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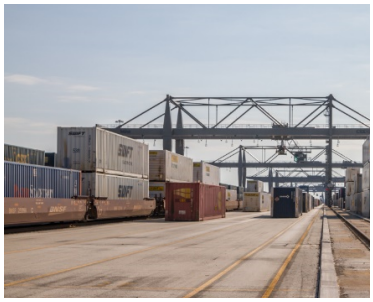


# Effingham Market Analysis Summary

*Prepared for:* City of Effingham

November 14, 2018

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## 1.0 Introduction

The City of Effingham is considering the addition of a new interchange along I-57 and the development of a multimodal freight facility south of the city. Hanson has conducted a high-level market analysis to determine the feasibility of the potential multimodal freight facility, the results of which are summarized below.

Effingham is located at the crossroads of I-57 and I-70. As such, it has direct access to Chicago, St. Louis, Indianapolis, Nashville, and Memphis. From a logistics viewpoint, the location is extremely good for consolidation and distribution. However, this must be understood and rationalized within the overall manufacturing, distribution, and consumption regions and markets within the Midwest.

To support a multimodal freight facility, an analysis of the potential for markets is required. The analysis herein begins with an understanding of the various logistic demands to and from Effingham based on the industrial transportation demands, as well as the logistics opportunities to support manufacturing and distribution activities in Chicago, St. Louis, Indianapolis, Nashville, and Memphis. This information then must be overlaid on the actual transportation options to support a multimodal freight facility, both in the Midwest and nationally. Once these areas have been analyzed, these independent studies will be synthesized into an overall market assessment for the demand for a multimodal freight facility.

## 2.0 Effingham Industrial Analysis

An industry cluster analysis identifies industries that are geographically concentrated in an area, or of a similar nature, such that they can make use of related buyers, suppliers, infrastructure, and workforce. By identifying industry clusters, economic development efforts can focus on companies that complement existing businesses or that complement each other. The analysis identifies sectors and clusters that have competitive advantages based upon the concentration of establishments and employment compared to the nation as a whole. Note, the analysis herein is only preliminary, as a typical industry cluster assessment requires a much "deeper dive," which is beyond the scope of this project. However, the results of this analysis are indicative of potential target industry groups in which Effingham may have a competitive advantage in the market.

Three (3) benchmarks are traditionally used to identify industries that may have a competitive advantage: location quotients, high wage levels, and average annual wage. The subject effort only examines location quotients, which is defined as a ratio that compares employment or establishments in a particular industry in the region to the employment or establishments in that same industry in the nation as a whole. If the location quotient exceeds 1.0, the region's share exceeds the national share, which means it is more concentrated.

Industry clusters for the Effingham Micropolitan Area in 1998 and 2016 are shown in Figure 1 and Figure 2, respectively. Coloring of the clusters are defined below.

- Gray indicates that the area is at or below the national average.
- Yellow indicates a slight concentration of industries, but not enough to skew transportation demand.
- Light green indicates that the area has a concentration of industries, due to its natural resources or location within a specific distribution network.
- Dark green indicates the area has an expertise in a specific industry, would be considered a manufacturing region, and will draw in significant products to support the manufacturing.

A high employment concentration (location quotient greater than 1.25, shown as light green) also indicates a specialization in that sector, industry, or cluster when compared to the national average. Sectors, industries, and clusters with concentration of 1.50 or greater are shown as dark green, which indicates the region has a concentration of 50% or greater than that found in the US as a whole.

Comparing the two industry cluster figures, the manufacturing base in the Effingham region has made some shifts over the 18-year period. For purposes of this analysis, industry clusters that do not drive transportation of freight commodities and product demand (such as education, finance, performing arts, etc.) are not considered. Observations related to the shift in manufacturing are summarized below.

- Expansion has occurred in the Business Services, Leather Products, Medical Devices, and Upstream Metals industries.
- Contraction has occurred in the Marketing, Apparel, Recreational Goods, Plastics, and Production Technology industries.
- Most other industries remain unchanged at this aggregate level.

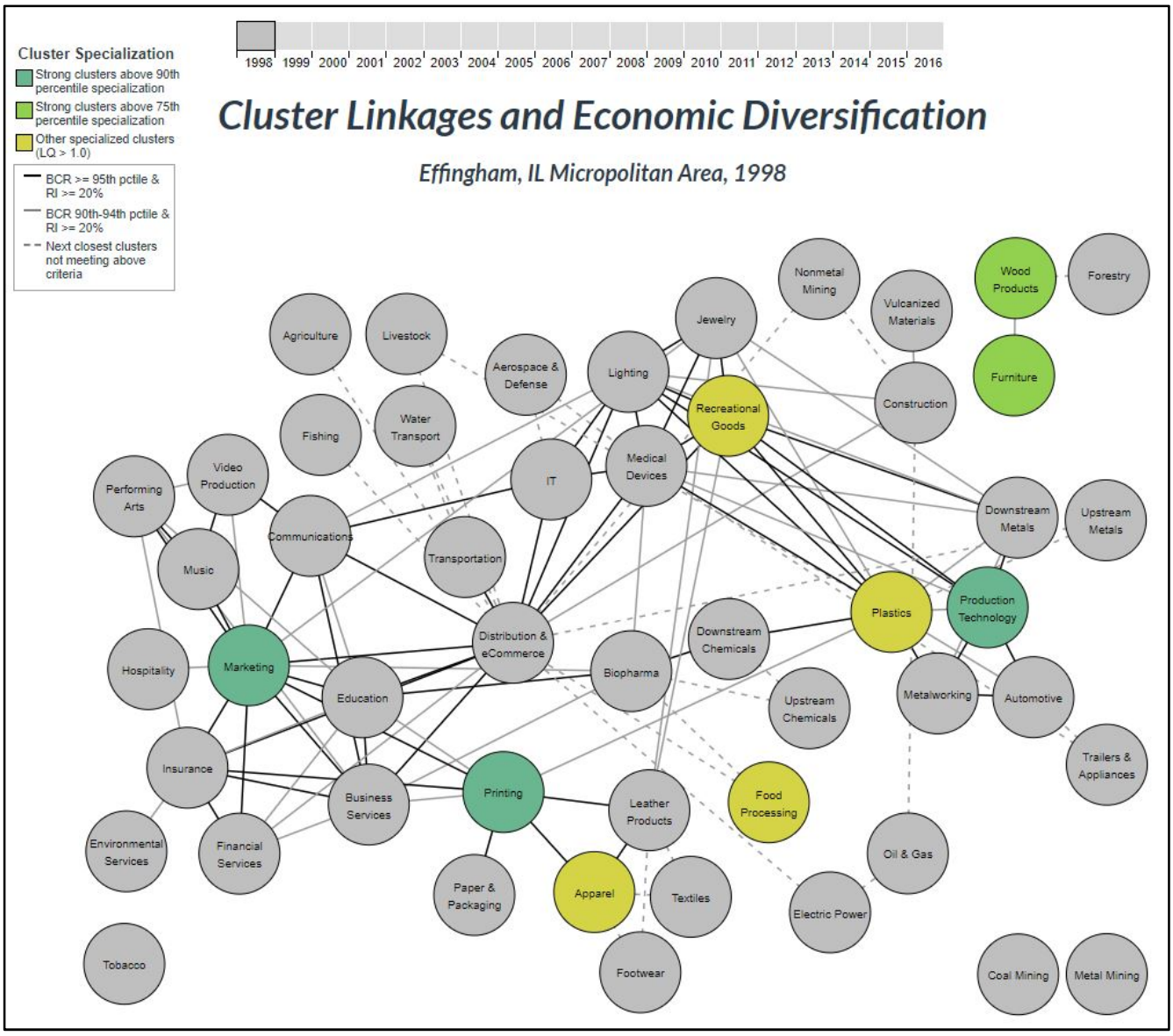


**Figure 1 – Industry Clusters, 1998 (source: www.clustermapping.us)**

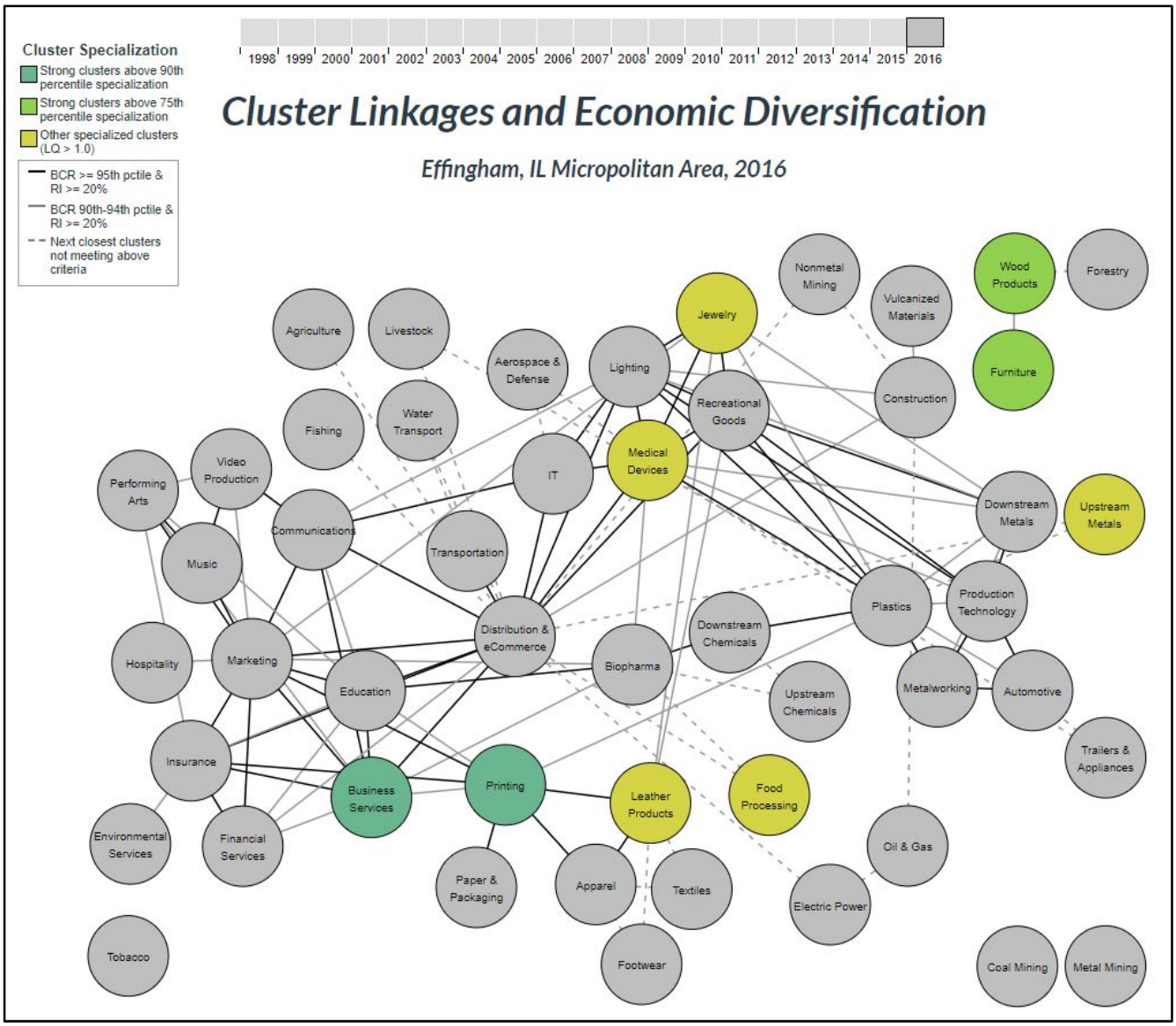


**Figure 2 – Industry Clusters, 2016 (source: www.clustermapping.us)**

The information presented in the industry clusters above is further conveyed by a review of job creation and decline for specific industries. Job creation by industry cluster from 1998 to 2016 is shown in Figure 3. As indicated, job creation generally corresponds with the industries that experienced expansion in the industry clusters above, and job decline generally corresponds with the industries that experienced contraction in the industry clusters above. As shown, the Business Services and Upstream Metals industries experienced significant job creation. From a freight perspective in the Effingham region, this could indicate increases in commodities such as paper products for printing and base metals for manufacturing steel components. The industry clusters and job creation also show a continued strong furniture manufacturing presence in the Effingham region. While these are strong industries for Effingham, the freight volumes they generate are relatively low from the perspective of railroads and trucking companies.

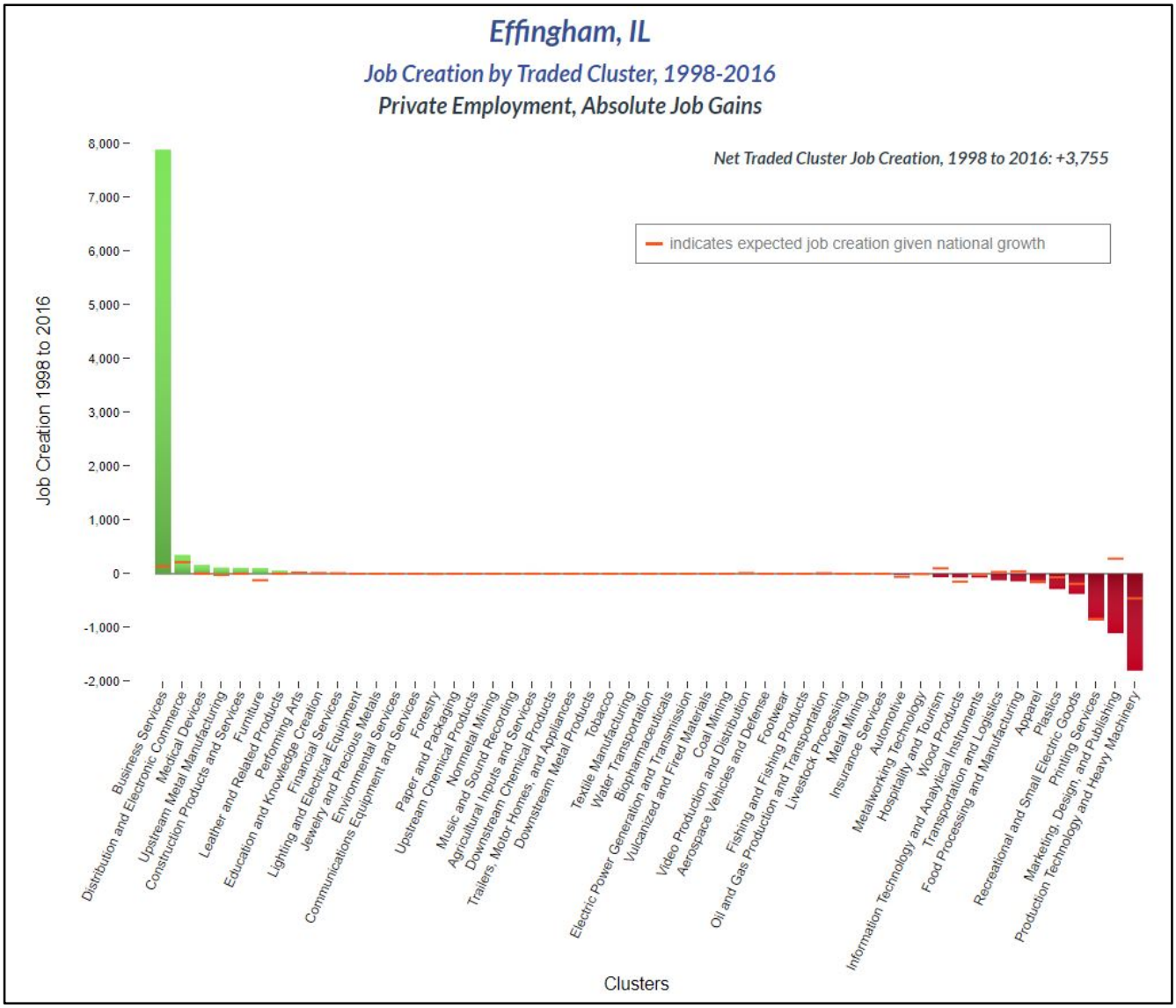


**Figure 3 – Effingham Job Creation/Decline, 1998-2016 (source: www.clustermapping.us)**

## 3.0 Regional Transportation Analysis

The primary purpose of multimodal freight facilities is the transloading or distribution of commodities. Transloading (the transfer of commodities from one mode of transportation to another) in the south-central Illinois region would most likely consist of agricultural products transferring from truck to rail (or to barge, if a commercially navigable river was nearby). However, several highly efficient truck-to-barge and rail-to-barge facilities have been recently constructed in the St. Louis region, which is only about 100 miles (driving distance) to the southwest of Effingham via I-70. Communication with the Transportation and Export Infrastructure Lead at the Illinois Soybean Association indicated 100 miles is typically considered to be the maximum distance to economically transport bulk agricultural products via truck. This concentration of facilities has resulted in the region being dubbed the “Ag Coast” of the US (see Figure 4 below). Thus, the likelihood of successfully developing a major transload facility in Effingham, particularly for agricultural commodities, appears to be low.


**Figure 4 – "Ag Coast of America" (source: St. Louis Regional Freightway)**

The Effingham area is currently served by two Class I railroads: Canadian National Railway (CN) and CSX Transportation. In order to determine a study area for this market analysis, Hanson conducted a review of interstate highway maps and Class I railroad maps (specifically CN and CSX). This led to the identification of the following “target” cities and corresponding Midwest study area that includes Illinois, Indiana, Kentucky, Tennessee, Missouri, and Ohio.

- Chicago, IL
- Cincinnati, OH
- Indianapolis, IN
- Louisville, KY
- Memphis, TN
- Nashville, TN
- St. Louis, MO

Further, based on historic and current freight flow patterns, Chicago generally operates as a major "hub" in a "hub and spoke" distribution model. In other words, many imports destined for the Midwest arrive in Chicago from East Coast and West Coast ports via train and are then distributed to the cities listed above via rail and truck. Similarly, exports originating in the Midwest are transported via rail and truck to Chicago, then sent by rail to East Coast and West Coast ports.

The Freight Analysis Framework (FAF), jointly developed and maintained by the Federal Highway Administration (FHWA) and the Bureau of Transportation Statistics (BTS), "integrates data from a variety of sources to create a comprehensive picture of freight movement among states and major metropolitan areas by all modes of transportation" (https://faf.ornl.gov/fafweb/). All of the cities above are included as metropolitan areas in FAF Version 4 (FAF4). Queries were executed to determine total 2016 freight movements via rail and truck between Chicago and the other cities listed above. The results are summarized in Table 1.

**Table 1 – FAF4 Data Summary for Midwest Origins/Destinations**

| Movement | 2016 Tonnage (x1,000) | | | Total Two-Way Tonnage (x1,000) | Tonnage Outbound from Chicago (x1,000) | Tonnage Inbound to Chicago (x1,000) |
|---|---|---|---|---|---|---|
| | Truck | Rail | Total | | | |
| Chicago to Cincinnati | 1,136 | 122 | 1,258 | 2,620 | 1,258 | --- |
| Cincinnati to Chicago | 1,279 | 82 | 1,361 | | --- | 1,361 |
| Chicago to Indianapolis | 2,695 | 348 | 3,043 | 6,181 | 3,043 | --- |
| Indianapolis to Chicago | 3,038 | 100 | 3,139 | | --- | 3,139 |
| Chicago to Louisville | 804 | 0 | 804 | 1,047 | 804 | --- |
| Louisville to Chicago | 240 | 3 | 243 | | --- | 243 |
| Chicago to Memphis | 192 | 0 | 192 | 452 | 192 | --- |
| Memphis to Chicago | 253 | 8 | 261 | | --- | 261 |
| Chicago to Nashville | 595 | 5 | 600 | 1,053 | 600 | --- |
| Nashville to Chicago | 444 | 8 | 452 | | --- | 452 |
| Chicago to St. Louis | 2,179 | 949 | 3,129 | 5,265 | 3,129 | --- |
| St. Louis to Chicago | 1,950 | 186 | 2,136 | | --- | 2,136 |
| % of Total | 89% | 11% | *Source: FAF4* | | 9,025 | 7,592 |

The tonnage moved between Chicago and Memphis was considerably lower than the other cities, as was Louisville and Nashville. However, the tonnage between Chicago and the cities of Indianapolis, St. Louis, and Cincinnati was significant (over 14M tons per year combined). Noteworthy is the disproportionality of tonnage moved via rail (11%) versus tonnage moved via truck (89%). Also noteworthy is the fact that tonnage, particularly truck tonnage, going from Chicago to the cities of Indianapolis, St. Louis, and Cincinnati is relatively balanced with the tonnage going from those cities to Chicago.

In order to better understand the composition of freight moving between Chicago and the cities of Indianapolis, St. Louis, and Cincinnati, the top 25 truck movements by tonnage are shown in Table 2 and the top 25 rail movements by tonnage are shown in Table 3. The commodity types moving between these cities appear to vary greatly.

Note, the major metropolitan areas included in FAF4 sometimes cross state boundaries. For example, FAF4 data for St. Louis includes St. Louis, MO and East St. Louis, IL; hence the label "St. Louis, MO-IL" in Table 2 and Table 3.

**Table 2 – Top 25 Midwest Truck Freight Movements**

| Origin | Destination | Commodity Classification | 2016 Tonnage (x1,000) |
|---|---|---|---|
| Indianapolis, IN | Chicago, IL-IN | Misc. mfg. prods. | 918 |
| St. Louis, MO-IL | Chicago, IL-IN | Other foodstuffs | 613 |
| Indianapolis, IN | Chicago, IL-IN | Fuel oils | 519 |
| Chicago, IL-IN | Indianapolis, IN | Mixed freight | 303 |
| Indianapolis, IN | Chicago, IL-IN | Base metals | 247 |
| Chicago, IL-IN | St. Louis, MO-IL | Chemical prods. | 218 |
| Indianapolis, IN | Chicago, IL-IN | Base metals | 215 |
| Cincinnati OH-KY-IN | Chicago, IL-IN | Motorized vehicles | 208 |
| Chicago, IL-IN | St. Louis, MO-IL | Mixed freight | 199 |
| Chicago, IL-IN | St. Louis, MO-IL | Fertilizers | 199 |
| Indianapolis, IN | Chicago, IL-IN | Other foodstuffs | 186 |
| Chicago, IL-IN | Indianapolis, IN | Base metals | 182 |
| St. Louis, MO-IL | Chicago, IL-IN | Alcoholic beverages | 181 |
| Chicago, IL-IN | Indianapolis, IN | Base metals | 178 |
| Chicago, IL-IN | Indianapolis, IN | Basic chemicals | 166 |
| St. Louis, MO-IL | Chicago, IL-IN | Waste/scrap | 149 |
| Chicago, IL-IN | Cincinnati OH-KY-IN | Mixed freight | 146 |
| Chicago, IL-IN | Indianapolis, IN | Gravel | 135 |
| Chicago, IL-IN | St. Louis, MO-IL | Basic chemicals | 122 |
| Chicago, IL-IN | Indianapolis, IN | Wood prods. | 121 |
| St. Louis, MO-IL | Chicago, IL-IN | Base metals | 110 |
| Indianapolis, IN | Chicago, IL-IN | Nonmetal min. prods. | 108 |
| Chicago, IL-IN | Indianapolis, IN | Newsprint/paper | 105 |
| Cincinnati OH-KY-IN | Chicago, IL-IN | Alcoholic beverages | 103 |
| Chicago, IL-IN | Cincinnati OH-KY-IN | Base metals | 103 |
| *Source: FAF4* | | **Total:** | **5,734** |

**Table 3 – Top 25 Midwest Rail Freight Movements**

| Origin | Destination | Commodity Classification | 2016 Tonnage (x1,000) |
|---|---|---|---|
| Chicago, IL-IN | St. Louis, MO-IL | Fertilizers | 624 |
| Chicago, IL-IN | St. Louis, MO-IL | Basic chemicals | 208 |
| Indianapolis, IN | Chicago, IL-IN | Base metals | 99 |
| Chicago, IL-IN | St. Louis, MO-IL | Gravel | 98 |
| Cincinnati, OH-KY-IN | Chicago, IL-IN | Waste/scrap | 82 |
| St. Louis, MO-IL | Chicago, IL-IN | Waste/scrap | 81 |
| St. Louis, MO-IL | Chicago, IL-IN | Base metals | 64 |
| Chicago, IL-IN | Indianapolis, IN | Plastics/rubber | 61 |
| Chicago, IL-IN | Indianapolis, IN | Nonmetal min. prods. | 52 |
| Chicago, IL-IN | Cincinnati, OH-KY-IN | Waste/scrap | 50 |
| Chicago, IL-IN | Cincinnati, OH-KY-IN | Natural sands | 45 |
| Chicago, IL-IN | Indianapolis, IN | Machinery | 37 |
| Chicago, IL-IN | Indianapolis, IN | Metallic ores | 34 |
| Chicago, IL-IN | Indianapolis, IN | Printed prods. | 29 |
| Chicago, IL-IN | Cincinnati, OH-KY-IN | Coal-n.e.c. | 28 |
| St. Louis, MO-IL | Chicago, IL-IN | Chemical prods. | 26 |
| Chicago, IL-IN | Indianapolis, IN | Motorized vehicles | 19 |
| Chicago, IL-IN | Indianapolis, IN | Electronics | 19 |
| Chicago, IL-IN | St. Louis, MO-IL | Plastics/rubber | 15 |
| St. Louis, MO-IL | Chicago, IL-IN | Fertilizers | 12 |
| Chicago, IL-IN | Indianapolis, IN | Articles-base metal | 12 |
| Chicago, IL-IN | Indianapolis, IN | Wood prods. | 11 |
| Chicago, IL-IN | Indianapolis, IN | Chemical prods. | 11 |
| Chicago, IL-IN | Indianapolis, IN | Basic chemicals | 11 |
| Chicago, IL-IN | Indianapolis, IN | Textiles/leather | 8 |
| *Source: FAF4* | | **Total:** | **1,736** |

As clearly shown in the preceding tables, the majority of freight is moved via truck between Chicago and the other Midwest cities. Further, almost 60% (about 3.4M tons per year) of the truck tonnage in Table 2 is moving between Chicago and Indianapolis. The highway distance directly from Chicago to Indianapolis is about 180 miles; from Chicago to Effingham to Indianapolis is about 350 miles. Thus, with nearly double the mileage, the likelihood of truck freight between Chicago and Indianapolis being diverted through a facility in Effingham appears to be low.

Similarly, almost two-thirds (65%, or about 1.1M tons per year) of the rail tonnage in Table 3 is moving between Chicago and St. Louis. Unless this tonnage was to move directly from East Coast or West Coast ports to Effingham instead of Chicago, the likelihood of this tonnage between Chicago and St. Louis stopping at a multimodal freight facility in Effingham appears to be low. Further, if this tonnage could move directly to Effingham instead of Chicago, it could probably move directly to St. Louis instead.

In practice, freight movements follow the most economical route. Each time freight is handled or delayed, additional costs are incurred and efficiency is diminished. For example, if freight moving from Chicago to St. Louis were to stop in Effingham, this longer route and the delay that would be

experienced for all of the freight on the particular truck/train while stopped in Effingham would decrease the overall freight efficiency and increase the overall transportation costs for the overall freight movement. While a stop in Effingham would likely be good for the freight being delivered there, the overall costs for the entire shipment on the given truck/train would increase, thereby decreasing overall freight efficiency and increasing overall freight costs.

A 2015 database of intermodal freight facilities was obtained from the USDOT. These existing facilities, along with 2016 truck volumes on the National Highway Freight Network (NHFN) are shown in Figure 5. Significant truck traffic is shown between Chicago and the other major Midwest metropolitan areas, as well as I-70 passing through Effingham between St. Louis and Indianapolis. However, this truck traffic appears to be pass-through traffic and not representative of freight destined for/originating in Effingham or the immediately surrounding area.

Noteworthy in Figure 5 is the concentration of intermodal freight facilities around major metropolitan areas. In general, and particularly with distribution centers, the success of a facility is dependent on the close proximity of a consumption market, typically in the form of a large population base. To emphasize this point, the same intermodal freight facilities shown in Figure 5 are also shown in Figure 6. However, Figure 6 also shows the population of all cities within the study area with a population greater than 12,500 people. For reference, the 2016 population of Effingham was 13,703. Existing intermodal freight facilities are clearly clustered around larger population bases.

Consideration was also given to the proximity of existing rail terminals. As stated previously, CN and CSX currently operate through Effingham. Existing CN and CSX rail terminals are shown in Figure 7. Also provided is the approximate straight-line distance from Effingham to the various rail terminals, which range from about 55 miles (Decatur, IL) to about 290 miles (Memphis, TN). Effingham is effectively surrounded with existing rail terminals; as such, the demand for a new multimodal freight facility in south-central Illinois is not proven.

Based on the Regional Transportation Analysis above, the likelihood of developing a successful multimodal freight facility or a major agricultural transload facility, near Effingham appears to be low. The concentration of several highly efficient truck-to-barge and rail-to-barge facilities in the St. Louis region has resulted in the region being dubbed the “Ag Coast” of the United States, which is within the 100 mile maximum economical trucking distance. Effingham industries that are experiencing growth, as identified in the industry clusters, may benefit by receiving raw materials at or shipping finished products from a local multimodal facility. However, the logistics plans that currently support these industries are clearly established, and changes are likely to occur only if significant transportation savings could be realized by these industries. Further, the local freight demand does not appear to be sufficient in a regional perspective to cause a shift in freight logistics at this time.

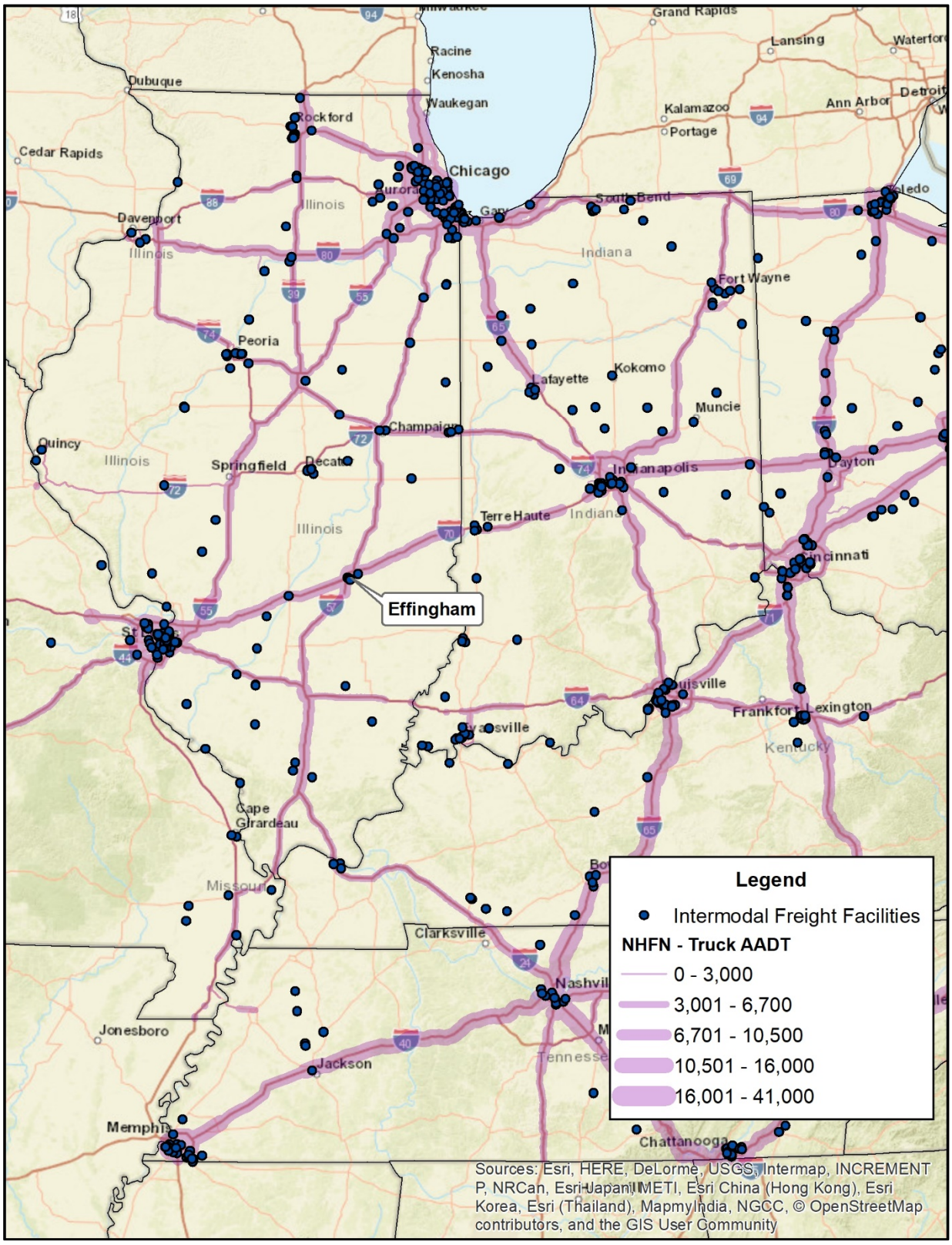


**Figure 5 – Highway Truck Volumes & Intermodal Freight Facilities**

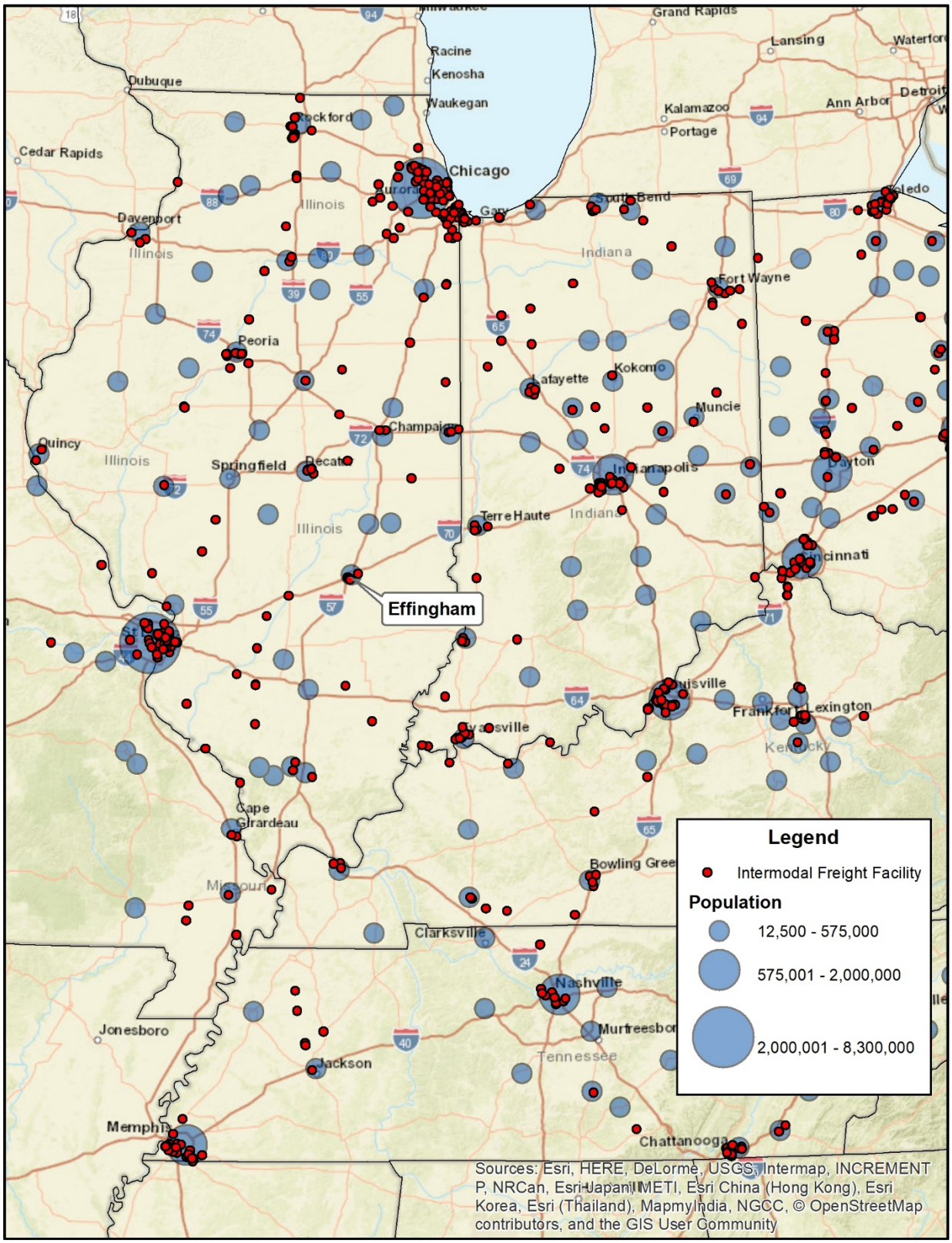


**Figure 6 – Population & Intermodal Freight Facilities**

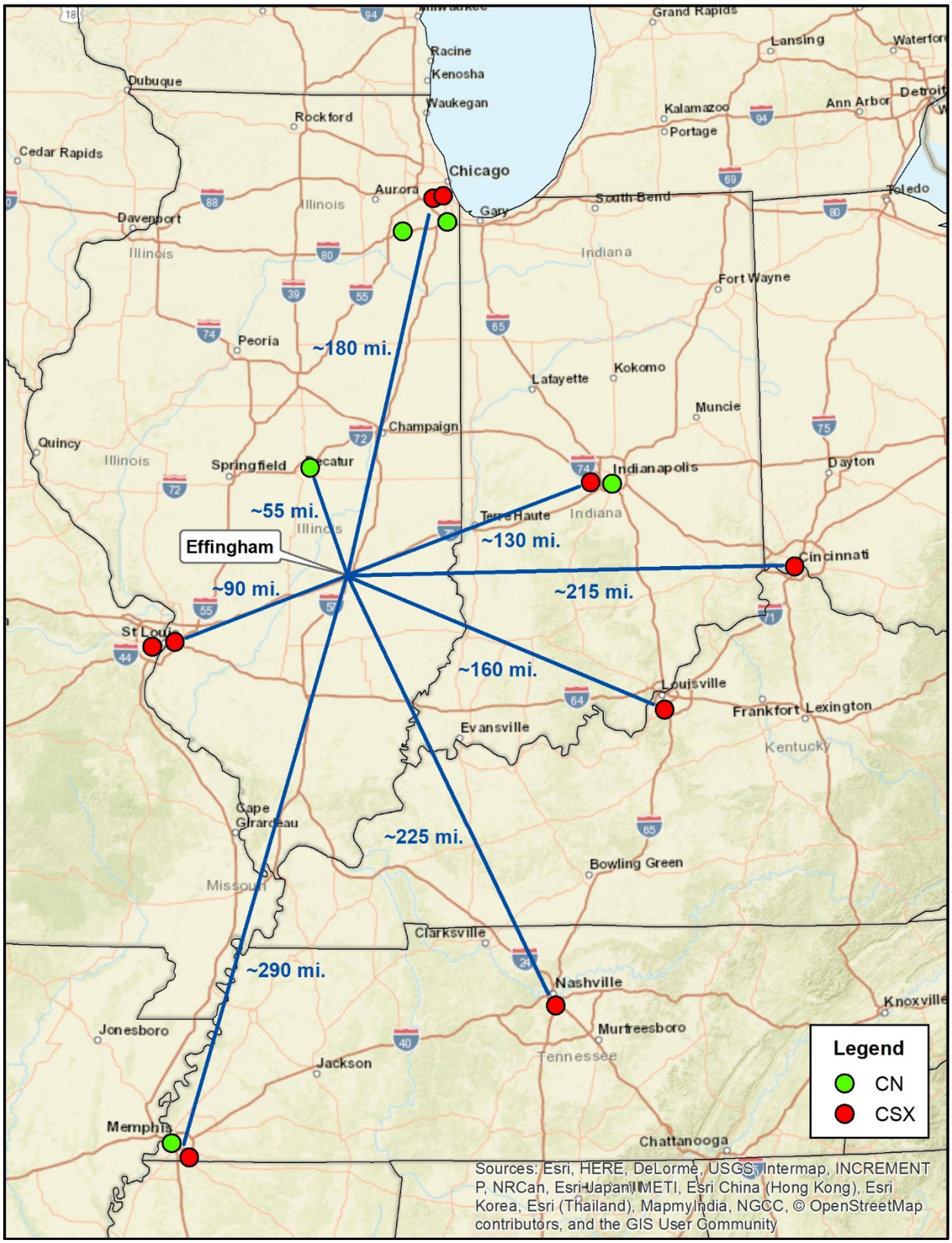


**Figure 7 – Existing Rail Terminals**

## 4.0 National Transportation Analysis

The preceding Regional Transportation Analysis focused on rail and truck modes of transportation, due to the good existing connections to rail (CN and CSX) and highways (I-57 and I-70) in Effingham. However, the national transportation analysis below will focus on rail only, as the majority of non-agricultural imports/exports to/from the Midwest are transported by train. Rail movements to/from the major East Coast, Gulf Coast, and West Coast ports to the Midwest are summarized below. Also included in the analysis are imports/exports to/from Canada, with a focus on the CN. Accordingly, the Canada import/export freight volumes shown herein do not include freight transported through North Dakota or New York, as those US rail entry/exit points are primarily used by the Canadian Pacific Railway (CP), not CN. The analysis focused on the major container ports as defined below.

- East Coast Ports: Charleston, SC; Jacksonville, FL; Norfolk, VA; Savannah, GA
- Gulf Coast Ports: Houston, TX; Mobile, AL; New Orleans, LA
- West Coast Ports: Los Angeles, CA; Seattle, WA

A summary of national freight movements to/from major Midwest rail terminal locations is shown in Table 4.

**Table 4 – National Freight Movements Summary**

| Direction | Origin | Destination | 2016 Tonnage (x1,000) | Total Tonnage (x1,000) |
|---|---|---|---|---|
| Imports | East Coast Ports | Chicago, IL | 191 | 304 |
| | | Indianapolis, IN | 54 | |
| | | Memphis, TN | 59 | |
| | Gulf Coast Ports | Chicago, IL | 1,427 | 2,556 |
| | | Indianapolis, IN | 310 | |
| | | Memphis, TN | 819 | |
| | West Coast Ports | Chicago, IL | 1,898 | 1,930 |
| | | Memphis, TN | 32 | |
| | Canada | Chicago, IL | 3,248 | 3,473 |
| | | Memphis, TN | 225 | |
| Exports | Chicago, IL | East Coast Ports | 529 | 722 |
| | Indianapolis, IN | | 60 | |
| | Memphis, TN | | 133 | |
| | Chicago, IL | Gulf Coast Ports | 2,986 | 3,228 |
| | Indianapolis, IN | | 156 | |
| | Memphis, TN | | 86 | |
| | Chicago, IL | West Coast Ports | 615 | 676 |
| | Memphis, TN | | 61 | |
| | Chicago, IL | Canada | 760 | 846 |
| | Memphis, TN | | 86 | |

*Source: FAF4*

As shown, Midwest freight volume to/from East Coast Ports is minimal relative to the other US entry/exit points (about 7% of all tonnage shown). The majority of imports to the Midwest originate from ports in Canada, the Gulf Coast, and the West Coast (in order of decreasing tonnage). Further,

Table 4 clearly shows the majority of imports traverse through Chicago (82%), as opposed to Memphis or Indianapolis. The majority of exports from the Midwest are destined for Gulf Coast Ports, and similar to imports, the majority of exports traverse through Chicago (89%). Additional details regarding the top rail freight movements by volume to/from Gulf Coast Ports are shown in Table 5.

**Table 5 – Top 25 Gulf Coast Ports Rail Freight Movements**

| Origin | Destination | Commodity Classification | 2016 Tonnage (x1,000) |
|---|---|---|---|
| Chicago, IL-IN | New Orleans, LA | Cereal grains | 1,572 |
| New Orleans, LA | Memphis, TN | Basic chemicals | 554 |
| Houston, TX | Chicago, IL-IN | Basic chemicals | 467 |
| Chicago, IL-IN | New Orleans, LA | Other ag prods. | 463 |
| New Orleans, LA | Chicago, IL-IN | Base metals | 259 |
| Chicago, IL-IN | New Orleans, LA | Fertilizers | 210 |
| Chicago, IL-IN | Houston, TX | Plastics/rubber | 201 |
| Chicago, IL-IN | Houston, TX | Gravel | 193 |
| Houston, TX | Chicago, IL-IN | Plastics/rubber | 157 |
| Mobile, AL | Chicago, IL-IN | Nonmetal min. prods. | 145 |
| Mobile, AL | Memphis, TN | Basic chemicals | 116 |
| Houston, TX | Chicago, IL-IN | Plastics/rubber | 103 |
| New Orleans, LA | Indianapolis, IN | Base metals | 99 |
| Chicago, IL-IN | Houston, TX | Cereal grains | 89 |
| Indianapolis, IN | Mobile, AL | Base metals | 78 |
| Houston, TX | Indianapolis, IN | Plastics/rubber | 76 |
| New Orleans, LA | Memphis, TN | Metallic ores | 68 |
| Memphis, TN | Houston, TX | Other foodstuffs | 63 |
| Houston, TX | Chicago, IL-IN | Coal-n.e.c. | 62 |
| New Orleans, LA | Indianapolis, IN | Nonmetal min. prods. | 60 |
| Indianapolis, IN | New Orleans, LA | Cereal grains | 59 |
| Chicago, IL-IN | New Orleans, LA | Animal feed | 58 |
| New Orleans, LA | Chicago, IL-IN | Plastics/rubber | 54 |
| Chicago, IL-IN | New Orleans, LA | Other foodstuffs | 50 |
| New Orleans, LA | Chicago, IL-IN | Other ag prods. | 42 |
| *Source: FAF4* | | **Total:** | **5,298** |

The total tonnage shown in Table 5 (almost 5.3M tons) is clearly skewed by agricultural commodities that are likely destined for East Asia, accounting for almost 40% of the top 25 movements. Beyond agricultural commodities, freight movements between the Midwest and Gulf Coast Ports are dominated by basic chemicals and base metals, likely used in various manufacturing processes. Note, the majority of the tonnage (78%) moves through Chicago.

Additional details regarding the top rail freight movements by volume to/from West Coast Ports are shown in Table 6. Similar to the freight movements to/from the Gulf Coast Ports, those going to/from West Coast Ports are dominated by commodities likely used in various manufacturing processes in the Midwest. Nearly all of the tonnage (98%) moves through Chicago.

**Table 6 – Top 25 West Coast Ports Rail Freight Movements**

| Origin | Destination | Commodity Classification | 2016 Tonnage (x1,000) |
|---|---|---|---|
| Los Angeles, CA | Chicago, IL-IN | Basic chemicals | 974 |
| Seattle, WA | Chicago, IL-IN | Metallic ores | 972 |
| Los Angeles, CA | Chicago, IL-IN | Coal-n.e.c. | 836 |
| Chicago, IL-IN | Los Angeles, CA | Articles-base metal | 206 |
| Seattle, WA | Chicago, IL-IN | Wood prods. | 127 |
| Memphis, TN | Los Angeles, CA | Newsprint/paper | 50 |
| Chicago, IL-IN | Los Angeles, CA | Basic chemicals | 49 |
| Chicago, IL-IN | Los Angeles, CA | Other foodstuffs | 42 |
| Chicago, IL-IN | Los Angeles, CA | Paper articles | 40 |
| Chicago, IL-IN | Los Angeles, CA | Base metals | 36 |
| Chicago, IL-IN | Los Angeles, CA | Electronics | 24 |
| Chicago, IL-IN | Los Angeles, CA | Articles-base metal | 20 |
| Los Angeles, CA | Chicago, IL-IN | Base metals | 18 |
| Los Angeles, CA | Chicago, IL-IN | Fuel oils | 18 |
| Chicago, IL-IN | Los Angeles, CA | Animal feed | 17 |
| Chicago, IL-IN | Los Angeles, CA | Chemical prods. | 16 |
| Chicago, IL-IN | Seattle, WA | Cereal grains | 16 |
| Seattle, WA | Memphis, TN | Wood prods. | 16 |
| Chicago, IL-IN | Seattle, WA | Paper articles | 13 |
| Chicago, IL-IN | Los Angeles, CA | Logs | 10 |
| Chicago, IL-IN | Los Angeles, CA | Plastics/rubber | 10 |
| Los Angeles, CA | Chicago, IL-IN | Chemical prods. | 9 |
| Chicago, IL-IN | Seattle, WA | Animal feed | 9 |
| Chicago, IL-IN | Seattle, WA | Milled grain prods. | 8 |
| Chicago, IL-IN | Los Angeles, CA | Logs | 8 |
| *Source: FAF4* | | **Total:** | **3,544** |

A summary of the top imports to the Midwest transported through Canada is shown in Table 7. The top commodity movement (crude petroleum) is likely coming from the Bakken Formation and/or the Athabasca Oil Sands, considering their relatively close proximity to the point of US entry (Minnesota). These movements could be destined for regional refineries and likely have no impact (positive or negative) on a potential facility in Effingham. Other commodities may be destined for Midwest manufacturing facilities. Again, nearly all of the tonnage (97%) moves through Chicago for distribution in the Midwest.

**Table 7 – Top 25 Import Freight Movements Through Canada**

| Point of US Entry from Canada | Destination | Commodity Classification | 2016 Tonnage (x1,000) |
|---|---|---|---|
| Minnesota | Chicago, IL-IN | Crude petroleum | 618 |
| Minnesota | Chicago, IL-IN | Fertilizers | 472 |
| Detroit, MI | Chicago, IL-IN | Basic chemicals | 407 |
| Minnesota | Chicago, IL-IN | Wood prods. | 252 |
| Minnesota | Chicago, IL-IN | Fertilizers | 117 |
| Minnesota | Chicago, IL-IN | Basic chemicals | 112 |
| Minnesota | Chicago, IL-IN | Coal-n.e.c. | 78 |
| Detroit, MI | Chicago, IL-IN | Plastics/rubber | 78 |
| Minnesota | Chicago, IL-IN | Other foodstuffs | 68 |
| Detroit, MI | Chicago, IL-IN | Newsprint/paper | 67 |
| Detroit, MI | Chicago, IL-IN | Wood prods. | 67 |
| Detroit, MI | Chicago, IL-IN | Nonmetal min. prods. | 62 |
| Minnesota | Memphis, TN | Wood prods. | 55 |
| Washington | Chicago, IL-IN | Nonmetal min. prods. | 53 |
| Detroit, MI | Chicago, IL-IN | Waste/scrap | 51 |
| Minnesota | Chicago, IL-IN | Articles-base metal | 50 |
| Montana | Chicago, IL-IN | Coal | 49 |
| Minnesota | Chicago, IL-IN | Newsprint/paper | 49 |
| Detroit, MI | Chicago, IL-IN | Fertilizers | 48 |
| Minnesota | Chicago, IL-IN | Plastics/rubber | 47 |
| Detroit, MI | Memphis, TN | Basic chemicals | 36 |
| Michigan | Chicago, IL-IN | Base metals | 31 |
| Washington | Chicago, IL-IN | Newsprint/paper | 30 |
| Detroit, MI | Chicago, IL-IN | Basic chemicals | 27 |
| Minnesota | Chicago, IL-IN | Wood prods. | 24 |
| *Source: FAF4* | | **Total:** | **2,948** |

A summary of the top exports from the Midwest transported through Canada is shown in Table 8. Although the export tonnage is less than 25% of the import tonnage, Table 8 again shows nearly all of the tonnage (93%) moving through Chicago.

As stated previously, imports/exports entering/exiting the US by rail through North Dakota and New York are excluded from Table 7 and Table 8 in order to focus the analysis on tonnage that is more likely transported by CN instead of CP.

**Table 8 – Top 25 Export Freight Movements Through Canada**

| Origin | Point of US Exit to Canada | Commodity Classification | 2016 Tonnage (x1,000) |
|---|---|---|---|
| Chicago, IL-IN | Detroit, MI | Coal-n.e.c. | 104 |
| Chicago, IL-IN | Detroit, MI | Plastics/rubber | 65 |
| Chicago, IL-IN | Minnesota | Transport equip. | 41 |
| Chicago, IL-IN | Detroit, MI | Chemical prods. | 39 |
| Chicago, IL-IN | Detroit, MI | Animal feed | 36 |
| Chicago, IL-IN | Detroit, MI | Basic chemicals | 34 |
| Chicago, IL-IN | Minnesota | Wood prods. | 32 |
| Chicago, IL-IN | Detroit, MI | Base metals | 30 |
| Chicago, IL-IN | Detroit, MI | Other foodstuffs | 28 |
| Chicago, IL-IN | Minnesota | Fuel oils | 28 |
| Chicago, IL-IN | Minnesota | Fertilizers | 24 |
| Memphis, TN | Detroit, MI | Basic chemicals | 24 |
| Chicago, IL-IN | Minnesota | Plastics/rubber | 23 |
| Memphis, TN | Detroit, MI | Motorized vehicles | 23 |
| Chicago, IL-IN | Minnesota | Basic chemicals | 22 |
| Chicago, IL-IN | Detroit, MI | Transport equip. | 21 |
| Chicago, IL-IN | Detroit, MI | Fertilizers | 17 |
| Chicago, IL-IN | Detroit, MI | Motorized vehicles | 15 |
| Chicago, IL-IN | Minnesota | Articles-base metal | 15 |
| Chicago, IL-IN | Detroit, MI | Milled grain prods. | 15 |
| Chicago, IL-IN | Minnesota | Chemical prods. | 11 |
| Chicago, IL-IN | Minnesota | Other foodstuffs | 11 |
| Chicago, IL-IN | Detroit, MI | Cereal grains | 11 |
| Chicago, IL-IN | Detroit, MI | Base metals | 10 |
| Chicago, IL-IN | Detroit, MI | Natural sands | 9 |
| *Source: FAF4* | | **Total:** | **688** |

The National Transportation Analysis above clearly shows well-established freight movement patterns between the Midwest and coastal ports, particularly Gulf Coast Ports and ports in Canada. The overwhelming majority of freight movements to/from the Midwest are routed through the facilities located in and near Chicago. Similar to the Regional Transportation Analysis, changes to national freight movements through a multimodal freight development in Effingham are not likely without a major population center to “drive” freight movements or significant transportation cost savings realized by shippers in the area. Further, the local and regional freight demand does not appear to be sufficient in a national perspective to cause a shift in freight logistics at this time.

## 5.0 Inland Port Concept

An inland port is “a site located away from traditional land, air, and coastal borders with the vision to facilitate and process international trade through strategic investment in multi-modal transportation assets and by promoting value-added services as goods move through the supply chain” (Center for Transportation Research, University of Texas). Examples of existing, successful inland ports include those located in or adjacent to the cities listed below.

- Chicago, IL
- Atlanta, GA
- Memphis, TN
- Kansas City, MO
- Columbus, OH
- Dallas/Ft. Worth, TX

Inland ports are typically located near multiple interstate highways and the mainline of multiple Class I railroads. All of the cities mentioned above have those characteristics, and from this perspective, Effingham is an ideal location for an inland port. However, one common characteristic of these successful inland ports that is lacking for Effingham is their location in or adjacent to major population centers. The nearest major population centers to Effingham are St. Louis to the west and Indianapolis to the east, both of which could be considered emerging inland ports themselves. Inland ports that do not meet the highway, railroad, and population criteria are typically either unsuccessful or can take a decade or more to attain success.

## 6.0 Conclusions

From a freight perspective, the Effingham Industrial Analysis (Section 2) could indicate increased demand for commodities such as paper products for printing and base metals for manufacturing steel components. The industry clusters and job creation also showed a continued strong furniture manufacturing presence in the Effingham area. While these are strong industries for Effingham, the freight volume they generate is relatively low from the perspective of railroads and trucking companies.

Based on the Regional Transportation Analysis (Section 3), the likelihood of developing a successful multimodal freight facility or a major agricultural transload facility near Effingham appears to be low. The concentration of several highly efficient truck-to-barge and rail-to-barge facilities in the St. Louis region has resulted in the region being dubbed the “Ag Coast” of the United States, which is within the 100 mile maximum economical trucking distance. Effingham industries that are experiencing growth, as identified in the industry clusters, may benefit by receiving raw materials at or shipping finished products from a local multimodal facility. However, the logistics plans that currently support these industries are clearly established, and changes are likely to occur only if significant transportation savings could be realized by these industries. Further, the local freight demand does not appear to be sufficient in a regional perspective to cause a shift in freight logistics at this time.

The National Transportation Analysis (Section 4) clearly showed well-established freight movement patterns between the Midwest and coastal ports, particularly Gulf Coast Ports and ports in Canada. The overwhelming majority of freight movements to/from the Midwest are routed through the facilities located in and near Chicago. Similar to the Regional Transportation Analysis, changes to national freight movements through a multimodal freight development in Effingham, such as the Inland Port Concept discussed in Section 5, are not likely without a major population center to “drive” freight movements or significant transportation cost savings realized by shippers in the area. Further, the local and regional freight demand does not appear to be sufficient in a national perspective to cause a shift in freight logistics at this time.

In addition, the Class I railroads are often proactive in finding logistics solutions to customers’ needs. For example, BNSF Railway and CSX recently announced (American Shipper magazine, 10/3/18) that they will offer direct intermodal rail service between Los Angeles and CSX’s intermodal hub near Toledo, OH. BNSF generally operates west of the Mississippi River, but this arrangement with CSX (which primarily operates east of the Mississippi River) demonstrates how the railroads utilize existing networks to extend their reach beyond the typical “end of the line,” bypassing the congested Chicago area and without construction of new multimodal freight facilities.

A potential opportunity that may have limited, seasonal success in Effingham is an agricultural dry bulk transload facility in combination with a shuttle train service to the St. Louis area. As stated above, 100 miles is typically considered to be the maximum distance to economically transport bulk agricultural products via truck. Effingham is about 100 miles (driving distance) from the St. Louis area, possibly making such a transload facility/shuttle service concept economically feasible. However, determining the economic viability of this concept may warrant additional analysis that is beyond the scope of this project.

Based on the analyses herein, the development of a multimodal freight facility in Effingham will be challenged to provide a sufficient logistics advantage to freight shippers to support freight movements that include a distribution function, as would be anticipated for a facility in Effingham. Our analysis suggests that terminals nearer to large population centers, with well-established distribution networks

and warehousing, will be much more competitive over the long term. Further, expansion plans for existing rail terminals in the Chicago area will continue to attract freight and distribution activities to that city. It is our opinion that a multimodal freight facility in Effingham will attract minimal volume at this time. However, planning a new I-57 interchange may benefit Effingham by preparing for a time when the Chicago area terminals reach capacity and a multimodal freight facility in Effingham is more likely to succeed. Unfortunately, determining if/when Chicago area terminals reach capacity would require significant effort that is well beyond the scope of this analysis.

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