



## Chapter Five: Market Demand

### INTRODUCTION

Chapter Four of this study provided baseline information for estimating commercial airline travel demand for each of the commercial airports in Iowa. The previous chapter included estimates of:

- Total annual visitor and resident related commercial airline travel for each of the 99 counties in Iowa.
- Where Iowa-related annual commercial air travel demand is now being served (this may be at a commercial airport in Iowa or at one of the Border or Outlying Hub airports).

As the analysis has shown, annual commercial airline travel demand associated with counties in Iowa is typically served by several airports. In some instances, demand associated with one particular county is served by more than one commercial airport in Iowa. In other instances, demand is served by airports in Iowa and by Border and/or Outlying Hub airports.

This chapter provides information on that portion of all Iowa-related commercial air travel demand that is closest to each of the commercial airports in Iowa. This demand is referred to as “closest drive time demand”. It is important to note that there will always be an inherent level of demand associated with any airport’s market area that leaves the market area to begin commercial airline travel at another more distant airport. Nearly all airports experience some level of passenger diversion. There are a number of factors that influence the actual demand that each airport captures. These factors include air service at the local airport, the nature of existing air service at alternative airports, passenger preferences, and, of course, airfares.

### CLOSEST DRIVE TIME DEMAND

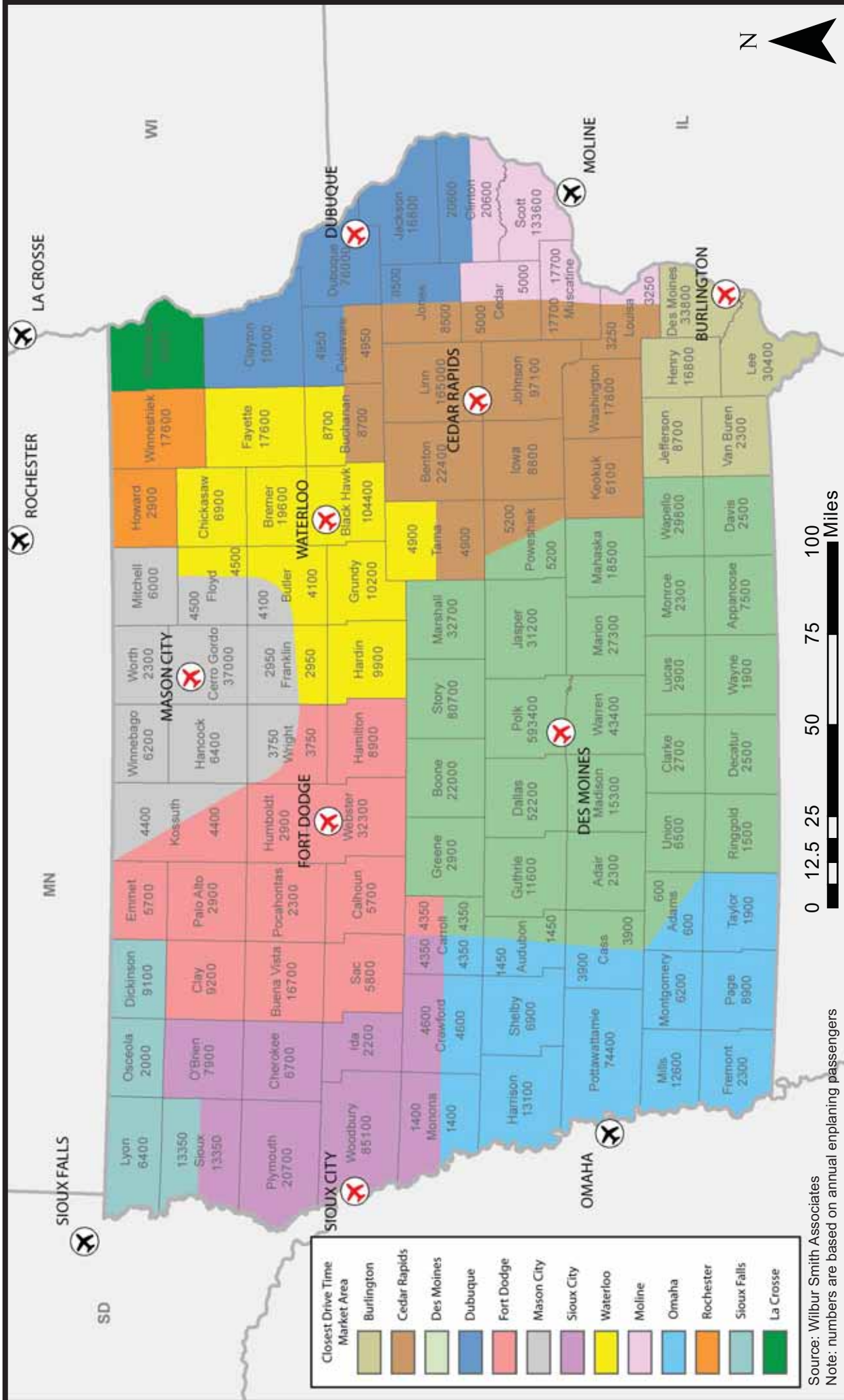
As Chapter Four of this study concluded, all of the eight commercial airports in Iowa have passengers that leave their local market area and drive to a more distant commercial airport either within or beyond Iowa to initiate their commercial airline travel. Airports in Iowa often define “local market area” as being the 60 minute drive time from their airports. However, this study more thoroughly evaluated airport market areas by looking at the demand located within closest geographic proximity or the “closest drive time demand.” This demand is then compared to the existing market area demand estimates developed in Chapter Four.

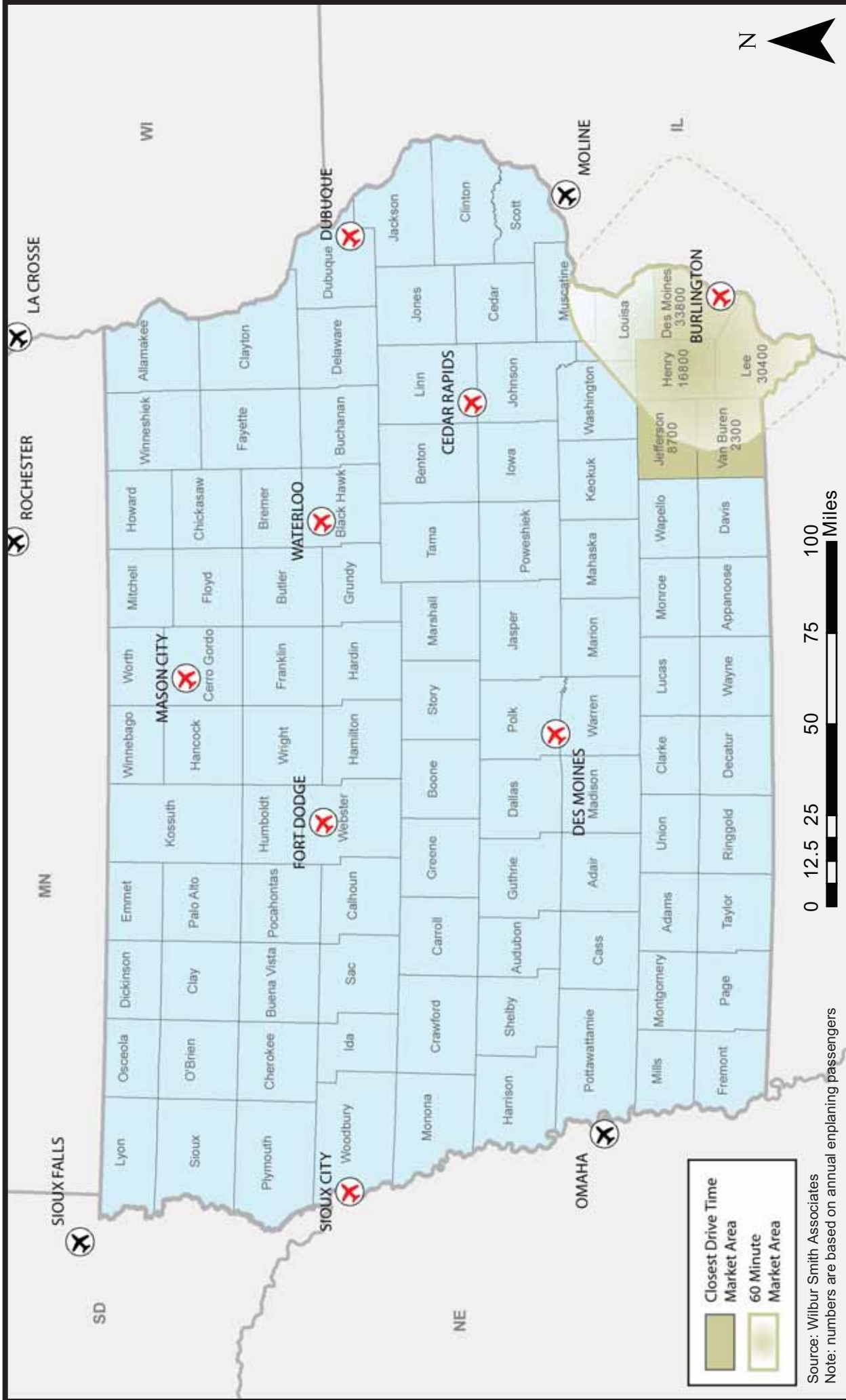
The first step in the closest drive time demand analysis was to identify which commercial service airport each of the 99 counties in Iowa is closest to. This determination was made by establishing a geographic centroid for each county and using a GIS tool which calculates drive times based on each airport’s current highway access to county centroids. In this analysis, the closest airport to each Iowa county is either one of the eight commercial airports in Iowa or one of the Border Airports considered in this study. In all instances, the Outlying Hub Airports considered are more distant than any of the eight commercial airports in Iowa and/or one of the Border Airports. In the process to assign total annual Iowa related commercial air travel demand to the nearest airport, none of the demand associated with Iowa’s 99 counties was assigned to an Outlying Hub Airport.



The eight commercial airports in Iowa currently enplane, on an annual basis, a total of approximately 1.63 million commercial airline travelers. Most of this demand is associated with counties in Iowa. A small number of travelers (estimated in this study at 18,550 enplanements) enter Iowa from other nearby states to initiate their commercial airline travel from one of the commercial airports in Iowa. Analysis completed to date indicates that there are an estimated 905,400 annual enplanements associated with counties in Iowa that now initiate their commercial airline trips using either Border or Outlying Hub airports. In some cases, commercial airline travel demand associated with counties in Iowa is actually, from a drive time standpoint, closer to one of the Border Airports than it is to one of the commercial airports in Iowa.

GIS analysis was used to identify the closest commercial airport, from a drive time standpoint, to each of the 99 counties. **Exhibit 5-1 through 5-14** reflect the results of the GIS analysis. In some instances, a county is equally close to two commercial airports in Iowa or to one of the commercial airports in Iowa and a Border Airport. In these instances, county baseline demand estimates, established in Chapter Four, were divided between the two airports.





Source: Wilbur Smith Associates  
 Note: numbers are based on annual enplaning passengers



**EXHIBIT 5-2: DRIVE TIME VS. 60 MINUTE MARKET AREA**  
 Southeast Iowa Regional Airport  
 Burlington, IA



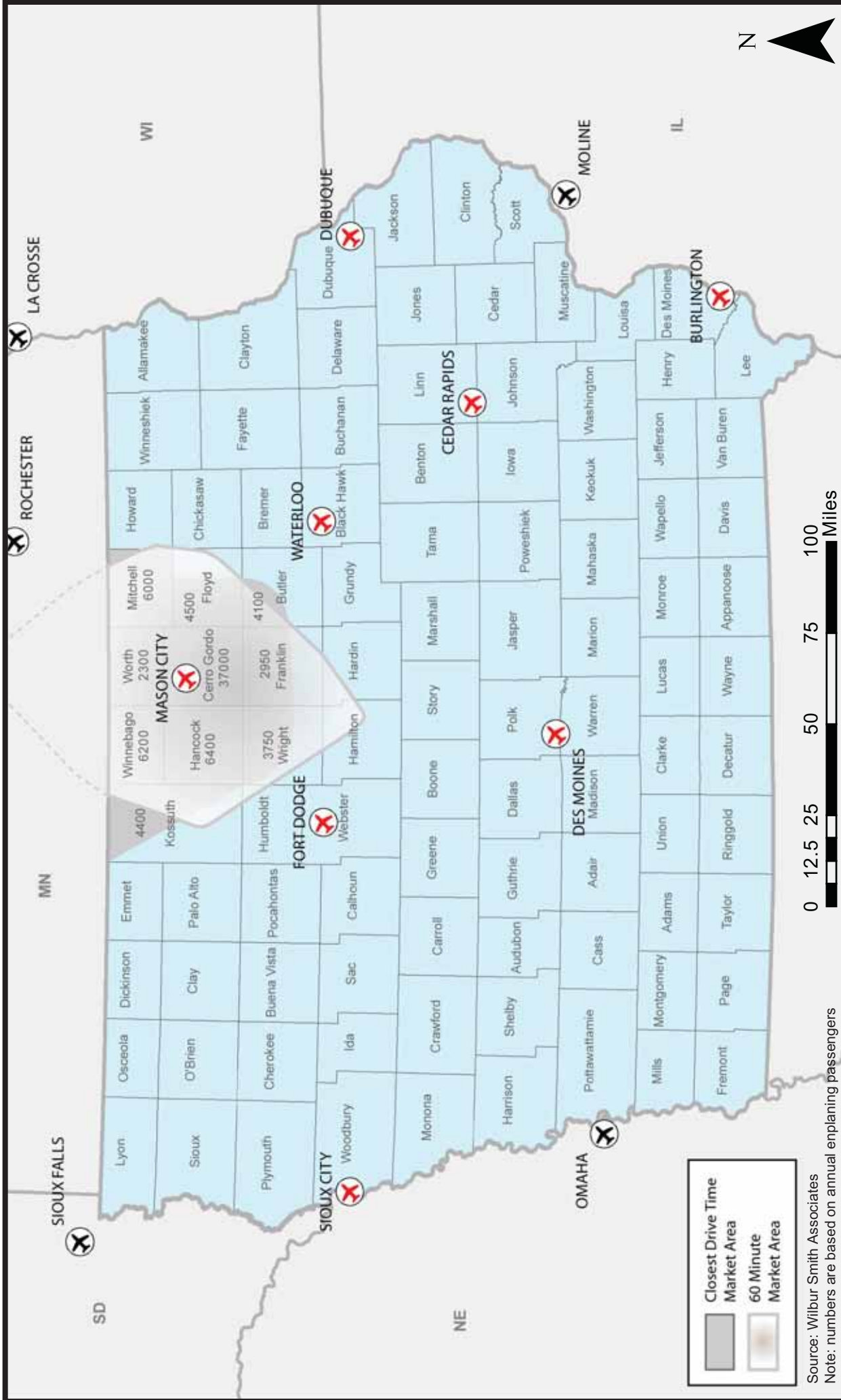








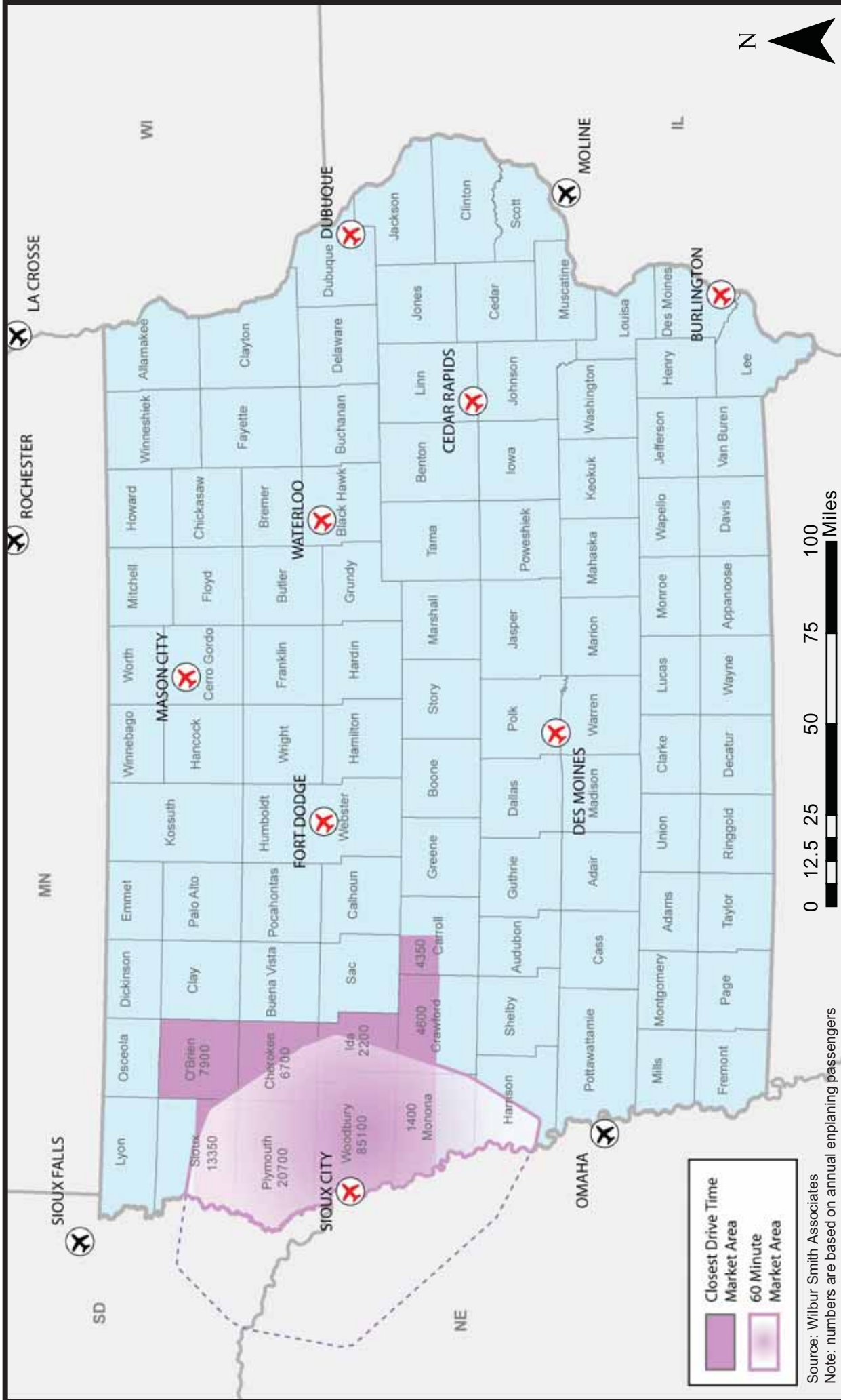




**EXHIBIT 5-7: DRIVE TIME VS. 60 MINUTE MARKET AREA**

Mason City Municipal Airport  
 Mason City, IA





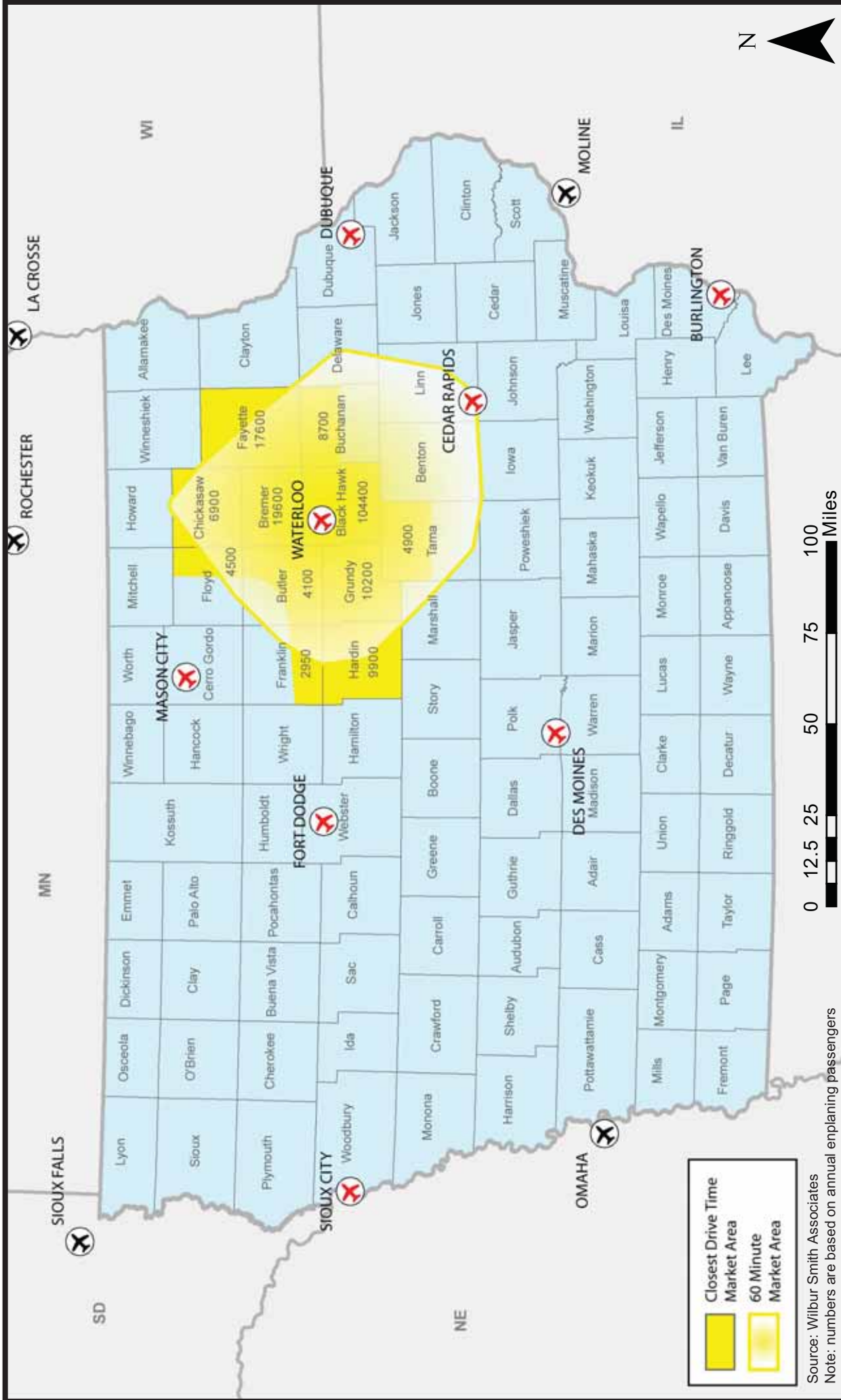
Source: Wilbur Smith Associates  
 Note: numbers are based on annual enplaning passengers



**EXHIBIT 5-8: DRIVE TIME VS. 60 MINUTE MARKET AREA**

Sioux Gateway Airport  
 Sioux City, IA





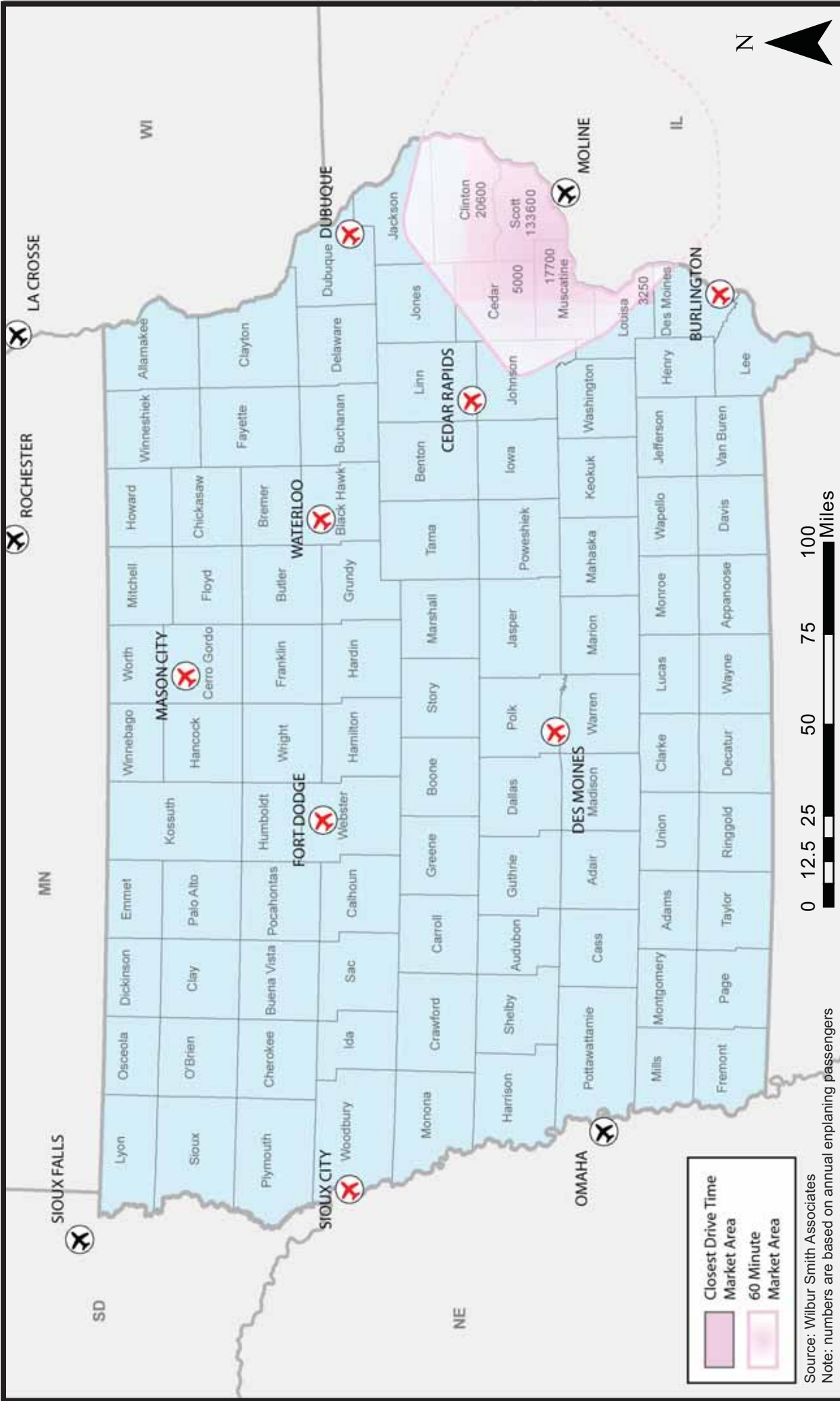
Source: Wilbur Smith Associates  
 Note: numbers are based on annual enplaning passengers



### EXHIBIT 5-9: DRIVE TIME VS. 60 MINUTE MARKET AREA

Waterloo Regional Airport  
 Waterloo, IA





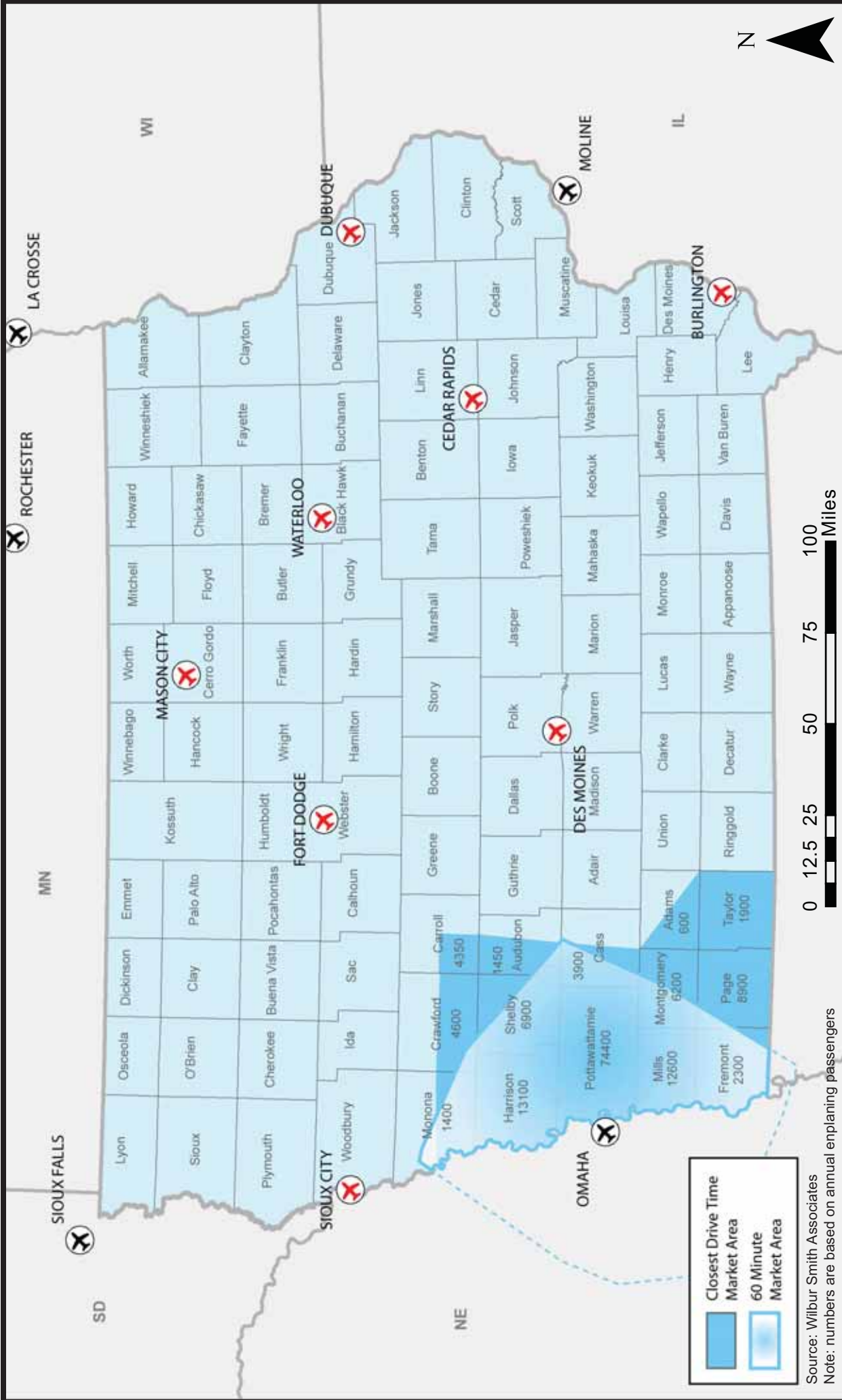
Source: Wilbur Smith Associates  
 Note: numbers are based on annual enplaning passengers



**EXHIBIT 5-10: DRIVE TIME VS. 60 MINUTE MARKET AREA**

Quad City International Airport  
 Moline, IL





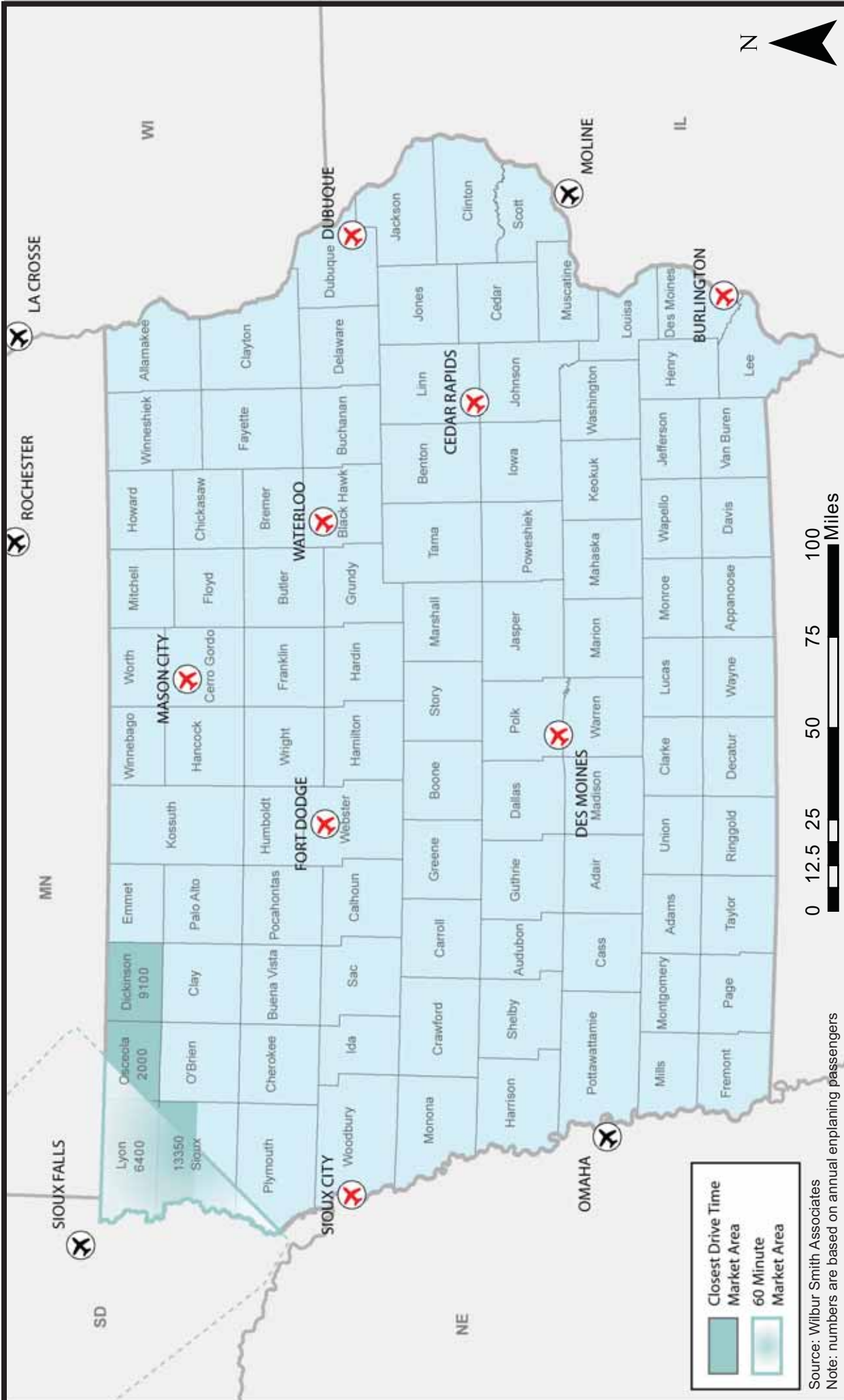
Source: Wilbur Smith Associates  
 Note: numbers are based on annual enplaning passengers



**EXHIBIT 5-11: DRIVE TIME VS. 60 MINUTE MARKET AREA**

Eppley Airfield  
 Omaha, NE





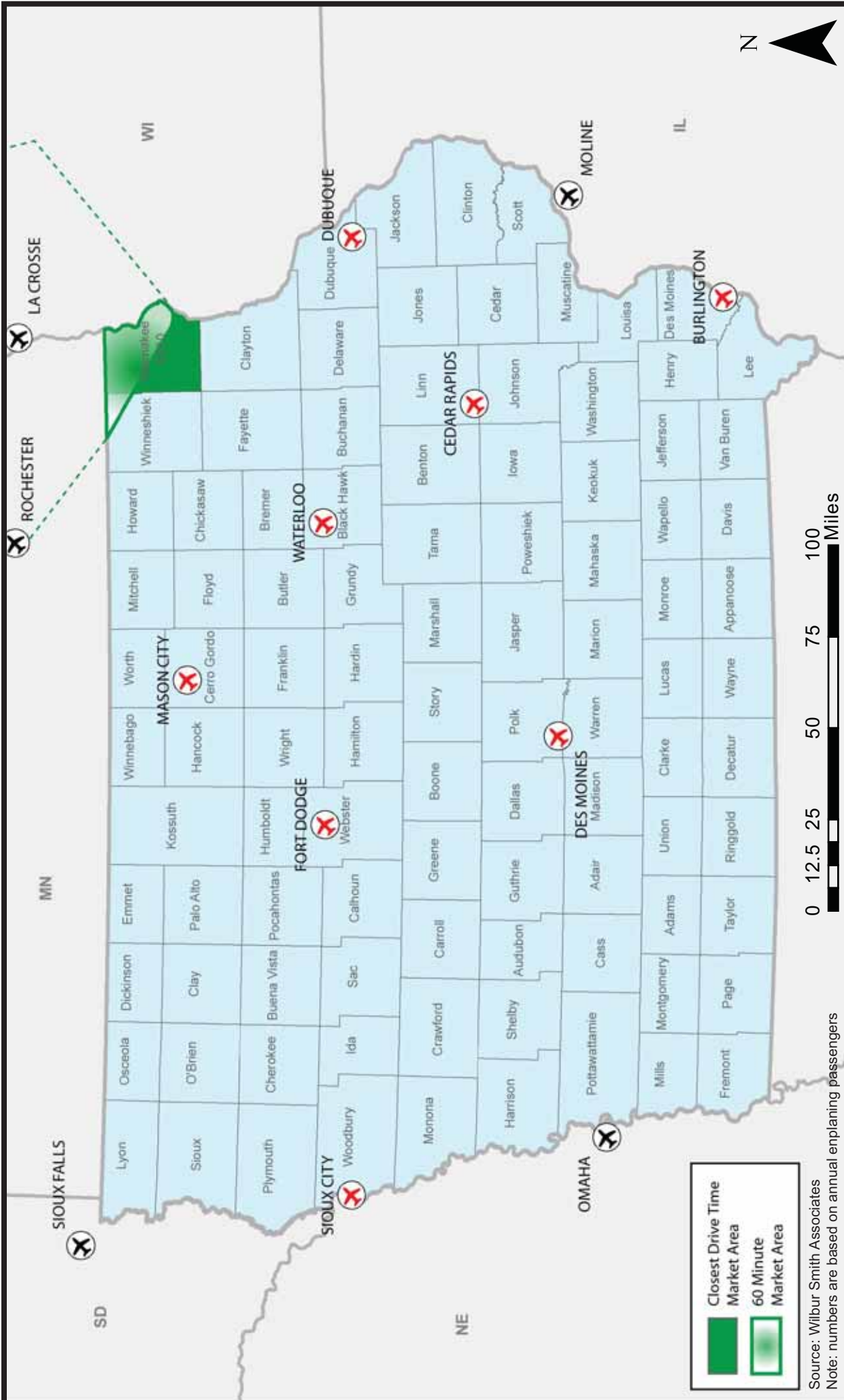
Source: Wilbur Smith Associates  
 Note: numbers are based on annual enplaning passengers

**Closest Drive Time Market Area**  
**60 Minute Market Area**



**EXHIBIT 5-12: DRIVE TIME VS. 60 MINUTE MARKET AREA**  
 Sioux Falls Regional Airport  
 Sioux Falls, SD





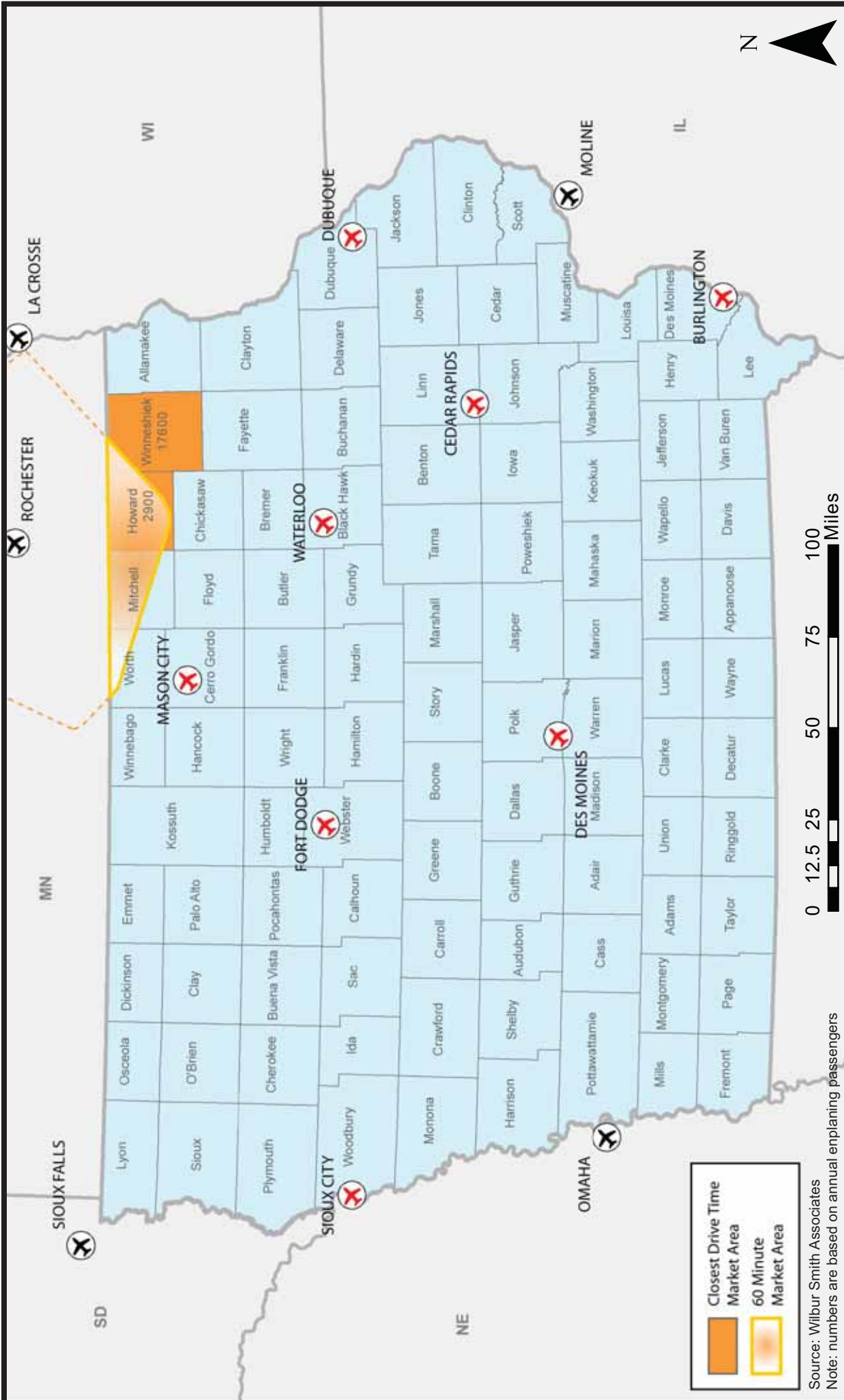
Source: Wilbur Smith Associates  
 Note: numbers are based on annual enplaning passengers



**EXHIBIT 5-13: DRIVE TIME VS. 60 MINUTE MARKET AREA**

La Crosse Municipal Airport  
 La Crosse, WI





Source: Wilbur Smith Associates  
 Note: numbers are based on annual enplaning passengers



**EXHIBIT 5-14: DRIVE TIME VS. 60 MINUTE MARKET AREA**  
 Rochester International Airport  
 Rochester, MN







Information presented in Exhibits 5-1 through 5-14 and summarized in **Table 5-1** assumes that resident- and visitor- related travel demand associated with each of the 99 counties in Iowa will use the closest airport to start their airline travel. Prior to deregulation of the airline industry, this type of usage was more common as vast differences in fares and airline service that now characterize commercial airports in the U.S. did not exist.

**Table 5-1**  
**Summary of Annual Demand at Commercial Airports in Iowa**

Airport	Total Enplanements	Iowa Generated Enplanements	Iowa Demand Based on Closest Drive Time Analysis	Iowa Enplanements as % of Closest Drive Time Demand
<b>EAS Single Carrier Airports</b>	<b>27,000</b>	<b>25,620</b>	<b>274,500</b>	<b>9.3%</b>
Burlington	7,800	6,420	92,000	7.0%
Fort Dodge	7,000	7,000	104,900	6.7%
Mason City	12,200	12,200	77,600	15.7%
<b>Non-EAS Single Carrier Airports</b>	<b>113,500</b>	<b>96,330</b>	<b>476,900</b>	<b>20.2%</b>
Dubuque	47,000	39,450	136,850	28.8%
Sioux City	33,600	23,980	146,300	16.4%
Waterloo	32,900	32,900	193,750	17.0%
<b>Multiple Carrier Airports</b>	<b>1,489,900</b>	<b>1,489,900</b>	<b>1,384,000</b>	<b>107.7%</b>
Cedar Rapids	511,000	511,000	375,400	136.1%
Des Moines	978,900	978,900	1,008,600	97.1%
<b>Total</b>	<b>1,630,200</b>	<b>1,611,850</b>	<b>2,135,400</b>	<b>75.5%</b>
Sources: Wilbur Smith Associates; Iowa DOT Note: figures may not sum to totals due to rounding				

Information presented in Table 5-1 shows each airport's approximate enplanements for the current time frame. This table also shows estimated annual enplanements that are closest to each airport. For the closest drive time demand estimates to be realistic, all airports would need to have similar levels of service and comparable fares. As discussed elsewhere in this study, in reality, significant differences in both fares and service do exist. These differences exist among the commercial airports in Iowa, between the commercial airports in Iowa and the Border Airports, and between the commercial airports in Iowa and the Outlying Hub Airports considered in this study.

While equal fares and equal service for all airports, intuitively, is not a viable scenario in today's commercial airline environment, it is nevertheless useful to examine the information presented in Table 5-1 for what it implies.

The three single carrier EAS airports now enplane a total of approximately 27,000 travelers annually. Of this total, an estimated 1,380 are attracted from areas beyond Iowa and the remainder are Iowa enplanements. The closest drive time analysis indicates that an estimated 274,500 Iowa passengers are actually closest to one of the three single carrier EAS airports. As a group, the single carrier EAS airports are attracting just nine percent of all demand that is closest to them. The single carrier non-EAS airports, as a group, attract an estimated 20 percent of all demand that is closest to them. As shown in Table 5-1, the single carrier non-EAS airports now enplane approximately 113,500 travelers each year. Of this total, 96,330 of the enplanements are Iowa associated and the others are attracted from beyond the State. The closest drive time analysis estimates that there are 476,900 annual enplanements that are closest to one of the three single carrier non-EAS airports.



Collectively, the commercial air travel demand that is closest to the six commercial airports in Iowa served by a single carrier (Burlington, Dubuque, Fort Dodge, Mason City, Sioux City, and Waterloo) leaves the local market area at very high rates. According to GIS analysis completed in this study, there are an estimated 751,400 annual airline trips associated with counties in Iowa that are geographically closest to one of the six single carrier commercial airports in Iowa. These same six airports served a total of approximately 140,500 enplaning passengers in 2006; it is worth noting that an estimated 18,550 of these enplaning passengers were attracted to these commercial airports in Iowa from other nearby states.

As a group, the six single carrier airports are attracting about 16 percent of all Iowa related annual commercial airline demand that is geographically closest to them. The six single carrier commercial airports attract 121,950 of their total annual enplanements from Iowa; this attraction is out of an estimated total of 751,400 annual commercial airline travelers associated with all counties that are closest to these airports. As reflected in the information in Table 5-1, some of the single carrier commercial airports now attract less than 10 percent of their total demand identified by the closest drive time analysis. At best, individual single carrier airports are attracting less than 30 percent of all annual demand identified in the drive time analysis. Of the estimated enplaning passengers that bypass one of the six single carrier commercial airports in Iowa, it is important to note the majority of them depart from either Des Moines International Airport or The Eastern Iowa Airport.

Also of interest in the information shown in Table 5-1 is that The Eastern Iowa Airport, based on the assignment of demand using the closest airport scenario, is “over attracting” demand. In 2006, this airport enplaned an estimated 511,000 travelers. Using GIS analysis to assign demand to the closest airport yields an annual enplanement estimate of 375,400 for this airport. The additional 135,600 annual enplanements that The Eastern Iowa Airport now serves come from market areas of other commercial airports in Iowa, a reflection of this airport’s choice of carriers and destinations served.

The closest drive time analysis for Des Moines International Airport indicates that the airport captures 97 percent of the demand that is closest to this airport. As with The Eastern Iowa Airport, Des Moines International now also draws its passengers from the market areas of other airports in Iowa. This attraction offsets passenger leakage that occurs from the Des Moines International market area. There are an estimated 29,700 annual travelers that are closest to this airport that now use a more distant airport. In the case of Des Moines International, these additional enplaning passengers are for the most part using either the commercial airport in Omaha or Kansas City to begin their airline travel.

Under the closest drive time scenario, Iowa associated demand that is closer to one of the Border Airports than it is to one of the eight commercial airports in Iowa was assigned to the Border Airport. The Iowa associated commercial air travel demand that was assigned to Border Airports is shown in **Table 5-2**.



**Table 5-2  
Summary of Iowa Generated Demand  
Served at Border and Outlying Hub Airports**

<b>Airport</b>	<b>Iowa Associated Enplanements Served by Border Airports</b>	<b>Iowa Demand Based on Closest Airport Analysis</b>	<b>Iowa Associated Enplanements as % Closest Drive Time Demand</b>
<b>Border Airports</b>	<b>659,600</b>	<b>381,600</b>	<b>172.9%</b>
Moline	283,900	180,150	157.6%
Omaha	308,200	142,100	216.9%
Sioux Falls	45,700	30,850	148.1%
Rochester	14,000	20,500	68.3%
La Crosse	7,800	8,000	97.5%
<b>All Outlying Hub Airports</b>	<b>245,800</b>	<b>0</b>	<b>NA</b>
<b>Total</b>	<b>905,400</b>	<b>381,600</b>	<b>NA</b>
Sources: Wilbur Smith Associates;			
Notes: NA=not applicable, figures may not sum to totals due to rounding			

Table 5-2 indicates that of the estimated 905,400 Iowa associated annual commercial airline travelers that use one of the Border or the Outlying Hub airports, 381,600 (42 percent) of these travelers are actually closer to and perhaps more conveniently served by one of the Border Airports. The remaining 523,800 (905,400 minus 381,600) annual travelers can be classified as leakage beyond the State. Combined, Moline, Omaha, and Sioux Falls are serving 54 percent of the passengers that leak outside Iowa. The remaining 46 percent are using the Outlying Hubs and the other Border Airports to initiate their commercial airline travel.

If commercial air travelers associated with the 99 counties in Iowa always selected the closest commercial airport, whether this is a commercial airport in Iowa or one of the Border Airports analyzed in this study, the landscape for the commercial airports in Iowa would be different. The information presented in Table 5-1 helps to explain these differences. These theoretical differences are summarized as follows:

- Each of the six single carrier commercial airports would be serving significantly higher enplanements levels. Southeast Iowa Regional and Fort Dodge Regional airports each enplane around 7,000 passengers annually. In the closest drive time demand scenario, annual enplanements at both of these airports would approach 100,000. For Mason City, Waterloo, Dubuque, and Sioux Gateway, each are currently experiencing annual enplanements in the 30,000 to 40,000 range. Under the closest demand analysis, enplanements at Mason City would be over 76,000, Dubuque and Sioux Gateway would jump to the 140,000 to 150,000 range, and Waterloo would be over 190,000.
- Demand served at Des Moines International, using the closest drive time analysis would increase by about 29,700 annual enplanements.
- The Eastern Iowa Airport now draws passengers from the market areas of at least three of other commercial airports in Iowa. Using the closest drive time analysis, enplanements at this airport would actually decrease from their current level.



Each airport's ability to capture an increasing percentage of its closest drive time demand is contingent upon its strengths, weaknesses, opportunities, and threats which will be outlined in the next chapter.

## COMPARISON OF MARKET AREA DEMAND

This chapter provides information that enables commercial airports to compare their current annual enplanements to annual commercial airline travel demand that is closest to their airport. As shown previously, the single carrier airports are not "capturing" notable percentages of the total demand that is closest to them. Airline travelers that are geographically closer to the six commercial airports in Iowa served by a single airline often leave their local market area and drive to a more distant commercial airport either within or beyond the State to start their airline travel.

The following sections compare:

- Current demand
- Total air travel demand established through the closest drive time analysis
- Total air travel demand in each airport's existing market area established through this study's survey efforts

### ***EAS Airports***

The three commercial airports in Iowa whose service is supported with federal subsidies from the EAS program have the biggest challenge as it relates to attracting passengers in their market areas. Burlington, Fort Dodge, and Mason City have service provided by one carrier. No competition at the EAS airports results in comparatively higher fares and even one delay or cancellation can result in passengers questioning the reliability of the service.

### **Burlington- Southeast Iowa Regional Airport**

Southeast Iowa Regional Airport serves Burlington and the surrounding region. In 2006, this airport enplaned approximately 7,760 passengers.

GIS drive time analysis completed for this study indicates that when commercial airline travel demand for all of Iowa's 99 counties is considered, an estimated 92,000 enplanements are geographically closest to Southeast Iowa Regional Airport. This indicates that the airport is now attracting about seven percent of the Iowa associated demand that is closest to this airport.

Chapter Four of this study provided information on the market area Southeast Iowa Regional Airport now draws its passengers. (See Exhibit 4-2 and Table A-1) Analysis in Chapter Four concluded that, in the area that the airport now draws its passengers from, there are a total of 82,380 enplanements. This indicates that the airport is drawing passengers from an area that is not as extensive as that identified through the closest drive time analysis. Of the airport's current 7,760 annual enplanements, it is estimated that 1,380 are drawn from beyond the State.

The airports listed in **Table 5-3** and **Exhibit 5-15** draw from the 82,380 enplanements that are located in the counties that Southeast Iowa Regional Airport now attracts its demand from. Of all of



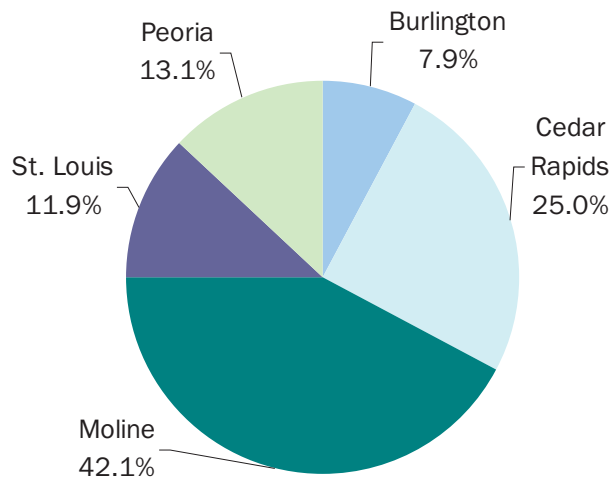
the annual passenger demand in the market area that Southeast Iowa Regional now serves, an estimated 54,340 of these passengers leave Iowa to use a commercial airport in another state.

**Table 5-3**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Southeast Iowa Regional Airport**

Airport	Annual Iowa-Generated Enplanements
Burlington*	6,380
Cedar Rapids	20,280
Moline	34,090
St. Louis	9,620
Peoria	10,630
<b>Total Current Market Area Demand</b>	<b>81,000</b>

Source: Wilbur Smith Associates  
 Note: Southeast Iowa Regional also attracts 1,380 annual enplanements from beyond Iowa

**Exhibit 5-15**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Southeast Iowa Regional Airport**





**Exhibit 5-16** compares current demand, all Iowa demand identified as being closest to this airport, and all demand that is in the market area that this airport now attracts its enplanements from. Southeast Iowa Regional Airport now captures about eight percent of all demand associated with its existing or closest drive time market area.

**Exhibit 5-16**  
**Market Area Demand Estimates**  
**Southeast Iowa Regional Airport**



Note: \*Includes 1,380 enplanements generated from out of state.

#### **Fort Dodge- Fort Dodge Regional Airport**

Total annual enplanements in 2006 for Fort Dodge Regional Airport were approximately 7,000. The closest drive time analysis indicates that there are 104,900 Iowa associated annual enplanements that are closer to this airport than any other commercial airport. Fort Dodge Regional does not currently attract any of its annual enplanements from beyond the State. This indicates that Fort Dodge Regional Airport is capturing about seven percent of the total Iowa related demand that is geographically closest to this airport.

Chapter Four of this study provided information on the current market area from which the Fort Dodge Regional Airport is attracting its enplanements. (See Exhibit 4-6 and Table A-5). The airport's existing market area is not as extensive as that calculated by the GIS closest drive time analysis. The airport's market area, established through this study's survey process, indicates that there are approximately 59,640 annual enplanements in the market area that the Fort Dodge Regional now draws its passengers from



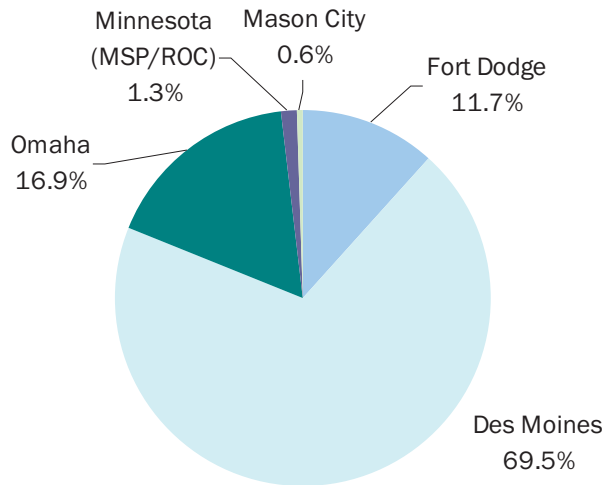
**Table 5-4** and **Exhibit 5-17** present the distribution of demand by airport for the counties that are in this airport’s current market area, as defined in Chapter Four. As shown, most of the enplanements in the airport’s market area depart from Des Moines International Airport; the variety of carriers providing nonstop service to and from the Des Moines International influences this choice. Those passengers who drive to Omaha from this airport’s market area are most likely doing so to take advantage of this airport’s low cost carrier service and competitive fares.

**Table 5-4**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Fort Dodge Regional Airport**

Airport	Annual Iowa-Generated Enplanements
Fort Dodge	7,000
Des Moines	41,430
Mason City	380
Omaha	10,080
Minnesota (MSP/ROC)	750
<b>Total Current Market Area Demand</b>	<b>59,640</b>

Source: Wilbur Smith Associates

**Exhibit 5-17**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Fort Dodge Regional Airport**





Analysis completed in this study has shown that Fort Dodge Regional Airport is not currently drawing its passenger from all Iowa counties that are closest to the airport. **Exhibit 5-18** shows that demand in this airport's market area ranges between 59,640 and 104,900 annual enplanements. At 7,000 annual enplanements, this airport is now capturing between seven and 12 percent of the demand identified in its market area.

**Exhibit 5-18**  
**Market Area Demand Estimates**  
**Fort Dodge Regional Airport**



**Mason City- Mason City Municipal Airport**

Total annual enplanements for Mason City Municipal Airport totaled approximately 12,160 in 2006. GIS analysis completed for this study indicates that there are 77,600 enplanements that are geographically closest to the Mason City Municipal Airport. This study's analysis indicates that Mason City Municipal does not currently attract any of its annual passengers from outside the State. This airport is now capturing about 15 percent of all of closest demand.

Chapter Four of this study provided information on those counties from which Mason City Municipal Airport now draws its demand. (See Exhibit 4-7 and Table A-6.) This study's survey efforts were used to establish this market area. This study concluded that passengers in the existing market area for Mason City Municipal also use other airports, both within and beyond Iowa.

Within the market area from which Mason City Municipal now draws its passengers, it is estimated that there are 80,310 total enplanements. When this demand estimate is compared to that developed through the closest drive time analysis (77,600 annual enplanements), it can be seen that the Mason City Municipal airport is drawing passengers from areas that are outside the parameters defined by the GIS closest drive time analysis.





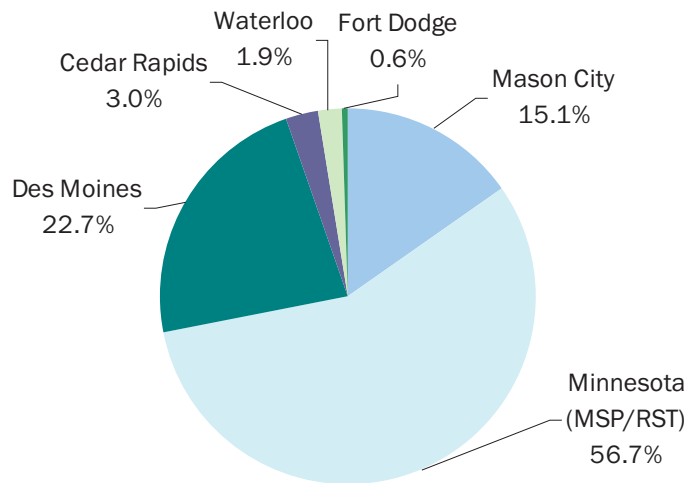
**Table 5-5** and **Exhibit 5-19** present the distribution, by departure airport, for the 80,310 estimated annual enplanements that are associated with the market area Mason City Municipal now draws its passengers from. There are an estimated 77,150 passengers in the existing market area that now decide for various reasons to begin their commercial airline travel from other airports. It is estimated that 34,750 of these trips (almost 43 percent) start from other commercial airports in Iowa, and the remaining 57 percent (45,560 trips) start from one of the commercial airports in Minnesota.

**Table 5-5**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Mason City Municipal Airport**

Airport	Annual Iowa-Generated Enplanements
Mason City	12,160
Des Moines	18,260
Cedar Rapids	2,390
Fort Dodge	450
Waterloo	1,490
Minnesota (MSP/RST)	45,560
<b>Total Current Market Area Demand</b>	<b>80,310</b>

Source: Wilbur Smith Associates

**Exhibit 5-19**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Mason City Municipal Airport**





As shown in **Exhibit 5-20**, total demand in this airport’s market area is between 77,600 (closest drive time) and 80,310 (existing market area) annual enplanements. With current annual enplanements at just over 12,000, Mason City Municipal Airport now captures between 14 and 16 percent of all annual demand estimated to be in its market area.

**Exhibit 5-20**  
**Market Area Demand Estimates**  
**Mason City Municipal Airport**



### ***Single Carrier Non-EAS Airports***

#### ***Dubuque- Dubuque Regional Airport***

In 2006, there were approximately 47,000 total annual enplanements at Dubuque Regional Airport. The closest drive time analysis indicates that there are 129,710 Iowa-generated annual enplanements that are closest to this airport. The Dubuque Regional Airport currently attracts an estimated 7,550 of its annual enplanements from beyond the State. This indicates that Dubuque Regional Airport is capturing about 30 percent of the total Iowa-related demand that is geographically closest to this airport.

Chapter Four of this study provided information on the current market area from which Dubuque Regional Airport is attracting its enplanements. (See Exhibit 4-5 and Table A-4). The demand for commercial airline travel in the airport’s existing market area is similar to that calculated by the GIS closest drive time analysis. The airport’s market area, established through this study’s survey process, indicates that there are approximately 129,710 Iowa-related enplanements in the Dubuque Regional market area. As noted, this airport draws an additional 7,550 annual enplanements from beyond the State.



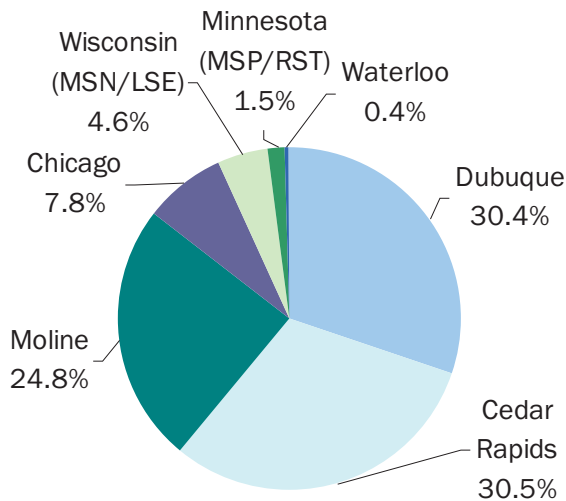
For the Iowa counties that are in Dubuque Regional Airport's existing market area (as defined in Chapter Four), total demand and the airports that serve this demand are presented in **Table 5-6** and **Exhibit 5-21**. As shown, many of the enplanements in this airport's market area depart from The Eastern Iowa Airport; the variety of carriers providing nonstop service to and from this airport influences this choice. Most remaining travelers in this airport's existing market area leave the State to begin their airline travel. Analysis completed in this study indicates that there are an estimated 50,750 Iowa-related enplanements in this airport's market area that begin their airline trips at airports beyond the State.

**Table 5-6**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Dubuque Regional Airport**

Airport	Annual Iowa-Generated Enplanements
Dubuque*	39,450
Cedar Rapids	39,510
Moline	32,110
Waterloo	500
Chicago	10,140
Minnesota (MSP/RST)	2,000
Wisconsin (MSN/LSE)	6,000
<b>Total Current Market Area Demand</b>	<b>129,710</b>

Source: Wilbur Smith Associates  
 Note: Dubuque Regional also attracts 7,550 annual enplanements from beyond Iowa

**Exhibit 5-21**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Dubuque Regional Airport**



This study has shown that Dubuque Regional Airport is currently drawing its passengers from all Iowa counties that are closest to the airport.



As **Exhibit 5-22** shows estimates of demand for the closest drive time and the existing market areas are very similar, 136,850 and 137,260, respectively. With its 47,000 annual enplanements (over 7,550 of which are attracted from beyond Iowa); this airport now captures about 30 percent of its Iowa-related demand

**Exhibit 5-22**  
**Market Area Demand Estimates**  
**Dubuque Regional Airport**



Note: \*Includes 7,550 enplanements generated from out of state.

### **Sioux City- Sioux Gateway Airport**

This analysis was completed prior to Frontier Airlines' initiation of service at Sioux Gateway Airport in October 2007.

Sioux Gateway Airport enplaned approximately 33,600 passengers in 2006. The closest drive time analysis indicates that there are 146,300 Iowa-generated enplanements that are closest to this airport. Since, Sioux Gateway Airport currently attracts an estimated 9,620 of its annual enplanements from beyond the State, this indicates that the airport is capturing about 15 percent of the total Iowa-related demand that is geographically closest to the airport.

Chapter Four of this study provided information on the current market area from which Sioux Gateway Airport is attracting its enplanements. (See Exhibit 4-8 and Table A-7). The demand for commercial airline travel in the airport's existing market area is somewhat higher than that calculated by the GIS closest drive time analysis. The airport's existing market area, established through this study's survey process, indicates there are approximately 160,940 annual Iowa-generated enplanements in the Sioux Gateway market area.



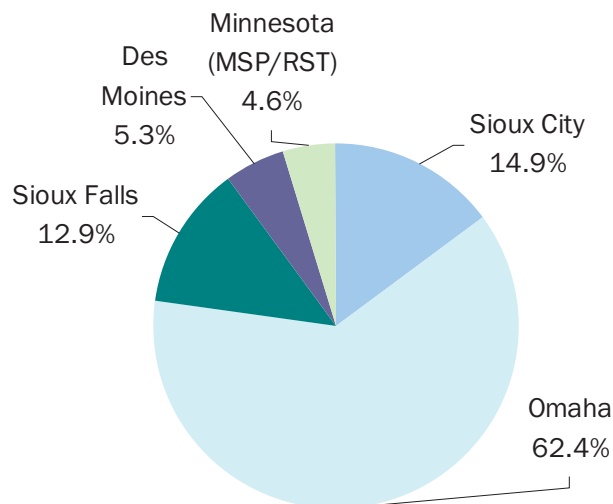
For the Iowa counties that are in Sioux Gateway’s existing market area (as defined in Chapter Four), demand is now served by the airports shown in **Table 5-7** and **Exhibit 5-23**. Many of the enplanements in the airport’s market area depart from Omaha; the variety of carriers providing non-stop service to and from this airport and its low fare carrier service influence this choice. Analysis completed in this study indicates that there are an estimated 135,480 Iowa-related enplanements in this airport’s market area that begin their airline trips at airports beyond the State. Analysis also shows that the Sioux Gateway Airport is currently drawing its passengers from all Iowa counties that are geographically closest to the airport.

**Table 5-7**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Sioux Gateway Airport**

Airport	Annual Iowa-Generated Enplanements
Sioux City*	23,940
Omaha	100,350
Sioux Falls	20,720
Des Moines	8,520
Minnesota (MSP/RST)	7,410
<b>Total Current Market Area Demand</b>	<b>160,940</b>

Source: Wilbur Smith Associates  
 Note: Sioux Gateway also attracts 9,620 annual enplanements from beyond Iowa.

**Exhibit 5-23**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Sioux Gateway Airport**





As presented in **Exhibit 5-24**, the closest drive time analysis indicates there are an estimated 146,300 Iowa related enplanements that are closest to this airport. Existing market area analysis completed earlier in this study shows a total pool of 160,940 annual enplanements that this airport draws its demand from. Based on the fact that this airport attracts an estimated 9,620 of its enplanements from beyond the State, the airport now captures between about 15 percent of all Iowa-generated demand in its market area.

**Exhibit 5-24**  
**Market Area Demand Estimates**  
**Sioux Gateway Airport**



Note: \*Includes 9,620 enplanements generated from out of state.

#### **Waterloo- Waterloo Regional Airport**

Total annual enplanements for Waterloo Regional Airport were approximately 32,880 in 2006. The closest drive time analysis indicates that there are 193,750 Iowa-related enplanements that are closest to this airport. Waterloo Regional Airport does not attract a measurable amount of its annual passenger demand from beyond the State. This indicates that Waterloo Regional Airport is capturing about 17 percent of the total Iowa-related demand that is geographically closest to the airport.

Chapter Four provided information on the existing market area from which Waterloo Regional Airport is attracting its enplanements. (See Exhibit 4-9 and Table A-8). The demand for commercial airline travel in the airport's existing market area, identified in Chapter Four, is higher than that calculated by the GIS closest drive time analysis. The airport's existing market area, established through this study's survey process, indicates there are approximately 201,430 annual Iowa enplanements in Waterloo Regional Airport's market area.

**Table 5-8** and **Exhibit 5-25** present the distribution of passengers associated with Waterloo Regional Airport's existing market area (as defined in Chapter Four) by departure airport. Many of the enplanements in the airport's existing market area departed from The Eastern Iowa Airport; the variety of carriers providing nonstop service to and from this airport influences this choice. For the same reasons, Des Moines International also attracts passengers from this airport's market area. Remaining travelers in this airport's market area leave the State to begin their airline travel. Analysis



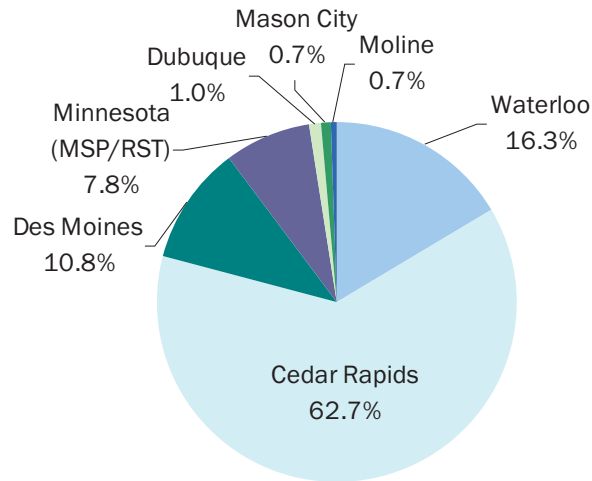
completed in this study indicates that there are an estimated 17,090 Iowa-related enplanements in this airport's market area that begin their airline trips at airports beyond the State. Of the 201,430 enplanements in this airport's existing market area, 91 percent depart from one of the commercial airports in Iowa.

**Table 5-8**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Waterloo Regional Airport**

Airport	Annual Iowa-Generated Enplanements
Waterloo	32,880
Cedar Rapids	126,310
Des Moines	21,680
Dubuque	1,980
Mason City	1,490
Moline	1,370
Minnesota (MSP/RST)	15,720
<b>Total Current Market Area Demand</b>	<b>201,430</b>
Source: Wilbur Smith Associates	



**Exhibit 5-25**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Waterloo Regional Airport**



As **Exhibit 5-26** shows, Iowa-related demand in this airport's market area is estimated between 193,750 (closest drive time) and 201,430 (existing market area) annual enplanements. With its current level of enplanements, the airport is attracting between 16 and 17 percent of all annual demand associated with its market area.

**Exhibit 5-26**  
**Market Area Demand Estimates**  
**Waterloo Regional Airport**



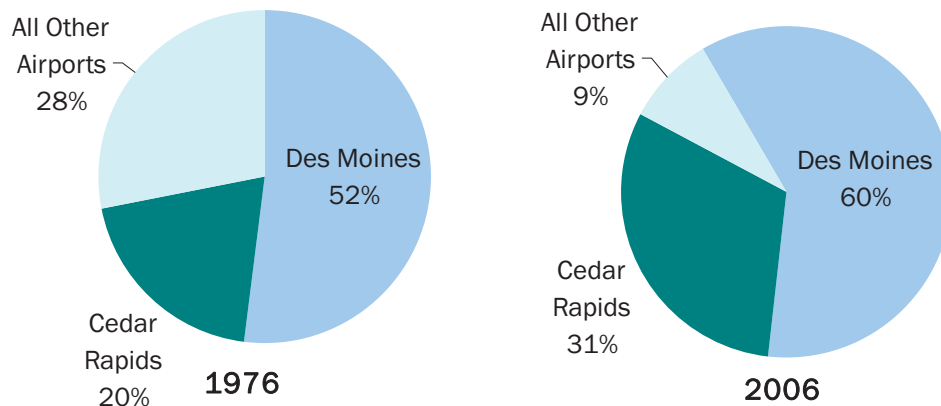




### ***Multi-Carrier Airports***

Both The Eastern Iowa Airport in Cedar Rapids and Des Moines International Airport have multiple carriers, providing a wide range of frequent flights to many destinations. Each airport also has a limited number of low cost carrier flights, and each of these two airports continues to try to attract additional low cost carrier service. It is clear that Des Moines International and The Eastern Iowa Airport have increased the role they play in meeting Iowa's commercial airline travel needs over the last 30 years. Prior to deregulation, The Eastern Iowa Airport served 20 percent of all enplanements in the State and Des Moines International served 52 percent of all enplanements. By 2006, these percentages had increased to 31 and 60, respectively. These two airports will likely continue to serve the majority of Iowa's demand for commercial airline travel in the coming years. This information is shown in **Exhibit 5-27**.

**Exhibit 5-27**  
**Percentage of Iowa Enplanements Served**  
**Des Moines and Cedar Rapids**  
**1976 and 2006**



### **Cedar Rapids- The Eastern Iowa Airport**

Total annual enplanements for The Eastern Iowa Airport were approximately 511,000 in 2006. The closest drive time analysis indicates that there are 375,400 Iowa enplanements that are closest to this airport. This indicates that this airport is "over attracting" in terms of Iowa demand that is geographically closest to this airport. According to analysis completed as part of this study, The Eastern Iowa Airport does not attract a measurable percentage of its annual enplanements from beyond the State.

Chapter Four of this study provided information on the existing market area from which The Eastern Iowa Airport is attracting its enplanements. (See Exhibit 4-3 and Table A-2). Analysis completed in Chapter Four shows that this airport draws its passengers from a very extensive market area within Iowa. The demand for commercial airline travel in the airport's existing market area is higher than that calculated by the GIS closest drive time market area analysis. The airport's existing market area, established through this study's survey process, has approximately 916,350 annual Iowa-related enplanements.



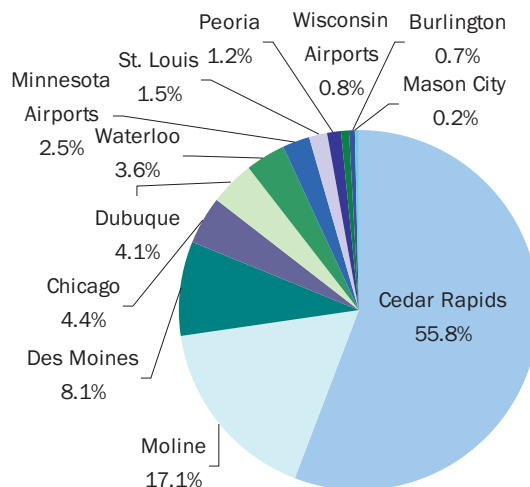
**Table 5-9** and **Exhibit 5-28** present the distribution of demand by airport for all counties from which The Eastern Iowa Airport now attracts demand. As shown, many of the enplanements in the airport's existing market area depart from one of the commercial airports in Iowa. An estimated 663,530 of the enplanements (72 percent) in the counties that The Eastern Iowa Airport draws demand from depart from one of the commercial airports in Iowa. The remaining 28 percent (256,580 enplanements) begin their trips from commercial airports beyond the State.

**Table 5-9**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**The Eastern Iowa Airport**

Airport	Annual Iowa-Generated Enplanements
<b>Cedar Rapids</b>	<b>510,980</b>
Burlington	6,380
Des Moines	74,350
Dubuque	37,450
Mason City	1,490
Waterloo	32,880
Moline	157,030
Chicago	40,720
Peoria	11,090
St. Louis	14,180
Minnesota Airports (MSP/RST)	22,760
Wisconsin Airports (LSE/MSN)	7,040
<b>Total Current Market Area Demand</b>	<b>916,350</b>

Source: Wilbur Smith Associates

**Exhibit 5-28**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**The Eastern Iowa Airport**





**Exhibit 5-29** presents market area demand for The Eastern Iowa Airport. In the market area that this airport attracts demand from, there are an estimated 916,350 Iowa enplanements. The closest drive time analysis shows that only 375,400 of these enplanements are actually closest to this airport. The airport now attracts about 56 percent of all Iowa-related enplanements that are in the market area it serves.

**Exhibit 5-29**  
**Market Area Demand Estimates**  
**The Eastern Iowa Airport**



**Des Moines- Des Moines International Airport**

In 2006, total annual enplanements for Des Moines International Airport reached approximately 978,900. The closest drive time analysis indicates that there are 1,008,600 Iowa enplanements that are closest to this airport. According to analysis completed as part of this study, Des Moines International Airport does not currently attract a measurable percentage of its annual demand from beyond the State.

Chapter Four of this study provided information on the existing market area from which Des Moines International Airport is attracting its enplanements. (See Exhibit 4-4 and Table A-3). Analysis completed in Chapter Four shows that this airport draws its passengers from a very extensive market area within Iowa. The existing market area demand for commercial airline travel in the airport's existing market area is higher than that calculated by the GIS closest drive time analysis.

The airport's market area, established through this study's survey process, indicates that there are approximately 1,341,070 annual Iowa-related enplanements in the existing market area that Des Moines International Airport serves. **Table 5-10** and **Exhibit 5-29** present the distribution of demand by departure airport for all counties that Des Moines International attracts demand from. Many of the enplanements in Iowa counties in the airport's existing market area choose to depart from one of the commercial airports in Iowa. An estimated 86 percent (1,150,030 enplanements) of the 1,341,070 enplanements in Des Moines International's existing market area depart from one of the



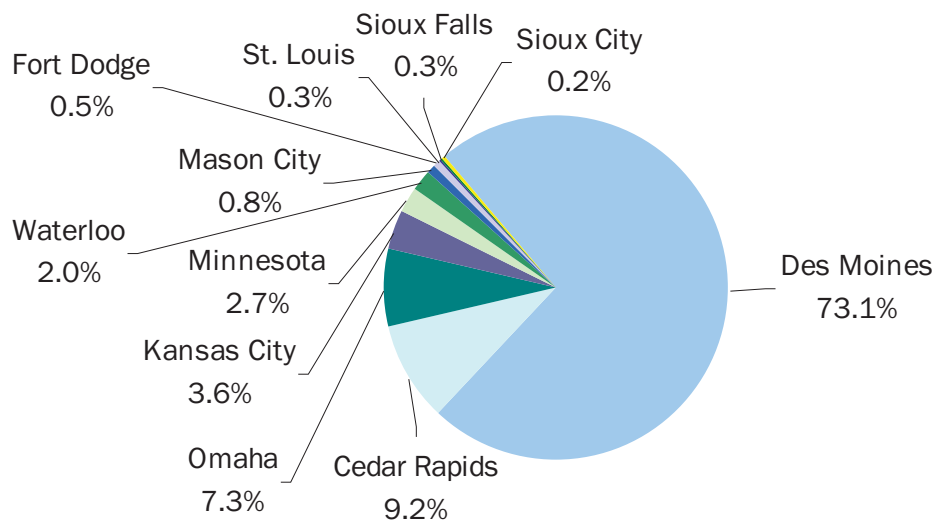
commercial airports in Iowa. The remaining 14 percent (191,040 enplanements) begin their trips from commercial airports beyond the State.

**Table 5-10**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Des Moines International Airport**

Airport	Annual Iowa-Generated Enplanements
Des Moines	978,970
Cedar Rapids	123,790
Omaha	97,370
Kansas City	48,920
Minnesota (MSP/RST)	36,210
Waterloo	26,610
Mason City	10,430
Fort Dodge	7,000
St. Louis	4,560
Sioux Falls	3,520
Sioux City	3,230
Peoria	460
<b>Total Current Market Area Demand</b>	<b>1,341,070</b>

Source: Wilbur Smith Associates

**Exhibit 5-30**  
**Actual Market Area Iowa-Generated Demand Distribution**  
**Des Moines International Airport**





As **Exhibit 5-31** shows, the closest drive time analysis found that there are 1,008,600 Iowa-related enplanements that are closest to Des Moines International. Survey work completed for this study showed that this airport draws its demand from a market area that includes 1,341,070 Iowa enplanements. Based on the 978,900 passengers that this airport now serves, the airport captures between 73 and 97 percent of available demand.

**Exhibit 5-31**  
**Market Area Demand Estimates**  
**Des Moines International Airport**



## SUMMARY

Analysis completed in this study has shown that Iowa's 99 counties now generate just over 2.5 million annual commercial airline enplanements. The commercial airports in Iowa also attract an estimated 18,550 enplanements annually from beyond the State. The eight commercial airports in Iowa collectively now serve approximately 1.63 million annual enplaning passengers. An estimated 905,400 additional Iowa-related enplanements leave the State annually to use one of Border or Outlying Hub airports.

A GIS tool was used to estimate how many of the 905,400 Iowa enplanements that now leave the State are closer to one of the commercial airports in Iowa than they are to one of the Border or Outlying Hub airports. The closest drive time analysis shows that 523,800 of the 905,400 enplanements are closer to one of the eight commercial airports in Iowa.

**Table 5-11** provides a summary of information discussed in this chapter including each airport's current enplanements, all enplanements in the airport's existing market area, and all Iowa enplanements that are geographically closest to the airport. This information will be used in subsequent analysis to identify viable air service opportunities for the eight commercial airports in Iowa.



**Table 5-11  
Demand Comparisons**

	<b>Airport</b>	<b>Approximate Current Annual Enplanements</b>	<b>Closest Drive Time Iowa Enplanements</b>	<b>Existing Market Area Iowa Enplanements</b>
<b>EAS Single Carrier Airports</b>				
	Burlington	7,760	92,000	82,380
	Fort Dodge	7,000	104,900	59,640
	Mason City	12,160	77,600	80,310
<b>Non-EAS Single Carrier Airports</b>				
	Dubuque	47,000	136,850	137,260
	Sioux City	33,600	146,300	160,940
	Waterloo	32,880	193,750	201,430
<b>Multiple Carrier Airports</b>				
	Cedar Rapids	511,000	375,400	916,350
	Des Moines	978,900	1,008,600	1,341,070
Sources: Wilbur Smith Associates; Iowa DOT				