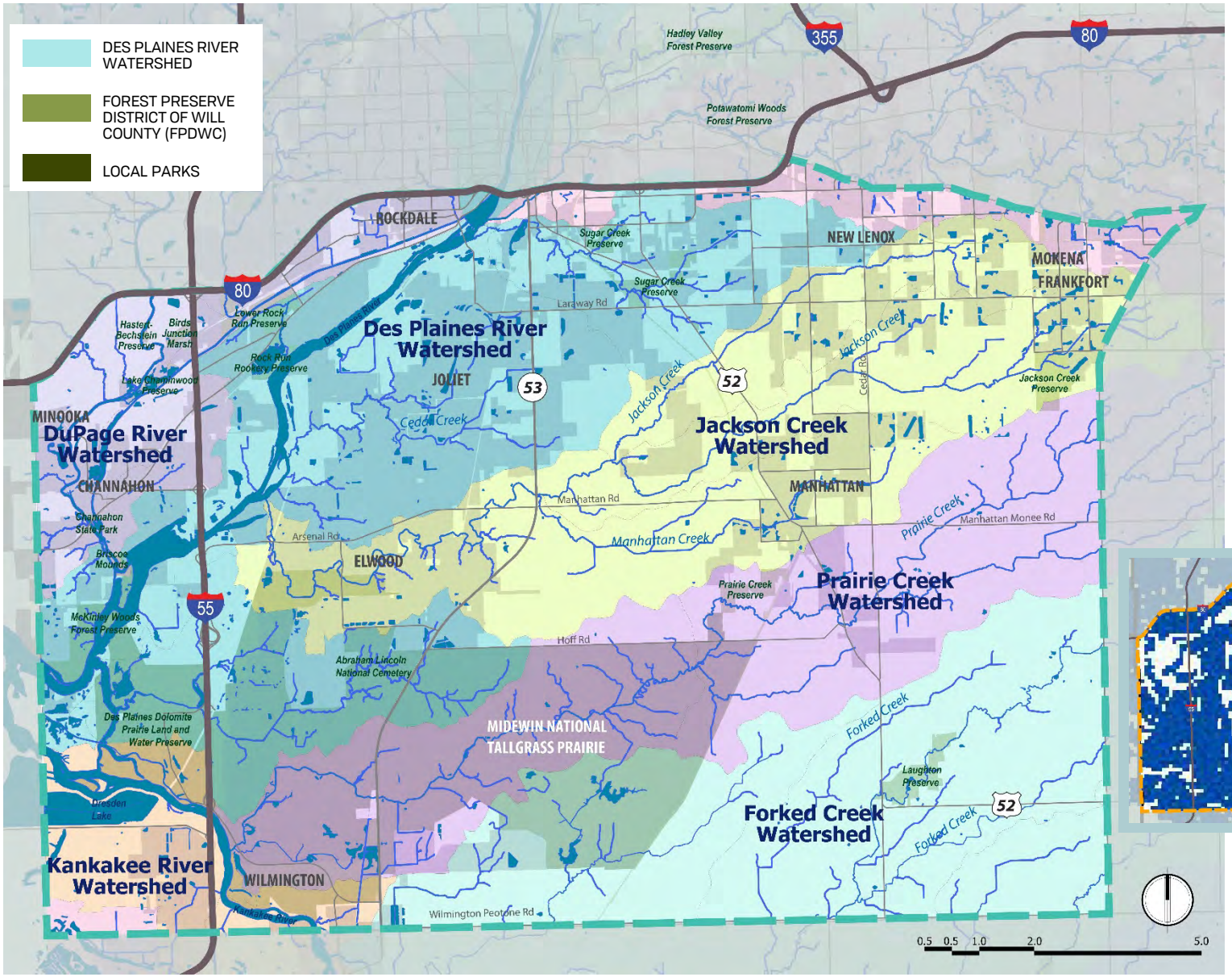
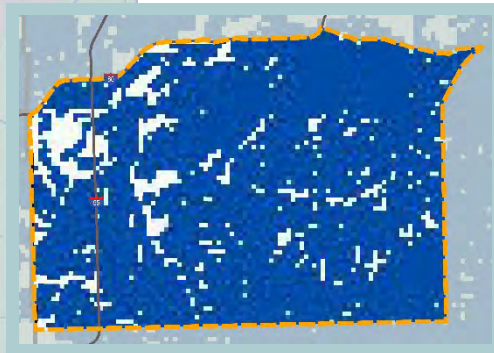


The Study Area has six watersheds around the following major waterways:

1. DuPage River
2. Kankakee River
3. Jackson Creek
4. Prairie Creek
5. Forked Creek
6. Des Plaines River

The majority of the Study Area has high hydric soils, according to the USDA. Hydric soils are soils where water remains at or near the soil surface for extended time periods during the growing season. These soils are critical for the formation of many types of wetlands.

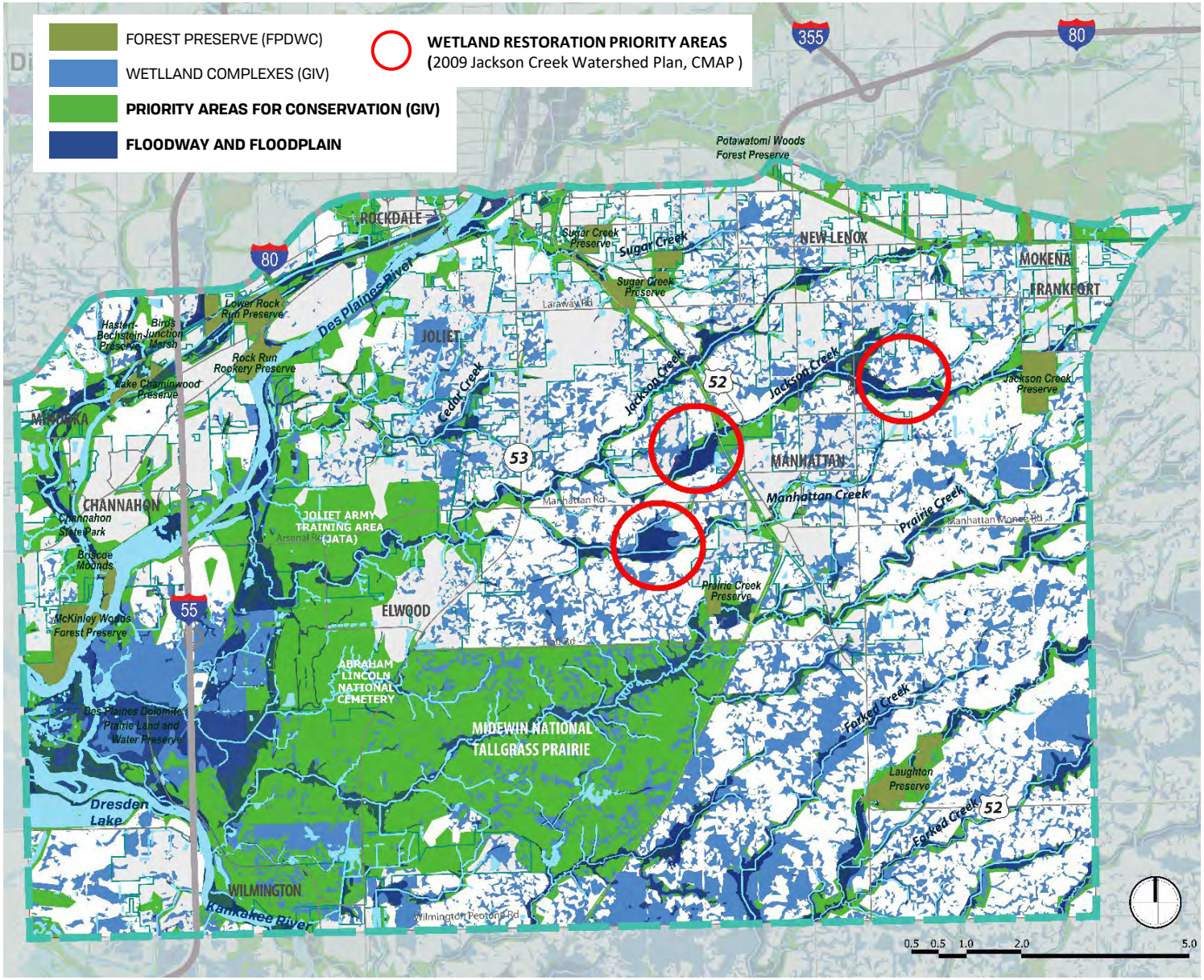


HYDRIC SOILS

Data sources: CMAP Land Use, 2015; Satellite Imagery, 2017; Will County GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Existing Waterways, Floodplains, Wetlands & Fish Habitat

REVISED JUNE 12, 2020



Waterways include Des Plaines, Kankakee and DuPage Rivers and Sugar, Cedar, Jackson, Manhattan, Prairie and Forked creeks.

Fish Habitat

- According to the 2009 Field Museum Study, : "Fishes of Will County", a total of 112 fish species has been recorded in Will County over the past 107 years and many of these are threatened or endangered today.
- Diversity of fishes in Jackson Creek includes a typical creek species and more unusual ones like Western Creek Chubsucker, Black Redhorse, Golden Redhorse and Norther Hog Sucker. These species prefer clean water, abundant native vegetation, clean gravel and sand and a steady reliable flow of water to feed and spawn.

Jackson Creek

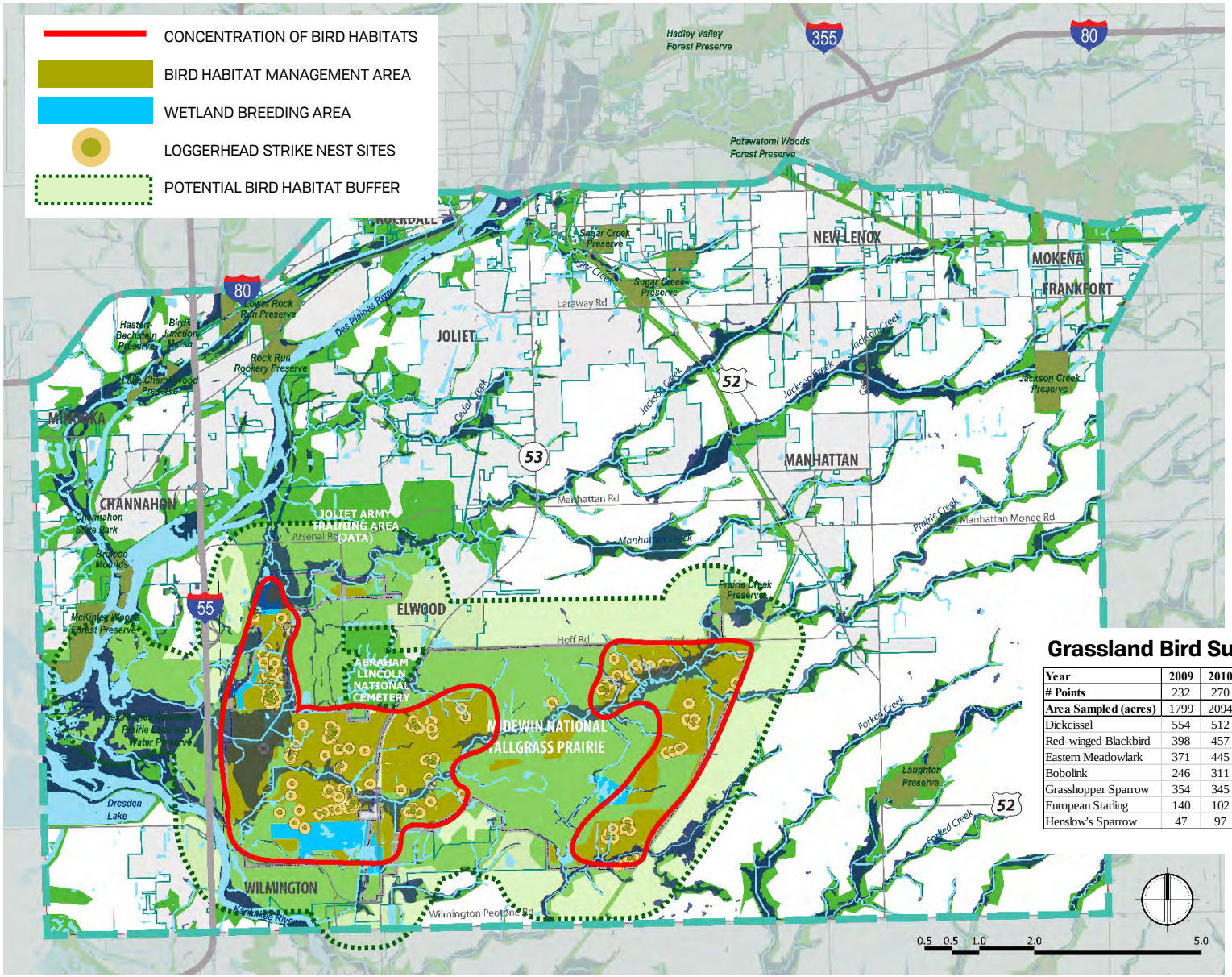
The 2009 Jackson Creek Watershed Plan identifies three high-priority areas for wetlands restoration

A. Spangler Road to the Wauponsee Trail along Jackson Creek
B. Area between Ridge, Brown, Cherry Hill, and Manhattan Roads (Sections 13 and 24, Jackson Township). This area was also specifically called out for wetland restoration in the Village of Manhattan's 2003 Manhattan Creek protection resolution.
C. Area between Baker, Reiter, Delaney, and Schoolhouse Roads (Sections 2, 3, and 4 in Manhattan Township)

Data sources: CMAP Land Use, 2015; Satellite Imagery, 2017; Will County GIS, 2019, GIV Data. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Midewin Bird Habitats

REVISED JUNE 12, 2020



The Midewin National Tallgrass Prairie is host to a large variety of bird species and habitats. According to ebird, 167 species of birds have been sighted in the Midewin.

Map shows the areas of concentration for bird habitats including significant areas for grassland bird habitat management, upland sandpiper breeding grounds, wetland bird breeding areas, and Loggerhead Strike nest sites.

Midewin has suggested a potential perimeter buffer of approx. 1,200m or .75 miles per USDOT's Section 4f Act. This buffer could protect bird habitats from encroaching development, traffic movement and noise.

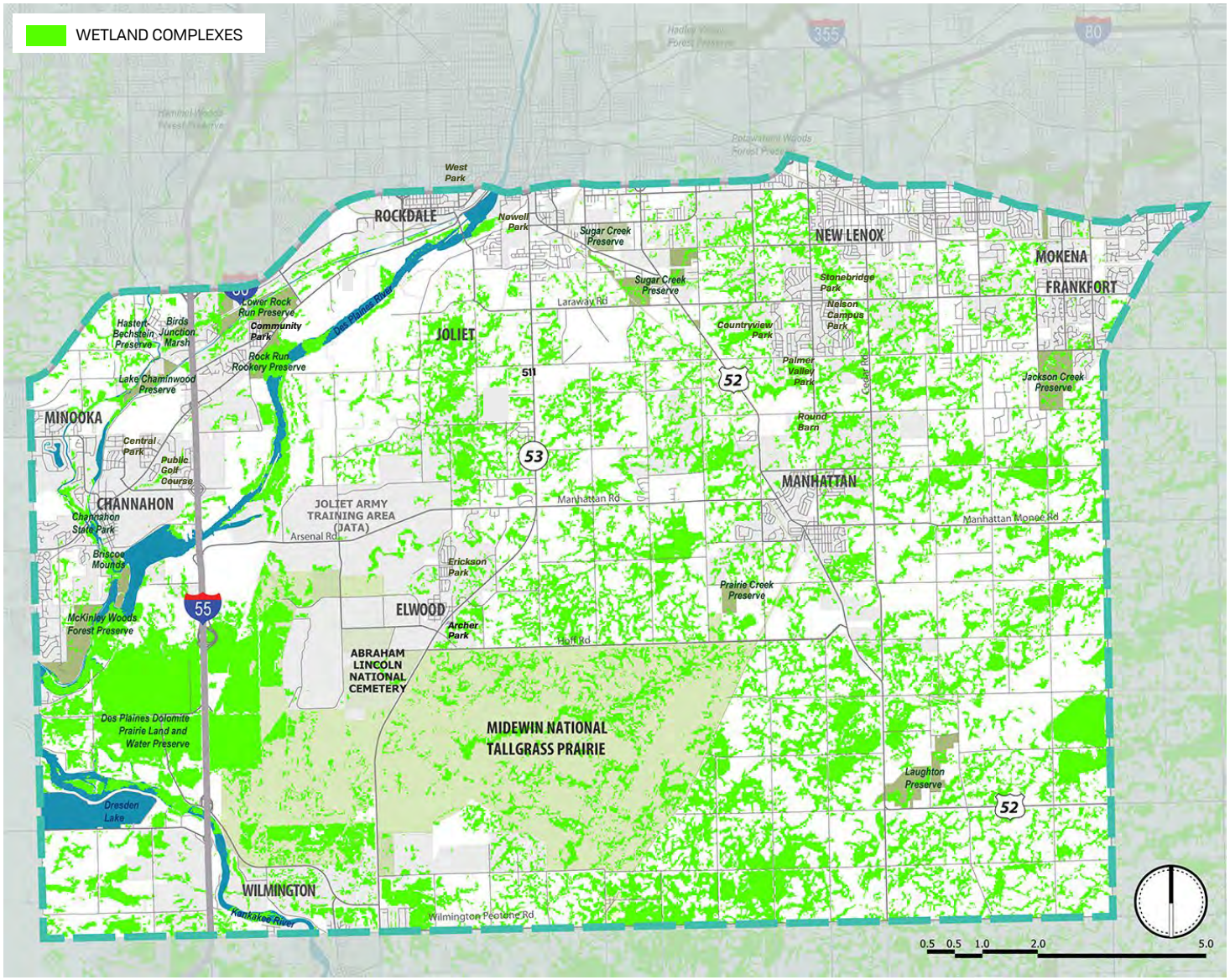
Grassland Bird Survey Results, 2009-2016

Year	2009	2010	2011	2012	2013	2014	2015	2016
# Points	232	270	273	312	299	169	152	183
Area Sampled (acres)	1799	2094	2117	2419	2318	1310	1178	1419
Dickcissel	554	512	667	721	500	363	301	438
Red-winged Blackbird	398	457	491	775	552	377	299	430
Eastern Meadowlark	371	445	439	515	512	317	203	270
Bobolink	246	311	417	332	380	174	184	262
Grasshopper Sparrow	354	345	434	311	281	198	166	213
European Starling	140	102	50	329	134	135	41	42
Henslow's Sparrow	47	97	100	130	62	46	47	68

Data sources: Openlands, Midewin, CMAP Land Use, 2015; Satellite Imagery, 2017; Will County GIS, 2019, GIV Data. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Wetland Complexes

REVISED JUNE 12, 2020



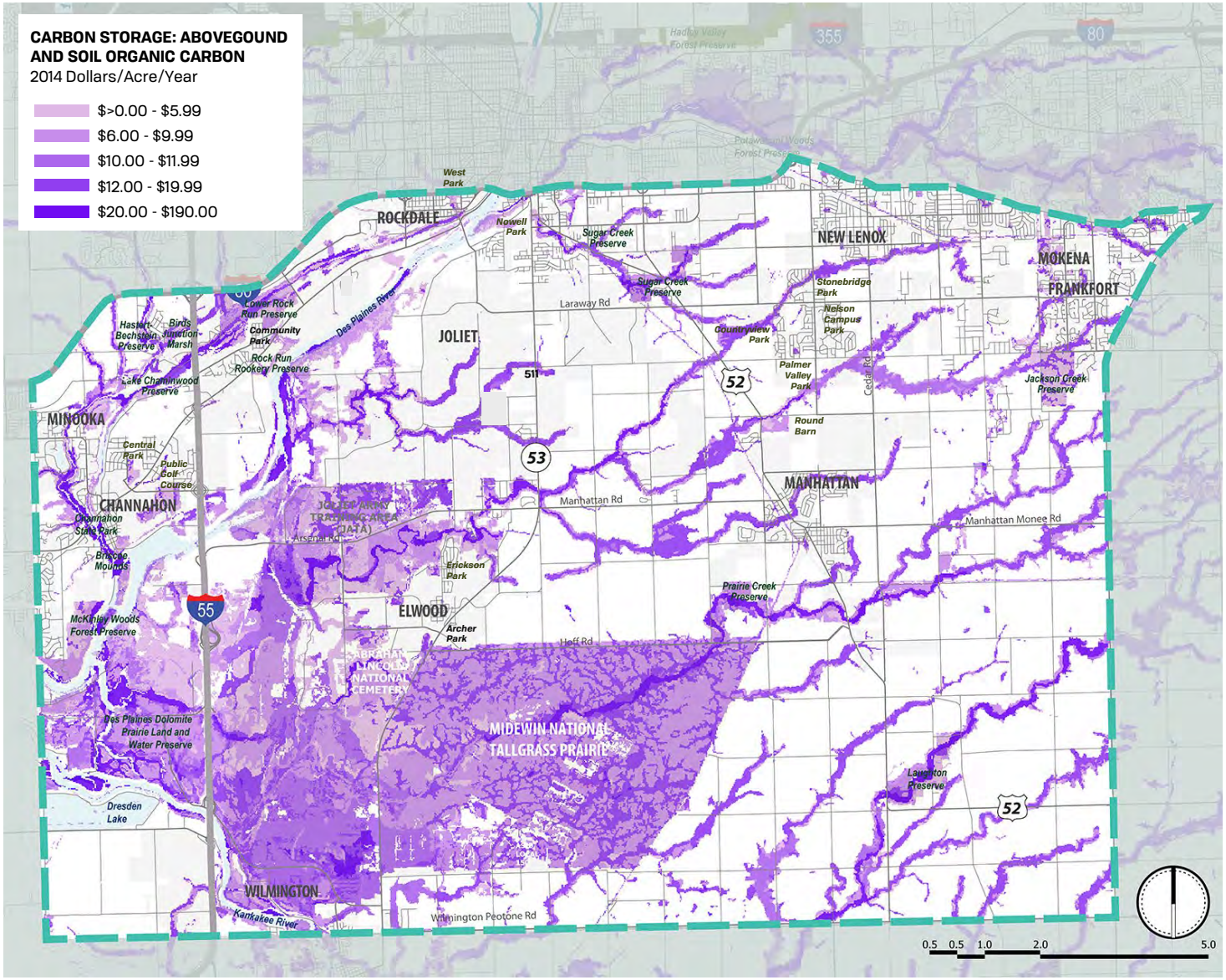
Wetland Complexes are areas with favorable wetland conditions that are potential restoration and enhancement opportunities for future site scale investigation.

The Land Use Study Area contributes to almost 8% of the CMAP region's Wetland Complex area. Wetland Complexes make up about 24% of the total Study Area. They are not indicated as having an ecosystem service value economic benefit but they are considered to be areas for potential restoration.

[1]Data sources: Green Infrastructure Vision Data, 2015.

Carbon Storage

REVISED JUNE 12, 2020



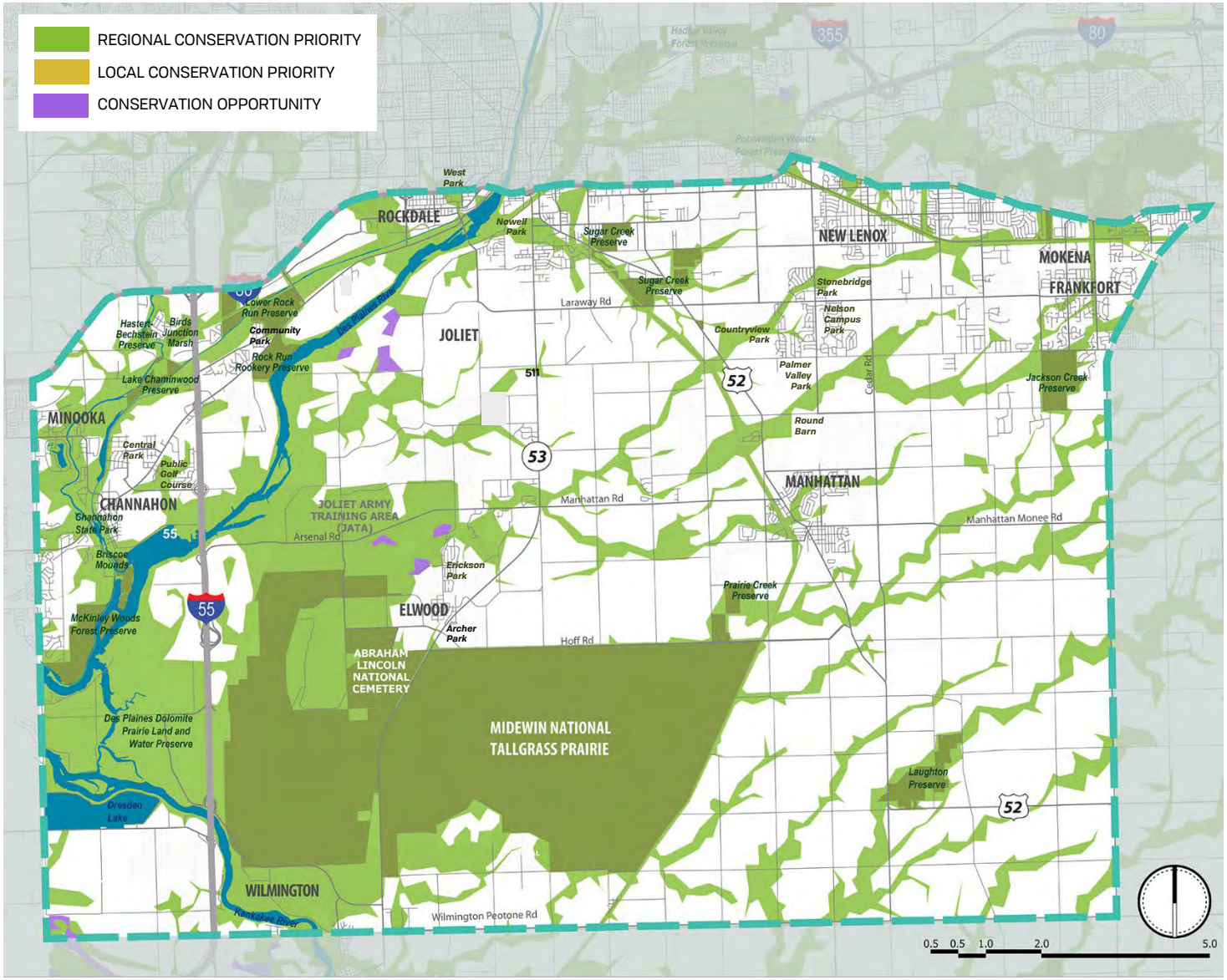
As part of the Green Infrastructure Vision, the Carbon Storage goal is to sequester carbon in vegetation and soils, thus reducing atmospheric CO2 and global climate change.[1]

The Land Use Study Area contributes to almost 5% of the CMAP region's Carbon Storage value. Carbon Storage makes up 11% of the aggregate ecosystem services valuated in the Study Area.

[1]Data sources: Green Infrastructure Vision Data, 2015.

Conservation Areas

REVISED JUNE 12, 2020



This map identifies areas that may be considered priorities for conservation, and reflects county-level green infrastructure plans where they exist.[1]

The vast majority of conservation areas in the Study Area are identified as a Regional Conservation Priority and cover Midewin National Tallgrass Prairie and the Des Plaines Dolomite Prairie Land and Water Preserve.

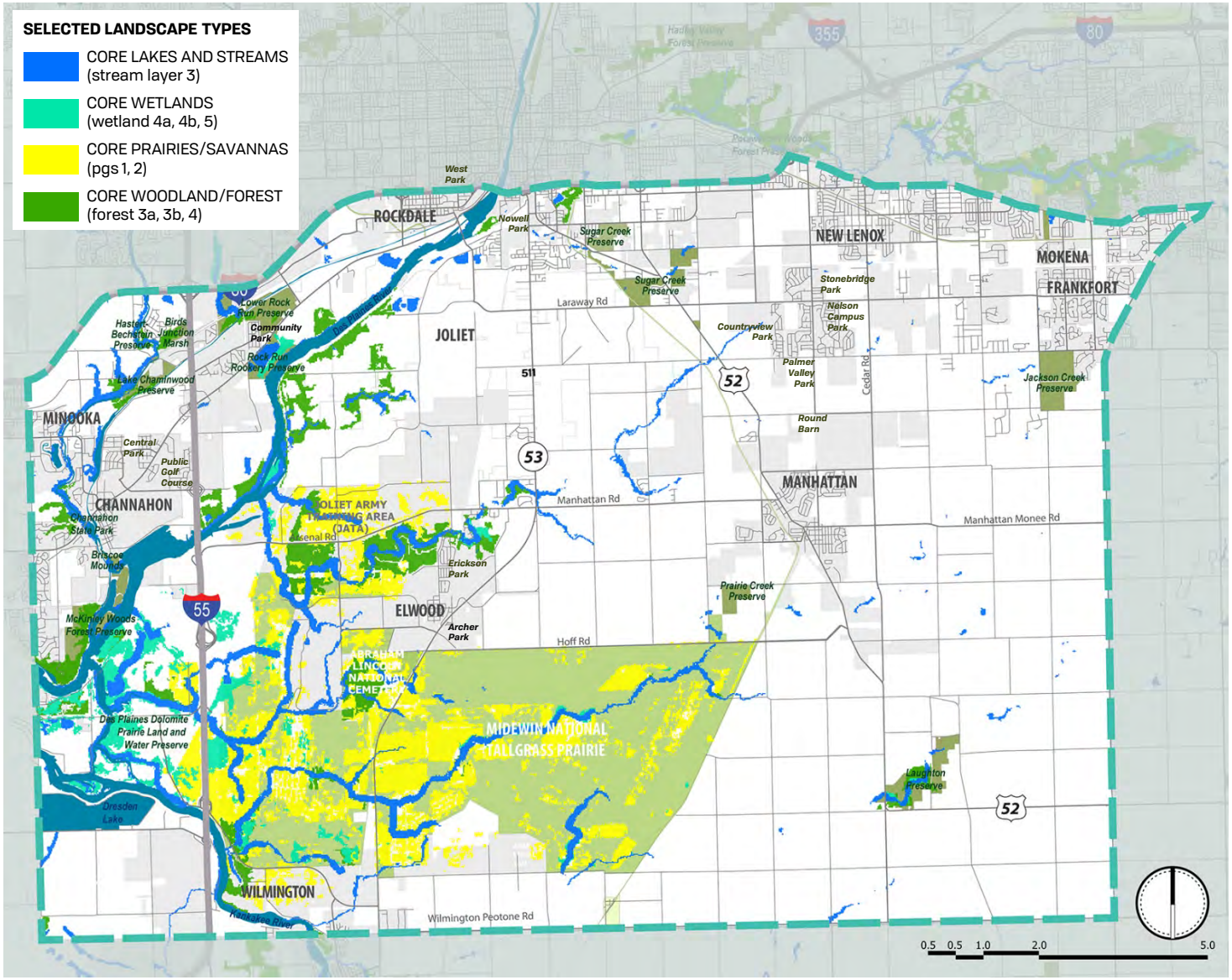
Table 12: Total Square Miles of Conservation Areas in Study Area

	Sq. Mi.	% Total
Regional Conservation Priority	0.5	0.2%
Local Conservation Priority	100.5	41.3%
Conservation Opportunity	0.0	0.0%
Land Use Study Area	243	

[1]Data sources: CMAP ON TO 2050 Layer: Conservation Areas, 2018.

Core Landscape

REVISED JUNE 12, 2020



Areas within the Green Infrastructure Vision are classified into four general landscape types: woodlands/forests, prairie/grassland/savanna, wetlands, and streams/lakes. These can be used to identify areas for conservation and potential restoration.

The majority of the selected core landscapes analyzed in this map are located in or near existing open spaces, lakes, and rivers.

Of particular note, the Land Use Study Area comprises over 40% of the CMAP region's total core prairie and savannas area.

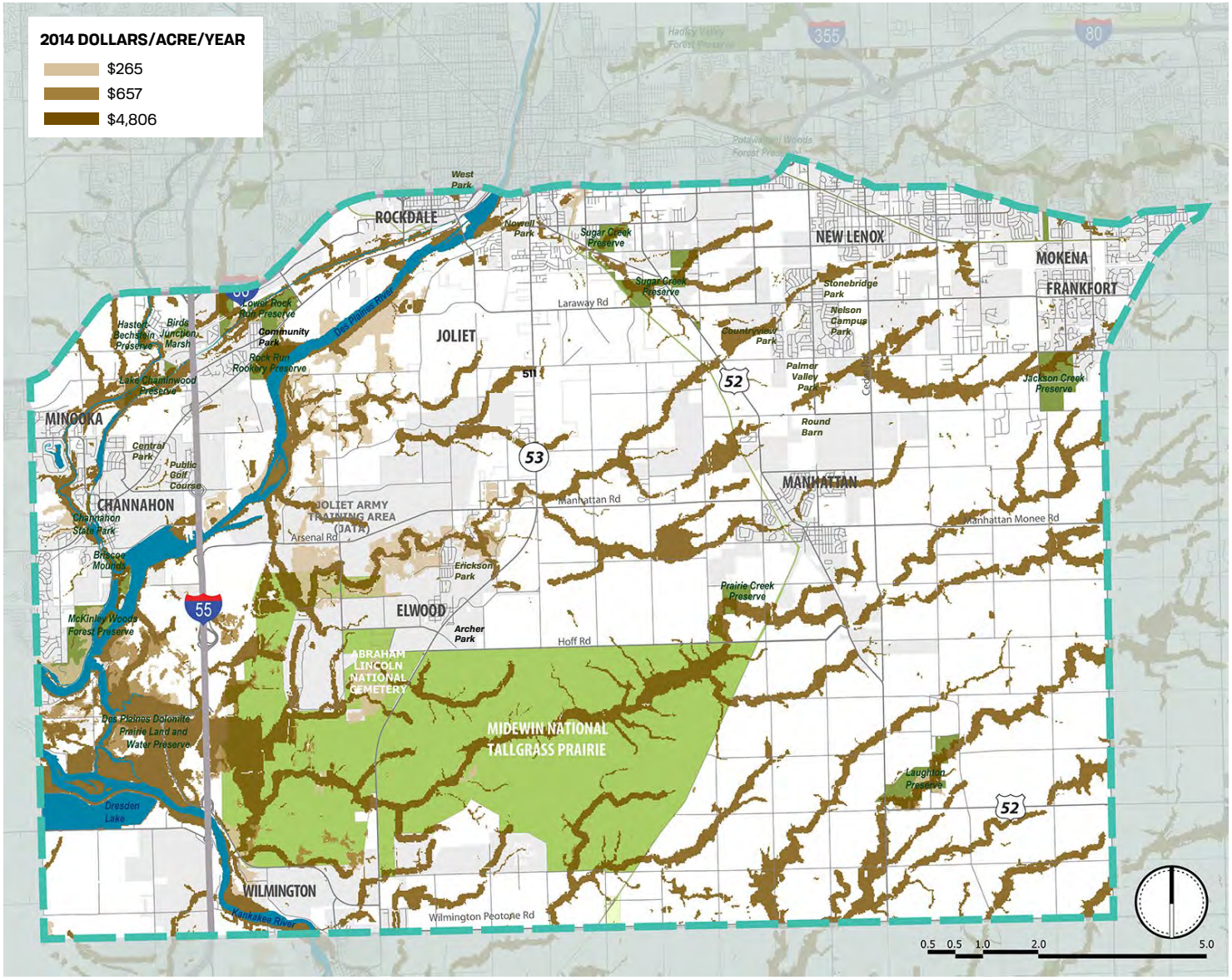
Table 13: Percent of Each Landscape Type in Study Area

Selected Landscape Types	% of Study Area
Core Lakes and Streams	4.6%
Core Wetlands	1.8%
Core Prairies and Savannas	5.8%
Core Woodlands and Forests	2.9%

[1]Data sources: Green Infrastructure Vision Data, 2015.

Groundwater Recharge

REVISED JUNE 12, 2020



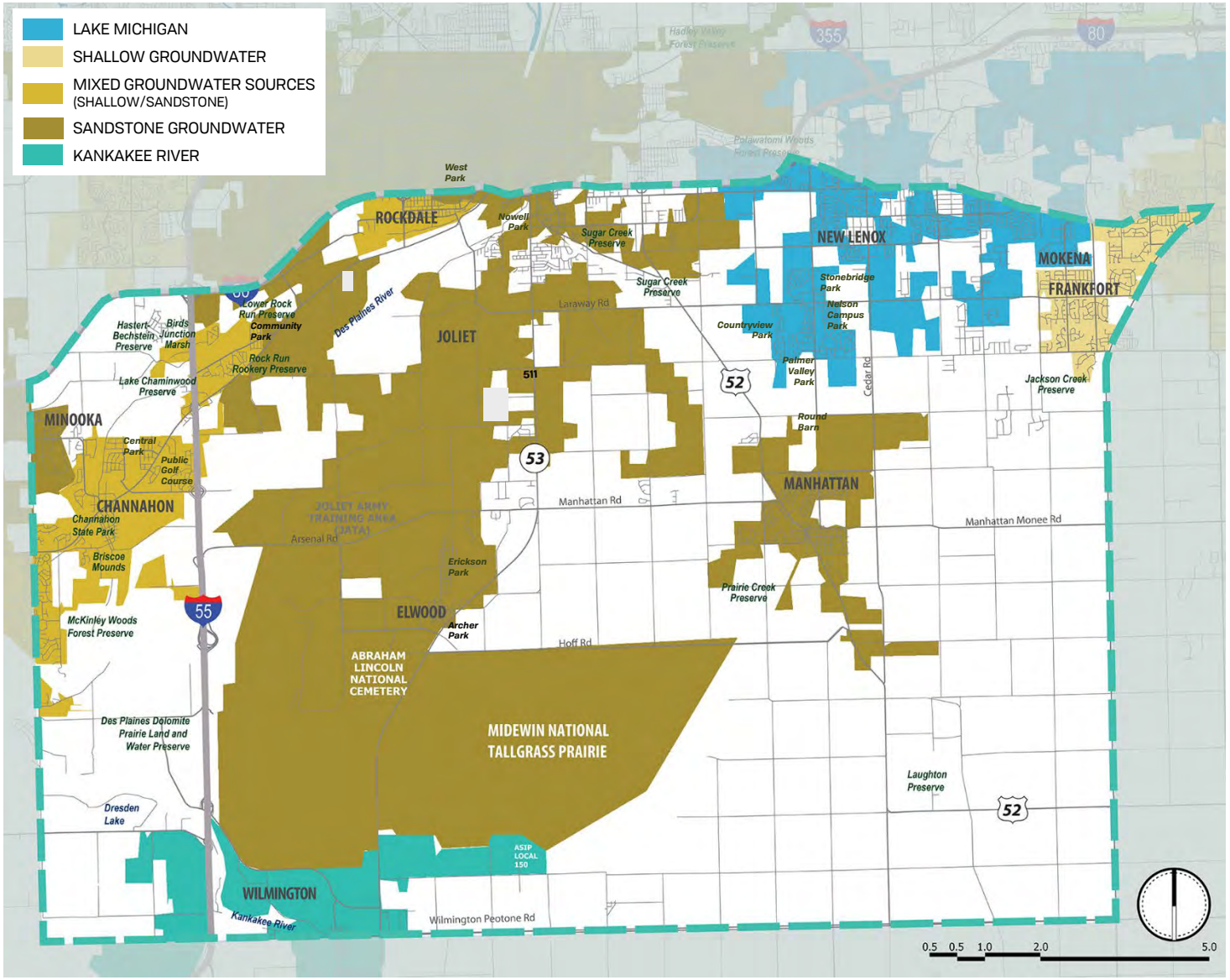
As part of the Green Infrastructure Vision, the Groundwater Recharge goal is to maintain natural rates of groundwater recharge and aquifer replenishment.[1]

The Land Use study area contributes to over 8% of the CMAP region's Groundwater Recharge value. Groundwater Recharge makes up over 24% of the aggregate ecosystem services valuated in the Study Area.

[1]Data sources: Green Infrastructure Vision Data, 2015.

Drinking Water Sources

REVISED JUNE 12, 2020



This map identifies the different sources of water supply for municipalities in the region in recognition of their unique challenges and management needs.[1]

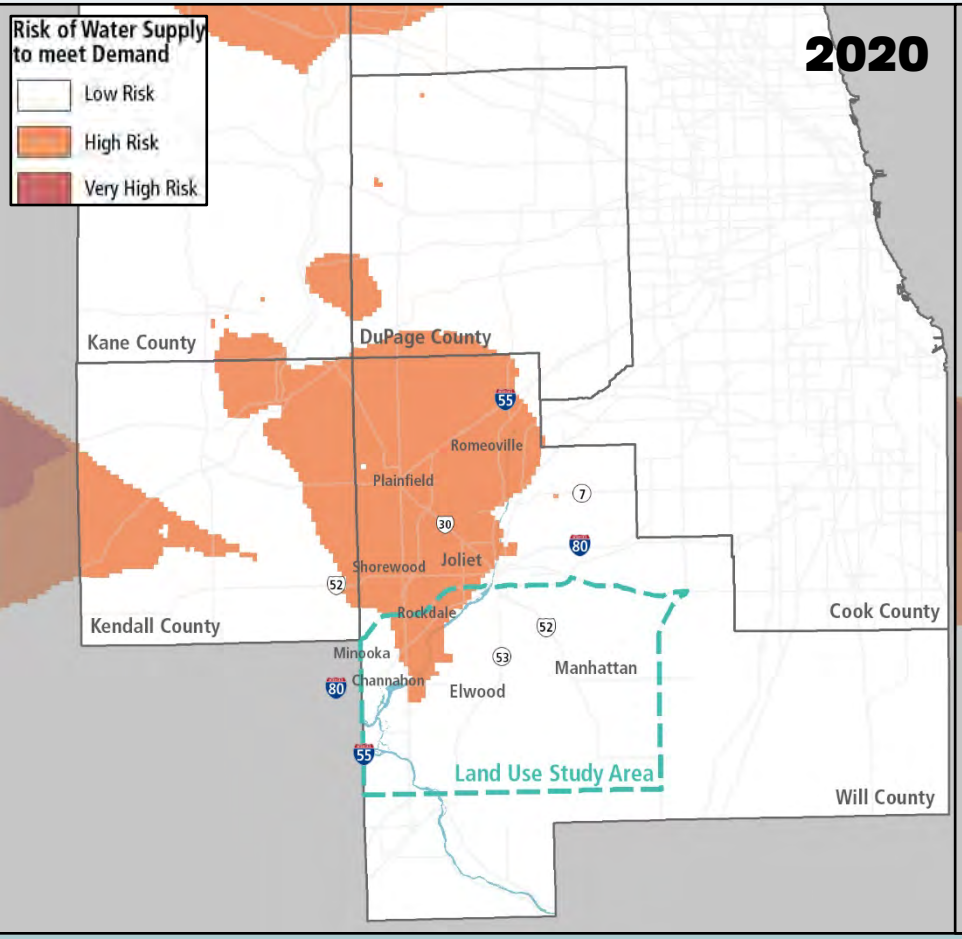
There are water supply challenges in the Study Area, which is primarily served by groundwater (84%). The majority of communities and other entities (over 70% of the Study Area) source their drinking water specifically from **sandstone** groundwater, including: Joliet, Elwood, Manhattan, Minooka, and Midewin/Abraham Lincoln National Cemetery. The Illinois State Water Survey predicted that the aquifer system will not meet the monthly water demand by 2030. The projections of when each community could run out of water could likely be shortened by new private well development. An additional 2-3 million gallons per day could be the tipping point and desaturate the aquifer, which could happen from new private industrial and commercial high capacity wells. The communities are exploring switching to Lake Michigan water, but even with the switch, groundwater will be needed as a backup.

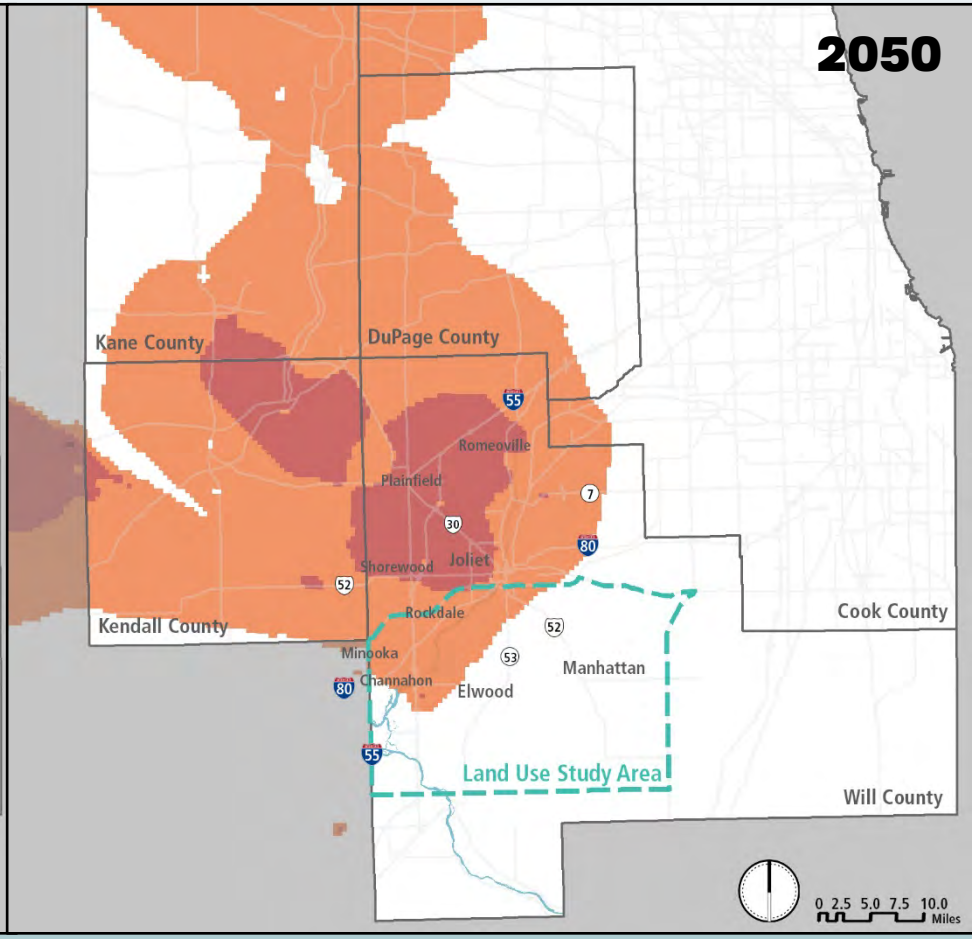
About 11% of the Study Area is served by Lake Michigan and 7% by the Kankakee River.

[1]Data sources: CMAP ON TO 2050 Layer: Drinking Water, 2018.

Aquifer Desaturation

REVISED JUNE 12, 2020





These maps depict modeled projections of risk that the regional water supply will face to meet demand. This includes existing and projected desaturation zones of the Ironton-Galesville sandstone aquifers in 2020 and 2050. Communities shown as high and very high risk in the land use study area include: Rockdale, Minooka, Channahon and Joliet.

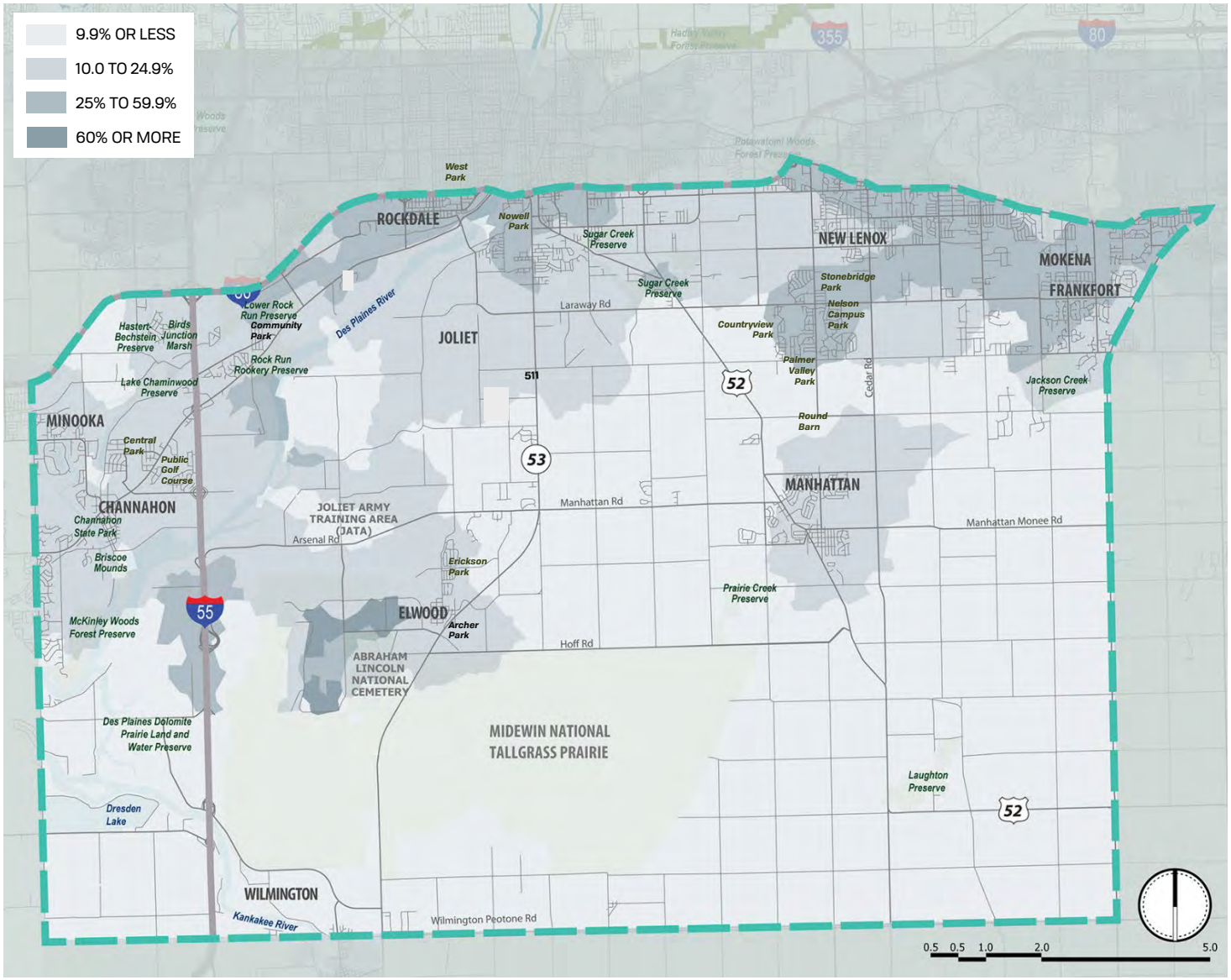
The projected demands assume that all communities, other than Joliet, will remain on their existing water source. Risk areas are shown where wells are likely to encounter significant reductions in pumpage. The model assumes that Joliet is off the aquifer by 2030, as reflected in recent City Council decisions. However, risk areas are projected to persist even without Joliet using the aquifer.

The results assume no additional commercial or industrial wells (as it is hard to predict where and when they would go). However, if an additional well went in an orange risk area, pumping 3 million gallons a day, it would generate a very high risk area (red) for about a 1.5 mile radius around that well.

Data sources: Illinois State Water Survey, 2020. Data note: future demands have been modified in a collaborative study with the SWPG region and local risk may be superseded by that study.

Imperviousness

REVISED JUNE 12, 2020



This map shows percent impervious surface by catchment, which is one of the many indicators that can be used to assess the quality of aquatic resources. Many of the region's water resources are still not meeting all the goals of the Clean Water Act, designated uses, Water Quality Standards, or measures of biological quality.[1]

Impervious surfaces and other forms of development reduce the infiltration of water into the ground. Impervious surfaces often contribute to higher storm water runoff, greater sediment yields, and increased pollutant loads, all of which can degrade water quality. Sensitive streams, for instance, can be impacted by as little as 5 to 10 percent impervious surface area, with greater impairments expected when rates exceed 20 to 25 percent.[2]

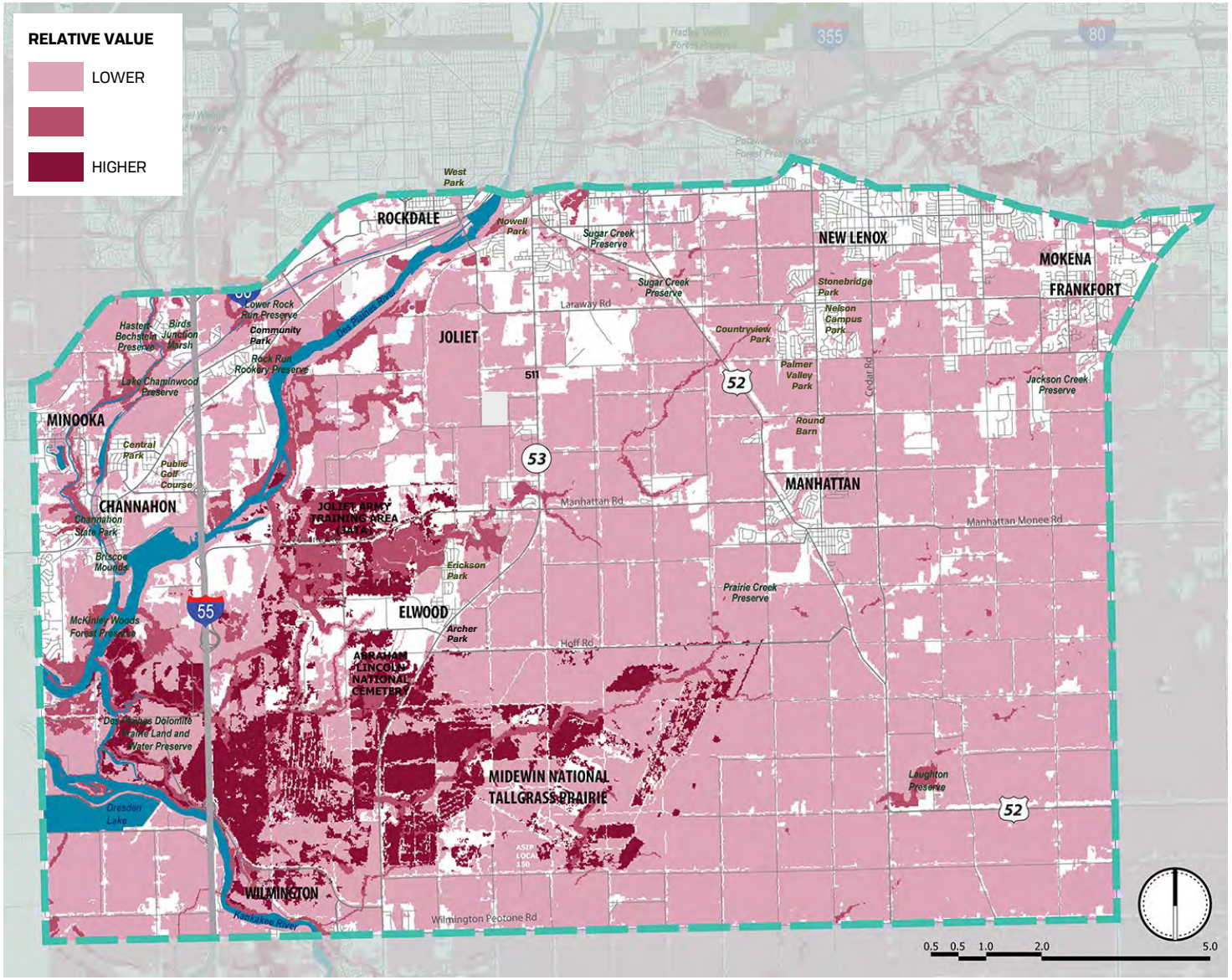
Table 14: Total Square Miles of Different Levels of Imperviousness in Study Area

	Sq. Mi.	% Total
9.9% or Less	151.1	62.2%
10% to 24.9%	67.1	27.6%
25% to 59.9%	23.3	9.6%
60% or More	1.3	0.5%
Land Use Study Area	243	

Data sources: [1]CMAP ON TO 2050 Layer: Watershed Integrity, 2018.
[2]NOAA Office for Coastal Management, https://coast.noaa.gov/howto/water-quality.html

Native Flora and Fauna

REVISED JUNE 12, 2020



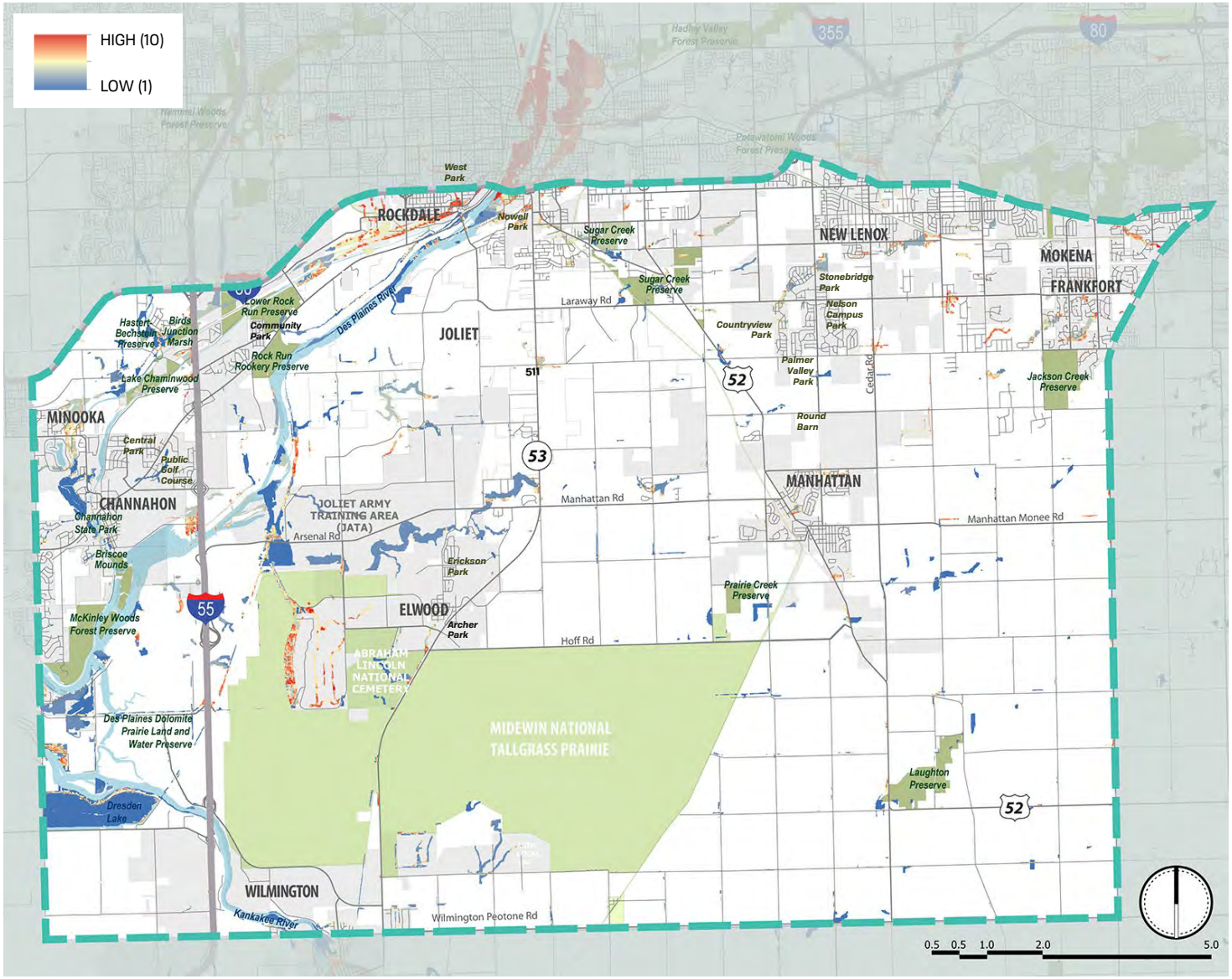
The Native Flora and Fauna ecosystem service, identified in the Green Infrastructure Vision, maintains species diversity and biomass. Areas indicated as a higher relative value provide opportunities for native vegetation and wildlife to thrive. [1]

The concentrations of native flora and fauna with a higher relative regional value are primarily in areas with naturally preserved open space, such as forest preserves, Midewin National Tallgrass Prairie, Joliet Army Training Area and the Abraham Lincoln National Cemetery.

[1]Data sources: Green Infrastructure Vision Data, 2015.

Riverine Flood Susceptibility Index

REVISED JUNE 12, 2020



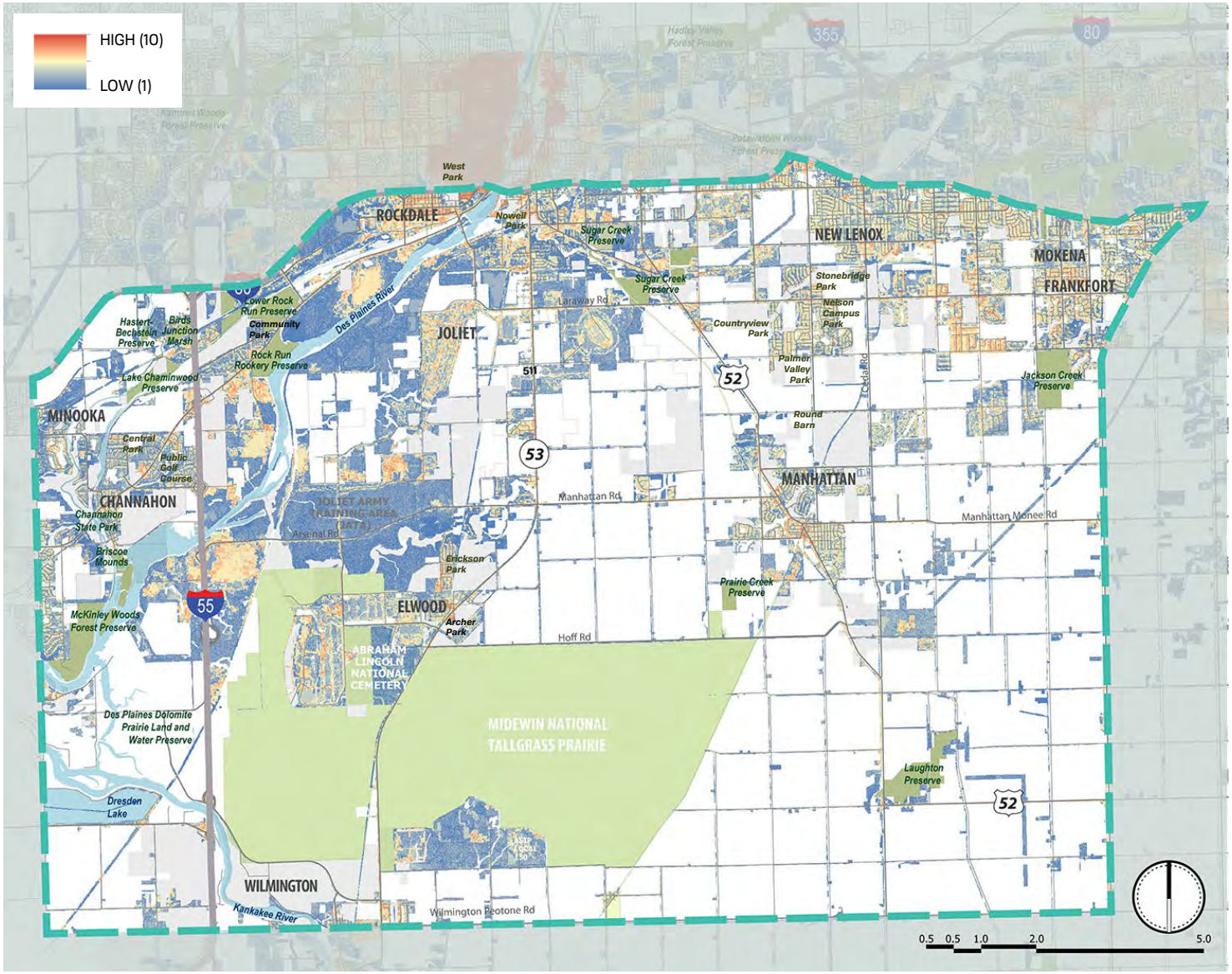
This map displays the riverine flood susceptibility index developed by CMAP to identify priority areas across the region for flooding mitigation activities.[1]

Intuitively, areas closer to rivers, streams, and lakes experience the highest susceptibility to riverine flooding. Within the Study Area, Rockdale seems to be the community with the most area susceptible to riverine flooding.

[1]Data sources: CMAP ON TO 2050 Layer: Flood Susceptibility Index, 2018.

Urban Flood Susceptibility Index

REVISED JUNE 12, 2020



This map displays the urban flood susceptibility index developed by CMAP to identify priority areas across the region for flooding mitigation activities.[1]

Just outside the Study Area, downtown Joliet seems to be the largest hotspot in terms of susceptibility to urban flooding. However, within the Study Area, every communities' downtown appears to have a higher susceptibility to urban flooding than other more open spaces. Some exceptions include areas that are near a river, stream, or lake.

[1]Data sources: CMAP ON TO 2050 Layer: Flood Susceptibility Index, 2018.

Selected Ecosystem Services

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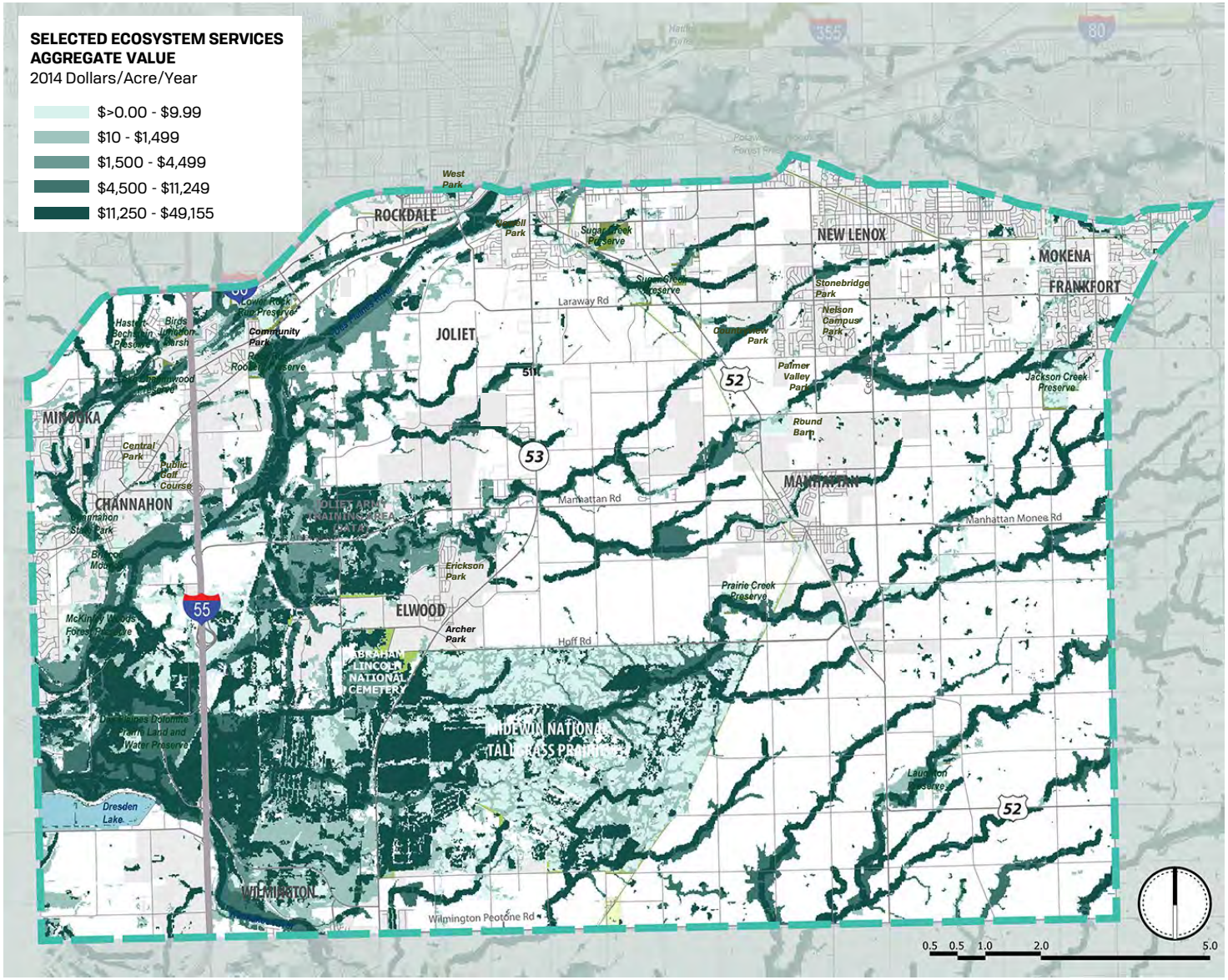


This map represents the combined economic value of four ecosystem services:

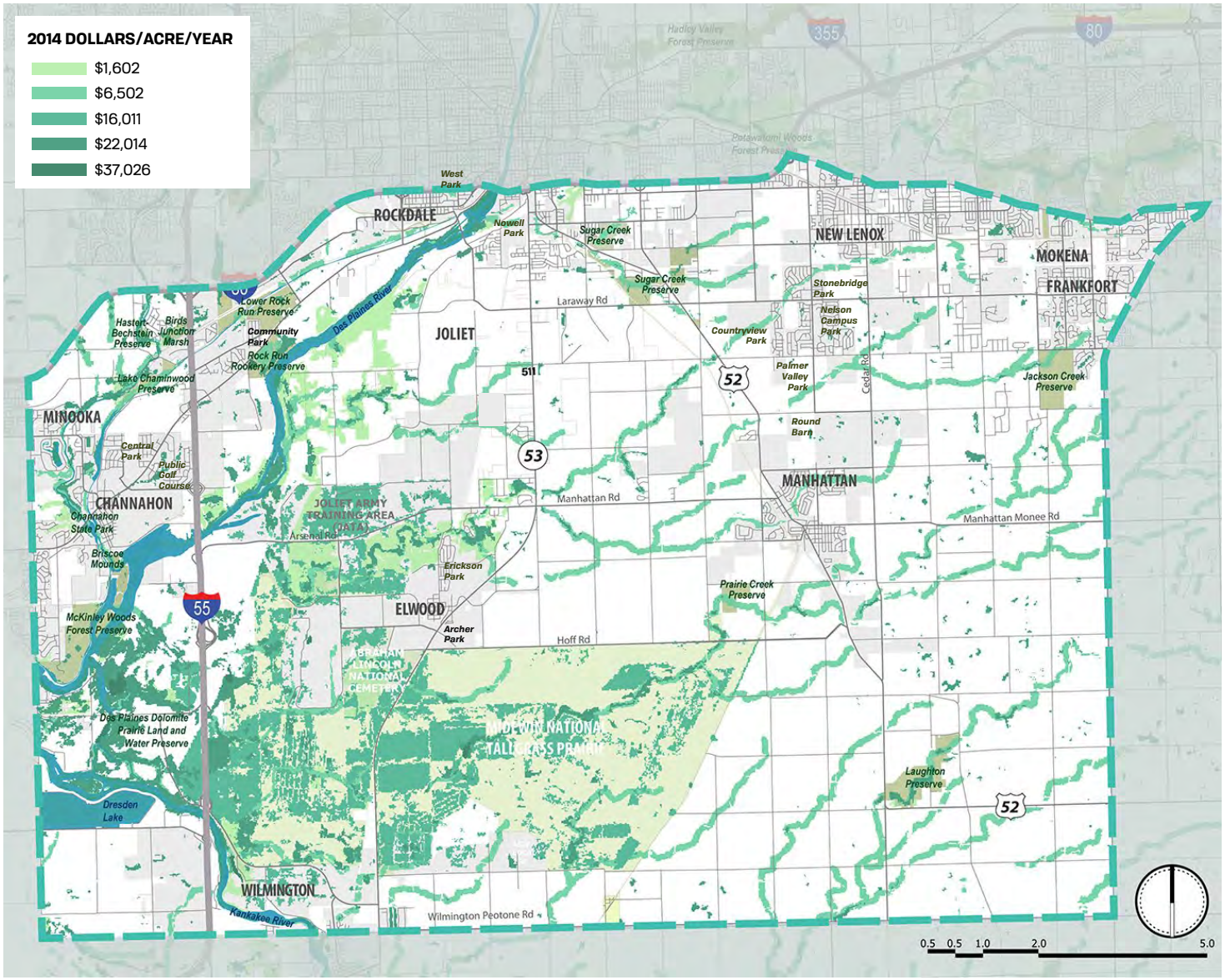
1. **Water Flow Regulation/ Flood Control**
2. **Water Purification**
3. **Groundwater Recharge**
4. **Carbon Storage**

These four services alone conservatively contribute more than $6 billion per year in economic value to the 7-county CMAP region.

[1]Data sources: Green Infrastructure Vision Data, 2015.

Water Flow Regulation / Flood Control

REVISED JUNE 12, 2020



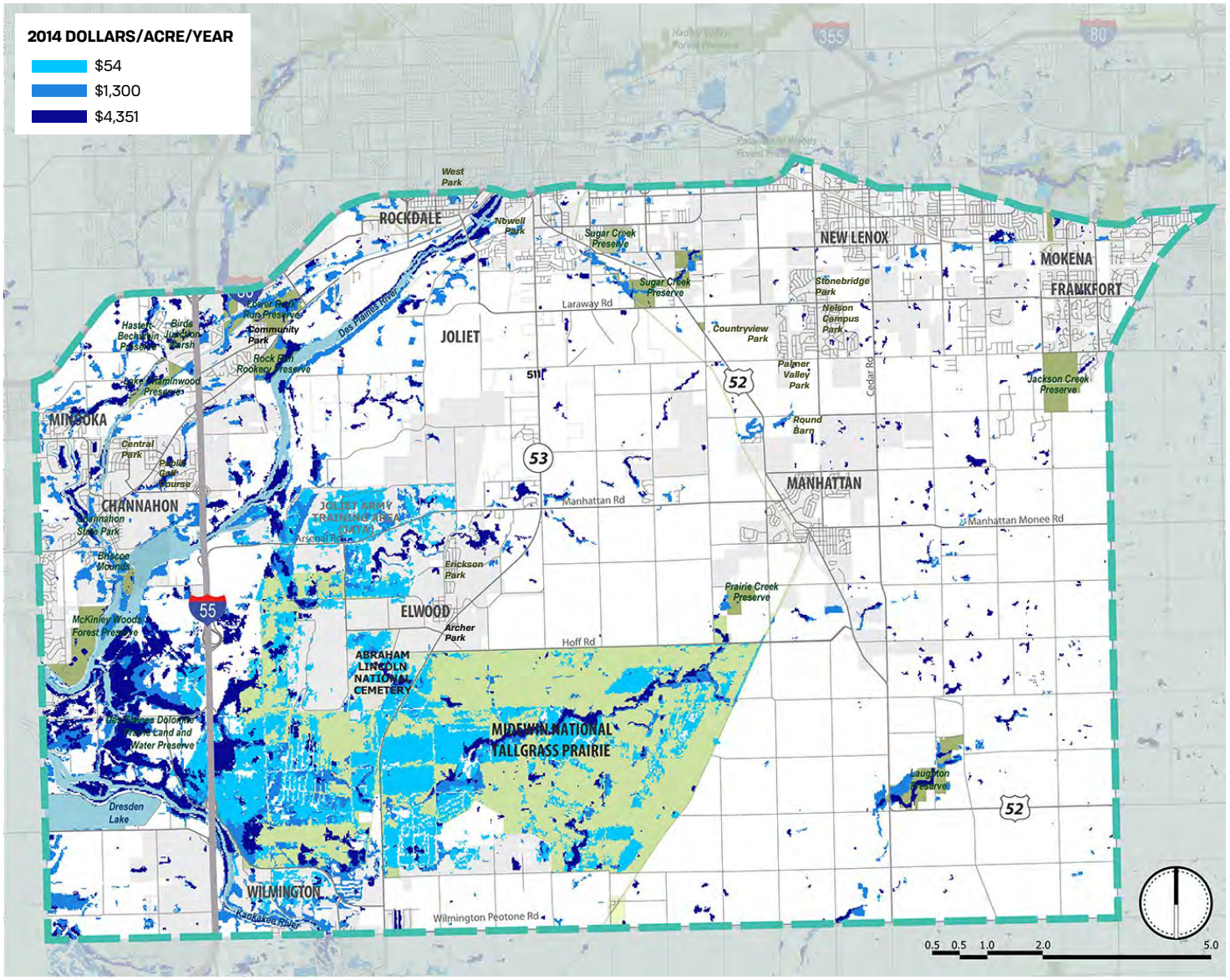
Part of the Green Infrastructure Vision, the Water Flow Regulation / Flood Control goal is to maintain water flow stability and protect areas against flooding (e.g., from storms).[1]

The Land Use Study Area contributes to almost 9% of the CMAP region's Flood Control value. Flood Control makes up over 68% of the aggregate ecosystem services valuated in the Study Area.

[1]Data sources: Green Infrastructure Vision Data, 2015.

Water Purification

REVISED JUNE 12, 2020



Part of the Green Infrastructure Vision, the Water Purification goal is to maintain water quality sufficient for human consumption, recreational uses like swimming and fishing, and aquatic life.[1]

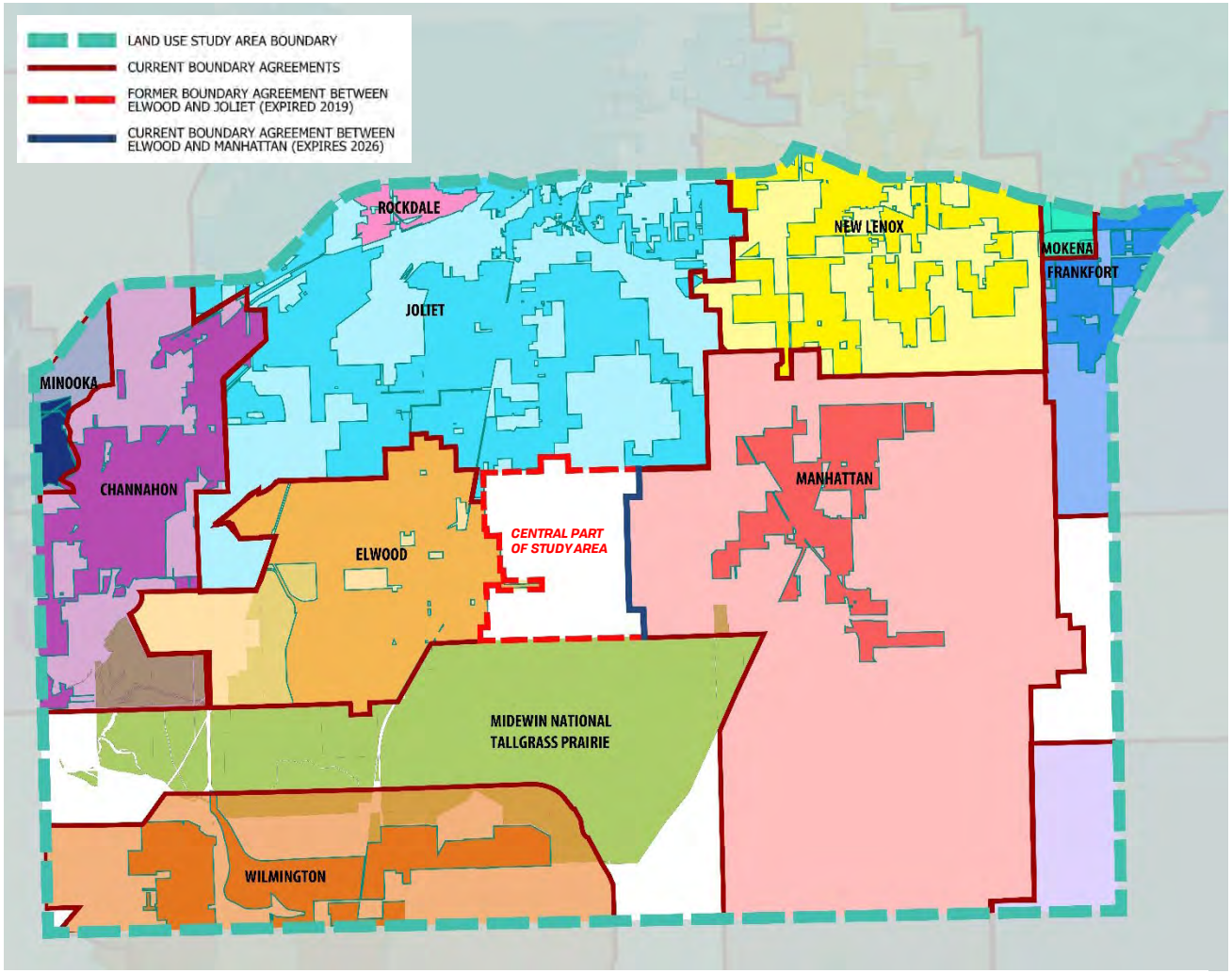
The Land Use Study Area contributes to almost 6% of the CMAP region's Water Purification value. Water Purification makes up about 7% of the aggregate ecosystem services valuated in the Study Area.

[1]Data sources: Green Infrastructure Vision Data, 2015.

Existing Land Use Policies

Existing County and Local Plans

REVISED JUNE 12, 2020



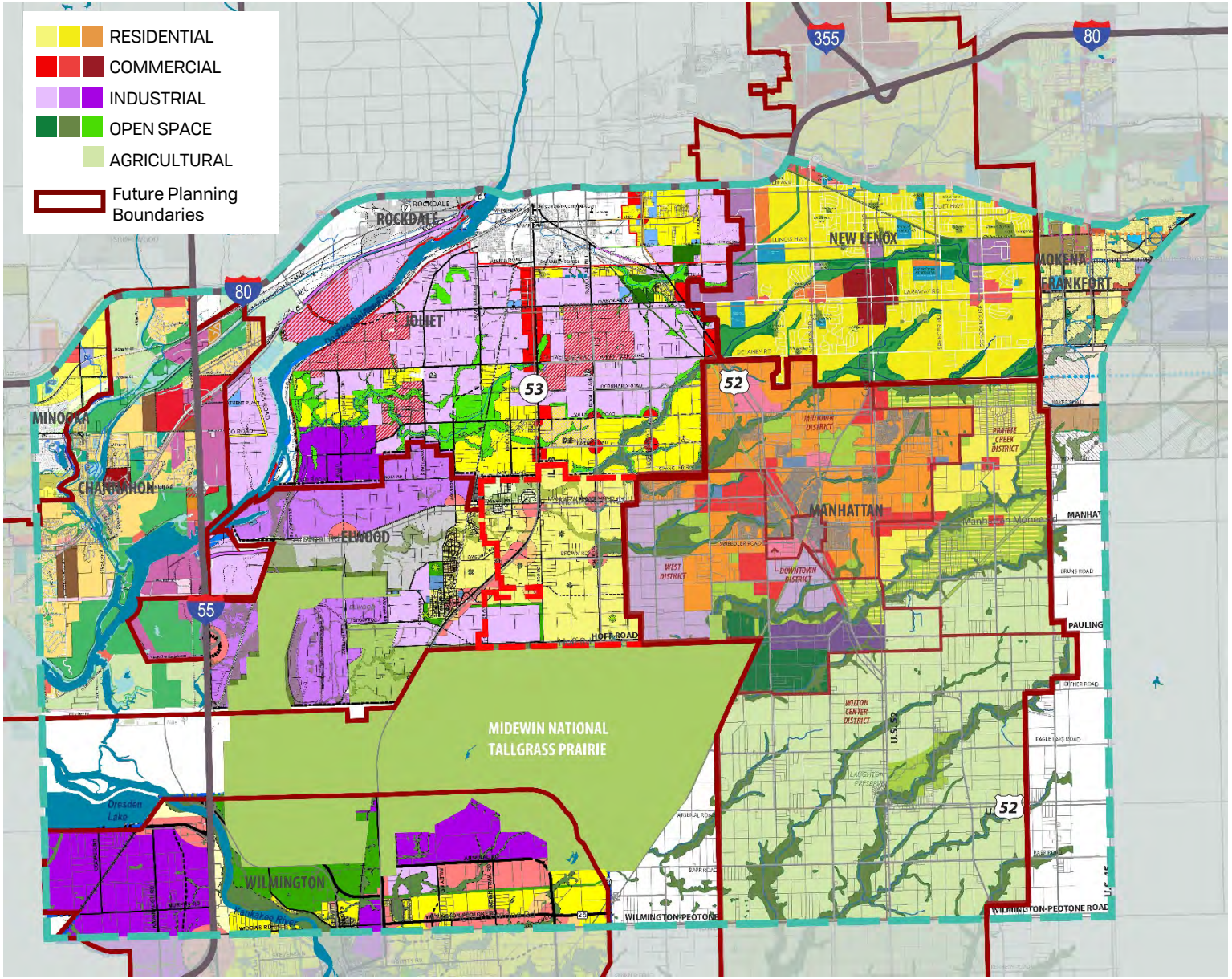
	AREA APPROX SQ. MI.	% OF STUDY AREA	REGULATING PLAN
STUDY AREA	242		
INCORPORATED AREA	75	31%	LOCAL MUNICIPAL ZONING
UNIINCORPORATED AREA (TOTAL)	167	69%	SEE BELOW
UNINCORPORATED AREA OUTSIDE MUNICIPAL PLANNING AREA	18	8%	WILL COUNTY LMRP
UNINCORPORATED AREA WITHIN MUNICIPAL PLANNING AREA	148	61%	FUTURE LAND USE PLANS FROM MUNICIPAL COMPREHENSIVE PLANS

- **Land Uses for the approximately 167 square miles of unincorporated land are regulated by both the Will County Land Resource Management Plan (LRMP) and local Comprehensive Plans.**
- **Many of these plans are over ten years old and do not adequately reflect the changing trends in housing, commercial and industrial markets.**
- **The "Central Part of the Study Area" currently has no local Land Use plan jurisdiction because of expired agreements between Elwood and Joliet.**

Data sources: CMAP Land Use, 2015; Will County GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Combined Local Future Land Use Maps

REVISED JUNE 12, 2020



- Significant land is allocated to low density housing and industrial uses.
- Commercial uses are generally envisioned along major arterials.
- Industrial uses are primarily along I-55, the Des Plaines River and the Intermodals.
- Agricultural uses are envisioned generally in the southeast part of the Study Area.
- All plans generally envision preserving creekways and floodplains.

YEAR OF COMPREHENSIVE PLAN ADOPTION

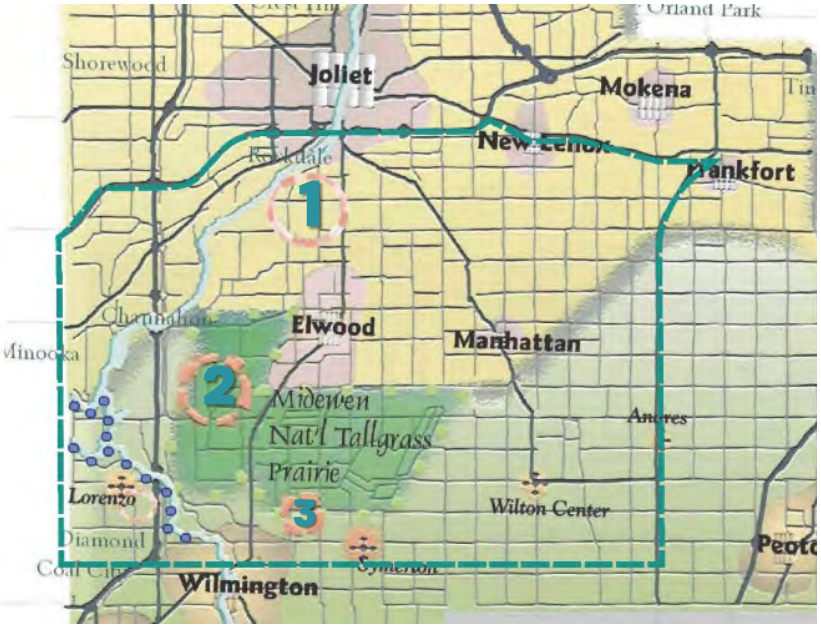
- WILL COUNTY: 2002, 2011 UPDATE
- JOLIET: 2007
- ELWOOD: 2007
- MANHATTAN: 2007
- NEW LENOX: 2018
- MOKENA: 2002
- FRANKFORT: 2019
- WILMINGTON: 2008
- CHANNAHON: 2019
- MINOOKA: 2013
- ROCKDALE: NA

*This map is a compilation of all the plans listed above.

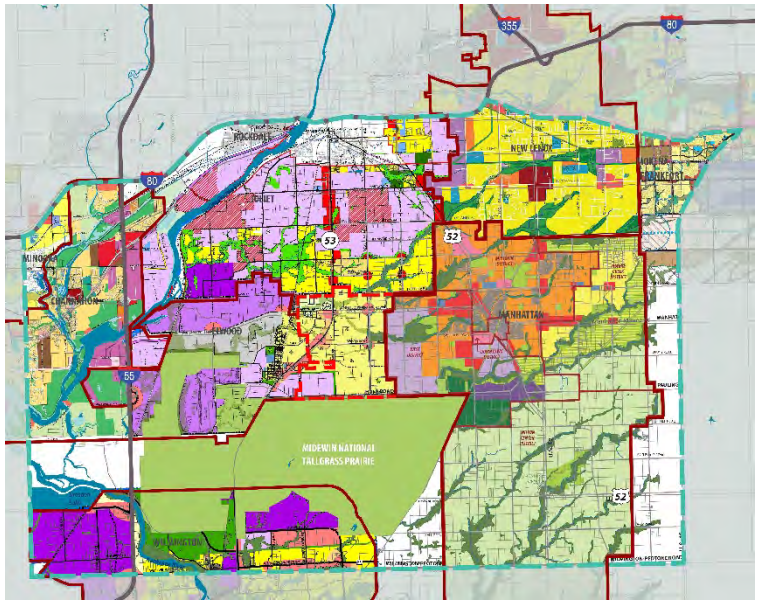
Data sources: Data from the Study Area Municipalities.

Comparison of County and Local Future Land Use Plans

REVISED JUNE 12, 2020



The 2002 Land Resource Management Plan (LRMP), last updated in 2011, guides future lands uses in unincorporated areas today.



Map shows compiled local Future Land Use Plans

Future Planning Boundaries

RESIDENTIAL

COMMERCIAL

INDUSTRIAL

OPEN SPACE

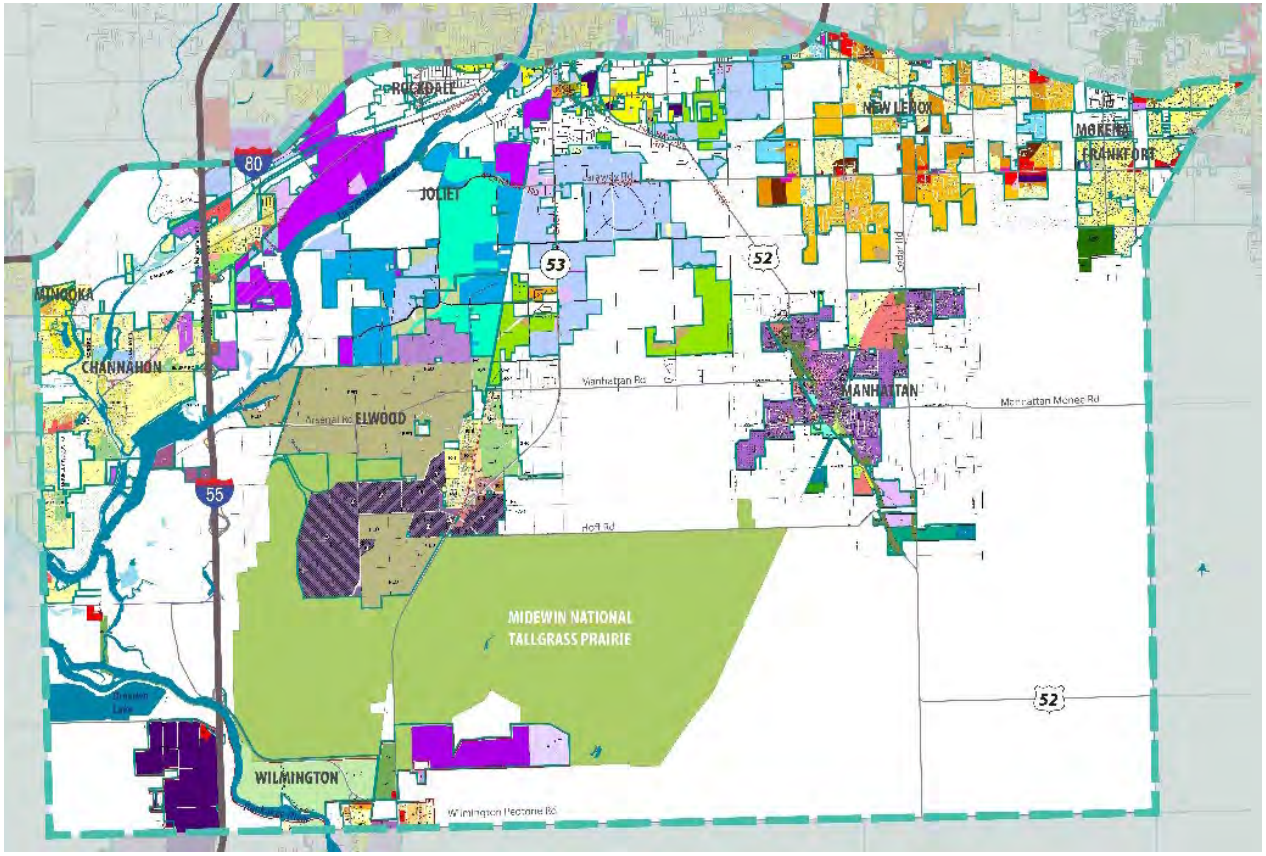
AGRICULTURAL

- All plans generally support the maintenance of rural and agricultural land uses in the south-east part of the Study Area.
- All plans emphasize the need to maintain and protect creeks and waterways.
- **The three locations of "Projects of Regional Impact" in the County LMRP are consistent with current locations of the major Intermodal facilities and local industrial zoning:**
  1. **The Union Pacific Global IV Intermodal in Joliet**
  2. **BNSF Logistics Park Chicago**
  3. **Deer Run Industrial Park**
- The LMRP's "Suburban Community" designation for most of the Central Part of the Study Area, which is mostly unincorporated now, is consistent with the typical low-density single-family residential uses recommended in local plans.
- County or local plans do not identify any industrial or "Projects of Regional Impact" in the Central Area area.

Data source: Will County Land Use Department and Municipal Data.

Compiled Existing Local Zoning for the Study Area

REVISED JUNE 12, 2020



JOLIET

- B-1 (Neighborhood Business Districts)
- B-2 (Central Business Districts)
- B-3 (General Business Districts)
- I-1 (Light Industrial Districts)
- I-2 (General Industrial Districts)
- R-1 (Single-Family Residential)
- R-1A (Single-Family Residential)
- R-1B (Single-Family Residential)
- R-2 (Single-Family Residential)
- R-2A (Single-Family Residential)
- R-3 (One and Two Family Residential
- R-4 (Low Density Multi-Family Residential)
- R-5 (High Density Multi-Family Residential)
- R-B (Restricted Business Districts)
- I-TA (Intermodal Terminal – Intermodal Terminal)
- I-TB (Intermodal Terminal – Transport Equipment)
- I-TC (Intermodal Terminal – Industrial Park)

MANHATTAN

- A (Agricultural)
- CR (Conservation/Recreation)
- ER (Estate Residential)
- GR (General Residential)
- R1 (Single-Family Residence)
- R2 (Multi-Family Residence)
- R3 (Multi-Family Residence)
- R4 (Two-Family Residence)
- R5 (Multiple Family Residence)
- R6 (Residential Apartment)
- BPD (Business Park District)
- B1 (Local Shopping)
- B2 (Community Shopping)
- B3 (General Business)
- CBD (Central Business District)
- I1 (Limited Industrial)
- I2 (General Industrial)
- I3 (Heavy Industrial)

NEW LENOX

- AG (Agricultural Districts)
- C-1 (Neighborhood Shopping Districts)
- C-2 (Community Shopping Districts)
- C-3 (General Business Districts)
- C-4 (Automotive Service Districts)
- C-5 (Office/Transitional Districts)
- C-7 (Regional Shopping)
- E (Estate Residence Districts)
- H (Hospital)
- I-1 (Limited Industrial Districts)
- R (Single Family Residence)
- R-1 (Single Family Residence)
- R-2 (Single Family Residence)
- R-2A (Single Family Residence)
- R-3 (Multi-Family Residence)
- R-4 (Two-Unit Residence
- R-5 (3- and 4-Unit Residence)
- R-6 (Multi-Family Residence)

ELWOOD

- A-1 (Agriculture)
- C-1 (Local Shopping)
- C-2 (Community Shopping)
- C-3 (Town Center Business District)
- I-1 (Office, Research, Light Industrial)
- I-2 (Light Industrial)
- I-3 (Heavy Industrial)
- I-4 (Large Scale Planned Industrial)
- G-R (General Residential)
- R-1 (Single-Family Residential)
- R-2 (Single- and Two-Family Residential)
- R-3 (Multi-Family Residential)
- R-4 (Single-Family Attached Residential)
- Federal Lands
- A (Intermodal and Related Uses)
- B (Industrial Park Uses)
- C (Residential Protection Zone)

The predominant local zoning for municipal areas is single family residential with commercial nodes along major arterials. The City of Joliet is the only municipality in the Study Area with a majority of land zoned for industrial uses. Additionally, all incorporated areas in the Study Area have minimal land zoned for agricultural uses.

MINOOKA

- A (Agricultural District)
- R1 (Single Family Detached Residence District)
- R1A (Single Family Residence District)
- R2 (Single Family Detached Residence District)
- R3 (Single Family Attached Residence District)
- R4 (Two Family Residence District)
- R4A (Two Family Residence District)
- R5 (Attached Single-Family Residence District)
- R6 (Multiple Family Residence District)
- B1 (Business District)
- B2 (Commercial District)
- M1 (Manufacturing District)
- M2 (Manufacturing District)
- Lowland Conservancy District

FRANKFORT

- Forest Preserve
- AG (Agricultural District)
- B1 (Local Business District)
- B2 (Community Business District)
- B3 (General Business District)
- B4 (Office District)
- H1 (Historic District)
- I1 (Limited Industrial District)
- I2 (General Industrial District)
- ER (Estate Residential District)
- R1 (Single Family Residential District)
- R2 (Single Family Residential District)
- R3 (Two-Family Residential District)
- R4 (Single Family Residential District)
- R5 (Multi-Family Residential District)

CHANNAHON

- A-1 (Agricultural District)
- A-2 (Rural Residence)
- C-1 (Local Shopping)
- C-2 (Community Shopping)
- C-3 (General Business)
- C-4 (Automotive Service)
- C-5 (Office/Transitional)
- C-6 (Office and Research)
- C-7 (Day-Care and Professional Office)
- I-1 (Limited Industrial)
- I-2 (Intensive Industrial)
- PR (Park and Recreational)
- R-1 (Single-Family Residence)
- R-2 (Single-Family Residence)
- R-3 (Multi-Family Residence)
- TC (Town Center)

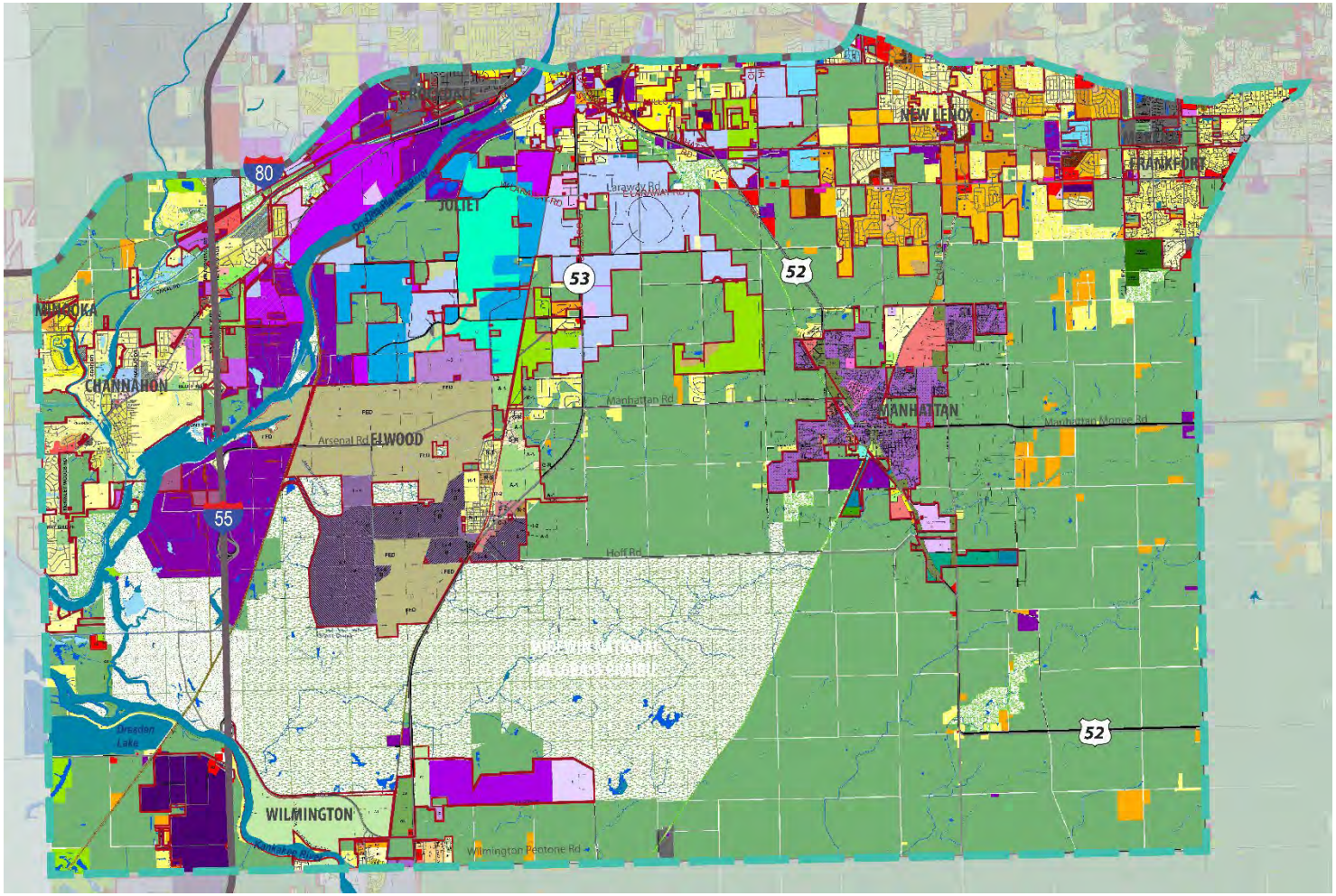
WILMINGTON

- A1 (Agricultural)
- ER (Estate Residential)
- GR (General Residential)
- R1 (Residential Single Family)
- R2 (Residential Single Family)
- R3 (Residential Two Family)
- R4 (Residential Single Family Attached)
- R5 (Residential Multi-Family)
- RG (Restricted Business)
- B1 (Neighborhood Commercial)
- B2 (Light Commercial)
- B2A (Central Commercial)
- B3 (General Commercial)
- I1 (Office, Research, Light Industrial)
- I2 (Light Industrial)
- I3 (Heavy Industrial)
- I4 (Large Scale Industrial)
- I5 (Large Scale Planned Industrial)

Data sources: Data from the Study Area Municipalities.

Combined County and Local Zoning Maps

REVISED JUNE 12, 2020



WILL COUNTY ZONING LEGEND

- Federal
- State
- Parks and Preserves
- MUNICIPALITY
- Agricultural Districts
- Outdoor Commercial
- Commecial Districts
- Industrial Districts
- Estate Residential Districts
- Single-Family Residential Districts
- Multi-Family Residential Districts

Please see legends for local zoning maps on previous page.

The above legend on this page is only for Will County Zoning.

- STUDY AREA
- MUNICIPAL BOUNDARIES

Will County Zoning

- Majority of unincorporated areas in the Study Area are zoned for agricultural uses.
- Small residential zoned areas are scattered in different parts of the Study Area.
- Industrial zoning is primarily along I-55 and the Des Plaines River.

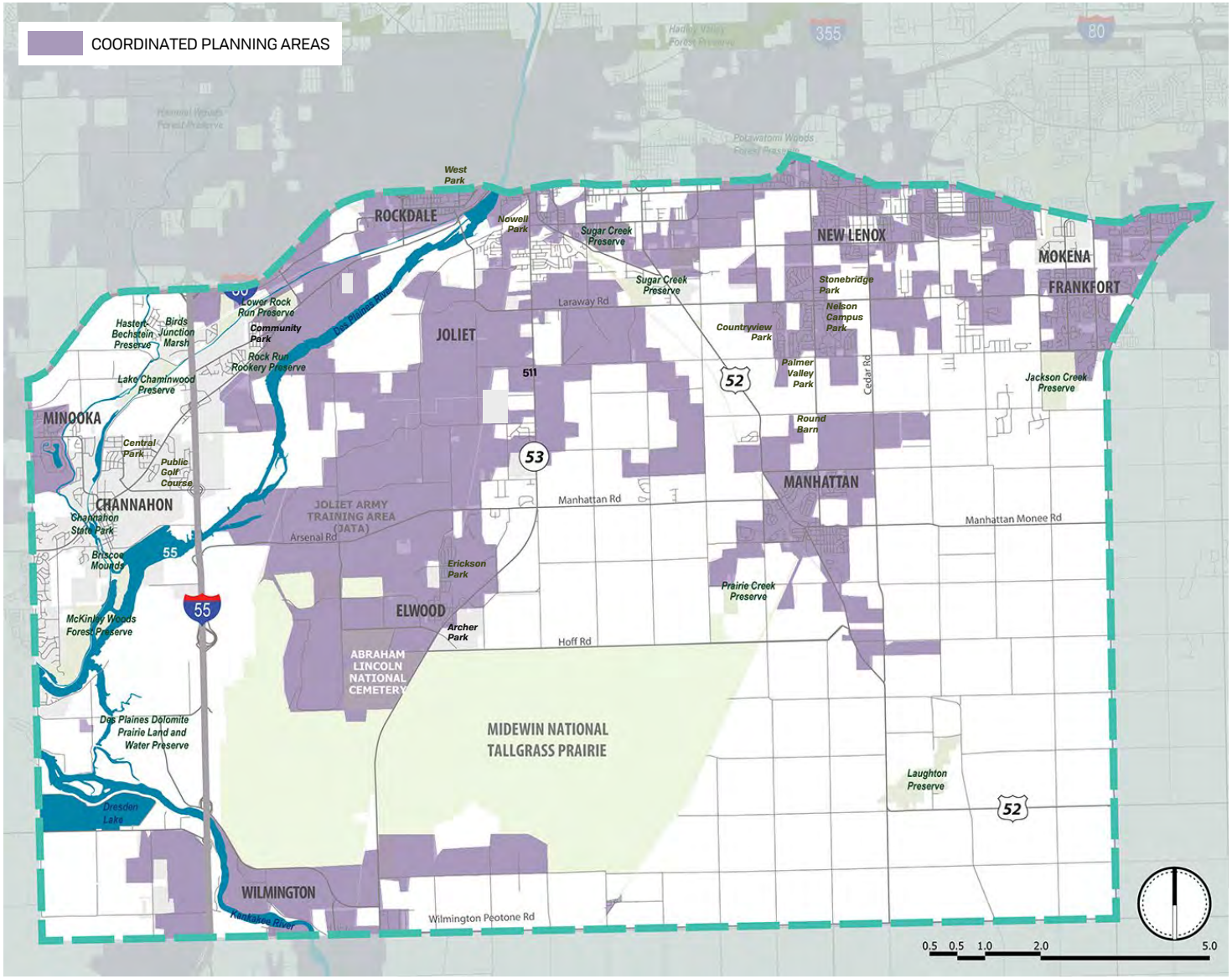
Local Zoning

- Majority of incorporated areas in the Study Area are zoned for low density residential uses.
- There is minimal land zoned for Agricultural Use in local zoning maps.
- Industrial zoning is primarily along the interstates and around the Intermodal facilities.

Data source: Will County Land Use Department.

Coordinated Planning Areas

REVISED JUNE 12, 2020



Coordinated Planning Areas have a significant amount of agricultural or natural lands, shown both within or adjacent to municipal boundaries.[1]

As a strategy to protect these lands from development pressures as the region's population grows, particularly in locations near or adjacent to municipal boundaries, ON TO 2050 recommends including agricultural and natural lands in local and county plans to signal the importance of retaining these valuable assets. Communities are encouraged to reflect upon the contribution of farmland and natural resources to local and regional economies, ecosystems, and character.

Every community in the Study Area, except for Channahon, is considered a part of a Coordinated Planning Area.

Table 15: Total Square Miles of Coordinated Planning Areas in Study Area

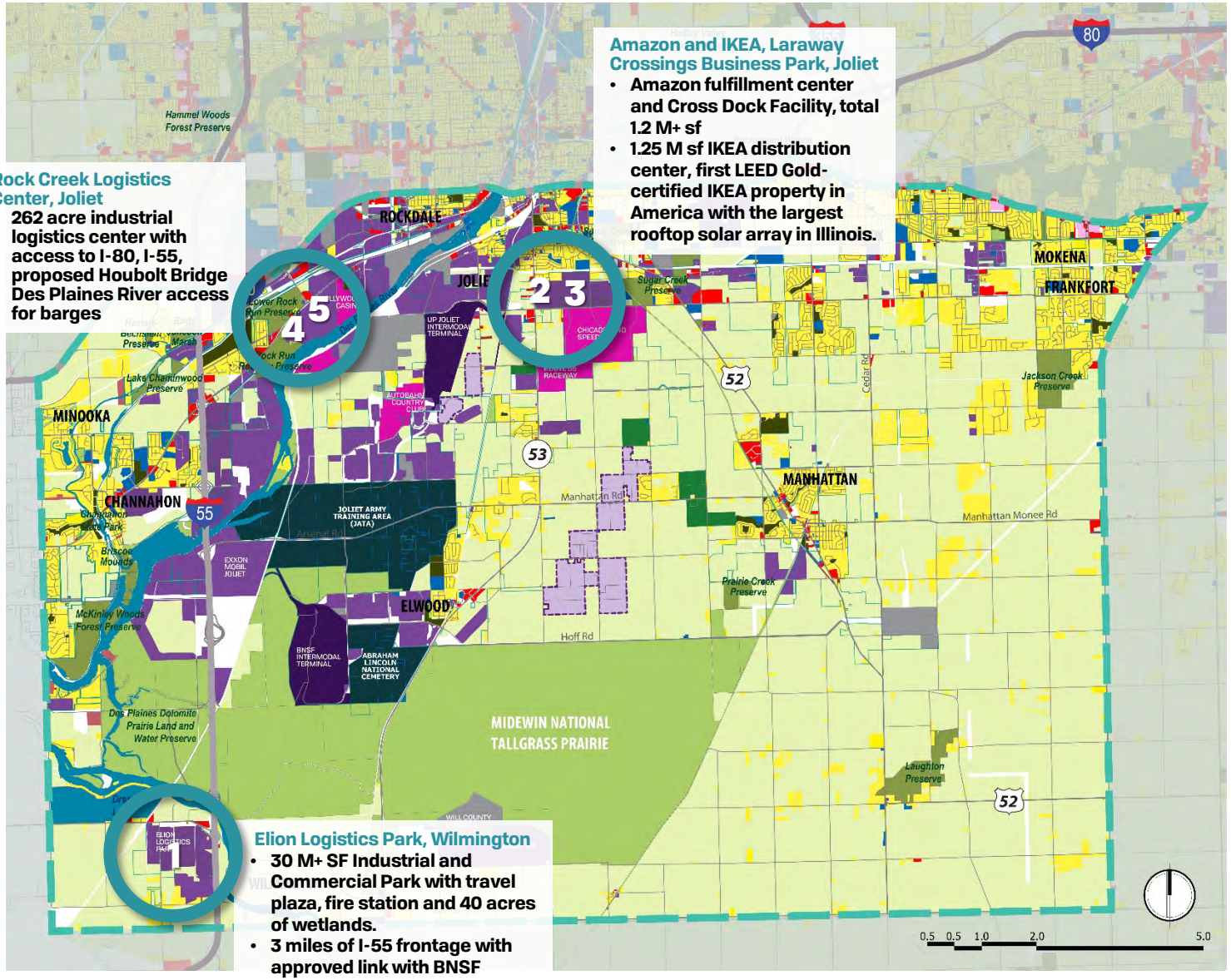
	Sq. Mi.	% Total
Coordinated Planning Areas	65	26.8%
Land Use Study Area	243	

[1]Data sources: CMAP ON TO 2050 Layer: Coordinated Planning Areas, 2018.

Major Projects Planned, Approved or Underway

Major Projects Planned, Approved or Underway

REVISED JUNE 12, 2020



Rock Creek Logistics Center, Joliet

- **262 acre industrial logistics center with access to I-80, I-55, proposed Houbolt Bridge**
- **Des Plaines River access for barges**

Amazon and IKEA, Laraway Crossings Business Park, Joliet

- **Amazon fulfillment center and Cross Dock Facility, total 1.2 M+ sf**
- **1.25 M sf IKEA distribution center, first LEED Gold-certified IKEA property in America with the largest rooftop solar array in Illinois.**

Elion Logistics Park, Wilmington

- **30 M+ SF Industrial and Commercial Park with travel plaza, fire station and 40 acres of wetlands.**
- **3 miles of I-55 frontage with approved link with BNSF Intermodal.**

Major recent developments are predominantly related to industrial uses and include the following:

1. Elion/Ridgeport Logistics Park, Wilmington
2. Amazon Fulfillment Center
3. IKEA Distribution Center, Joliet
4. Rock Creek Logistics Center, Joliet
5. GP Transco new headquarters, Joliet

RESIDENTIAL
COMMERCIAL
INDUSTRIAL/UTILITY
OPEN SPACE
AGRICULTURAL
CIVIC/INSTITUTIONAL
VACANT

PROPOSED PROJECTS

6. PROPOSED NORTHPOINT DEVELOPMENT
7. PROPOSED TTX DEVELOPMENT
8. PROPOSED HARBOR FREIGHT DEVELOPMENT

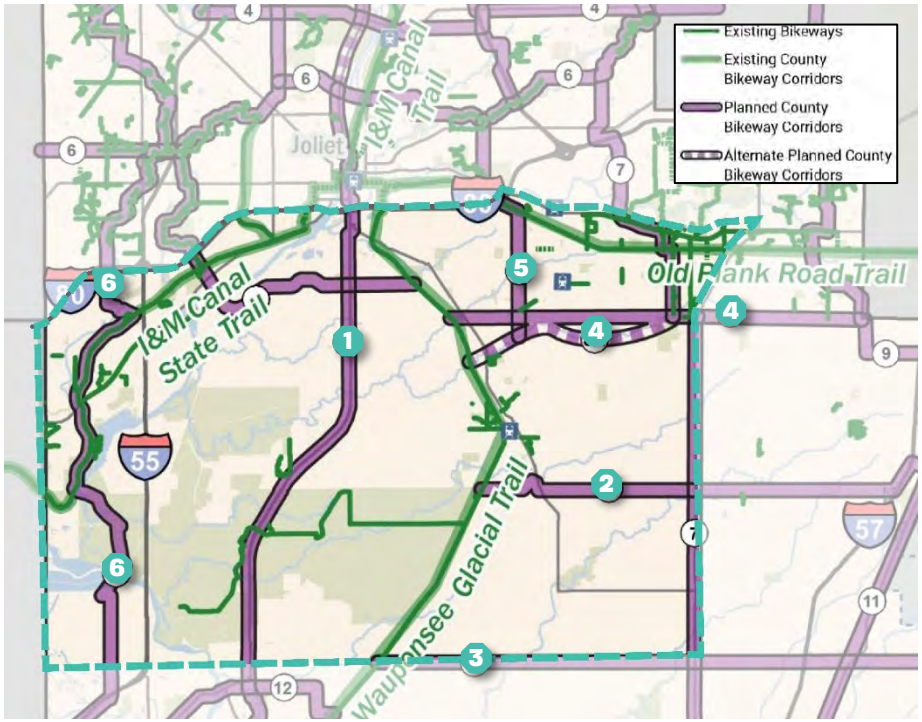
No new major retail, commercial or residential development has been constructed or approved in the Study Area in recent years.

Data sources: CMAP Land Use, 2015; Will County GIS, 2019; developer websites. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

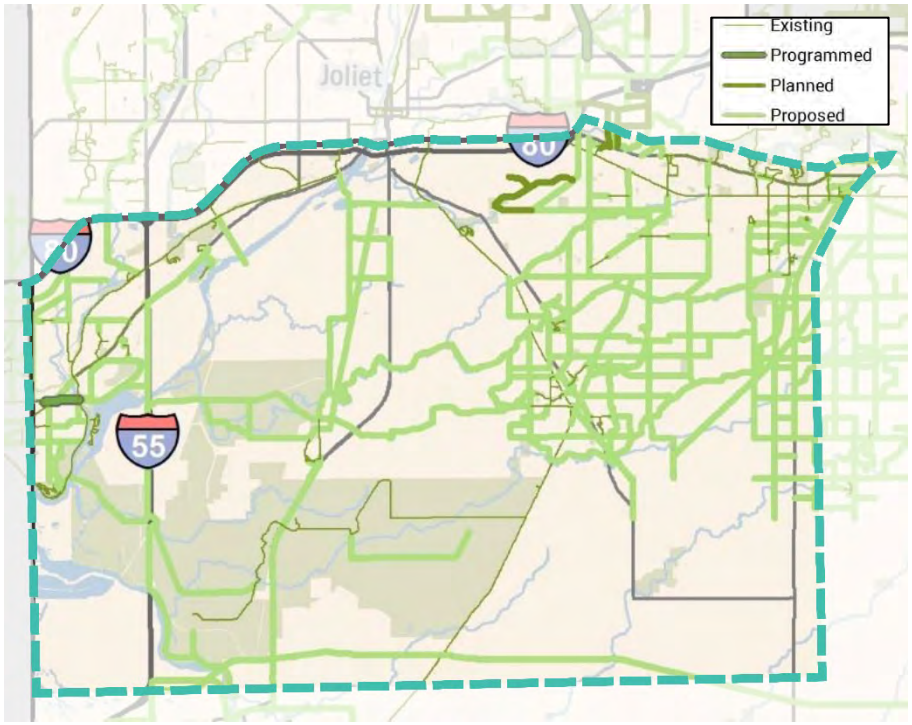
Existing and Planned Trails

REVISED JUNE 12, 2020

FUTURE DISTINCT BIKEWAY CORRIDORS MAP, FPDWC



FUTURE LOCAL BIKEWAYS MAP, FPDWC



According to the Forest Preserve District of Will County (FPDWC) and the Will County Division of Transportation's 2016 Will County Bikeway map, the following corridors were identified as major Distinct Bikeway Corridors within the Study Area:

Existing bikeway corridors

- Wauponsee Glacial Trail
- I & M Canal Trail
- Trails in the Midewin National Tallgrass Prairie.

Future planned bikeway corridors:

1. IL 53 Bikeway Corridor
2. Trail along Hoff Road
3. Trail along Wilmington Peotone Road
4. Trail along Steger Road
5. Trail along Gougar Road
6. DuPage River Trail Extension

Future Local Bikeways

Significant local trails are programmed, planned or proposed to create stronger east-west connections and introduce trails along major creekways.

Planned future Bike Corridors are primarily on major transportation arterials. Potential impacts of truck traffic on these corridors would need to be discussed with the FPDWC.

Data source: FPDWC.

Summary of Existing Challenges and Major Opportunity Areas

Summary of Potential Land Use Impacts: West of IL 53

REVISED JUNE 12, 2020

Impacts on the Des Plaines River and the quality of life of the Rockdale Community which is already surrounded by industrial uses

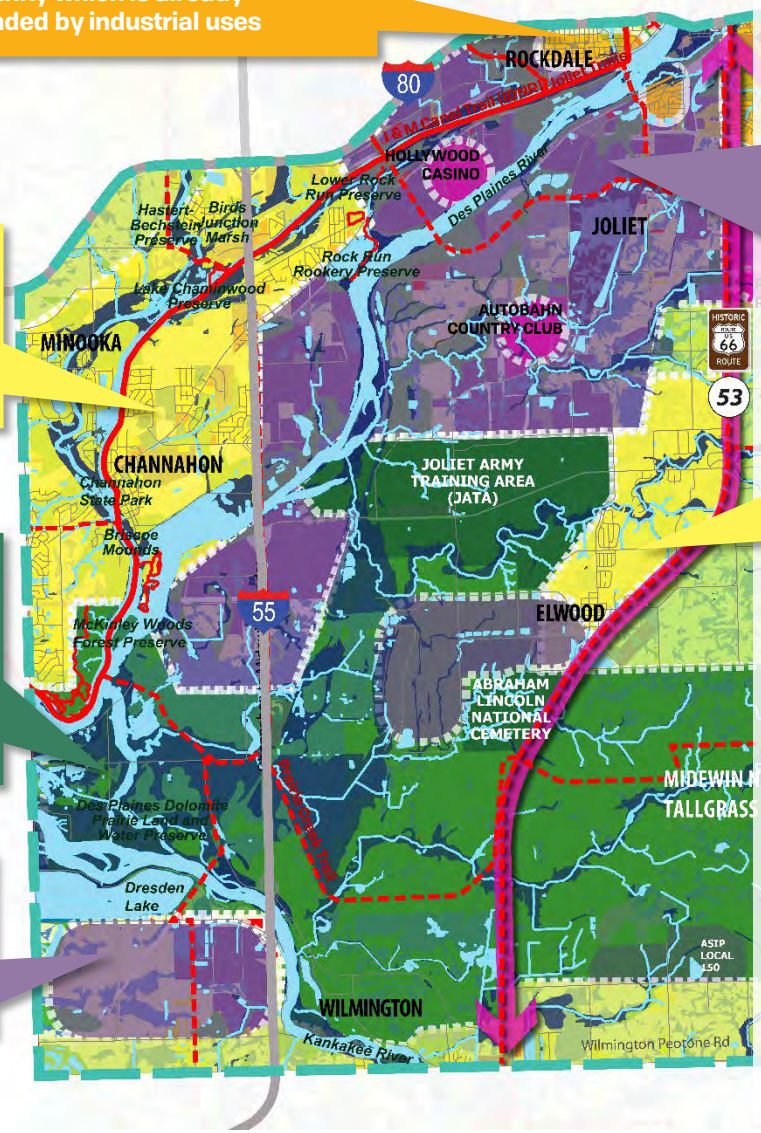
Impacts on Des Plaines River and Cedar Creek as new industrial uses add more impervious coverage. Impacts of potential increase in truck traffic on I & M Canal Trail and existing and planned trails.

Impacts on the DuPage River waterway and the quality of life of Channahon and Minooka residents

Impacts on Jackson Creek, JATA, Elwood residents and pockets of unincorporated residential areas

Impacts on major natural resources like the Midewin, JATA, IDNR preserves, waterways, bird and fish habitats

Impacts on the Kankakee River, Dresden Lake, the Midewin and IDNR preserves



Current industrial and freight related uses are primarily concentrated to the west of IL 53 along the Des Plaines River, I-80 and I-55.

There could be critical impacts on surrounding areas if freight related uses continue to grow towards the east and west without a cohesive plan followed by both the County and Local Municipalities. These critical impacts include:

- Impacts on water supply, watersheds, wetlands, prime soils, impervious coverage, drainage, wildlife habitat, historic and cultural landmarks, archaeological assets, air quality and health, farmland, historically significant farm structures, generational farms and agricultural income
- Impacts on the long-term tourism potential around Route 66 and other major destinations
- Impacts on FPDWC planned Bike Corridors that are primarily on major transportation arterials
- Impacts on Jackson Creek as a potential greenway and trail corridor as identified by the LMRP and the FPDWC Bike Plan
- Impacts on long term costs for extension and maintenance of public infrastructure

Map shows these critical land use impacts on areas west of IL 53. See following page for impacts on areas east of Il 53.

Summary of Potential Land Use Impacts: East of IL 53

REVISED JUNE 12, 2020

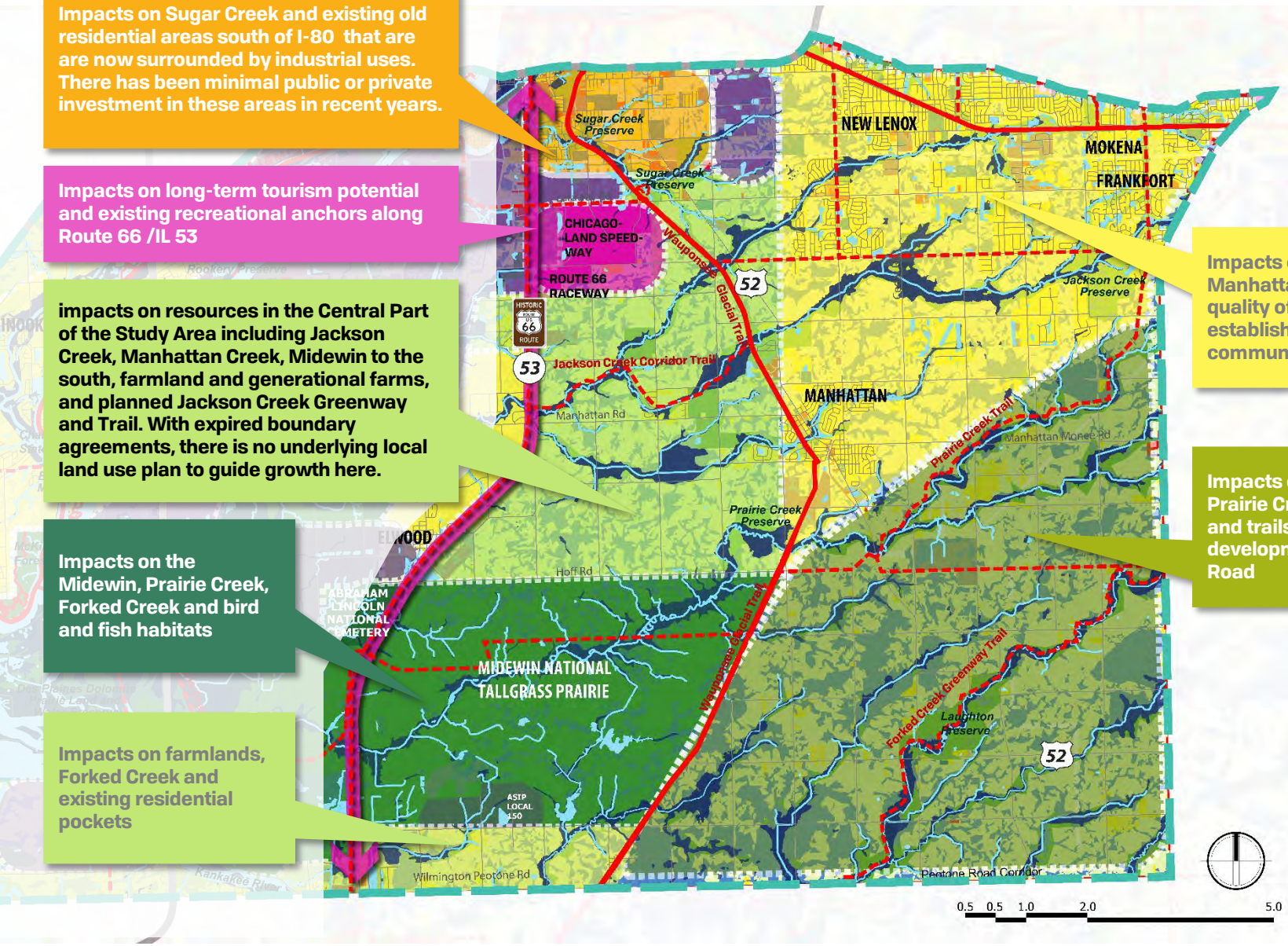
Impacts on Sugar Creek and existing old residential areas south of I-80 that are are now surrounded by industrial uses. There has been minimal public or private investment in these areas in recent years.

Impacts on long-term tourism potential and existing recreational anchors along Route 66 /IL 53

impacts on resources in the Central Part of the Study Area including Jackson Creek, Manhattan Creek, Midewin to the south, farmland and generational farms, and planned Jackson Creek Greenway and Trail. With expired boundary agreements, there is no underlying local land use plan to guide growth here.

Impacts on the Midewin, Prairie Creek, Forked Creek and bird and fish habitats

Impacts on farmlands, Forked Creek and existing residential pockets

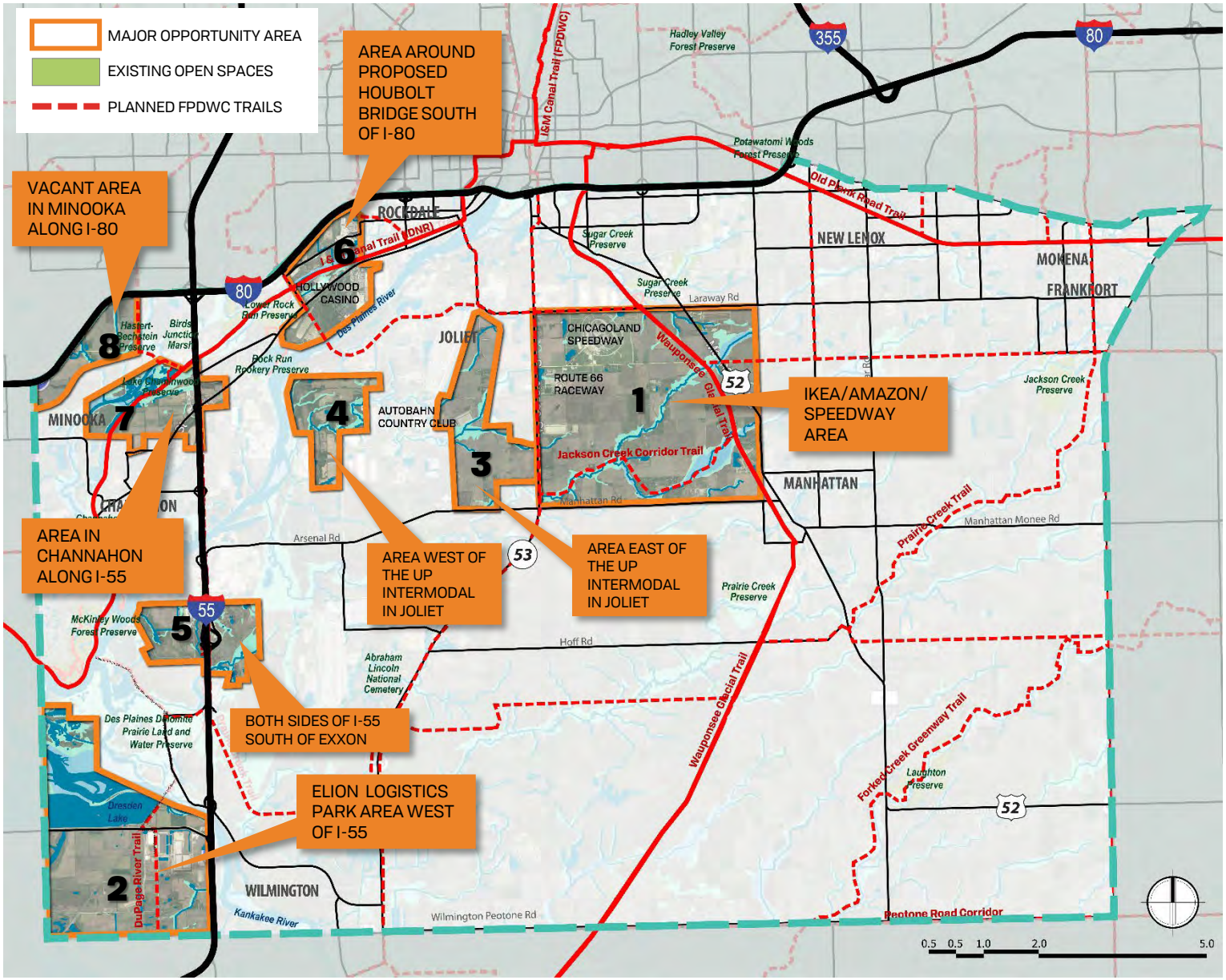


Impacts on Jackson and Manhattan Creeks and quality of life of established residential communities

Impacts on Forked and Prairie Creeks, farmland and trails of potential development along Hoff Road

Major Opportunity Areas

REVISED JUNE 12, 2020



8 Major Opportunity Areas are suggested based on the following criteria:

- **PROXIMITY TO MAJOR TRANSPORTATION CORRIDORS, INCLUDING I-55, I-80 AND IL 53.**
- **PROXIMITY TO MAJOR ECONOMIC ANCHORS**
- **SIGNIFICANT CONTIGUOUS LAND FOR NEW DEVELOPMENT AND INFILL OPPORTUNITIES**
- **PROXIMITY TO EXISTING MUNICIPAL INCORPORATED AREAS AND EXISTING INFRASTRUCTURE**
- **POTENTIAL TO PROTECT WATERWAYS INCLUDING JACKSON CREEK, DES PLAINES RIVER AND DUPAGE RIVER**
- **OPPORTUNITIES TO IMPLEMENT FPDWC PLANNED TRAIL CORRIDORS, INCLUDING THE IL 53, JACKSON CREEK AND DUPAGE RIVER TRAIL CORRIDORS**

The table on the following page shows in greater detail how these opportunity areas meet these eight criteria.

Data sources: CMAP Land Use, 2015; Satellite Imagery, 2017; Will County GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Major Opportunity Areas: Criteria Table

REVISED JUNE 12, 2020

CRITERIA	OPPORTUNITY AREAS							
	1	2	3	4	5	6	7	8
PROXIMITY TO MAJOR TRANSPORTATION CORRIDORS, INCLUDING I-55, I-80 AND IL 53.	Highway: IL-53, US-52 Roadways: Laraway Rd, Manhattan Rd, Schweitzer Rd	Highway: I-55 Roadways: River Rd, Lorenzo Rd	Highway: IL-53 Roadways: Laraway Rd, Manhattan Rd/Arsenal Rd	Highway: none Roadways: Arsenal Rd	Highway: I-55 Roadways: Arsenal Rd	Highway: I-80 Roadways: Channahon Rd	Highway: I-55 Roadways: Eames St	Highway: I-80 Roadways: Ridge Rd, River Rd
PROXIMITY TO MAJOR ECONOMIC ANCHORS	Laraway Crossing Business Park Amazon and IKEA Distro Centers Chicagoland Speedway Route 66 Raceway	Elion/Ridgeport Logistics Park	UP Intermodal nearby	UP Intermodal nearby	CenterPoint Intermodal nearby	Hollywood Casino & Hotel		
SIGNIFICANT CONTIGUOUS LAND FOR NEW DEVELOPMENT AND INFILL OPPORTUNITIES	8,877 AC, 14 SQ-MI*	5,530 AC, 8.6 SQ MI*	1,990 AC, 3.0 SQ MI*	1,229 AC, 2.0 SQ MI*	1,550 AC, 2.4 SQ MI*	1,586 AC, 2.5 SQ MI*	1,674 AC, 2.4 SQ MI*	936 AC, 1.5 SQ MI*
PROXIMITY TO EXISTING MUNICIPAL INCORPORATED AREAS AND EXISTING INFRASTRUCTURE	Joliet, Manhattan	Wilmington	Joliet, Elwood	Joliet,	Elwood	Joliet	Channahon	Minooka
POTENTIAL TO PROTECT WATERWAYS INCLUDING JACKSON CREEK, DES PLAINES RIVER AND DUPAGE RIVER	Sugar Creek Preserve, Jackson Creek, Sugar Creek	Des Plaines Dolomite Prairie, McKinley Woods, Des Plaines River, Dresden Lake, Kankakee River	Des Plaines River	Des Plaines River, Cedar Creek	Des Plaines Dolomite Prairie and Midewin nearby, Des Plaines River	Rock Run and Rock Run Rookery nearby, Des Plaines River, DuPage River	Lake Chaminwood Preserve, DuPage River	Hastert-Bechstein Preserve nearby, DuPage River
OPPORTUNITIES TO IMPLEMENT FPDWC PLANNED TRAIL CORRIDORS	IL 53 Bikeway Corridor, Trail along Steger Road, Trail along Gougar Road	DuPage River Trail			Channahon to Midewin Corridor	Laraway to Rock Run Trail		

*Approximate overall acreage, will need to be refined as Opportunity Areas are analyzed in greater detail.

Note: The truck routing ECR has identified several key corridors for additional study. Some of these potential corridors intersect with the Land Use areas of opportunity and will be reflected as the truck routing study evolves.

Opportunity Areas 1 and 2 offer the most land, over 14,000 acres total, for new development around major anchors, transportation corridors, natural resources and planned trails. These two areas are suggested as "High Impact Areas of Near Term Change" (see page 37) to be developed in greater detail in future tasks.

Opportunity Areas: Existing Land Uses and Acreage

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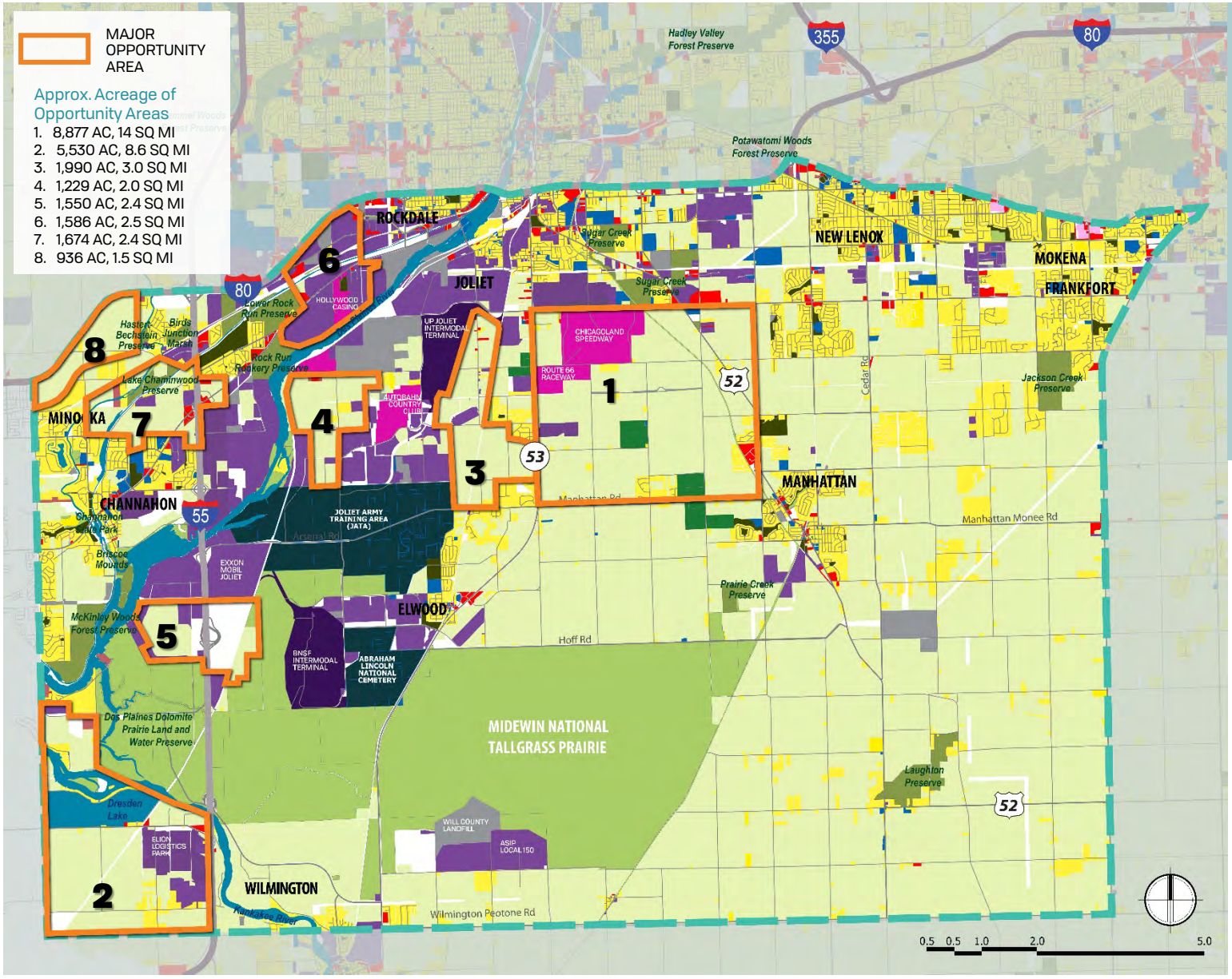


OPPORTUNITY AREAS 1 THROUGH 6 ARE NEAR EXISTING INTERMODAL FACILITIES AND MAJOR INDUSTRIAL ANCHORS. VACANT, INFILL AND FARMED PARCELS IN THESE AREAS OFFER SIGNIFICANT OPPORTUNITIES FOR NEW DEVELOPMENT.

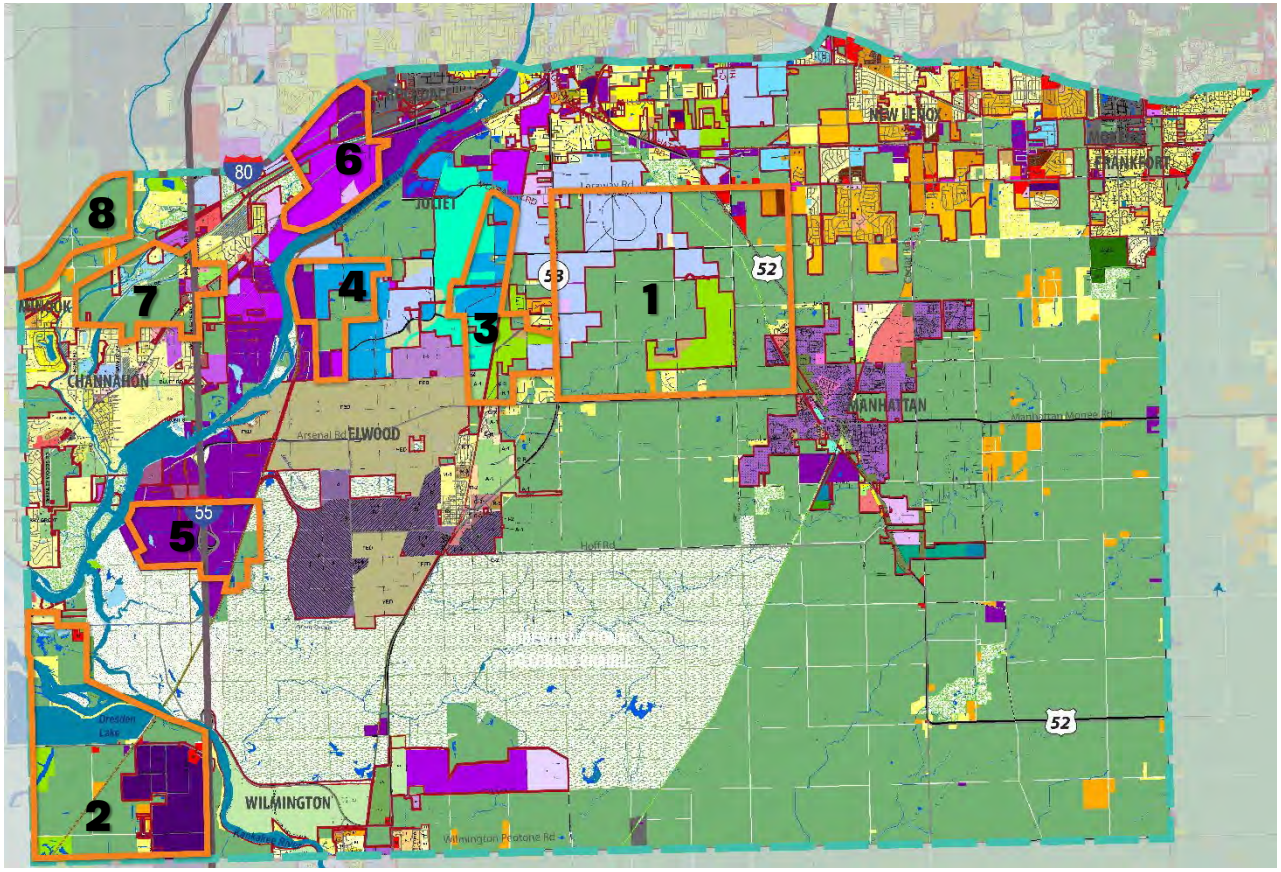
OPPORTUNITY AREAS 7 & 8 ARE PRIMARILY FARMLAND TODAY AND OFFER OPPORTUNITIES TO ATTRACT NEW DEVELOPMENT ALONG I-80 AND I-55.

- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL/UTILITY
- OPEN SPACE
- AGRICULTURAL
- CIVIC/INSTITUTIONAL
- VACANT

Data sources: CMAP Land Use, 2015; FPDWC, 2019; Will County GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Opportunity Areas on Combined Zoning Map

REVISED JUNE 12, 2020



JOLIET

- B-1 (Neighborhood Business Districts)
- B-2 (Central Business Districts)
- B-3 (General Business Districts)
- I-1 (Light Industrial Districts)
- I-2 (General Industrial Districts)
- R-1 (Single-Family Residential)
- R-1A (Single-Family Residential)
- R-1B (Single-Family Residential)
- R-2 (Single-Family Residential)
- R-2A (Single-Family Residential)
- R-3 (One and Two Family Residential
- R-4 (Low Density Multi-Family Residential)
- R-5 (High Density Multi-Family Residential)
- R-B (Restricted Business Districts)
- I-TA (Intermodal Terminal – Intermodal Terminal)
- I-TB (Intermodal Terminal – Transport Equipment)
- I-TC (Intermodal Terminal – Industrial Park)

MANHATTAN

- A (Agricultural)
- CR (Conservation/Recreation)
- ER (Estate Residential)
- GR (General Residential)
- R1 (Single-Family Residence)
- R2 (Multi-Family Residence)
- R3 (Multi-Family Residence)
- R4 (Two-Family Residence)
- R5 (Multiple Family Residence)
- R6 (Residential Apartment)
- BPD (Business Park District)
- B1 (Local Shopping)
- B2 (Community Shopping)
- B3 (General Business)
- CBD (Central Business District)
- I1 (Limited Industrial)
- I2 (General Industrial)
- I3 (Heavy Industrial)

NEW LENOX

- AG (Agricultural Districts)
- C-1 (Neighborhood Shopping Districts)
- C-2 (Community Shopping Districts)
- C-3 (General Business Districts)
- C-4 (Automotive Service Districts)
- C-5 (Office/Transitional Districts)
- C-7 (Regional Shopping)
- E (Estate Residence Districts)
- H (Hospital)
- I-1 (Limited Industrial Districts)
- R (Single Family Residence)
- R-1 (Single Family Residence)
- R-2 (Single Family Residence)
- R-2A (Single Family Residence)
- R-3 (Multi-Family Residence)
- R-4 (Two-Unit Residence
- R-5 (3- and 4-Unit Residence)
- R-6 (Multi-Family Residence)

ELWOOD

- A-1 (Agriculture)
- C-1 (Local Shopping)
- C-2 (Community Shopping)
- C-3 (Town Center Business District)
- I-1 (Office, Research, Light Industrial)
- I-2 (Light Industrial)
- I-3 (Heavy Industrial)
- I-4 (Large Scale Planned Industrial)
- G-R (General Residential)
- R-1 (Single-Family Residential)
- R-2 (Single- and Two-Family Residential)
- R-3 (Multi-Family Residential)
- R-4 (Single-Family Attached Residential)
- Federal Lands
- A (Intermodal and Related Uses)
- B (Industrial Park Uses)
- C (Residential Protection Zone)

Unincorporated parcels within the opportunity areas are generally zoned by the County for agricultural and industrial use.

Incorporated parcels within the opportunity areas are regulated by local municipal zoning, and generally include agricultural, industrial, residential and commercial uses.

MINOOKA

- A (Agricultural District)
- R1 (Single Family Detached Residence District)
- R1A (Single Family Residence District)
- R2 (Single Family Detached Residence District)
- R3 (Single Family Attached Residence District)
- R4 (Two Family Residence District)
- R4A (Two Family Residence District)
- R5 (Attached Single-Family Residence District)
- R6 (Multiple Family Residence District)
- B1 (Business District)
- B2 (Commercial District)
- M1 (Manufacturing District)
- M2 (Manufacturing District)
- Lowland Conservancy District

FRANKFORT

- Forest Preserve
- AG (Agricultural District)
- B1 (Local Business District)
- B2 (Community Business District)
- B3 (General Business District)
- B4 (Office District)
- H1 (Historic District)
- I1 (Limited Industrial District)
- I2 (General Industrial District)
- ER (Estate Residential District)
- R1 (Single Family Residential District)
- R2 (Single Family Residential District)
- R3 (Two-Family Residential District)
- R4 (Single Family Residential District)
- R5 (Multi-Family Residential District)

CHANNAHON

- A-1 (Agricultural District)
- A-2 (Rural Residence)
- C-1 (Local Shopping)
- C-2 (Community Shopping)
- C-3 (General Business)
- C-4 (Automotive Service)
- C-5 (Office/Transitional)
- C-6 (Office and Research)
- C-7 (Day-Care and Professional Office)
- I-1 (Limited Industrial)
- I-2 (Intensive Industrial)
- PR (Park and Recreational)
- R-1 (Single-Family Residence)
- R-2 (Single-Family Residence)
- R-3 (Multi-Family Residence)
- TC (Town Center)

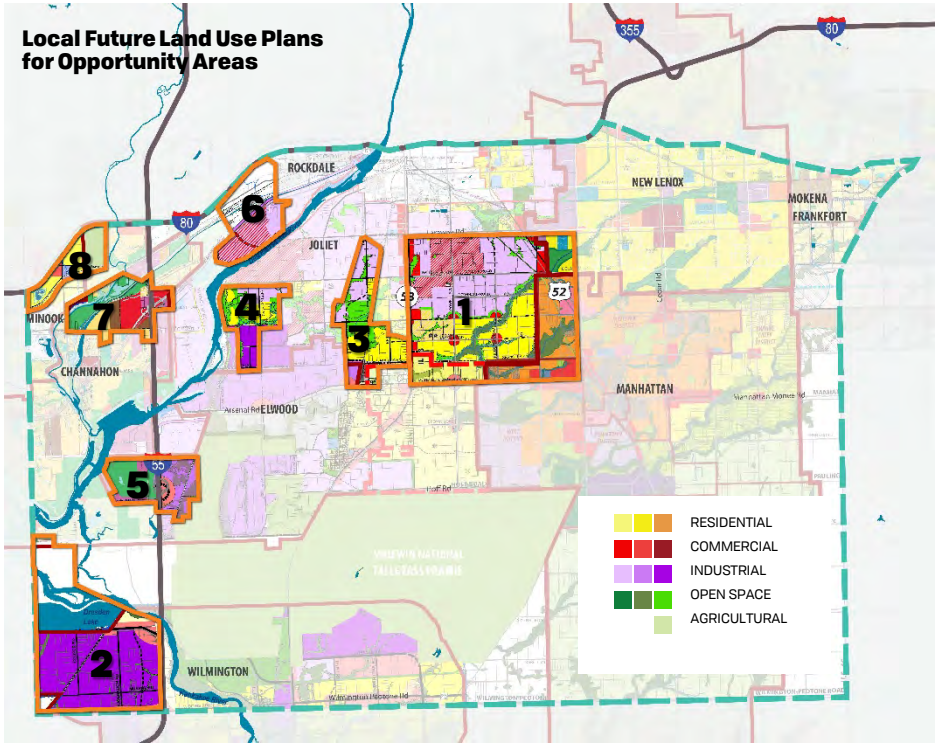
WILMINGTON

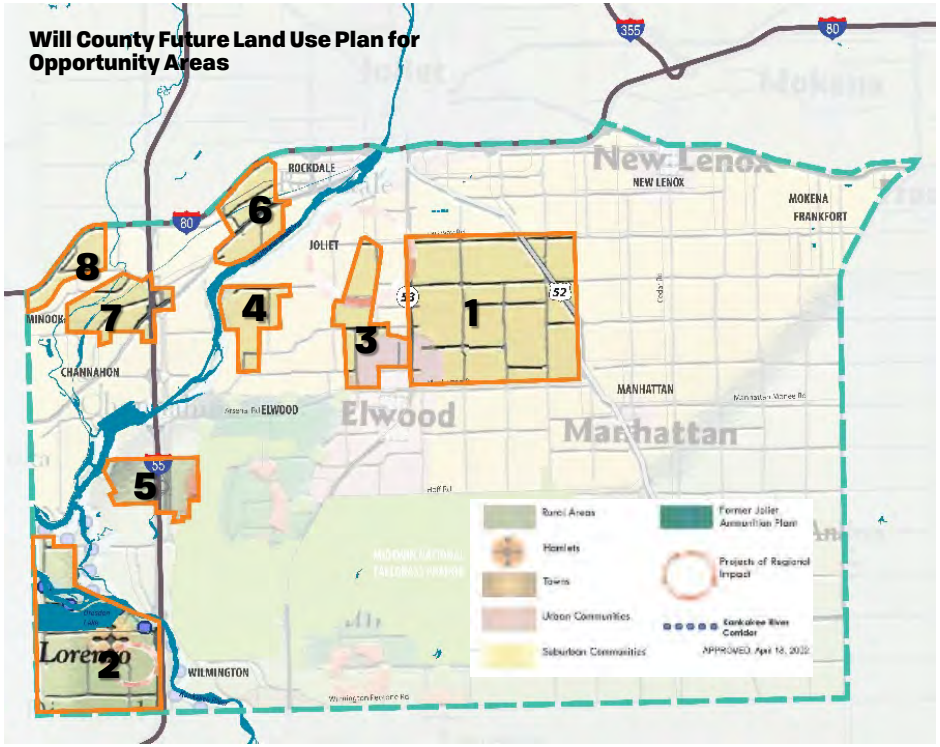
- A1 (Agricultural)
- ER (Estate Residential)
- GR (General Residential)
- R1 (Residential Single Family)
- R2 (Residential Single Family)
- R3 (Residential Two Family)
- R4 (Residential Single Family Attached)
- R5 (Residential Multi-Family)
- RG (Restricted Business)
- B1 (Neighborhood Commercial)
- B2 (Light Commercial)
- B2A (Central Commercial)
- B3 (General Commercial)
- I1 (Office, Research, Light Industrial)
- I2 (Light Industrial)
- I3 (Heavy Industrial)
- I4 (Large Scale Industrial)
- I5 (Large Scale Planned Industrial)

Data sources: Data from the Study Area Municipalities.

Opportunity Areas: Existing Local and County Land Use Plans

REVISED JUNE 12, 2020





OPPORTUNITY AREA	MUNICIPAL JURISDICTION	LOCAL FUTURE LAND USE DESIGNATION	COUNTY FUTURE LAND USE DESIGNATION
AREA 1	CITY OF JOLIET AND VILLAGE OF MANHATTAN	INDUSTRIAL AND COMMERCIAL USES CONCENTRATED IN THE NORTHWEST PART. RESIDENTIAL USES FOR THE REMANING AREAS TO THE SOUTH AND EAST.	SUBURBAN COMMUNITIES
AREA 2	CITY OF WILMINGTON		RURAL AREAS, PROJECT OF REGIONAL IMPORT
AREA 3	CITY OF JOLIET AND VILLAGE OF ELWOOD	INDUSTRIAL AND RESIDENTIAL USES	SUBURBAN COMMUNITIES, URBAN COMMUNITIES
AREA 4	CITY OF JOLIET	INDUSTRIAL AND RESIDENTIAL USES	SUBURBAN COMMUNITIES
AREA 5	VILLAGE OF ELWOOD	INDUSTRIAL, COMMERCIAL	RURAL AREAS
AREA 6	CITY OF JOLIET	INDUSTRIAL, RECREATIONAL	SUBURBAN COMMUNITIES
AREA 7	VILLAGE OF CHANNAHON	REGIONAL COMMERCIAL AND RESIDENTIAL, MINIMAL INDUSTRIAL	SUBURBAN COMMUNITIES
AREA 8	VILLAGE OF MINOOKA	INDUSTRIAL, COMMERCIAL AND RESIDENTIAL	SUBURBAN COMMUNITIES

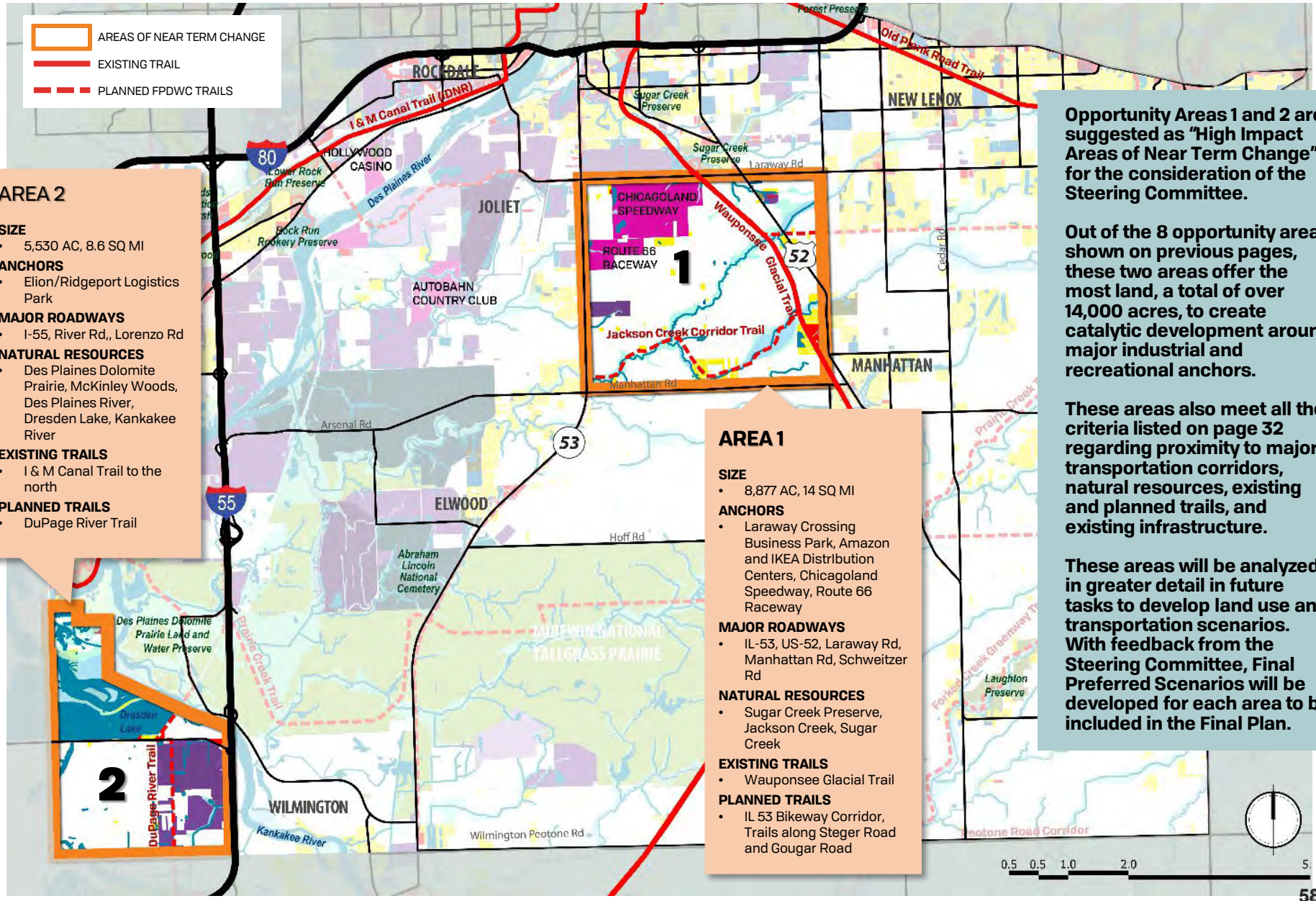
Most Opportunity Areas were generally envisioned by current plans to have multiple land uses.

Current market trends have the potential to shift these areas to predominantly single use industrial.

Data sources: Will County Land Use Department; Study Area Municipal Data.

High Impact Areas for Near Term Change

REVISED JUNE 12, 2020



AREA 2

SIZE
- 5,530 AC, 8.6 SQ MI

ANCHORS
- Elion/Ridgeport Logistics Park

MAJOR ROADWAYS
- I-55, River Rd,, Lorenzo Rd

NATURAL RESOURCES
- Des Plaines Dolomite Prairie, McKinley Woods, Des Plaines River, Dresden Lake, Kankakee River

EXISTING TRAILS
- I & M Canal Trail to the north

PLANNED TRAILS
- DuPage River Trail

AREA 1

SIZE
- 8,877 AC, 14 SQ MI

ANCHORS
- Laraway Crossing Business Park, Amazon and IKEA Distribution Centers, Chicagoland Speedway, Route 66 Raceway

MAJOR ROADWAYS
- IL-53, US-52, Laraway Rd, Manhattan Rd, Schweitzer Rd

NATURAL RESOURCES
- Sugar Creek Preserve, Jackson Creek, Sugar Creek

EXISTING TRAILS
- Wauponsee Glacial Trail

PLANNED TRAILS
- IL 53 Bikeway Corridor, Trails along Steger Road and Gougar Road

Opportunity Areas 1 and 2 are suggested as "High Impact Areas of Near Term Change" for the consideration of the Steering Committee.

Out of the 8 opportunity areas shown on previous pages, these two areas offer the most land, a total of over 14,000 acres, to create catalytic development around major industrial and recreational anchors.

These areas also meet all the criteria listed on page 32 regarding proximity to major transportation corridors, natural resources, existing and planned trails, and existing infrastructure.

These areas will be analyzed in greater detail in future tasks to develop land use and transportation scenarios. With feedback from the Steering Committee, Final Preferred Scenarios will be developed for each area to be included in the Final Plan.

Data sources: CMAP Land Use, 2015; FPDWC, 2019; Will County GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Market Analysis

Existing Market Conditions Executive Summary

REVISED JUNE 12, 2020

Industrial

The Land Use Study Area grew in population and households since 2010. This mirrors trends in the County and communities.

Median ages in the Study Area, County, and communities have risen. This may reflect the aging "Baby Boomer" generation, inflow of older people, outflow of younger people, or a combination. This does not indicate the Study Area lacks families or people of all ages.

The Study Area's median income exceeds Will County's, but incomes vary within communities (some lower, some higher).

Will County is growing at a faster rate than the Chicago region. Massive industrial growth drives the real estate industry in Will County and the Land Use Study. Most is new construction, including speculative buildings topping 1 million square feet.

The industrial inventory increased steadily year-on-year and approaches 200 million square feet countywide. The Land Use Study Area comprises over 50 million square feet – almost 30%. It has nearly doubled over 10 years.

For years, the market was able to absorb (fill) most new buildings, so construction picked up in response. As a result, many more new buildings were completed than could be absorbed in 2017-2018, increasing vacancy. Vacancy has fallen as companies move in and expand.

Retail

Will County's retail grew little over the past decade despite a growing population. The Study Area has added little since 2014. However, the vacancy rate has remained stable since then.

While some locations are thriving, the bricks-and-mortar retail market is difficult across the region and the nation.

Amazon = decline of physical stores + rise of massive warehouses.

Office

Will County's office vacancy decreased steadily since 2010 while the Study Area's mostly increased, though it improved since 2018. Office development is not a major force in the Land Use Study Area.

Residential New Construction

Since 2013, residential new construction increased every year, notably in Manhattan and Channahon. Most newly permitted housing units have been single-family.

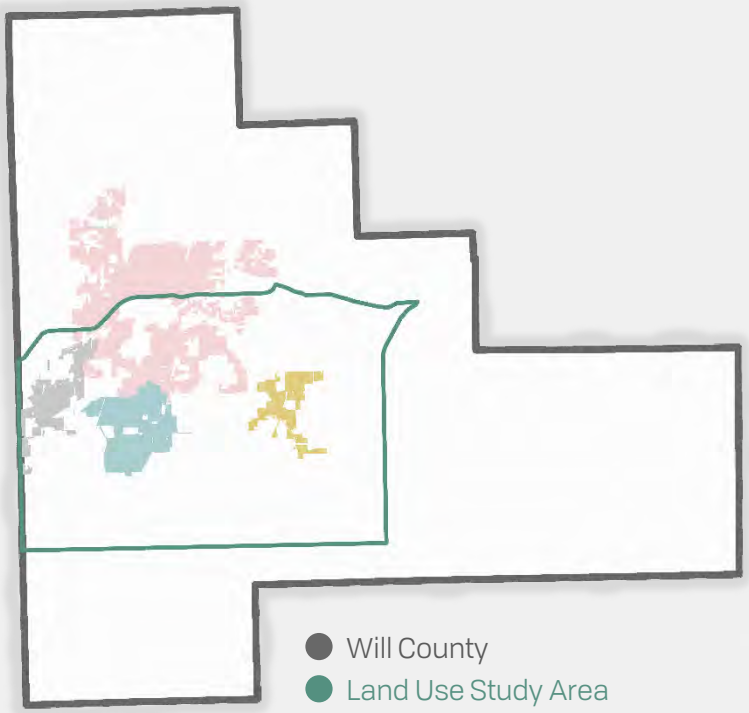
New subdivisions are not anticipated in the large volumes seen prior to the Great Recession (the crash of an overheated housing market).

Employment

The number of jobs has grown in the Study Area by 47% since 2008. The number in transportation/logistics has increased 66%. Nonetheless, a majority (59%) of jobs located in the Study Area are not industrial. Only 14% of all employees both live and work within the Land Use Study Area.

Demographics Land Use Study Area, County, and Communities

REVISED JUNE 12, 2020

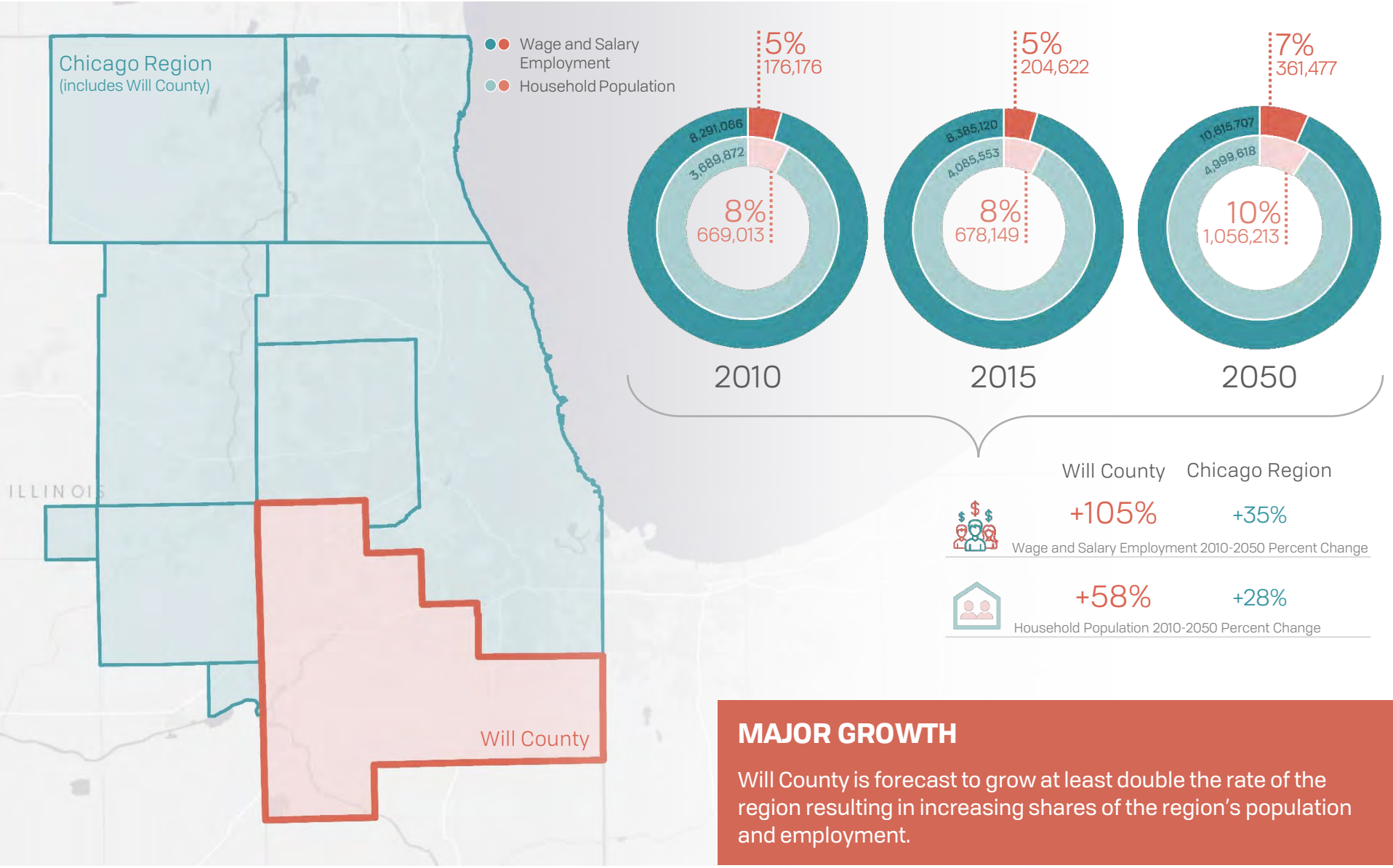


		Will County	Land Use Study Area	City of Joliet	Village of Elwood	Village of Manhattan	Village of Channahon
Population	2010	677,560	70,348	147,160	2,282	7,051	12,515
	2019	706,224	75,815	151,671	2,.382	8,327	13,215
	2024	725,533	79,332	154,637	2,453	8,777	13,560
Households	2010	225,256	23,683	47,915	882	2,360	4,008
	2019	235,135	25,649	49,164	935	2,786	4,254
	2024	241,806	26,856	50,082	967	2,940	4,369
Housing Units	2010	237,501	24,841	51,180	926	2,462	4,176
	2019	248,412	26,851	52,910	968	2,890	4,419
	2024	259,519	28,483	54,824	1,017	3,085	4,613
Vacant Housing Units	2010	12,245	1,158	3,265	44	102	168
	2019	13,277	1,202	3,746	33	104	165
	2024	17,713	1,627	4,742	50	145	244
Median Age	2010	35.4	37.2	31.7	37.9	31.2	35.9
	2019	36.9	38.9	33.2	40.5	35.4	37.9
	2024	37.4	39.5	33.4	39.8	34.0	37.7
Median Household Income	2019	$83,997	$90,843	$65,943	$75,366	$92,268	$94,221
	2024	$93,045	$100,811	$75,444	$90,788	$104,682	$103,257

Source: Esri, US Census

ON TO 2050 Will County Population and Employment Projections

REVISED JUNE 12, 2020



	Will County	Chicago Region
Wage and Salary Employment 2010-2050 Percent Change	+105%	+35%
Household Population 2010-2050 Percent Change	+58%	+28%

MAJOR GROWTH

Will County is forecast to grow at least double the rate of the region resulting in increasing shares of the region's population and employment.

Source: CMAP, ON TO 2050 Socioeconomic Forecast Appendix

Market Trends Industrial

REVISED JUNE 12, 2020

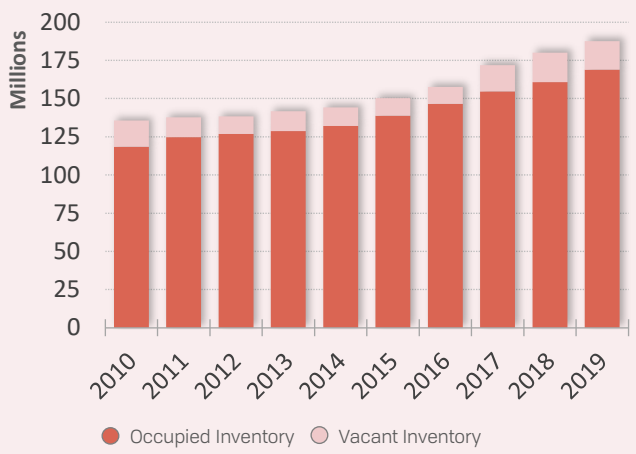
WILL COUNTY

INDUSTRIAL GROWTH

County's industrial inventory grew significantly since 2009: **+105%**

Due to land availability and highway access, the County's share of the region's industrial inventory was up from 2009: **+4%**

Inventory



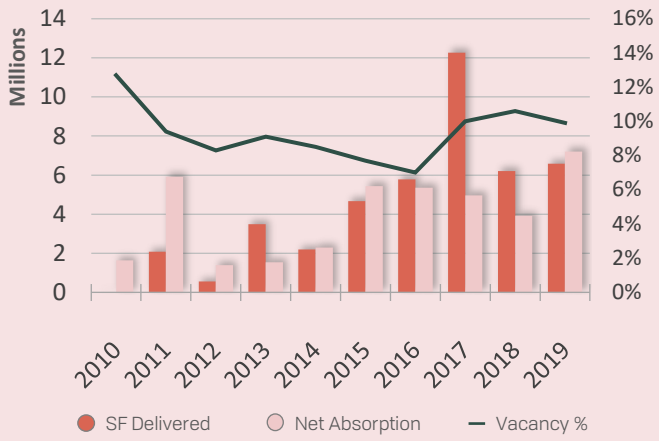
MASSIVE CONSTRUCTION IN 2007

2017 deliveries spike led to 2018 vacancy rate increase to: **+3.6%**

By 2019, vacancy dropped to **9.9%** as the new space was absorbed.

Will County's vacancy rate is still much higher than the Chicago region's (3.6%) as of 3rd quarter 2019.

Construction



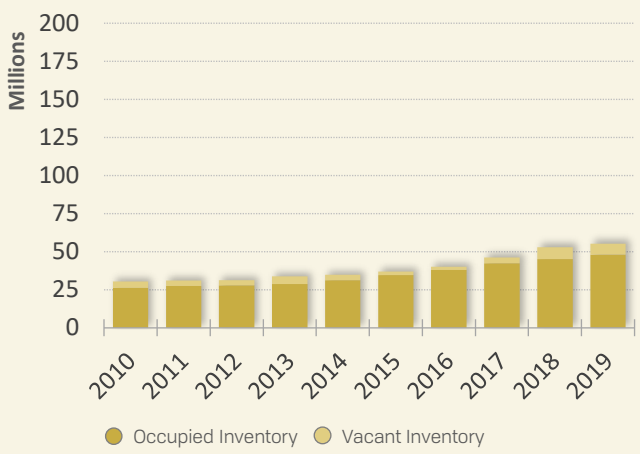
LAND USE STUDY AREA

MASSIVE GROWTH

The Land Use Study Area accounts for **29%** of the County's industrial inventory, a **+22%** increase from 2010.

Over 10 years, the Study Area's inventory has grown: **+82%**

Inventory



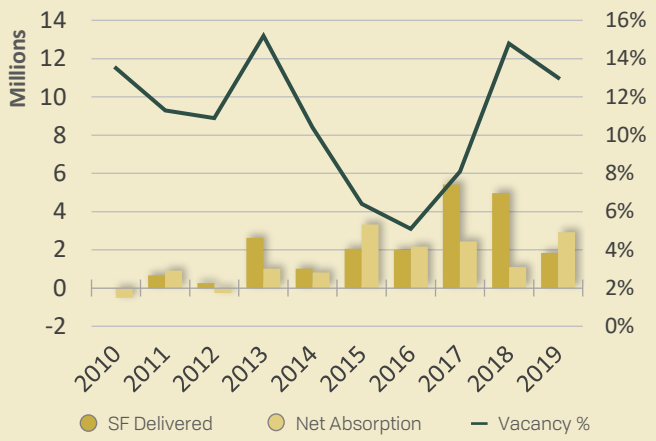
DELIVERIES PEAK IN 2017-2018

The vacancy rate increased sharply from 2016 to 2018 as new space was delivered onto the market.

The market added over 10 million SF in 2017-2018 but absorbed only **34%** of the space.

By 2019, deliveries slowed as new space filled. Vacancy rate fell from 2018: **-1.8%**

Construction



Source: CoStar

Market Trends Retail

REVISED JUNE 12, 2020

WILL COUNTY

LITTLE GROWTH

Vacancy rate was decreasing steadily until 2017 but increased to **6%** in 2019 from a low of 4.8%.

Factors include growth of e-commerce resulting in store closings nationwide.

Limited new retail construction in the Chicago region over the past 10 years compared to earlier decades.

Inventory barely grew over past 10 years despite population growth, reflecting the slowdown in the retail industry overall since the recession.

Minimal or negative absorption in past 2 years.

Inventory grew by 1.2 million SF, totaling over 35 million SF in 2019. As of Q3 2019, 2.1 million SF were vacant.

LAND USE STUDY AREA

NO SIGNIFICANT GROWTH IN 5 YEARS

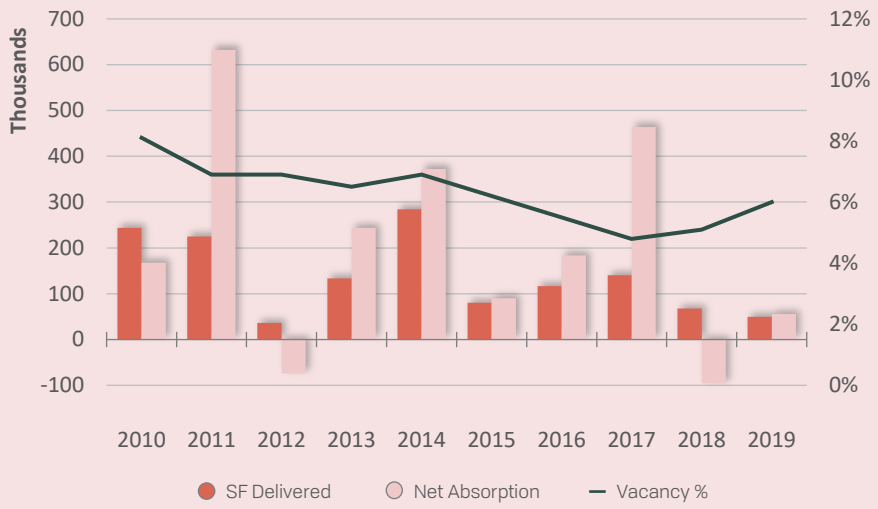
Minimal or negative absorption since 2016. Almost no growth in new retail space since a large spike in 2014.

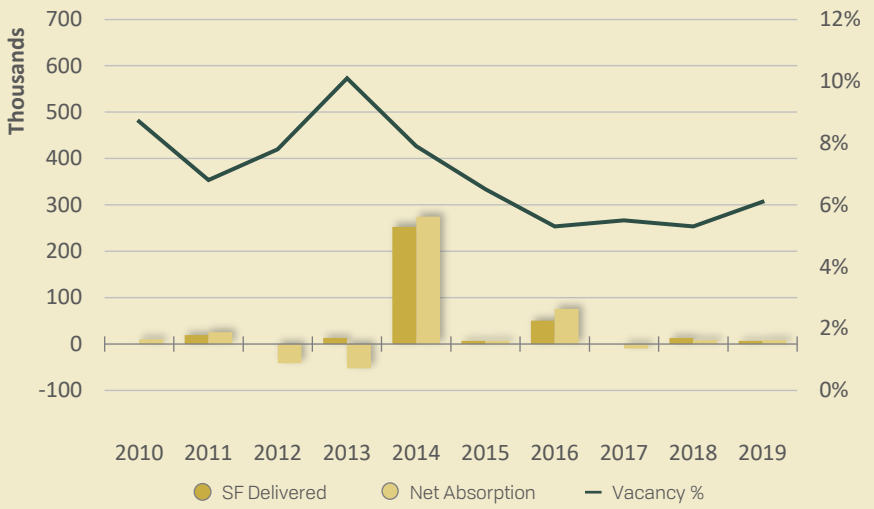
Vacancy rate is comparable to that of Will County.

Inventory grew by 347,000 SF from 2010-2019 to 2.8 million SF. As of Q3 2019, 168,000 SF were vacant.

Vacancy rate has been stable since 2015 as the space delivered in 2014 was absorbed.

Construction





Source: CoStar

Market Trends Office

REVISED JUNE 12, 2020

WILL COUNTY

VACANCY IMPROVEMENT

Vacancy rate trended downward almost every year, ending 2019 at **7.4%**, its lowest in a decade.

Will County accounts for a relatively small share of the Chicago suburban office inventory – about 12%. However, the vacancy rate is significantly better than many of the suburban Chicago sub-markets.

LAND USE STUDY AREA

SEE-SAW ABSORPTION

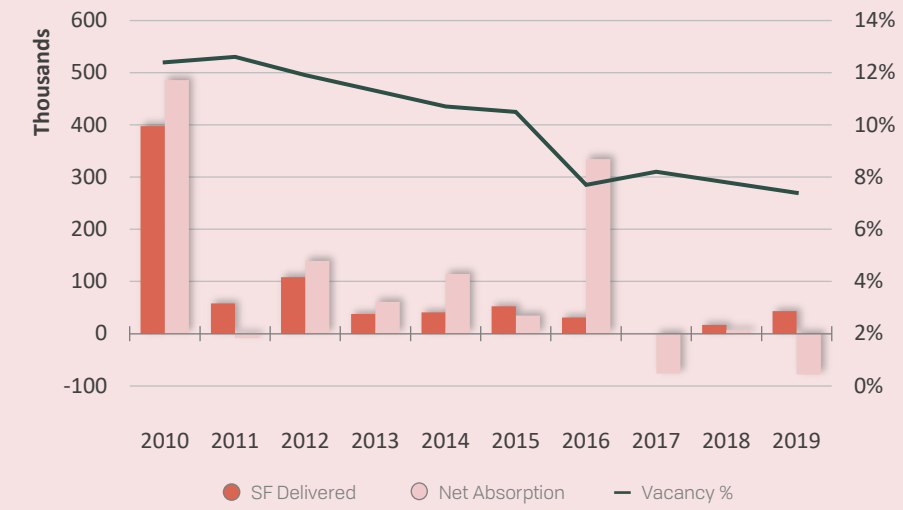
Vacancy rose from 2012-2014 and did not decrease until 2016 due to new deliveries in 2012-2013 that were largely absorbed.

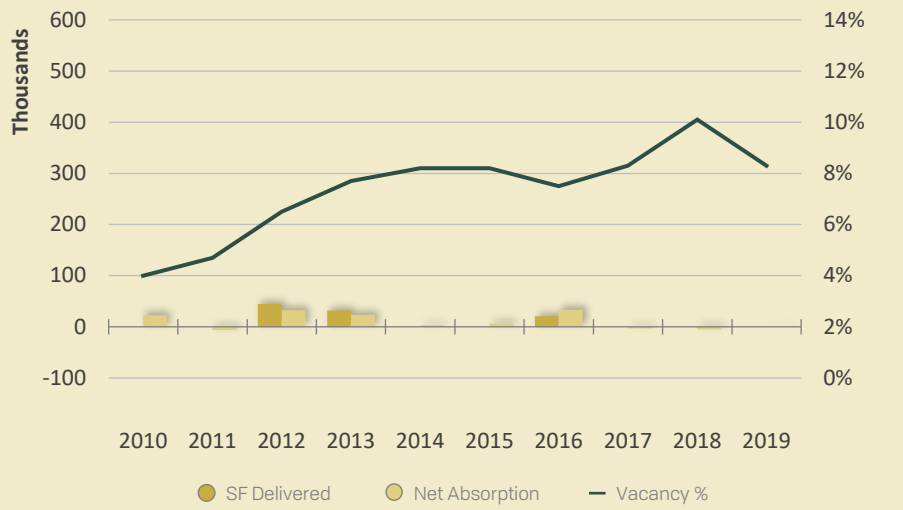
Vacancy rate now trending down from 10.1% in 2018 to 8.3% in 2019.

Inventory grew by 99,000 SF to 609,000 in 2019. As of Q3 2019, 50,000 SF were vacant.

Negative absorption in subsequent years countered strong numbers in 2016.

Construction





Source: CoStar

Market Trends New Residential Construction

REVISED JUNE 12, 2020

WILL COUNTY

INCREASING ACTIVITY POST-RECESSION

Steady construction since 2014 peaking in 2016 at almost 1,800 units.

Little multi-family construction except in 2016.

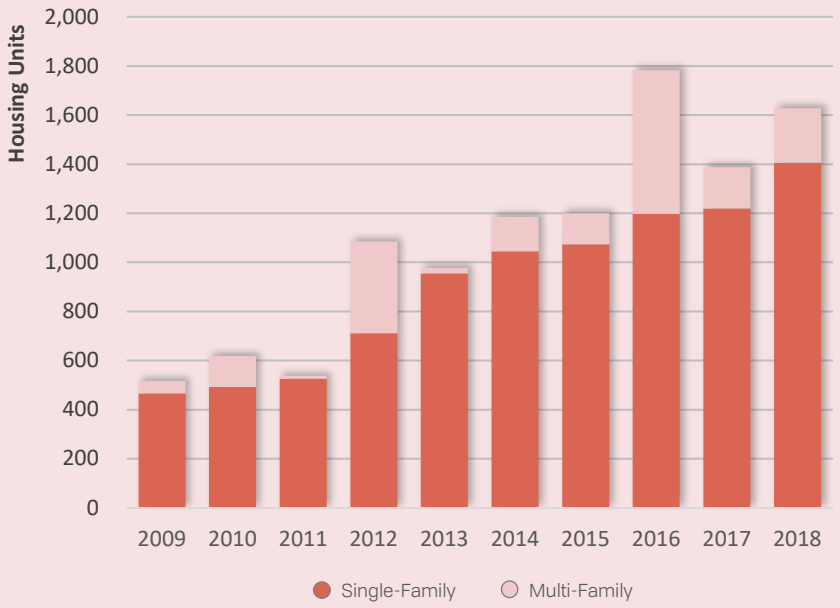
LAND USE STUDY AREA MUNICIPALITIES

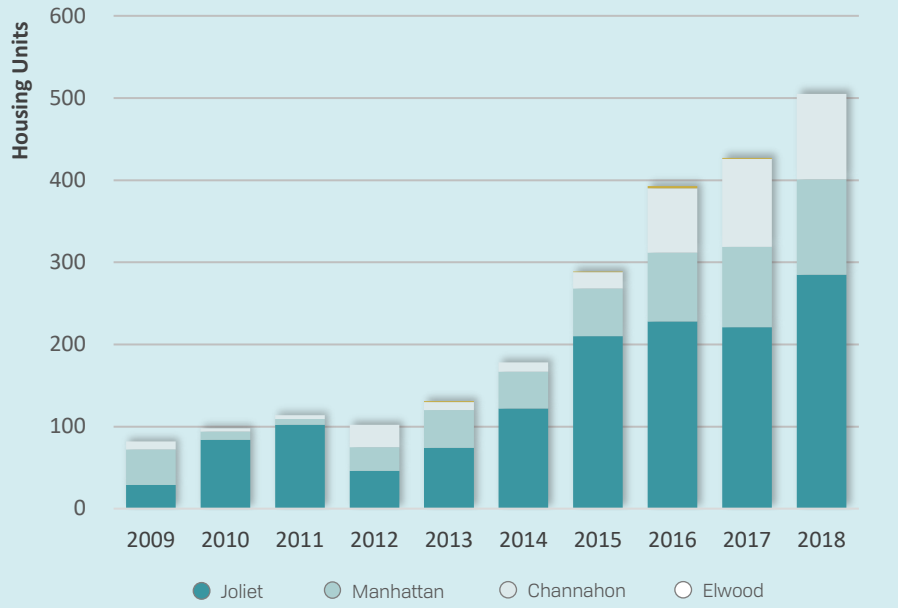
INCREASING ACTIVITY POST-RECESSION

All new residential construction was in Joliet, Manhattan and Channahon.

Study Area communities accounted for 31% of county's residential construction in 2018.

Construction



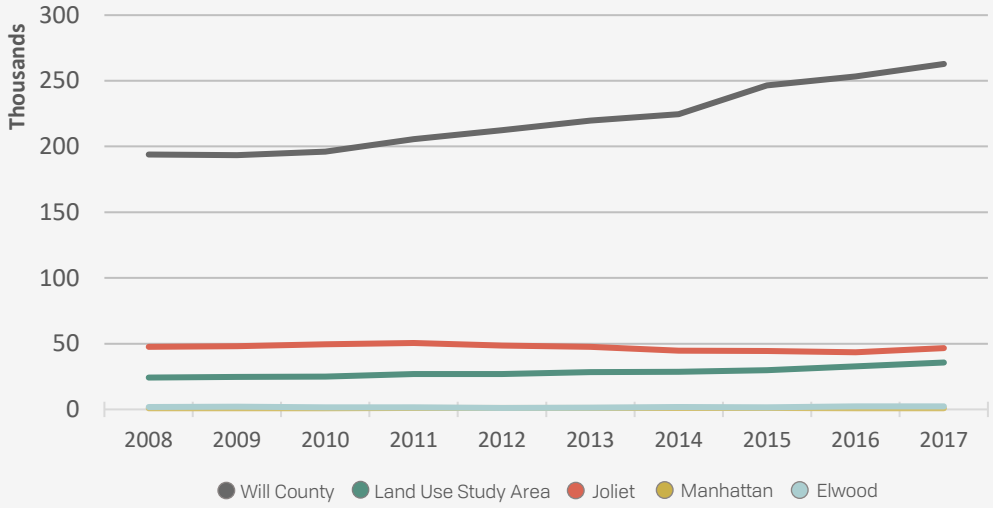


Source: U.S. Census Bureau, Building Permits Survey.

Industrial Jobs

REVISED JUNE 12, 2020

ALL JOBS LOCATED IN WILL COUNTY



OVERALL GROWTH

+36% growth in Will County

+47% growth in Study Area

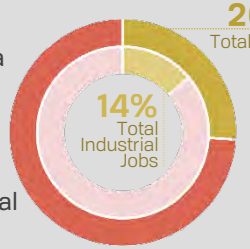
+34% growth in City of Joliet

-2% decrease in Village of Elwood

Study Area has a much higher share of industrial jobs compared to the County:

41% vs **22%**

Study Area accounts for 14% of County's total jobs but 26% of its industrial jobs.



WILL COUNTY

INDUSTRIAL GROWTH

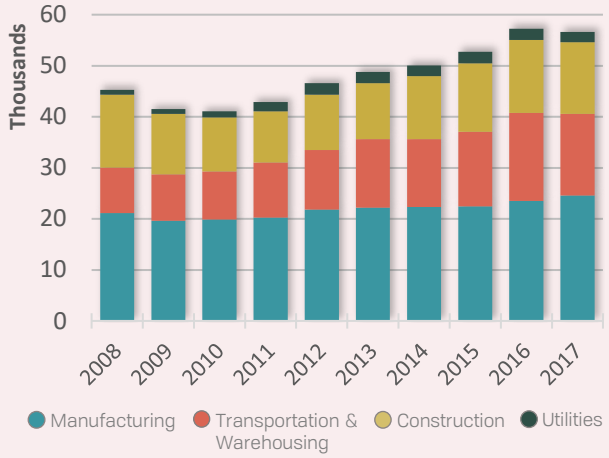
Increase since 2010 with a slight decrease between 2016 and 2017.

Manufacturing remains the largest sector though transportation and warehousing registered the strongest gains since 2010.

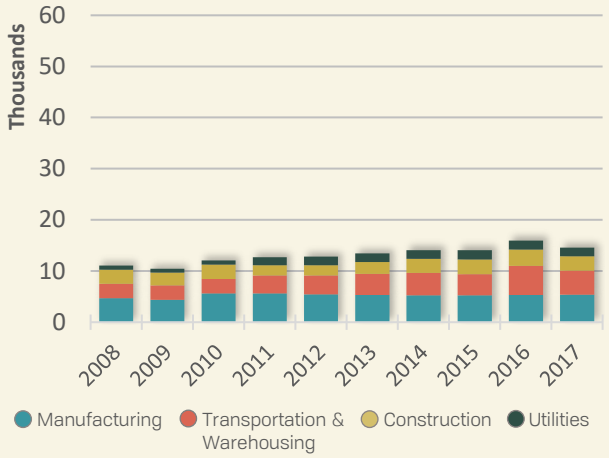
78% of total jobs are non-industrial

42% of all employees live in the county

Industrial Jobs



LAND USE STUDY AREA



STEADY GROWTH

Steady industrial employment growth since 2009 with a spike in 2016.

+66% in transportation & logistics jobs

-4% in manufacturing jobs

14% of all employees live and work in the Study Area

50% of total jobs are non-industrial*

*Since 2014, they've increased at a greater rate than industrial jobs.

Source: U.S. Census Bureau, LEHD Origin-Destination Employment Statistics.

Study Area Communities Industrial Jobs

REVISED JUNE 12, 2020

JOLIET

MID-DECADE GROWTH

Overall decline of **-6%** since 2008 but picked up in 2016-17 to almost 7,000 jobs.

While manufacturing jobs decreased during this period, transportation and warehousing jobs doubled.

Despite its industrial reputation, **86%** of Joliet's almost 47,000 jobs are non-industrial.

Largest single sector is **health care**.

24% of all employees live in Joliet.

ELWOOD

SIGNIFICANT GROWTH SINCE 2012

+90% employment increase since 2012

+200% growth in manufacturing

+50% growth in transportation & warehousing

2% of all employees live in Elwood

Non-industrial employment small but growing since 2017.

MANHATTAN

DECREASE

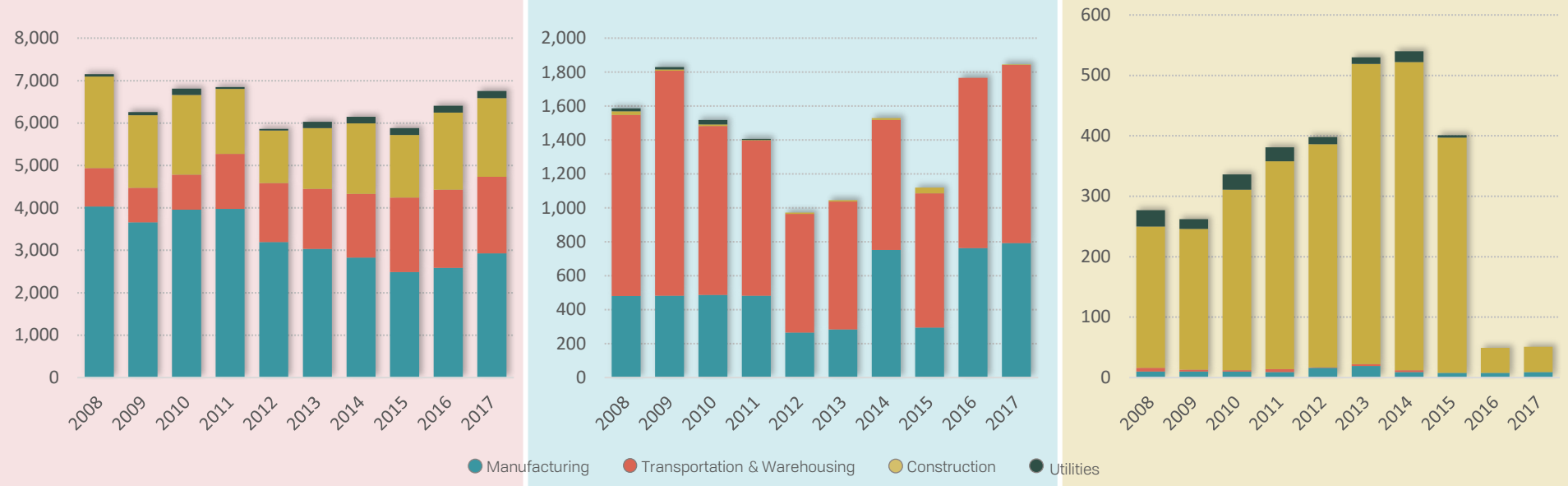
Minimal industrial employment other than construction. Major drop-off since 2014.

Increase in employment fueled by construction occurring from 2008-2014.

+35% increase in non-industrial employment.

28% of employees live in Manhattan.

Industrial Jobs Located in the Community



Source: U.S. Census Bureau, LEHD Origin-Destination Employment Statistics.

Study Area Communities Jobs Held by Residents

REVISED JUNE 12, 2020

JOLIET

STEADY GROWTH SINCE 2010

+26% increase in non-industrial employment

+4% growth in manufacturing

+62% growth in transportation & warehousing

36% work less than 10 miles from home

ELWOOD

OVERALL GROWTH

Large increase between 2010-2011 with slight decline since 2014.

Decrease in manufacturing. Increase in transportation and warehousing.

75% of employment is non-industrial accounts

31% work within 10 miles of home

MANHATTAN

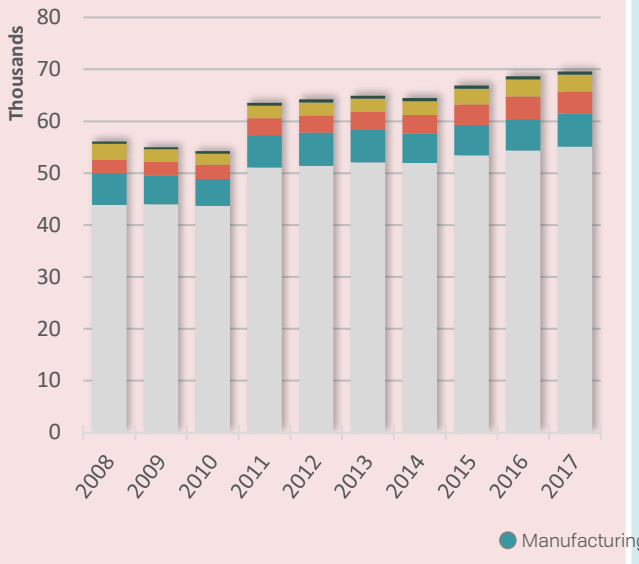
LARGE GROWTH SINCE 2009

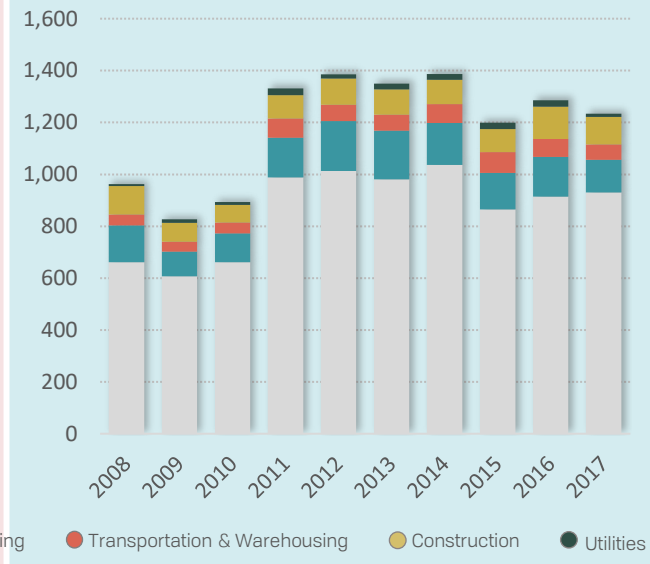
Among industrial sectors, largest increase in construction.

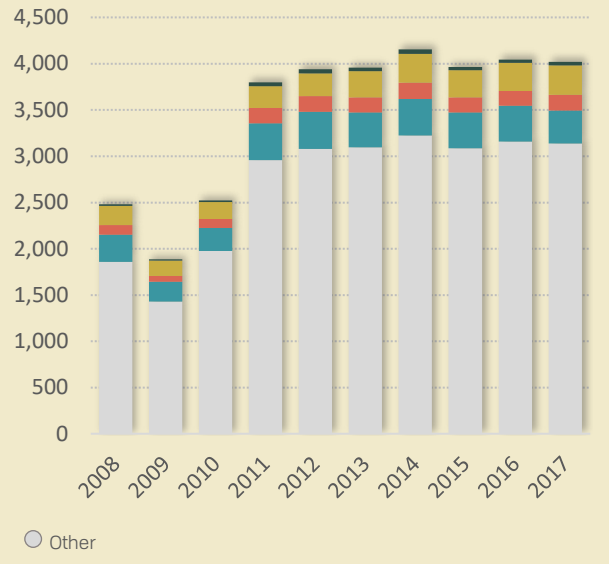
+69% increase in non-industrial employment

30% work less than 10 miles from home

Jobs Held by Residents in the Community







Manufacturing · Transportation & Warehousing · Construction · Utilities · Other

Source: U.S. Census Bureau, LEHD Origin-Destination Employment Statistics.

Appendix B

Market Study

Kretchmer Associates

REAL ESTATE AND PLANNING CONSULTING

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Evanston, IL 60201
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Moving Will County Market Analysis

DATE

May 2020

PRODUCED FOR

Chicago Metropolitan Agency for Planning (CMAP)

Kretchmer Associates

REAL ESTATE AND PLANNING CONSULTING

Table of Contents

Kretchmer Associates

SUMMARY AND CONCLUSIONS

Project Scope

Kretchmer Associates prepared a market analysis for the southwestern area of Will County, an area roughly bounded by I-80 and Route 30 on the north, Wilmington-Peotone Road on the south, the Cook – Will county border on the east, and the Will – Grundy county border on the west. The purpose of this study is to provide a realistic market-driven analysis from which future land use planning scenarios can be developed. The focus of this report is on the industrial and residential markets as these are the ones with the greatest opportunity for growth.

The findings in this report reflect our review of industry research, our own analysis, and phone interviews conducted with employees of Cushman Wakefield, Colliers, NAI Hiffman, JLL, Avison Young, and CenterPoint familiar with Will County, as well as multiple residential realtors or sales agents.

Incorporating Uncertainty from COVID-19

At the time of this writing, there is considerable uncertainty about the economy and real estate market nationally, regionally and locally. The full impacts will not be known until the pandemic ends. Whether this will result in a prolonged recession, how long it will take businesses to ramp up again, and how quickly individuals will get back to work will determine the short-term impacts. Long term impacts are difficult to predict.

The pandemic strongly impacts the retail industry, which had problems prior to the virus outbreak. Homebuilding will be affected depending on how long unemployment and furloughs last and how long it takes for buyers to recoup the losses to their savings for a down payment. Absent government intervention, communities may see a wave of mortgage defaults once more. The rental market will be disrupted short-term, as tenants may not be able to afford their rents and will seek less expensive options. During the prior recession, those who lost their homes to foreclosure became renters, which increased rental demand.

The industrial market in the Land Use Study Area (LUSA) is heavily dependent on transportation and logistics, including warehouses for e-commerce. While some shipments have been reduced, demand for food and other staples has increased, and demand may exist for flexible warehouse space to meet unpredictable logistics needs. We expect that the shake-out in the retail industry will continue, resulting in continued demand for large warehouses and the intermodal facilities in the LUSA.

Major Opportunity Areas

The Land Use Existing Conditions Report suggests 8 Major Opportunity Areas based on 6 criteria, including 2 opportunity areas selected for near term change. The criteria are:

- Proximity to major transportation corridors, including I-55, I-80, and IL-53
- Proximity to major economic anchors
- Significant contiguous land for new development and infill opportunities
- Proximity to existing municipal incorporated areas and existing infrastructure
- Potential to protect waterways including Jackson Creek, Des Plaines River, and DuPage River

Major Opportunity Areas

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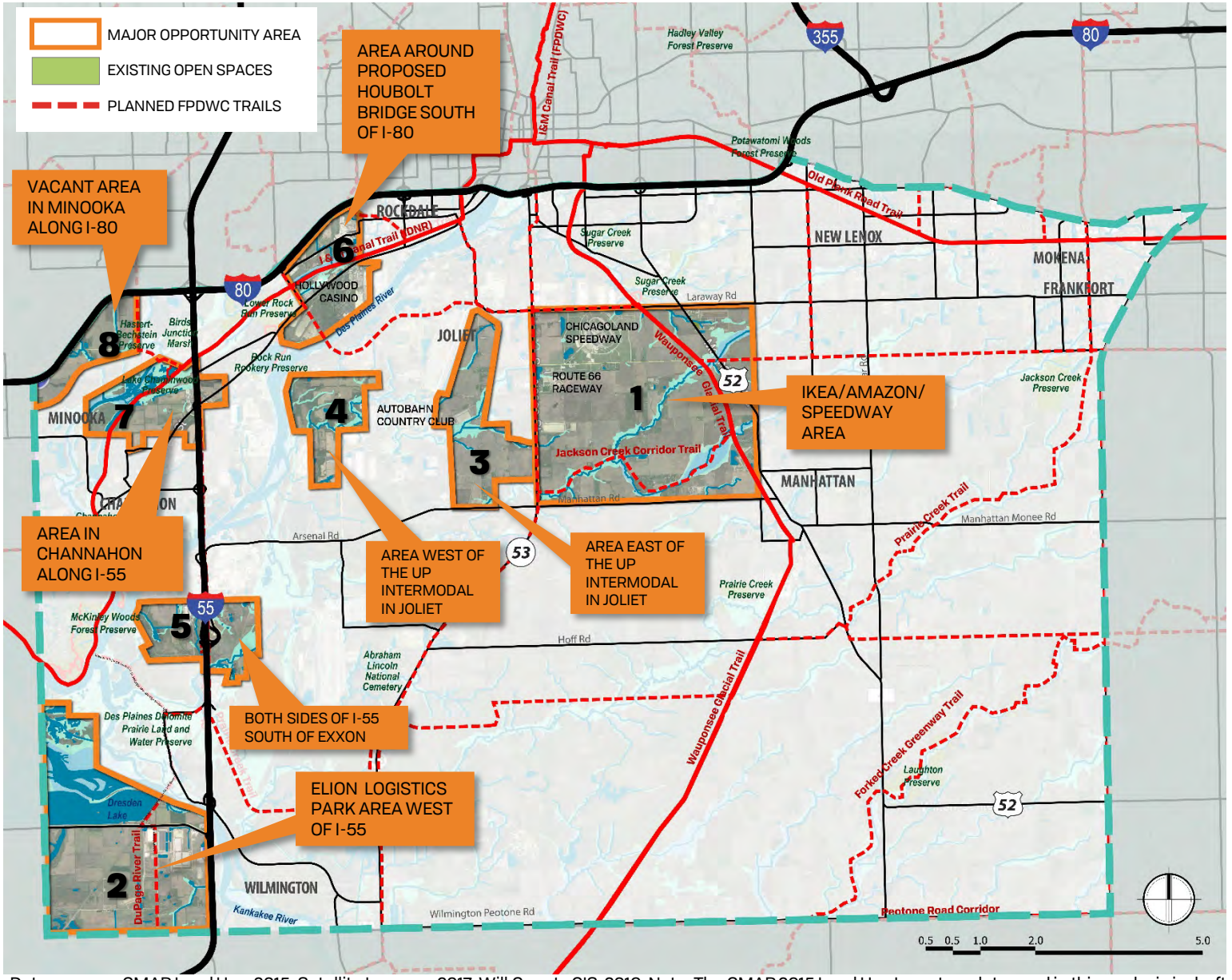


8 Major Opportunity Areas are suggested based on the following criteria:

- **PROXIMITY TO MAJOR TRANSPORTATION CORRIDORS, INCLUDING I-55, I-80 AND IL 53.**
- **PROXIMITY TO MAJOR ECONOMIC ANCHORS**
- **SIGNIFICANT CONTIGUOUS LAND FOR NEW DEVELOPMENT AND INFILL OPPORTUNITIES**
- **PROXIMITY TO EXISTING MUNICIPAL INCORPORATED AREAS AND EXISTING INFRASTRUCTURE**
- **POTENTIAL TO PROTECT WATERWAYS INCLUDING JACKSON CREEK, DES PLAINES RIVER AND DUPAGE RIVER**
- **OPPORTUNITIES TO IMPLEMENT FPDWC PLANNED TRAIL CORRIDORS, INCLUDING THE IL 53, JACKSON CREEK AND DUPAGE RIVER TRAIL CORRIDORS**

Data sources: CMAP Land Use, 2015; Satellite Imagery, 2017; Will County GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

- Opportunities to implement Forest Preserve District of Will County (FPDWC) planned trail corridors, including the IL-53, Jackson Creek, and DuPage River Trail corridors

The above-described criteria are compatible with market factors that influence where development occurs. Specifically, locations within 3 miles of I-80 and I-55 (preferably within 1 mile) are most attractive in general for industry in the LUSA, while proximity to IL-53 is also attractive for companies' regional distribution networks.

Companies like IKEA and Amazon are major economic anchors, users that tend to predict what places will be attractive to other companies looking for similar locational attributes. Major economic anchors also include infrastructure important to industry, especially the UP and BSNF intermodal facilities in Joliet and Elwood.

To site the 1 million square foot industrial buildings demanded in the LUSA, developers need 50 contiguous acres. Many also need proximity to labor leading them to infill sites closer to existing concentrations. Some existing parks have "pad-ready" sites to meet these needs. As development progresses, infill sites with good access to labor become more scarce, leading developers to seek land elsewhere. To avoid land use conflict and negative impacts from trucking and traffic congestion, it makes economic sense to steer development demand to opportunity areas that match the criteria listed above.

Summary of Findings

The Land Use Study Area is growing in both population and employment, and this trend is projected to continue, though most likely at a slower rate than it has since the end of the recession.

The area is most known regionally as the major transportation and logistics hub for the greater Chicago region and the Midwest with two major intermodal facilities. This has created conflicts between residents and industry relative to truck traffic, congestion and pollution. The purpose of this report is to provide data and analysis that can be used to develop recommendations for mitigating these conflicts through the Truck Routing Study and to develop scenarios for future land use that address the needs of residents, businesses, property owners and government.

Industrial space grew by 82% in the LUSA in the past ten years to well over 55 million square feet. While the industrial vacancy rate was higher at the end of 2018 (14.8%) than it had been over the prior three years, it dropped to 13.0% by the end of 2019. A tight market in 2016 led to overbuilding over the next two years, though there is still a large amount of interest in leasing and owning these warehouses, particularly from third party logistics companies (3PL), major retailers (Walmart, Target, IKEA, etc.) and e-commerce companies such as Amazon.

Residential development has picked up since the end of the recession with almost 1,800 housing units added between 2014 and 2018, 88% of which was single-family homes. New builders took over dormant subdivisions that were stalled by the recession and built new product that has sold well if priced at entry to middle market prices.

At this time, there are more than 1,200 approved but unbuilt lots with infrastructure in Manhattan and more than 2,100 approved without infrastructure (assuming the village's typical residential density). However, concern over industrial development west of US-52 has raised concerns over the future marketability of homes west of Cedar Road. This impacts existing homes as well as new construction.

There is only one small subdivision in Joliet in the LUSA with unbuilt lots and none in Elwood. There are also subdivisions in Channahon not yet built out, as well as extensive land for future residential growth.

Based on short-term projections by demographic data provider Esri and extrapolating CMAP's Will County 2050 projections to the LUSA, we estimate demand for 13,500 residential units, or 468 per year on average by 2050. Of these, the annual average number of owner-occupied units is 305 and the number of rental units is 163. Given the very limited supply of rental units in the LUSA and the need for workforce housing to meet employment needs, we estimate that the rental share will increase from its current 18% to 25%. This will require zoning changes on the part of municipalities, which currently have almost all residential land zoned for single-family housing.

Since the market for retail development will follow the increase in rooftops, future retail demand will be dictated by the pace of residential development. The LUSA and southwestern Will County are not significant office locations within the Chicago region. Other than office space to serve the local population, such as medical and service businesses, office development will play a minor role in future development in the LUSA.

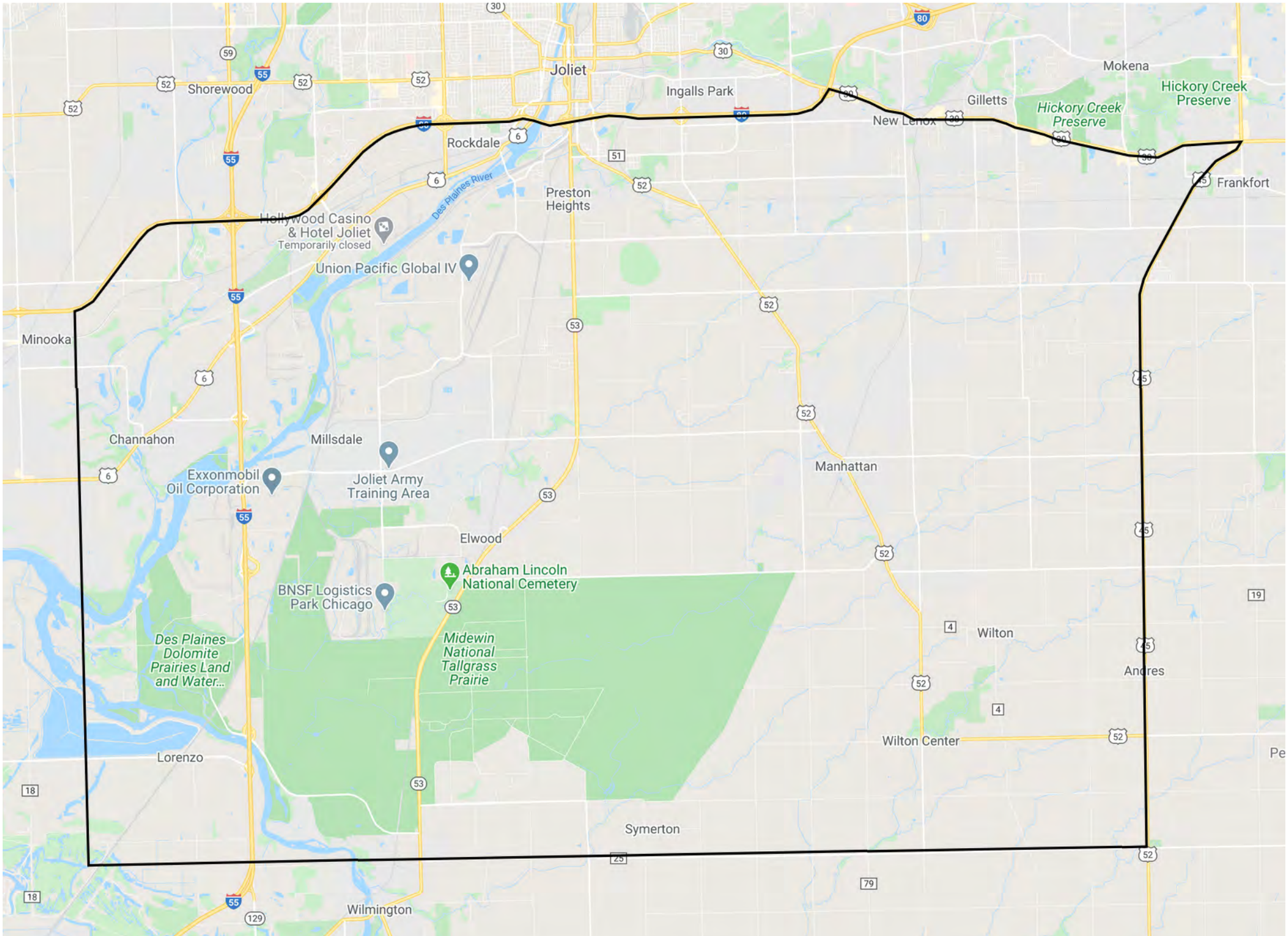
OVERVIEW OF STUDY AREA

The LUSA is in southwestern Will County and includes all or portions of Joliet, Elwood, Manhattan, Channahon, Minooka, Wilmington, Rockdale, New Lenox, Mokena, Frankfort, and Symerton. It is bounded by I-80 and Route 30 on the north, the Will - Cook County line on the east, Wilmington-Peotone Road on the south and the Will - Grundy county line on the west. It covers approximately 242 square miles, 51% of which (124 square miles) is agricultural.

Of these 124 square miles, nearly 93% is currently unincorporated. Other major uses include large industrial parks, two intermodal facilities, single-family residential neighborhoods, and publicly owned open space and natural resources, most notably the Midewin National Tallgrass Prairie and the Abraham Lincoln National Cemetery.

A map of the area is on the following page.

Moving Will County Land Use Study Area



Source: Kretchmer Associates

Kretchmer Associates

DEMOGRAPHICS AND EMPLOYMENT

Population and Households

Table 1 shows the population and household trends in the Land Use Study Area and Will County from 2000 and projected to 2024 based on the U.S. Census and estimates and projections by Esri, a demographic data vendor. The LUSA registered a major increase in both population and households (30-32%) between 2000 and 2010 with significant growth prior to the recession.

New residential development stalled after the recession but started up again in the middle of the decade. As such, both population and households experienced an 8% increase between 2010 and 2019 and are projected to increase by another 5% over the next five years. (Note that these projections pre-date the COVID-19 outbreak.)

Will County's growth was even higher prior to the recession with population and household growth of 34-35% between 2000 and 2010. Both grew, but at a much lower rate of 4% between 2010 and 2019, with projected growth of 3% by 2024.

Both the LUSA and county are characterized by households with children. Twenty percent of the LUSA's population is under 15; in the county the share is higher at 22%. Approximately 13% of residents in both the Land Use Study Area and county are senior citizens. Thirty-seven percent of the LUSA's population is ages 25-54, lower than the county's 41%.

The median age is higher in the LUSA at 38.9 years than in the county overall (36.9 years).

Household Income

The median household income in the LUSA is estimated at $90,843, 8% higher than the county's $83,997. Almost 23% of households in the LUSA and 27% in the county have incomes under $50,000, the level that generally equates to 60% of the Area Median Income or AMI in the Chicago metropolitan area.

On the upper end, 45% of the LUSA's and 41% of the county's households have incomes over $100,000, with 8-9% over $200,000. The median incomes are projected to increase by 11% over the next five years. Table 2 shows the income distribution and projection for 2024.

Households by Age and Income

Almost 20,000 households in the LUSA or 78% are under 65. By 2024, the number is projected to grow very slightly by only 0.4%.

The number of senior households is projected to increase by 19%, consistent with the aging of the Baby Boomer population.

The most significant increases will be among those headed by a household 25-44, 65-74 and 75+ years of age. The 25-44-year-old cohort includes young families with children. Table 3 shows these trends.

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Table 1

POPULATION CHARACTERISTICS
LAND USE STUDY AREA AND WILL COUNTY

	Land Use Study Area		Will County	
	Number	Percent	Number	Percent
Population				
2000 Census	54,325		502,288	
2010 Census	70,348		677,560	
Change, 2000-2010	16,023	29.5%	175,272	34.9%
2019 Estimated	75,815		706,224	
Change, 2010-2019	5,467	7.8%	28,664	4.2%
2024 Projected	79,332		725,533	
Change, 2019-2024	3,517	4.6%	19,309	2.7%
Households				
2000 Census	17,937		167,550	
2010 Census	23,683		225,256	
Change, 2000-2010	5,746	32.0%	57,706	34.4%
2019 Estimated	25,649		235,135	
Change, 2010-2019	1,966	8.3%	9,879	4.4%
2024 Projected	26,856		241,806	
Change, 2019-2024	1,207	4.7%	6,671	2.8%
Average Household Size, 20	2.93		2.96	
Population by Age, 2019				
Under 5	4,496	5.9%	46,684	6.6%
5-14	11,020	14.5%	105,673	15.0%
15-24	9,323	12.3%	88,883	12.6%
25-34	9,160	12.1%	93,241	13.2%
35-44	10,185	13.4%	99,032	14.0%
45-54	10,998	14.5%	98,080	13.9%
55-64	10,479	13.8%	85,769	12.1%
65-74	6,402	8.4%	55,168	7.8%
75-84	2,714	3.6%	24,302	3.4%
85+	1,038	1.4%	9,392	1.3%
Median Age, 2019	38.9		36.9	

Source: Esri

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Table 2

INCOME CHARACTERISTICS
LAND USE STUDY AREA AND WILL COUNTY

	Land Use Study Area		Will County	
	Number	Percent	Number	Percent
2019 Household Distribution	25,649		235,135	
Under $15,000	1,180	4.6%	13,645	5.8%
$15,000-24,999	1,322	5.2%	14,548	6.2%
$25,000-34,999	1,251	4.9%	13,610	5.8%
$35,000-49,999	2,087	8.1%	21,006	8.9%
$50,000-74,999	4,200	16.4%	39,548	16.8%
$75,000-99,999	3,987	15.5%	35,290	15.0%
$100,000-149,999	6,088	23.7%	50,557	21.5%
$150,000-199,999	3,330	13.0%	27,360	11.6%
$200,000+	2,204	8.6%	19,571	8.3%
Median Household Income	$90,843		$83,997	
2024 Household Distribution	26,856		241,806	
Under $15,000	1,060	3.9%	11,967	4.9%
$15,000-24,999	1,189	4.4%	12,833	5.3%
$25,000-34,999	1,083	4.0%	11,944	4.9%
$35,000-49,999	1,884	7.0%	18,939	7.8%
$50,000-74,999	4,062	15.1%	38,065	15.7%
$75,000-99,999	3,968	14.8%	35,075	14.5%
$100,000-149,999	6,684	24.9%	55,679	23.0%
$150,000-199,999	4,269	15.9%	34,395	14.2%
$200,000+	2,657	9.9%	22,909	9.5%
Median Household Income	$100,811		$93,045	

Note: Numbers may not sum to given totals due to rounding.

Source: Esri

Table 3

HOUSEHOLDS BY AGE
LAND USE STUDY AREA

	2019		2024		Change	
	Number	Percent	Number	Percent	Number	Percent
Households by Age	25,650		26,857		1,207	4.7%
Age 15-24	307	1.2%	293	1.1%	-14	-4.6%
Age 25-34	3,283	12.8%	3,548	13.2%	265	8.1%
Age 35-44	4,930	19.2%	5,308	19.8%	378	7.7%
Age 45-54	5,662	22.1%	5,283	19.7%	-379	-6.7%
Age 55-64	5,693	22.2%	5,529	20.6%	-164	-2.9%
Total Under 65	19,875	77.5%	19,961	74.3%	86	0.4%
Age 65-74	3,716	14.5%	4,321	16.1%	605	16.3%
Age 75+	2,059	8.0%	2,575	9.6%	516	25.1%
Total 65+	5,775	22.5%	6,896	25.7%	1,121	19.4%

Source: Esri

Table 4 shows the household income distribution for those under 65 and 65+ years of age. Among those under 65, 18% have incomes below $50,000, while 40% of those 65+ are in this category.

Seniors often have lower incomes than younger households since most are no longer working. However, 18% of seniors in the LUSA have incomes under $25,000, indicating a significant number of very low-income households. In contrast, only 7% of households under 65 are very low-income.

The number of households under 65 with incomes under $100,000 is projected to decrease, while the number with incomes over $100,000 is projected to increase by 2024. This is due to the assumed increase in household incomes. The number of households 65+ is projected to increase for all income groups except for those under $25,000.

Household Size and Type

The LUSA is fairly evenly split between small (1-2 person) and larger (3+-person) households. Over 75% are considered family households as shown in Table 5.

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Table 4

HOUSEHOLDS BY AGE AND INCOME
LAND USE STUDY AREA

	2019		2024		Change	
	Number	Percent	Number	Percent	Number	Percent
Household Income - Under Age 65						
$0-$14,999	735	3.7%	621	3.1%	-114	-15.5%
$15,000-$24,999	729	3.7%	602	3.0%	-127	-17.4%
$25,000-$34,999	728	3.7%	556	2.8%	-172	-23.6%
$35,000-$49,999	1,325	6.7%	1,081	5.4%	-244	-18.4%
$50,000-$74,999	2,876	14.5%	2,533	12.7%	-343	-11.9%
$75,000-$99,999	3,158	15.9%	2,935	14.7%	-223	-7.1%
$100,000-$149,999	5,370	27.0%	5,658	28.3%	288	5.4%
$150,000-$199,999	2,981	15.0%	3,698	18.5%	717	24.1%
$200,000+	1,973	9.9%	2,277	11.4%	304	15.4%
Household Income - Age 65+						
$0-$14,999	444	7.7%	439	6.4%	-5	-1.1%
$15,000-$24,999	594	10.3%	587	8.5%	-7	-1.2%
$25,000-$34,999	523	9.1%	528	7.7%	5	1.0%
$35,000-$49,999	764	13.2%	804	11.7%	40	5.2%
$50,000-$74,999	1,325	22.9%	1,529	22.2%	204	15.4%
$75,000-$99,999	828	14.3%	1,033	15.0%	205	24.8%
$100,000-$149,999	718	12.4%	1,026	14.9%	308	42.9%
$150,000-$199,999	348	6.0%	570	8.3%	222	63.8%
$200,000+	231	4.0%	380	5.5%	149	64.5%

Source: Esri

Table 5

HOUSEHOLD CHARACTERISTICS
LAND USE STUDY AREA

	Number	Percent
Households by Size	25,468	
1 Person	5,259	20.6%
2 Person	7,746	30.4%
3 Person	4,500	17.7%
4 Person	4,559	17.9%
5 Person	2,339	9.2%
6 Person	675	2.7%
7 + Person	390	1.5%
Households by Type		
Non-Family Households	6,207	24.4%
Family Households	19,261	75.6%

Note: Due to data availability, Land Use Study Area approximated using Census tracts.

Source: US Census, American Community Survey 2014-2018

ON TO 2050 Projections

CMAP projections for 2050 show Will County's population increasing by 58% from 2010 to 2050 for an annual average of 1.4% as shown in Table 6. With Esri's 2019 population estimate of 706,200 (as shown above), the average annual increase from 2019-2050 equates to 1.6% or 11,300.

Translating this increase to households based on an average 2019 household size of 2.96 persons, the average annual household growth from 2019-2050 is projected at 1.7% or 3,900. This is 3.4 times higher than the estimated 2010-2019 average household growth of 0.5%.

Should these projections occur, there will be significant demand countywide for new housing. With areas to the north in Will County more built out, it is likely that the Land Use Study Area could grow at a higher rate depending on residential land availability and industrial development patterns.

Table 6

WILL COUNTY POPULATION AND HOUSEHOLDS
2010-2050

	Population	Change
CMAP Projection		
2010	669,013	
2015	678,149	
2050	1,056,213	
2010-2050 Change	387,200	58%
2010-2050 Average Annual Change	9,680	1.4%
Esri Population Estimate		
2019	706,224	
Change 2019-2050	349,989	50%
2019-2050 Average Annual Change	11,290	1.6%
Estimated Households 2019-2050		
2019 Average Household Size	2.96	
2019 Households	235,135	
2050 Households	356,829	
Change 2019-2050	121,694	52%
Average Annual Household Change	3,926	1.7%

Source: CMAP, ON TO 2050 Socioeconomic Forecast Appendix, Esri, Kretchmer Associates.

Jobs and Businesses by Industry

The total mix of jobs as of 2017 (according to the U.S. Census' Longitudinal Employer Household Dynamics program) shows that 48% of employees in the LUSA earned more than $40,000, but 20% earned less than $15,000. In the decade from 2008-2017, employment in the LUSA grew by 11,300 or 47% and 51% of these new employees earned more than $40,000 per year.

Although some positions in these industries are not tied to industrial real estate, enough are that we consider Utilities, Construction, Manufacturing, and Transportation and Warehousing to be industrial for this purpose. As of 2017, 41% of jobs in the LUSA (14,500 jobs) were in these four sectors, higher than the share of Will County's jobs in the same industries (22%). The LUSA accounts for only 14% of the county's total jobs but 26% of its jobs in these sectors. Manufacturing had the largest number of jobs (5,400), followed by Transportation and Warehousing (4,600).

These industrial sectors have seen steady growth since 2009 with a spike in 2016. The number of jobs in Transportation and Logistics increased 66%, while manufacturing jobs declined by 4%. Tables showing jobs located in the LUSA (at-place employment) and resident employment by industry follow.

The vast majority (30,500 or 78%) of employed residents living in the LUSA do not work in these industrial sectors. The largest single employment sectors in 2017 were Health Care and Social Assistance, Educational Services, and Retail Trade, though these are followed by Manufacturing.

Major Employers

The largest employer in the LUSA is Amazon in Joliet, with approximately 3,500 employees. Other major employers include Walmart, BNSF, Stepan (a chemical manufacturer), and Georgia Pacific (paper) in Elwood; ExxonMobil (refinery) and Bunge Loders Croklaan (global vegetable oils and fats manufacturer) in Channahon; Michaels (crafts) in New Lenox; Meijer in Mokena; and Michelin in Wilmington. The number of companies by industry in the LUSA appears in Table 9, while estimated jobs at these employers appear in Table 10.

Commuting Trends

Only 14% of employees both live and work in the LUSA. A plurality of those who work in the LUSA live in Joliet (14% or 4,900 people). Chicago is home to 6% of workers (2,300), New Lenox to 4% (1,500), Channahon to 3% (900), and Manhattan to 2% (700). Other home locations for over 400 LUSA workers each are: Tinley Park, Crest Hill, Minooka, Shorewood, Frankfort, Lockport, Bolingbrook, Mokena, Orland Park, Wilmington, Morris, Plainfield, and Romeoville.

Over ¼ of LUSA residents work in Chicago (4,200 or 11%), Joliet (3,800 or 10%), or New Lenox (2,400 or 6%). Over 1,000 LUSA residents each commute to Frankfort or Mokena, while over 400 each travel to: Orland Park, Tinley Park, Bolingbrook, Naperville, Channahon, Aurora, Downers Grove, Romeoville, Minooka, Plainfield, Manhattan.

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Table 7

JOBS LOCATED IN THE LAND USE STUDY AREA

NAICS	Industry	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		Change	
											Number	Percent	Number	Percent
	All	**24,244**	**24,834**	**25,080**	**26,950**	**26,901**	**28,508**	**28,573**	**29,828**	**32,894**	**35,583**	**100.0%**	**11,339**	**39.8%**
11	Agriculture, Forestry, Fishing, and Hunting	54	48	69	45	59	49	54	71	69	55	0.2%	1	2.0%
21	Mining	93	91	79	99	88	66	84	97	140	119	0.3%	26	39.4%
22	**Utilities**	**763**	**777**	**800**	**1,575**	**1,727**	**1,679**	**1,710**	**1,815**	**1,747**	**1,657**	**4.7%**	894	**53.2%**
23	**Construction**	**2,793**	**2,492**	**2,793**	**1,965**	**2,013**	**2,305**	**2,758**	**2,844**	**3,197**	**2,855**	**8.0%**	62	**2.7%**
31-33	**Manufacturing**	**4,695**	**4,361**	**5,624**	**5,593**	**5,422**	**5,336**	**5,215**	**5,267**	**5,325**	**5,392**	**15.2%**	697	**13.1%**
42	Wholesale Trade	1,365	1,934	1,847	2,071	2,000	2,212	2,178	2,355	2,321	5,866	16.5%	4,501	203.5%
44-45	Retail Trade	1,625	1,688	1,817	2,224	1,976	1,922	1,942	2,321	2,526	2,754	7.7%	1,129	58.7%
48-49	**Transportation and Warehousing**	**2,784**	**2,833**	**2,826**	**3,546**	**3,669**	**4,095**	**4,396**	**4,109**	**5,679**	**4,638**	**13.0%**	1,854	**45.3%**
51	Information	131	133	274	238	194	216	220	213	204	198	0.6%	67	31.0%
52	Finance and Insurance	492	486	508	563	557	706	651	488	443	424	1.2%	-68	-9.6%
53	Real Estate Rental and Leasing	171	159	123	138	154	206	236	292	271	318	0.9%	147	71.4%
54	Professional, Scientific, and Technical Services	731	790	775	902	929	809	803	844	858	855	2.4%	124	15.3%
55	Management of Companies and Enterprises	22	12	20	10	29	41	34	21	5	4	0.0%	-18	-43.9%
56	Administrative and Support and Waste Management and Remediation Services	731	954	798	1,062	1,518	1,752	1,453	1,448	1,462	1,552	4.4%	821	46.9%
61	Educational Services	1,417	1,602	1,125	1,121	1,066	1,067	1,084	1,275	1,294	1,221	3.4%	-196	-18.4%
62	Health Care and Social Assistance	1,824	1,985	1,095	1,209	1,153	1,348	1,359	1,658	2,670	2,706	7.6%	882	65.4%
71	Arts, Entertainmen, and Recreation	1,737	1,552	1,421	1,581	1,587	1,500	1,240	1,317	1,190	1,211	3.4%	-526	-35.1%
72	Accommodations and Food Services	1,388	1,527	1,492	1,506	1,268	1,360	1,386	1,594	1,779	1,917	5.4%	529	38.9%
81	Other Services (except Public Administration)	927	889	1,022	951	930	1,263	1,176	1,131	1,123	1,264	3.6%	337	26.7%
92	Public Administration	501	521	572	551	562	576	594	668	591	577	1.6%	76	13.2%

Source: U.S. Census, Longitudinal Employer Household Dynamics Program

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Table 8

EMPLOYEES LIVING IN THE LAND USE STUDY AREA

NAICS	Industry	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		Change	
											Number	Percent	Number	Percent
	All	**34,745**	**32,794**	**33,433**	**36,579**	**37,086**	**37,282**	**38,130**	**38,660**	**39,166**	**39,169**	**100.0%**	**4,424**	**11.9%**
11	Agriculture, Forestry, Fishing, and Hunting	50	64	62	59	56	49	54	59	72	54	0.1%	4	8.2%
21	Mining	33	30	45	40	36	28	33	35	31	38	0.1%	5	17.9%
22	**Utilities**	**279**	**354**	**342**	**397**	**450**	**451**	**438**	**481**	**430**	**409**	**1.0%**	130	**28.8%**
23	**Construction**	**2,639**	**2,201**	**1,990**	**2,026**	**2,080**	**2,080**	**2,310**	**2,576**	**2,580**	**2,712**	**6.9%**	73	**3.5%**
31-33	**Manufacturing**	**4,201**	**3,567**	**3,508**	**3,815**	**3,805**	**3,765**	**3,676**	**3,578**	**3,706**	**3,615**	**9.2%**	-586	**-15.6%**
42	Wholesale Trade	1,934	1,869	1,810	1,986	2,024	2,047	2,109	2,063	2,129	2,219	5.7%	285	13.9%
44-45	Retail Trade	3,815	3,626	3,748	4,247	4,151	4,006	4,063	4,125	4,233	4,109	10.5%	294	7.3%
48-49	**Transportation and Warehousing**	**1,528**	**1,387**	**1,388**	**1,610**	**1,642**	**1,711**	**1,738**	**1,795**	**1,940**	**1,902**	**4.9%**	374	**21.9%**
51	Information	605	580	661	643	604	615	650	583	629	569	1.5%	-36	-5.9%
52	Finance and Insurance	1,416	1,376	1,488	1,499	1,481	1,451	1,477	1,456	1,465	1,531	3.9%	115	7.9%
53	Real Estate Rental and Leasing	413	379	385	425	427	448	488	437	461	483	1.2%	70	15.6%
54	Professional, Scientific, and Technical Services	1,817	1,776	1,812	2,021	2,022	2,149	2,204	2,276	2,267	2,282	5.8%	465	21.6%
55	Management of Companies and Enterprises	382	365	412	464	473	418	478	465	415	392	1.0%	10	2.4%
56	Administrative and Support and Waste Management and Remediation Services	1,964	1,546	1,761	1,989	2,129	2,112	2,269	2,231	2,263	2,341	6.0%	377	17.9%
61	Educational Services	3,387	3,719	4,007	4,266	4,220	4,414	4,470	4,443	4,436	4,417	11.3%	1,030	23.3%
62	Health Care and Social Assistance	4,229	4,087	4,098	4,674	4,890	4,825	4,856	5,103	5,189	5,009	12.8%	780	16.2%
71	Arts, Entertainmen, and Recreation	881	865	871	964	957	928	902	893	920	959	2.4%	78	8.4%
72	Accommodations and Food Services	2,500	2,400	2,200	2,505	2,655	2,690	2,722	2,889	2,899	2,966	7.6%	466	17.3%
81	Other Services (except Public Administration)	1,199	1,166	1,215	1,282	1,323	1,386	1,448	1,437	1,491	1,517	3.9%	318	22.9%
92	Public Administration	1,473	1,437	1,630	1,667	1,661	1,709	1,745	1,735	1,610	1,645	4.2%	172	10.1%

Source: U.S. Census, Longitudinal Employer Household Dynamics Program

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Table 9

COMPANIES LOCATED IN THE LAND USE STUDY AREA AND WILL COUNTY (2019)

NAICS	Industry	Land Use Study Area		Will County	
		Number	Percent	Number	Percent
	All	2,235	100.0%	19,205	100.0%
11	Agriculture, Forestry, Fishing, and Hunting	11	0.5%	60	0.3%
21	Mining	11	0.5%	25	0.1%
22	**Utilities**	**5**	**0.2%**	**26**	**0.1%**
23	**Construction**	**296**	**13.2%**	**1,842**	**9.6%**
31-33	**Manufacturing**	**118**	**5.3%**	**818**	**4.3%**
42	Wholesale Trade	108	4.8%	738	3.8%
44-45	Retail Trade	238	10.6%	2,459	12.8%
48-49	**Transportation and Warehousing**	**119**	**5.3%**	**624**	**3.2%**
51	Information	29	1.3%	324	1.7%
52	Finance and Insurance	78	3.5%	931	4.8%
53	Real Estate Rental and Leasing	84	3.8%	727	3.8%
54	Professional, Scientific, and Technical Services	175	7.8%	1,671	8.7%
55	Management of Companies and Enterprises	3	0.1%	18	0.1%
56	Administrative and Support and Waste Management and Remediation Services	95	4.3%	861	4.5%
61	Educational Services	63	2.8%	580	3.0%
62	Health Care and Social Assistance	136	6.1%	1,801	9.4%
71	Arts, Entertainmen, and Recreation	52	2.3%	435	2.3%
72	Accommodations and Food Services	131	5.9%	1,339	7.0%
81	Other Services (except Public Administration)	301	13.5%	2,465	12.8%
92	Public Administration	77	3.4%	442	2.3%
99	Unclassified	104	4.7%	1,019	5.3%

Sources: Esri, Infogroup

Table 10

MAJOR EMPLOYERS IN THE LAND USE STUDY AREA

Employer	Municipality	Industry	Employees
Amazon	Joliet	Distribution - General Merchandise	3,500
Walmart	Elwood	Distribution - General Merchandise	900
BNSF	Elwood	Logistics - Rail	800
ExxonMobil	Channahon	Energy - Refinery	710
Stepan	Elwood	Manufacturing - Chemicals	450
Michaels	New Lenox	Distribution - Crafts	400
Georgia-Pacific	Elwood	Distribution - Paper	400
Bunge Loders Croklaan	Channahon	Manufacturing - Oils	325
Meijer	Mokena	Retail - Grocery	300
Michelin	Wilmington	Distribution - Tires	300

Note: Efforts were made to show the largest employers, but this list may not be comprehensive.
Source: Comprehensive Annual Financial Reports, ESRI Business Analyst

Unemployment Trends

COVID-19 has severely upended the economy and led to historic mass layoffs in March 2020. However, monthly labor force reports from the Illinois Department of Employment Security (IDES) do not yet reflect these layoffs, so available local statistics reflect the previous long run of near "full employment" nationwide.

As of January 2020, Will County's unemployment rate was 4%, an improvement of 1.1 percentage points over January 2019. The Chicago MSA's rate of 3.8% was similar and improved by the same scale over the previous year. Will County's rate in January was the same as Illinois and the nation.

The "Perma-Temp" System

The nature of warehouse employment has changed in modern retail and TDL industries in a trend that complicates the measurement of industry employment and also negatively impacts workers.

Warehouse Workers for Justice (WWJ) estimates that 70% of Chicagoland warehouses employ temporary employees rather than direct hires. According to the organization, many workers report that in suburban Will County it is impossible to find work anywhere other than at a staffing agency. For example, WWJ notes that workers at Walmart's Import Distribution Center in Elwood were split among 10 different employers until recently. Large companies like Walmart now employ layers of subcontractors, each competing to provide flexible labor at a low cost. These may be staffing companies themselves or third party logistics firms who subcontract while handling supply chains for other retailers and manufacturers.

Author and President Obama's head of the Department of Labor's Wage and Hour Division David Weil calls this phenomenon the "fissured workplace" and criticizes it for leaving many without fair wages, a career path, or a safe work environment.

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INDUSTRIAL MARKET TRENDS

Will County

According to CBRE, the global real estate brokerage firm, 4th quarter 2019 was the 38th consecutive quarter of positive net absorption in the Chicago industrial market, with a total of 12.5 million square feet absorbed for the year. Across the region, 48 tenants were searching for at least 50,000 square feet, totaling 19.4 million being actively sought.

According to CoStar data, Will County's industrial inventory grew from 135 million square feet in 2010 to 187 million square feet in 2019, a 38% increase (approximately 52 million square feet). This averages over 5 million square feet added to the market yearly (through Quarter 3) over the course of a decade.

Deliveries are a measure of when buildings under construction are completed and "delivered" to the market or to a contracted occupant. Deliveries through the third quarter peaked in 2017 with 12 million square feet, approximately twice the amount delivered in 2016 or 2018. Over 6 million square feet were delivered in 2018 and 2019 through the third quarter. Approximately 4 to 7 million square feet were absorbed (purchased or leased) each year in 2017-2019 through the third quarter, but this was not enough to keep up with the massive amount of finished construction.

This led vacancy to grow rapidly to 10.6% in 2018. By 2019, the rate fell below 10% as demand continued. The spike in vacancy was due to rapid growth in inventory that takes time be absorbed. The market is continuing to absorb large amounts of space, so developers continue to produce it. The addition of a handful of buildings can cause a large increase in the vacancy rate when each building is 1+ million square feet, as is the case in Will County.

Due to this rapid pace of newly constructed huge buildings, Will County's vacancy rate was much higher than the Chicago region's (3.6%) as of the third quarter of 2019. The County's share of the region's industrial inventory was 16% at year-end 2019, up from 12% in 2010 due to land availability and excellent highway access.

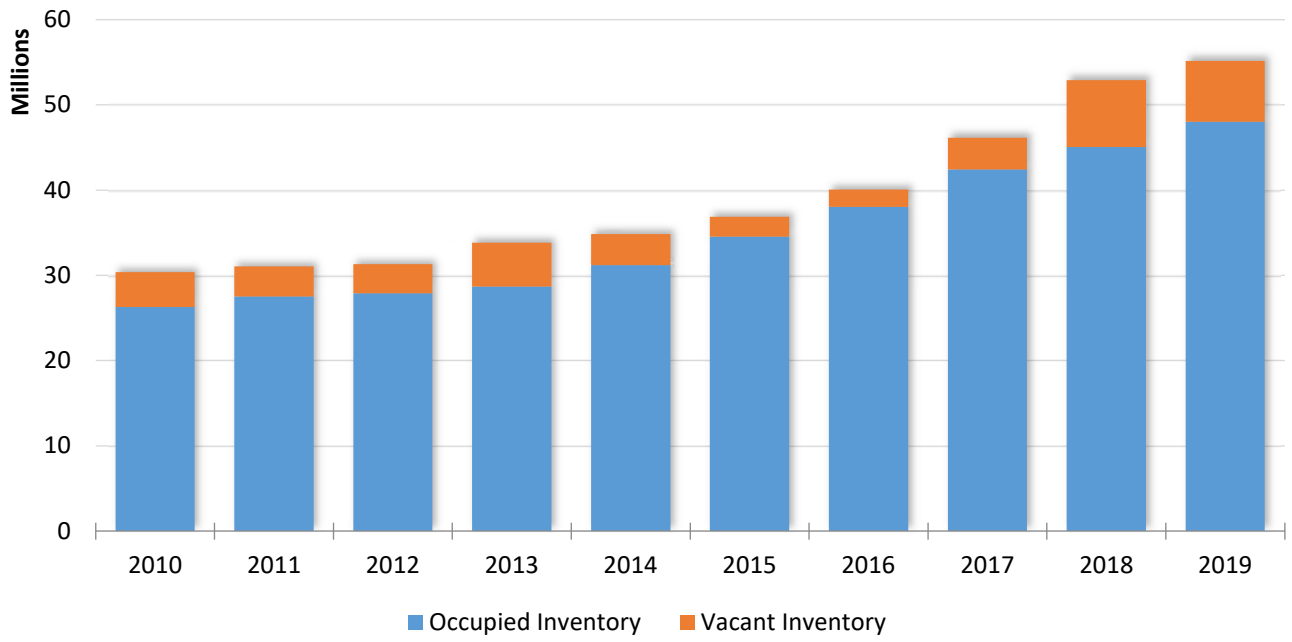
Land Use Study Area

The Land Use Study Area accounts for 29% of the county's industrial inventory. This is an increase from 22% in 2010. The LUSA's inventory has seen massive growth of 82% in 10 years. By the end of the third quarter of 2019, this inventory included 412 buildings with well over 55 million square feet total.

As in the County overall, the LUSA's vacancy rate increased sharply from 2016 to 2018 as new space was delivered. The rate increased from 5.1% to 14.8% in three years as 12 million square feet were delivered and 6 million were absorbed – approximately 34%. By 2019, deliveries slowed as new space had yet to fill up. The vacancy rate decreased by 1.8 percentage points over the previous year to 13.0% at year-end 2019. Charts showing these trends follow.

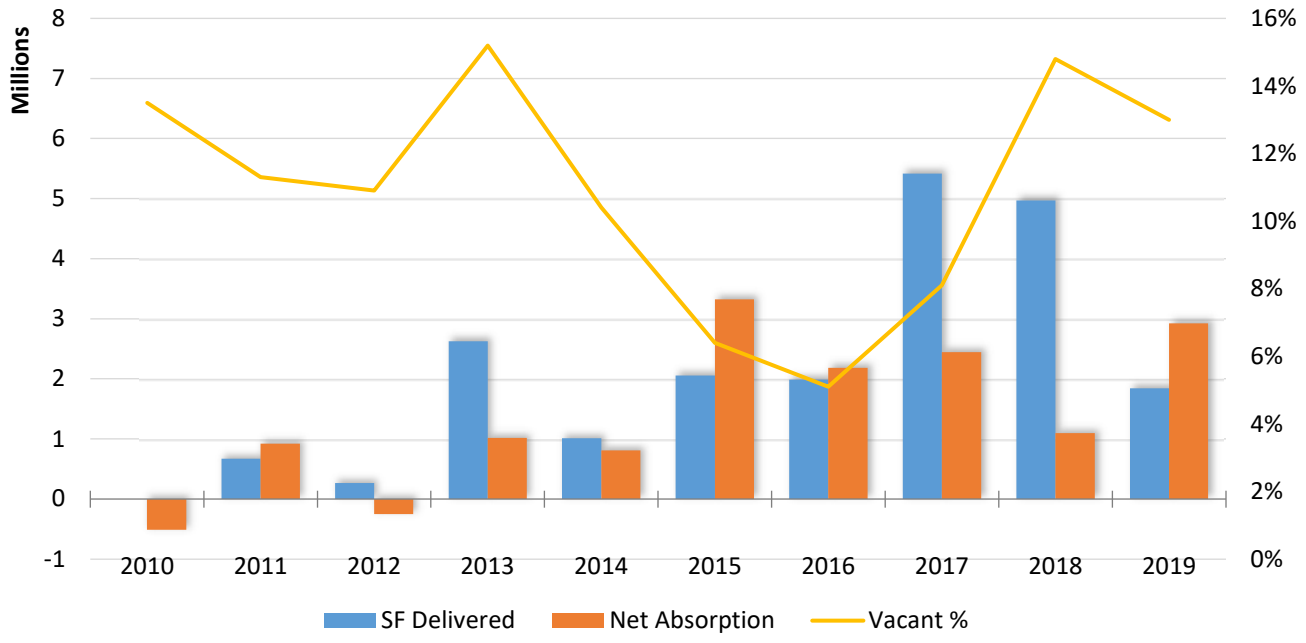
The average industrial rent increased from $3.85 per square foot in 2010 to $5.51 in 2019 in Will County and from $3.71 to $5.75 in the LUSA. This equates to a 14.8% increase in the LUSA and 11.2% in the County.

FIGURE 1 – LAND USE STUDY AREA OCCUPIED AND VACANCY INDUSTRIAL BUILDINGS



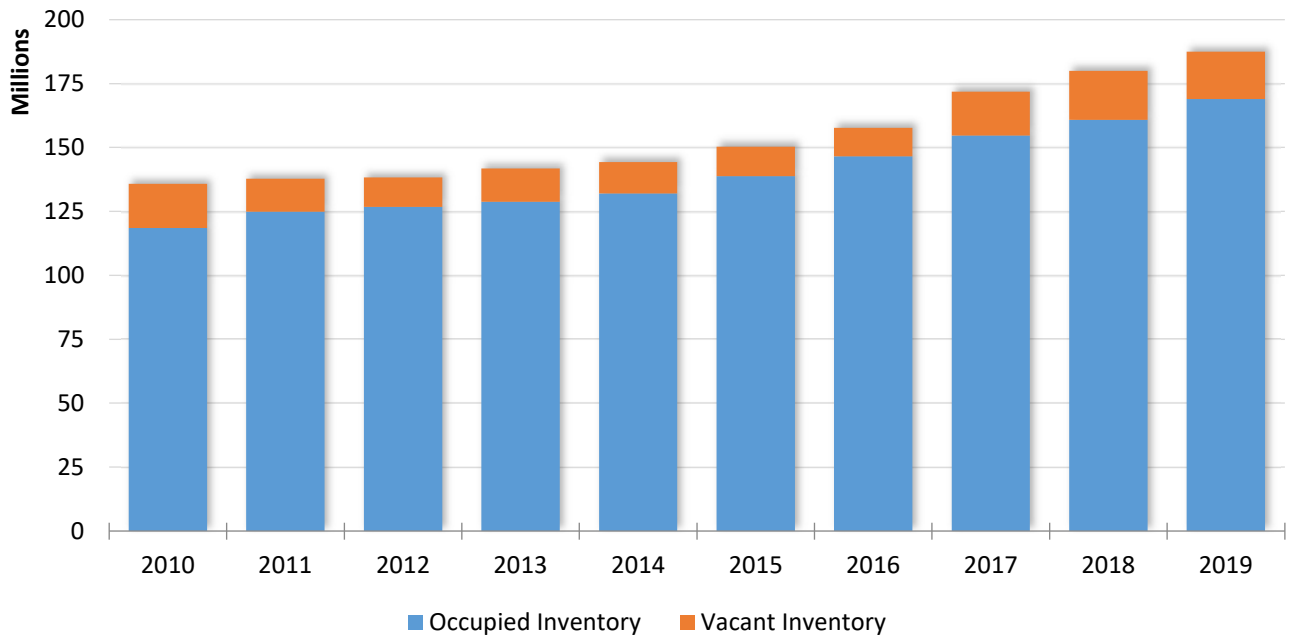
Source: CoStar

FIGURE 2 – LAND USE STUDY AREA INDUSTRIAL DELIVERIES AND ABSORPTION



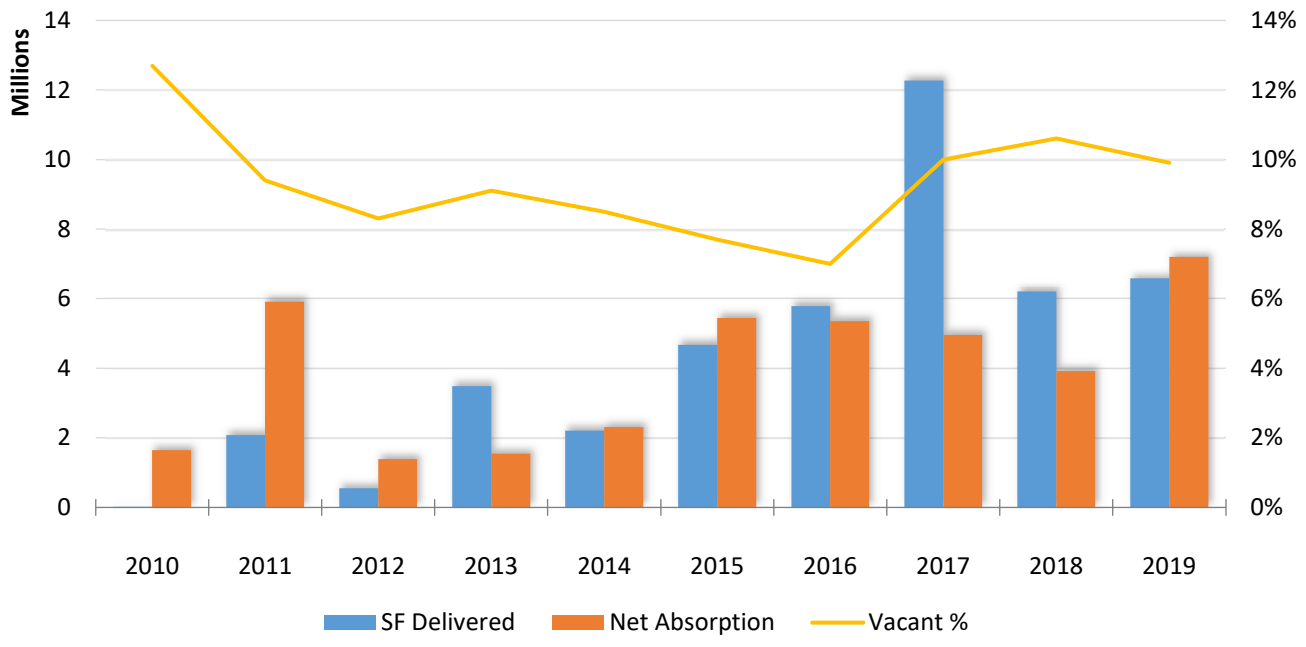
Source: CoStar

FIGURE 3 – WILL COUNTY OCCUPIED AND VACANT INDUSTRIAL BUILDINGS



Source: CoStar

FIGURE 4 – WILL COUNTY INDUSTRIAL DELIVERIES AND ABSORPTION



Source: CoStar

Agricultural Land Valuation

According to the Illinois Society of Professional Farm Managers & Rural Appraisers (ISPFMRA), the average sale price per acre of farmland of all qualities in Illinois peaked in 2013 at $6,079-$12,538 per acre for fair to excellent quality farmland and in 2014 for recreational land at $3,925. Statewide, farmers were 62% of buyers.

The ISPFMRA's 2018 Illinois Farm Values & Lease Trends report states that most activity over the last decade in "transitional tracts", or those being converted out of farming, has been "centered near Elwood's huge intermodal facility. Sales in the $20,000-$40,000 per acre range are the most common for industrial warehouses. There has been little activity of bare land being converted to residential. Most of the residential building has been on previously engineered or existing developed lots." These prices are well above the price per acre for farming.

Three large transitional sales in 2018 were in Will County. They were 32 acres at $10,147 per acre, 40 acres at $27,500 per acre, and 289 acres at $20,348 per acre. These prices make clear the strong incentive facing farmers considering selling their land for industrial development.

Factors Influencing the Industrial Market

Industrial real estate brokers and developers active in Will County at some of the nation's largest companies expect the current development trends to continue for the foreseeable future – at least 10 years (if not longer – some think 20+ years). Will County is perhaps the TDL center of the Chicago area, which is one of the nation's hottest industrial real estate markets.

The following market factors represent a distillation of these interviews and our analysis.

The strongest determinant for the development of TDL properties is proximity to I-55 and I-80, especially to one or more 4-way interchanges. These locations are the "hottest." Companies like Will County for lower real estate taxes and highway access (especially I-80) while retaining access to labor.

More than one mile from an interstate, market potential declines, prices are lower, the largest companies begin to fall off, and local companies doing smaller "deals" increase. But they do exist, notably along IL-53. Locations over 3 miles from an interstate are far less viable.

Users with high volume intermodal needs or overweight containers want to be "inside" CenterPoint's intermodal facility. Those focused more on regional distribution want to be within 10-15 miles of the intermodal, though up to 30 miles could be viable (as an absolute maximum).

Typical rents range from $3.24 per square foot NNN (what Target is paying) to $7 per square foot NNN for more sophisticated and expensive buildings. (NNN or "triple net" means that tenants pay their pro rata share of real estate taxes, building insurance and common area maintenance. In a gross lease, the landlord covers these expenses so the asking rent is higher, but uncommon in new buildings.)

Speculative developers also like Will County because even a vacant building can be sold to an investor, though this could change if investment preferences shift to another asset class.

There are relatively few rail users, so highways are more valuable to more companies – though Elwood and Joliet will strongly attract rail users compared

to Cook and DuPage counties. Most land along these corridors is already slated for development or is otherwise not in "play" e.g. developers "sitting" on it, restrictive zoning, etc. To be clear, much of this land is still vacant in the LUSA and could take a decade to fill, perhaps longer depending on the economy and barriers to developing other land. By comparison, in northern Will County (Bolingbrook/Romeoville), land for industry is closer to reaching true build-out.

For other developers looking to enter the market – those who don't already control existing parks or land planned for industrial – it is difficult to find the 50-100-acre sites required for these large buildings. This is why some developers are now pushing to develop land farther from highways and not served by rail, such as the area east of IL-53. They are willing to take big risks on resident opposition and on acquiring the intermodal access still needed to make this viable.

With intermodal access, large expanses of this "south central" Will County area should be marketable for industry over the next decade. Without intermodal access, significant industrial development east of IL-53 is not currently viable as drives to the intermodals approach 20 minutes. The route to the intermodals would be circuitous, and existing competitive sites in the LUSA have superior highway access. As more land fills up and expectations around highway proximity shift as a result, it is possible that in 10-20 years this calculation changes.

Smaller development could still occur east of IL-53 without intermodal access, since companies seeking regional distribution have more flexibility with interstate proximity and local highways. Even if large scale development does not occur, it will be important to implement a land use policy that avoids scattershot development, which can impact surrounding land uses.

Some companies need an intermodal location (i.e. CenterPoint) while others do not. Typical absorption at CenterPoint is 1-1.3 million square feet per year. According to the developer, the park has approximately 10 years of supply remaining (1,000 acres that could accommodate 13-15 million square feet more).

Some of the available land for development is currently used for container storage, while other parcels are not on the market. This allows some containers to stay on-site, but most are still leaving.

Drayage costs make locations farther away more expensive for companies using the intermodal heavily (perhaps 10-15% of users). For companies without heavy intermodal use or overweight containers, some say the rent is similar vs. other locations, while others see a 10-15% rent premium for locating at the intermodals.

Regardless, there are few incentives for light users to locate specifically at the intermodal, with increased traffic and more access restrictions presenting a disincentive for those seeking primarily regional distribution. Drayage costs for truckloads increase for companies not located at the intermodals – approximately $100 per container. However, for companies that are minimally dependent on rail, these costs are a small factor in locational decisions.

An additional cost of being farther from the intermodals is the time value of trucks waiting in traffic congestion. For example, Walmart and Home Depot have buildings at the intermodals because they have a large volume of containers coming straight from Los Angeles by train. Others include Harbor Freight and Saddle Creek (a large third party

logistics or 3PL company).

From a regional distribution standpoint (moving products from warehouse to store to customer), highway proximity is much more important than intermodal access. Therefore, CenterPoint's available land does not need to be absorbed by the market before other industrial land will be developed. If development occurs east of IL-53 with an intermodal connection, such development will still need to compete with CenterPoint on rates and amenities.

In the event a new CSX intermodal were to be built in Crete in southeastern Will County (locally approved, but now on hold), it should not impact the UP and BNSF intermodals in the LUSA much because CSX primarily serves the East Coast, while these other two intermodals mostly serve the West Coast and Texas.

For many companies, labor availability remains a strong motivation to locate in the north part of the LUSA, if not the more densely developed communities in northern Will County. The area most favorable for attracting labor is now north of Bluff Road to I-80 near I-55. (Availability of labor also drives companies to stay in Cook County despite higher taxes, though lower taxes in Will are attractive for investors.)

Some large companies may have dual facilities, with activities less dependent on labor farther from the more populous communities and other operations closer to the labor supply. For example, Amazon has both extremely large warehouses and smaller distribution facilities (250,000 square foot) throughout the region.

Elion in Wilmington is still seen as rather far for labor, though it benefits from being on I-55. This is one reason the developer emphasizes on-site amenities for workers and drivers.

Sites in Grundy County or those somewhat farther south along I-55 are near enough for regional distribution, and buildings have dramatically more trailer parking for the same price, so the economics may be similar. This makes more distant areas along the highways competitive for some users, though Grundy County is still considered a different market. However, these locations may still be too far for attracting enough labor.

Some companies' locational decisions come down to the particularities of their supply chain and business strategy. These approaches are proprietary and can be hard to predict, but they factor in (for example):

- Labor
- Transportation
- Sometimes neighbors
- Need for a pad-ready site with utilities vs. tolerance for raw land development
- Preference for a free-standing facility vs. locating in an industrial park.

The market in this subregion is for large buildings, not small "incubators," which are expensive to build on a per square foot basis. In Will County, building sizes, ceiling heights, and trailer parking have continued to grow. There is reportedly a shortage of "small" buildings with closer to 100,000 square feet and high ceilings (24'). Fortune 1000 companies have been moving forward with 350,000-650,000 square foot buildings or larger, but medium-sized companies have been more hesitant.

In neighboring Cook County and Northwest Indiana, there has been less new construction in recent decades so there may be fewer options between a very old building and a brand new one. Northwest

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Indiana tends to have lower fees and lower worker compensation costs (and lower taxes than Cook but not necessarily Will). But the location near highway and rail in Will County is a strong attractor.

Assorted other developing industry needs and trends include:

- Demand for more trailer storage, more parking, and larger sites for the same sized buildings to accommodate these.
- Freestanding trailer parking on "excess land" is a growing “asset class” due to new driver regulations dictating daily and monthly stopping times. These need 3-5 acres. Rates may be $20-$30/day or $350/month per truck. A high tax on trailer storage would stop this activity.
- TDL growth is driving growth in pallet companies, though this has historically been a strength of Chicago’s south suburbs more than the southwest ones.
- It may be easier to address driver shortages, fuel price fluctuations and other unknowns by locating at CenterPoint, since transportation costs are a large part of the total "bill". Any greater predictability could become more valuable during and after COVID-19.
- Higher buildings are more expensive both in building costs and in labor. Buildings with clear heights of 36-40' required higher skilled forklift operators and come with expensive fire regulations. The benefits are not there for every company or in more distant locations with a smaller labor pool.
- Verticality (multiple stories) is still rare and not being pursued with any amount of consistency to impact land use except in dense urban locations.
- Increasing automation could make farther locations more viable if it reduces labor reliance.
- While many companies have wanted the option of a site-level rail connection, many who have it reportedly do not use it. This is distinct from intermodals, which connect rail and road. Varying opinions suggest that effectively connecting rail-using companies with rail-served buildings is difficult in Will County.

Opportunity Area Market Factors for Near Term Change

Area 1

This area is bounded by Laraway Road on the north, Manhattan Road on the south, and IL-53 on the west and extends just east of US-52. It includes the industrial anchors IKEA, Amazon, and the existing Laraway Crossings industrial park at the north end. At the northeast corner of Laraway Road and IL-53, the park has 362 acres with a total buildout potential of 7 buildings and 5 million square feet. It should have land still available despite recent development. Chicagoland Speedway and Route 66 Raceway are also economic anchors.

While this location does not front on an interstate, it still offers good access to I-80 and IL-53 for companies to distribute goods regionally. It also benefits from proximity to labor in the northern portion of the LUSA.

Amazon occupies two buildings in Laraway Crossings. It opened its the first fulfillment center here in October 2015. The 500,000 square foot facility receives incoming orders and processes them, shipping out products in the region.

The second began as an almost 750,00 square foot speculative warehouse developed by Hillwood Investment Properties, expandable by another 312,000 square feet. This is a “high cube” building with 36-foot clear ceiling heights, deep truck courts, 76 high dock doors (expandable to 169),

drive-in doors, and parking for 154 cars and 72 trailers, also expandable. It also has advanced lighting, an ESFR sprinkler system, a reinforced roof, heavy dock equipment, and high performance electrical. This feature list is typical of the qualities that companies seek in new industrial buildings.

Amazon is also opening another 1 million square foot fulfillment center in Channahon at Venture One Real Estate's Crossroads 55 industrial park. Reportedly, this facility will focus specifically on "pick, pack, and ship" of large items. The company also operates a 750,000 square foot fulfillment center in Romeoville in the Windham Lakes Business Park.

In 2015, IKEA announced plans to build their first 1.4 million square foot Midwest distribution center on a 72-acre site in Laraway Crossings. Within 4 months, the company was planning a second center immediately west of the first. These opened in 2017 and 2018.

The newest building garners special attention for unique features that are not becoming standard at this point, but could in the future, though some are tailored to IKEA's needs. These include a fully automatic storage "silo", vacuum cranes, flat pallet boards that stay inside the facility for reuse, and a huge 9,000 square foot solar array on the roof (spread over almost 269,000 square feet).

Based on these locations, both companies probably look for "pad-ready" sites with entitlements and utilities in place with good labor access (despite an increasing focus on automation).

Adjacent to Laraway Crossings is Core5 Logistics Center at I-80 Joliet, a newer industrial park with an occupied 737,000 square foot building, another 1+ million square foot speculative building on the market (almost 60 acres) with space for almost 200,000 square feet of expansion, and another 37 acres of land for more development. The park also has expansion space for 133 more trailer parking spots. Building features are like those noted above in the Amazon facility.

Area 1 is a proven location for industry that makes sense for future adjacent development as land becomes available. Focus on this for near term change acknowledges this momentum and creates an opportunity for improvement of the I-80 interchange at IL-53, which brokers call problematic and very dangerous.

Area 2

In contrast to the closer-in, multi-park character of Area 1, the second area for near term change is at the far southwest section of the LUSA on the west side of I-55 north of Wilmington-Peotone Road. It is currently viewed as far from labor. However, its I-55 location is attractive in the market and it boasts frontage along the BNSF's Transcontinental Mainline that runs from Los Angeles to Chicago, along with convenient intermodal access.

It also offers plenty of entitled land on a full interchange at Lorenzo Road. It makes sense from a planning standpoint to also focus efforts on a more distant location with no shortage of master planned sites for 1+ million square foot buildings. Such a focus could prevent random development on non-contiguous greenfields. This is the Elion Logistics Park 55, formerly called RidgePort Logistics Center.

Elion Partners purchased the park in summer 2019 and immediately announced a $2 billion expansion plan, pushing the total planned to 30+ million square feet of industrial and commercial space (mostly big box industrial). All told, the park has 1,500 acres of developable land. The current spec building on the market at 30260 Graaskamp Boulevard is 811,000 square feet with 211,000

more for future expansion (1.2 million total).

Occupants include Michelin, Post, Batory Foods, Lineage logistics, PURIS, a non-GMO organic pea protein, starch, and fiber producer, and commercial users Mobil, TA, Petro, Shell, and Knights Inn.
Elion is emphasizing a range of amenities given the distance it requires workers to travel, items it claims "[focus on] the well-being of truck and warehouse employees," helping them to "restore, reenergize, nourish, and explore." The referenced amenities are those typical of a full-featured travel plaza with services for long haul truck drivers, including showers, a store, a restaurant, and more. 140 acres of retail services are planned, though this total seems to include areas for car and truck parking. Phase 1 is planned to include more restaurants, a hotel, healthcare, a fitness center, a barber shop, pet care, and a chapel.

The roads are expandable up to four lanes, and there are first responders (fire and police) and a helipad. The property also includes 40 acres of wetlands with seating and a path. $140 million in TIF enables the developer to lower pass-through costs to tenants, allowing the park to be competitive with Indiana but also likely meant to attract users who might otherwise seek a location farther north in the county.

With TIF investment and the focus on providing amenities in addition to purely industrial buildings, it makes also makes sense to focus planning efforts here so that the public investment provides the most incremental value for the TIF.

Other Major Opportunity Areas

Area 3
The area east of the UP intermodal west of IL-53 between Laraway Road and Mississippi Avenue will be marketable since it has similar proximity to I-80 as Area 1, somewhat better proximity to I-55, and of course is near the intermodal.

Area 4
The area west of the UP intermodal to the Des Plaines River has the same virtue of intermodal proximity with even better proximity to I-80 and I-55, including the desirable intersection between the two.

Area 5
While some think of I-80 as the primary interstate, a location on I-55 is desirable from a labor attraction standpoint. Area 5 is west of Elwood straddling I-55 and is also near the intermodals.

Area 6
I-80 frontage is a huge benefit for industry, especially so close to the I-55 interchange. This area is between I-80 and the Des Plaines River and includes or is adjacent to multiple industrial park anchors.

Area 7
This is west of I-55 in Channahon and Minooka and is an attractive area for industry with excellent proximity to the I-80 interchange, good intermodal access and frontage on I-55.

Area 8
This area is slightly farther west along I-80 in Minooka so is less in demand but can accommodate large buildings and trailer parking with highly desirable I-80 frontage very close to I-55. This is a good opportunity for later development to retain immediate highway access and avoid disparate greenfield developments to the east.

Maps follow showing the Major Opportunity Areas once again and recent business expansions and ongoing industrial developments in and near the LUSA and these Major Opportunity Areas.

Opportunity Areas: Existing Land Uses and Acreage

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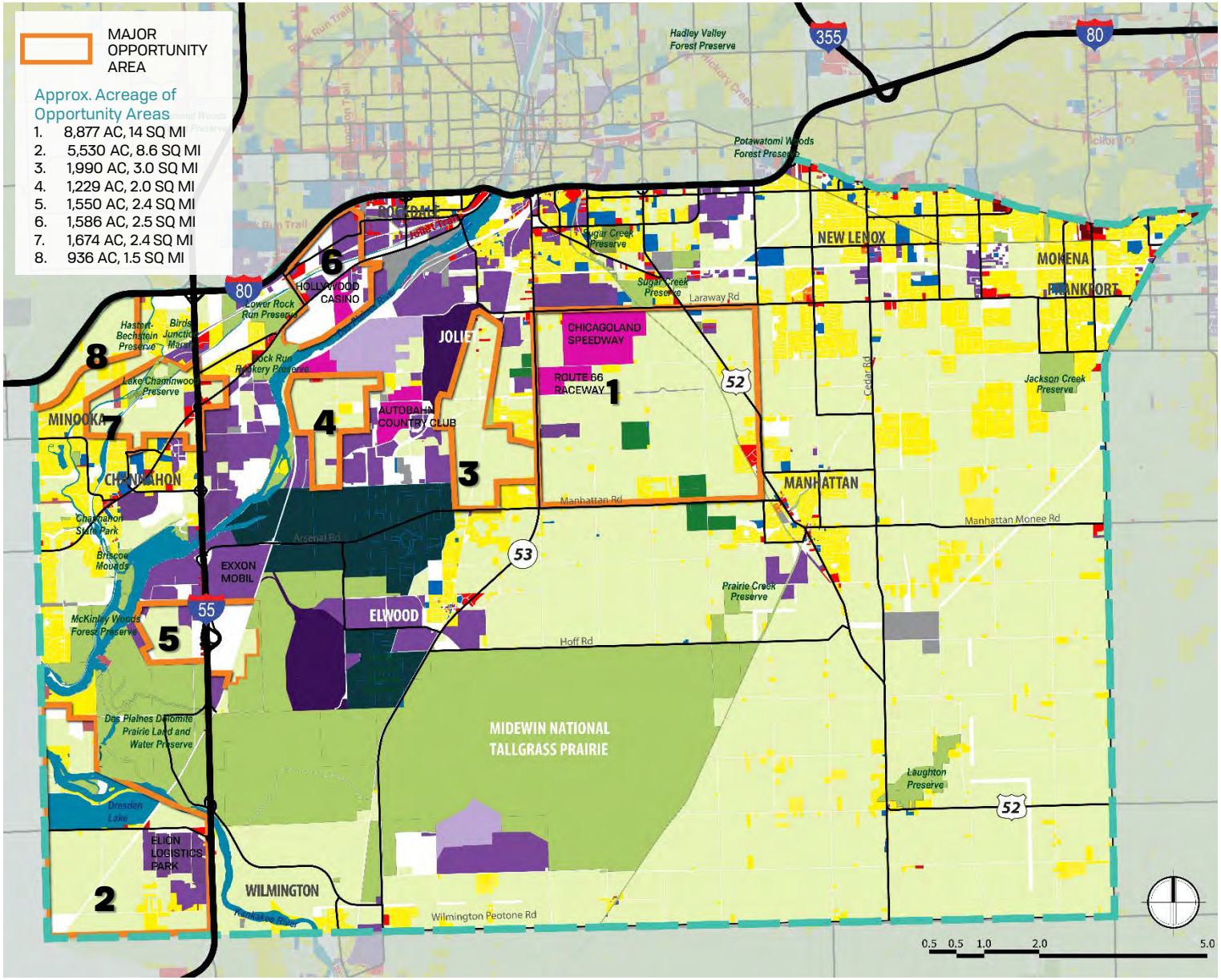
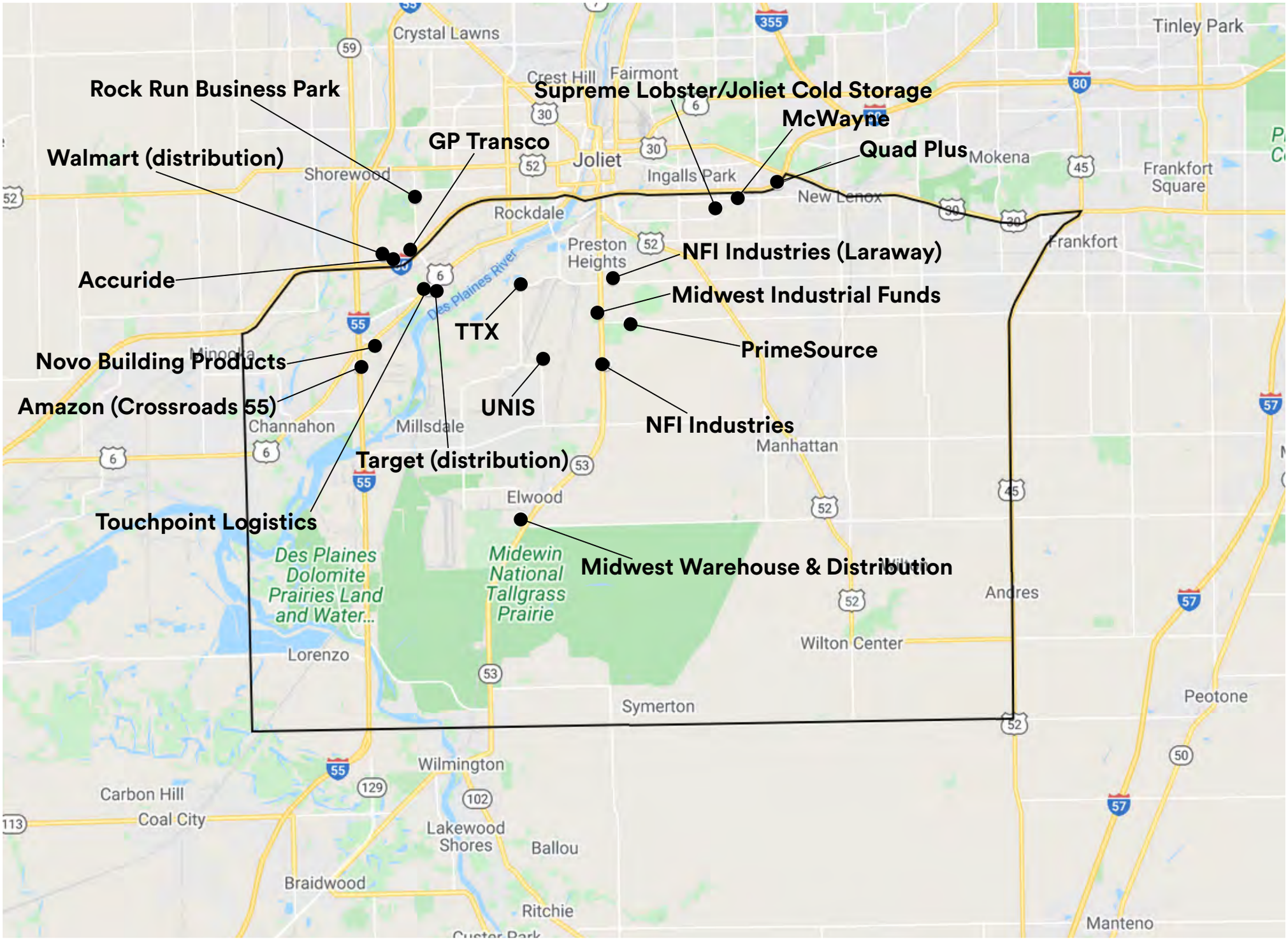


OPPORTUNITY AREAS 1 THROUGH 6 ARE NEAR EXISTING INTERMODAL FACILITIES AND MAJOR INDUSTRIAL ANCHORS. VACANT, INFILL AND FARMED PARCELS IN THESE AREAS OFFER SIGNIFICANT OPPORTUNITIES FOR NEW DEVELOPMENT.

OPPORTUNITY AREAS 7 & 8 ARE PRIMARILY FARMLAND TODAY AND OFFER OPPORTUNITIES TO ATTRACT NEW DEVELOPMENT ALONG I-80 AND I-55.

Data sources: CMAP Land Use, 2015; FPDWC, 2019; Will County GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

Recent/Planned Industrial Expansions & Developments In/Near the LUSA



Sources: Will County CED, LoopNet, Kretchmer Associates

HOUSING OVERVIEW AND FOR-SALE HOUSING MARKET

Housing Tenure

As of the 2014-2018 period, the American Community Survey (ACS) estimates a very low vacancy rate of 4.2% overall and only 2.4% for rental units. As will be discussed below, there has been very little rental construction in the LUSA in decades. The overwhelming majority of housing units are owner-occupied (82%). The ownership share for those under 65 years is similar to this, while it is higher for those 65+ (85%), which is common. Seniors are more likely to be homeowners as they have lived in the area for a long time and purchased when prices were lower. Many younger households have difficulty saving for a down payment given increasing home prices and student debt.

Housing Stock Size and Age

Table 11 shows the characteristics of the housing stock. Over 89% of the housing is single-family detached and attached. Multi-family buildings with 5+ units account for only 5% of all housing. The Land Use Study Area's housing stock is relatively new, with 29% built since 2000, 31% in the 1980s and 1990s, 23% in the 1960s and 1970s, and 17% before 1960. Almost 1,100 units were added since 2010, compared to just over 6,700 between 2010 and 2009.

Residential Building Permits

The graphs below show single-family and multifamily building permits in four LUSA municipalities between 2009 and 2018. Joliet had the highest number of total permits (1,372), followed by Manhattan (493) and Channahon (366). Only 12% of the 2,237 units were multifamily, with Joliet accounting for 58% of these. Elwood issued only 6 permits for single-family houses during this period. Construction permits picked up in 2013 and have increased steadily since.

Owner-Occupied Housing and Affordability

According to data from the ACS, as of 2014-2018, 71% of the owner-occupied housing in the LUSA had a mortgage with a median monthly cost of $1,827. This was 2.4 times higher than the $774 median monthly cost for owners without a mortgage. Affordability is a concern among those with a mortgage, as 26% were paying more than the recommended 30% of income. Only 13% of those without a mortgage had the same cost burden.

Home Sales

Kretchmer Associates obtained and analyzed data from the Multiple Listing Service (MLS) on closed home sales between 2015 and 2019 in the municipalities in the Land Use Study Area. Table 14 shows the number of sales, average price, market time, home size, year built and property taxes for the ten area communities. A map showing concentrations of these sales also follows.

Over this five-year period, there were 5,000 sales with a weighted average price of $255,600 and a median price of $232,900. The communities with the most sales during this period were New Lenox, Manhattan, Channahon, and Frankfort. The highest average prices were in Frankfort and Mokena (at $430,000 and $434,000), while the least expensive were in Rockdale and Joliet ($113,000 and $118,000). The average age of homes sold was 1991 and the average size was 1,932 square feet. Property taxes averaged 2.1% of the sales price.

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Table 11

HOUSING OCCUPANCY AND TENURE
LAND USE STUDY AREA

	Number	Percent
Housing Occupancy/Vacancy		
Total housing units	26,580	
Vacant units	1,112	4.2%
Vacant units for rent	111	2.4%
Housing Tenure		
Occupied housing units	25,468	
Owner-occupied units	20,996	82.4%
Renter-occupied units	4,472	17.6%
Occupied Units (Households 15-64)	19,924	
Owner Occupied	16,260	81.6%
Renter Occupied	3,664	18.4%
Occupied Units (Households 65+)	5,136	
Owner Occupied	4,344	84.6%
Renter Occupied	792	15.4%

Note: Due to data for the Land Use Study Area approximated using Census tracts.

Source: US Census, American Community Survey, 2014-2018

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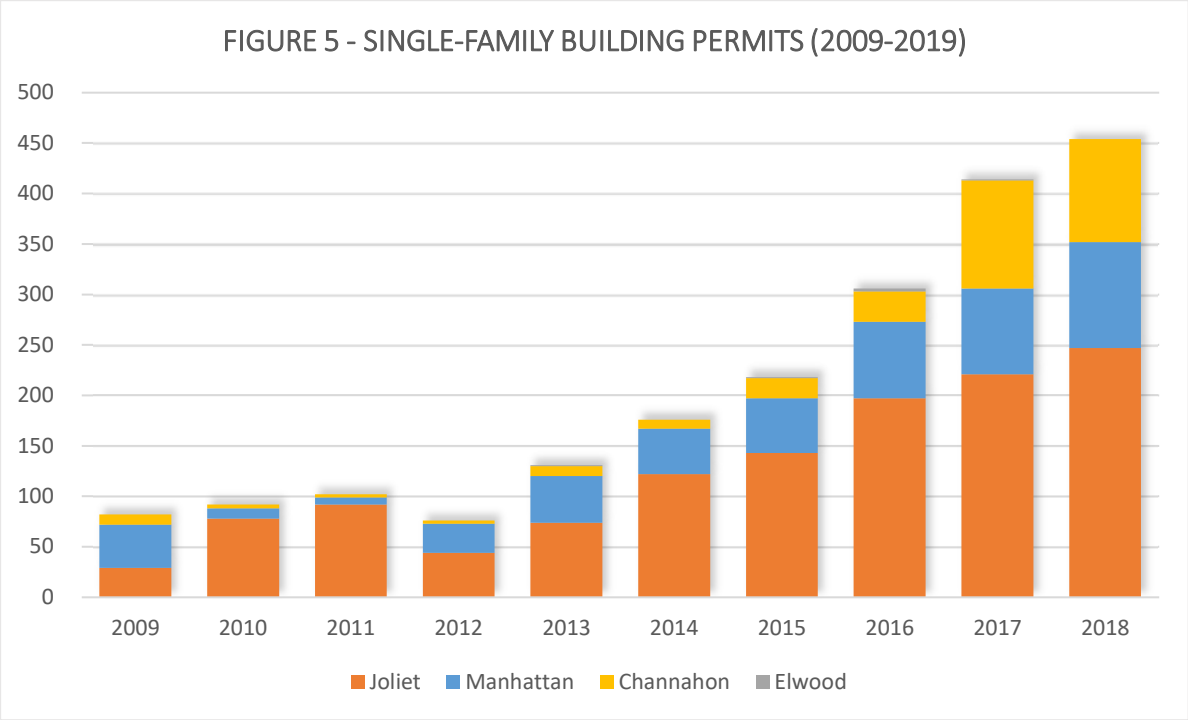
Table 12

HOUSING CHARACTERISTICS
LAND USE STUDY AREA

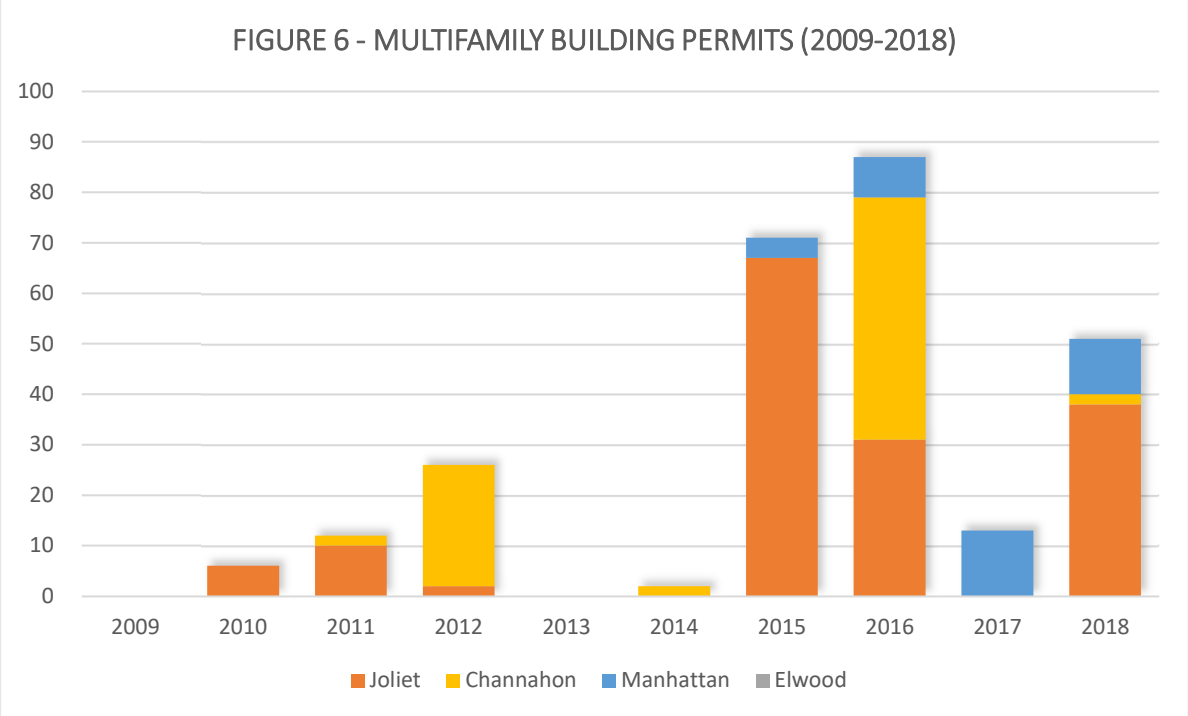
	Number	Percent
Total Units	26,580	
Single-Family Detached	21,356	80.3%
Single-Family Attached	2,429	9.1%
2-4 Units	1,161	4.4%
5-9 Units	614	2.3%
10+ Units	773	2.9%
Mobile Home, Other	247	0.9%
Year Structure Built		
2014 and later	413	1.6%
2010-2013	667	2.5%
2000-2009	6,716	25.3%
1990-1999	5,494	20.7%
1980-1989	2,714	10.2%
1970-1979	3,983	15.0%
1960-1969	1,997	7.5%
1950-1959	1,899	7.1%
1940-1949	917	3.4%
1939 or earlier	1,780	6.7%

Note: Due to data availability, Land Use Study Area approximated using Census tracts.

Source: US Census, American Community Survey 2014-2018



Source: U.S. Census



Source: U.S. Census

Table13

HOMEOWNERSHIP CHARACTERISTICS
LAND USE STUDY AREA

	With a mortgage		Without a mortgage	
	Number	Percent	Number	Percent
Owner-Occupied Housing Units	14,850	70.7%	6,146	29.3%
Monthly Housing Cost				
Less than $200	0	0.0%	106	1.7%
$200 to $399	24	0.2%	523	8.5%
$400 to $599	45	0.3%	1,346	21.9%
$600 to $999	216	1.5%	2,912	47.4%
$1,000 to $1,299	647	4.4%	861	14.0%
$1,300 to $1,499	2,913	19.6%	251	4.1%
$1,500 to $1,999	4,144	27.9%	-	-
$2,000 to $2,499	3,264	22.0%	-	-
$2,500 to $2,999	1,949	13.1%	-	-
$3,000 or more	1,648	11.1%	-	-
$1,500 or more	-	-	147	2.4%
Median Housing Cost	$1,827		$774	
Monthly Housing Cost as Percent of				
Less than 20%	6,354	42.8%	4,531	73.7%
20-29%	4,635	31.2%	772	12.6%
30% or more	3,840	25.9%	807	13.1%
Zero or negative income	21	0.1%	36	0.6%

Note: Due to data availability, Land Use Study Area approximated using Census tracts.

Source: US Census, American Community Survey 2014-2018

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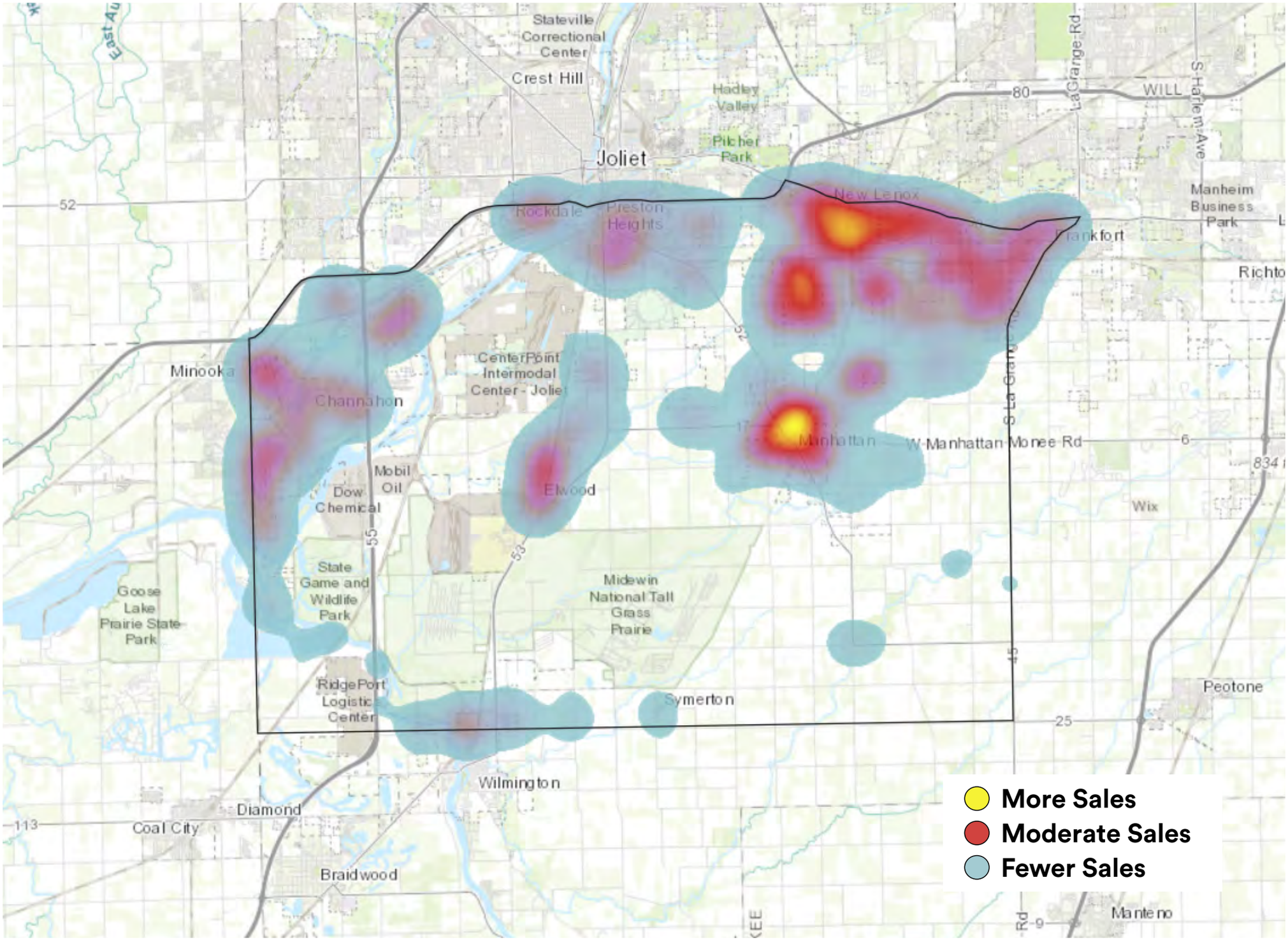
Table 14

HOME SALES IN LAND USE STUDY AREA MUNICIPALITIES - 2015-2019

Municipality	# of Sales	Avg Sale Price	Avg Market Time	Avg Size (SF)	Avg Year Built	Avg Property Taxes
Elwood	310	$195,920	97	1,338	1990	$4,275
Joliet	398	117,564	65	1,382	1960	2,763
Manhattan	902	243,645	85	2,037	1997	5,760
Channahon	599	222,103	77	1,924	1989	5,067
Minooka	167	249,056	75	2,121	1992	5,725
Rockdale	61	112,931	66	1,141	1940	1,915
Wilmington	146	197,778	131	1,598	1984	3,751
New Lenox	1,887	265,916	74	1,741	1995	5,485
Frankfort	505	430,052	110	3,227	2000	10,108
Mokena	83	434,180	97	2,969	2007	7,854
	Total	Weighted Avg./ Median	Weighted Avg./ Median	Weighted Avg./ Median	Weighted Avg./ Median	Weighted Avg./ Median
	5,058	$255,573	82	1,932	1991	$5,611
		$232,874	81	1,832	1991	$5,276

Source: Multiple Listing Service; Kretchmer Associates.

All Home Sales 2015-2019 in Land Use Study Area



Sources: MLS, Kretchmer Associates

Foreclosures

As the largest municipality in the Land Use Study Area, Joliet had by far the largest number of foreclosure filings over the past 11 years at more than 10,600, followed far behind by the other communities as shown in Table 15 based on data from the Woodstock Institute. As occurred throughout the region, foreclosure filings dropped precipitously in 2014 and have continued to decrease in the following years.

Despite the decrease in foreclosure filings, communities in the LUSA still have a high share of homeowners with negative equity. Over 15% of homeowners in Joliet and Manhattan, 12% in Wilmington, 7% each in Channahon and New Lenox, and 6% in Elwood have negative equity, much higher than the 8% national rate. This is due to the slower appreciation in the housing market in the Chicago region overall compared to the nation.

In addition, Elwood, Joliet and Manhattan also have a higher percentage of owners who are delinquent on their mortgages compared to the national 1.1% rate. These data are from 2018 and no doubt the numbers will increase this year due to the higher unemployment numbers due to COVID-19.

Subdivisions Underway and Planned

Manhattan has nine subdivisions approved with infrastructure and three approved without infrastructure. Table 16 summarizes these. Most of the subdivisions are in the northern half of the village. Some are subdivisions where building stopped during the recession due to financial problems incurred by their developers. New homes in the entry and middle price range have been selling very well in the past few years in Stonegate (Lennar) and Hanover Estates (Distinctive Homebuilders), both of which have a significant number of buildable lots.

There is only one active subdivision in the Joliet section of the LUSA, Cedar Creek west of IL-53 off Millsdale Road. This development also stalled during the recession and was taken over by Distinctive Homebuilders in the past year. However, the subdivision is adjacent to industrial uses, hence more truck traffic, and has had more limited buyer interest. Homes are smaller and less expensive than in Manhattan. The City of Joliet is not looking for more residential development in the LUSA, given the availability of land on the west side of the city.

As was shown earlier, there are no residential projects underway in Elwood, and nothing is planned.

In New Lenox, Four Seasons of New Lenox, an active adult development with 600+ units is planned by K. Hovnanian, a national homebuilder but the site is north of the Land Use Study Area near Silver Cross Hospital.

Channahon also has subdivisions with unbuilt lots, but the number of lots is not available. The village also has a considerable amount of potentially developable land for future residential growth.

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Table 15

FORECLOSURE FILINGS AND MORTGAGE DELINQUENCY
LAND USE STUDY AREA MUNICIPALITIES

	Joliet	Elwood	Manhattan
Foreclosure Filings			
2008	1,118	13	18
2009	1,493	19	53
2010	1,861	23	96
2011	1,279	21	79
2012	1,471	13	80
2013	1,042	12	53
2014	624	11	38
2015	543	12	30
2016	434	8	28
2017	435	24	24
2018	349	14	15
Total	10,649	170	514
Homes with Negative Equity	15.5%	6.2%	15.5%
Delinquent on Mortgage	1.8%	3.1%	1.8%

	Channahon	New Lenox	Wilmington
Foreclosure Filings			
2008	35	78	27
2009	58	107	38
2010	60	160	37
2011	43	116	27
2012	66	150	35
2013	45	95	29
2014	18	64	15
2015	22	53	12
2016	19	78	38
2017	22	68	25
2018	18	54	24
Total	406	1,023	307
Homes with Negative Equity	7.4%	7.1%	11.8%
Delinquent on Mortgage	1.0%	0.7%	0.8%

Note: Negative equity and delinquency as of June 30, 2018. U.S. averages: negative equity - 8.2%, delinquency - 1.1%.

Source: Woodstock Institute, Zillow

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Table 16

RESIDENTIAL SUBDIVISIONS WITH AVAILABLE LOTS

Community and Subdivision	# of Acres	Total Units	Buildable Lots Available #	Buildable Lots Available % of Total	Density (units/acre)
Manhattan					
Approved with Infrastructure					
Beck's Farm	142	253	122	48%	1.8
Butternut Ridge	76	75	28	37%	1.0
Hanover Estates	195	343	135	39%	1.8
Ivanhoe	125	222	112	50%	1.8
Leighlinbridge Unit 5	14	60	28	47%	4.3
Stonegate	135	380	377	99%	2.8
Sunset Lakes	155	307	274	89%	2.0
Tramore	103	336	140	42%	3.3
Whitefeather	160	436	22	5%	2.7
Total	1,105	2,412	1,238	51%	2.2
Approved, no Infrastructure					
Keating Estates	239	625	625	100%	2.6
Lexington	607	NA	NA	NA	NA
Manhattan Meadows	160	306	306	100%	1.9
Joliet					
Cedar Creek	NA	154	47	31%	NA

NA Not Available

Source: Village of Manhattan; Kretchmer Associates.

Insights from Residential Professionals in the Area

Kretchmer Associates staff interviewed real estate brokers and homebuilders active in Manhattan, Joliet and Elwood, the three communities most impacted by potential industrial development.

In Manhattan, buyers are most interested in homes east of Cedar Road as they feel that homes there will be less impacted by truck traffic and the potential of future industrial development east of IL-53. Some current residents of Manhattan's west side are starting to look at homes farther east just in case more industrial buildings are constructed on the west side of the village.

Sales activity has been brisk in Manhattan with buyers attracted to the village because of its high-quality schools, open space, less traffic congestion, and prices $80,000-100,000 lower than homes of comparable size and features in New Lenox, Mokena, and Orland Park. However, newer subdivisions have Special Service Areas (SSAs) in place to fund infrastructure. The SSA can add $2,500 a year to the owner's real estate tax bill starting two years after purchasing. This is why Lennar's homes in Stonegate are priced relatively low so that the monthly mortgage and real estate taxes will be affordable to a wider range of buyers.

Homes sell quickly in Elwood though there are fewer homes on the market given the village's small size. Prices are lower than in Manhattan though homes haven't appreciated much in the past few years. Some prospective buyers don't want to move to Elwood because of the truck and auto traffic generated by CenterPoint's buildings. However, brokers felt that entry level homes would sell well in Elwood.

Cedar Creek is the only active subdivision in Joliet south of I-80. The prices are reasonable, but the location is considerably less desirable for most potential buyers. Most buyers already live in Joliet.

Demand for New Homes

Based on population projections by Esri over the next five years and by CMAP to 2050, there will continue to be strong demand for more owner-occupied housing in the Land Use Study Area. The factors that have attracted buyers here should continue, as long as future industrial development does not cause excessive traffic, noise, and pollution. Table 17 shows the potential demand for 305 units of owner-occupied housing per year on average, for a total of 8,500 units between 2019 and 2050. The demand for rental housing is discussed in the following chapter of this report.

Impact of Industrial Development on the Residential Market in the Land Use Study Area

The potential industrial development as planned at Northpoint will have a negative effect on home values in Manhattan according to realtors. It will dampen residential demand for homes west of Cedar Road and especially west of US-52. This will hurt existing homeowners as well as subdivisions underway but not yet built out.

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Table 17

POTENTIAL DEMAND FOR OWNER-OCCUPIED HOUSING IN THE LAND USE STUDY AREA

	Number	Percent
2019 Households	25,649	
2024 Households	26,856	
Household Change	1,207	4.7%
Average Annual Household Change	241	0.9%
2019 Owner-Occupied Units and Share of Occupied Units	21,135	82.4%
Potential Additional Demand 2019-2024		
Additional Owner Demand to 2024 (due to household change and 75% owner share*)	905	75%
Potential Additional Demand 2025-2050		
2050 Households (consistent with county's growth at 1.7%/year)	38,270	
Household Change	11,414	42.5%
Owner Demand based on 75% Share of Household Growth	8,560	75%
2019-2050		
Total Owner-Occupied Demand	9,466	
Average Annual Owner-Occupied Demand	305	

* Assumes increase in rental demand from 17.6% to 25% of all housing due to limited rental housing in Land Use Study Area.

Source: Kretchmer Associates based on estimates and projections from Esri and CMAP.

RENTAL HOUSING MARKET

Rent and Affordability

As shown above, only 18% of units in the Study Area are renter-occupied. The median gross rent (contract rent plus tenant-paid utilities) was $1,080 according to the most recent ACS data. Sixteen percent paid under $750, 28% paid $750-999, and 48% paid over $1,000.

Affordability is a very real concern for renters in the Land Use Study Area. Forty-five percent of renters pay more than 30% of their income in gross rent. This is not surprising since there are few affordable apartments funded through the Illinois Housing Development Authority, HUD, the townships, Will County, or the Housing Authority of Joliet in these communities. According to information from these entities, the LUSA has only 319 affordable rental units, and all but 8 units are for seniors. These affordable units represent only 7% of all rental units, well below what is needed.

Market Rental Trends

Kretchmer Associates obtained rental market data from Reis, a national real estate data company owned by Moody's, for the area within a 12-mile radius of Elwood. This includes a larger geographic area than the Land Use Study Area as it includes most of Joliet, but it gives a reasonable picture of the rental market in the LUSA communities. The survey includes 10 properties with 2,380 units, all of which are in Joliet. Only one is south of I-80 in the LUSA. All of the properties are older, generally 40-50 years old. However, the overall vacancy rate is very low at only 2.5%, indicating a very tight rental market. The average asking rent is $967 across all unit types, below the median for the LUSA.

In comparison, the Joliet submarket, which includes a much larger area extending up to Romeoville and Bolingbrook, has a higher vacancy rate at 6.8%, along with a much higher average rent of $1,122 because there are more higher quality, Class A properties in the communities at the northern end of the submarket.

Both the LUSA and Joliet sub-market have significantly lower average rents than the Chicago metro area ($1,514). However, the Land Use Study Area's vacancy rate is still half the rate of the region's (5.2%).

The graphs below show the average asking rent and vacancy trends for the Land Use Study Area (12-mile radius from Elwood), Joliet submarket, and Chicago Metro area. Maps showing the area covered within 12 miles of Elwood and the Joliet submarket follow.

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Table 18

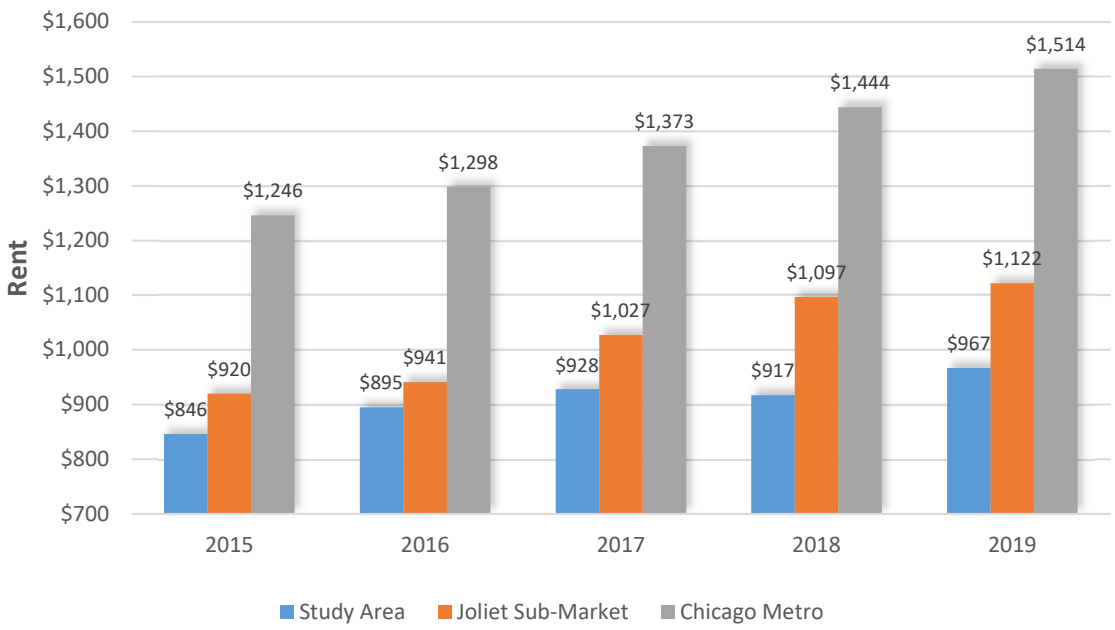
RENTAL CHARACTERISTICS
LAND USE STUDY AREA

	Number	Percent
Total Renter-Occupied Housing Units	4,472	
Gross Rent		
Less than $250	18	0.4%
$250-$499	148	3.3%
$500-$749	567	12.7%
$750-$999	1,245	27.8%
$1,000-$1,249	918	20.5%
$1,250-$1,499	698	15.6%
$1,500-$1,999	400	8.9%
$2,000+	135	3.0%
No Cash Rent	343	7.7%
Median Gross Rent	$1,080	
Gross Rent as Percent of Income		
Less than 15%	579	12.9%
15-19.9%	550	12.3%
20-24.9%	455	10.2%
25-29.9%	466	10.4%
30-34.9%	352	7.9%
35% or more	1,670	37.3%
Not computed	400	8.9%

Note: Due to data availability, Land Use Study Area approximated using Census tracts.

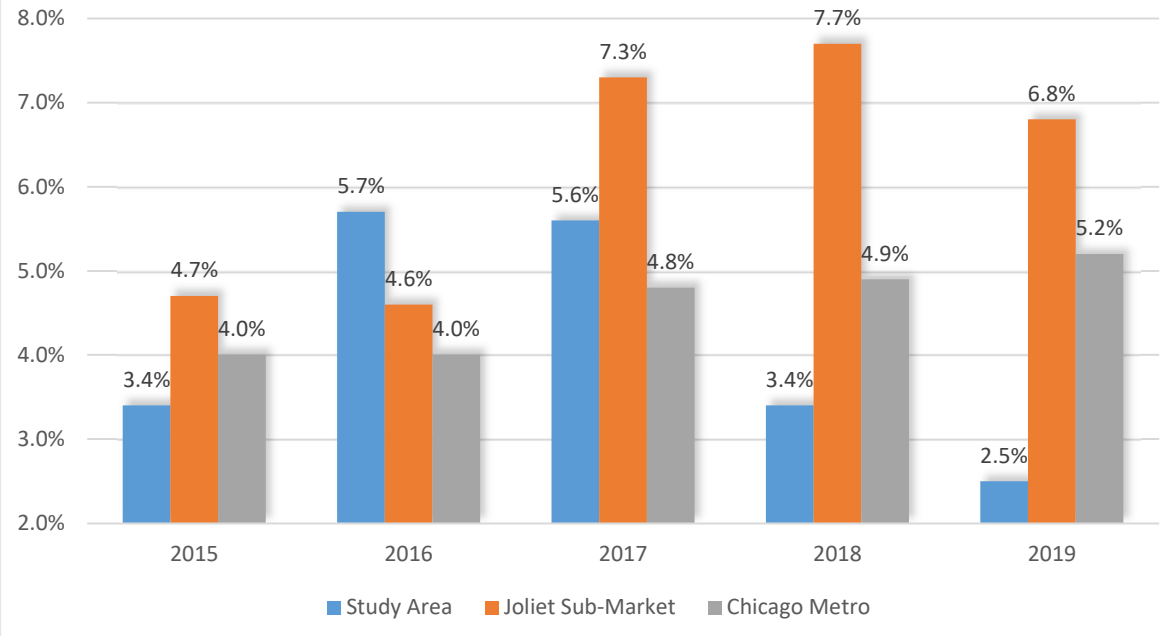
Source: US Census, American Community Survey 2014-2018

FIGURE 7- AVERAGE ASKING RENT (4TH QUARTER)



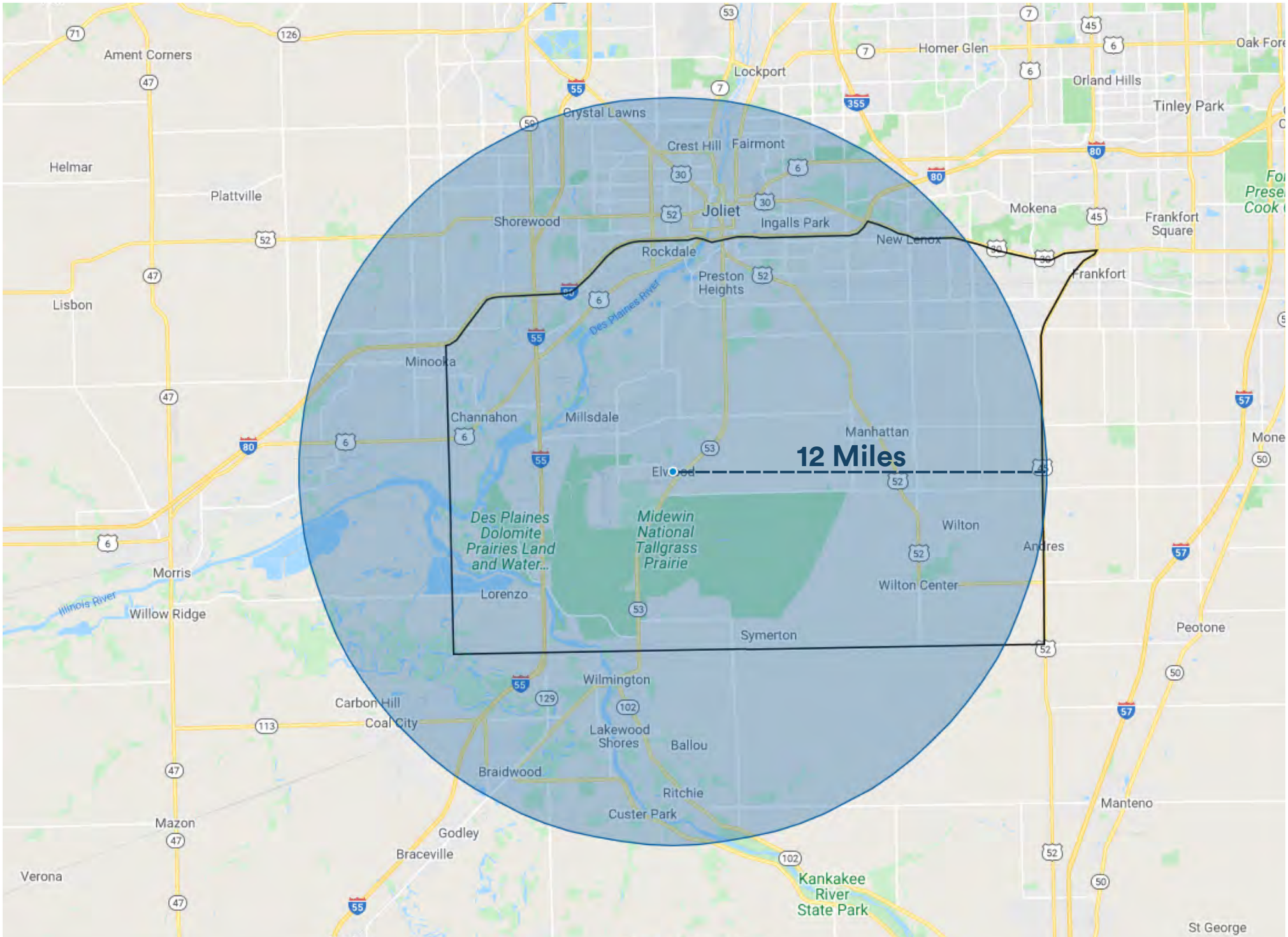
Source: Reis

FIGURE 8 - VACANCY RATE (4TH QUARTER)



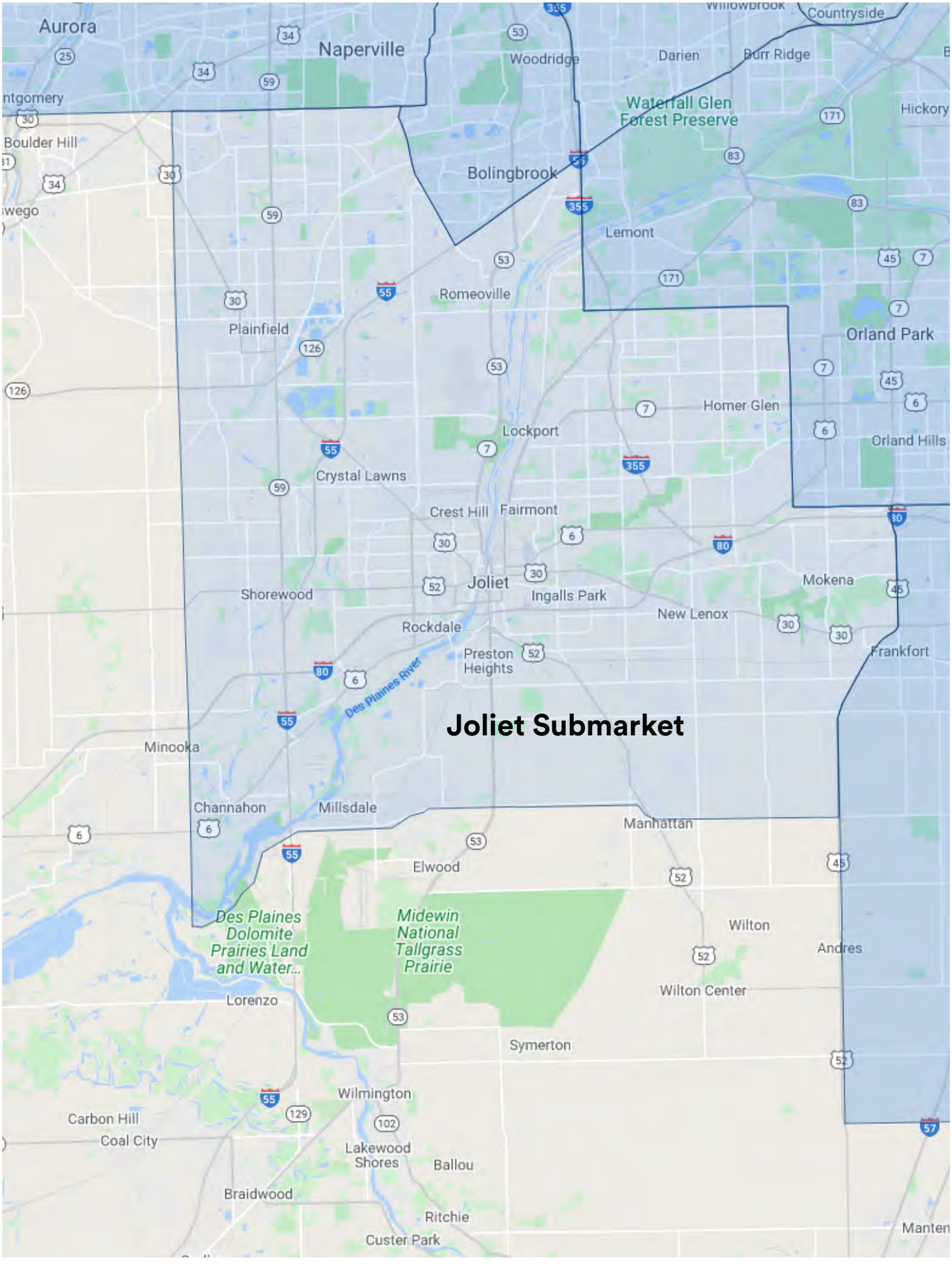
Source: Reis

Rental Market Area (12-Mile Radius from Elwood)



Source: Kretchmer Associates

Joliet Apartment Submarket
(area covered by Reis data)



Sources: Reis, Kretchmer Associates

Kretchmer Associates

Rental Demand

The LUSA's small number of rental units, lack of affordable rental properties, lack of multifamily construction in recent years, and the aging of existing market-rate rental properties demonstrate the need for more rentals at all price points.

The following table shows the potential demand for rental units at all levels over the coming years. We estimate demand for 2,200 rental units between 2019 and 2024 based on the growth in population and the unmet demand due to the low rental share in the Land Use Study Area today.

We conservatively assume that there would be demand for an additional 1,900 units if the rental share increased relatively modestly from the current 18% to 25%. This is the current unmet demand.

We also calculated the potential demand to 2050 based on CMAP's population projection for Will County (1.7% per year). Applying this rate to the 2024 household projection from Esri, results in additional demand between 2025 and 2050 of almost 2,900 rental units, again assuming a 25% share. The total rental demand to 2050 is projected at 5,050 units or 163 per year on average.

While most of this demand will be for market-rate units, a portion will be for affordable units for families and seniors. Assuming affordable demand is 15-20% of the total demand, there is a need for 750-1,000 affordable rental units by 2050.

Local realtors report a need for more rental housing of all types, particularly for workforce housing so that employees can live closer to their jobs at the TDL firms in the area.

There is a need across the price spectrum, for high quality, higher priced rentals, medium-priced rentals, and those for low and moderate-income households.

Table 19

POTENTIAL RENTAL DEMAND IN THE LAND USE STUDY AREA

	Number	Percent
2019 Households	25,649	
2024 Households	26,856	
Household Change	1,207	4.7%
Average Annual Household Change	241	0.9%
2019 Renter-Occupied Units and Share of Occupied Units	4,514	17.6%
Potential Additional Demand 2019-2024		
2019 Rental Units assuming 25% Renter Share	6,412	25.0%
Unmet Current Rental Demand (Difference in current and 25% share)	1,898	
Additional Rental Demand to 2024 (due to household change and 25% rental share)	302	
2024 Rental Demand (Unmet current and additional due to household change)	2,200	
Potential Additional Demand 2025-2050		
2050 Households (consistent with county's growth at 1.7%/year)	38,270	
Household Change	11,414	42.5%
Rental Demand based on 25% Share of Household Growth	2,853	25.0%
2019-2050		
Total Rental Demand	5,053	
Average Annual Rental Demand	163	
Affordable Rental Demand (15-20%)	750-1,000	15-20%

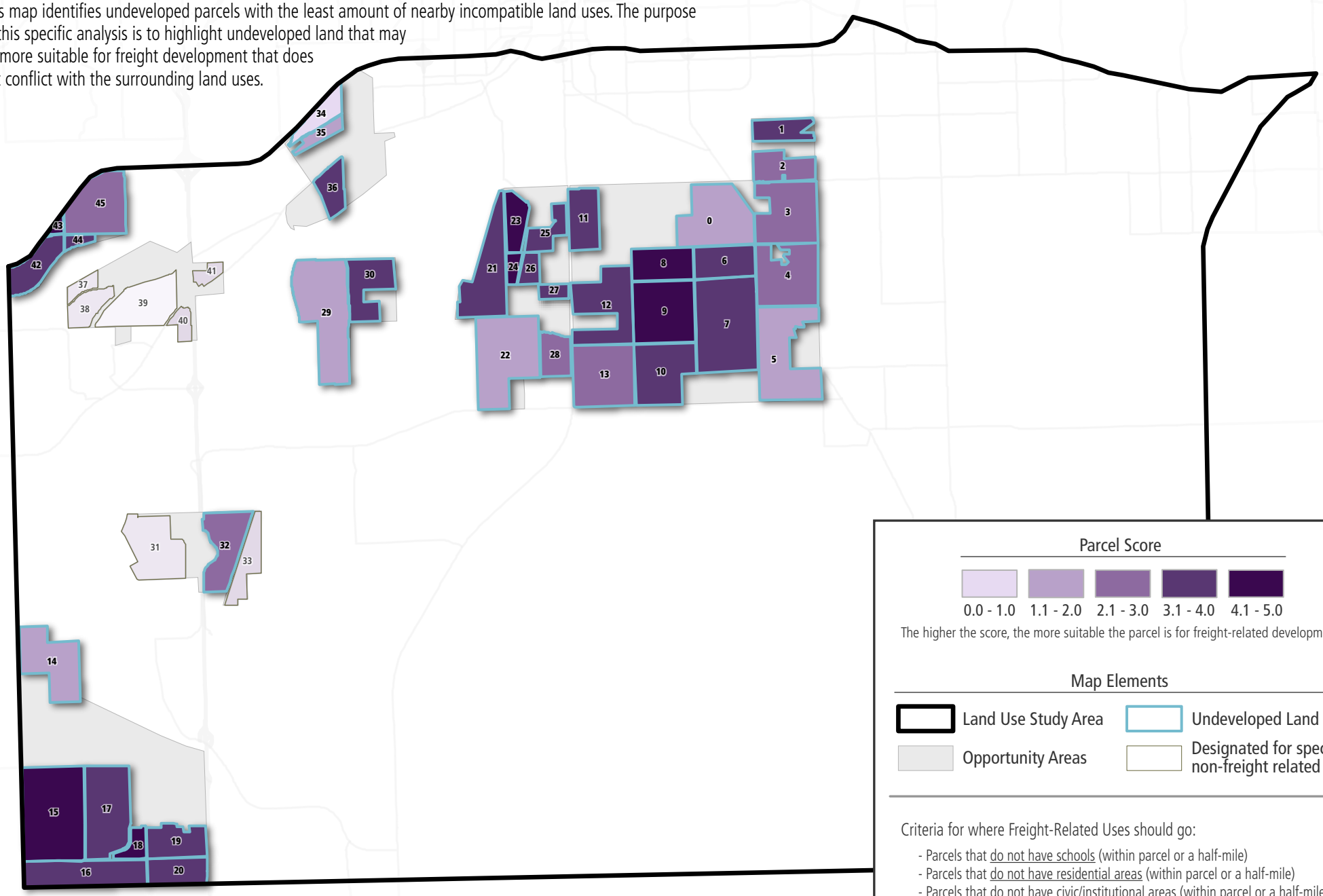
Source: Kretchmer Associates based on estimates and projections from Esri and CMAP.

Appendix C

Opprtunity Area Parcel Scoring Analysis

Parcel Exemption Analysis: Incompatible Land Uses

This map identifies undeveloped parcels with the least amount of nearby incompatible land uses. The purpose of this specific analysis is to highlight undeveloped land that may be more suitable for freight development that does not conflict with the surrounding land uses.



Parcel Score

0.0 - 1.0	1.1 - 2.0	2.1 - 3.0	3.1 - 4.0	4.1 - 5.0

The higher the score, the more suitable the parcel is for freight-related development.

Map Elements

- Land Use Study Area
- Opportunity Areas
- Undeveloped Land
- Designated for specific non-freight related use

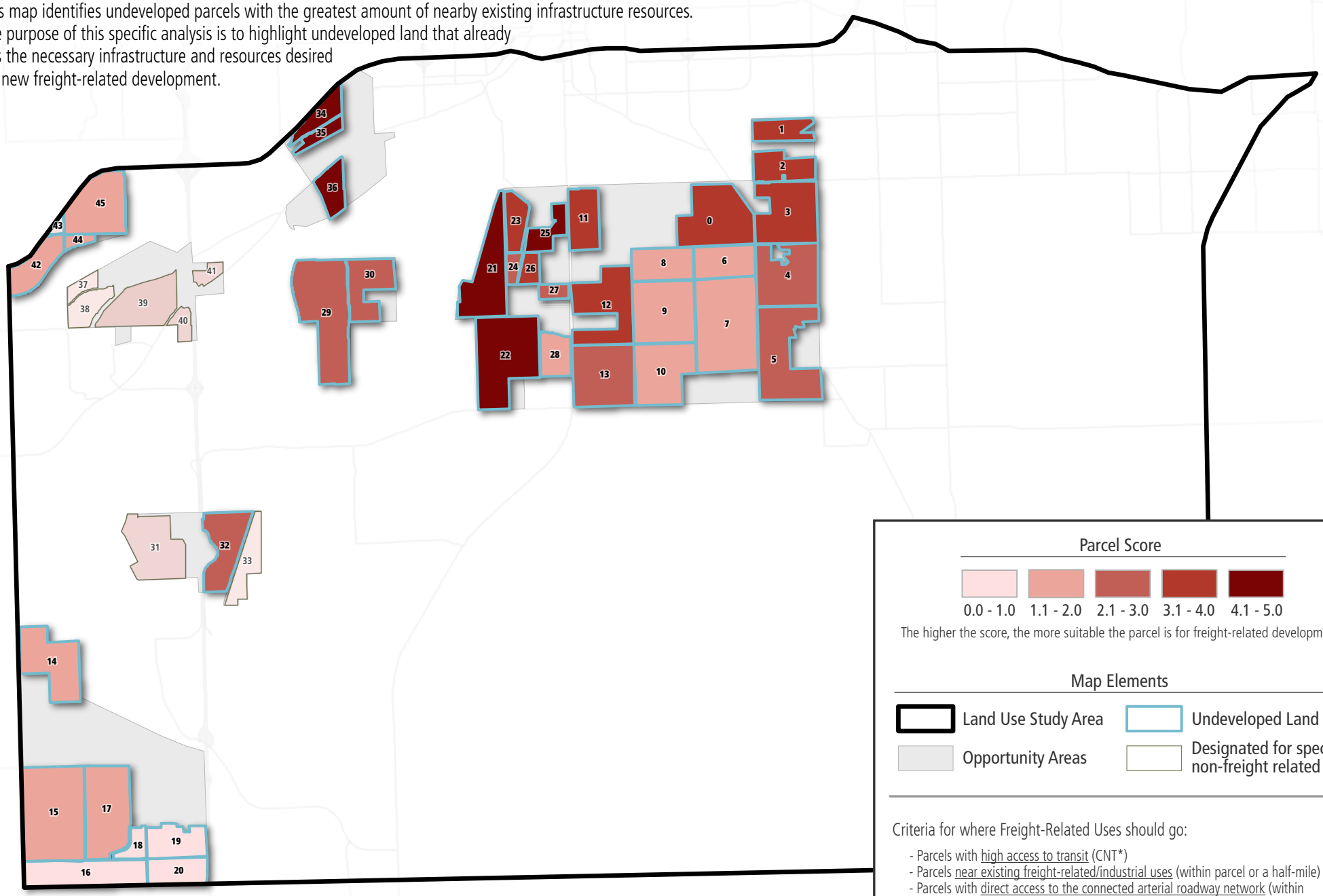
Criteria for where Freight-Related Uses should go:

- Parcels that do not have schools (within parcel or a half-mile)
- Parcels that do not have residential areas (within parcel or a half-mile)
- Parcels that do not have civic/institutional areas (within parcel or a half-mile)
- Parcels that do not have existing trails (within parcel or a half-mile)
- Parcels that do not have public open spaces (within parcel or a half-mile)
- Parcels that do not have a high score on the demographic analysis of vulnerable populations (CNT*)
- Parcels that do not have a high existing ecosystem service value (CNT*)

*Analysis conducted by the CNT.

Parcel Exemption Analysis: Direct Access

This map identifies undeveloped parcels with the greatest amount of nearby existing infrastructure resources. The purpose of this specific analysis is to highlight undeveloped land that already has the necessary infrastructure and resources desired for new freight-related development.



Parcel Score

0.0 - 1.0	1.1 - 2.0	2.1 - 3.0	3.1 - 4.0	4.1 - 5.0

The higher the score, the more suitable the parcel is for freight-related development.

Map Elements

- Land Use Study Area
- Opportunity Areas
- Undeveloped Land
- Designated for specific non-freight related use

Criteria for where Freight-Related Uses should go:

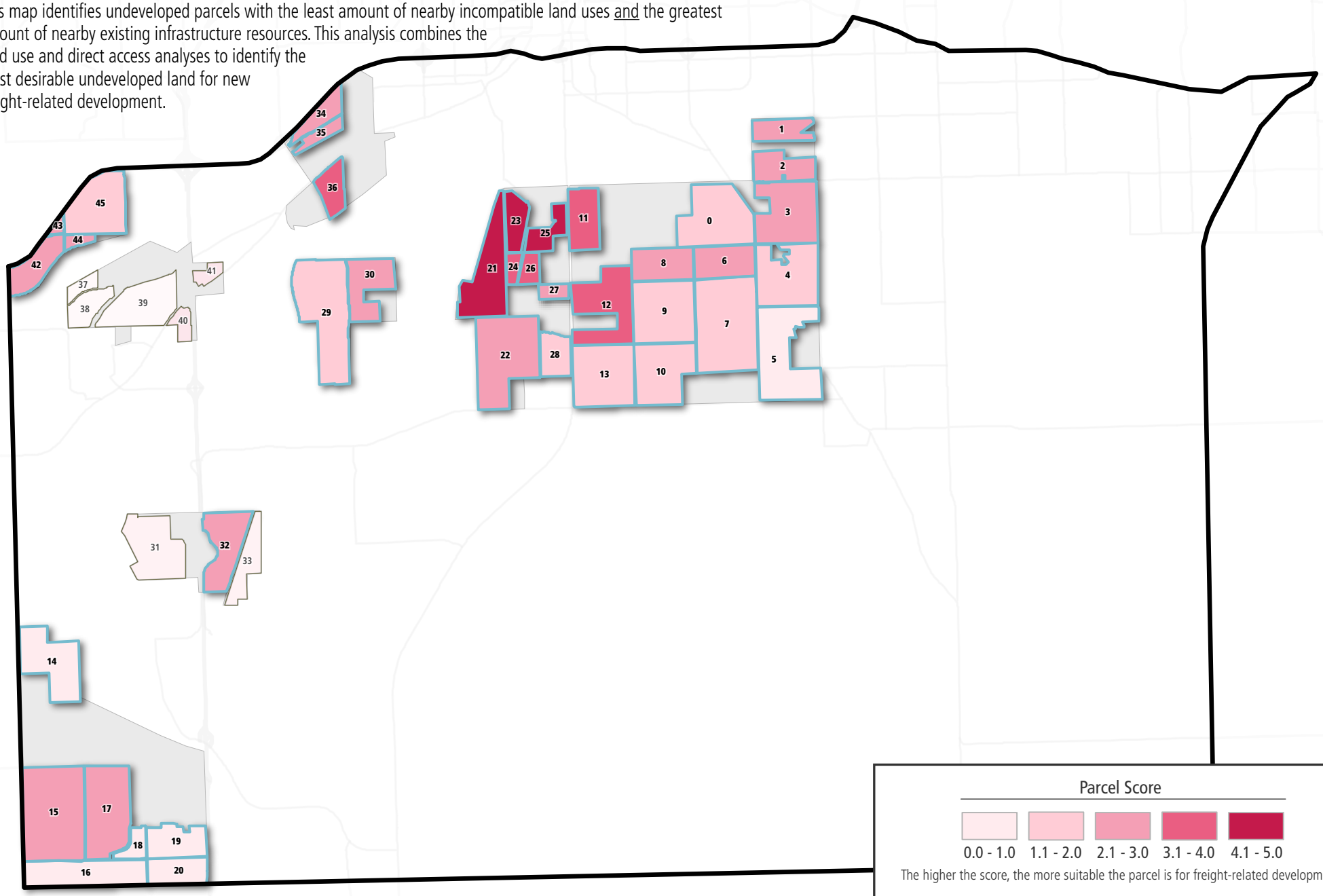
- Parcels with high access to transit (CNT*)
- Parcels near existing freight-related/industrial uses (within parcel or a half-mile)
- Parcels with direct access to the connected arterial roadway network (within parcel or a half-mile)
- Parcels with direct access to existing utility/communication ROW (within parcel or a half-mile)
- Parcels with direct access to existing waste resources (within parcel or a half-mile)
- Parcels with direct access to Facility Planning Areas (within parcel or a half-mile)
- Parcels with direct access to existing water sewer utilities (within parcel or a half-mile)

*Analysis conducted by the CNT.

0 2.5 5 Miles

Parcel Exemption Analysis: Incompatible Land Uses and Direct Access

This map identifies undeveloped parcels with the least amount of nearby incompatible land uses and the greatest amount of nearby existing infrastructure resources. This analysis combines the land use and direct access analyses to identify the most desirable undeveloped land for new freight-related development.



Appendix D

Industrial & TDL Land Use Scenarios

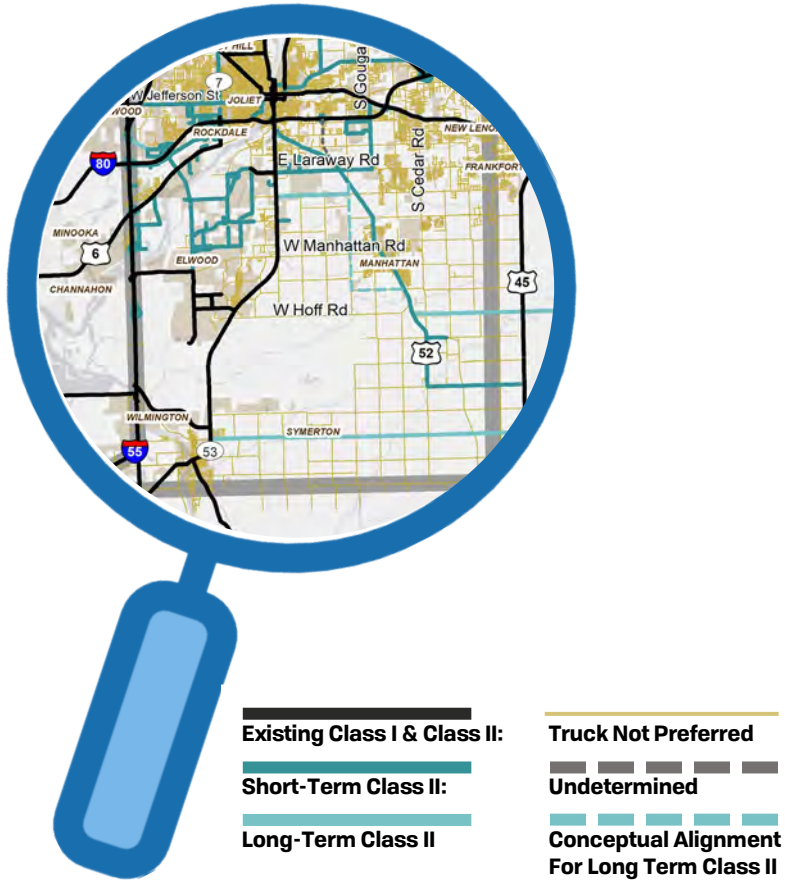
Introduction

Four Land Use Scenarios were developed for the eight "Major Opportunity Areas" that were identified in the Existing Conditions Report.

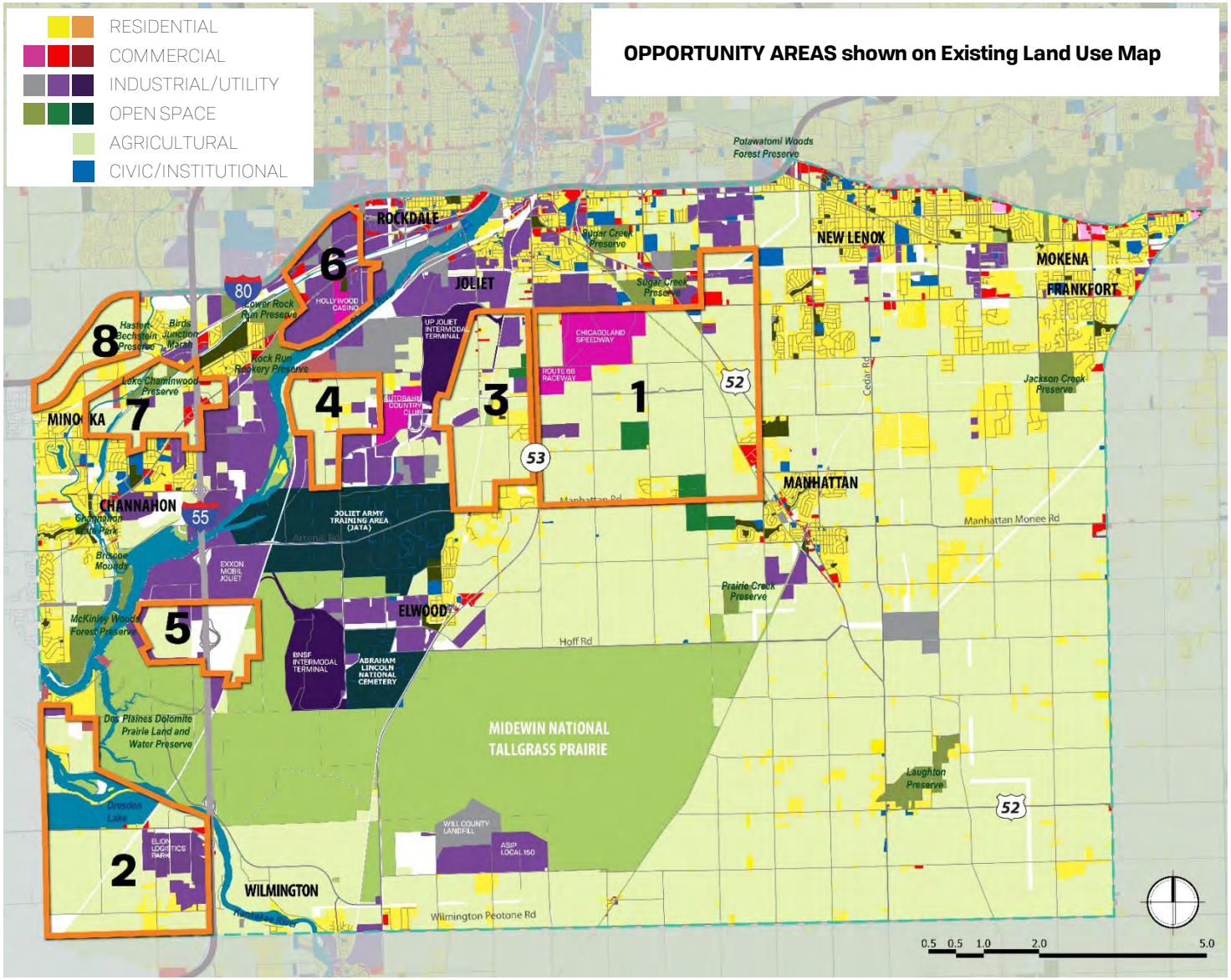
The scenarios had the following goals:

1. CREATE A PLACE-BASED ANALYTICAL TOOL that ties truck routing recommendations to potential land use impacts.
2. CREATE A DYNAMIC TOOL that can change as the truck routing recommendations continue to evolve.
3. CREATE A CONSENSUS BUILDING TOOL that allows stakeholders to select preferred elements from each scenario.

ONE LENS FOR ALL SCENARIOS:
RECOMMENDED TRUCK ROUTES



GOAL 1: CREATE A PLACE BASED TOOL for 8 Major Opportunity Areas

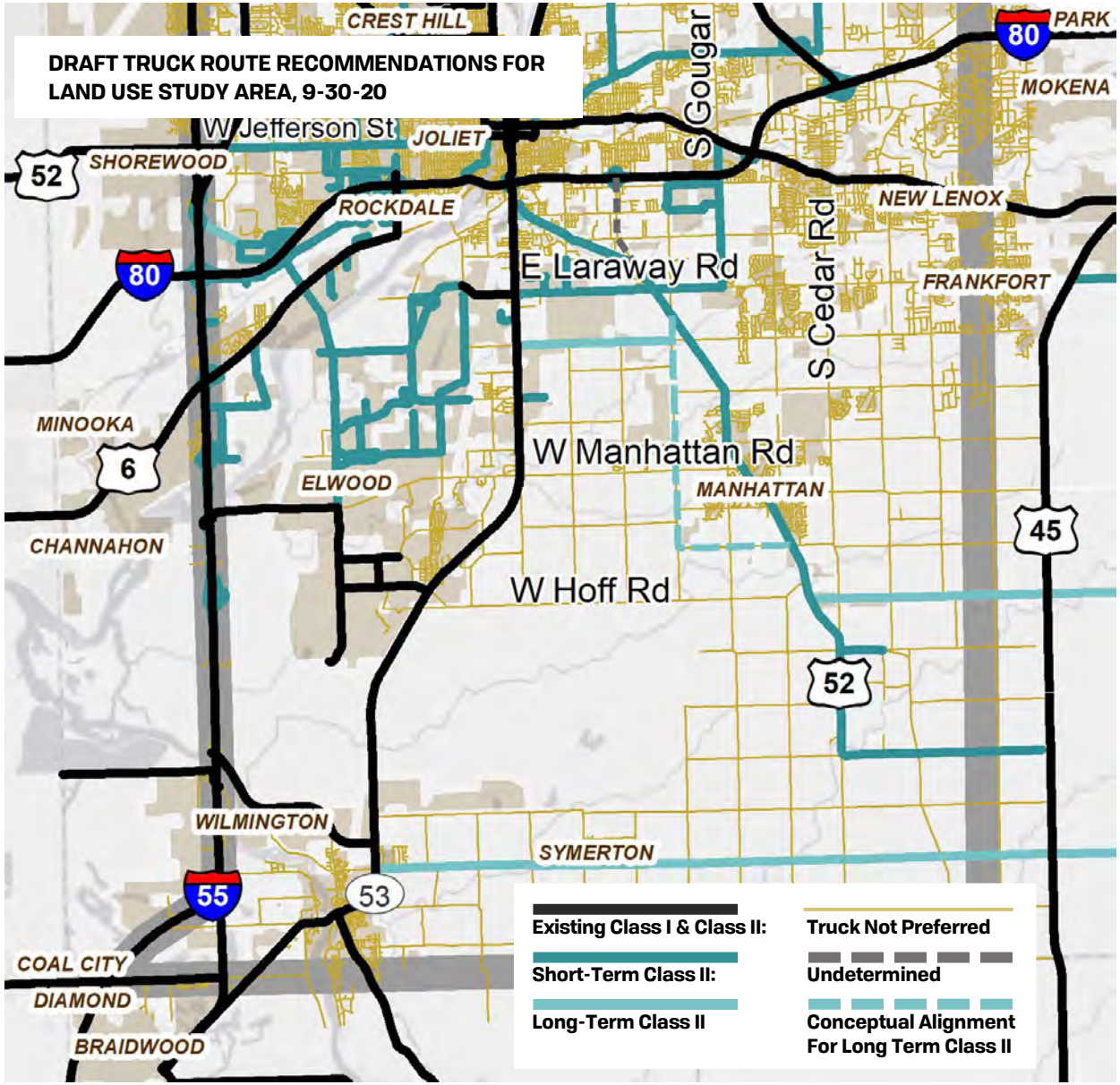


CRITERA FOR OPPORTUNITY AREAS

- **Proximity to major transportation corridors, including I-55, I-80 and IL 53.**
- **Proximity to major economic anchors**
- **Significant contiguous land for new development and infill opportunities**
- **Proximity to existing municipal incorporated areas and existing infrastructure**
- **Potential to protect waterways, including Jackson Creek, Des Plaines River and DuPage River, and other natural resources**
- **Opportunities to implement Forest Preserve District of Will County (FPDWC) planned trail corridors, including the IL53, Jackson Creek and DuPage River trail corridors**

Data sources: CMAP Land Use, 2015; FPDWC, 2019; Will County GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

GOAL 2: CREATE A DYNAMIC TOOL that can change as truck route recommendations change



Scenarios are based on the distinction between TRUCK ACCESS and TRUCK MOBILITY on recommended routes.

Access: Routes that would primarily provide direct access to adjacent parcels with industrial use.

Mobility: Routes that would primarily be for truck travel only and would not provide direct access to adjacent parcels with industrial use.

Scenario Assumptions:

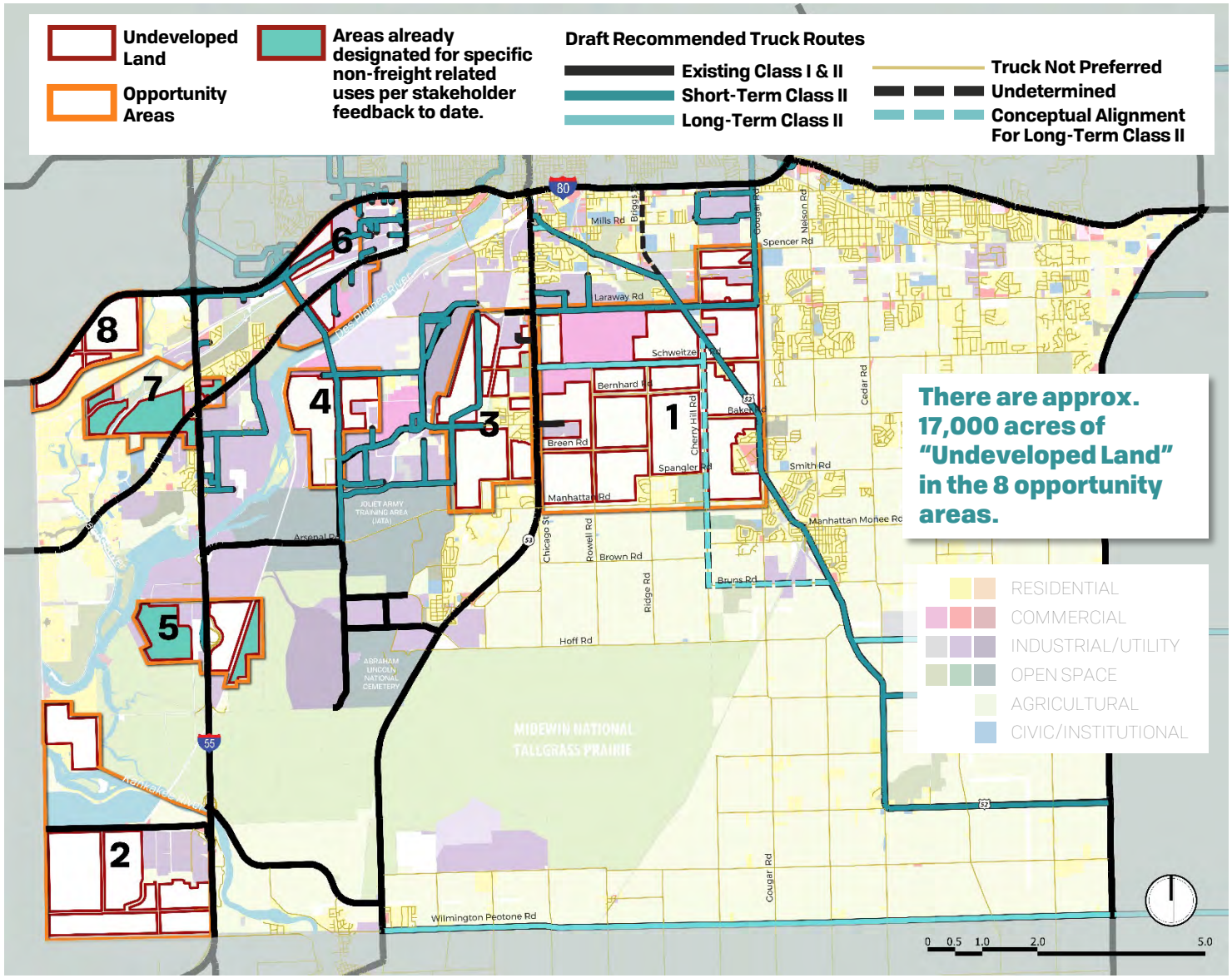
SCENARIO A
Freight related uses are allowed on all parcels with frontage along all recommended truck routes.

SCENARIO B
Same as Scenario A, minus all parcels with frontage only on the long-term truck routes.

SCENARIO C
Same as Scenario B, minus parcels with frontage only along IL 53/Historic Route 66.

SCENARIO D
Same as Scenario C, minus parcels required for potential preservation

SCENARIO CONSTANT: UNDEVELOPED LAND



Undeveloped Land includes the following:

- Vacant parcels
- Parcels with existing agricultural use

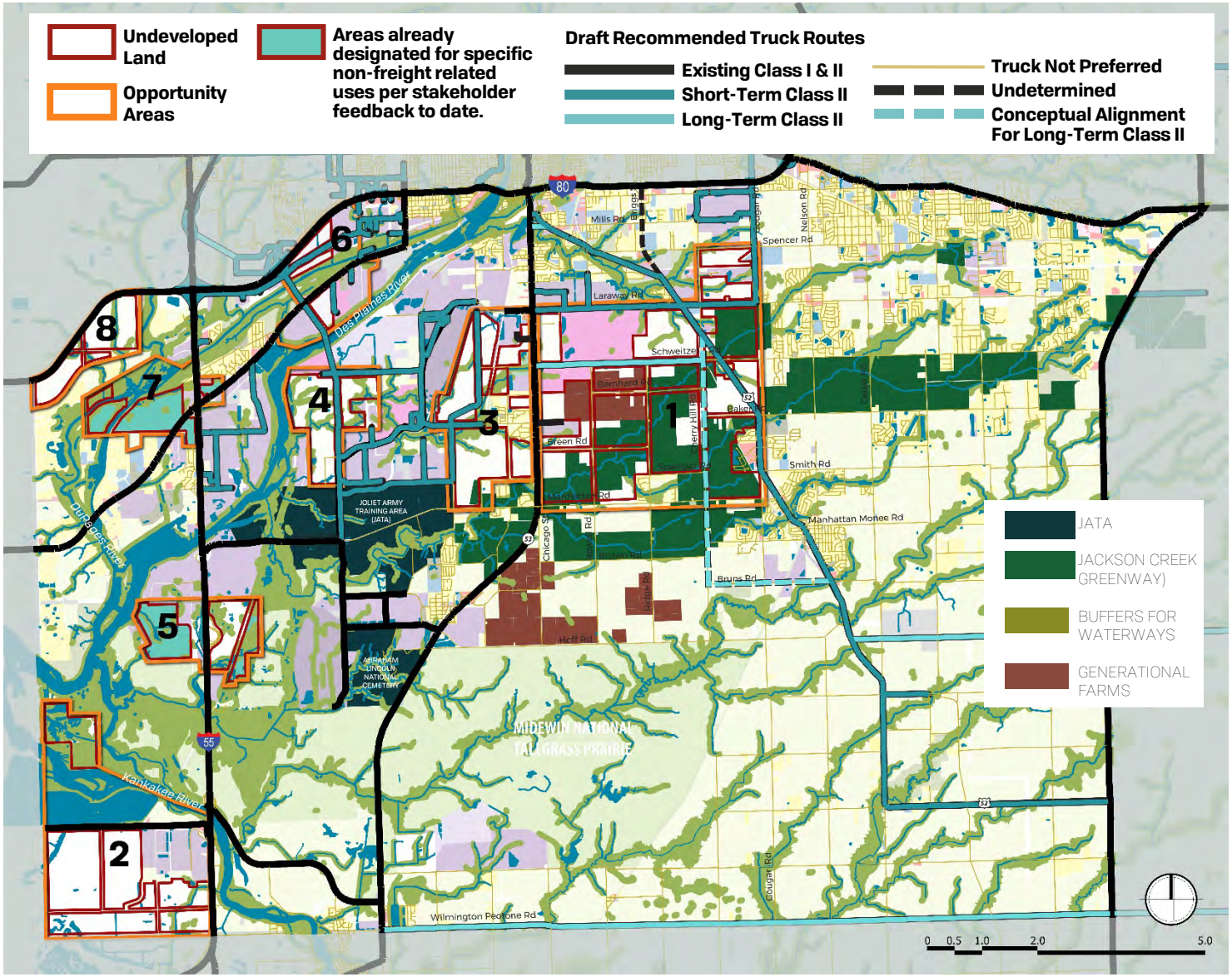
Undeveloped Land does not include the following:

- Parcels with any existing development (industrial, residential, civic, commercial or other)
- Existing public open spaces
- Areas already designated for specific non-freight related uses per stakeholder feedback received to date.

Parcels shown as Undeveloped Land will continue to be refined per future feedback from stakeholders.

Data sources: CMAP Land Use, 2015; FPDWC, 2019; Will County GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

SCENARIO VARIABLES: LAND CAPACITY & PRESERVATION AREAS



In developing the scenarios, two major variables were considered.:

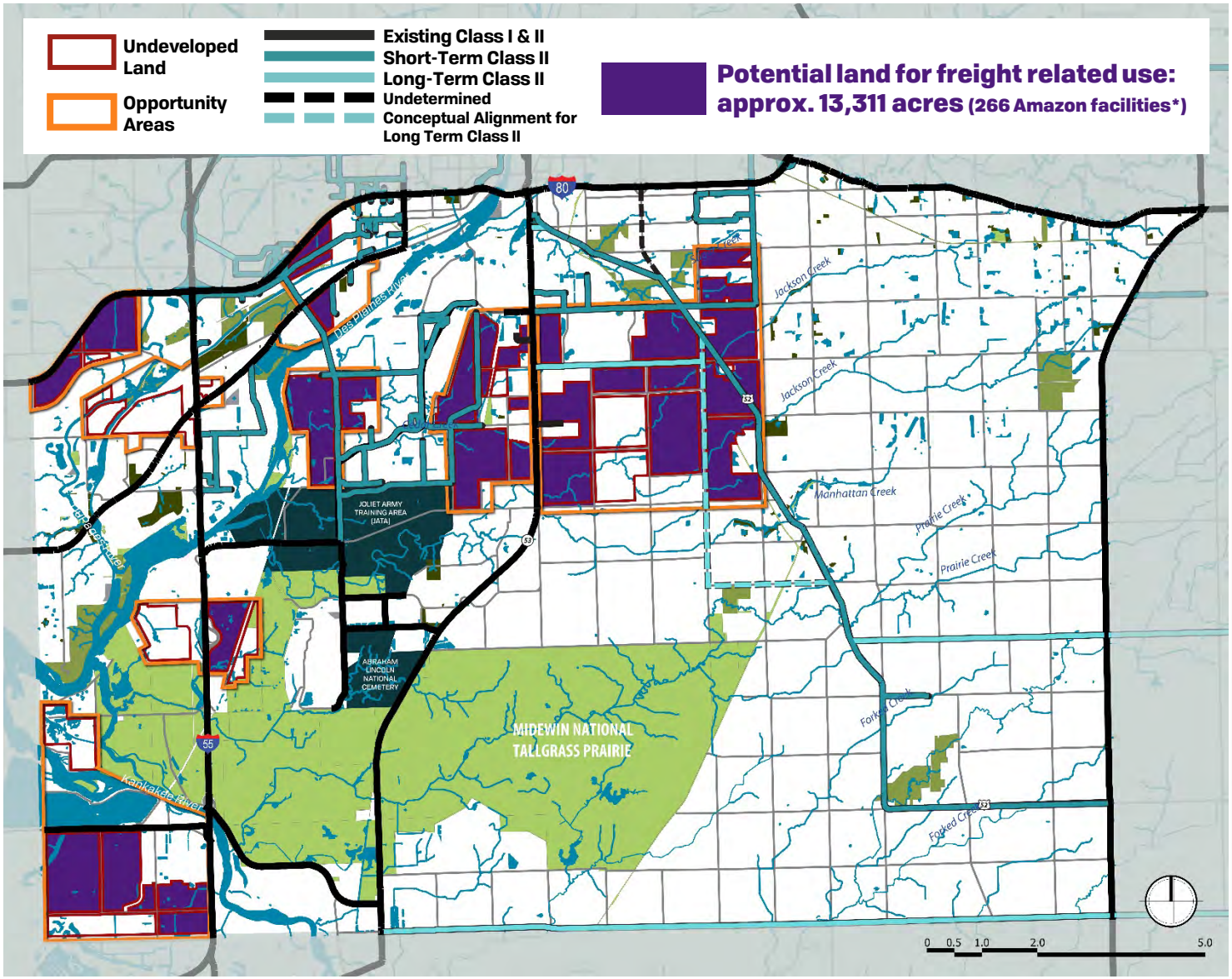
1. **LAND CAPACITY**
2. **PRESERVATION AREAS**

These help to address the following key questions:

- **How much land capacity is available for freight related use? Assuming one freight related facility is approx. 1 million sf on 50 acres, how many facilities can fit?**
- **How much land remains for other uses and preservation areas?**
- **Which of the recommended preservation areas can be provided?**

Data sources: CMAP Land Use, 2015; FPDWC, 2019; Will County GIS, 2019. Note: The CMAP 2015 Land Use Inventory data used in this analysis is draft data.

SCENARIO A showing potential freight related land capacity



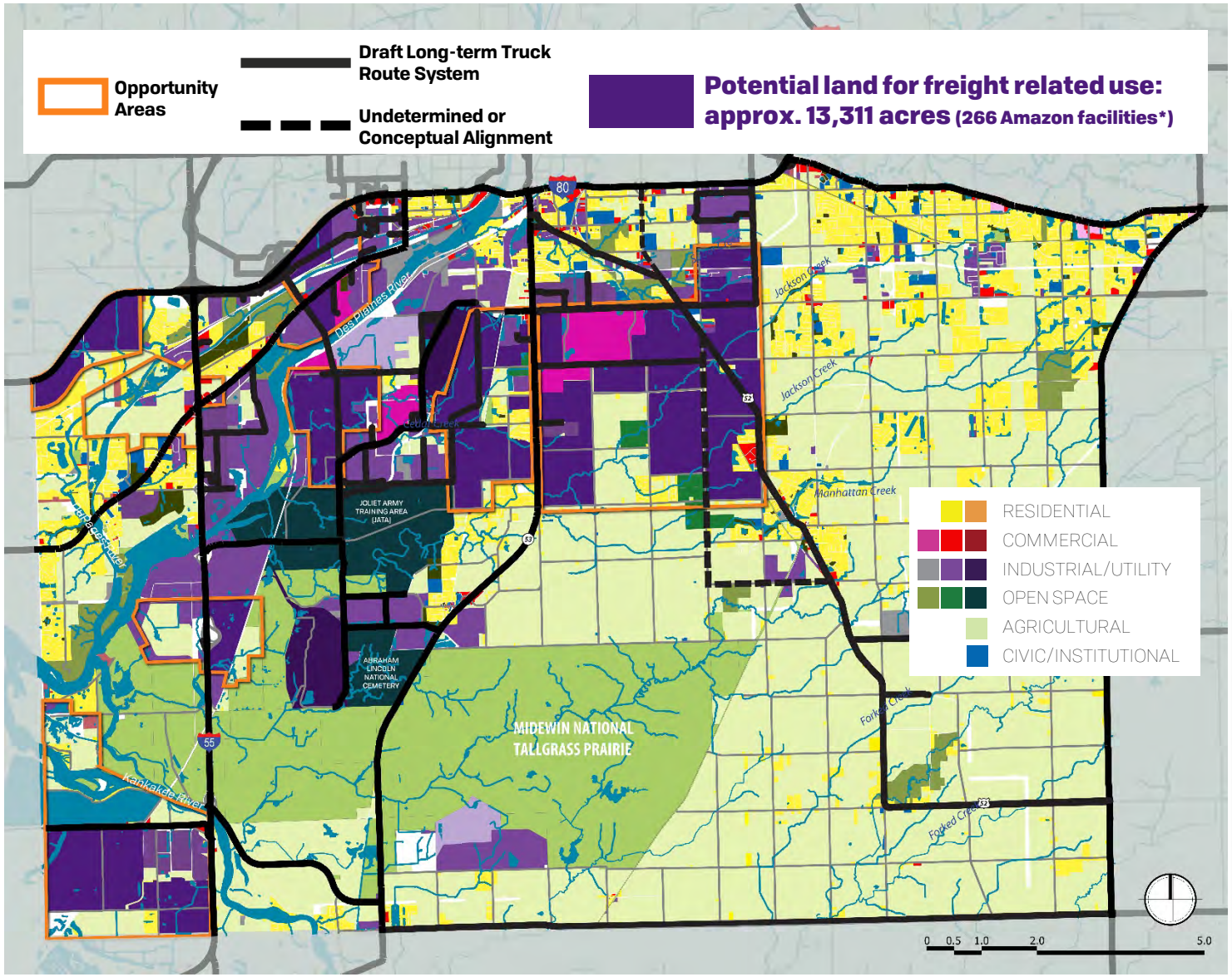
Industrial and freight related uses are allowed on all parcels with frontage along all recommended truck routes.

	LAND CAPACITY	
1	LAND CAPACITY FOR FREIGHT RELATED USE	13,311 ACRES
2	LAND REMAINING FOR OTHER USES AND PRESERVATION AREAS	3,765 ACRES
	PRESERVED AREAS	
3	JACKSON CREEK GREENWAY	NP
4	JATA	P
5	BUFFERS FOR FLOODPLAINS	NP
6	GENERATIONAL FARMS	NP

P: PROVIDED NP: NOT PROVIDED

*no. of Amazon facilities is provided as an example of capacity and assumes 50 acres of land for a 1 million sf facility.

SCENARIO A showing potential freight related land capacity plus existing land uses



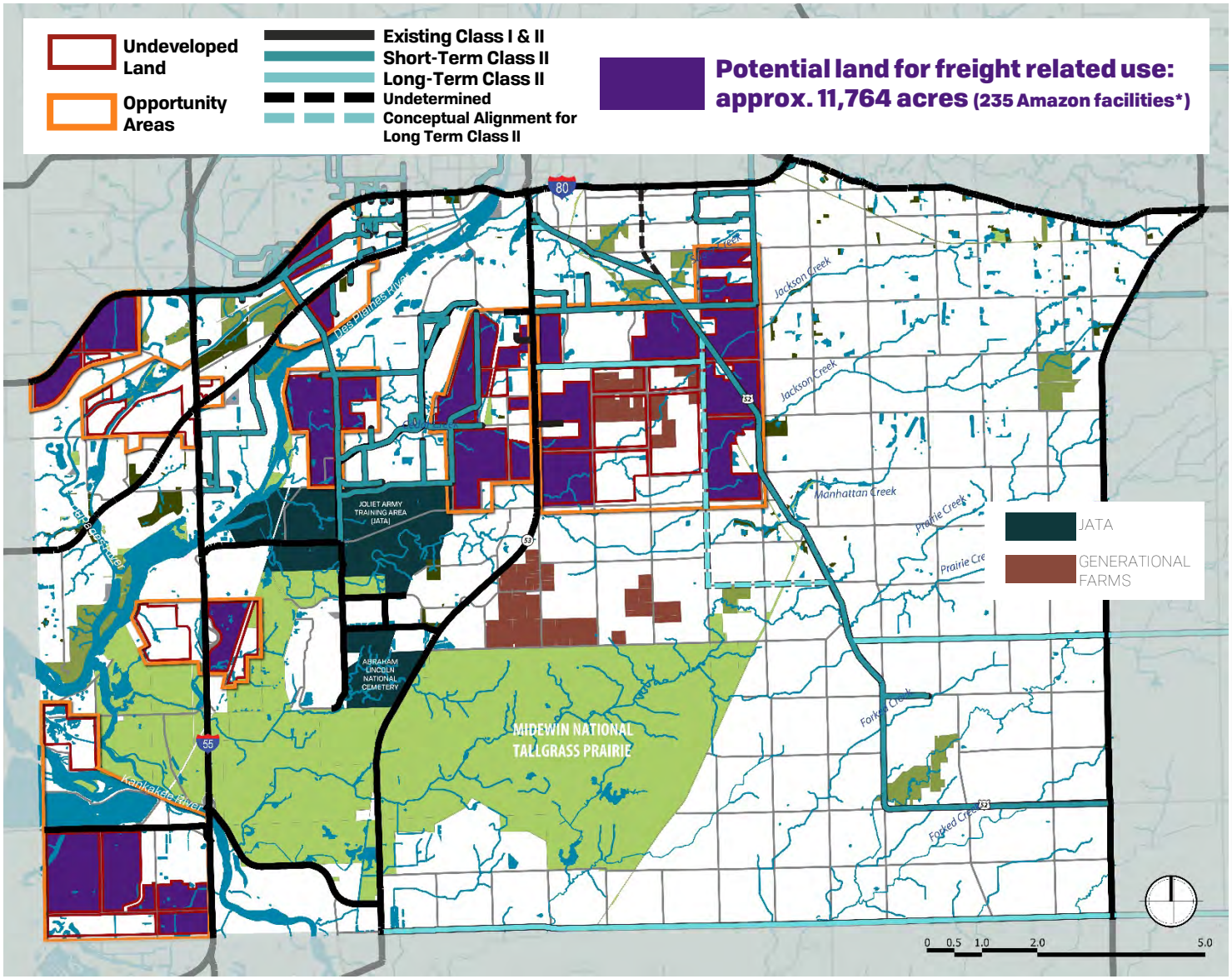
Industrial and freight related uses are allowed on all parcels with frontage along all recommended truck routes within the scenario focus areas.

	LAND CAPACITY	
1	LAND CAPACITY FOR FREIGHT RELATED USE	13.311 ACRES
2	LAND REMAINING FOR OTHER USES AND PRESERVATION AREAS	3,765 ACRES
	PRESERVED AREAS	
3	JACKSON CREEK GREENWAY	NP
4	JATA	P
5	BUFFERS FOR FLOODPLAINS	NP
6	GENERATIONAL FARMS	NP

P: PROVIDED NP: NOT PROVIDED

*no. of Amazon facilities is provided as an example of capacity and assumes 50 acres of land for a 1 million sf facility.

SCENARIO B showing potential freight related land capacity



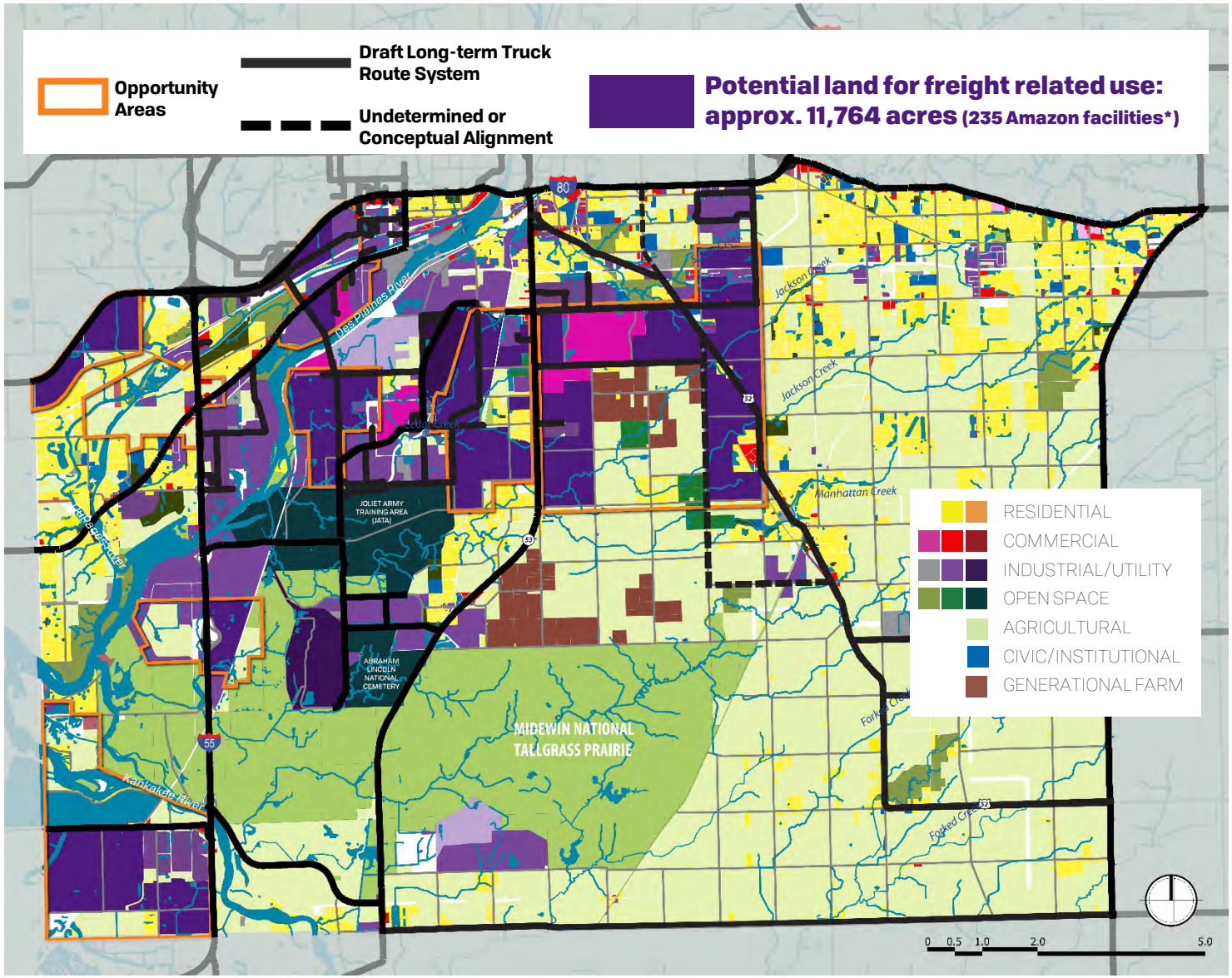
Scenario B: Same as Scenario A, minus all parcels with frontage only on the long-term truck routes.

	LAND CAPACITY	
1	LAND CAPACITY FOR FREIGHT RELATED USE	11,764 ACRES
2	LAND REMAINING FOR OTHER USES AND PRESERVATION AREAS	5,312 ACRES
	PRESERVED AREAS	
3	JACKSON CREEK GREENWAY	NP
4	JATA	P
5	BUFFERS FOR FLOODPLAINS	NP
6	GENERATIONAL FARMS	P

P: PROVIDED NP: NOT PROVIDED

*no. of Amazon facilities is provided as an example of capacity and assumes 50 acres of land for a 1 million sf facility.

SCENARIO B showing potential freight related land capacity plus existing land uses



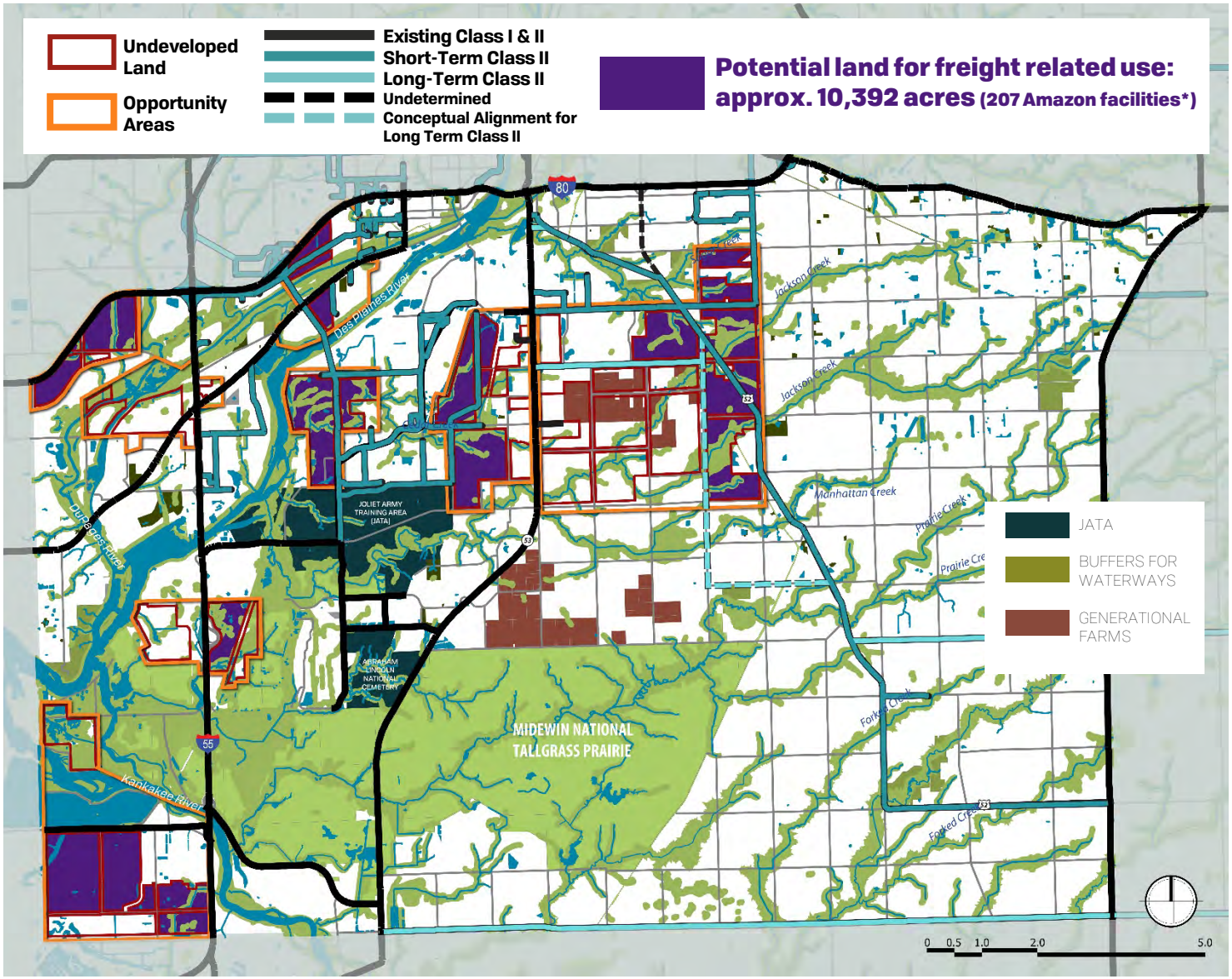
Scenario B: Same as Scenario A, minus all parcels with frontage only on the long-term truck routes.

	LAND CAPACITY	
1	LAND CAPACITY FOR FREIGHT RELATED USE	11,764 ACRES
2	LAND REMAINING FOR OTHER USES AND PRESERVATION AREAS	5,312 ACRES
	PRESERVED AREAS	
3	JACKSON CREEK GREENWAY	NP
4	JATA	P
5	BUFFERS FOR FLOODPLAINS	NP
6	GENERATIONAL FARMS	P

P: PROVIDED NP: NOT PROVIDED

*no. of Amazon facilities is provided as an example of capacity and assumes 50 acres of land for a 1 million sf facility.

SCENARIO C showing potential freight related land capacity



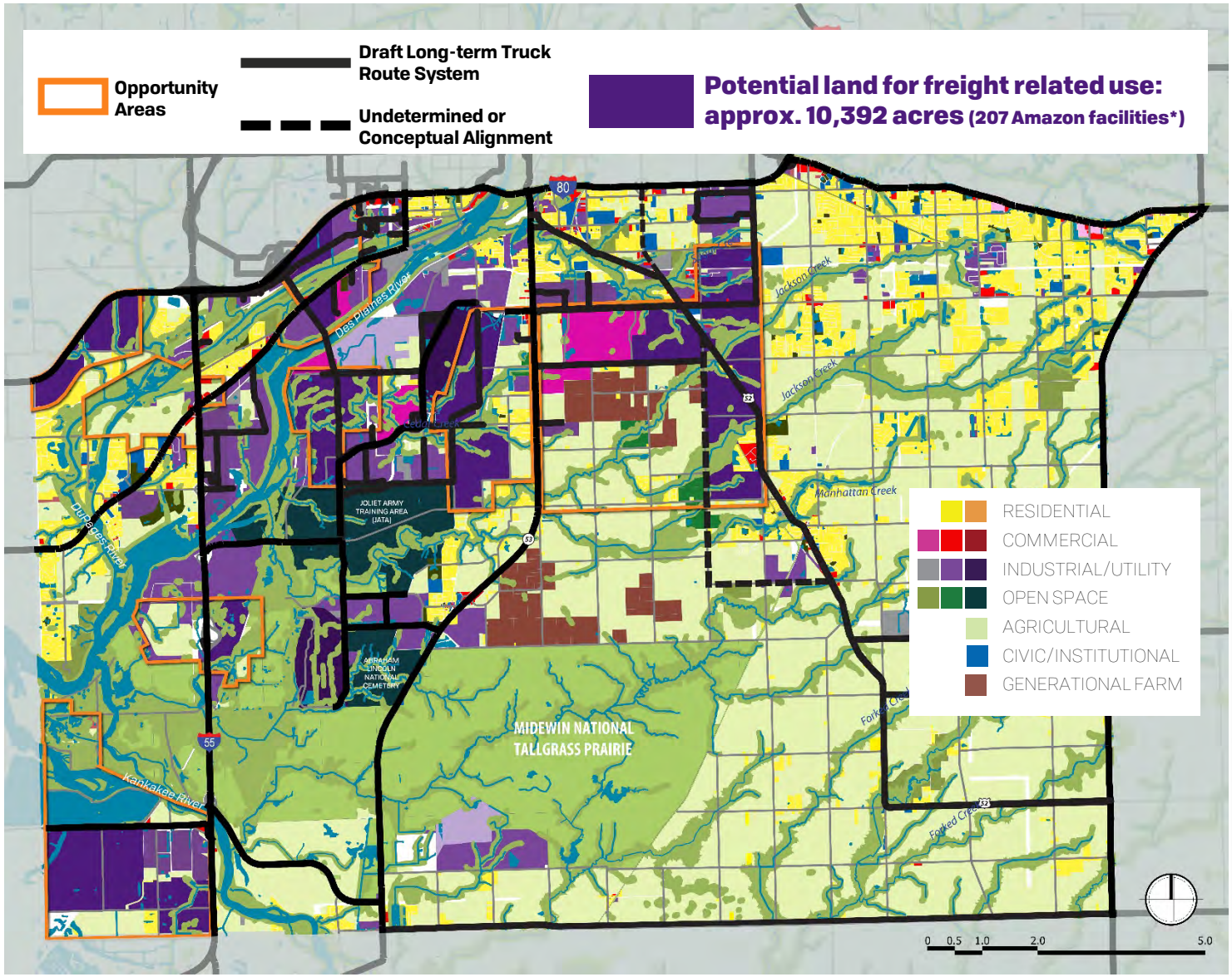
Scenario C: Same as Scenario B, minus parcels with frontage only along IL 53/Historic Route 66.

	LAND CAPACITY	
1	LAND CAPACITY FOR FREIGHT RELATED USE	10,392 ACRES
2	LAND REMAINING FOR OTHER USES AND PRESERVATION AREAS	6,684 ACRES
	PRESERVED AREAS	
3	JACKSON CREEK GREENWAY	NP
4	JATA	P
5	BUFFERS FOR FLOODPLAINS	P
6	GENERATIONAL FARMS	P

P: PROVIDED NP: NOT PROVIDED

*no. of Amazon facilities is provided as an example of capacity and assumes 50 acres of land for a 1 million sf facility.

SCENARIO C showing potential freight related land capacity plus existing land uses



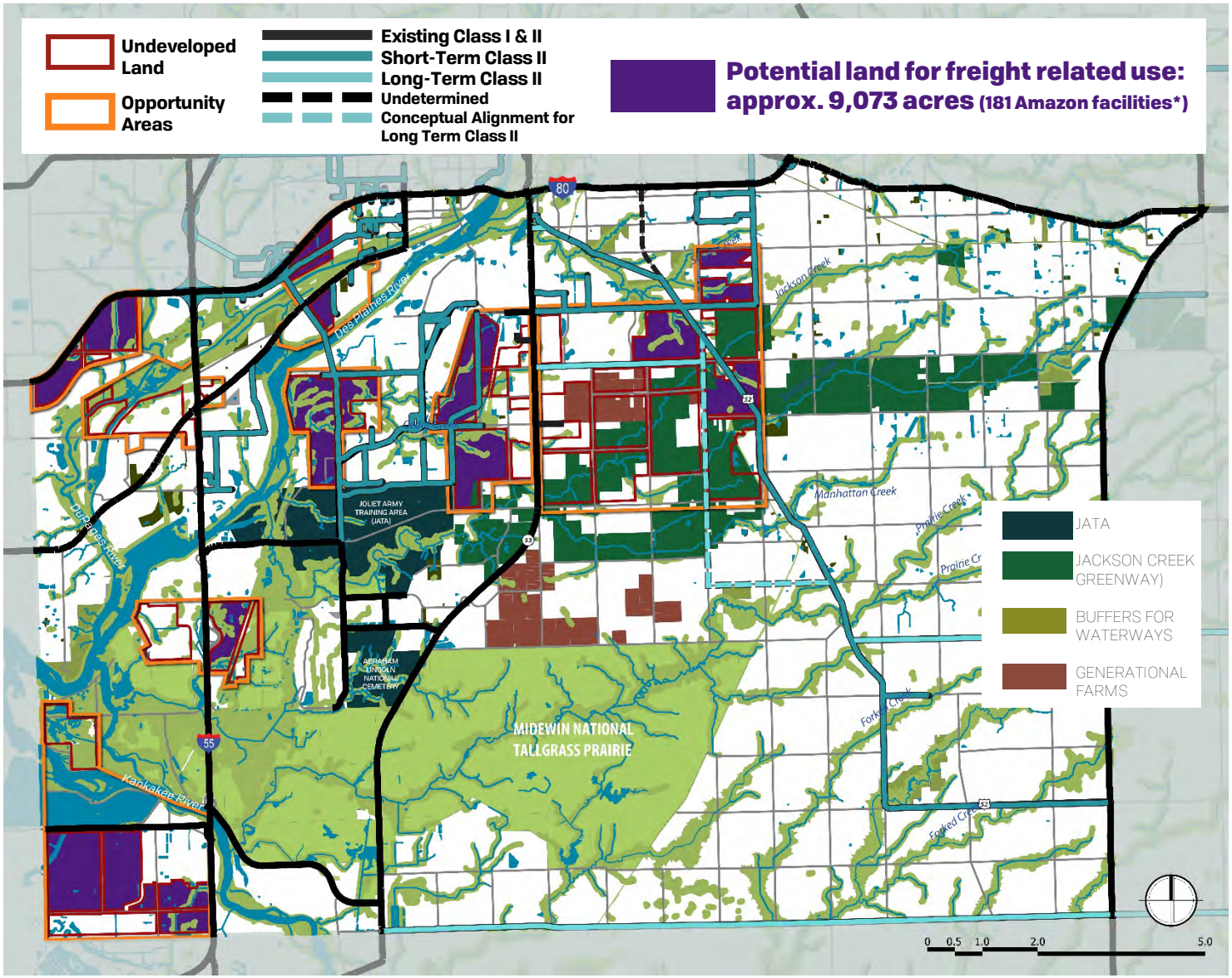
Scenario C: Same as Scenario B, minus parcels with frontage only along IL 53/Historic Route 66.

	LAND CAPACITY	
1	LAND CAPACITY FOR FREIGHT RELATED USE	10,392 ACRES
2	LAND REMAINING FOR OTHER USES AND PRESERVATION AREAS	6,684 ACRES
	PRESERVED AREAS	
3	JACKSON CREEK GREENWAY	NP
4	JATA	P
5	BUFFERS FOR FLOODPLAINS	P
6	GENERATIONAL FARMS	P

P: PROVIDED NP: NOT PROVIDED

*no. of Amazon facilities is provided as an example of capacity and assumes 50 acres of land for a 1 million sf facility.

SCENARIO D showing potential freight related land capacity



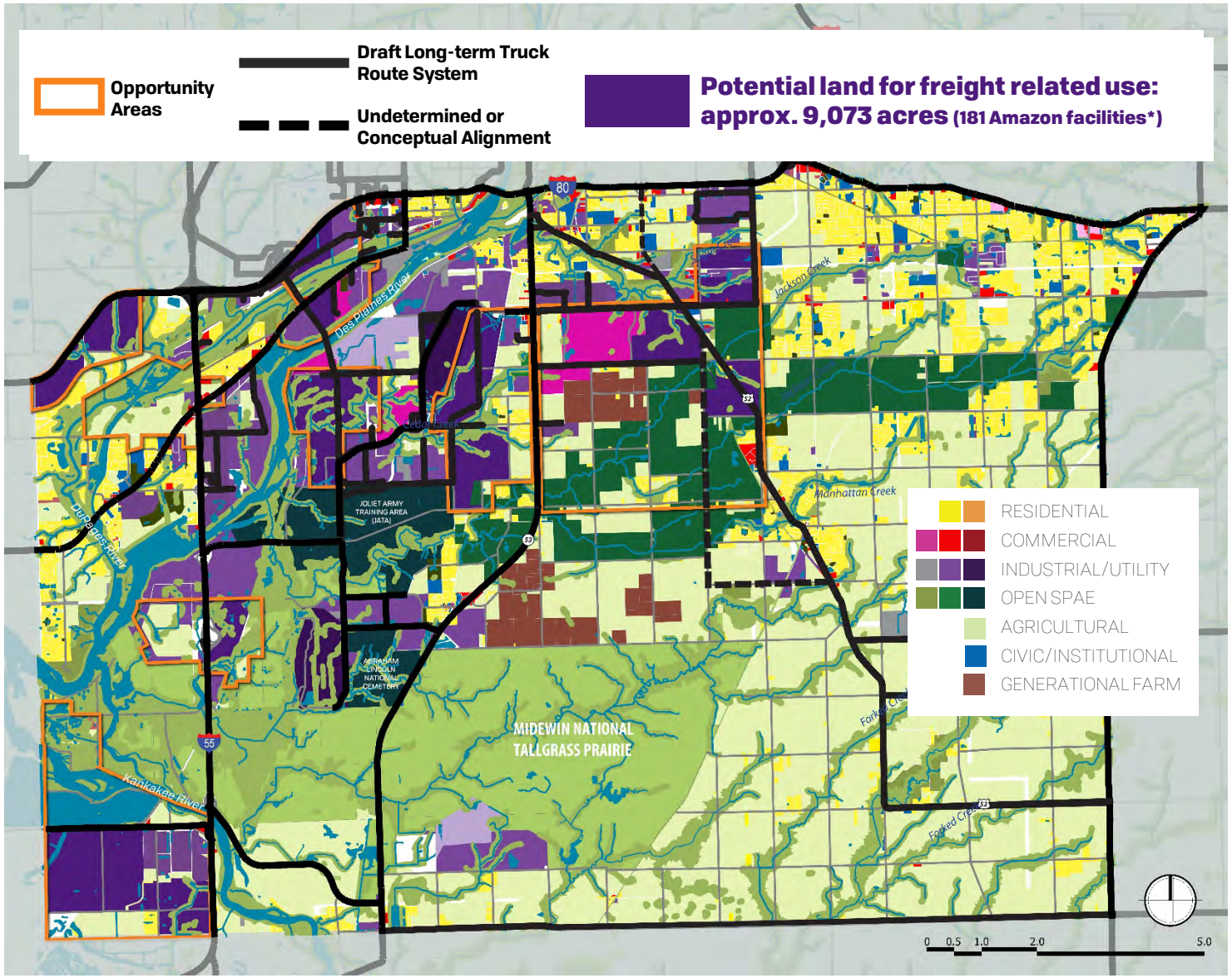
Scenario D: Same as Scenario C, minus parcels required for potential preservation

	LAND CAPACITY	
1	LAND CAPACITY FOR FREIGHT RELATED USE	9,073 ACRES
2	LAND REMAINING FOR OTHER USES AND PRESERVATION AREAS	8,003 ACRES
	PRESERVED AREAS	
3	JACKSON CREEK GREENWAY	P
4	JATA	P
5	BUFFERS FOR FLOODPLAINS	P
6	GENERATIONAL FARMS	P

P: PROVIDED NP: NOT PROVIDED

*no. of Amazon facilities is provided as an example of capacity and assumes 50 acres of land for a 1 million sf facility.

SCENARIO D showing potential freight related land capacity plus existing land uses



Scenario D: Same as Scenario C, minus parcels required for potential preservation

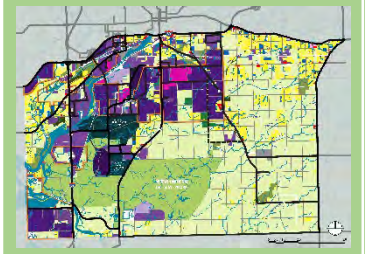
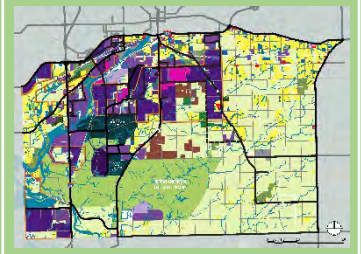
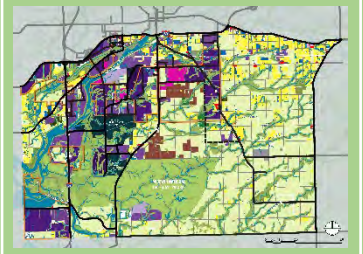
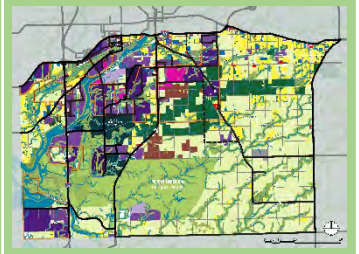
	LAND CAPACITY	
1	LAND CAPACITY FOR FREIGHT RELATED USE	9,073 ACRES
2	LAND REMAINING FOR OTHER USES AND PRESERVATION AREAS	8,003 ACRES
	PRESERVED AREAS	
3	JACKSON CREEK GREENWAY	P
4	JATA	P
5	BUFFERS FOR FLOODPLAINS	P
6	GENERATIONAL FARMS	P

P: PROVIDED NP: NOT PROVIDED

*no. of Amazon facilities is provided as an example of capacity and assumes 50 acres of land for a 1 million sf facility.

SUMMARY TABLE FOR THE FOUR SCENARIOS

This table offers a summary for the four scenarios and the two variables: Land Capacity and Preservation Areas. Each scenario is shown in greater detail on the following pages.

		SCENARIO A Industrial and freight related uses are allowed on all parcels with frontage along all recommended truck routes.	SCENARIO B Same as Scenario A, minus all parcels with frontage only on the long-term truck routes.	SCENARIO C Same as Scenario B, minus parcels with frontage only along IL 53/Historic Route 66	SCENARIO D Same as Scenario C, minus parcels required for potential preservation
					
	LAND CAPACITY				
1	**LAND CAPACITY FOR FREIGHT RELATED USE**	**13,311 ACRES (266 AMAZONS)**	**11,764 ACRES (235 AMAZONS)**	**10,392 ACRES (207 AMAZONS)**	**9,073 ACRES (181 AMAZONS)**
2	**LAND REMAINING FOR OTHER USES & PRESERVATION AREAS**	**3,765 ACRES**	**5,312 ACRES**	**6,684 ACRES**	**8,003 ACRES**
	PRESERVATION AREAS				
3	**JACKSON CREEK GREENWAY**	**Not Provided**	**Not Provided**	**Not Provided**	**Provided**
4	**JATA**	**Provided**	**Provided**	**Provided**	**Provided**
5	**BUFFERS FOR WATERWAYS**	**Not Provided**	**Not Provided**	**Provided**	**Provided**
6	**GENERATIONAL FARMS**	**Not Provided**	**Provided**	**Provided**	**Provided**

Appendix E

Engagement and Planning Process Overview and Timeline

Moving Will County Engagement and Planning Process Overview and Timeline

This appendix provides an overview of the community engagement conducted, planning process timeline, and milestones completed (and in-progress), and expected deliverables for the Moving Will County project.

STEERING COMMITTEE

Throughout the project timeline the Steering Committee has played a critical role in getting the word out and sharing public involvement opportunities with their community members. They have been an important resource for this regional community engagement effort, as both the Land Use Strategy and Truck Routing study areas together span twenty municipalities and large swaths of unincorporated areas. The Steering Committee consists of leaders from local municipalities, agencies, as well as associations and nonprofits representing business, environmental and agricultural interests. They have reviewed draft deliverables at key milestones in the timeline and provided feedback that was incorporated into revisions. Steering Committee members include:

- Will County Land Use Department
- Will County DOT
- IDOT District 1
- Illinois Soybean Association
- Illinois Trucking Association
- Midewin National Tallgrass Prairie
- Mid-West Truckers
- Openlands
- Will County Board
- Will County Center for Economic Development
- Will County Governmental League
- Forest Preserve District of Will County
- Village of Elwood
- Village of Manhattan
- City of Joliet
- Village of Channahon
- Village of Frankfort
- Village of Symerton
- Village of Minooka
- Village of Mokena
- Village of New Lenox
- Village of Rockdale
- City of Crest Hill
- City of Lockport
- Village of Plainfield
- City of Naperville
- City of Wilmington
- Village of Bolingbrook
- Village of Shorewood
- Village of Woodridge
- Village of Homer Glen
- Village of Romeoville

ENGAGEMENT SUMMARY

Below is a summary of the community engagement events and opportunities that have been conducted since project kickoff as a part of Moving Will County. To see how they fit within the deliverables, please see the "Timeline: Completed" section in this memo.

- Project website: contact/comment form, plan documents, community meeting recordings, project updates and engagement opportunities.
    - Website contact email list: 750+ participants
    - Website comments received: 90+ comments
- 2 Virtual Public Workshops: 127 attended first, 118 attended second
- 4 Steering Committee meetings
- Online surveys:
    - For community members/public:
        - Online interactive map of Draft Truck Route Network (WikiMap): over 300 comments
        - Online survey of Draft Land Use Strategy (Survey Monkey): 255 responses

    - For Steering Committee:
        - Online survey of project themes/goals/outcomes (Survey Monkey)
        - Online survey of Land Use Strategy (Survey Monkey)
- Alternatives for those without internet access: poster-sized maps, printable surveys, and call-in voice mail number
- ~18 Focus groups/stakeholder interviews

TIMELINE: COMPLETED

Below is a timeline of the major milestones and deliverables completed to date throughout the Moving Will County planning process. Opportunities in which **key stakeholders and the public were engaged are shown below in bolded font**.

- Fall 2019: Project Kickoff
    - **First Steering Committee:** December 2019
        - Meeting objectives: project overview, process, timeline, themes, goals and opportunities.
- Winter 2020: Existing Conditions Analysis
    - **Focus Groups and Stakeholder Interviews** (14) conducted with municipalities and key organizations/agencies.
    - Draft Existing Conditions Reports submitted for Land Use Strategy and Truck Routing Study.
- Spring 2020: Existing Conditions Analysis continues
    - Existing Conditions Reports revised.
    - **Second Steering Committee:** April 2020
        - Meeting objectives: overview of existing conditions analysis.
    - Truck Routing Best Practices memo completed.
- Summer 2020: Draft Truck Route Network
    - Draft Truck Route Network developed.
    - **Municipal review**: individualized outreach to each study area municipality to review and recommend revisions to the draft truck routing recommendations before public release.
    - Draft Truck Route Network revised based on municipal staff feedback.
    - **First Virtual Community Workshop:** August 2020
        - Meeting objectives: overview of the Moving Will planning process, existing conditions, and gathered feedback on Draft Truck Routing Network.
        - 127 attendees.
    - Other engagement opportunities:
        - **Online survey:** map of Draft Truck Route Network in which community members could place comments. Over 300 comments received.
        - **Printed poster maps** of Draft Truck Route Network were sent to key community locations.
    - **Municipal poll:** poll sent to leaders of study area municipalities to weigh in on themes/goals and provide input on how their community intends to adopt/accept and implement the project.
- Fall 2020: Revised Truck Route Network and Draft Preservation Areas and Land Use Scenarios
    - Draft Preservation Areas and Land Use Scenarios developed.
    - **Land Use Scenarios informational meeting:** Q&A held for Steering Committee members to better understand the draft recommendations prior to taking an online survey and attending the Steering Committee meeting.

    - **Third Steering Committee:** October 2020
        - Meeting objectives: gain feedback on Draft Truck Routing Network updates and Draft Preservation Areas and Land Use Scenarios.
    - **Land Use Scenarios Online survey:** sent to Steering Committee on Draft Preservation Areas and Land Use Scenarios to provide further input.
- Winter 2021: Draft Land Use Strategy
    - Draft Land Use Strategy developed based on Fall Steering Committee feedback.
    - **Fourth Steering Committee meeting:** February 2021
        - Meeting objectives: gained feedback on revised preservation areas and criteria for locating future TDL/industrial land uses.
    - **Second Virtual Community Workshop:** February 2021
        - Meeting objectives: gained feedback on revised preservation areas and criteria for locating future TDL/industrial land uses.
        - 118 attendees
- Spring 2021: Revised Draft Land Use Strategy and Finalize Truck Routing Study
    - **Online survey:** gained feedback on Draft Land Use Strategy from community members. 255 respondents.
- Summer 2021: Revised Draft Land Use Strategy and Finalize Truck Routing Study continues
    - Finalize Truck Routing Study: June 2021
    - Develop Land Use Strategy Document: June 2021
    - **Final Steering Committee Review Period** of Land Use Strategy document: July 2021
- Fall 2021: Final Land Use Strategy
    - Land Use Strategy finalized: September 2021
    - Moving Will County approval and adoption: October 2021

FINAL DELIVERABLES

- Truck Routing Study
    - Recommended truck routing network
    - Recommended investment plan
    - National best practices for accommodating trucks
    - Guidance for local communities in designating truck routes
- Land Use Strategy
    - Economic Market Analysis
    - Preservation areas
    - Land use scenarios
    - Impact assessment
    - Implementation guidance
- Between both studies:
    - Design ideas to improve safety and mitigate the negative externalities of trucks
    - Livability recommendations

MOVING
WILL COUNTY

TRUCK ROUTING + LAND USE

Memorandum

To: *Patricia Mangano, CMAP*
Stephen Ostrander, CMAP
Denise Winfrey, Will County
Nick Palmer, Will County
Ann Schneider, Will County

From: *Jacque Henrikson, Civiltech*
Mike Folkening, Civiltech
Ferhat Zerin, Ginkgo
Perry Georgopoulos, Ginkgo

Date: *April 9, 2021*

Subject: Moving Will County Draft Land Use Strategy Public Commenting Period Summary

The following document is a summary of the community feedback that was received during the public commenting period for the Draft Moving Will County Land Use Strategy. Community members were encouraged to review the draft recommendations and either participate in a Community Workshop on February 24, 2021 (which included a presentation of the recommendations, polling questions and a questions and comments portion) or in an online survey that was open February 25 through March 21, 2021. The findings from each of these opportunities are summarized below in two different sections. The project team was unable to address every question received during the virtual community workshop, due to limited time and in some cases the need to follow-up with other team members and project partners, so a key goal of this document is to be a resource to answer outstanding questions that community members may have and address next steps based on the feedback received.

February 24, 2021 Virtual Community Workshop

MEETING STATS

- Number of registrants: 243
- Number of actual attendees: 118
- Number of questions and comments received: ~65
- Speakers (consultant team):
    - Civiltech (Moving Will County project lead): Jacque Henrikson

    - Lakota Group (engagement lead): Abigail Rose
    - Ginkgo (land use lead): Ferhat Zerin
- Affiliation of attendees (as self-reported in the chat box):
    - Municipal and Township residents: Elwood, Carillon, Romeoville, Joliet, New Lenox, Manhattan Township, Crestwood, Naperville, Crete, Wilmington, Manteno, Mokena, New Lenox Township
    - Agency representatives: Will County Board, Will County Land Use Department, CMAP, Green Garden Township, Jackson Township, WCGL, Laraway School District
    - NPOs and Associations: Illinois Sierra Club, Futurez NFP, the Conservation Foundation, Openlands, Will County Audubon, CED, Sugar Creek Hills Homeowners Association, Universalist Unitarian Church of Joliet
    - Other organizations and neighborhood groups: No to Northpoint, No to Loves, NOAP, No to Joliet Country Club Warehouses, V3 Companies, LaPorte Real Estate Partners, TranSystems, Working Families Joliet, Cullinan Properties, Will County Agriculture Sustainability and Conservation Initiative, Acreage43560, LLC, LDC/LMCC

INTERACTIVE POLLING QUESTIONS (completed during workshop)

Polling questions were utilized to engage participants throughout the presentation of the Draft Land Use Strategy. Below are the results. A significant number of participants indicated that they were "uncertain" in regard to the questions on TDL (Transportation, Distribution, and Logistics)/Industrial Land Uses. This highlighted the importance of having the presentation materials and an online survey (which asks the same questions) available after the meeting so that participants could have more time to review, consider, and provide feedback on the draft recommendations. For more details on the online survey, see page 9.

- Introduction:
    - Please describe yourself (check all that apply):
        - 59%: Residents of the study area
        - 36%: Represent an agency, organization or other entity impacted by the study area
        - 21%; Residents of Will County outside the study area
        - 17%: Work in the study area
- TDL/Industrial Land Uses
    - Do you agree with the gross acreage for and location of new TDL/industrial uses?
        - 40%: Uncertain
        - 32%: Yes
        - 28%: No
    - Do you agree with the criteria used to determine the locations of new TDL/industrial uses?
        - 62%: Yes
        - 22%: Uncertain

        - 16%: No
    - Do you agree with the exceptions to the criteria (where new TDL/industrial uses are not allowed)?
        - 78%: Yes
        - 13%: Uncertain
        - 9%: No
- Preservation Areas
    - Do you agree with the five proposed preservation areas?
        - 81%: Yes
        - 15% Uncertain
        - 4%: No

COMMENTS AND QUESTIONS FEEDBACK SUMMARY

This section includes a summarized record of the feedback received through the chat box, Q&A tool, and over the phone open comment period during the February 24 Public Workshop on the following topics:

Land Use

- Summarized comments:
    - Desire to build convention centers and hotels to attract trade shows.
    - The east and south sides of Joliet are already saturated with warehouse and truck traffic.
    - Consider proposing TDL/industrial developments on west side of Joliet.
    - There is already industrial/TDL just south of Cherry Hill subdivision, just west of Gougar Rd, and south of Rt 30.
    - Concerns regarding Joliet annexing unincorporated areas to generate tax revenue without the areas being compensated.
    - Need for an infrastructure plan so adequate roads are in place when zoning is changed to allow TDL/industrial.
    - Look at impacts to eastern Will County.

- Specific comments:
    - *Briggs Street is being used as a truck route and if these developments were not there Briggs Street would not be used as it falls into the exceptions - Residential housing, churches, schools and fire station - we are suffering greatly both in our quality of life and emergency responses. Briggs Street is also a major school bus route.*
    - *As a land trust with hq located in Will County, The Conservation Foundation would love to be a part of the land use discussion.*

- *I am absolutely terrified when I see the dark purple areas in comparison to where I live. Over 12,000 acres with the capacity of 4X's of what there is today.*
- *Too much dark purple, I agree. Roads already dangerous.*

- **Questions**
  - *Q: Why is there so much dark purple?*
    - A: Without a plan that provides cohesive guidance, the outcome would almost certainly be far worse. There could be a lot more purple everywhere, developed in an unguided and a haphazard manner. This will study help restrict where that growth can occur.
  - *Q. Does this plan show were industry will least conflict with other uses, or does this show what will be developed?*
    - A. The study is trying to show where industrial uses can be allowed. Land use is regulated by local zoning codes or comprehensive plans. Incorporated municipalities can decide where land use go based on zoning code. The team is trying to make sure that this plan actually has some legal basis and could be compatible to municipalities' actual codes.

      Every community has a right to pursue economic development for themselves, but this plan is intended to help guide and limit where those uses can go. It shows where TDL/industrial land uses will have the least conflict and can be supported by the necessary infrastructure based on a variety of criteria. It does <u>not</u> show where they will be developed.

      This project is not determining the future market for these sorts of uses, but based on previous trends, it is assuming that more private development will likely continue coming to Will County, so it is important to have a framework of criteria in place (agreed upon by all study area municipalities) to show where it should/should not go to avoid impacts.
  - *Q: Can you review how the plan will impact Eastern Will County?*
    - A: one of things the plan is trying to do, in addition to adoption and approval by all the study area communities within the study area, is get consensus on the criteria being proposed. These criteria can be applied on a wider scale if desired by the County and communities outside of this project's study area.
  - *Q: Who approved the land uses (warehouses) and routes by Briggs St?*
    - A: Nothing has been approved with the Land Use Strategy recommendations. These are all in draft format and won't be final until this fall. The TDL, industrial and preservation areas shown by Briggs are from existing municipal land use maps (these land uses were not developed as a part of this study). This plan is not recommending any change to the existing uses along Briggs.

- *Q: Seems like all this material concentrates on industrial and freight traffic, have we done any studies/research on alternative uses for land other than industrial and bringing in more freight traffic?*
  - A: Good point. A complete land use plan would look at all types of land uses. However, this project is focusing on TDL/industrial (purple) land uses because it is currently unclear where these types of land uses should go (so the plan helps provide guidance on limits, along with identifying key areas for preservation).

    From extensive market research (conducted by the team early in the process) it was found that the housing market is down and commercial development isn't growing, but there is huge potential for other uses that the market can't support right now. This plan will ensure that there is enough land available for other uses to come in and develop, by helping communities restrict where TDL/industrial (purple) land uses can go.

Environmental

- General summarized comments:
  - Consider impacts to birds and other wild animals.
  - Concerns regarding pollution and the health-related issues.

- Specific comment:
  - *With future water quality trading programs and carbon capture programs unfolding, you may want to avoid designating on the map whether the land is "public" or not. There may not be enough public dollars to purchase all of the land needed to implement the entire strategy. Private property owners can implement the strategies and will be motivated to do so over time with upcoming water and carbon incentives. It is more important to designate "permanent" protection, as opposed to "public".*

- Questions:
  - *Q: How are you addressing the additional greenhouse gases produced by truck traffic from the 12,000 acres of warehouse development minus the loss of the carbon capture lost by the acres that was previously stored by the farms? Has an economic contribution study been done to show that this 12,000 acres is the right amount needed?*
    - A: We will be conducting an open space impact analysis later in the project, and we have already conducted a market study as a part of the project prior to the development of these draft recommendations. However, it is important to underscore that the Land Use Strategy is not proposing that every area indicated as purple should become TDL/industrial. As projects are proposed and communities consider future developments, environmental studies will need to be conducted, which could prevent development of specific parcels.

Conducting an economic analysis of the max acreage proposed is beyond the scope of this study, but is something that could be considered in the future. The goal of the Moving Will County Land Use Strategy is to develop a framework of criteria, agreed upon by the communities, to prioritize locations for new TDL/industrial development, identifying where it should—and should not—go. This will prevent dispersed and disorganized development, which leads to more environmental, community and infrastructure impacts. Additional environmental impact studies would need to be completed to determine suitability at specific locations, but adoption of this plan will provide criteria for each municipality when reviewing developments.

- *Q: Did you map prime soils. soils of statewide importance (USDA/NRCS); Ag Areas (I believe there is one) state of IL centennial and sesquicentennial farms prior to deciding new land use? 12,000+ removal of ag acres is significant. Are you accounting for the economic and environmental removal of those acres? A mitigation fee to compensate for those acres proposed to be removed to compensate for those to assist in preservation acres is one possibility.*
  - *[Follow-up Response] Looks like you did account for many of my concerns, that's great. Definitely look at the mitigation fee to help with implementation.*
  - A: As a part of the Land Use Existing Condition Report (located here), the team looked at many environmental datasets (e.g. CMAP Green Infrastructure Vision), including wetlands and farming areas.
- *Q: Primary concern, any studies concurrently being studied for negative impacts from pollution, etc, from heavy truck traffic?*
  - A: Transportation, Distribution, and Logistics (TDL) is a strong market, so this plan will help figure out a way to guide and restrict TDL uses in this area. This is the first step. And then if/when this plan is adopted, communities can figure out the rules/standards for developers that will help mitigate environmental problems, using this plan as guidance. They can also look at other solutions like technology improvements, building vertical, etc. The hope is that, in combination with the new best practices coming to this industry, this plan can help address the concerns with TDL uses coming into the area. Many in the TDL sector are adopting zero emissions goals, which could mitigate some of these concerns.

Community Livability and Placemaking

- Summarized comments:
  - Include opportunities for community art.
  - Concerns regarding low wage jobs with warehousing.

- Specific comments:
    - *Nothing like positioning Will County to be the home of low wage no health insurance temp jobs in warehouses.*
    - *Great idea on the preservation areas and bike trails.*

Truck Routing

- Summarized comments:
    - Concerns about the following roadways: Rowell Ave, Briggs St, Cherry Hill (damaging existing agriculture and farm animals).
    - Congestion: I-80/Rt 53.
    - Bridge improvements needed at I-80 and the Briggs interchange bridge.
    - Desire to reduce truck traffic and concerns about added truck traffic.
    - Concerns regarding traffic fatalities with semi-trucks.
    - Recommendation to contact IL Farm Bureau to receive input on IL and USDOT legislation related to farm use of roads and bridges.
    - Safety issues at Rt 52/53 and Rt 52/US 6.
    - Electric trucks are expensive and take a while to roll out.

- **Questions:**
    - *Q: Were areas outside of the study that create truck loads, such as land in Kankakee County, considered?*
        - A: Datasets on truck routing, traffic, congestion, origins/destinations, crashes, etc. were considered as a part of the Truck Routing Existing Conditions Report (which was one of the components used to develop the truck routing network). While the focus area of this analysis was within the study area and the expanded "transportation network to consider," most of these datasets were created by agencies at the County, Regional, or Federal level, and therefore reflects regional understandings as relevant to the study area. The Truck Routing Existing Conditions Report can be found here.

Plan Adoption/Approval and Next Steps

- Summarized comments:
    - Identify who decides how balance and prosperity will be defined, and how success will be judged.
    - Include more specificity of how goals will be pursued.
    - Desire for residents to lend a hand with helping to get the plan adopted by the County and local municipalities.

- **Questions:**
    - *Q: Have the municipalities listed on the slide pledged to use this final document to guide their decision making with respect to developing their comprehensive plans?*
        - A: All communities within the study area were individually asked to be a part of the Steering Committee and/or review draft deliverables for the Moving Will County project, and most have participated. All invited communities and stakeholder agencies have been kept up-to-date, every step of the way, during the project. We hope that all impacted communities adopt or approve this study, but it is up to each individual municipality to do so at the local level.

    - *Q: Who confirmed the truck routes and land usage for warehouses?*
        - A. The Moving Will County project includes two studies on two slightly different timelines, the Land Use Strategy and the Truck Routing Study. The Truck Routing Study will be complete this spring. The truck routes and draft land uses were developed based on an analysis of existing conditions and community feedback. All municipalities within the study area were invited to be a part of a Steering Committee and to weigh in as recommendations were developed. Additionally, other members of the Steering Committee included NPOs (such as Openlands) and other agencies (such as the County and State departments of transportation). There was also a public workshop in summer 2020 to review the draft truck routing network.

          None of these recommendations have been confirmed yet. While the Truck Routing Study will be completed in spring, it will still be the responsibility of the municipalities, Will County DOT, and IDOT to implement the recommendations; in cases where a new truck route is recommended, further study would be necessary. The Land Use Strategy is on a longer timeline, to be completed fall of 2021. These recommendations have also not been finalized. What was shown at the community meetings was a draft for community feedback. The recommendations will be revised based on the feedback received.

          The goal for both of these studies is to provide a framework that communities can build on, to target further study in terms of land use and truck routing issues within their municipality. The objective is to reach consensus among all the study area municipalities, so that everyone is working towards the same goals and considering their neighbors when revising/developing further studies and reviewing future developments.

Other

- Summarized comments:
    - Concern of Loves Truck stop near resident at I-80/Briggs.

    - Better publicizing of meetings by County and municipalities: e.g. sending an automated message.

- **Questions:**
    - *Q: Northpoint and compatibility with the Land Use Strategy?*
        - A: The Truck Routing Study and the Land Use Strategy were never intended to focus on one particular development. They were intended to give the agencies and municipalities guidance on where trucks should and should not travel and structured to provide guidance on future land uses across the study area, including areas to prioritize the location of future TDL/industrial land uses and preservation areas. Adopting the proposed Truck Routing Study and Land Use Strategy will help protect the region's natural resources and provide a framework of criteria that will help municipalities and the County determine places for growth for future TDL/industrial developments in the future.

Online Survey

Community members who were unable to attend the Virtual Community Workshop, or who had attended but still needed more time to review the recommendations and provide comments, were encouraged to participate in an online survey. Below are the results. This survey was open from February 25 through March 21, 2021.

Note: It was possible that individuals could participate in both the Community Workshop polling questions as well as the online survey. About 14% (36) respondents indicated that they attended the virtual workshop

Responses to Online Survey Polling Questions

- Introduction:
    - Please describe yourself (check all that apply):
        - 73%: Residents of the study area
        - 21%; Residents of Will County outside the study area
        - 15%: Work in the study area
        - 7%: Represent an agency, organization or other entity impacted by the study area
- Preservation Areas
    - Do you agree with the five proposed preservation areas?
        - 72%: Yes
        - 18% Uncertain
        - 11%: No
- TDL/Industrial Land Uses
    - Do you agree with the gross acreage for and location of new TDL/industrial uses?
        - 51%: No

        - 27%: Yes
        - 22%: Uncertain
    - Do you agree with the exceptions to the criteria (where new TDL/industrial uses are not allowed)?
        - 54%: Yes
        - 22%: No
        - 25%: Uncertain

Summary of Online Survey Findings:

- 255 People took the survey.
- Most people who took the survey, over 85%, did not attend the virtual workshop.
- The majority of the people who took the survey, almost 73%, are residents within the Land Use Study Area.
- Only 14.5% of the people work in the Land Use Study Area.
- 72% of the people agreed with the proposed Five Preservation Areas.
- The majority of people, 51%, did not agree with the amount and locations of new TDL/industrial uses, and only 27% did agree. However, almost 22% were uncertain.
- The majority of people, 54% agreed with the exceptions to the criteria. It should be noted that 25% were undecided.

Preservation Area Comments

Respondents were asked if they have more thoughts to their answers regarding the proposed preservation areas. A summary of key themes heard in the comments would include:

- Strong support for the preservation areas as shown in the Draft Land Use Strategy. However, there were many comments for adding more preservation areas and that the Strategy does not have enough. Some ideas included expanding existing park areas and forest preserves and preserving historical churches, equine properties, the cooling lakes (with the potential closure of Dresden Station), and more agricultural areas.
- Support to add buffers around existing and new preservation areas, such as public waterways, floodplains, Jackson Creek Greenway and several commented that Abraham Lincoln National Cemetery should be better protected.
- Several comments to add more preservation areas for the Sugar Creek and Spring Creek corridors.
- A few suggestions to add the former Joliet Country Club land for preservation.
- A few respondents also expressed confusion about where the NorthPoint Development's Compass Business Park is located in relation to the preservation areas.

TDL/Industrial Area Comments

Respondents were asked if they have more thoughts to their answers regarding the proposed TDL/industrial areas. A summary of key themes heard in the comments would include:

- General feedback seems to indicate that the Draft Land Use Strategy has too much land allocated to TDL/industrial uses (purple areas on map).
- Concerns over purple areas in Manhattan near Hoff Road.
- Concerns that TDL/industrial uses at US 52 and Cherry Hill are too close to residences and would create too much truck traffic on a route used by residents and school buses.
- Concerns that land for TDL/industrial use at the corner of Cherry Hill and Spencer is across the street from an elementary school. However, this land is already in Cherry Hill Business Park and the corner is planned as detention in the Cherry Hill plan.
- Concerns that TDL/industrial comes very close to the residential area south of Noel Road in Elwood.
- Requests that less farmland should be shown as purple.
- Several comments on changing the criteria for a ½ mile distance from existing schools, homes, civic uses etc. to 1 mile.
- Concerns regarding the impacts of increased TDL/industrial development on home values and quality of life and the costs of infrastructure falling on municipalities.
- A policy recommendation was for developers to be required to pay significantly higher development impact fees upfront for roadway infrastructure improvements.
- Concerns regarding the impact increased TDL/industrial would have on the water supply, congestion and pollution.
- Safety concerns regarding increased truck traffic that new TDL/industrial developments would bring were also expressed.
- Desire to keep TDL/industrial uses by interstates or existing truck routes and concentrate on infill development in existing purple areas.
- A recommendation to consider bike path connections across the various land uses, specifically the Wauponsee Bike Trail.
- Concerns regarding the deteriorating state of roads and bridges, especially in unincorporated townships, due to existing truck traffic and the concerns that increased traffic with more purple will exacerbate this.

Next Steps for Addressing Community Feedback

The project team will investigate potential revisions to the recommendations based on the feedback received and summarized above. Some specific action items include:

- The project team will follow-up with specific municipalities on comments/suggestions received regarding areas to add for preservation and areas that should not be designated for TDL/industrial use. Specific issues to address include:
    - Elwood: With the potential closure of Dresden Station, can the cooling lakes be added to the preservation plan? Also, are TDL/industrial uses too close to the residential area south of Noel Road?
    - Joliet: Should more preservation areas be added for the Sugar Creek and Spring Creek corridors? Can the former Joliet Country Club land also be added for preservation?
    - Manhattan: Should the areas shown for TDL/industrial uses near Hoff Road be decreased in acreage?
    - New Lenox: Are TDL/industrial uses at US 52 and Cherry Hill too close to existing homes? Would this create too much truck traffic on a route used by residents and school buses? Can we confirm that this area is already a part of the existing Cherry Hill Business Park and is potentially slated for detention?

- Many respondents suggested that the ½ mile residential/schools/civic/etc. buffer was too small and should be expanded to 1 mile. The project team will investigate the impacts of expanding the buffer to 1 mile on land designated for future TDL/industrial uses.

- Many environmental experts participated in the public commenting period and had specific ideas for incorporating best practices into the strategy regarding preservation. Participants also expressed the desire that developers take on more responsibilities regarding impacts to the community and needed infrastructure. The project team will consider how some of these ideas can be incorporated into high-level best practice design guidelines that municipalities and the County can implement.

- Concerns were expressed that residents and other stakeholders weren't engaged prior to recommendations being developed. The project team will include a section in the Land Use Strategy document that describes the community engagement process, and how there were opportunities for community and Steering Committee feedback throughout the plan development process.

- Some of the above concerns illustrated that there are misunderstandings that the Moving Will County project purpose is to designate more areas as TDL and industrial (purple) and to bring more truck traffic to Will County. The project team will clarify the purpose of the overall study in the planning documents, which is to improve safety and livability by limiting future TDL and industrial developments to areas with the least impacts—not to encourage more to come. The proposed plan would actually be a reduction in the purple areas in comparison to what is resulting from the current trends that are happening without a cohesive plan. Limiting the growth will lead to fewer impacts on water supply, congestion and pollution. Likewise the purpose of the Truck Routing Study is to improve transportation safety and community livability by directing truck traffic to specific routes with the fewest impacts rather than encouraging more truck traffic.

Appendix F

Criteria for Selecting Areas for Preservation and Protection Memorandum

MOVING WILL COUNTY

TRUCK ROUTING + LAND USE

Memorandum

To: *Stephen Ostrander, CMAP*
Patricia Mangano, CMAP
Ann Schneider, Will County
Nick Palmer, Will County
Denise Winfrey, Will County

From: *Ferhat Zerin, Ginkgo*
Pericles Georgopoulos, Ginkgo
Jacque Henrikson, Civiltech
Michael J. Folkening, Civiltech

Date: *July 22, 2020*

Subject: DRAFT Criteria for Selecting Areas for Preservation and Protection

The Land Use Study Area for the Moving Will County Plan offers over 40 square miles of protected land that includes federal, state, county and local public open spaces[1]. However, as documented in the Existing Conditions Report, there are significant resources outside these areas that could be considered for future preservation and protection. This memorandum provides a draft list of criteria to assist in the selection of these areas. These draft criteria are intended to be the basis for further discussion with stakeholders and will continue to be refined as the plan is developed in greater detail.

At the June 23, 2020 Midewin Stakeholders Group Discussion, participants suggested the following two steps for developing the list of criteria: one, collect existing criteria that are used by stakeholder agencies and recent relevant plans, and two, identify common criteria/themes and consolidate into one consistent list that can be used by all.

This memorandum is organized in two sections that follow these two steps:

- Section 1: Existing Criteria from Agencies and Past Plans
- Section 2: Common Themes and Recommended Draft Criteria

[1] Existing Open Spaces, *Land Use & Market Analysis Existing Conditions Report*, 15

Section 1: Existing Criteria from Agencies and Past Plans

The following sources have been used to collect examples of criteria used by local agencies or past plans and are summarized below:

- Will County Long Range Master Plan (LRMP), Open Space Section, Revised 2011
- Land Acquisition Policy and Procedures, Forest Preserve District of Will County (FPDWC), provided by the FPDWC on June 26, 2020
- Land Evaluation System (LES) provided by the FPDWC on July 10, 2020
- Land Preservation Policy, The Conservation Foundation, 2006
- Jackson Creek Watershed Plan, CMAP, 2009

1.1 Will County Long Range Master Plan (LRMP), Open Space Section, 2011

The LRMP offers the following seven criteria for "Identifying Land for Inclusion in the Open Space System":

1. **Connectivity**
2. **Equitable distribution of public open space lands throughout Will County**
3. **Protection of Water Resources**
4. **Protection of Environmentally Significant Natural or Habitat Areas**
5. **Preservation of Agricultural Resources**
6. **Protection of Historic and Culturally Significant Resources**
7. **Protection and Enhancement of Visual Resources**

Key points on these seven criteria as described in the plan are provided below and the full section from the LRMP is provided in Appendix A.

Criteria #1: Connectivity

- Connecting existing park and open space lands across the County through a countywide trail network is critical to the creation of a continuous open space network. This will aid in the creation of recreational trails and greenways and will create uninterrupted habitat corridors to benefit Will County's wildlife.

- The trail and water trail networks proposed by Open Lands, CMAP, and the Forest Preserve District can be used to identify critical "gaps" for open space protection.

- Connections among new development and historical and culturally significant areas can also be made with greenways, trails etc.

Criteria #2: Equitable distribution of public open space lands throughout Will County

- The relationships of public open space lands to populated communities throughout Will County are important factors to consider in evaluating lands for inclusion in the open space system. Specifically, efforts to secure lands in more densely developed areas of the County must continually be reevaluated as population trends shift to provide a more equitable geographic distribution of open space over the long term.

Criteria #3: Protection of Water Resources

- Wetlands, Hydric Soils, Floodplains, River & Stream Corridors

    - Hydric soils are the primary indicator of the presence of a wetland and may identify a small wetland area that has not been identified by the US Fish and Wildlife Service or the Illinois DNR.

    - Floodplains are significant areas that are vulnerable to development within the County. Development within the floodway and the 100- year floodplain is often restricted, making these lands available for incorporation into the open space network. Because floodplains and floodways provide important habitat and a buffer for flooding events, they are important components of the open space network. Additionally, floodplains and floodways offer corridors for public access and greenway connections.

- Water Quality

    - The Clean Water Act Section 303(d) List identifies the impaired streams in the State and provides additional information on the suspected sources and causes of impairment. Impairment caused by urban runoff, agricultural runoff, and many other common sources can be partially abated by increasing open space lands and greenways.

- Stormwater Management

    - The *1998 Will County Stormwater Management Plan* identifies a number of flooding, stream bank erosion, and water quality trouble spots in the County that might be linked within the open space network. One of the main goals of the *1998 Will County Stormwater Management Plan* is to "prevent increases in stormwater related problems associated with development, redevelopment and other watershed activities." The Plan includes an analysis of Land Use Area and Population by Watershed that will be helpful in

determining areas where establishment of an open space network can help achieve stormwater management objectives.

- It also states that almost 50% percent of mapped floodplain is potentially available for development. Thus, incorporating these lands into the open space network could help prevent future stormwater management and flooding problems.

- Public Surface Water Intakes/Public Groundwater Wells

  - Capture zones delineated around all public supply groundwater wells can contribute to open space lands in Will County. This effort would likely have to be coordinated with the Illinois Geological Survey and the Illinois State Water Survey, both divisions of Illinois DNR. These capture zones and areas of the County which have a high potential for groundwater recharge could be target areas for future acquisitions to protect public water supply.

  - The Kankakee is the only watershed in Will County with a public supply surface water intake. In addition to IL DNR, open space acquisitions may be identified through coordination with public water suppliers and the US EPA. The Illinois EPA manages the water use designations for the streams and lakes in the County, including the designation of streams used for public water supply. An increase in the open space network in these watersheds will help to protect the water supply from significant contamination, which in turn could reduce treatment costs.

  - These actions and many others concerning water supply are recommended in the "Northeastern Illinois Regional Water Supply/Demand Plan" which was endorsed by CMAP in March of 2010 and accepted by the by the Will County Board as a reference document.

- Water-based Recreation Resources

  - An increase in open space lands will help to protect water quality for streams that have been designated for recreational contact such as swimming, boating, and fishing.

  - Specific streams that have been designated for public water supply will also benefit from a streamside buffer to filter overland flow before it enters the stream channel.

  - The major river corridors in Will County – Des Plaines, DuPage, and Kankakee – have been designated as regional Water Trails with proposed access points through a partnership between state and local governments and non-profit organizations. These Water Trails are intended to provide regional tourism and economic benefits, educational and stewardship programs, and recreational opportunities for canoeists and kayakers in northeastern Illinois.

Criteria #4: Protection of Environmentally Significant Natural or Habitat Areas

- Areas of Will County that have known occurrences of threatened and endangered species are key components of the open space network. The Illinois Department of Natural Resources in conjunction with The Nature Conservancy is monitoring the status of many threatened and endangered species and habitats in the State of Illinois. The program in Will County currently monitors 52 species.

- Specific sites under consideration for development must be evaluated for their relationships to critical habitat areas to protect threatened and endangered species in the County, and habitat areas must be formally designated as part of the open space network.

- Some other natural areas, such as small local woodlands and grasslands, may have significant regional open space value as well as contribute to local biodiversity. The *Biodiversity Recovery Plan*, completed by *Chicago Wilderness,* provides insights into lands in the region that could have significant habitat or could add biodiversity to an open space network. *The Recovery Plan* also provides strategies for identifying, managing, and incorporating these lands into an open space network.

- The Illinois DNR maintains and updates a Natural Areas and Fish & Wildlife Areas database and map. The Natural Areas Acquisition Fund is a state-funding source that is used to purchase high-quality natural areas and habitat for endangered and threatened species.

Criteria #5: Preservation of Agricultural Resources

- Farmland defines Will County's rural character and is potentially an important component of the future open space network. While the Plan recognizes the need for land owners to use their land for non-agricultural uses when farming ceases to become viable use, there is a need to preserve agricultural land where appropriate due to the ongoing urbanization of the County.

- The Agricultural Use Concept in the Land Use Element describes agriculture as the dominant land use in the Rural Form Area. The continuation of agricultural uses is an important goal of the Land Resource Management Plan.

- Prime Farmland and Soils of Statewide Significance

    - According to the 1997 Natural Resources Inventory by USDA Natural Resources Conservation Service (NRCS), Illinois is losing Prime Farm land at a fast rate and the supply of land most suitable for farming is limited. Conversion and loss of agricultural land can diminish the State's and County's cropland base and could negatively impact environmental quality. The NRCS designates Prime Farmland Soils as "land that has the best combination of physical and chemical characteristics for producing food, feed forage,

fiber, and oilseed crops and is also available for these uses." Its current use must be for crops and pasture or it must be available for future use in producing food and fiber. Specific soil series are designated by NRCS as Prime Farmland Soils and must be considered as the basis for protecting open spaces from development over the long term.

- In addition to Prime Farmland Soils, the USDA/NRCS maintains a listing of Soils of Statewide Significance for every County. While these soils do not meet the criteria for Prime Farmland Soils, they are high-quality farming soils and can be as productive under the right circumstances.

Criteria #6: Protection of Historic and Culturally Significant Resources

- Historic Resources and Rural Structures
  - Locations with sites listed and identified as potential local landmarks and thematic districts on the National Register of Historic Places or on the local register are high priority areas in open space preservation efforts. These sites have been determined to have significant value and could be incorporated into trails to provide areas of interest and anchors for the open space system. Rural structures should also be considered in some areas as they may provide character for a park and/or trail. In 1988, Will County completed an inventory of its historic resources. In 2000 and 2001, a rural structures survey was completed for four townships. A fifth township will be completing its rural structures survey soon.
- Archeological Resources
  - The Illinois State Museum, a division of the Illinois Department of Natural Resources, has developed a map of areas that have high archeological potential. The map is intended only for a coarse regional analysis and does not ensure that archeological artifacts will be found in those areas. However, this information could help to further inform the process of evaluating land for preservation as open space.

Criteria #7: Protection and Enhancement of Visual Resources

- Areas that reflect the character of a community or rural setting are important components of the open space plan to be preserved and enhanced where possible, including lands along scenic roads and byways and around scenic man-made and natural features. Coordinating these lands with existing or proposed trail networks can protect them and make them more accessible to the recreational user.

1.2 Forest Preserve District of Will County (FPDWC)

Following information has been provided by the FPDWC on June 26, 2020 regarding the agency's "Land Acquisition Policy and Procedures":

Criteria for New Acquisition

In acquiring new properties, the District considers whether the property meets any of the following six criteria:

1. **Preservation of lands for the protection, enhancement, or management of natural resources, including the preservation of lands as a buffer to existing preserves.**
2. **Preservation of lands that increase the area, diversity, buffer, linkage, or management opportunities of an existing preserve.**
3. **Preservation of lands for the protection, enhancement, or management of natural, cultural or scenic resources.**
4. **Preservation of lands to provide public access for the interpretation and enjoyment of natural, cultural or scenic resources.**
5. **Preservation of lands to provide outdoor recreational opportunities.**
6. **Ability to advance other goals and objectives of the District as identified by District staff, the Citizens Advisory Committee, or the District's Commissioners.**

Land Evaluation System (LES)

The FPDWC also uses an evaluation system called LES that considers 20 elements on which staff base their evaluations of predetermined Resource Plan areas. These 20 elements consist of 10 natural resource and conservation elements and 10 planning and development elements and are scored on a 5-point scale system as shown below in Table 1.

Table 1: Land Evaluation System Score Sheet, FPDWC

	Natural Resource and Conservation Elements	Area Score	Maximum Score
1	Natural Community Quality		5
2	Natural Community Rarity		5
3	Native and Key Species Rarity		5
4	Natural Resource Sensitivity		5
5	Diversity		5
6	Landscape Ecology		5
7	Geology/Physical Features		5
8	Water Resources		5
9	Boundaries and Management		5
10	Restoration		5
	Natural Resource and Conservation Total Score		50

	Planning and Development Elements	Area Score	Maximum Score
11	Recreation Connectivity		5
12	Current Site Condition		5
13	Compatibility of Adjacent Land Uses		5
14	Development Trends		5
15	Local and Regional Benefits		5
16	Planning Community Support/Partnerships		5
17	Encumbrances		5
18	Cultural Resources		5
19	Site Suitability for Development		5
20	Application to Resource Plan		5
	Planning and Development Total Score		50
	Resource Area Total Score		**100**

LES Scoring: 5 is the highest possible score. For consistency, each element has the basis for the point values of 0, 1, 3, and 5. However, in the case that the LES team cannot distinguish between a point value of a 1 and 3 or a 3 and 5, scores of 2 or 4 is assigned to the criteria in order to differentiate the score. Justification for the points assigned for each element are documented on the score sheet below each element. If there is a limited amount of information that staff can obtain, this is reflected in the score and explanation and noted as to why there is a lack of information on the subject. The full LES system section from the FPDWC is provided in Appendix B.

1.3 The Conservation Foundation

The Foundation's 2006 LAND PRESERVATION POLICY includes the following criteria for selection of preservation areas:

- The Foundation's preservation priorities are:
  - Land along rivers and streams, and lands significant to watershed protection.
  - Large wooded areas, prairies and wetlands.
  - Areas serving as buffers to forest preserves and other preserved areas.
  - In-holdings in already-preserved property.
  - Property that provides connections to other parcels of preserved land.
- The Foundation will seek to protect properties with the following characteristics:
  - Natural ecosystems or unique natural features.

  - Freshwater resources such as floodplains, aquifers, stream corridors, and other lands that protect watersheds.
  - Features of educational, scenic, recreational and/or scientific value.

- The Foundation will seek to protect properties that are large enough, or adjoining land already protected, so that it is likely that their conservation values will remain intact even if adjacent properties are developed.
- The Foundation will seek to protect properties that benefit the public in ways such as the encouragement of sound land use planning, promotion of open space conservation, and the furtherance of wise stewardship of natural resources.
- The Foundation will seek to protect properties in partnership with appropriate conservation agencies and organizations. The Foundation will work with partners that have expressed a desire, and possess the financial resources, to be the ultimate owner of the property. Where feasible, the Foundation will obtain written agreement outlining the terms under which the property will be transferred to the partner.
- The Foundation will not acquire or hold property that poses greater financial or organizational burdens than benefits.

Source: https://www.theconservationfoundation.org/about-us/finances-and-policies/

1.4 Jackson Creek Watershed Plan, 2009, CMAP

The 2009 Jackson Creek Watershed Plan follows U.S. EPA guidelines for watershed based plans to control nonpoint source pollution, the type of pollution that includes sediments running off of cropland or oil from a parking lot but not a direct discharge from an industrial operation or a wastewater treatment plant. The plan responds to the 2006 Integrated Water Quality Report by the Illinois Environmental Protection Agency that identified major creeks in the watershed as **not supporting the aquatic life designated use** due to impairments from total phosphorus and total nitrogen.

While the plan does not provide a separate list of criteria for protecting the watershed, following items from the Goals (p:1-3) and Summary of Recommendations (p: 7-4) will be helpful in establishing criteria related to water resources for the Moving Will County Plan:

- Protect regionally and locally valuable natural resources within the watershed from degradation in hydrologic condition.

- Ensure that the dolomite prairie and threatened/endangered species within Midewin National Tallgrass Prairie are not damaged by upstream hydrologic changes and pollution.
- Identify important groundwater recharge areas and areas of high aquifer sensitivity to the extent practicable.
- Characterize the extent and effects of tile drainage within the watershed to the degree practicable and recommend any necessary changes to drainage policy in the county.

- Identify and prioritize open space protection opportunities in concert with the Forest Preserve District of Will County (FPDWC) and other partners to preserve flood storage.
  - Obtain recreational benefits from open space protection while minimizing any negative impacts to natural resources from recreational use.
- Protect the Class 1 Environmental Corridor
  - As much land as possible within the Class I environmental corridor should be legally protected and managed for conservation purposes, either through acquisition/easement or through conservation design during development. The FPDWC, park districts, and land conservancies should use the Class I environmental corridor identified in this plan to guide and support their land protection activities.
- Channel development to Class II Corridors
  - The municipalities and the county should promote protection and restoration of areas in the environmental corridors by channeling development to Class II environmental corridors through zoning and annexation policies and by encouraging sensitive site design in those areas if they are developed.
- Extend protection to Isolated Wetlands
  - Consider amending the Will County Stormwater Management Ordinance (WCSMO) to include protections for isolated wetlands. Will County Lowland Conservancy Overlay District Ordinance14 which applies to unincorporated county land does require a 75-foot setback from wetlands (if they are one-third acre or larger) containing a 25-foot strip of native vegetation.
  - Expand Midewin to the Joliet Arsenal Training Area (JATA): Support efforts to transfer ownership of the Joliet Arsenal Training Area to the U.S. Forest Service to expand Midewin with the ultimate goal of restoring JATA.

Section 2: Common Themes and Recommended Draft Criteria

The criteria from the 2011 Will County Land Resource Management Plan (LRMP) has been used as a starting point to develop the **Draft Criteria for Selection of Areas for Protection and Preservation** within the Land Use Study Area, shown as items 1-7 below in Table 2. Elements from other sources cited in Section 1 and stakeholder feedback to date have been added as items 8-11 to expand the list. Common **themes** are highlighted in blue. The "check marks" in the columns to the right show if the sources cited in Section 1 reflect these recommendations. These high-level criteria will be further refined with stakeholders' input and form the basis for detailed recommendations as the plan is developed further.

Table 2: Draft Criteria for Selection of Areas for Protection and Preservation and Sources

	THEME AND CRITERIA	LMRP CRITERIA	FPDWC NEW ACQUISITION CRITERIA	FPDWC LES CRITERIA	THE CONSERVATION FOUNDATION	JACKSON CREEK WATERSHED PLAN
1	CONNECTIVITY ▪ Creates continuity in the open space network and provides missing links between public open spaces, trails and greenways. ▪ Protects existing and planned bike and water trail corridors and connections to the regional trails system.	✓	✓	✓	✓	✓
2	EQUITABLE DISTRIBUTION ▪ Ensures that existing developed areas and areas intended for future growth are equitably served with public open spaces.	✓				
3	WATER RESOURCES ▪ Protects floodplains, waterways, wetlands and hydric soils as important natural resources and habitat corridors. ▪ Protects water quality by reducing impairments caused by urban and agricultural runoff and creates buffers to filter overland flow. ▪ Connects to stormwater management systems to help prevent stormwater and flooding related problems and provides a buffer from flooding.	✓	✓	✓	✓	✓

	THEME AND CRITERIA	LMRP CRITERIA	FPDWC NEW ACQUISITION CRITERIA	FPDWC LES CRITERIA	THE CONSERVATION FOUNDATION	JACKSON CREEK WATERSHED PLAN
	WATER RESOURCES (CONTD.) ▪ Protects public water supply sources including surface water intakes/groundwater wells and capture zones that have a high potential for groundwater recharge. ▪ Protects water-based recreation including swimming, boating, fishing, canoeing and kayaking.	✓	✓	✓	✓	✓
4	NATURE & HABITAT ▪ Protects areas that have known occurrences of threatened and endangered species, critical habitat areas and areas that are critical to maintaining local biodiversity. ▪ Creates uninterrupted habitat corridors to benefit wildlife.	✓	✓	✓	✓	✓
5	AGRICULTURE ▪ Preserves farmland to maintain Will County's rural character, a critical goal of the 2011 Will County Land Resource Management Plan (LMRP). ▪ Protects prime farmland and soils of statewide significance to preserve lands that have the physical and chemical characteristics for producing food, feed forage, fiber and oilseed crops.	✓	✓		✓	
6	HISTORY & CULTURE ▪ Protects historic resources, rural structures and archaeological resources as identified in national, county, state and/or local registers, surveys or plans.	✓	✓	✓		
7	VISUAL RESOURCES, TOURISM & RECREATION ▪ Creates new opportunities for tourism and outdoor recreation and/or enhances existing destinations. ▪ Preserves the character of a community or rural setting, including lands along scenic roads and byways and around scenic man-made and natural features.	✓	✓	✓		✓

	THEME AND CRITERIA	LMRP CRITERIA	FPDWC NEW ACQUISITION CRITERIA	FPDWC LES CRITERIA	THE CONSERVATION FOUNDATION	JACKSON CREEK WATERSHED PLAN
8	EXISTING OPEN SPACES ▪ Increases the area, diversity, linkage, or management opportunities of an existing public open space. ▪ Creates a buffer to protect habitats, plant life, water resources and other natural features of existing public open spaces.	✓		✓	✓	✓
9	SITE CONDITIONS ▪ Does the area's current and past use pose potential for hazardous waste, contaminated soils and water, debris, garbage, and/or other health risk factors? ▪ Do adjacent land uses, zoning and development character pose any negative impacts? ▪ Are there any existing long-term leases, licenses, and/or easements that may inhibit restoration, development, or management of the site? ▪ What degree of effort is necessary to restore and/or maintain the natural resources of the area? ▪ To what degree does the area's physical features support public access and recreational facilities?			✓		
10	PREVIOUS PLANS ▪ Are there previous plans that support the preservation / protection of the area? ▪ Does the area have expressed support or opposition from local and regional planners, elected officials, interest groups, adjacent landowners, and partnerships?		✓	✓		✓
11	REGIONAL AND LOCAL BENEFITS • Benefits the regional and Will County • Benefits multiple municipalities in Will County • Benefits a local municipality only			✓		

Next Steps

Following next steps are suggested to further refine and develop the draft list of criteria:

- Share the Draft List of Criteria with the Midewin stakeholders group and collect feedback by mid-August.
- Refine and incorporate into the Draft Scenarios due Sep 16, 2020
- Share with the Steering Committee/Community at the next fall session, tentatively end of September or October, 2020.
- Develop Final List of Criteria that incorporates feedback from all stakeholders.

Other items to consider as the list is further refined:

- Determine who will enforce these criteria: Will County, local municipalities and/or agencies.
- Determine how the criteria will be evaluated. Options can include a numeric scoring system like the FPDWC LES scoring or a percentage (X% of criteria have to be met).
- Test the refined list with examples of potential areas for preservation and protection. The following areas have general support from stakeholders and would be good examples to test how the criteria would work:
    - Potential Jackson Creek Greenway
    - Joliet Arsenal Training Area (JATA) as an expansion of the Midewin National Tallgrass Prairie
    - Three areas recommended as “Wetland Restoration Priorities” by the 2009 Jackson Creek Watershed Plan (p 6-7)
    - Potential protection of generational farms, for example the Bernhard and Coldwater farms
- Provide list of sources, maps and agencies that can assist users in determining how each criterion might apply to a specific area. For example, the FPDWC LES suggests information sources that include Aerial Tax Maps, Historical Aerial Photos, Soils Maps, FEMA Floodplain Maps, National Wetland Inventory Maps, Natural Areas Inventory Site Maps/Information, Geology Maps, USGS Topography Maps, Zoning and Land Use Maps etc.

Appendix A

CRITERIA FOR IDENTIFYING LANDS FOR INCLUSION IN THE OPEN SPACE SYSTEM

from Will County Long Range Master Plan (LRMP), Open Space Section, 2011

CRITERIA FOR IDENTIFYING LANDS FOR INCLUSION IN THE OPEN SPACE SYSTEM

Based upon the open space initiatives identified in the previous section, criteria have been established to clearly identify lands for inclusion in the Will County open space network through acquisition or other methods. The following criteria are not presented in order of importance, but rather are meant to serve as a checklist when evaluating lands presented in development proposals or for inclusion in Will County's open space system. The list includes locational criteria that address connectivity and the geographic distribution of open space in Will County as well as criteria related to the presence of the following significant resources:

- Water resources
- Environmentally significant natural or habitat areas
- Agricultural resources
- Historic and culturally significant resources
- Visual resources

Criteria #1:

Connectivity

Connecting existing park and open space lands across the County through a countywide trail network is critical to the creation of a continuous open space network. This will aid in the creation of recreational trails and greenways and will create uninterrupted habitat corridors to benefit Will County's wildlife. The trail and water trail networks proposed by OpenLands, CMAP , and the Forest Preserve District can be used to identify critical "gaps" for open space protection. Connections among new development and historical and culturally significant areas can also be made.

Criteria #2:

Equitable distribution of public open space lands throughout Will County

The relationships of public open space lands to populated communities throughout Will County are important factors to consider in evaluating lands for inclusion in the open space system. Specifically, efforts to secure lands in more

Open Space Network Inclusion Criteria

- Connectivity
- Equitable Distribution
- Protection of Water Resources
- Environmental & Habitat Protection
- Preservation of Agricultural Resources
- Protection of Historical & Cultural Significant Resources
- Protection of Visual Resources

densely developed areas of the County must continually be reevaluated as population trends shift to provide a more equitable geographic distribution of open space over the long term.

It is understood that higher property values in developed parts of the County may limit the ability to acquire land in these areas. Partnerships with landowners and other active non-profit organizations may help in securing properties for open space, especially along the DuPage River and Lily Cache Creek.

Criteria #3:

Protection of Water Resources

All lands within Will County sit within one of three major watersheds: the DesPlaines, the Kankakee, and the Chicago. The natural hydrological features within these watersheds (rivers, streams, wetlands, floodplains, hydric soils, etc.) are critical components of the County open space system, as they contribute to safe drinking water supply and support important natural communities, habitats, and corridors. Identifying the hydrological features in Will County is an important first step, but implementing measures to protect water quality through stormwater management techniques and providing water-based recreation opportunities are important to preserving overall ecological health and quality of life for residents.

The areas around river corridors subject to a variety of environmental characteristics and development should respect the unique qualities of these environmentally vulnerable areas.

Wetlands, Hydric Soils, Floodplains, River & Stream Corridors

Hydric soils are the primary indicator of the presence of a wetland and may identify a small wetland area that has not been identified by the US Fish and Wildlife Service or the Illinois DNR. A listing of hydric soils in the State can be obtained from the Illinois State Office of the NRCS. A soil survey can also be obtained from the NRCS and will show the distribution of different soil series.

Floodplains are significant areas that are vulnerable to development within the County. The Federal Emergency Management Authority publishes and periodically updates the locations of floodways, 100-year floodplains, and 500-year floodplains. Development within the

floodway and the 100- year floodplain is often restricted, making these lands available for incorporation into the open space network. Because floodplains and floodways provide important habitat and a buffer for flooding events, they are important components of the open space network. Additionally, floodplains and floodways offer corridors for public access and greenway connections.

Water Quality

The Illinois EPA collects water quality data with their Water Use Designations for waterways. Additional water quality information can be obtained from the US EPA and the *Will County Stormwater Management Plan*. The Clean Water Act Section 303(d) List identifies the impaired streams in the State and provides additional information on the suspected sources and causes of impairment. Impairment caused by urban runoff, agricultural runoff, and many other common source can be partially abated by increasing open space lands and greenways.

The *Strategic Plan for Water Resource Management* that was completed by NIPC (forerunner to CMAP) discusses water resource management issues and strategies to address those issues. The plan focuses on stormwater management, water quality, and water supply. Several issues and strategies relate to open space acquisition and could provide guidance on what types of areas are intended for inclusion in the regional open space network.

Stormwater Management

The *1998 Will County Stormwater Management Plan* identifies a number of flooding, stream bank erosion, and water quality trouble spots in the County that might be linked within the open space network. One of the main goals of the *1998 Will County Stormwater Management Plan* is to "prevent increases in stormwater-related problems associated with development, redevelopment and other watershed activities." The Plan includes an analysis of Land Use Area and Population by Watershed that will be helpful in determining areas where establishment of an open space network can help achieve stormwater management objectives. It also states

that almost 50% percent of mapped floodplain is potentially available for development. Thus, incorporating these lands into the open space network could help prevent future stormwater management and flooding problems.

Public Surface Water Intakes/Public Groundwater Wells

Capture zones delineated around all public supply groundwater wells can contribute to open space lands in Will County. This effort would likely have to be coordinated with the Illinois Geological Survey and the Illinois State Water Survey, both divisions of Illinois DNR. These capture zones and areas of the County which have a high potential for groundwater recharge could be target areas for future acquisitions to protect public water supply.

Information on the areas of Will County with the potential for groundwater recharge can be obtained from the Illinois State Geological Survey.

The Kankakee is the only watershed in Will County with a public supply surface water intake. In addition to IL DNR, open space acquisitions may be identified through coordination with public water suppliers and the US EPA.

The Illinois EPA manages the water use designations for the streams and lakes in the County, including the designation of streams used for public water supply. An increase in the open space network in these watersheds will help to protect the water supply from significant contamination, which in turn could reduce treatment costs.

These actions and many others concerning water supply are recommended in the "Northeastern Illinois Regional Water Supply/Demand Plan" which was endorsed by CMAP in March of 2010 and accepted by the Will County Board as a reference document.

Water-based Recreation Resources

An increase in open space lands will help to protect water quality for streams that have been designated for recreational contact such as swimming, boating, and

fishing. Specific streams that have been designated for public water supply will also benefit from a streamside buffer to filter overland flow before it enters the stream channel.

The major river corridors in Will County – Des Plaines, DuPage, and Kankakee – have been designated as regional Water Trails with proposed access points through a partnership between state and local governments and non-profit organizations. These Water Trails are intended to provide regional tourism and economic benefits, educational and stewardship programs, and recreational opportunities for canoeists and kayakers in northeastern Illinois.

Criteria #4:

Protection of Environmentally Significant Natural or Habitat Areas

Areas of Will County that have known occurrences of threatened and endangered species are key components of the open space network. The Illinois Department of Natural Resources in conjunction with The Nature Conservancy is monitoring the status of many threatened and endangered species and habitats in the State of Illinois. The program in Will County currently monitors 52 species. Specific sites under consideration for development must be evaluated for their relationships to critical habitat areas to protect threatened and endangered species in the County, and habitat areas must be formally designated as part of the open space network.

Critical habitat will be protected.

Some other natural areas, such as small local woodlands and grasslands, may have significant regional open space value as well as contribute to local biodiversity. The *Biodiversity Recovery Plan*, completed by *Chicago Wilderness*, provides insights into lands in the region that could have significant habitat or could add biodiversity to an open space network. *The Recovery Plan* also provides strategies for identifying, managing, and incorporating these lands into an open space network.

The Illinois DNR maintains and updates a Natural Areas and Fish & Wildlife Areas database and map. The Natural Areas Acquisition Fund is a state-funding source that is used

to purchase high-quality natural areas and habitat for endangered and threatened species.

Criteria #5:

Preservation of Agricultural Resources

Farmland defines Will County's rural character and is potentially an important component of the future open space network. While the Plan recognizes the need for land owners to use their land for non-agricultural uses when farming ceases to become viable use, there is a need to preserve agricultural land where appropriate due to the ongoing urbanization of the County. The Agricultural Use Concept in the Land Use Element describes agriculture as the dominant land use in the Rural Form Area. The continuation of agricultural uses is an important goal of the Land Resource Management Plan.

Crop land within the County is a valuable resource that needs to be protected.

Prime Farmland and Soils of Statewide Significance

According to the 1997 Natural Resources Inventory by USDA Natural Resources Conservation Service (NRCS), Illinois is losing Prime Farm land at a fast rate and the supply of land most suitable for farming is limited. Conversion and loss of agricultural land can diminish the State's and County's cropland base and could negatively impact environmental quality. The NRCS designates Prime Farmland Soils as "land that has the best combination of physical and chemical characteristics for producing food, feed forage, fiber, and oilseed crops and is also available for these uses." Its current use must be for crops and pasture or it must be available for future use in producing food and fiber. Specific soil series are designated by NRCS as Prime Farmland Soils and must be considered as the basis for protecting open spaces from development over the long term.

In addition to Prime Farmland Soils, the USDA/NRCS maintains a listing of Soils of Statewide Significance for every County. While these soils do not meet the criteria for Prime Farmland Soils, they are high-quality farming soils and can be as productive under the right circumstances.

Criteria #6:

Protection of Historic and Culturally Significant Resources

Historic Resources and Rural Structures

Locations with sites listed and identified as potential local landmarks and thematic districts on the National Register of Historic Places or on the local register are high priority areas in open space preservation efforts. These sites have been determined to have significant value and could be incorporated into trails to provide areas of interest and anchors for the open space system. Rural structures should also be considered in some areas as they may provide character for a park and/or trail. In 1988, Will County completed an inventory of its historic resources. In 2000 and 2001, a rural structures survey was completed for four townships. A fifth township will be completing its rural structures survey soon.

Archeological Resources

The Illinois State Museum, a division of the Illinois Department of Natural Resources, has developed a map of areas that have high archeological potential. The map is intended only for a coarse regional analysis and does not ensure that archeological artifacts will be found in those areas. However, this information could help to further inform the process of evaluating land for preservation as open space.

The Old Plank Road Trail is an example of how historic features can be preserved and included in a countywide open space network.

Criteria #7:

Protection and Enhancement of Visual Resources

Areas that reflect the character of a community or rural setting are important components of the open space plan to be preserved and enhanced where possible, including lands along scenic roads and byways and around scenic man-made and natural features. Coordinating these lands with existing or proposed trail networks can protect them and make them more accessible to the recreational user.

Appendix B

2000 LAND EVALUATION SYSTEM (LES)

from Forest Preserve District of Will County (FPDWC)

2000 LES Evaluation Elements and Score Sheet Instructions

The LES considers 20 elements on which staff will base their evaluations of the predetermined Resource Plan areas. These 20 elements consist of 10 natural resource and conservation elements and 10 planning and development elements. This will enable the evaluation to reflect the strengths and weaknesses in either natural resource conservation or educational and recreational development.

Scoring will be based on a 5-point scale system, with 5 being the highest possible score. In order to establish more consistent scores, each element will have the basis for the point values of 0, 1, 3, and 5 well defined and included on the evaluation sheet. However, in the case that the LES team can not distinguish between a point value of a 1 and 3 or a 3 and 5, scores of 2 or 4 will be assigned to the criteria in order to differentiate the score. Justification for the points assigned for each element will be documented on the score sheet below each element. If there is a limited amount of information that staff can obtain, this will be reflected in the score and explanation and noted as to why there is a lack of information on the subject. Detailing the scores and justification for each element in this manner will be done in order to remove the potential for applying arbitrary numbers that could affect the final score.

This document includes the description of the elements that will be evaluated as well as instructions for completing the score sheet. The instructions include a list of sources the evaluator may need to reference in order to complete the form, criteria for each point value, and examples of those point values for each element. Some examples may be more explicit than others due to the nature of the evaluation element.

2000 LES Data and Score Sheet Instructions

Resource Plan:

Plan Area: The number by which a particular area is referenced in the District's LES program and identified on the site maps.

Resource Plan Goal: Overall purpose for preserving identified resources or parcels; should reference criteria in Land Acquisition and Protection Policy.

General Location: The site is located in _____ Township (__ N, ___ E) Section __

Nearest Municipality: Any municipalities or partnerships that the District would have to or want to coordinate with in regards to the Resource Plan.

Relevance to District Holdings: Describe how the parcels relate to other preserves or future preserves.

P.I.N.(s) and Acreage(s): Reference the County Permanent Index Number and acreage for each tax parcel in resource area.

Information Source Check List: The following information sources should be used in inventorying and evaluating the resource area. Indicate the specific sources below.

☐ Aerial Tax Map Photos - Year and Scale

☐ Historical Aerial Photos _____ (year)

☐ Soils Maps

☐ FEMA Floodplain Maps (panel No._____)

☐ National Wetland Inventory Maps

☐ Natural Areas Inventory Site Maps/ Information

☐ Geology Maps

☐ USGS Topography Maps (Quad name and series)

☐ Zoning/Land Use Maps

☐ GIS / Databases

☐ Drive by Site Visit **Date(s):**_____ Detail and attach field notes (level of visibility).

☐ Site walk **Date(s):**_____ Detail and attach field notes.

☐ Discussions with biologist familiar with the site_____ Detail and attach notes.

☐ Discussions with landowner, neighbor, other_____ Detail and attach notes.

☐ Discussions with staff members familiar with site_____ Detail and attach notes.

☐ Previous plans by other entities (i.e.: cities, villages, county, state, and federal)_____

☐ Publications: List any known publications referenced or used concerning the natural area.

Summary: The summary should be a short non-technical statement that identifies the significance of the area and briefly describes why the area is being considered, the purpose for its evaluation, and a summary of the site's most critical elements. It should include information on the management/development goals and how the site relates to the overall goals for the Resource Plan.

Natural Resource & Conservation Elements: /50 (Subtotal points for this section)

Planning and Development Elements: /50 (Subtotal points for this LES section)

TOTAL SCORE: /100

Natural Resource and Conservation Elements

1. Natural Community Quality /5

Consider the degree of habitat modification and disturbance that has occurred to the structure and function of the natural resources and the types of communities present; whether or not characteristic dominant and indicator species are present and the degree of representation of that particular natural community type.

5 = Includes relatively undisturbed communities, primarily native species, key community assemblages with little modification (>50% undisturbed).
3 = Some disturbance, mix of native and non-native, significant community types, human-induced disturbance/habitat modifications (i.e.: channelized drainage) .
1 = Extensive disturbance, predominantly exotic or early successional species, poor representation.
0 = No natural quality, urban/developed/manipulated (mowed turf) no natives, degraded.

The evaluator is to consider the level and type of disturbance that the parcel has been subjected to. Different impacts affect communities in different ways, but ultimately the responses to different levels of disturbance by various species is the item to be evaluated. The level of access staff has to the parcel will be the primary determinant to the ability to accurately evaluate the parcel. The Illinois Natural Areas Inventory Technical Report will be used to review natural community quality and disturbance.

Examples:
5 = Messenger Woods.
3 = A grazed field and 1 = plowed field are both disturbed sites; however, plowing has a much higher degree of disturbance associated with the activity.
1 = A clear cut forest and 3 = selective cutting both disturb the site; however, clear cutting results in a much more disturbed site.
0 = Grassy parcel along a trailhead.

Sources: Use aerial photos, databases, field visits, INAI information, and any other resources to identify the general degree of habitat disturbance. Identify and list what sources were used to obtain information and identify after that information, i.e.: The 1996 aerial photo (p7A-Joliet Twp) showed that the area was an agricultural field. Upon a field visit (10/02/02), it was confirmed that the site has been fallow, with some patches of successive shrub growth occurring on perimeter of the site.

2. Natural Community Rarity /5

Consider the dominant community types present or potential presence and the rarity of these particular community assemblages.

5 = Rare community types, unprotected or limited protection regionally.
3 = Uncommon community types or some protection already present regionally.
1 = Potential for community types of concern, some level of protection already present.
0 = No found or documented key communities of concern warranting special protection.

The evaluator will consider the relative occurrence of communities over different geographical regions, primarily the state of Illinois, or noted as otherwise. Usually the rarity is a result of unique geological or hydrological conditions.

Examples:
5 = Dolomite prairie.
3 = Mesic prairie, upland forest.
1 = Old field within Nature Preserve.
0= Pine plantation.

Sources: Use aerial photos, databases, field visits, INAI information, and any other resources to identify the dominant community types present. Get biological confirmation as to the rarity index of the particular assemblages.

3. Native and Key Species Rarity /5

Consider the ability of the parcel to protect species that are federally, state, regionally, or locally endangered, threatened or rare and consider the consequences of no implementation of preservation tools.

5 = Known presence of endangered and threatened species or regionally rare species, few viable populations in region, unprotected regionally.
3 = Potential for species of concern, some level of protection already present regionally.
1 = No endangered and threatened species, potential for uncommon species, already well protected regionally.
0 = No found or documented key species of concern warranting special protection.

The evaluator will use historical information and published lists of state and federally designated threatened or endangered species to rate the parcel. The likelihood that the parcel may contain the presence of habitat likely to harbor the species is also evaluated.

Examples:
5 = Yellow lady slipper orchid, Hine's Emerald Dragonfly, Leafy Prairie Clover.
3 = Dolomite seeps and the Hine's Emerald Dragonfly (Keepataw Preserve).
1 = County Farm Road Access-degraded Glade Mallow.
0 = Farm field.

Sources: Use aerial photos, databases, field visits, INAI information, and any other resources to identify the parcel's ability to protect any key species.

4. Natural Resource Sensitivity /5

Consider the sensitivity and fragility of the natural resources to habitat fragmentation or degradation at all levels (landscape, community, species), and the consequences of no implementation of preservation tools. Also considers the restrictions under which the particular natural resources thrive.

5 = Known presence of sensitive natural resources with specific restrictions for the health and viability of the resource.
3 = Likely potential presence of sensitive natural resources.
1 = Common resources with little restrictions.
0 = No found or documented key resources of concern warranting special protection.

The evaluator will look at certain issues regarding a resource's level of sensitivity and fragility, such as a species that relies on a particular food source or ability to thrive after impacts

Examples:
5 = Wetland soils-sensitive to compaction.
3 = Stream systems with potential for run-off/erosion.
1 = Pastured barrens.
0 = Farm field with no sensitive resources.

Sources: Use aerial photos, databases, field visits, INAI information, and any other resources to identify the sensitivity and fragility of the natural resources. Get biological confirmation as to the sensitivity of the resources.

5. Diversity /5

Consider the biological richness of the area; the number of species, natural communities, or habitats present, as well as structured diversity within the habitats.

5 = High degree of diversity with multiple community or habitat types and presence of appropriate dominant and indicator species (>7).
3 = Moderate diversity with at least the key dominant and indicator species or 3-6 community types present.
1 = Low diversity, dominated by a few species or <3 community types.
0 = Monoculture, dominated by 1 species or no natural community present.

The evaluator will consider the richness of both the currently protected area and the additional parcels being evaluated.

Examples:
5 = Braidwood Dunes.
4 = Site has both high quality sedge meadows (primarily 1 community type) with a high population of species.
3 = Black Road Access-Rock Run Preserve (diverse plant communities).
1 = Laraway Road Access of Sugar Creek Preserve (farm field and floodplain forest).
0 = Farm field.

Sources: Use aerial photos, databases, field visits, INAI information, and any other resources to identify the dominant community types present. Get biological confirmation as to diversity of the resources.

6. Landscape Ecology /5

Consider landscape scale features that affect ecosystem function, species distribution patterns, and long-term biological viability, such as perimeter to volume ratio, edge effect, fragmentation, and habitat corridors.

5 = Little to no habitat fragmentation; minimal edge effect (high degree of landscape attributes).
3 = Moderate habitat fragmentation/edge effect (moderate degree of landscape attributes).
1 = Highly fragmented with large gaps in the habitat (low degree of landscape attributes).
0 = No elements of landscape ecology-small fragmented parcels with no natural habitats.

The evaluator will look at the indirect consequences of impacts at a larger landscape scale; (i.e.: the minimum sized block for grassland bird habitat, Hydrological issues concerning wetland impacts (municipal wells within the fracture zones of the bedrock strata effecting wetland recharge).

Examples:
5 = Thorn Creek Woods Nature Preserve.
3 = Braidwood Dunes.
1 = Parcels along a greenway system within a residential area (DuPage River Trail).
0 = Subdivision detention basin.

Sources: Use aerial photos and GIS, field visits, and any additional information to determine the level of landscape elements featured within the area.

7. Geology/ Physical Features /5

Consider the presence of important physical or abiotic features such as surface topography, geologic formations, palaeontological deposits, and soils.

5 = Known presence of significant or rare features.
3 = More common features/ moderate quality.
1 = Few significant features.
0 = No found or documented significant features.

The evaluator will use published records and documents to determine the level of geological significance.

Examples:
5 = Large strata with fossils, canyon formations, cemetery dunes, sand savannas.
3 = Unusual soils, rolling terrain (Spring Creek Valley).
1 = Prairie along Old Plank Road Trail, dissected and degraded uplands.
0 = No fossils, destroyed or filled areas.

Sources: Use aerial photos and GIS, databases, field visits, INAI information, soils map, USGS Quad maps, and any other resources to identify any significant physical features.

8. Water Resources /5

Consider surface water resources, such as lakes, ponds, ephemeral or permanent wetlands, riparian habitats, etc., as well as groundwater resources.

5 = Presence of aquatic resources with multiple habitat types and or desirable quality/diversity known.
3 = Presence of aquatic resources, moderate level of desirable quality/diversity.
1 = Some aquatic resources present, but highly degraded and/or highly modified.
0 = No aquatic resources present.

The evaluator will use the Illinois Natural Areas Inventory Technical Report and additional data sources to determine the presence and quality of open water resources, considering all elements of the resources on site.

Examples:
5 = Site with high quality stream system and community types, minimal human disturbance.
3 = Monee Reservoir.
1 = Areas of low quality wetlands dominated by reed canary grass.
0 = Mowed turf/agricultural field.

Sources: Use aerial photos and GIS datasets, databases, field visits, INAI information, IEPA data, Soils map, USGS Quad maps, NWI maps, FEMA FIRM maps, and any other resources to identify any aquatic features.

9. Boundaries and Management Access /5

Consider the District's ability to manage and protect the parcels if acquired. The likelihood of encroachment and access issues is evaluated.

5 = Little threat of encroachment, available access for management (adjacent to District property).
3 = Threat of encroachment likely, but provides access or limited options for adequate access with no threat of encroachment likely.
1 = Access available only through other public lands, with existing known encroachments.
0 = No access available (inholdings) making boundaries difficult to manage and threat of encroachment likely.

The evaluator will look at any evidence of dumping or obvious signs of encroachment as well as road access or location relative to District property.

Examples:
5 = Inholding in District preserve.
3 = Parcel along the DuPage River with steep sloping rocky edge, but no good access points (except from the River).
1 = Site along the I&M Canal would have to cross Illinois Department of Natural Resources (IDNR) property and is surrounded by industrial parks with potential for hazard material situation.

Sources: Use aerial photos and GIS, databases, field visits, past experience, and any other resources to identify the District's ability to manage and protect the parcels.

10. Restoration **/5**

Consider the District's degree of effort necessary and its ability to restore and/or maintain a particular site. Also consider the need to restore in order to insure ecosystem function.

5 = High quality natural resources with minimal restoration/maintenance needs.
3 = Site moderately disturbed with some need for restoration/maintenance.
1 = Heavily disturbed, difficult or complex restoration/maintenance required.
0 = Restoration not feasible, cost prohibitive, or extends beyond the District's preserve boundary.

The evaluator will look at the quality of the site and determine the level of restoration and/or maintenance that will be necessary in order to achieve the goals that have been established for the site. The significance of the restoration benefits also has to be considered along with the costs.

Examples:

5 = Relatively in tact, no additional clearing needed, only maintenance such as prescribed burning in order to insure ecosystem function (not manipulating land or water).
3 = Braidwood Dunes; site has had years of fire suppression and more intensive cutting is necessary (fire alone will not restore site) (not manipulating land or water).
1 = Statesville property; farmed, but hydrology on site is intact with hydric soils.
0 = The site will involve major restoration project, re-creation and manipulation of the land and water regime.

Sources: Use aerial photos and GIS, databases, field visits, past experience and any other resources to identify the District's ability to restore/maintain the site.

Total Score: /50

11. Recreation Connectivity /5

Consider the recreational opportunities and/or trail connections to other public facilities and programs, District holdings, and regional trails, or use as an alternative transportation connection.

5 = Adjacent to existing property and provides openspace, trails or has the ability to provide specific recreational or educational programs.
3 = Part of the link to connect sites, part of proposed system, but not adjacent to current holdings.
1 = Connection only through multiple, unsuitable parcels.
0 = No connection.

Examples:
See attached map example.

Sources: Use aerial photos and GIS, databases, county and municipal land use mapping, and any other resources to identify recreational opportunities.

12. Current Site Condition /5

Consider the site's current and past zoning and land use practices. Are there structures that could be a potential risk? Is there a potential for hazardous waste, contaminated soils and water, debris, garbage, and/or other health risk factors?

5 = Compatible with little conflicting issues, no signs of environmental risk.
3 = Few concerns, possible potential for environmental risks.
1 = Some concerns for the District's use of land, known dumping that can be readily handled.
0 = Incompatible land use with District's future goals, known hazardous environmental risks.

Examples:
5 = No structures on site, gained access for full site walk with no apparent signs of potential hazards.
3 = Parcel with homestead on it with likelihood of underground storage tanks very high, isolated parcel with no way to walk the entire parcel.
1 = Site adjacent to an industrial park or within the Des Plaines River Valley.
0 = Site that has been sited for dumping and environmental hazards are high (site north of Heritage Park).

Sources: The evaluator will use aerial photos and GIS, databases, field visits, county and municipal land use mapping, and any other resources to identify site conditions.

13. Compatibility of Adjacent Land Uses /5

Consider the adjacent land uses and zoning, development character of the neighborhood, and/or potential and expected impacts to site.

5 = Protected openspace, public areas.
3 = Unprotected open spaces, potential for expansion/buffer.
1 = Low intensity development (potential use of conservation easement, license, donation).
0 = High intensity development (no green space).

Examples:
See attached map example.

Sources: Field visits, aerial photos and GIS, databases, county and municipal land use mapping, and any other resources to identify adjacent land uses.

14. Development Trends /5

Consider the potential loss of the site or natural resources without preservation through the analysis of the expected growth and zoning within the area.

5 = Plans already exist for development.
3 = High-expected growth.
1 = Moderate growth area.
0 = Low growth area.

Examples:
5 = Parcel within municipality limits that has a site plan already proposed.
3 = Area surrounding Vermont Cemetery in the City of Naperville, known to proceed with development according to their Comprehensive Plans.
1 = Green Garden Township-land is slowly being turned over to new ownership-large lot development.
0 = Area around Wilton Center.

Sources: Use County Land Resource Management Plan and Municipal Comprehensive Plans, and any other resources to identify development trends.

15. Local and Regional Benefits /5

Consider the scale of the benefits that protection of the site will provide. Benefits can be related to recreation, education, local character preservation, or resource management (stormwater management, wetland mitigation and/or wetland banking opportunities, etc.).

5 = Benefits countywide or greater.
3 = Benefits multiple communities (regions within Will County).
1 = Benefits local community only.
0 = Has little to no benefit to local community.

The evaluator will consider what type of benefit the particular Resource Plan will be providing and to what extent those benefits reach.

Examples:
5 = Protecting the Wauponsee Glacial Trail corridor and any parcels needed for trail access.
3 = Thorn Creek Woods, Old Plank Road Trail provides recreational opportunities for multiple communities.
1 = Sauk Trail, Lambs Woods, Runyon Preserve.
0 = Subdivision detention basin outlot with no connection to other District property.

Sources: Use County Land Resource Management Plan and Municipal Comprehensive Plans, and any other resources to identify scale of benefits.

16. Planning Community Support/Partnerships /5

Consider the expressed support or opposition from local and regional planners, elected officials, interest groups, adjacent landowners, and partnerships.

5 = Significant local and regional support.
3 = Moderate local or regional support, no expected opposition.
1 = Some local or regional support known, some opposition expected.
0 = No support, opposition expected.

Examples:
5 = Adopted resolutions, letters on file supporting the Resource Plan, Northeastern Illinois Planning Commission plans.
3 = Verbal support, Chaminwood Plan.
1 = Conflicting sides; similar to Big Run Resource Plan.
0 = A dedicated use already planned-an addition to Hickory Creek might be the only suitable site for the Village of Frankfort to build a new sewage treatment plant and the village has proposed that need already.

Sources: The evaluator will consider any existing partnerships within the Resource Plan and will use County Land Resource Management Plan, municipal comprehensive plans, watershed plans, and park district plans to determine the level of support/opposition expected.

17. Encumbrances /5

Consider the presence of existing long term leases, licenses, and/or easements that may inhibit restoration, development, or management of the site.

5 = No known encumbrances.
3 = Manageable encumbrances with little impact to District goals expected.
1 = Encumbrances with some impact likely and/or necessary negotiations before acquisition.
0 = Unmanageable encumbrances, will likely create problems.

Examples:
5 =
3 = Trail right-of-way.
1 = Farm licenses exist, want to retain existing use.
0 = Multiple leaseholds (Heaven's Gate), drainage problems that will prevent ability to manage.

Sources: The evaluator will use aerial photos, GIS and field visits to determine the presence of encumbrances.

18. Cultural Resources /5

Consider prehistoric and historic archaeological sites, features, structures, and/or landscapes.

5 = Known presence of high quality, significant resources not in public ownership.
3 = Potential for cultural resources or common resources of moderate quality.
1 = Very low quality resources.
0 = No found or documented resources.

Examples:
5 = Site is eligible or on the National Register; provides information on settlement patterns.
3 = Artifacts provide temporal, cultural, and functional information.
1 = Artifacts indicate unknown culture and function.
0 = Material unknown.

Sources: The evaluator will use the Illinois Historic Preservation map of High Probability, the Rural Structure Survey, and the District Cultural Resource Manager to determine the level of cultural significance.

19. Site Suitability for Development /5

Consider the degree to which a site's physical features can support public access and recreational facilities appropriate to the scale of the site; or design/modifications needed to minimize impacts to natural resources. Consider soils, topography, geology, infrastructure, and public access options.

5 = High suitability, few limitations to development or facilities available adjacent or nearby.
3 = Moderate suitability, some limitations to development or access.
1 = Low suitability for development, severe limitations to development.
0 = No suitability for development, too many limitations, cost prohibitive.

The evaluator will look at the intended use for the site as proposed in the goals and objectives for the site. Using all the past information that has been collected, the evaluator will be able to determine the site's ability to appropriately handle a certain level of development.

Examples:
5 = Legal road access, with sewer, water or tap-ons available, no wetlands, no floodplain.
3 = Site has wetlands or floodplain, but can develop around the areas.
1 = Soil limitations, poor soil or bedrock too close to the surface for septic, or public access is only available through residential neighborhood.
0 = Trail development within a floodway, too many bridge crossings required.

Sources: Use aerial photos and GIS, datasets, databases, field visits, INAI information, soils map, USGS Quad maps, NWI maps, Federal Emergency Management Agency (FEMA) Federal Insurance Rate Maps (FIRM), and any other resources to identify site suitability.

20. Application to Resource Plan /5

Consider how the site addresses the goals established for that particular Resource Plan, a measure of the desired outcomes achieved through some degree of protection.

5 = Addresses over half of the goals and is the key to meeting those goals.
3 = Addresses less than half of the goals, requires adjacent parcels in order to address the goals.
1 = Addresses few of the goals, or only through the acquisition of additional significant parcels.
0 = Addresses none of the identified goals or objectives.

The evaluator will use the obtained information and scores to determine how the particular parcel addresses the desired goals for the site and what is necessary in order to achieve those goals.

Sources: The evaluator will use all the sources available and the scores and evaluations on the previous elements to determine how the parcel fits into the Resource Plan to achieve the goals.

Total Score: /50

Appendix G

MFA Natural Areas Benefit Assessment

Introduction

A monetary impact/benefit assessment has become a part of planning and building infrastructure, housing, commercial, cultural, educational, leisure and recreational developments. The same hasn't been true for ecosystems and nature perseveres. Reasons for that were the lack of awareness of how important these areas are and the cost efficiency of conducting a study like this to identify and monetize the benefits

This has changed over the years and now there is a growing number of primary academic data and commercial studies on the value of natural systems and functions available that have also been used in this general assessment.

The loss of ecosystems that provide flood protection and clean drinking water for example requires communities to build facilities to replace and compensate for those lost ecosystem services. And that comes at an ever-increasing cost.

Moving Will County Open Space Benefit/Impact Approach

Market & Feasibility Advisors (MFA) approaches this assignment with a three-step approach based on approaches found in similar studies, which have been adapted to the situation in Will County.

The three steps are:

- Documenting the ecosystem services for the three preservation areas
- Quantify the dollar value of benefit
- Connect natural systems and the local economy

Methodologies and Examples for Evaluating Benefits and Impacts

Open space provides a range of benefits to citizens of a community. Categorically, agricultural land can be valued for the vistas and decompressive open space it offers. Parks and natural areas can be used for recreation and as critical natural systems habitat. Wetlands can provide stormwater drainage, flood mitigation and wildlife habitat. Forests also provide natural systems habitat and aesthetic benefits to surrounding residents. In growing urban and suburban areas, any preserved land can offer relief from congestion and other negative effects of development.

There are two major approaches for estimating open space value from the economics literature. Under the first approach are hedonic property value studies in which the open space value is inferred by estimating the sales price or value of a property as a function of measures of proximity to open space and other property and neighborhood characteristics. In the second are studies that use surveys to elicit preferences or values households place on various types of open space amenities.

In this assignment, we employ some benefit/impact factors derived from already established values (using the second approach).

Approach

Ecosystems serve a wide variety of purposes including water supply, water quality, water storage, air quality, climate stability, aesthetic information, food, habitat, recreation, soil retention, and disaster risk reduction. All these services are provided by natural systems (natural capital) as long as those ecosystems are resilient and healthy.

The approach involves the following steps:

- Identify and estimate (acres) of land cover classes, e.g., forest, grassland, wetlands
- Identify the benefit/valuation of ecosystem purposes and land cover class combination using the Benefit Transfer Methodology (BTM) to find and transfer appropriate values for ecosystem functions. In cases where no published studies were available for a particular ecosystem function/land cover combination, no value is shown in this report.
- Estimate the annual benefits for the three areas of the ecosystem services for a particular land cover class

Quantifying Benefits

Benefit Transfer Methodology (BTM) is a well-established methodology that indirectly estimates the value of ecological goods or services. BTM is frequently used because it can generate reasonable estimates quickly and at a fraction of the cost of conducting a full and comprehensive study.

The BTM process identifies previously published studies from comparable ecosystems and uses, for this project in particular, studies that examine similar uses and geographies in an urban fringe setting. It then 'transfers' the results and findings to a different study location, in this case Will County.

In other words, the BTM process is similar to a home appraisal in which the value and features of comparable, neighboring homes are used to estimate the value of the home in question. As with home appraisals, the BTM results can be somewhat rough but quickly generate reasonable values appropriate for policy work and analysis.

Next, the individual study values from the identified comparable studies are adjusted and standardized for units of measure, inflation, consumer price index (CPI), and land cover classification to create a consistent set of variables to avoid "apples-to-pears" comparisons. Because studies with a variety of subjects or features (land uses) contain uncertainty, results are usually presented in a range (in this case an annual high and low dollars per acre value).

Findings

The report includes three different nature areas:

1. Joliet Army Training Area, 4,000 acres
2. Jackson Creek Greenway, 8,500 acres
3. Prairie Creek Area, 640 acres

Using land cover categories from the National Land Cover Database (NLCD), and satellite images of each site, we prepared a general estimate of the land cover type for each of the sites. The following table details those distribution estimates

Table 1. Estimated Distribution of Land Cover Type

Preservation Area	Joliet Army Training Area		Jackson Creek Greenway		Prairie Creek Area	
Total Size (Acres)	4,000	100%	8,500	100%	640	100%
Forests	1,600	40%	850	10%	32	5%
Grasslands	1,000	25%	2,550	30%	64	10%
Shrublands	800	20%	850	10%	64	10%
Water	200	5%	0	0%	32	5%
Wetlands	0	0%	0	0%	0	0%
Open Space	400	10%	4,250	50%	448	70%

Source: National Land Cover Database (NLCD), Google Earth Images, MFA

This study identified 12 general ecosystem functions that could be valued across each land cover type shown in the previous table. Each land cover type provides economically valuable goods and services. For example, wetlands provide benefits such as habitat for wildlife, climate stability, and recreation opportunities like birdwatching.

The following table shows a matrix of the ecosystem functions for each land cover type. Green fields indicate that values/data sets from comparable studies were available and assigned – orange fields indicate that no values/dataset were found or available in comparable studies. This does not indicate that there is no value, it states that no values/datasets were available to quantify benefits.

Table 2. Land Cover Type & Ecosystem Function Matrix

Function/Land Cover Type	Forests	Grasslands	Shrublands	Water	Wetlands	Open Space
Aesthetics	Y	Y	N	Y	Y	N
Air Quality	Y	N	Y	N	N	N
Climate Stability	Y	Y	Y	N	Y	N
Disaster Risk Reduction	N	N	Y	N	N	N
Energy & Raw Materials	N	N	N	N	N	N
Food	N	Y	N	N	N	N
Habitat	N	N	N	Y	N	N
Recreation	Y	N	Y	N	Y	Y
Soil Retention	Y	N	Y	N	N	N
Water Capture, Conveyance, & Supply	Y	N	N	N	N	N
Water Quality	Y	N	N	N	N	N
Water Storage	N	N	Y	Y	N	N

Source: National Land Cover Database (NLCD), Comparable Studies

Annual Benefits

Applying identified benefits/values from the reference table in the appendix to the estimated distribution of land cover types results in annual per acre benefits for each of the three subject sites.

Results are shown in dollars per acre per year and the total dollar value of the annual value of ecosystem functions for each land cover type.

Joliet Army Training Area

Table 3. Annual Benefits Joliet Army Training Area

Land Cover Type	Acres	Dollar/Acre/Year		Dollar/Year	
		Low	High	Low	High
Forests	1,600	$1,515	$33,359	$2,423,584	$53,373,885
Grasslands	1,000	$252	$1,957	$251,583	$1,957,069
Shrublands	800	$205	$15,981	$163,795	$12,784,903
Water	200	$6,439	$8,234	$1,287,860	$1,646,736
Wetlands	0	$124,573	$148,118	$0	$0
Open Space	400	$876	$876	$350,402	$350,402
Total	4,000			**$4,477,224**	**$70,112,995**

Jackson Creek Greenway

Table 4. Annual Benefits Jackson Creek Greenway

Land Cover Type	Acres	Dollar/Acre/Year		Dollar/Year	
		Low	High	Low	High
Forests	850	$1,515	$33,359	$1,287,529	$28,354,876
Grasslands	2,125	$252	$1,957	$534,613	$4,158,772
Shrublands	850	$205	$15,981	$174,032	$13,583,959
Water	425	$6,439	$8,234	$2,736,702	$3,499,313
Wetlands	0	$124,573	$148,118	$0	$0
Open Space	4,250	$876	$876	$3,723,025	$3,723,025
Total	**8,500**			**$8,455,901**	**$53,319,946**

Prairie Creek Area

Table 5. Annual Benefits Prairie Creek Area					
Land Cover Type	**Acres**	**Dollar/Acre/Year**		**Dollar/Year**	
		Low	**High**	**Low**	**High**
Forests	32	$1,515	$33,359	$48,472	$1,067,478
Grasslands	64	$252	$1,957	$16,101	$125,252
Shrublands	64	$205	$15,981	$13,104	$1,022,792
Water	32	$6,439	$8,234	$206,058	$263,478
Wetlands	0	$124,573	$148,118	$0	$0
Open Space	448	$876	$876	$392,451	$392,451
Total	**640**			**$676,185**	**$2,871,451**

Summary

The combined annual estimated benefits of ecosystem functions of the three subject areas are between $13.6 million and $126.3 million.

Table 6. Annual Benefits of the Three Areas		
Preservation Area	**Low**	**High**
Joliet Army Training Area	$4,477,224	$70,112,995
Jackson Creek Greenway	$8,455,901	$53,319,946
Prairie Creek Area	$676,185	$2,871,451
Combined Total	**$13,609,310**	**$126,304,391**

Appendix/References

Table 7. References with Original Values/Benefits & Inflated 2021 Values/Benefits (per acre & year)

Land Cover Type	Impact/Function	Reference/Author/ Source	Year	Original $ Value		2021 $ Value		
				Low Value	High Value	Low Value	High Value	Average
Forests	Air Quality	McPherson	1992	$238	$238	$452	$452	$452
Forests	Climate Stability	McPherson	1992	$1,403	$1,403	$2,667	$2,667	$2,667
Forests	Water Capture, Conveyance, & Supply	McPherson	1992	$10	$10	$19	$19	$19
Wetlands	Recreation & Tourism	Creel and Loomis	1992	$7,549	$8,021	$14,349	$15,246	$14,798
Wetlands	Recreation & Tourism	Creel and Loomis	1992	$8,729	$10,380	$16,592	$19,730	$18,161
Shrublands	Recreation & Tourism	Richer	1995	$65	$65	$114	$114	$114
Water	Habitat	Berrens et al.	1996	$4,839	$4,839	$8,220	$8,220	$8,220
Forests	Air Quality	McPherson et al.	1998	$30	$30	$48	$48	$48
Forests	Air Quality	McPherson et al.	1999	$1,068	$1,068	$1,696	$1,696	$1,696
Shrublands	Disaster Risk Reduction	Zavaleta	2000	$42	$58	$65	$90	$78
Shrublands	Water Storage	Zavaleta	2000	$31	$527	$48	$819	$434
Water	Habitat	Berrens et al.	2000	$4,135	$4,135	$6,426	$6,426	$6,426
Forests	Aesthetic Information	McPherson and Simpson	2002	$349	$1,763	$510	$2,577	$1,544
Forests	Aesthetic Information	Nowak et al.	2002	$4,867	$7,172	$7,115	$10,484	$8,799
Forests	Air Quality	McPherson and Simpson	2002	$79	$137	$115	$200	$158
Forests	Water Capture, Conveyance, & Supply	McPherson and Simpson	2002	$90	$103	$132	$151	$141
Wetlands	Aesthetic Information	Colby and Wishart	2002	$85,001	$85,001	$124,254	$124,254	$124,254
Grasslands	Aesthetic Information	Sengupta and Osgood	2003	$59	$59	$85	$85	$85
Water	Aesthetic Information	Sengupta and Osgood	2003	$5	$5	$7	$7	$7
Shrublands	Climate Stability	Graham et al.	2004	$131	$10,621	$184	$14,944	$7,564
Shrublands	Soil Retention	Richardson	2005	$10	$10	$14	$14	$14
Wetlands	Recreation & Tourism	Solby and Smith-Incer	2005	$168	$224	$230	$307	$269
Forests	Climate Stability	Smith et al.	2006	$84	$543	$111	$720	$415
Forests	Climate Stability	Smith et al.	2006	$2,912	$14,541	$3,859	$19,272	$11,565
Forests	Recreation & Tourism	Weber and Berrens	2006	$43	$59	$57	$78	$68
Shrublands	Air Quality	Delfino et al.	2007	$1	$1	$1	$1	$1
Shrublands	Recreation & Tourism	Weber 2007	2007	$46	$46	$59	$59	$59
Water	Water Storage	Delfino et al.	2007	$4	$5	$6	$6	$6
Grasslands	Food	Shaw et al.	2009	$13	$91	$16	$109	$63
Open Space	Recreation & Tourism	Brander and Koetse	2011	$738	$738	$876	$876	$876
Grasslands	Climate Stability	Liu et al.	2012	$696	$1,532	$801	$1,763	$1,282
Shrublands	Climate Stability	Liu et al.	2012	$15	$24	$17	$28	$22
Wetlands	Climate Stability	Liu et al.	2012	$77	$77	$89	$89	$89
Wetlands	Climate Stability	Liu et al.	2012	$915	$3,592	$1,053	$4,133	$2,593
Grasslands	Climate Stability	DeLonge et al.	2013	$134	$150	$151	$169	$160
Forests	Soil Retention	Yoo et al.	2014	$21	$131	$23	$146	$84
Forests	Water Capture, Conveyance, & Supply	Hill et al.	2014	$34	$136	$38	$151	$94
Forests	Water Quality	Hill et al.	2014	$671	$2,088	$746	$2,320	$1,533

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Appendix H

Stakeholder Comments

WILL COUNTY
GOVERNMENTAL LEAGUE

August 31, 2021

Moving Will County Project Team,

After reviewing the draft final plan we have several comments on behalf of our members. First we commend the CMAP staff for their work on this process throughout a challenging time. Working to better coordinate land-use and transportation investments is a principle that our members firmly stand behind. The WCGL is committed to working with our members to continue working together to build a successful region. However, the WCGL also supports every communities' ability to grow and develop in a manner that they feel best represents the interests of their residents. We would also seek to encourage all of our members to review and pursue the best practices listed at the end of the study.

Our main area of concerns revolves around "The Strategy." We are in agreement that the one criteria of being located along an existing truck route is necessary to having a successful development. The concerns come with the four exceptions to that criteria. The first exception is parcels with frontage only along IL 53/Historic Route 66. This section of Route 53 in the study area is largely a 4 lane divided highway with a minimal number of controlled intersections. This roadway was designed to handle the type of development that this exception seeks to keep out of this area. If development is stopped along major state routes like IL53 then where is development acceptable?

The second exception is parcels within a ½ mile or 10 minute walk of existing residential areas, schools, places of worship, and civic and institutional uses. This requirement is overly burdensome when looking at development. In many cases developers are putting together multiple parcels to complete a development and may be required to purchase land that is within this boundary. That does not mean that they will actually develop within the that limit. This should be eliminated in favor of encouraging effective screening and sound buffering near these specific developments.

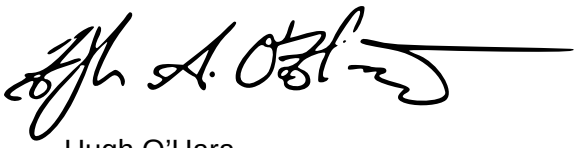
The third exception of parcels designated for other uses in local comprehensive plans is unacceptable. Local government plans all allow for variances and exceptions to be made. If a community chooses to grant a variance to their local plan they have every right to make that change. Forcing communities to live by decisions made by previous boards for planning decisions should not be considered. Nor should communities that annex property into their community be required to maintain the planned use that was preferred by another unit of local government.

The final exception for parcels required for preservation of natural resources is a goal that all communities should strive for however, if someone sells their prime farmland to a developer as is their right, then that land can be used as the developer and community see fit.

Beyond the “The Strategy,” there are several other items we would like to highlight that are of concern. This first of those is a the age and relevance of some of the data points. The plan mentions a number of plans that are at least 10 years old. Much has changed in the last 10 years, particularly the expansion of e-commerce that is driving so much of the development in this area. The use of gross acres for land development vs net buildable acres is not stressed enough and is misleading on how much available land can be used west of IL53. The plan should also acknowledge the advantages that having access to global markets has had for our region’s farmers. Finally, the plan does not reflect recent on the ground changes that will have a major impact on the region. These include Joliet’s approval of the Northpoint development and reports of the potential redevelopment of the Route 66 Raceway and Chicagoland Speedway.

Thank you for taking the time to review our comments on the plan. If you have any questions please contact me at 815-274-7700 or hugh.ohara@wcgl.org.

Sincerely,



Hugh O’Hara
Executive Director

Beecher Bolingbrook Braidwood Channahon Coal City Crest Hill Diamond Elwood Frankfort
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August 30, 2021

Jacque Henrikson, AICP
Civiltech Engineering

RE: **Comments on *Moving Will County* Draft Land Use Strategy**
Sent via email to: JHenrikson@civiltechinc.com

Dear Jacque:

Thank you for the opportunity to comment on the most recent draft of the *Moving Will County* Land Use Strategy. Presented with a range of land use possibilities, like many, we largely agree with the balanced approach in Scenario D, which complements approximately 9,000 acres of land capacity for freight related uses with 8,000 acres in preservation, clustering TDL to maximize the health, well-being, character, economic competitiveness, and resilience of Will County.

Moving Will County honors the wealth of cultural, agricultural, and natural resources, with some of the rarest natural areas and finest soils in the world, while demonstrating the potential for TDL to thrive and adhere to regionally and nationally recognized freight principles and best practices. As Will County and the region continue to evolve, our hope is that this blueprint in *Moving Will County* is swiftly adopted by and adhered to by decision makers at all levels, taking the best equitable approach for all people who live and work in the area. Demonstrating a united front has driven our greatest successes in the *Moving Will County* land use study area since the diverse delegation of decision makers and non-profits in 1995 unanimously voted for the Joliet Army Ammunition Plant to become the mosaic of community, nature, agriculture, and TDL. This consensus will be crucial in the decades that follow.

I. The Draft Land Use Strategy's Guiding Principles Support Best Practices

We were pleased to see the draft Land Use Strategy, for the most part, intentionally situates potential TDL uses to complement the rich diversity of communities, nature, agriculture, and cultural resources in southwest Will County. The principles of Prosper, Nurture, and Balance, as largely borne out in the draft map, demonstrate that all these values can coexist and translate into a more competitive county with a diversity of economic opportunities, while maintaining a depth of history, nature, culture, and values.

It is clear that southwest Will County has ample space for TDL without sacrificing its long-standing agricultural businesses, way of life, and the health and wellbeing of its residents. Yet, it also highlights that just placement and best practices are crucial to protect the health and quality of life of all people in the study area. As Center for Neighborhood Technology rightly expressed, it is imperative that existing

and future freight and warehousing avoid and negate impacts to our most vulnerable populations, which are often currently situated near industrial uses.

We appreciate reflection of the larger principles in *ON TO 2050* and the *Will County Community Friendly Freight Mobility Plan* ("Will County Freight Plan") in the draft Land Use Strategy's guiding principles. As one of the six regional freight clusters identified by CMAP, effective land use planning will be necessary to maximize economic benefits while preserving and enhancing the environmental health of Will County.

Clustering TDL and routing trucks as efficiently and tightly as possible onto existing nearby interstates offer the greatest opportunity to avoid and minimize harmful impacts in the Study Area. This combination supports the formation of synergistic, sustainable systems while minimizing land use conflicts and the hurdles they impose on residents and the environment. Strategic placement of TDL in turn means that supporting roads, bridges, water, and other infrastructure become more economical to accommodate and maintain.

II. **Recommended Land Use Strategy for Industrial and TDL Uses**

The criterion and exceptions establish an important framework to determine if land is suitable for industrial uses or is important for conserving community, natural, agricultural, and cultural values. However, we recommend tightening the current language so that major projects adhere to important plans and protections, avoiding an imbalanced and harmful result.

We understand the importance of integrating municipal comprehensive plans as part of the recommended land use strategy for the Study Area. There are a couple of areas where jurisdictions either have conflicting land use plans or the desired use falls under another jurisdiction. For instance, in the municipal comprehensive plan for the Village of Elwood, it reflects industrial uses within the Joliet Training Area, which Moving Will County recognizes is promised under federal law to be transferred in time by the U.S. Army to the U.S. Forest Service for preservation. The Land Use Strategy also states that "agricultural uses are envisioned generally in the southeast part of the Study Area. (See Draft Land Use Strategy, p. 21.) However, as the Land Use Strategy later depicts, much of the study area is currently used for agriculture, with a number of generational and centennial farms. As agricultural industry is one of the greatest economic drivers in our state, this importance should be reflected in illustrations of existing and consistent future uses in the draft Land Use Strategy.

A. <u>First Exception to the Land Use Criteria</u>

Under the first exception, a *parcel* would be suitable unless it *only* has frontage along Illinois Route 53, which is otherwise known as Historic Route 66. The criteria should apply to a project rather than a particular parcel, since TDL projects usually involve multiple parcels. Moreover, the exclusion should apply to projects that will alter the character and likely result in a contradictory shift of surrounding land uses, as well as to projects that depend upon using or traversing Route 53 for access, especially in the southern part of the study area, rather than have sole frontage onto it. Otherwise, massive projects could qualify under the exception, which transform this part of the Study Area in ways that would defeat clustering industry and the preservation of significant natural resources in southwest Will County. This would destroy generational farms, villages, and Townships that have expressed a continued desire to maintain the rural character, health, and balance of agricultural businesses within their communities.

Route 53 (Historic Route 66) is significant in that it bounds several rural communities, the second largest Veteran's cemetery in the country, and Midewin National Tallgrass Prairie – the first ever so designated in the United States. In addition to increasing truck traffic along the route, through and within these places, the noise, light, vibration, and pollution of TDL moving east and south into this part of the Study Area would be highly destructive to what is predominately and historically of great agricultural, natural, and cultural value. It could be used to tacitly allow conflicting uses in communities that have fought to keep their family farms, their businesses, their health, and their way of life. Calming traffic and use of IL 53 will be critical to protect the character and tourism potential, as well as existing resources along this historic route. Given the amount of land suitable for TDL, sacrificing other economic drivers and the identity of these communities is unnecessary, and would be a terrible loss.

B. Second Exception to the Land Use Criteria.

We agree with the second exception, and would expand it to include cemeteries, public parks, and natural areas, such as Midewin National Tallgrass Prairie. A project does not need to bound one of these sensitive uses to be severely impact it. Project locations often can negatively influence placement and maintenance of roads and other infrastructure, which compound impacts to the resources the plan seeks to protect under this exception. In addition, while a half mile may be adequate for certain resources, the buffer may not be sufficient for larger projects, which project high acute as well as chronic decibels of noise, mass-light, major changes in drainage and water draw-down, and surges in traffic, vibration, and cumulative pollution.

C. Third Exception to the Land Use Criteria.

The third exception applies to parcels designated for other uses in local comprehensive plans. This exception is too narrow. If the vast majority of residents in a community where a project is proposed to be situated are opposed to it, that should matter. In addition, a project can traverse more than one jurisdiction. If an affected jurisdiction object, the project should be seriously questioned or not move forward. Otherwise, one community can impose its will upon another, even though the second will bear the brunt of impacts. While this is appropriate as one of the factors in preservation, given the full force of community impacts by certain projects, opposition by potentially impacted parties should be weighted heavily in the third exception as well. This is especially true in divested areas that are historically underrepresented. Moreover, plans made by the federal government – especially pertaining to federal land - should not be precluded because they are not incorporated into local comprehensive plans. We recommend that any controlling plan is the measure, rather than a designation in one single plan, with the overriding potential for the majority of residents to call the project into question.

D. Fourth Exception to the Land Use Criteria.

While we are glad to see that it is clear TDL should not take protected lands and waters, the fourth exception of land that is "required for conservation" is too narrow. Again, it is important that projects are viewed as a whole rather than segmented by a parcel-by-parcel analysis. Scale matters, as does distance and the magnitude of acute and chronic disturbances. This hard look is necessary to avoid major development that would drain community wells, flood neighboring farm fields, inundate an adjacent cemetery with high decibels of sound, vibration, and pollution, or run against and contaminate adjoining property – even if it was globally imperiled. It would be simpler to ask: Would the proposed

project conflict with natural, cultural, and agricultural values in the Study Area? The checklist can be used to determine whether there is a conflict.

We agree that the four proposed areas selected for preservation are critical natural resources in the Study Area. The Joliet Army Training Area, Jackson Creek Greenway, Prairie Creek Area, and Floodplain Buffers are essential resources to include on the list. Proposed industry south of Schweitzer Road along Cherry Hill Road is in direct conflict with this exception, since it would certainly impact the Jackson Creek watershed, and promote further development in conflict with the preservation principles. The conflict is evident in that it is used to justify a conceptual alignment for a Long-Term Class II route that conflicts with surrounding agricultural, residential, and natural land uses. Openlands strongly urges the study team to strike this proposed industrial area and the related conceptual long-term Class II route from the Land Use Strategy and Truck Routing maps.

We were pleased to see a checklist of criteria for preservation. We agree that connectivity of greenways and blueways in the Study Area is crucial to protecting natural resource values, especially as our climate conditions continue to change. Connectivity should be considered for both people and wildlife, given the global significance of natural resources that creek and trail corridors connect. This is especially important in areas such as south Joliet, so that all people have meaningful access to nature. In addition to elevating quality of life, cleaner air and more manageable water are essential for a decent quality of life. Adequate protection of stream corridors, wetlands, and landscapes like prairies, with their deep roots, provide important flood protections for people that live and work in the surrounding areas.

Protecting water supply as well as water quality is vital in this part of the region. As studies by Joliet and the Illinois State Water Survey project that maximum peak demand will no longer be met by 2030 even with best conservation practices in place, industrial projects – all new major uses – should be evaluated for specific, surrounding (indirect) and cumulative impacts to the water supply of the communities on the same aquifer. The same should be true for evaluating the collective burden on wastewater systems, since significant increases in the total amount of water discharged into streams like Jackson Creek can degrade these pristine waterways and profoundly change the quality and dynamics of greater watershed areas.

While protecting known occurrences of threatened and endangered species is important to prevent a takings and support preservation of our finest and most rare ecological areas, it is also important to recognize as well where species are anticipated or likely to occur, so that appropriate studies are done before these protected plants and wildlife are lost. This is especially true when habitat has been restored and is viable to support certain species, or where projects are proposed near remnants that are known to harbor listed species.

In evaluating site specific conditions, we are confused as to the last three questions on the preservation check list. Are these meant to devalue certain land for preservation? If so, we consider them inappropriate and should be struck. A globally significant remnant could be among three-to-four hundred acres documented world-wide, and have extreme ecological value, but may not be easy to manage or be suitable for trails and other public access. Similarly, the existing site conditions for a trail could be altered given agency and community priority, even if existing conditions don't support this use. Land uses that are high quality can also have numerous easements that crisscross the premises, which are frequently navigated when conducting restoration and ongoing stewardship. These factors should be evaluated when conservation priorities are set.

III. **Recommended Preservation Areas**

We strongly agree with recognizing the four recommended preservation areas of the Joliet Army Training Area, Jackson Creek Greenway, Prairie Creek Area, and buffers for other waterways. All four resources are regionally – if not globally – significant and important to the health and quality of life of people in the Study Area. In designating buffers for other waterways, TDL should be sited so that it does not degrade the Kankakee River, a state protected resource and high-quality waterway that harbors listed species as well as species of greatest concern. This is also true of high-quality tributaries, such as Forked Creek, where federally listed species have been identified.

In designating the Prairie Creek Area as a preservation priority, it is important to consider that any industrial uses further upstream in the watershed will have serious repercussions to the quality, flow, biodiversity, and integrity of this important system. In defining buffer width, given the import of the resources, we recommend that the County and municipalities adopt a 100-foot requirement to reduce sedimentation, erosion, and pollutant loading; increase infiltration; and accommodate greater variability in stream conditions as our climate continues to change. Canopy cover is also important to shade waterways as temperatures continue to rise.

In addition, it is worth noting that existing resources, such as Midewin, deserve critical protection, as does the Des Plaines Conservation Area, the Kankakee River, and associated high quality connected wetlands and waters.

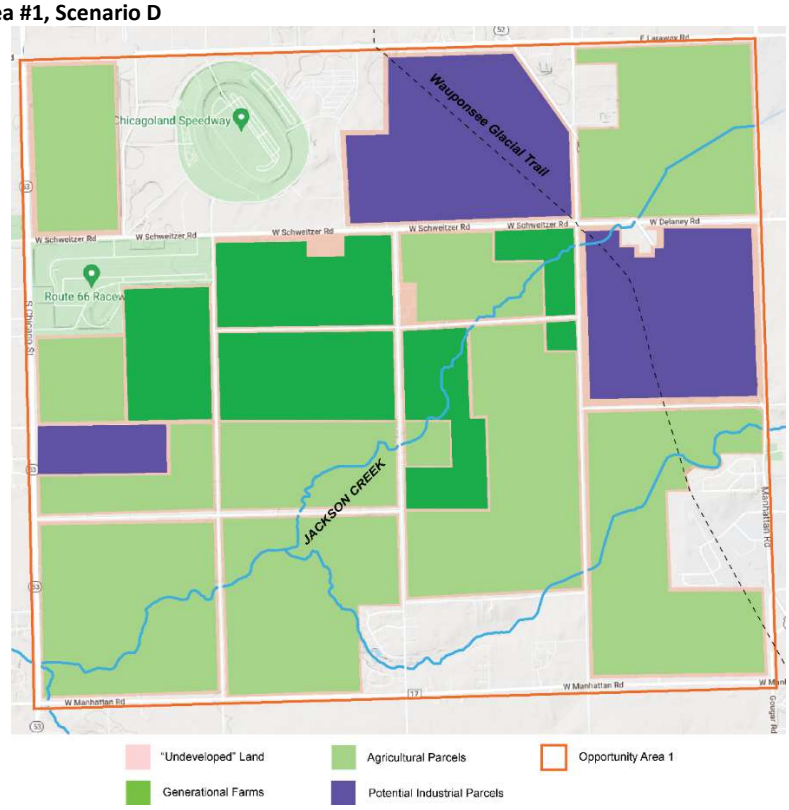
We are disappointed to see that a buffer for Midewin National Tallgrass Prairie is not included in the draft Land Use Strategy. Several scientific studies provide solid support for a buffer around Midewin. These studies have already been referenced in previous transportation proposals to evaluate the likelihood that globally imperiled grassland bird habitat and other important landscapes within Midewin would be harmed and "constructively used" as a resource protected under Section 4(f) of the U.S. Department of Transportation Act. Understanding the importance and validity of these considerations, it would make sense to include such a buffer in long-term strategies designed to protect this and connected natural lands and waters. Otherwise, it can inadvertently and tacitly allow for uses that will pose significant conflicts to natural resources in the Study Area.

IV. **Natural Areas Benefit Assessment**

We greatly appreciate the Natural Areas Benefit Assessment as part of the valuation of natural resources in the Study Area. We encourage a more robust valuation of benefits as an example of how the natural and agricultural areas in southwest Will County are worthy of federal dollars that are available for resiliency and biodiversity as our country strives to work with farmers, ranchers, and other landowners to conserve 30% of our nation's lands and waters. This could assist municipalities and the county to secure competitive federal funding for agriculture, infrastructure, and open space. For instance, available studies quantify benefits of water quality, capture, and flood reductions gained by restoring wetlands and prairie, such as grasslands. The value of biodiversity, as it emerges to the forefront, will also be important to incorporate. Studies are soon to be released as to how wetlands, waters, and riparian areas are vital to disaster risk reduction, with figures juxtaposed against the FEMA dollars and other private expenditures after major storm events that are increasing in frequency. These figures will undoubtedly increase the estimated annual benefits of the three preservation areas, along

with maintaining the integrity of existing preservation areas, such as Midewin National Tallgrass Prairie, the Des Plaines Conservation Area, and the numerous creeks and forest preserves in the Study Area.

Fig. 1: Opportunity Area #1, Scenario D



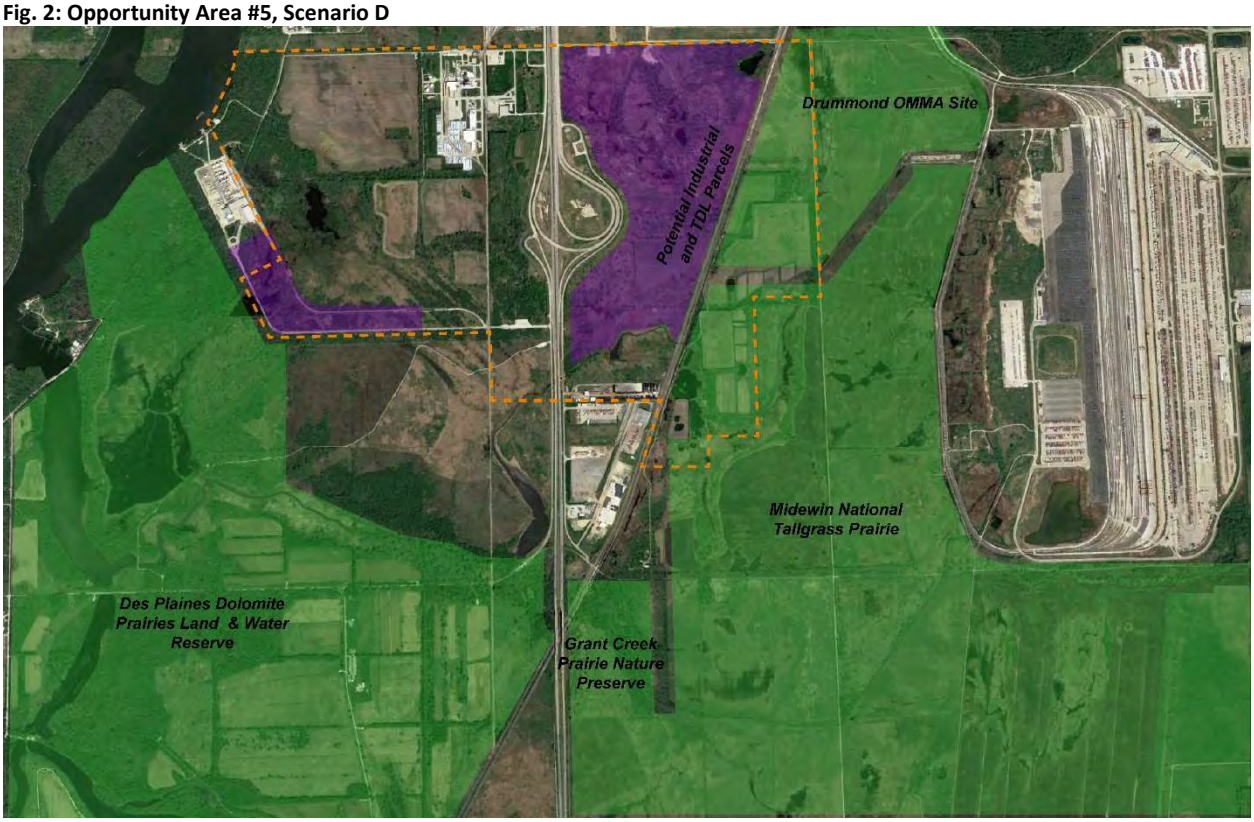
IV. **Opportunity Areas**

We agree with the assessment that the identified opportunity areas largely represent unique locales that will play a role in the creation of a more habitable and prosperous Will County. These opportunity areas are composed mainly of what the report identifies as “undeveloped land.” Both vacant parcels and parcels with existing agricultural use fall into this category. We caution against the perception that could be given in grouping farmland that is among the nation’s finest quality and culturally significant sites with vacant lots. Beyond the generational farms referenced on the map, it should be clear that these agricultural soils, natural resources, tribal remnants, and community heritage sites should not be viewed as blank slates for increased development. This would defeat the exercise of clustering industrial uses to preserve these resources. We have heard and appreciate that the opportunity areas are not specifically for new industrial development, unless colored expressly for that purpose, and appreciate that these pose just as significant potential for preserving our network of farm fields, fragile wetlands, Preservation Commission sites, and regional trails.

For instance, Jackson Creek is an excellent location for a nature trail and buffer that preserves this high-quality protected resource. As we mentioned earlier, our concern lies in that certain proposed industrial uses, such as those within Opportunity Area 1, would undermine the intended preservation principles in the Land Use Strategy.

In addition, recommending potential industrial facilities in Opportunity Area 5, adjacent to Midewin, would likely harm connected wet mesic dolomite prairie, one of the rarest land types in the world, with fragile ecosystems supported by clean water flowing almost at the surface of its limestone bedrock. The proposed area could also very well host federally protected species. We strongly urge the team to omit that portion of Opportunity Area 5, and explicitly stating that Midewin and other existing preservation areas should be protected would make it clear that the plan is to uphold the integrity of these natural resources.

Fig. 2: Opportunity Area #5, Scenario D



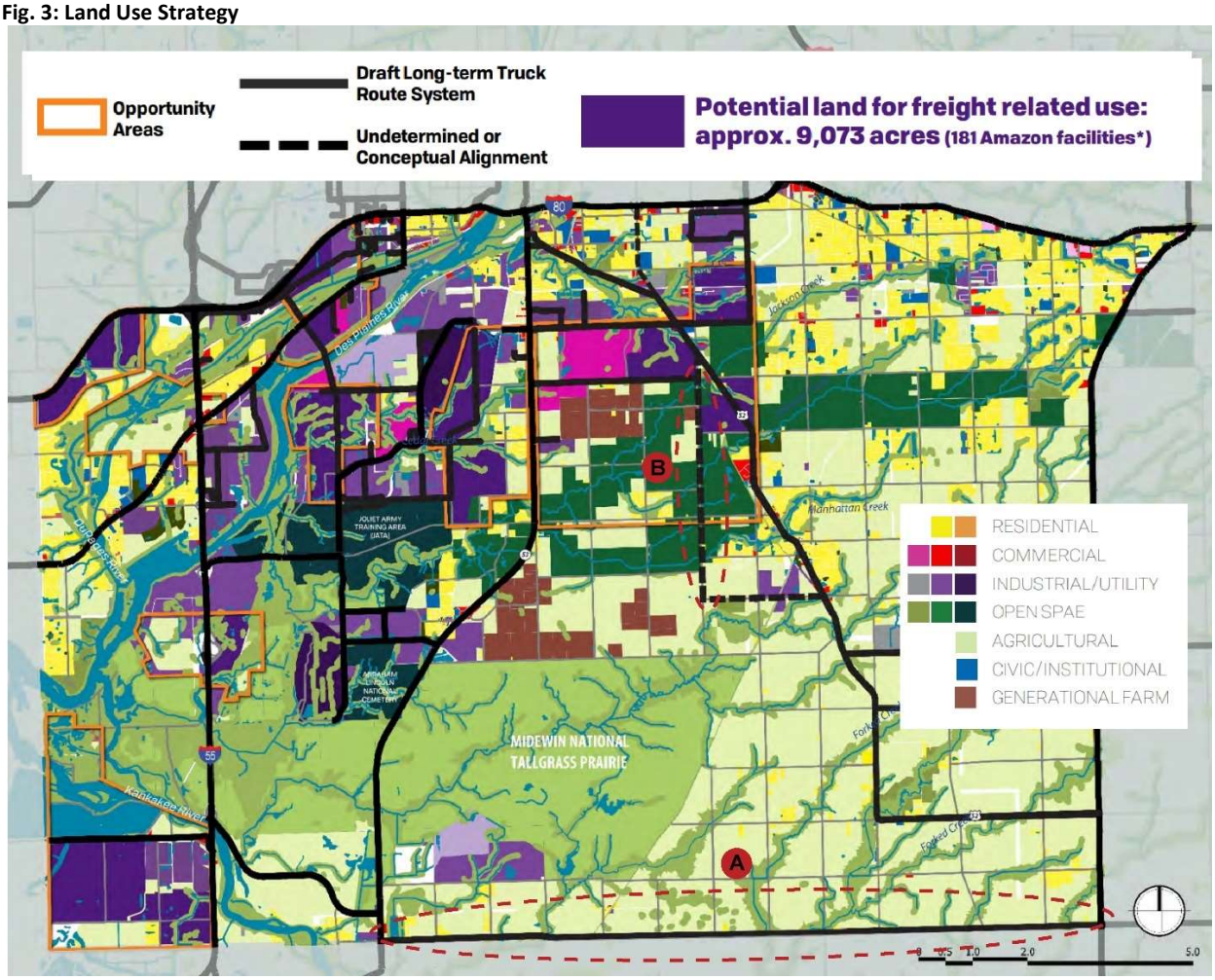
The Steering Committee survey which ranks preservation areas by level of importance is useful for defining priorities, however we caution using this to afford areas higher on the list protection while denying it from those on the bottom. Likewise, the survey which asks members to create a hierarchy of environmental protection strategies, such as buffers for waterways and avoiding impacts on generational farms, must not be used as a basis for overly selective conservation practice. All preservation strategies must be considered holistically and as part of an interconnected system, with equal protections, considerations, and effort afforded for all.

V. Achieving Balance Between Land Use, Freight, Truck Traffic and Routing

We agree that there is a great interdependency between transportation and land use. The Chicago Metropolitan Agency for Planning embodies this, demonstrating how taking a unified approach deeply influences how we live, work, and move within and across the region. This common thread runs through the Will County Community Friendly Freight Mobility Plan, which recommended this type of

planning initiative that coordinates land use and transportation planning. One of its key findings was that "[a]ctions need to be taken to avoid and address potential community and environmental impacts of freight on both the human and natural environments." Will County Freight Plan, Executive Summary (2017), p. 22. Even with its focus on freight, this precursor recognized the need for plans to address community and environmental effects of freight, balance and protect agricultural areas, and maintain the character and quality of life for residents and communities in the county. This plan demonstrates that there are ample locations suitable for TDL that can avoid negative impacts and maximize infrastructure investments by maintaining industry near existing interstates.

Fig. 3: Land Use Strategy



As a comprehensive land use strategy developed in conjunction with transportation planning, it is important and relevant to comment on proposed roadway reclassifications which will have a significant impact on surrounding land uses.

A. Wilmington - Peotone Road

Wilmington - Peotone Road runs east to west parallel to the Midewin National Tallgrass Prairie, at some points falling within one mile of the U.S. Forest Service area. As a potential Long Term Class II route, Wilmington – Peotone Road will require significant reconstruction. Selective widening of the roadway, the addition of passing lanes, repaving, and other design and engineering changes will be necessary to

accommodate freight traffic weighing up to an allowable to 80,000 pounds and with no overall length limitations. These physical interventions, as well as the traffic which will be drawn away from existing North-South interstates, will impose lasting, negative repercussions on the surrounding rural communities and wildlife. Shunting traffic south to what could become a "de-facto" Illiana Tollway would have all the same impacts and cost issues associated with that failed project. Instead, it is vital to focus limited transportation dollars on the billion-dollar solution for existing interstate use and access, adhering to the principle that intermodals should be within a mile and a half of such infrastructure.

B. Cherry Hill Road

Cherry Hill Road is marked for conceptual alignment as a Long-Term Class II route. As such, this roadway would require reengineering, redesigning, and rebuilding. This is further complicated by the fact Cherry Hill Road is situated below the base flood elevation of Jackson Creek, as noted in the Joliet South Side Comprehensive Plan. Because of this, in addition to these large-scale physical interventions Cherry Hill Road would need to be raised and have its existing culverts widened. Reclassifying Cherry Hill as a Long-Term Class II route and the associated reconstruction necessary to make that designation a reality will impose a significant and dangerous burden on the protected Jackson Creek Waterway. We question the necessity of this conceptual route as there are *no* existing industrial parcels along Cherry Hill south of W Baker Rd. Any proposed use is in direct conflict with draft principles in the Land Use Strategy and should be rejected. Furthermore, the reclassification of this road as a Class II route could be used to justify new industrial and TDL uses along its bank, as per the 'One Criteria,' which will clash with and impede existing uses.

Last, we encourage using iterative processes in crafting land use and transportation plans. Just as potential industrial and TDL parcels are chosen based on their proximity to freight routes, so too should potential new freight routes reflect updated land use strategies. With the adoption of Scenario D by the Steering Committee, many areas originally designated for future industrial and TDL use will now remain unchanged. These areas were often used as the basis for new freight trucking routes, which seek to meet an anticipated need that no longer exists. Proposed trucking routes should be reanalyzed following the formal adoption of a land use strategy for Will County.

IV. **Conclusion**.

Thank you again for the opportunity to comment on this important initiative.

Kind regards,

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August 31, 2021

Jacque Henrikson, AICP, Civiltech Engineering

By email: JHenrikson@civiltechinc.com

Dear Jacque:

Thank you for the opportunity to offer comments on the draft document, Moving Will County Land Use Strategy. We support the overall recommendations this document makes, and we particularly appreciate the clear designation of areas recommended for preservation. Additionally, we have two requests for clarification and additional detail.

First, we would like to ask for a clarification on pages 22 and 23. Page 22 says the criteria for TDL appropriateness is frontage along "Existing Class I and Class II truck routes, and Short-term Class II truck routes." Page 23 lacks this detail, saying only "designated truck routes." We would like to ask that page 23 repeat the more specific language on page 22 to specifically identify **existing and short-term** truck routes, meaning that parcels along the long-term conceptual alignments are not eligible to have TDL development nearby. This is an important distinction, as the long-term conceptual truck route alignments are quite different in character than the short-term routes.

Second, the best practice strategies at the end of the document (starting on page 41) are positive but are focused nearly exclusively on green features that can be installed on-site. In addition to these, we suggest also calling out strategies to encourage low-emissions trucks and provide transit options for workers, as well as install green features along truck routes that will be used to access the site. While these actions go beyond site-level planning, they are still within the purview of municipal governments, who we see as the primary implementers of the land use strategy recommendations.

Thank you for your consideration of these comments, and please contact me with any questions.

Sincerely,

Robert Dean, CEO

Cc: Chicago Metropolitan Agency for Planning (CMAP)

Jacqueline A. Henrikson, AICP

From: Kurt Carroll <kcarroll@newlenox.net>
Sent: Monday, August 30, 2021 3:36 PM
To: Jacqueline A. Henrikson, AICP
Subject: RE: EXTERNAL: RE: Moving Will County Land Use Strategy

Jacqueline,

Nice job. The Village of New Lenox does not have any comments.

Thanks,

Kurt

Kurt T.Carroll
Village Administrator

(815) 462 – 6415(office)

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Jacqueline A. Henrikson, AICP

From: John Greuling <John.Greuling@willcountyced.com>
Sent: Tuesday, August 31, 2021 11:47 AM
To: Jacqueline A. Henrikson, AICP
Subject: RE: Moving Will County Land Use Strategy

Jacqueline:

First I want to thank you and your team for the detailed analysis in developing the various land use scenarios. It truly appears no stone was left unturned.

As we have stated before, the CED does not support #1 of the four exceptions as written on page 22 of the Land Use Strategy Report (August, 2021):

Exception 1: Prohibiting development on parcels that have frontage only on either side of Rte. 53/Historic Rte. 66 potentially represents a taking from the owners of said property. Any development along that corridor would have to meet ingress and egress design standards required by IDOT and the local government jurisdiction as a result of any required traffic studies. Trying to keep trucks and passenger vehicles off of one of the better divided highways through the inland port makes no sense.

Thank-you.

John

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