

APPENDIX B

Potential for Tier 2 Airports to
Accommodate Projected MSP Activity

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ATTACHMENTS

Attachment 1 Airport Catchment Areas

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APPENDIX B

Potential for Tier 2 Airports to Accommodate Projected MSP Activity

INTRODUCTION

The ability of Tier 2 airports to accommodate projected passenger activity at MSP is examined in this analysis. If feasible, passenger diversion would allow MSP to reduce or postpone the expansion of facilities such as terminal buildings, roadways and parking. The focus of this analysis is on four regional airports with available passenger service facilities, including Duluth (DLH), Rochester (RST), Eau Claire (EAU) and St. Cloud (STC). These four airports have been described as Tier 2 airports in previous analyses.¹ This study reviews the history of service and activity at the four airports, examines the challenges to attracting air service that face supplemental airports, and concludes with a description of two scenarios that assume these four airports capture a greater share of the market and the implications for MSP activity.

1 History of Activity

Air service at the four Tier 2 airports has been limited in recent years. Current service consists of the following:

Duluth: After many years of scheduled service limited to MSP, DLH now also has Delta Air Lines service to Detroit, United Airlines service to Chicago O'Hare, and more limited service to Las Vegas and Orlando.

Eau Claire: Eau Claire recently lost its scheduled service to MSP but now has United Airlines service to Chicago O'Hare.

Rochester: Rochester has non-stop service to two airline hubs, MSP and Chicago O'Hare via American Airlines. In November 2011 Delta Air Lines eliminated direct service from RST to Detroit Metropolitan Wayne County Airport (DTW).

St. Cloud: Early in 2010, STC lost its only regular scheduled service, which was to MSP.

Table B.1.1 shows historical originating passengers at MSP and the four Tier 2 airports since 2002.

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Table B.1.1

Passenger Originations

Year	MSP	DLH	EAU	RST	STC	Total
2002	6,710,352	135,030	19,980	140,770	20,680	7,026,812
2003	6,889,611	112,740	20,370	134,630	19,160	7,176,511
2004	7,670,432	143,710	24,340	134,620	19,910	7,993,012
2005	8,228,337	136,780	24,200	136,720	23,380	8,549,417
2006	8,298,117	133,250	20,840	141,310	23,480	8,616,997
2007	8,412,426	161,120	19,690	151,280	23,590	8,768,106
2008	7,784,543	134,900	16,020	143,420	18,560	8,097,443
2009	7,632,271	109,880	10,740	118,020	12,300	7,883,211
2010	7,790,528	142,290	17,030	110,970	1,140	8,061,958

Source: USDOT Origin-Destination Survey.

While MSP has demonstrated some modest increases in traffic over the period, all the remaining airports, except for DLH, have lost traffic. Many originating passengers in the areas served by the Tier 2 airports drive to MSP to take advantage of the better air service. In 2003, as part of the *Tier 2 Air Service Study*, catchment areas were defined and a passenger survey was conducted to determine the percentage of passengers in each airport's catchment area that used MSP instead of the local airport.² **Attachment 1** shows the catchment areas as defined in the *Tier 2 Air Service Study*. The capture rates determined for these catchment areas were:

- DLH 51%
- EAU 18%
- RST 43%
- STC 19%

For example, the survey indicated that 51 percent of the passengers beginning their trip in the DLH catchment area actually used DLH, while the remaining 49 percent drove to MSP. These capture rates were used to estimate originations by catchment area as shown in **Table B.1.2**.

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Table B.1.2

Estimated Passenger Originations by Catchment Area

Year	MSP	DLH	EAU	RST	STC	Total
2002	6,214,833	264,765	111,000	327,372	108,842	7,026,812
2003	6,347,234	270,405	113,365	334,346	111,161	7,176,511
2004	7,069,385	301,170	126,263	372,386	123,808	7,993,012
2005	7,561,494	322,135	135,052	398,309	132,427	8,549,417
2006	7,621,265	324,682	136,120	401,457	133,473	8,616,997
2007	7,754,913	330,375	138,507	408,497	135,814	8,768,106
2008	7,161,748	305,105	127,912	377,252	125,426	8,097,443
2009	6,972,272	297,033	124,528	367,271	122,107	7,883,211
2010	7,130,363	303,768	127,352	375,599	124,876	8,061,958

Source: Tier 2 Air Service Study and HNTB analysis, 2011.

Even after adjustment for capture rates, the MSP catchment area accounts for almost 90 percent of the total.

2 Challenges to Increasing Air Service at Tier 2 Airports

The MAC is very limited in its legal ability to restrict aviation activity at MSP. The “economic non-discrimination provisions in the grant assurances the Airport has with the FAA require that the MAC make MSP available for public use on reasonable terms and without unjust discrimination to any user.”³ An approach in which Tier 2 airports provide incentives to attract air service away from MSP is much more legally defensible than an approach in which the MAC creates disincentives to use MSP.

The challengers to increasing air service at the Tier 2 airports will vary depending on the assumed role(s) of the Tier 2 airports. Three alternative roles for the Tier 2 airports are examined:

1. Competing hub;
2. Low cost carrier supplemental airport; and
3. Increased capture share of existing market.

2.1 Competing Hub

Establishing one of the Tier 2 airports as a competing hub would offer the greatest opportunity to divert significant amounts of passenger activity from MSP. Generally, airlines establish connecting hubs for two reasons, 1) to provide a means of allowing passengers to get from point A to point B in instances where there is insufficient traffic to justify nonstop service and 2) to dominate a local market, in terms of air service, to the extent that the airline can charge a premium on fares. The larger the market, the more an airline can benefit by establishing

dominance over its competitors. This is why major airline hubs tend to locate in large metropolitan areas and why, when it is necessary to downsize, airlines eliminate their smaller hubs rather than their expensive congested hubs. Memphis, Tennessee is the smallest metropolitan area currently served by an airline hub. **Table B.2.1** compares Memphis population with the population in the metropolitan areas served by the four Tier 2 airports. The Minneapolis-St. Paul metropolitan area is shown for comparison purposes.

Table B.2.1

Population Comparison	
Metro Area	Population (000's)
Minneapolis-St. Paul	3,269
Memphis	1,304
Duluth	276
St. Cloud	189
Rochester	185
Eau Claire	99

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Accounts, for 2009.

The comparison suggests that the Tier 2 airport markets are too small to be considered viable candidates for connecting airline hubs.

2.2 Low Cost Carrier Supplemental Airport

Low cost carriers, such as Southwest Airlines, have changed strategy in recent years. In the 1980s and 1990s, Southwest Airlines would avoid directly competing with major airlines, by serving large metropolitan areas from secondary airports. Within the past decade, Southwest has elected to challenge its competitors directly by adding service to the primary airport serving major metropolitan areas. MSP is a case in point.

With the exception of very large markets, airlines prefer to serve a market through a single airport. Concentrating service at a single airport allows airlines to achieve economies of scale and reduce unit costs, while at the same time concentrating demand so that more nonstop markets become viable. Houston is the smallest market with a significant secondary airport; and the secondary airport in that instance – Houston Hobby – is much closer to the center of market demand than any of the candidate secondary airports in the Minneapolis-St. Paul area. In terms of originating passengers, the Houston market is about 25 percent larger than the Minneapolis-St. Paul market.

2.3 Increased Capture Share of Existing Market

A less ambitious and more achievable goal would be for the Tier 2 airports to capture a greater share of the market in their own catchment areas, through the successful implementation of

ongoing air service development efforts. The result would be an increase in the share of catchment area originations flying out of their airports, and a reduction in the number of originations driving to MSP. Because of their small size, regular scheduled service from these airports is likely to continue to include connecting hubs such as MSP. Therefore, some of the originating passengers drawn away from MSP would come back to MSP as connecting passengers. Each originating passenger accounts for a passenger enplanement, whereas each connecting passenger accounts for both a deplanement and subsequent enplanement. Therefore, connecting passengers generate more aircraft operations than originating passengers.

3 Implications for Future Activity at MSP

Two scenarios are examined in this section. Scenario A assumes that the Tier 2 airports secure enough additional air service to recapture 50 percent of the originating passengers in their catchment areas that currently use MSP. Scenario B assumes that the Tier 2 airports obtain enough additional air service to recapture all (100 percent) of the originating passengers in their catchment areas that currently use MSP. For DLH, EAU and RST the distribution of air service to each hub is assumed to be the same as today. In the case of STC, which has no scheduled service now, new service is assumed to be to Chicago O’Hare, reflecting STC’s current air service development efforts.

Table B.3.1 shows the anticipated impact of each scenario on the EA forecast of scheduled carrier originating passengers. The impact of Scenario A is to reduce the forecast of originating passengers at MSP by about 4.8 percent, whereas the impact of Scenario B is to reduce the forecast of originating passengers at MSP by about 9.5 percent.

Table B.3.1

Impact on Originating Passenger Forecasts			
Year	Forecasts		
	Baseline	Scenario A	Scenario B
2010	7,790,528	7,790,528	7,790,528
2015	8,883,918	8,507,509	8,131,099
2020	10,204,344	9,771,988	9,339,633
2025	11,737,103	11,239,805	10,742,507
2030	13,510,342	12,937,913	12,365,484

Source: EA Forecast and HNTB analysis, 2011.

Originating passenger traffic drives the demand for facilities such as automobile parking and access roads. Implementation of Scenario A would delay the need for these facilities by about two years, whereas the implementation of Scenario B would result in a three or four year delay.

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Table B.3.2 shows the anticipated impact of each scenario on the EA forecast of scheduled passenger enplanements. As noted earlier, some diverted originations would return as connecting passengers, so the net impact of each Scenario on forecast passenger enplanements at MSP would be less than on forecast originating passengers.

Table B.3.2

Impact on Scheduled Passenger Enplanement Forecasts			
Year	Forecasts		
	Baseline	Scenario A	Scenario B
2010	15,710,323	15,710,323	15,710,323
2015	17,481,494	17,323,767	17,166,039
2020	19,998,899	19,818,458	19,638,017
2025	22,877,279	22,670,868	22,464,457
2030	26,176,806	25,940,625	25,704,444

Source: EA Forecast and HNTB analysis, 2011.

Passenger enplanement levels drive the need for gates and many other terminal building facilities. The need for these facilities could be postponed by about six months under Scenario A and for up to a year under Scenario B.

Table B.3.4 shows how the EA forecast of aircraft operations would be affected under each Scenario. Aircraft operations are largely influenced by passenger enplanements, so the results are roughly similar to the passenger enplanement forecasts.

Table B.3.4

Impact on Aircraft Operation Forecasts			
Year	Forecasts		
	Baseline	Scenario A	Scenario B
2010	437,075	437,075	437,075
2015	441,932	438,334	434,736
2020	484,879	480,932	476,984
2025	526,040	521,757	517,474
2030	567,396	562,776	558,157

Source: EA Forecast and HNTB analysis, 2011.

The impact of Scenario A is the equivalent of slightly more than a half year of growth while the impact of Scenario B is the equivalent of slightly more than a year of growth. Aircraft operations drive the need for airfield capacity, but MSP is projected to have sufficient airfield capacity to accommodate the EA forecast until well past 2030.

4 Summary

The above analysis shows that implementation of air service improvements at the Tier 2 airports near MSP could delay the need for improvements from a few months to four years, depending on the Scenario and the facility in question. Although several of the Tier 2 airports are involved in aggressive air service development efforts, it should be noted that recent trends are for airlines to withdraw service from small airports, as they eliminate smaller aircraft from their fleet and consolidate operations. As a result, these airports may not be able to recapture traffic that currently drives to MSP, and their capture share could decline further in the future. In that instance, facility expansion at MSP may need to be accelerated slightly.

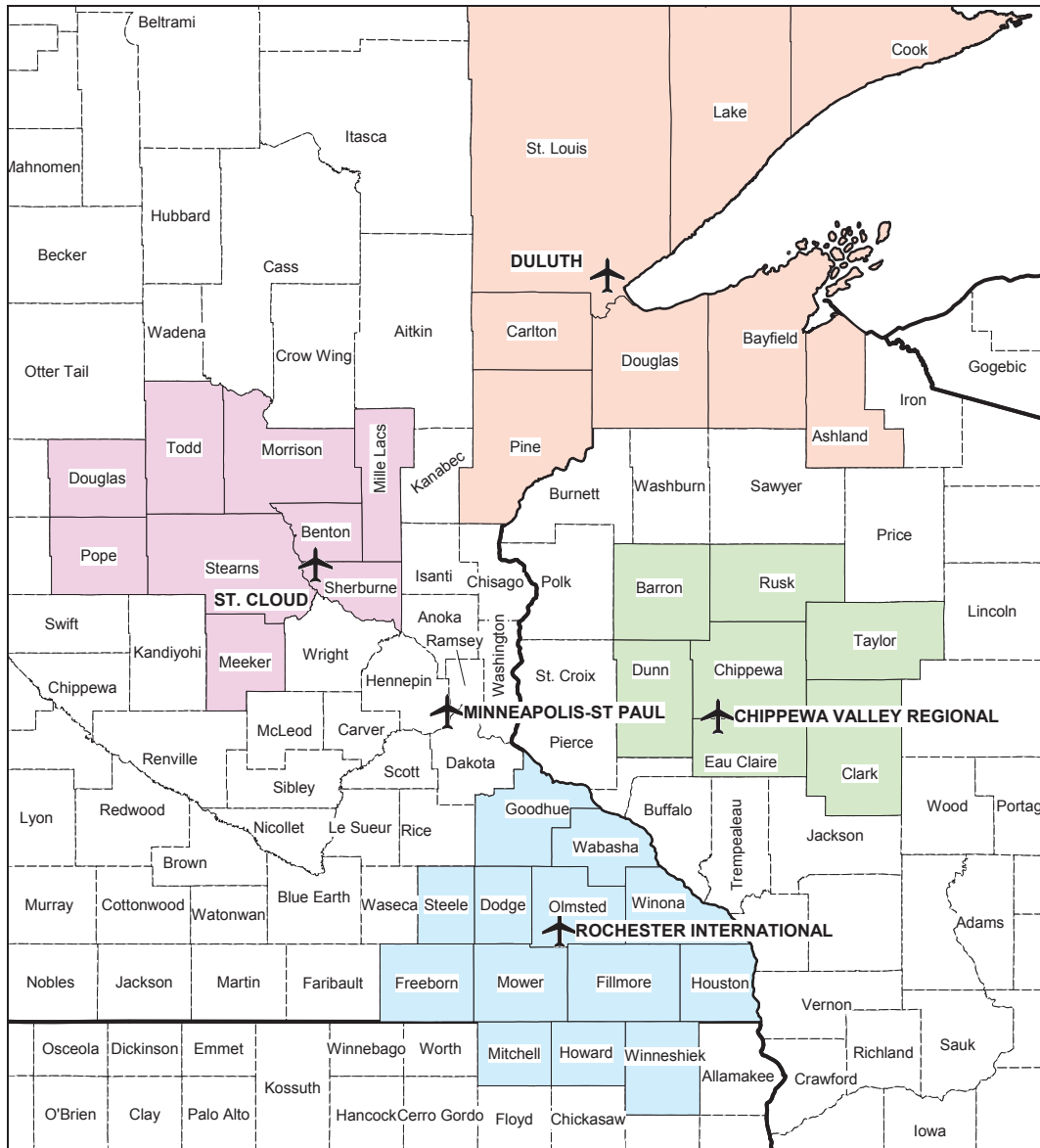
Endnotes

¹ Kramer aerotek, inc. on behalf of the Office of Aeronautics, Minnesota Department of Aviation, Tier 2 Air Service Study, 2003.

² Ibid.

³ 49 U.S.C. 47107.

Attachment 1:
Airport Catchment Areas



Airport Service Areas - Working Definition

Source: Minnesota Department of Aviation, *Tier 2 Air Service Study*, 2003.

