



Chapter Four: Demand Analysis

INTRODUCTION

Previous chapters of the *Iowa Air Service Study* reviewed historic and current air service levels from both a national and a local perspective. This framework is essential to understanding the current air service environment within which the airports in Iowa are working to maintain and improve commercial air service.

This chapter presents several key analyses which are important to this study, including the following:

- Estimation of total annual commercial air travel demand for each Iowa county,
- Identification of a primary market area for each of the eight commercial service airports in Iowa using information from this study's survey efforts,
- Assignment of the estimated annual commercial air travel demand associated with each county to one or more airports in Iowa using survey results and modeling techniques, and
- Identification of the role that Border Airports and Outlying Hub Airports play in serving commercial air travel demand associated with various counties in Iowa.

In subsequent chapters, steps to determine the potential that exists to improve air service will be developed and will focus on the following items discussed in this chapter:

- Iowa counties included in the market area of each airport,
- Total demand for commercial airline travel within the market area of each commercial airport in Iowa, and
- The role that Border and Outlying Hub airports play in serving commercial air service demand associated with some Iowa counties.

These items help establish a demand profile for each commercial service airport. The demand profile provides a means to identify the level of unconstrained demand for commercial airline travel actually present, versus the level of demand actually being served by commercial service airports in Iowa. From the demand profile, an estimate of potential enplanements that each airport may serve in the future can be made. Potential demand projections for the commercial service airports in Iowa will be discussed in Chapter Six. Each airport's potential level of demand will be used in the analysis of air service enhancement opportunities and in the development of airport action plans.

DEVELOPING ESTIMATES OF DEMAND

Through airport and airline records, it is possible to identify the number of passengers using commercial service airports analyzed in this study. Enplanement information for all eight commercial service airports in Iowa (as well as for Border and Outlying Hub airports) is available on both a current and a historical basis. Passengers are recorded at each airport annually as enplanements; an enplanement is defined as a passenger boarding a commercial air carrier.

Airport-specific enplanement records do not, however, identify the total level of unconstrained demand that may actually be associated with each airport's market area. This is because, as discussed, some passengers leave the local airport market area and board commercial aircraft at



other more distant airports. The phenomenon whereby airline travelers leave their local market area to begin their airline travel from another more distant airport is referred to as passenger leakage or diversion.

Information collected as part of this study indicates that air travelers associated with Iowa's 99 counties often leave the State to begin air travel from one of the Border or Outlying Hub airports. In some cases, Border Airports are actually the closest and most convenient commercial airport for air travel demand associated with some Iowa counties. Later in this chapter, an estimate of total annual commercial air travel demand associated with all Iowa counties that is served outside the State will be developed. This estimate will then be further refined to show what portion of this demand should be considered actual passenger "leakage." In instances where Iowa-associated commercial air travel demand is most logically served by one of the Border Airports, this demand will not be considered passenger leakage.

It is estimated that 1.63 million passengers enplane flights at commercial airports in Iowa annually (Table 4-1). This includes Iowa originating passengers, as well as out-of-state passengers originating at commercial service airports in Iowa. This happens most frequently at those airports that border other states, including Southeast Iowa Regional Airport, Dubuque Regional Airport, and Sioux Gateway Airport. The enplanements shown in Table 4-1 include both resident and visitor related travel.

**Table 4-1
2006 Enplanements at Commercial Service Airports in Iowa**

Airport in Iowa	Annual Enplanements (Rounded)
Burlington	7,800
Cedar Rapids	511,000
Des Moines	978,900
Dubuque	47,000
Fort Dodge	7,000
Mason City	12,200
Sioux City	33,600
Waterloo	32,900
Total Statewide Enplanements	1,630,200
Source: Iowa DOT, Airport records	
Note: Figures may not sum to total due to rounding	

Iowa versus National Trends

Table 4-2 presents recent growth in enplanements between 1995 and 2005 for both Iowa and the U.S. Total 2006 enplanements for the U.S. were not available at the writing of this chapter. As shown, enplanements grew over the 10-year period at both the State level and for the U.S. as a whole. However, average annual growth in enplaned passengers at the State level was below that of the nation. It is worth noting that enplanements at Iowa commercial service airports grew 3.5 percent between 2005 and 2006, well above the average annual growth that has occurred over 1995 to 2005 period.



**Table 4-2
Recent Enplanement Trends in the U.S. and Iowa**

	1995	2005	2006	Average Annual Growth Rate 1995-2005	Percent Change 2005-2006
United States	547,800,000	660,480,000	NA	1.9%	NA
Iowa	1,482,028	1,574,184	1,630,000	0.6%	3.5%
Sources: Bureau of Transportation Statistics; Iowa DOT					
Note: NA=Not available					

Demand for commercial airline travel, as expressed in total annual enplaned passengers, is most influenced by population, employment, tourism, and income. Lower rates of growth for commercial airline travel in Iowa are most likely related to the State's socioeconomic and demographic characteristics, in addition to lower volumes of tourism. It is worth noting that total U.S. enplanements presented in Table 4-2 are inflated to some degree because they also include "connecting" travelers. For example, if an air traveler from Iowa begins their trip in Fort Dodge, flies to Minneapolis-St. Paul, and then on to Seattle, this traveler is counted as an enplanement at both Fort Dodge and Minneapolis-St. Paul. Since commercial airports in Iowa do not accommodate a measurable number of connections, it is necessary to consider this in the analysis to estimate total commercial airline travel demand in Iowa.

DEMAND FOR AIRLINE TRAVEL

Unconstrained demand for commercial air travel (originations) for each county in Iowa is estimated by adding the 1.6 million enplaned passengers that are now served by the eight commercial airports in Iowa, to any Iowa "associated" air travelers that now use commercial airports (primarily the Border or the Outlying Hub airports) in another state for their travel.

To estimate Iowa's unconstrained demand for commercial airline travel, a ratio of total U.S. origination and destination (O&D) demand to population was developed. This ratio factors out connecting airline passengers since very few connections take place at the commercial airports in Iowa. For the U.S. as a whole, the current ratio of total population to O&D airline passengers is 1.48. The current population to O&D passenger ratio for Iowa is much lower at 0.55. This lower ratio is a reflection of the State's socioeconomic, demographic, and tourism characteristics.

For this study, estimates of annual travel demand by county consider to some extent:

- Both resident and visitor travel.
- The individual characteristics of each county including population, employment, and average income levels.
- The type of businesses located in each county that may rely on air travel.
- Rural or urban setting of the county.

In addition to the factors noted above, information from this study's passenger and business surveys, parking lot inventories, current airport enplanements, and information supplied by Border Airports on the estimated number of enplanements from Iowa they serve were all used to help estimate unconstrained commercial air travel demand for Iowa and its individual counties. As noted, input from commercial airports in Iowa and Border Airports was considered in this process. Commercial service airports in Iowa provided information on their estimated passenger leakage



rates, and several Border Airports provided estimates of the percent of their annual enplaned passenger demand that they believe to be generated in Iowa.

Using the factors noted here, initial estimates of total commercial air travel demand for each of the Iowa counties were developed. These initial estimates of demand for each Iowa county were assigned to one or more commercial airports, either within or beyond Iowa. The first assignment of demand resulted in adjustments to the initial estimates of unconstrained air travel demand at the individual county level.

Through an iterative process, demand at the individual county level was estimated and assigned until the State's total annual demand for commercial airline travel was reflective of current annual passenger enplanement levels at each of the eight airports in Iowa and estimated levels of Iowa residents utilizing either Border or Outlying Hub airports.

This study concludes that, currently, approximately 2.5 million annual airline enplanements are associated with all Iowa counties. These 2.5 million enplanements represent Iowa's current annual unconstrained level of demand for commercial airline travel. When this total annual level of demand is considered, Iowa's ratio of population to total annual air travel demand is 0.83 enplanements/person, closer to, but still below, the national ratio of 1.48. The eight commercial airports in Iowa now service approximately 1.6 million enplanements. Currently, an estimated 905,000 annual airline enplanements associated with Iowa are being served by an airport in another state.

Table 4-3 and **Exhibit 4-1** present estimated Iowa generated demand for commercial airline travel by county. Polk County, which includes the City of Des Moines, generates by far the highest level of demand, followed by Linn, Scott, and Black Hawk counties.

It is important to note that the county level demand estimates shown in Table 4-3 are thought to be within five percent, plus or minus, of actual air travel demand by county. Assuming that the statewide estimate of unconstrained demand is five percent low, this would translate into another 125,000 enplanements statewide.



Table 4-3
Total Unconstrained Annual Estimated Passenger Enplanements by Iowa County

County	2005 County Population	Annual Demand
Adair	7,859	2,300
Adams	4,264	1,200
Allamakee	14,709	8,000
Appanoose	13,666	7,500
Audubon	6,457	1,900
Benton	27,000	22,400
Black Hawk	125,891	104,400
Boone	26,602	22,000
Bremer	23,677	19,600
Buchanan	21,019	17,400
Buena Vista	20,151	16,700
Butler	15,072	8,200
Calhoun	10,443	5,700
Carroll	21,034	17,400
Cass	14,219	7,800
Cedar	18,254	10,000
Cerro Gordo	44,645	37,000
Cherokee	12,237	6,700
Chickasaw	12,563	6,900
Clarke	9,161	2,700
Clay	16,897	9,200
Clayton	18,337	10,000
Clinton	49,717	41,200
Crawford	16,889	9,200
Dallas	51,762	52,200
Davis	8,659	2,500
Decatur	8,605	2,500
Delaware	18,025	9,900
Des Moines	40,810	33,800
Dickinson	16,687	9,100
Dubuque	91,631	76,000
Emmet	10,534	5,700
Fayette	21,298	17,600
Floyd	16,443	9,000
Franklin	10,732	5,900
Fremont	7,759	2,300
Greene	9,963	2,900
Grundy	12,329	10,200
Guthrie	11,547	11,600
Hamilton	16,209	8,900



Table 4-3 (continued)
Total Unconstrained Annual Estimated Passenger Enplanements by Iowa County

County	2005 County Population	Annual Demand
Hancock	11,786	6,400
Hardin	18,003	9,900
Harrison	15,884	13,100
Henry	20,246	16,800
Howard	9,700	2,900
Humboldt	9,973	2,900
Ida	7,379	2,200
Iowa	16,055	8,800
Jackson	20,335	16,800
Jasper	37,674	31,200
Jefferson	15,972	8,700
Johnson	117,067	97,100
Jones	20,509	17,000
Keokuk	11,157	6,100
Kossuth	16,142	8,800
Lee	36,705	30,400
Linn	198,903	165,000
Louisa	11,842	6,500
Lucas	9,672	2,900
Lyon	11,750	6,400
Madison	15,158	15,300
Mahaska	22,364	18,500
Marion	32,984	27,300
Marshall	39,418	32,700
Mills	15,284	12,600
Mitchell	10,919	6,000
Monona	9,520	2,800
Monroe	7,835	2,300
Montgomery	11,313	6,200
Muscatine	42,756	35,400
O'Brien	14,414	7,900
Osceola	6,694	2,000
Page	16,253	8,900
Palo Alto	9,697	2,900
Plymouth	24,958	20,700
Pocahontas	7,930	2,300
Polk	401,006	593,400
Pottawattamie	89,738	74,400
Poweshiek	18,925	10,400
Ringgold	5,273	1,500



Table 4-3 (continued)
Total Unconstrained Annual Estimated Passenger Enplanements by Iowa County

County	2005 County Population	Annual Demand
Sac	10,621	5,800
Scott	160,998	133,600
Shelby	12,634	6,900
Sioux	32,277	26,700
Story	79,952	80,700
Tama	17,919	9,800
Taylor	6,614	1,900
Union	11,972	6,500
Van Buren	7,786	2,300
Wapello	35,965	29,800
Warren	42,981	43,400
Washington	21,457	17,800
Wayne	6,601	1,900
Webster	39,003	32,300
Winnebago	11,351	6,200
Winneshiek	21,234	17,600
Woodbury	102,605	85,100
Worth	7,768	2,300
Wright	13,647	7,500
Total	2,966,334	2,517,000



MARKET AREA DETERMINATION

One hundred percent (100%) of each Iowa county's unconstrained demand for commercial service was assigned to a commercial airport in Iowa or out-of-state airport (primarily the Border or the Outlying Hub airports defined in this study) as part of this study's technical analysis. In order to determine which airports to assign each county's demand to, results from parking lot inventories and other data sources were analyzed.

In October and November 2006, a license plate inventory of the parked cars at each of the commercial airports in Iowa, as well as Border Airports in Moline, Omaha, Sioux Falls, La Crosse, and Rochester, was completed. License plates were tallied at each airport on two separate days at least one week apart. The number of occurrences of each Iowa county license plate was tallied and summed to determine how far passengers are driving and at what frequency to access commercial airline service at each individual airport in Iowa, as well as out-of-state airports included in the inventory. The results of the passenger and business surveys were also analyzed in order to verify the results of the parking lot inventories and assist with the assignment of the county level demand to one or more commercial airports.

Table 4-4 presents the total annual estimated air travel demand associated with each county as well as an approximation of where each county's estimated annual demand is served. When passengers associated with a particular county use a Minnesota Airport, this includes departures from both Rochester International Airport and Minneapolis/St. Paul International Airport. Wisconsin includes La Crosse Municipal Airport and Dane County Regional Airport in Madison. A summary of this information, by each of the commercial service airports in Iowa as well as Border Airports and Outlying Hub Airports, can be found in **Appendix A**.

When an air traveler associated with one of Iowa's 99 counties chooses an airport for starting or ending their air travel, they consider many factors. The importance that a traveler places on these factors is influenced by whether or not the passenger is flying for business or they are flying for personal/leisure travel. While all travelers consider the proximity of their departure airport, business travelers are more likely to place a higher priority on convenience than do personal or leisure travelers. Ground access undoubtedly plays a role in the decision making process that a passenger goes through to select a departure airport.

While proximity and ground access do influence passenger choices, as this study's passenger and business surveys have revealed, other factors sometimes have a greater influence on determining where Iowa associated air travelers start their commercial airline trips. When a passenger selects a departure airport, schedule and frequency of service are important decision making factors. The most important factors influencing the selection of a departure airport, however, are the reliability of the airline service and airfare.



**Table 4-4
Airport Capture Rates and Demand, by Iowa County**

County	Departure Airport	County Capture Rate	County Demand
Adair	Des Moines	65%	1,500
	Omaha	30%	690
	Kansas City	5%	120
		<u>100%</u>	<u>2,300</u>
Adams	Des Moines	30%	360
	Omaha	50%	600
	Kansas City	20%	240
		<u>100%</u>	<u>1,200</u>
Allamakee	Minnesota (MSP/RST)	50%	4,000
	Wisconsin (LSE/MSN)	50%	4,000
		<u>100%</u>	<u>8,000</u>
Appanoose	Des Moines	80%	6,000
	Kansas City	20%	1,500
		<u>100%</u>	<u>7,500</u>
Audubon	Des Moines	35%	670
	Omaha	65%	1,240
		<u>100%</u>	<u>1,900</u>
Benton	Cedar Rapids	90%	20,160
	Chicago	10%	2,240
		<u>100%</u>	<u>22,400</u>
Black Hawk	Cedar Rapids	67%	69,950
	Des Moines	10%	10,440
	Waterloo	23%	24,010
		<u>100%</u>	<u>104,400</u>
Boone	Des Moines	75%	16,500
	Omaha	25%	5,500
		<u>100%</u>	<u>22,000</u>
Bremer	Cedar Rapids	80%	15,680
	Waterloo	10%	1,960
	Minnesota (MSP/RST)	10%	1,960
		<u>100%</u>	<u>19,600</u>



Table 4-4 (continued)
Airport Capture Rates and Demand, by Iowa County

County	Departure Airport	County Capture Rate	County Demand
Buchanan	Cedar Rapids	85%	14,790
	Moline	5%	870
	Waterloo	10%	1,740
		100%	17,400
Buena Vista	Des Moines	35%	5,850
	Sioux City	10%	1,670
	Omaha	40%	6,680
	Sioux Falls	15%	2,510
	100%	16,700	
Butler	Cedar Rapids	80%	6,560
	Waterloo	10%	820
	Minnesota (MSP/RST)	10%	820
		100%	8,200
Calhoun	Des Moines	65%	3,710
	Fort Dodge	5%	290
	Omaha	30%	1,710
		100%	5,700
Carroll	Des Moines	50%	8,700
	Omaha	50%	8,700
		100%	17,400
Cass	Des Moines	20%	1,560
	Omaha	60%	4,680
	Kansas City	20%	1,560
		100%	7,800
Cedar	Cedar Rapids	75%	7,500
	Moline	20%	2,000
	Chicago	5%	500
		100%	10,000
Cerro Gordo	Des Moines	20%	7,400
	Mason City	23%	8,510
	Minnesota (MSP/RST)	57%	21,090
		100%	37,000



Table 4-4 (continued)
Airport Capture Rates and Demand, by Iowa County

County	Departure Airport	County Capture Rate	County Demand
Cherokee	Des Moines	25%	1,680
	Sioux City	20%	1,340
	Omaha	40%	2,680
	Sioux Falls	15%	1,010
		100%	6,700
Chickasaw	Cedar Rapids	20%	1,380
	Waterloo	5%	350
	Minnesota (MSP/RST)	75%	5,180
		100%	6,900
Clarke	Des Moines	70%	1,890
	Omaha	15%	410
	Kansas City	15%	410
		100%	2,700
Clay	Sioux Falls	60%	5,520
	Minnesota (MSP/RST)	40%	3,680
		100%	9,200
Clayton	Dubuque	20%	2,000
	Minnesota (MSP/RST)	20%	2,000
	Wisconsin (LSE/MSN)	60%	6,000
		100%	10,000
Clinton	Cedar Rapids	25%	10,300
	Moline	70%	28,840
	Chicago	5%	2,060
		100%	41,200
Crawford	Omaha	100%	9,200
		100%	9,200
Dallas	Des Moines	90%	46,980
	Omaha	7%	3,650
	Kansas City	3%	1,570
		100%	52,200



Table 4-4 (continued)
Airport Capture Rates and Demand, by Iowa County

County	Departure Airport	County Capture Rate	County Demand
Davis	Cedar Rapids	35%	880
	Des Moines	55%	1,380
	St. Louis	10%	250
		100%	2,500
Decatur	Des Moines	55%	1,380
	Omaha	10%	250
	Kansas City	35%	880
		100%	2,500
Delaware	Cedar Rapids	70%	6,930
	Dubuque	20%	1,980
	Moline	5%	495
	Waterloo	5%	495
		100%	9,900
Des Moines	Burlington	11%	3,720
	Cedar Rapids	10%	3,380
	Moline	54%	18,250
	St. Louis	10%	3,380
	Peoria	15%	5,070
		100%	33,800
Dickinson	Sioux Falls	60%	5,460
	Minnesota (MSP/RST)	40%	3,640
		100%	9,100
Dubuque	Cedar Rapids	25%	19,000
	Dubuque	40%	30,400
	Moline	25%	19,000
	Chicago	10%	7,600
		100%	76,000
Emmet	Sioux Falls	60%	3,420
	Minnesota (MSP/RST)	40%	2,280
		100%	5,700
Fayette	Cedar Rapids	20%	3,520
	Minnesota (MSP/RST)	40%	7,040
	Wisconsin (LSE/MSN)	40%	7,040
		100%	17,600



Table 4-4 (continued)
Airport Capture Rates and Demand, by Iowa County

County	Departure Airport	County Capture Rate	County Demand
Floyd	Cedar Rapids	20%	1,800
	Mason City	10%	900
	Waterloo	10%	900
	Minnesota (MSP/RST)	60%	5,400
		100%	9,000
Franklin	Cedar Rapids	10%	590
	Des Moines	30%	1,770
	Mason City	10%	590
	Waterloo	10%	590
	Minnesota (MSP/RST)	40%	2,360
		100%	5,900
Fremont	Omaha	50%	1,150
	Kansas City	50%	1,150
		100%	2,300
Greene	Des Moines	80%	2,320
	Omaha	20%	580
		100%	2,900
Grundy	Cedar Rapids	70%	7,140
	Des Moines	20%	2,040
	Waterloo	10%	1,020
		100%	10,200
Guthrie	Des Moines	75%	8,700
	Omaha	25%	2,900
		100%	11,600
Hamilton	Des Moines	90%	8,010
	Fort Dodge	10%	890
		100%	8,900
Hancock	Des Moines	30%	1,920
	Mason City	10%	640
	Minnesota (MSP/RST)	60%	3,840
		100%	6,400



Table 4-4 (continued)
Airport Capture Rates and Demand, by Iowa County

County	Departure Airport	County Capture Rate	County Demand
Hardin	Cedar Rapids	15%	1,490
	Des Moines	75%	7,430
	Waterloo	10%	990
		100%	9,900
Harrison	Omaha	95%	12,450
	Kansas City	5%	660
		100%	13,100
Henry	Burlington	5%	840
	Cedar Rapids	30%	5,040
	Moline	40%	6,720
	St. Louis	10%	1,680
	Peoria	15%	2,520
		100%	16,800
Howard	Minnesota (MSP/RST)	100%	2,900
		100%	2,900
Humboldt	Des Moines	60%	1,740
	Fort Dodge	10%	290
	Omaha	30%	870
		100%	2,900
Ida	Des Moines	45%	990
	Sioux City	10%	220
	Omaha	45%	990
		100%	2,200
Iowa	Cedar Rapids	90%	7,920
	Chicago	10%	880
		100%	8,800
Jackson	Cedar Rapids	10%	1,680
	Dubuque	15%	2,520
	Moline	70%	11,760
	Chicago	5%	840
		100%	16,800



Table 4-4 (continued)
Airport Capture Rates and Demand, by Iowa County

County	Departure Airport	County Capture Rate	County Demand
Jasper	Des Moines	90%	28,080
	Kansas City	10%	3,120
		100%	31,200
Jefferson	Cedar Rapids	60%	5,220
	Des Moines	30%	2,610
	St. Louis	10%	870
		100%	8,700
Johnson	Cedar Rapids	80%	77,680
	Moline	15%	14,570
	Chicago	5%	4,860
		100%	97,100
Jones	Cedar Rapids	70%	11,900
	Dubuque	15%	2,550
	Moline	5%	850
	Chicago	10%	1,700
		100%	17,000
Keokuk	Cedar Rapids	50%	3,050
	Des Moines	50%	3,050
		100%	6,100
Kossuth	Des Moines	60%	5,280
	Minnesota (MSP/RST)	40%	3,520
		100%	8,800
Lee	Burlington	6%	1,820
	Cedar Rapids	39%	11,860
	Moline	30%	9,120
	St. Louis	15%	4,560
	Peoria	10%	3,040
		100%	30,400
Linn	Cedar Rapids	80%	132,000
	Moline	10%	16,500
	Chicago	10%	16,500
		100%	165,000



Table 4-4 (continued)
Airport Capture Rates and Demand, by Iowa County

County	Departure Airport	County Capture Rate	County Demand
Louisa	Cedar Rapids	50%	3,250
	Moline	50%	3,250
		100%	6,500
Lucas	Des Moines	75%	2,180
	Omaha	5%	150
	Kansas City	20%	580
		100%	2,900
Lyon	Omaha	30%	1,920
	Sioux Falls	50%	3,200
	Minnesota (MSP/RST)	20%	1,280
		100%	6,400
Madison	Des Moines	85%	13,010
	Omaha	8%	1,220
	Kansas City	7%	1,070
		100%	15,300
Mahaska	Des Moines	90%	16,650
	Kansas City	10%	1,850
		100%	18,500
Marion	Des Moines	90%	24,570
	Kansas City	10%	2,730
		100%	27,300
Marshall	Cedar Rapids	40%	13,080
	Des Moines	60%	19,620
		100%	32,700
Mills	Omaha	80%	10,080
	Kansas City	20%	2,520
		100%	12,600
Mitchell	Mason City	10%	600
	Minnesota (MSP/RST)	90%	5,400
		100%	6,000



Table 4-4 (continued)
Airport Capture Rates and Demand, by Iowa County

County	Departure Airport	County Capture Rate	County Demand
Monona	Sioux City	10%	280
	Omaha	90%	2,520
		100%	2,800
Monroe	Des Moines	90%	2,070
	Kansas City	10%	230
		100%	2,300
Montgomery	Omaha	80%	4,960
	Kansas City	20%	1,240
		100%	6,200
Muscatine	Cedar Rapids	30%	10,620
	Moline	60%	21,240
	Chicago	10%	3,540
		100%	35,400
O'Brien	Omaha	35%	2,770
	Sioux Falls	55%	4,350
	Minnesota (MSP/RST)	10%	790
		100%	7,900
Osceola	Sioux Falls	65%	1,300
	Minnesota (MSP/RST)	35%	700
		100%	2,000
Page	Omaha	50%	4,450
	Kansas City	50%	4,450
		100%	8,900
Palo Alto	Sioux Falls	60%	1,740
	Minnesota (MSP/RST)	40%	1,160
		100%	2,900
Plymouth	Sioux City	20%	4,140
	Omaha	45%	9,320
	Sioux Falls	25%	5,180
	Minnesota (MSP/RST)	10%	2,070
		100%	20,700



Table 4-4 (continued)
Airport Capture Rates and Demand, by Iowa County

County	Departure Airport	County Capture Rate	County Demand
Pocahontas	Des Moines	45%	1,040
	Fort Dodge	10%	230
	Omaha	45%	1,040
		100%	2,300
Polk	Des Moines	91%	539,990
	Omaha	5%	29,670
	Kansas City	4%	23,740
		100%	593,400
Pottawattamie	Omaha	90%	66,960
	Kansas City	10%	7,440
		100%	74,400
Poweshiek	Cedar Rapids	50%	5,200
	Des Moines	50%	5,200
		100%	10,400
Ringgold	Des Moines	55%	830
	Omaha	15%	230
	Kansas City	30%	450
		100%	1,500
Sac	Des Moines	50%	2,900
	Omaha	50%	2,900
		100%	5,800
Scott	Moline	95%	126,920
	Chicago	5%	6,680
		100%	133,600
Shelby	Omaha	100%	6,900
		100%	6,900
Sioux	Sioux City	10%	2,670
	Omaha	25%	6,680
	Sioux Falls	45%	12,020
	Minnesota (MSP/RST)	20%	5,340
		100%	26,700



Table 4-4 (continued)
Airport Capture Rates and Demand, by Iowa County

County	Departure Airport	County Capture Rate	County Demand
Story	Des Moines	85%	68,600
	Omaha	10%	8,070
	Kansas City	5%	4,040
		<u>100%</u>	<u>80,700</u>
Tama	Cedar Rapids	90%	8,820
	Des Moines	10%	980
		<u>100%</u>	<u>9,800</u>
Taylor	Des Moines	20%	380
	Omaha	50%	950
	Kansas City	30%	570
		<u>100%</u>	<u>1,900</u>
Union	Des Moines	75%	4,880
	Omaha	15%	980
	Kansas City	10%	650
		<u>100%</u>	<u>6,500</u>
Van Buren	Cedar Rapids	40%	920
	Des Moines	20%	460
	St. Louis	20%	460
	Peoria	20%	460
		<u>100%</u>	<u>2,300</u>
Wapello	Cedar Rapids	25%	7,450
	Des Moines	65%	19,370
	St. Louis	10%	2,980
		<u>100%</u>	<u>29,800</u>
Warren	Des Moines	85%	36,890
	Omaha	8%	3,470
	Kansas City	7%	3,040
		<u>100%</u>	<u>43,400</u>
Washington	Cedar Rapids	80%	14,240
	Moline	20%	3,560
		<u>100%</u>	<u>17,800</u>



Table 4-4 (continued)
Airport Capture Rates and Demand, by Iowa County

County	Departure Airport	County Capture Rate	County Demand
Wayne	Des Moines	65%	1,240
	Omaha	5%	100
	Kansas City	30%	570
		100%	1,900
Webster	Des Moines	65%	21,000
	Fort Dodge	15%	4,850
	Omaha	20%	6,460
		100%	32,300
Winnebago	Des Moines	20%	1,240
	Mason City	5%	310
	Minnesota (MSP/RST)	75%	4,650
		100%	6,200
Winneshiek	Minnesota (MSP/RST)	70%	12,320
	Wisconsin (LSE/MSN)	30%	5,280
		100%	17,600
Woodbury	Sioux City	16%	13,620
	Omaha	84%	71,480
		100%	85,100
Worth	Mason City	10%	230
	Minnesota (MSP/RST)	90%	2,070
		100%	2,300
Wright	Des Moines	79%	5,930
	Fort Dodge	6%	450
	Mason City	5%	380
	Minnesota (MSP/RST)	10%	750
		100%	7,500
TOTAL			2,517,000
Source: Wilbur Smith Associates			
Note: Demand may not sum to totals due to rounding			



MARKET AREA DEMAND BY AIRPORT

Exhibits 4-2 through 4-9 show the counties included in the primary market areas for each of the eight commercial airports in Iowa and the actual demand from each county that is currently being served by each of the respective airports in Iowa. Demand assignments shown in these exhibits approximate 2006 annual levels of enplaned passengers reported by each of the commercial airports in Iowa.

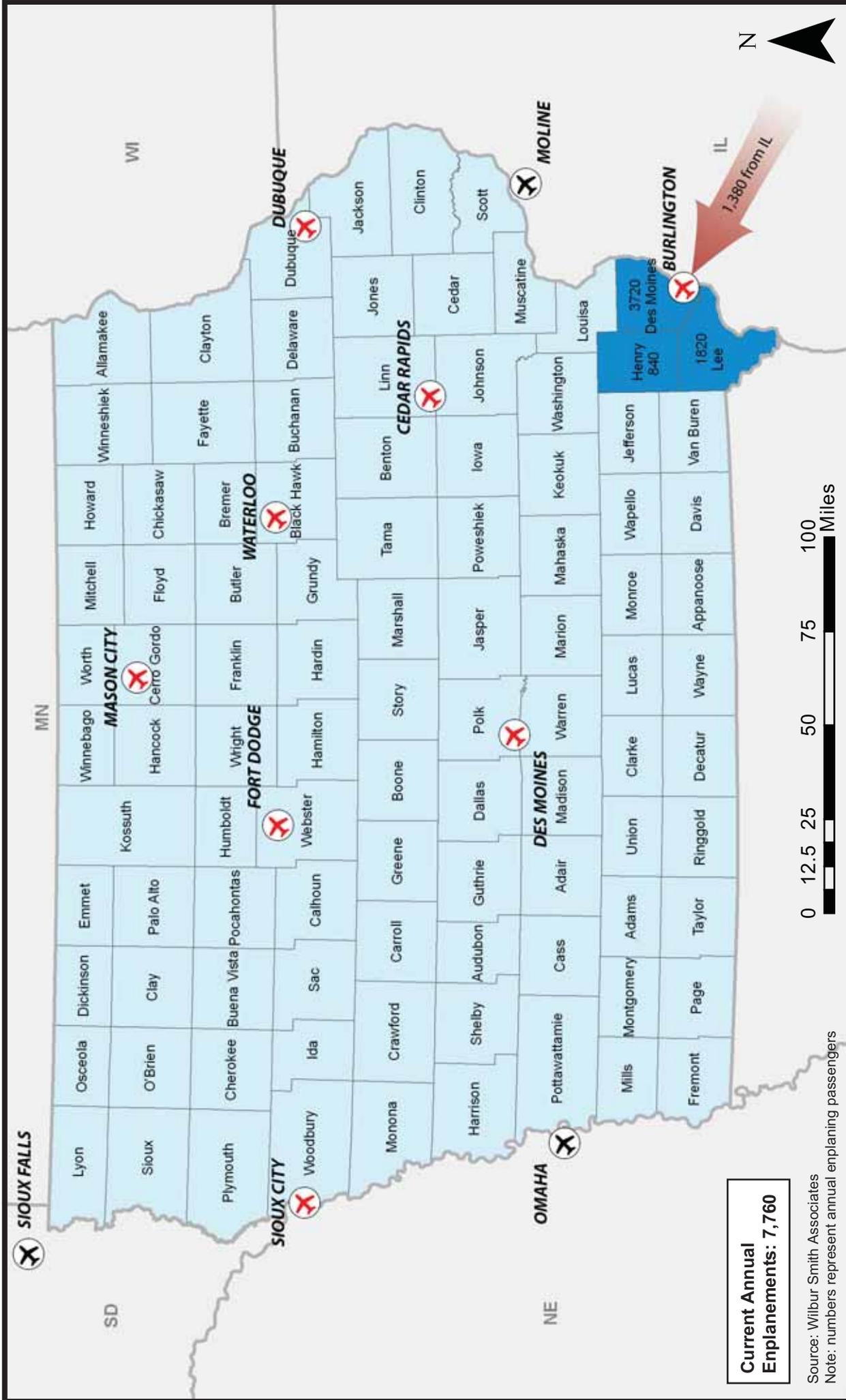


EXHIBIT 4-2: CURRENT MARKET AREA DEMAND
 Southeast Iowa Regional Airport
 Burlington, IA



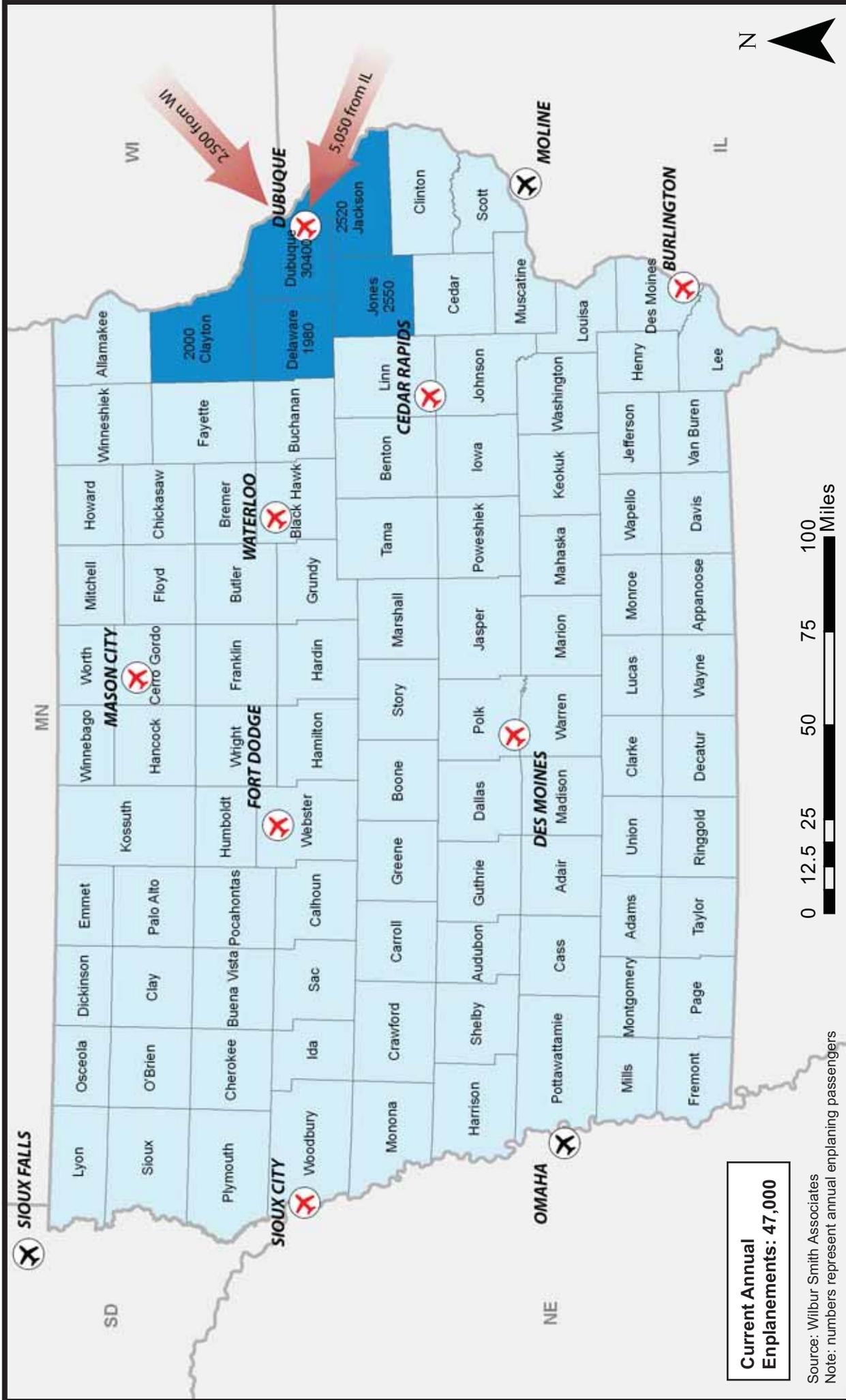


EXHIBIT 4-5: CURRENT MARKET AREA DEMAND
 Dubuque Regional Airport
 Dubuque, IA



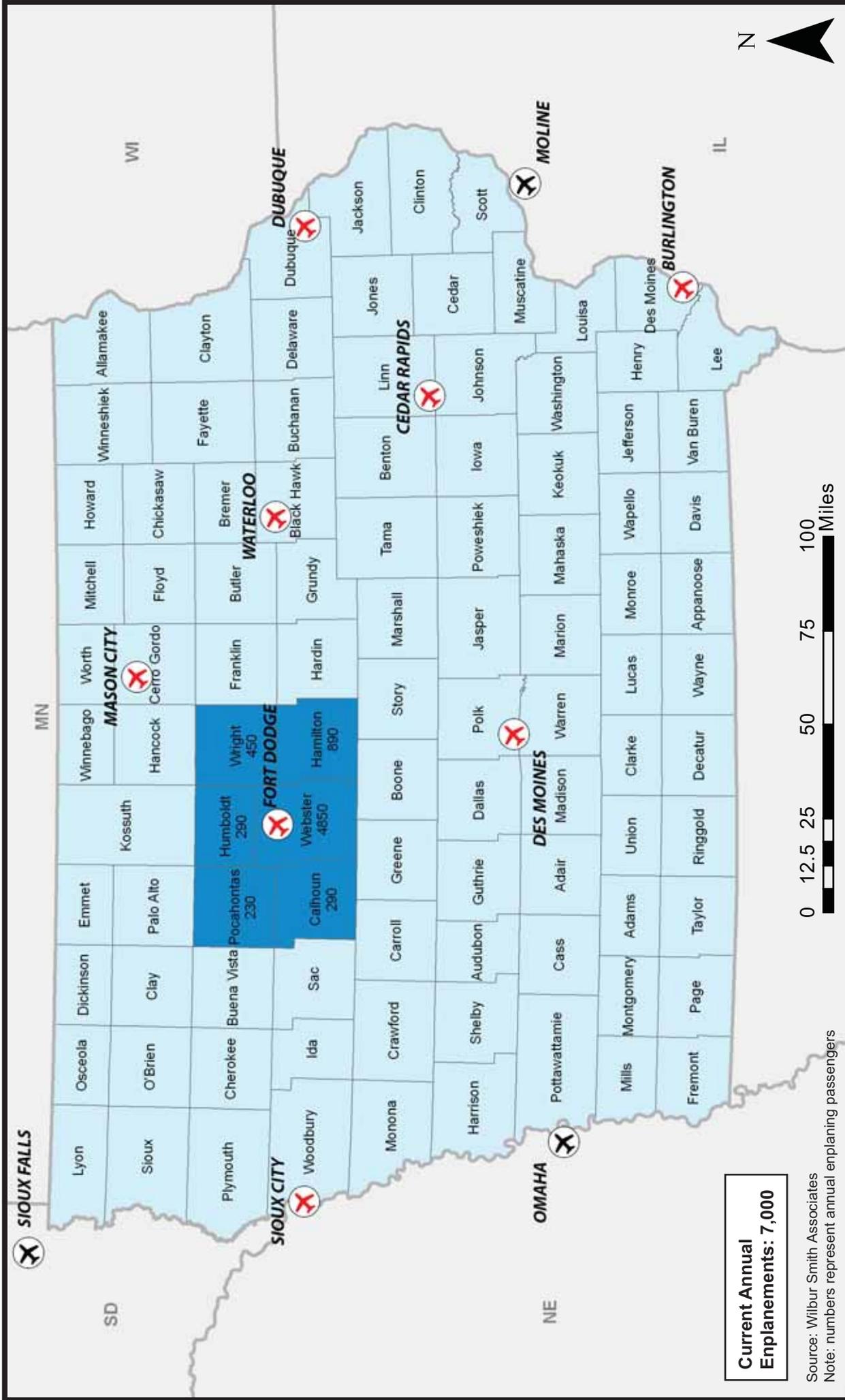


EXHIBIT 4-6: CURRENT MARKET AREA DEMAND
 Fort Dodge Regional Airport
 Fort Dodge, IA



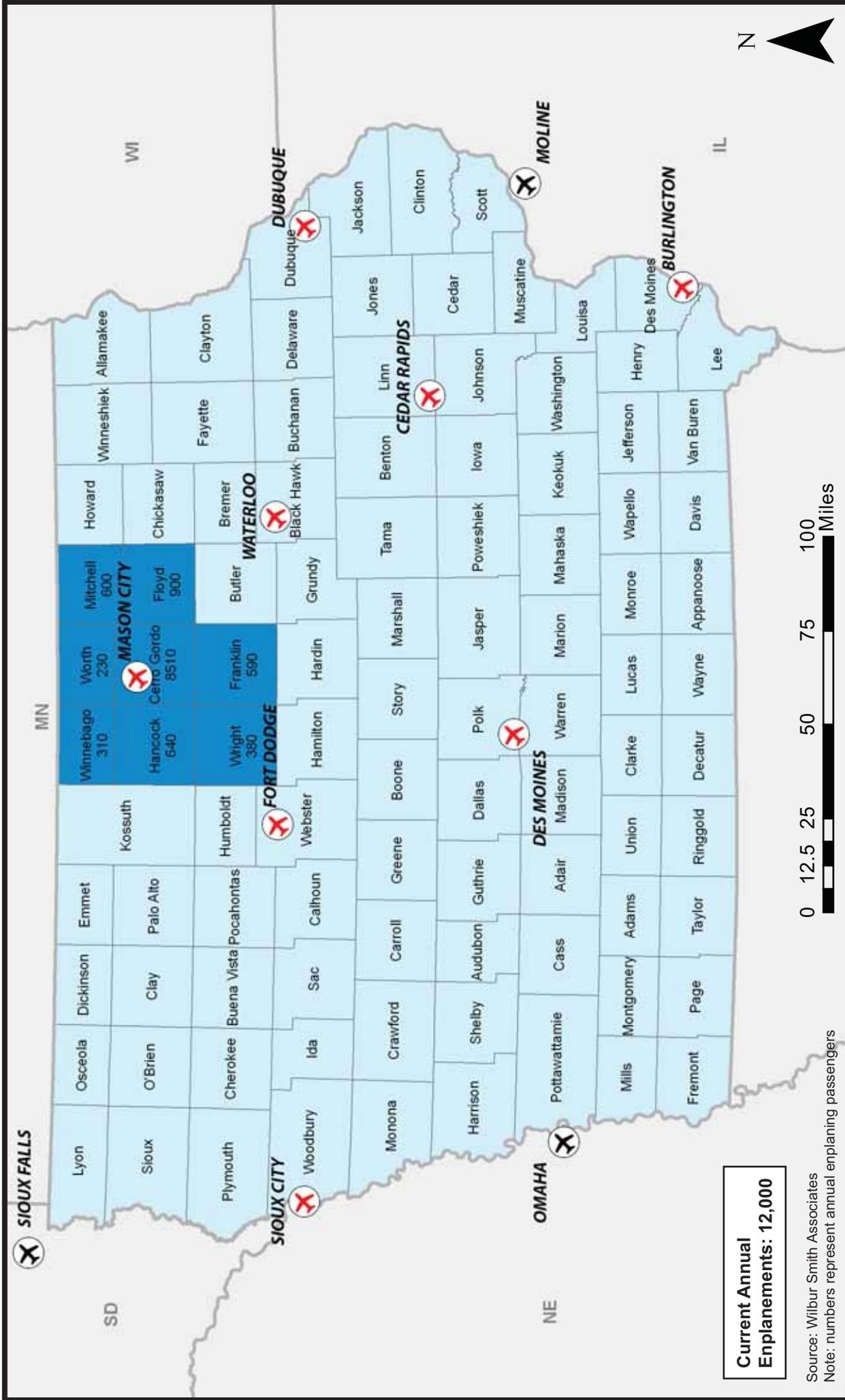
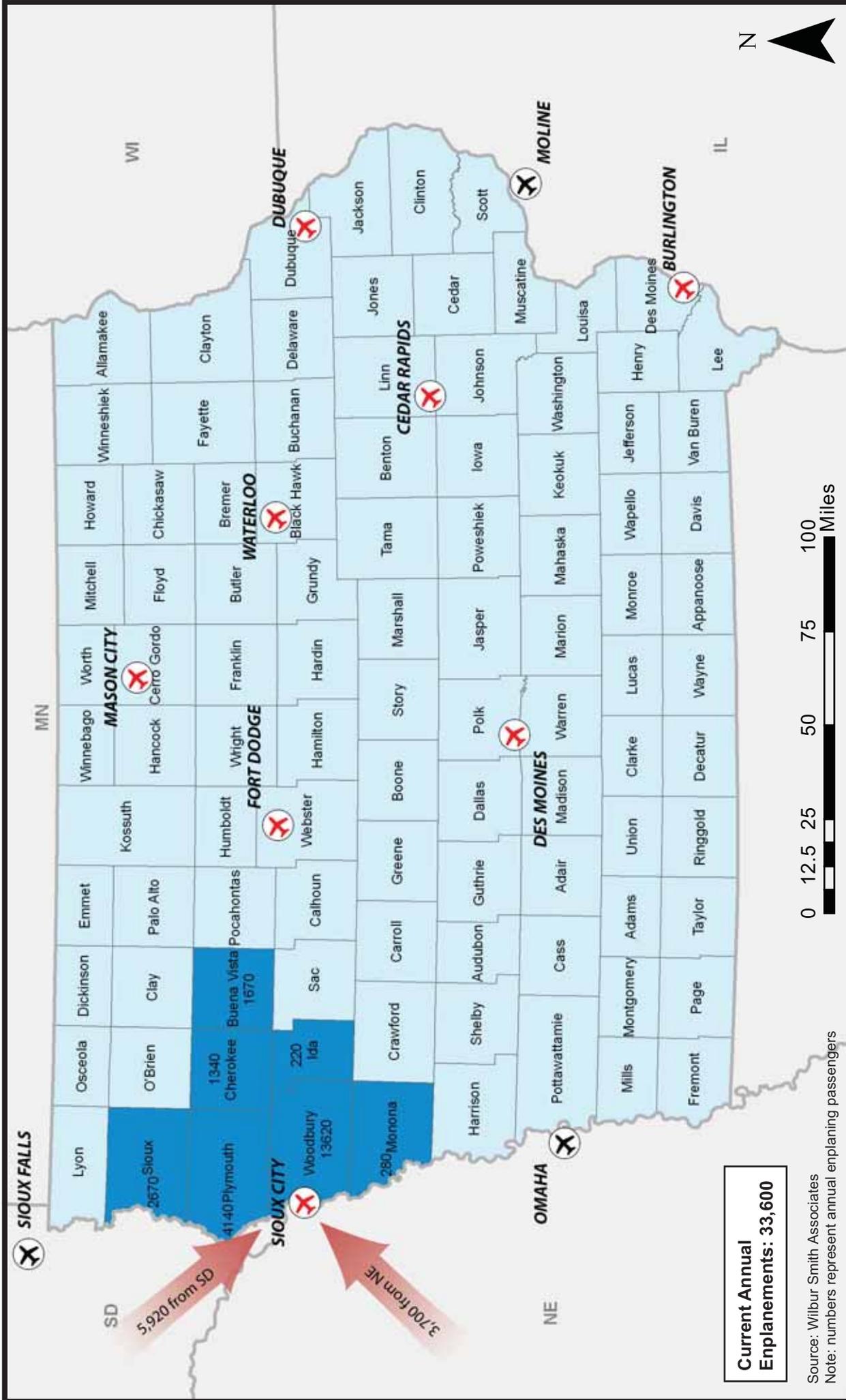


EXHIBIT 4-7: CURRENT MARKET AREA DEMAND
 Mason City Municipal Airport
 Mason City, IA





Current Annual Enplanements: 33,600

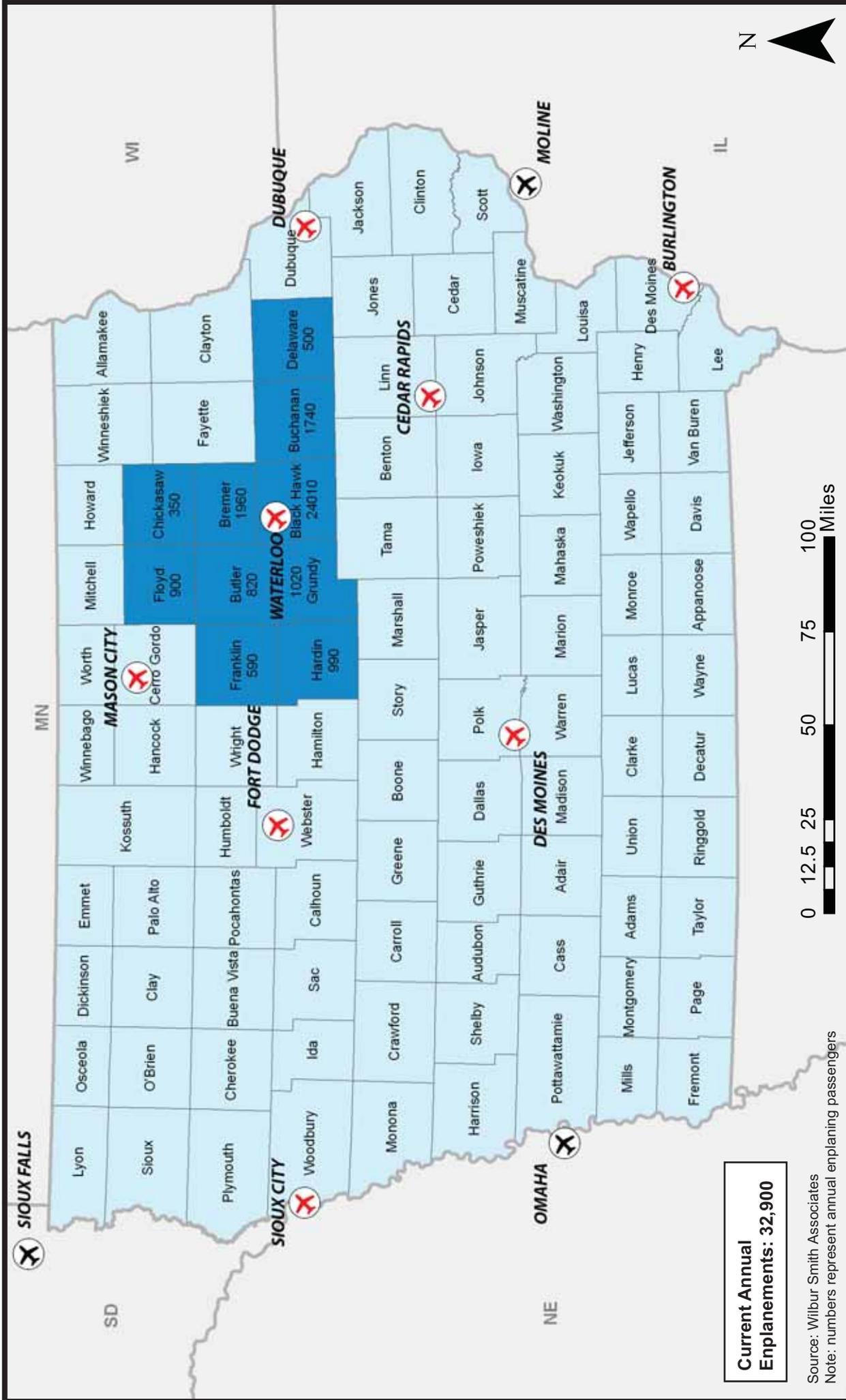
Source: Wilbur Smith Associates
 Note: numbers represent annual enplaning passengers



EXHIBIT 4-8: CURRENT MARKET AREA DEMAND

Sioux Gateway Airport
 Sioux City, IA





Current Annual Enplanements: 32,900

Source: Wilbur Smith Associates
 Note: numbers represent annual enplaning passengers

EXHIBIT 4-9: CURRENT MARKET AREA DEMAND

Waterloo Regional Airport
 Waterloo, IA





Market Area Summaries for Commercial Airports in Iowa

Burlington – Southeast Iowa Regional Airport (BRL)

The market area for Southeast Iowa Regional Airport consists primarily of three counties: Des Moines, Henry, and Lee (**Exhibit 4-2**). In addition, a small number of this airport's enplanements are drawn from Illinois. Des Moines County, where the airport is located, accounts for the majority of Southeast Iowa Regional's current enplanement demand. Based on this study's survey findings, the airport's primary market area has a radius of approximately 40 miles. The airport has moderate ground access from several U.S. and state highways, but does not have interstate highway access.

Despite the majority of Southeast Iowa Regional Airport's passengers coming from Des Moines County, the airport only captures an estimated 11 percent of the total annual air travel demand associated with that county. Study analysis reveals that many passengers in Southeast Iowa Regional Airport's market area also drive north to Quad City International Airport in Moline, IL. In fact, 54 percent of Des Moines County's demand appears to be attracted by this Border Airport. Quad City International also attracts passengers from Henry and Lee counties. Other airports thought to be drawing demand from counties in Burlington's market area are located in Cedar Rapids, St. Louis, and Peoria.

Over the last 10 years, service at Southeast Iowa Regional Airport has been reduced drastically. United Express pulled nonstop service between the airport and Chicago in early 2001. After American Airlines bought TWA and merged its flight operations in 2001, American reduced its hub operations at Lambert- St. Louis International Airport from 800 flights per day to 300 and replaced mainline service with regional jets by 2003. Today, flights from Southeast Iowa Regional Airport are limited to just a few per day to Lambert-St. Louis International Airport and Kansas City International Airport with significantly reduced connecting opportunities for local passengers than just five years ago.

Cedar Rapids – The Eastern Iowa Airport (CID)

The market area of The Eastern Iowa Airport is relatively large, consisting of 33 counties (**Exhibit 4-3**). Linn County, where Cedar Rapids is located, accounts for the largest percentage of the airport's demand, followed by Johnson and Black Hawk counties. The airport market area has an estimated radius of over 100 miles in some directions, reaching as far south as the State border and nearly to the Minnesota border to the north. According to study findings, The Eastern Iowa Airport draws some of its annual passenger demand from several counties located in market areas for the commercial airports that serve Waterloo, Dubuque, and Burlington. Ground access to The Eastern Iowa Airport is provided by I-80 and I-380.

Some airports draw demand from The Eastern Iowa Airport market area, but very few draw a significant number of travelers from this airport's primary market area. Study analysis shows that some demand from counties in this airport's market area is served by Quad City International Airport in Moline. Airports in Minnesota draw demand from the counties in the northern part of the airport's market area, and Des Moines International Airport draws demand from counties in the western part of the airport's market area. Airports in Chicago also draw smaller numbers of passengers from counties that are in the eastern part of the airport's market area. The Eastern Iowa Airport is served by five airlines that offer nonstop service to 10 destinations across the country. Thus, the number of



passengers associated with counties in The Eastern Iowa Airport market area that choose airports beyond the local market area is not as significant as airports in Iowa only served by a single carrier.

Des Moines – Des Moines International Airport (DSM)

Des Moines International Airport's market area covers a large portion of Iowa. Based on study findings, it appears this airport draws demand from 51 of Iowa's 99 counties (**Exhibit 4-4**). Des Moines International Airport draws more than half of its nearly one million annual enplanements from Polk County. Remaining demand comes from counties stretching from the north to the south of the State, as far west as Cherokee County and as far east as Jefferson and Van Buren counties. The market area's radius extends 150 miles in some directions. Des Moines International Airport can be accessed from the east and west by I-80 and from the north and south by I-35.

Des Moines International Airport and The Eastern Iowa Airport share passenger demand in the easternmost counties of the Des Moines International Airport market area. Kansas City International Airport also draws demand from counties in the southern part of the airport's market area, as does Eppley Airfield in Omaha from counties in the western most portion of the Des Moines International Airport market area. Smaller numbers of enplanements from counties in the Des Moines International Airport market area also occasionally use Lambert-St. Louis International and Minneapolis-St. Paul International. Des Moines International Airport serves a high percentage of the estimated annual passenger demand associated with counties in its primary market area. Airfares and nonstop service play a role in the decision of some passengers to drive to Eppley Airfield, Kansas City International Airport, and Minneapolis-St. Paul International Airport to begin their airline travel.

Dubuque – Dubuque Regional Airport (DBQ)

Counties in the primary market area for Dubuque Regional Airport are located along the northeastern border of Iowa; this airport also draws some passenger demand from parts of Wisconsin and Illinois (**Exhibit 4-5**). The airport's market area contains five Iowa counties, including Dubuque County which accounts for the largest number of the airport's enplanements. Dubuque Regional Airport is one of three airports in Iowa that draw demand from out of state; nearly 8,000 annual enplanements can be attributed to northern Illinois and southwestern Wisconsin. In all, the primary market area for this airport has a radius of approximately 75 miles. Although Dubuque Regional Airport is not near any interstate highways, it is accessible by several U.S. highways, including Routes 61, 151, and 20.

According to study findings, passengers from Iowa counties that are in the primary market area for Dubuque Regional Airport also use Quad City International Airport in Moline and the commercial airports in Chicago. Although Dubuque County accounts for the largest portion of Dubuque Regional Airport enplaned passengers, many passengers from this county also chose other airports for commercial air service. Many passengers from Jackson County choose to fly out of Quad City International Airport instead of Dubuque Regional Airport. Dubuque Regional Airport has only American Eagle service to Chicago-O'Hare. Greater levels of airline service at other airports cause some travelers in this airport's market area to choose other airports for their travel. Enplanements associated with counties in the Dubuque Regional Airport market area also use The Eastern Iowa Airport, as well as Minnesota and Wisconsin airports for their air travel.



Fort Dodge – Fort Dodge Regional Airport (FOD)

The primary market area for the Fort Dodge Regional Airport is located in north central Iowa; the market area consists of six counties directly around the airport (**Exhibit 4-6**). The key county in the airport's market area is Webster, from which nearly 5,500 of this airport's annual enplaned passengers originate. The market area is relatively small, stretching 50 miles from north to south and 90 miles from east to west. Ground access to the airport is provided primarily by US-169 and US-20.

Study findings show that passengers from the counties in the market area for Fort Dodge Regional Airport often use either Des Moines International Airport or Eppley Airfield in Omaha. Des Moines in particular draws a large number of travelers from counties that are in the Fort Dodge Regional Airport market area. Northwest Airlines partner, Mesaba, is the only carrier serving the airport. Mesaba provides service to Minneapolis-St. Paul International Airport via Mason City Municipal Airport.

Mason City – Mason City Municipal Airport (MCW)

The primary market area for Mason City Municipal Airport contains eight counties in north central Iowa (**Exhibit 4-7**). Cerro Gordo County accounts for the greatest number of Mason City Municipal Airport enplanements, accounting for approximately 8,500 passengers annually. The market area has a radius of approximately 50 miles. Ground access to Mason City Municipal Airport is provided primarily by I-35.

Passengers from counties in the Mason City Municipal Airport market area often choose to fly out of either Des Moines International Airport or Minnesota airports. Commercial airports in Minnesota draw over 20,000 passengers annually from Cerro Gordo County. Minnesota airports draw passenger demand from the Iowa counties of Hancock, Mitchell, and Winnebago. Des Moines International Airport also draws demand from Cerro Gordo County, as well as from other counties in this airport's market area. Northwest Airlines partner, Mesaba, offers nonstop service between Mason City and Minneapolis-St. Paul.

Sioux City – Sioux Gateway Airport (SUX)

Sioux Gateway Airport's market area consists of seven counties in northwestern Iowa. This airport also draws some of its annual passenger demand from nearby areas in South Dakota and Nebraska (**Exhibit 4-8**). The majority of Sioux Gateway's annual passenger demand is associated with Woodbury County. A notable percentage of this airport's annual passenger demand is also drawn from Plymouth County. This airport's primary market area has a radius of approximately 90 miles in some directions. Access to Sioux Gateway Airport is provided from the north and south by I-29 and from the east and west by US-20.

Eppley Airfield in Omaha and Sioux Falls Regional Airport also serve passengers from counties that are in the Sioux Gateway market area. Sioux Falls Regional Airport in South Dakota draws demand from both Plymouth and Sioux counties. An estimated 9,300 from Plymouth County, 6,600 from Sioux County, and nearly 70,000 from Woodbury where Sioux City is located, use Eppley Airfield annually. In addition, some passengers from counties in the Sioux Gateway Airport market area use Des Moines International Airport and, to a lesser extent, Minneapolis-St. Paul International to begin



their airline trips. Sioux Gateway Airport has nonstop service to Minneapolis-St. Paul by Northwest Airlines partner, Mesaba and recently added nonstop service to Denver by Frontier Airlines.

Waterloo – Waterloo Regional Airport (ALO)

The primary market area for Waterloo Regional Airport consists of 10 counties in north central Iowa (**Exhibit 4-9**). By far, the majority of this airport's annual demand comes from Black Hawk County, where the airport is located. Waterloo Regional Airport attracts over 26,000 of its 35,000 annual enplanements from Black Hawk County. The airport's primary market area stretches nearly 75 miles from the airport in certain directions and only 25 miles in others. This is largely due to the nature of the airport's ground access, provided from the east and west by US-20 and from the north by State Routes 218 and 63.

Counties that are in the primary market area for Waterloo Regional Airport are also in proximity to other commercial airports in Iowa. Much of the demand associated with counties in the primary market area for Waterloo Regional Airport is attracted by either The Eastern Iowa Airport or Des Moines International Airport. Both draw enplanements from Black Hawk County, where Waterloo Regional Airport is located. The Eastern Iowa Airport also draws enplanements from Bremer, Buchanan, Butler, Delaware, and Grundy counties. Some passengers from counties in this airport's market area also reportedly use the commercial airports in Minnesota. Northwest Airlines partners, Mesaba and Pinnacle, offer nonstop service between Waterloo and Minneapolis-St. Paul.



IOWA DEMAND UTILIZING BORDER AND OUTLYING HUB AIRPORTS

In the case of three of the eight commercial airports in Iowa, the study analysis has shown that some of their current annual demand is attracted from areas beyond the State. This study estimates that, annually, approximately 18,550 enplanements at commercial service airports in Iowa are from neighboring states. Commercial airports in Iowa that attract portions of the annual passenger demand from neighboring states include Southeast Iowa Regional, Dubuque Regional, and Sioux Gateway airports.

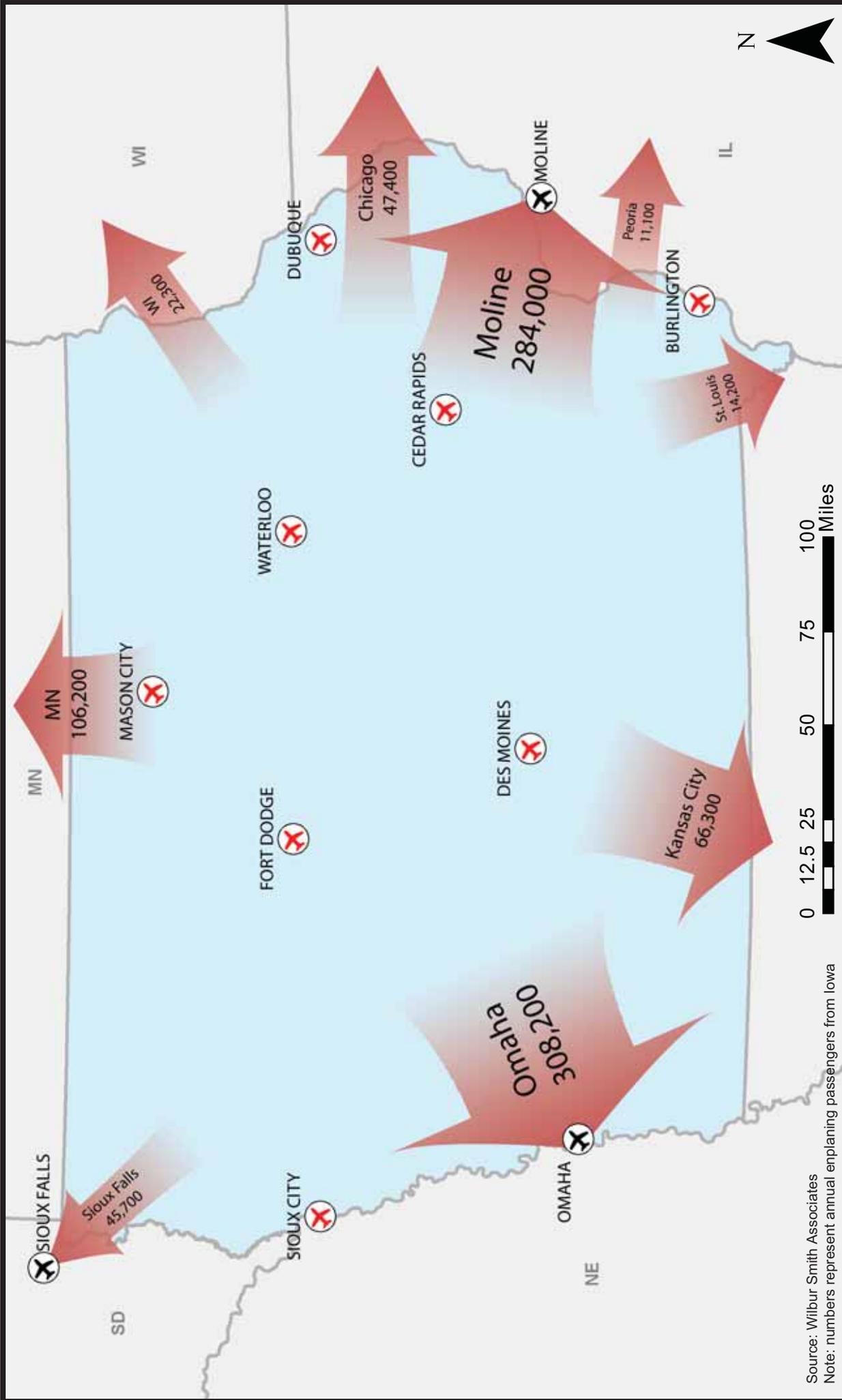
Analysis completed thus far in this study has shown that over 905,000 annual airline trips associated with the 99 counties in Iowa are now served by commercial airports beyond the State. For some Iowa counties, commercial airports in Sioux Falls (South Dakota), Omaha (Nebraska), and Moline (Illinois) are the closest airports. When travelers associated with an Iowa county use one of the Border Airports that is actually their closest airport, this utilization will not be classified as passenger “leakage,” since the traveler is selecting the most convenient commercial airport. Estimated flows of passenger demand between Iowa and out-of-state airports are shown in **Table 4-5**.

Table 4-5
Flows of Airline Trips Into and Out of Iowa
(Based on 2006 data)

Out-of-State Resident Usage of Airports in Iowa		Iowa Resident Usage Border and Outlying Hub Airports	
Airport in Iowa	Originations From Out-of-State	Border and Outlying Hub Airport	Originations From Iowa
Burlington	1,380	Moline, IL	283,940
Dubuque	7,550	Omaha, NE	308,170
Sioux City	9,620	Sioux Falls, SD	45,690
		Chicago, IL	47,390
		Kansas City, MO	66,350
		Peoria, IL	11,090
		St. Louis, MO	14,180
		Minnesota (Rochester/Minneapolis)	106,240
		Wisconsin (La Crosse/Madison)	22,320
Total Airline Trips Served by Commercial Airports in Iowa	18,550	Iowa Associated Airline Trips Served at Border and Outlying Hub Airports	905,360

Source: Wilbur Smith Associates

Iowa associated air travel demand utilizing out-of-state airports is graphically depicted in **Exhibit 4-10**. The majority (64 percent) of the annual out-of-state usage occurs at Border Airports at Quad City International Airport and Eppley Airfield in Omaha. **Exhibits 4-11** through **4-19** depict demand associated with various Iowa counties utilizing Border and Outlying Hub airports. Further analysis will be undertaken to identify what portion of this demand constitutes actual passenger leakage from the market areas of commercial service airports in Iowa. If travelers associated with an Iowa county are selecting the closest commercial airport, even though it may be in another state, this selection will not be classified as passenger leakage in subsequent analysis.



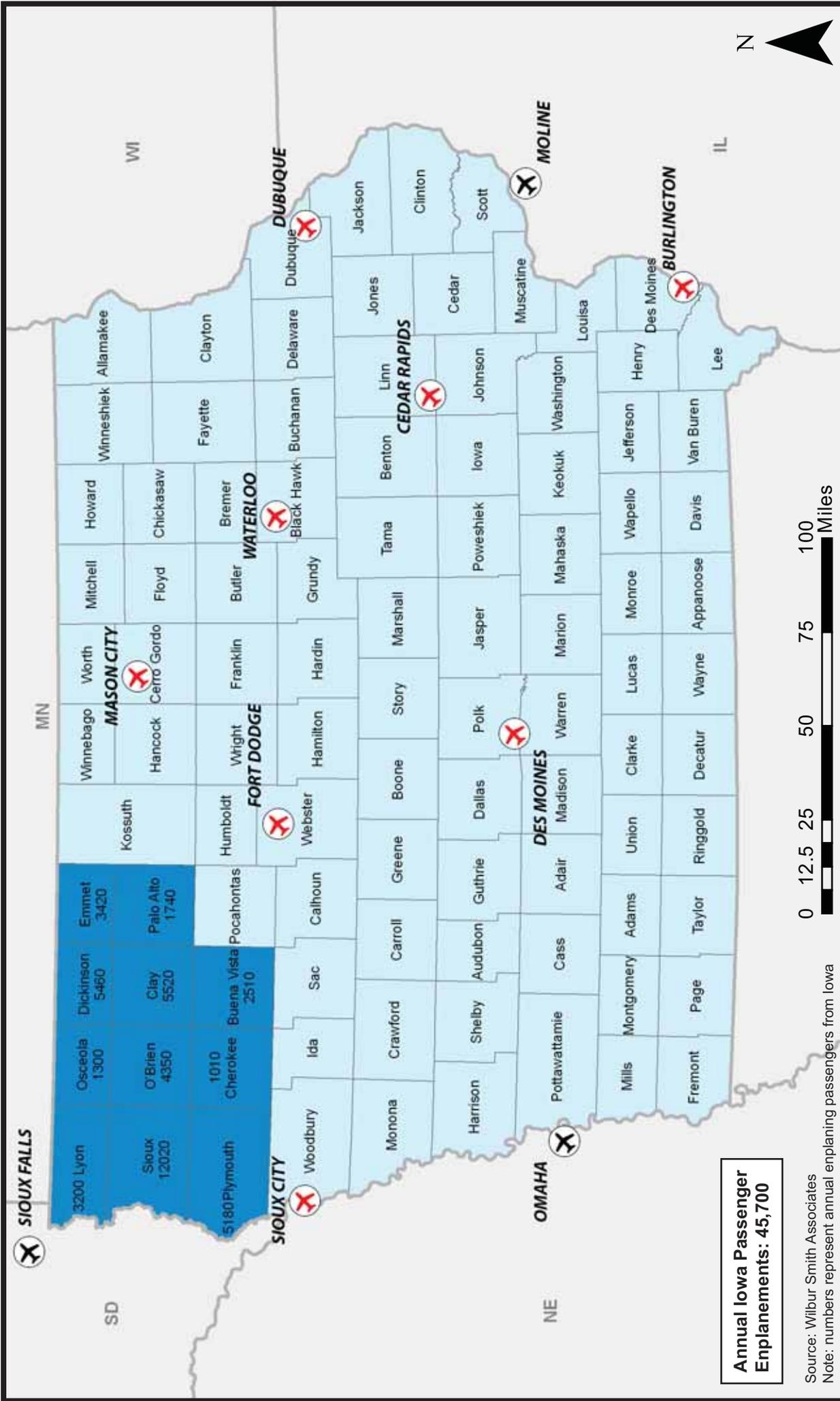
Source: Wilbur Smith Associates
 Note: numbers represent annual enplaning passengers from Iowa



EXHIBIT 4-10: IOWA PASSENGERS UTILIZING BORDER AND OUTLYING HUB AIRPORTS

Annual Enplanements at Airports in Iowa: 1,630,000
 Estimated Annual Iowa Usage of Border and Outlying Hub Airports: 905,500





Annual Iowa Passenger Enplanements: 45,700

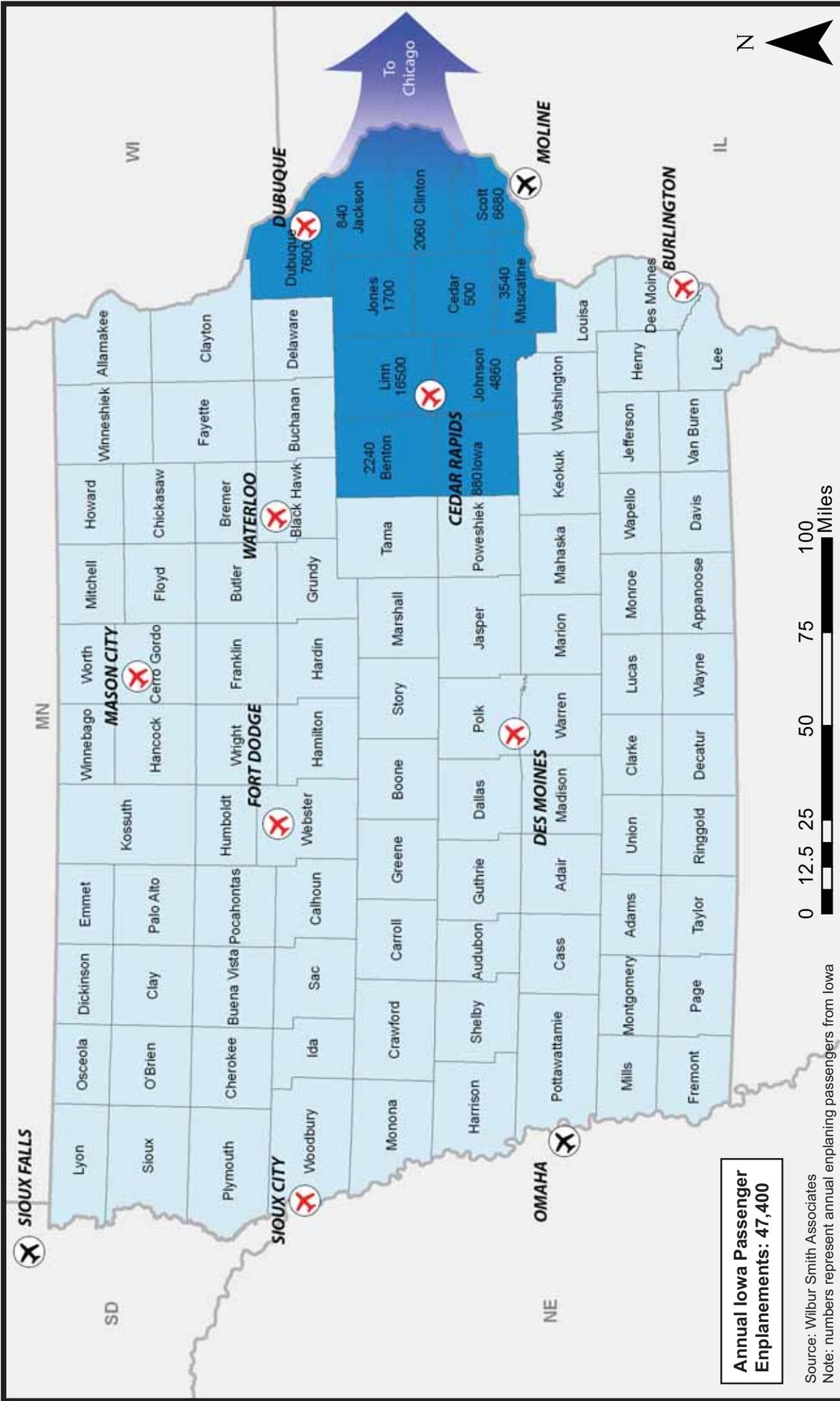
Source: Wilbur Smith Associates
 Note: numbers represent annual enplaning passengers from Iowa



EXHIBIT 4-13: ENPLANEMENTS GENERATED BY IOWA RESIDENTS

Sioux Falls Regional Airport
 Sioux Falls, SD



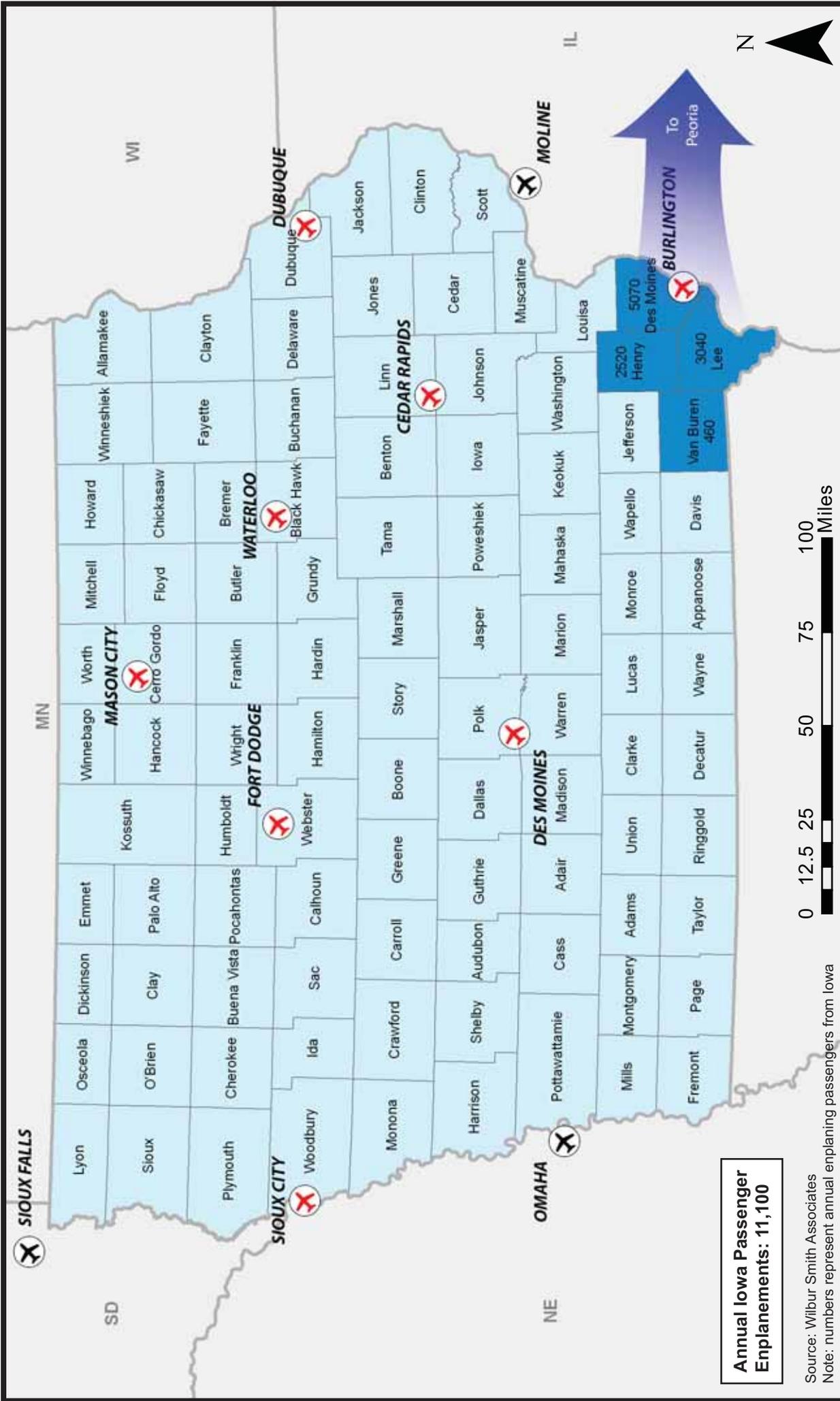


Annual Iowa Passenger Enplanements: 47,400

Source: Wilbur Smith Associates
 Note: numbers represent annual enplaning passengers from Iowa

EXHIBIT 4-14: ENPLANEMENTS GENERATED BY IOWA RESIDENTS
 Chicago O'Hare International & Chicago Midway Airports
 Chicago, IL



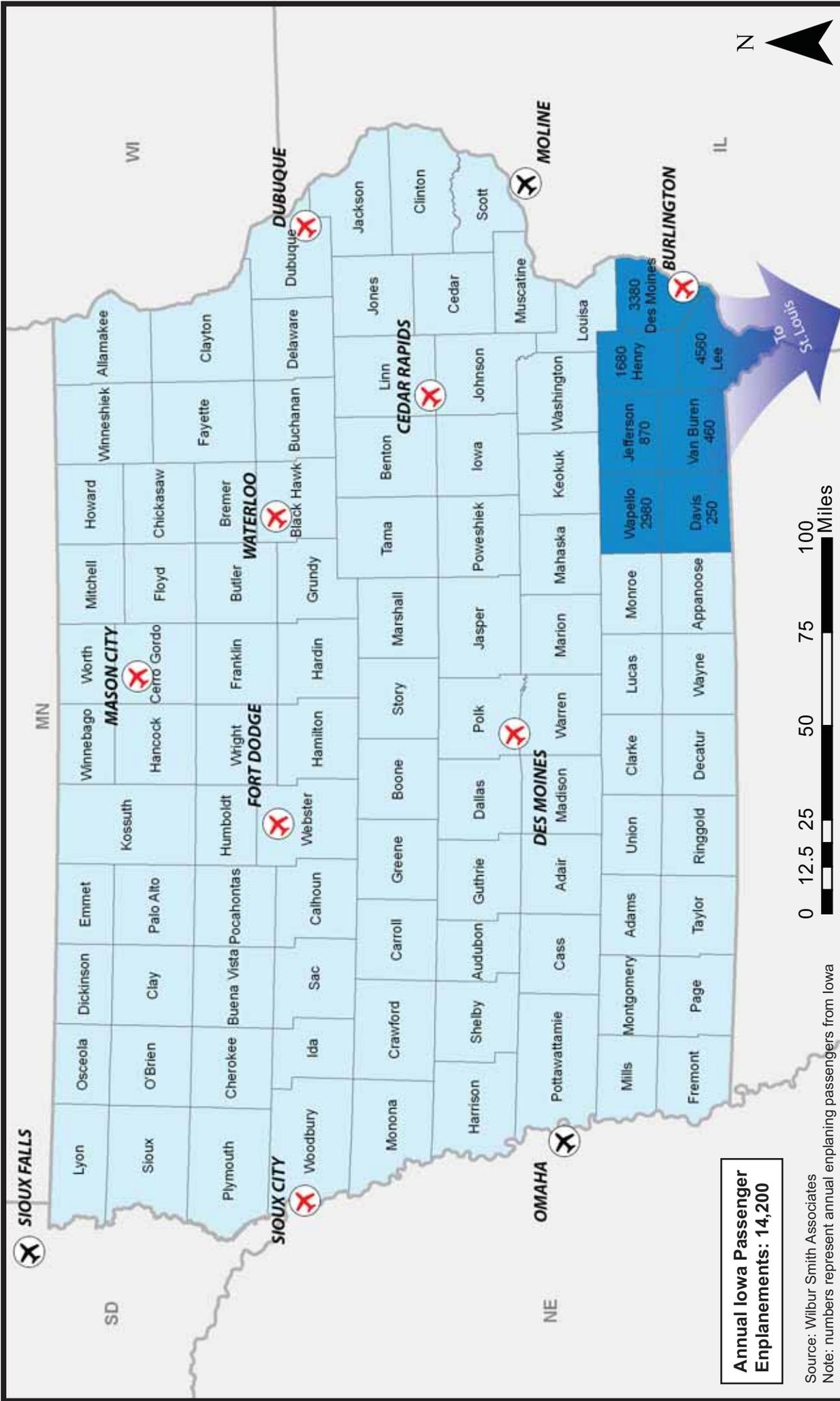


Annual Iowa Passenger Enplanements: 11,100

Source: Wilbur Smith Associates
 Note: numbers represent annual enplaning passengers from Iowa

EXHIBIT 4-16: ENPLANEMENTS GENERATED BY IOWA RESIDENTS
 Greater Peoria Regional Airport
 Peoria, IL





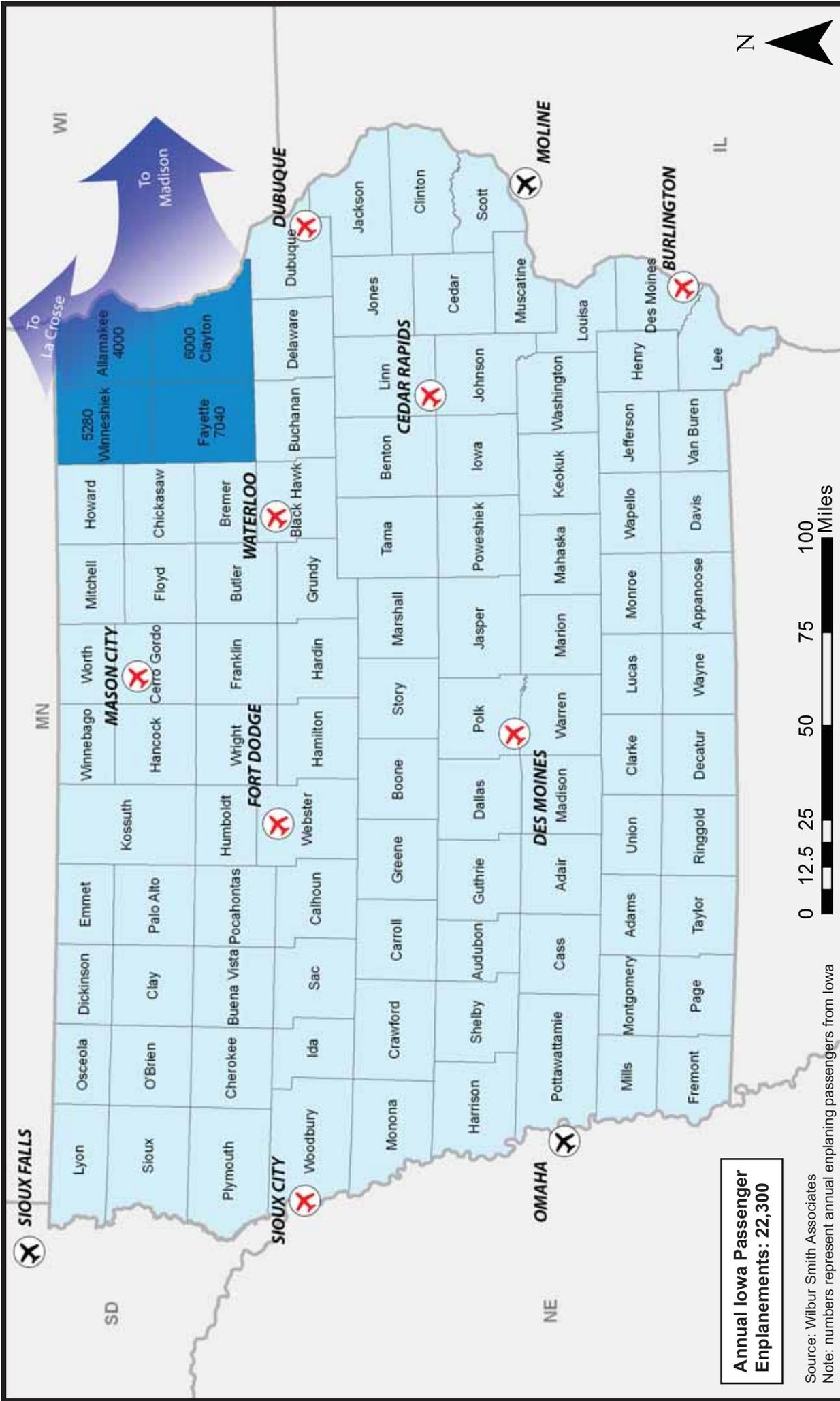
Annual Iowa Passenger Enplanements: 14,200

Source: Wilbur Smith Associates
 Note: numbers represent annual enplaning passengers from Iowa

EXHIBIT 4-17: ENPLANEMENTS GENERATED BY IOWA RESIDENTS

Lambert - St. Louis International Airport
 St. Louis, MO





Annual Iowa Passenger Enplanements: 22,300

Source: Wilbur Smith Associates
 Note: numbers represent annual enplaning passengers from Iowa

EXHIBIT 4-19: ENPLANEMENTS GENERATED BY IOWA RESIDENTS
 Dane County Regional and La Crosse Municipal Airports
Madison and La Crosse, WI





Iowa Resident Usage of Border and Outlying Hub Airports

Moline, IL – Quad City International Airport (MLI)

Quad City International Airport is located in Moline, Illinois, just six miles from the Iowa-Illinois border. Quad City International Airport is accessible from Iowa by I-80 to the west and US-61 to the north and south. Based on study findings, this airport draws passengers from counties that are 100 miles into Iowa, at certain points. Quad City International Airport draws passengers from 16 counties in eastern Iowa. This airport draws demand from counties located within the Dubuque, Cedar Rapids, and Burlington airport market areas (**Exhibit 4-11**). Iowa associated demand in Scott County is served almost exclusively by Quad City International Airport. In all, Quad City International Airport serves an estimated 284,000 enplanements from Iowa annually.

Quad City International Airport is served by five airlines: AirTran, American Eagle, Delta, Northwest, and United. These airlines provide nonstop service from Moline to eight airline hubs. Nearly all daily flights are provided on jet or regional jet aircraft. AirTran, a low cost carrier, provides nonstop service from Moline to Atlanta and Moline to Orlando. The availability of this low cost carrier (LCC) service has lowered many of the fares offered to other markets. This availability of LCC service contributes to the level of enplanements that this airport draws from Iowa.

The next steps in this study will identify what portion of the 284,000 annual enplanements attracted from Iowa by this Border Airport should be considered leakage.

Omaha, NE - Eppley Airfield (OMA)

Eppley Airfield in Omaha is located across the river from Council Bluffs, Iowa, less than a 5-mile drive. According to survey findings, air travelers from Iowa also drive as far as 250 miles to begin their airline travel from this Border Airport. This airport is accessible from Iowa by I-80 from the east and by I-29 from the north and south. It is estimated that Eppley Airfield draws enplanements from 42 Iowa counties, including several that are also in the market areas for Sioux Gateway, Des Moines International, and Fort Dodge Regional airports (**Exhibit 4-12**). Nearly all of the demand associated with the Iowa counties of Crawford and Shelby is served at Eppley Airfield. At least 80 percent of the demand associated with the Iowa counties of Harrison, Mills, Monona, Montgomery, Pottawattamie, and Woodbury Counties is now served by Eppley Airfield. This airport serves a total of over 308,000 Iowa-generated enplanements annually.

Commercial service at Eppley Airfield is provided by 10 airlines, most of which are major carriers. These airlines provide nonstop service to 18 locations across the country, as far west as Las Vegas and as far east as New York. Low cost carrier, Southwest Airlines, provides nonstop service between Omaha and Chicago Midway, St. Louis, Las Vegas, and Phoenix. Eppley Airfield's large draw of Iowa demand can be attributed to lower airfares, its high level of service, and easy accessibility from many Iowa counties.

The next steps in this study will identify what portion of the 308,000 annual enplanements attracted from Iowa by this Border Airport should be considered leakage.



Sioux Falls, SD – Sioux Falls Regional Airport (FSD)

Sioux Falls Regional Airport in South Dakota is located directly west from the northwest corner of Iowa, less than a 15 mile drive from the State border. The Sioux Falls Regional Airport draws passengers as far south and east as Buena Vista County in Iowa (100 miles away). The airport is accessible from Iowa by I-29 to the south, I-90 through southern Minnesota, or by US-18. Sioux Falls Regional Airport appears to draw demand from 11 Iowa counties; many of these same counties are in the market area for Sioux Gateway Airport (**Exhibit 4-13**). This study's analysis estimates that Sioux Falls Regional Airport serves approximately 46,000 Iowa-generated enplanements annually.

Sioux Falls Regional Airport is served by six airlines, including Delta, United, and Northwest. The airport offers nonstop service to six locations, as far west as Las Vegas and as far east as Orlando. The airport's proximity to Iowa, its moderate level of service, and lack of other nearby airports account for Iowa passenger's utilizing this airport.

In some cases the Sioux Falls Regional Airport is the closest commercial airport to some counties in Iowa. The next steps in this study will identify what portion of the 46,000 annual enplanements attracted from Iowa by this Border Airport should be considered leakage.

Chicago, IL – Chicago O'Hare International Airport (ORD) and Chicago Midway (MDW)

Chicago is located approximately 140 miles due east of the Iowa border. The Chicago metropolitan area is accessible to Iowa by I-80, I-88, and US-20 to I-90. Study findings show that Chicago airports (Chicago O'Hare International Airport and Chicago Midway Airport) draw passenger enplanements from Iowa. In total, it appears that Chicago airports draw demand from at least 11 Iowa counties (**Exhibit 4-14**). Much of the demand originating in Iowa using Chicago airports is part of the Dubuque Regional Airport and/or The Eastern Iowa Airport market areas. In total, Chicago airports draw approximately 47,000 Iowa enplanements each year.

Chicago O'Hare International Airport is one of the largest airports in the world. It is served by 42 airlines and has nonstop service to over 200 destinations worldwide. Chicago Midway Airport acts as a supporting airport to Chicago O'Hare International Airport but still offers substantial service. Chicago Midway Airport is served by 10 airlines, including several low cost carriers; these carriers offer nonstop service to 58 destinations. The depth of service offered by these two airports is undoubtedly what causes Iowa residents to drive to Chicago. Exceptional nonstop service to destinations throughout the U.S., direct international flights, and a significant low cost carrier service at Chicago Midway Airport all combine to contribute to Iowa associated passengers driving to the Chicago area airports.

Given the distance and the proximity of the two airports in the Chicago metropolitan area, all of the 47,000 annual enplanements that leave Iowa to use these airports can be classified as leakage. Subsequent steps in this study will determine what portion of this demand, if any, might be served by one or more of the eight commercial airports in Iowa.



Kansas City, MO – Kansas City International Airport (MCI)

Kansas City International Airport is located approximately 100 miles south of the southwest corner of Iowa. It is accessible from Iowa by I-35 and I-29. According to study findings, some Iowa associated passengers drive an estimated 200 miles to begin their trip from this Outlying Hub Airport. In total, Kansas City International Airport draws demand from 26 Iowa counties, including several in the Des Moines International Airport market area (**Exhibit 4-15**). Approximately 66,000 Iowa-generated enplanements drive to Kansas City International Airport each year to begin their airline trips. All of this demand can be classified as leakage.

Kansas City International Airport is served by 12 airlines, including several major airlines. The airport offers nonstop service to 58 destinations throughout the U.S., Canada, and Mexico. Leakage from Iowa to Kansas City International Airport can be attributed to accessibility from southern Iowa, the number of nonstop destinations served from this airport, and airfares. Subsequent steps in this study will help to determine what portion of the 66,000 annual enplanements that now leave Iowa to use this Outlying Hub Airport can be retained.

Peoria, IL – Greater Peoria Regional Airport (PIA)

Greater Peoria Regional Airport is located approximately 100 miles east of Burlington, Iowa. It is accessible from Iowa by either I-74 to the northwest or by US-34 to I-74 from the west. Study findings show that Greater Peoria Regional Airport is drawing demand from four counties in Iowa (**Exhibit 4-16**). This creates leakage from the Southeast Iowa Regional and The Eastern Iowa airport market areas. In all, just over 11,000 passengers originating in Iowa counties use Greater Peoria Regional Airport each year.

Greater Peoria Regional Airport is served by five airlines: Allegiant, American Eagle, Delta, Northwest, and United, offering nonstop service to six destinations. Residents of Iowa most likely drive to Greater Peoria Regional Airport to begin airline trips based on its proximity. The next steps in this study will identify what portion of the 11,000 annual enplanements attracted from Iowa by this airport should be considered leakage.

St. Louis, MO – Lambert–St. Louis International Airport (STL)

Lambert-St. Louis International Airport is located over 150 miles southeast of the southeast corner of Iowa. The airport is accessible from Iowa via US-61 from the north or I-35 south to I-70 east. Lambert-St. Louis International Airport draws passengers from several counties in southeastern Iowa. These counties are also in the market area for The Eastern Iowa Airport, Des Moines International, and Southeast Iowa Regional airports (**Exhibit 4-17**). In all, it is estimated that Lambert-St. Louis International Airport draws approximately 14,000 enplanements per year from counties in Iowa.

Although the level of nonstop service offered at Lambert-St. Louis International Airport has been significantly reduced since American Airlines merger with TWA in 2001, the airport is still served by 17 airlines offering nonstop service to nearly 70 destinations. Like service at Chicago O'Hare International Airport, the options at Lambert-St. Louis International Airport are undoubtedly what drive Iowa residents to make the long commute to initiate travel.



Given the proximity of this airport to Iowa, all of the 14,000 annual enplanements that leave Iowa to use Lambert-St. Louis International Airport can be classified as leakage. Subsequent steps in this study will determine what portion of this demand, if any, might be served by one or more of the eight commercial airports in Iowa.

Minnesota Airports – Minneapolis-St. Paul International Airport (MSP) and Rochester International Airport (RST)

Minneapolis-St. Paul International Airport is located 100 miles north of the Iowa-Minnesota border; this airport is accessible to Iowa residents via I-35. Rochester International Airport is located approximately 30 miles north of the Iowa-Minnesota border and is accessible by US-63, or by I-35 to I-90. The combined market area for these two Minnesota airports stretches across the northern part of Iowa and as far south as 80 miles into Iowa. Together, the two airports draw demand from a total of 26 counties in northern Iowa, including counties that are also located in the market areas for airports in Iowa that serve Cedar Rapids, Waterloo, Mason City, Des Moines, Fort Dodge, and Sioux City (**Exhibit 4-18**). Annually, Minneapolis-St. Paul International and Rochester International airports together draw over 106,000 enplanements from Iowa.

Minneapolis-St. Paul International Airport is served by 21 airlines, offering nonstop service to 131 destinations, 14 of which are international. The level of service and destination options cause Iowa residents to make the commute to start air travel. Rochester International Airport is served by Sun Country and American Airlines, and has nonstop service to four destinations. The easy commute from northern Iowa makes Rochester International Airport a viable alternative for Iowa air travelers in this part of the State.

As with some of the other Border airports, in some cases Rochester International Airport is the closest commercial airport to some counties in Iowa. Howard, Mitchell, and Worth counties are all in close proximity to this Border Airport. The next steps in this study will identify what portion of the 106,000 annual enplanements attracted from Iowa by Rochester International and Minneapolis-St. Paul International airports should be considered leakage.

Wisconsin Airports – Dane County Regional Airport (MSN) and La Crosse Municipal Airport (LSE)

Dane County Regional Airport, in Madison, Wisconsin, is located approximately 100 miles east of northern Iowa. The airport is accessible from Iowa by US-18 from the west or by US-151 to US-18 from Dubuque. La Crosse Municipal Airport is located 30 miles north of the northeast corner of Iowa, accessible by SR-35 or US-61 from the south. Together, airports at La Crosse and Madison attract demand associated with four counties in northeastern Iowa. These counties are included in the market areas for The Eastern Iowa Airport and Dubuque Regional airports (**Exhibit 4-19**). Annually, Wisconsin airports draw over 22,000 enplanements from counties in Iowa.

Dane County Regional Airport is served by six airlines that offer nonstop flights to 15 destinations in the U.S., as far west as Denver and as far east as New York. Use of Dane County Regional Airport can likely be attributed to these service options and the airport's proximity to some counties in Iowa. La Crosse Municipal Airport is served by Northwest and American Airlines and offers flights to Minneapolis-St. Paul International Airport and Chicago O'Hare International Airport.

The next steps in this study will identify what portion of the 22,000 annual enplanements attracted from Iowa by these two commercial airports in Wisconsin should be considered leakage.



SUMMARY

According to the records of the commercial airports in Iowa, the eight commercial service airports now serve approximately 1.63 million annual enplanements. Of the 1.63 million enplanements that are now using one of the eight commercial airports in Iowa, an estimated 18,550 are attracted from nearby states. When Iowa's total passenger demand is analyzed, over 905,000 annual enplaning passengers associated with one of Iowa's 99 counties now use an airport in another state to start their airline trips.

As summarized in **Table 4-6**, this analysis has estimated that annually, there are approximately 2,517,000 annual airline trips (both resident and visitor related) that are associated with Iowa's 99 counties.

Table 4-6
Total Statewide Generated Originations

	Enplanements
Iowa Originating Passengers	1,630,200
Minus	
Attraction of Out-of-State Passengers	-18,550
Plus	
Iowa Demand Served by Border and Outlying Hub Airports	+905,360
Equals	
Total Statewide Generated Originations	2,517,000
Source: Wilbur Smith Associates	

There are several reasons why Iowa associated passengers leave the State for commercial airline service. In some cases, Iowa passengers use these airports because they are closest to their origination or destination. In other cases, the out-of-state airport has comparatively better service and/or lower fares.

Now that base demand and usage patterns have been established, the next step will be to determine what portion of the 905,400 annual passengers served by commercial airports should be considered as actual passenger leakage. When Iowa associated passenger demand leaves the market area of one of the eight commercial airports in Iowa to use a more distant airport; these passengers will be included in leakage estimates.

Subsequent portions of this report will examine each commercial service airport in Iowa to determine if current rates of passenger leakage from their market areas can be reduced.