POLICY PLAN FOR MICHIGAN AIR SERVICE

Analysis of Essential Air Service and Recommendations for Preservation of Access to the Nation's Air Transportation System

MDOT
Michigan Department of Transportation
AERONAUTICS

March 2016

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Note: Many codes and abbreviations are used throughout this report. Appendix II on page 32 is a key page to utilize for future reference.

(Proofread for nontechnical revisions up through March 16, 2016)

Introduction

This paper will serve as the 2015 Policy Plan for Michigan Air Service (PPMAS). This is the first update to the PPMAS since March 2001. The sponsor for this project is the Michigan Department of Transportation (MDOT).

The airline industry has undergone major changes since the last PPMAS update (March 2001). The events of 9/11, numerous airline bankruptcy filings, the tripling of oil prices, and the worst recession since the Great Depression necessitated a transformation of the airline industry for its very survival. This transformation resulted in airline consolidation and a significant capacity reduction. Today not only are airlines surviving, they are thriving. It has been a turbulent fourteen years.

The 2001 PPMAS stated early on that "Michigan air service has, for the most part, flourished" since deregulation in the late 1970s. This was true not only for Michigan airports, but for most United States (U.S.) airports. It was being driven by an airline industry that was generating too much seat capacity to be financially viable – the airline industry from deregulation through 2009 lost a cumulative $40 billion. In other words, these trends were unsustainable and significant change was only a matter of time.

Subsequently, industry capacity has been reduced significantly, particularly in smaller less profitable markets. This trend has had negative implications on all but the largest Michigan airports (Detroit and Grand Rapids). All other airports have suffered significant traffic and capacity reductions since 2001. In particular, the smallest Michigan airports, Essential Air Service (EAS) markets would appear to be most at risk. This is particularly relevant for Michigan, which has the most EAS markets of any state in the Continental U.S. (nine) and is second only to the state of Alaska.

The EAS Program was instituted in 1978, as a part of the deregulation of the U.S. airline industry. The purpose of EAS was to ensure that smaller communities would retain a link to the national air transportation system. EAS provides a federal (DOT) financial subsidy to airlines to serve smaller markets that they otherwise would not find financially viable. As noted earlier, EAS has been a very important program to the state of Michigan, as nine of its commercially-served airports operate under EAS.

While this paper will address trends at most Michigan airports, the focus will be on EAS airports as these are the most vulnerable. It will not address the airports at Grand Rapids (GRR) and Detroit (DTW), whose future as air transportation centers is certain. EAS airports, on the other hand, are very much at risk. EAS airports are also airports where public policies (MDOT) can have the most impact. While airlines dictate route decisions across the vast majority of the U.S., EAS markets are different. Due to federal subsidies, public policy can certainly make a difference.

After first reviewing industry trends, this paper will conduct an overview assessment of air service trends at all Michigan airports (excluding Detroit and Grand Rapids). It will then review the EAS Program, essentially overviewing the evolution of the program. Subsequently, an analysis of the EAS Program will be examined – looking at the pros and cons of the program, taking into consideration the various factors affecting EAS. Finally, alternatives to the current EAS Program will be inspected. This effort is not being done to initiate changes to the current EAS Program, but to provide guidance and a contingency plan for MDOT, should further changes to the current EAS Program be considered at the federal level. The final product will allow MDOT the ability to monitor proposed changes to EAS and propose guidelines that will be the most beneficial to Michigan's EAS airports.

State Long Range Plan Goals

The goals in MDOT's current long-range plan were developed with the help of a Customers and Providers Committee, working with MDOT staff to review and reassess the goals of the current state long-range plan. Changes were developed in a cooperative manner and represented the consensus of the group around eight core goal areas:

- Preservation – Within the constraints of state and federal law, direct investment in existing transportation systems to effectively provide safety, mobility, access, and intermodal connectivity or support economic activity and the viability of older communities and ensure that the facilities and services continue to fulfill their intended functions.

- Safety – Promote the safety and security of the transportation system for users and passengers, pedestrians, and motorized and non-motorized vehicles.

- Basic Mobility – Work with the general public, public agencies and private sector organizations to ensure basic mobility for all Michigan citizens by (at a minimum) providing safe, effective, efficient and economical access to employment, educational opportunities, and essential services.

- Strengthening the State's Economy – Provide transportation infrastructure and services that strengthen the economy and competitive position of Michigan and its regions for the 21st Century.

- Transportation Services Coordination – Create incentives for coordination between public officials, private interests, and transportation agencies to improve safety, enhance or consolidate services, strengthen intermodal connectivity, and maximize the effectiveness of investment for all modes by encouraging regional solutions to regional transportation problems.

- Intermodalism – Improve intermodal connections to provide seamless transportation for both people and products to and throughout Michigan.

- Environment and Aesthetics – Provide transportation systems that are environmentally responsible and aesthetically pleasing.

- Land Use Coordination – Coordinate local land use planning, transportation planning, and development to maximize the use of the existing infrastructure, increase the effectiveness of investment, and retain or enhance the vitality of the local community.

Policy Plan for Michigan Air Service Goals

Goals for PPMAS were developed by the Michigan Aeronautics Commission's Commercial Air Service Committee. The goals are intended to ensure that MDOT's air service policies address Michigan's current and future air transportation requirements. The goals of the 2015 PPMAS are:

- Stewardship - Preserve transportation system investments, protect the environment, and utilize public resources in a responsible manner.
- Safety and Security - Continue to improve transportation safety and ensure the security of the transportation system.
- System Improvement - Modernize and enhance the transportation system to improve mobility and accessibility
- Efficient and Effective Operations - Improve the efficiency and effectiveness of the transportation system and transportation services, and expand MDOT's coordination and collaboration with partners

Executive Summary

At the time of the last PPMAS in March 2001, Michigan airports were generating near all-time high passenger volumes. At the same time, airlines were consistently losing money and generating sub-par financial returns, the result of excess capacity.

Subsequent to 9/11, the oil spike and deep economic recession in the late 2000s, the airline industry quickly reduced seat capacity beginning in 2008. Primarily in smaller U.S. markets from 2008 to 2012, smaller U.S. airports on average experienced 21 percent seat capacity declines. The result was that airlines experienced significant positive financial turnarounds. Airports, particularly smaller U.S. airports, took a big hit.

It is highly likely that constrained airline capacity will be the norm going forward. Recent airline consolidation almost ensures this. The continued phasing-out of 50-seat regional jets and pilot shortages are also expected to have major negative effects on smaller airports in the future.

Michigan airports saw similar trends. Smaller Category I, II and III Airports generally experienced significant declines in traffic, averaging about 25 percent since 2005. Category I Airports are the largest Michigan airports with 100 plus weekly flights, while Category II Airports have between 25-99 weekly flights, and Category III Airports operate with less than 25 flights per week. A breakout of Category II and III Airports is shown in Appendix I on page 29.

The primary exception to traffic declines was at the state's two largest airports, DTW and GRR, where both have seen traffic increase since the early 2000s. Both have benefited from a national trend of increased "leakage" from smaller regional airports to larger airports where the availability of nonstop service and lower air fares exist. Capacity declines at smaller airports also contributed.

EAS airports have done relatively well, as capacity is only down 5 percent since 2007, compared to 21 percent for relatively larger airports. EAS airports have benefited from upgrades to larger regional jet aircraft and a fivefold increase in the EAS budget since 2001. Nevertheless, load Factors on average are below 35 percent – this trend is unsustainable. Hence, the reason that this paper on EAS is necessary.

Given these results, changes to the current EAS Program are anticipated, particularly as the federal government looks to cut spending in the face of continued, large budget deficits. Expected changes to EAS fall into two camps: (1) Revision of eligibility requirements to current program; or (2) Massive changes to EAS Program, including elimination of all markets except Alaska or possible intermodal alternatives.

Revisions to the current EAS Program, along the line of historical revisions, would likely reduce the current funding budget 10-20 percent (roughly $25-50 million annually). It is likely that none of these revisions would have any effect upon Michigan's EAS airports, as Michigan airports are well above most of the current eligibility cutoffs.

Michigan needs to be prepared in case major changes take place to the current EAS Program including its total elimination, which has gained political traction on a few occasions and is still a possibility. Tied to that, Michigan needs to be proactive and consider the following: (1) Review of state or local funding of air service, as this is a national trend; and (2) Proactively develop an initial intermodal contingency plan, which has been started and is summarized later in this document.

Industry Dynamics

This section will briefly look at the airline industry first from a historical perspective, which will lay the foundation for what has occurred more recently and what will likely happen in the future to airline capacity (service). The emphasis of this analysis will be from an airline economics perspective, as that is what will drive capacity. Later in this paper, we will touch upon the regulatory environment and how that could affect Michigan air service.

Airline Industry: Historical Review

Since deregulation in 1978 through 2009, the airline industry cumulatively lost approximately $40 billion. This was primarily a function of overcapacity in the industry where the supply of seats was greater than demand. The result was that airlines had to price airline seats below cost. The charts below illustrate: (1) The widening gap between the supply of seats and demand that took place during this time period; and (2) The resulting decline in airline price (yield).

Exhibit 1

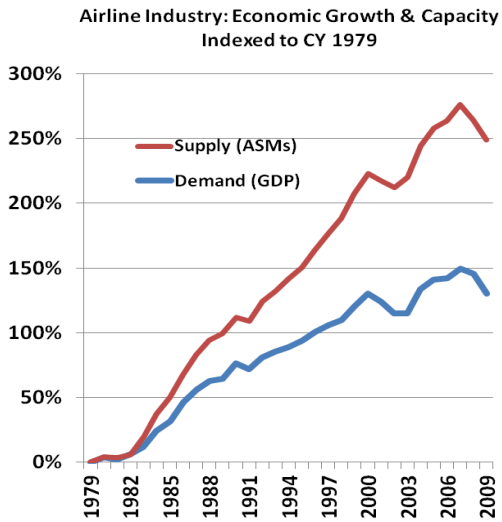
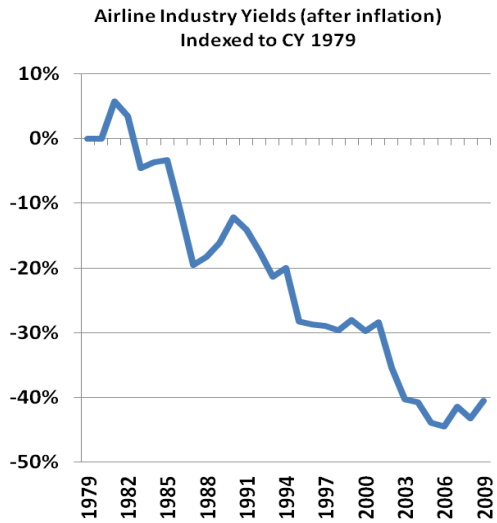


Exhibit 2



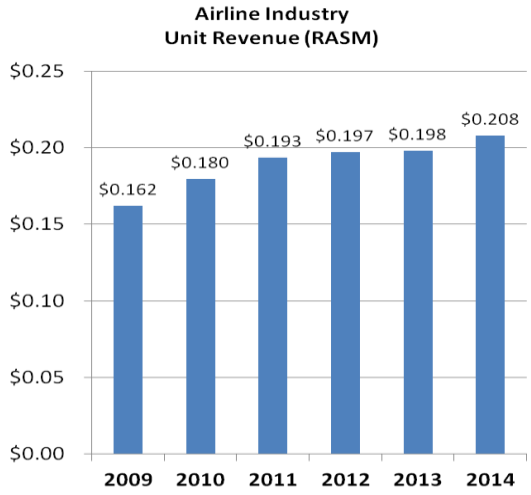
After nearly thirty (30) years of overcapacity, the airline industry had accumulated massive financial losses, numerous airlines had gone out of business or merged, and airline balance sheets consisted of heavy debt levels. These financial results had been generated despite the fact that one of the primary cost inputs (oil prices) had been fairly tame during this time period, ranging from about $20-50 per barrel.

Beginning in 2007, oil prices spiked eventually peaking at around $150 per barrel. The airline industry's survival depended upon a significant transformation. The key component would be to sharply reduce capacity, particularly with regard to fuel inefficient aircraft fleets such as 50-seat regional jets and to some degree, DC9 and MD-80 aircraft. The effect of an improved supply/demand balance would allow the airline industry to increase pricing to the point of profitability.

The graphs on the next page (and Exhibit 11 on page 11) illustrate what has occurred since 2009. Airlines cut capacity and unit revenue has increased substantially through moderately higher load factors and mostly in the form of sharply higher air fares (and ancillary fees). Most importantly, airlines have been

profitable since 2009. Despite operating at fuel prices (until very recently) three times above 2005 levels when the airline industry was unprofitable.

Exhibit 3



** Source: Air Transport Association (A4A)*

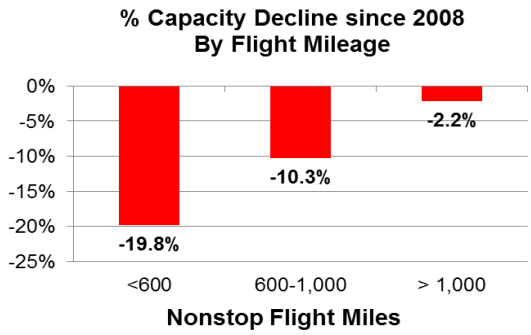
Exhibit 4 (in 000s)

Calendar-Years 2013 & 2014

	Pre-Tax: 2013			Pre-Tax: 2014		
Airline	Rev	P&L	Margin	Rev	P&L	Margin
Delta	$37,818	$3,837	10.1%	$40,362	$4,500	11.1%
Southwest	$17,699	$1,278	7.2%	$18,605	$1,816	9.8%
United	$38,287	$1,259	3.3%	$38,901	$2,373	6.1%
American	$25,760	$1,488	5.8%	$42,650	$4,249	10.0%
US Airways	$14,935	$1,003	6.7%	$0	$0	na
jetBlue	$5,441	$414	7.6%	$5,817	$515	8.9%
Alaska	$5,150	$857	16.6%	$5,368	$962	17.9%
Allegiant	$996	$155	15.5%	$1,137	$201	17.7%
Spirit	$1,654	$282	17.0%	$1,932	$355	18.4%
Total	$147,740	$10,572	7.2%	$154,772	$14,971	9.7%

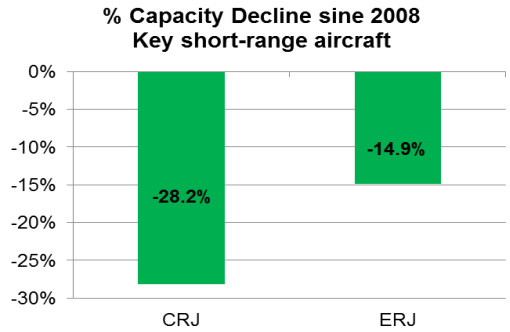
The most impacted segment of the industry from this reduction in service was smaller airports, particularly those that rely on short-haul, smaller (regional jet) aircraft. Mainline airline capacity, particularly longer-haul flying, has been little affected. This can be seen clearly by the graphs below, with the result being significant seat capacity declines at the nation's smaller airports.

Exhibit 5



* Source: Innovata via Diio (carrier published schedules)

Exhibit 6



* Source: Innovata via Diio (carrier published schedules)

One other key point pertains to the right hand chart directly above: Delta Connection primarily relies on CRJ flying. American and United have typically relied heavily upon the ERJ aircraft. Delta, whose operating profitability is well ahead of the rest of the industry, has been more aggressive with regard to reducing smaller regional jet flying. It is only a matter of time until United and American catch up in this regard. While much of the seat capacity declines are over for Michigan airports, there could still be more to come.

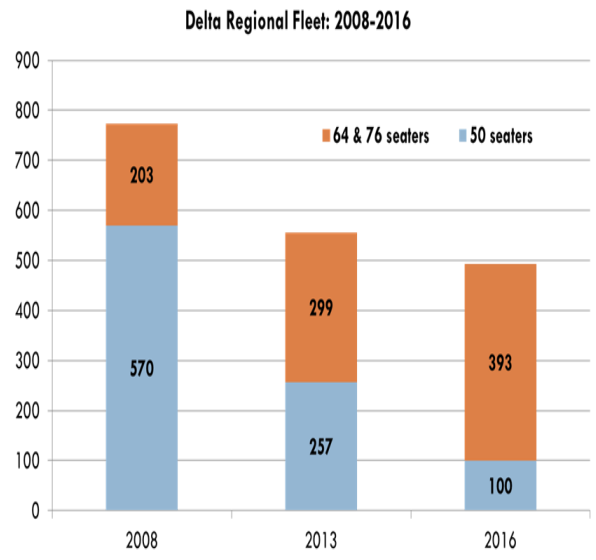
Airline Industry: The Future

U.S. airlines have been rewarded for reducing capacity and pushing up air fares/fees. U.S. airlines are currently recording record profits and have never been stronger financially. Much of this change was

driven by capacity discipline in light of sharply higher oil prices. During this same time period, airlines were rapidly consolidating. Four major mergers took place: Northwest-Delta, American-US Airways-American West, United-Continental and Southwest-AirTran. Today, Delta, American, United, and Southwest Airlines combined control about 83 percent of industry capacity. This consolidation of air service likely means that the future capacity growth will be muted. The result will likely be constrained capacity and higher air fares.

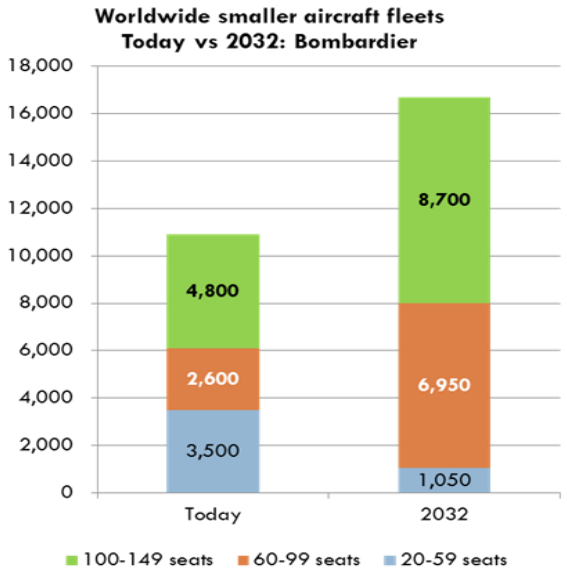
The primary issue going forward for smaller markets will be airlines' reduced use of 50-seat regional jets. Airlines are currently in the process of downsizing this aircraft-type, transitioning to larger aircraft (mostly 76-seat regional jets). The charts below illustrate: (1) Delta's near-term regional fleet plan, which is likely a microcosm of the industry over the next few years; and (2) Bombardier's expectations in the coming 20 years. Both are indicative of a sharp reduction in flying of smaller regional jets. This will likely have negative implications for smaller markets, such as for those in Michigan.

Exhibit 7



' Source: Delta Air Lines 10-K filing*

Exhibit 8



** Source: Bombardier*

In addition, the largest 50-seat (CRJ and ERJ) regional jet operator in the U.S. is SkyWest Airlines. SkyWest operates primarily as United Express and Delta Connection. SkyWest has stated publicly that 50-seat regional jets will become prohibitively expensive to operate/maintain after 40,000 cycles (lifetime aircraft departures), and they would plan to retire this fleet at this point in 2019. In other words, expect very little 50-seat regional jet flying after 2019. Hence, current 50-seat flying today faces two alternatives: (1) Upgrade to larger 76-seat jets; or (2) Lose service.

In summary, the U.S. airline industry is expected to exhibit little capacity growth in the coming years. Any demand growth will likely result in higher air fares. The effect upon smaller airports could be even more ominous. Sharp reductions in 50-seat flying will mean that markets will have to be able to meet the demand of larger 76-seat jets at higher expected air fares. Many smaller markets will not be able to do this. The smallest markets will be in the toughest position, including those in Michigan. The effect of these key trends upon Michigan's smallest airports will be discussed more later.

Air Service Summary Assessment: State of Michigan Airports*

This section summarizes and reviews the Michigan air service market (*excluding Grand Rapids and Detroit). It will briefly analyze current results by market.

In looking at Michigan from a statewide perspective, it is clear how important Detroit (DTW) is. Almost 78 percent of Michigan's O&D traffic (not shown) originates from DTW. This is due to DTW's position as a major Delta Air Lines hub and its relative air service.

Exhibit 9

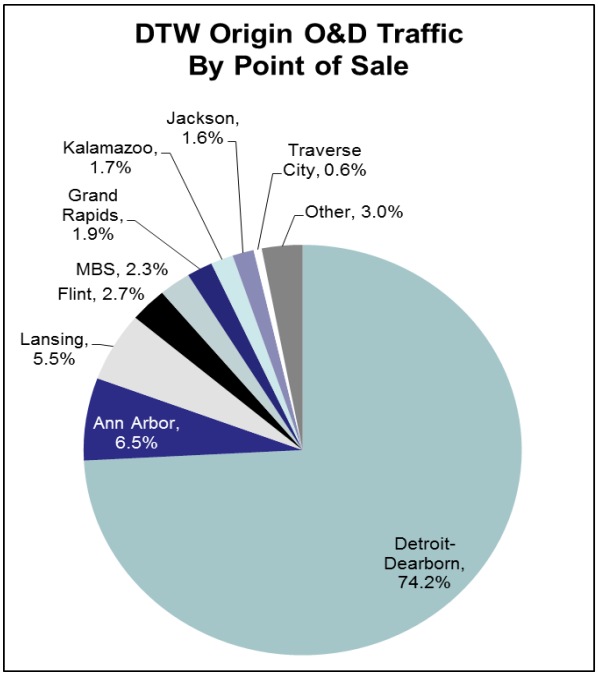


Exhibit 10

Detroit Origin O&D Traffic By Point of Sale

CBSA	%	Origin Passengers
Detroit-Dearborn	74.2%	3,553,166
Ann Arbor	6.5%	309,050
Lansing-E. Lansing	5.5%	262,464
Flint	2.7%	131,324
Midland-Saginaw-Bay City	2.3%	112,385
Grand Rapids-Wyoming	1.9%	91,382
Kalamazoo	1.7%	79,555
Jackson	1.6%	75,716
Battle Creek	1.1%	50,380
Traverse City	0.6%	30,473
Mt. Pleasant	0.6%	28,279
Owosso	0.4%	19,249
Alma	0.3%	12,412
Holland	0.2%	8,829
Muskegon	0.2%	8,500
Cadillac	0.2%	8,025
Ionia	0.2%	7,312
Total	100.0%	4,788,501

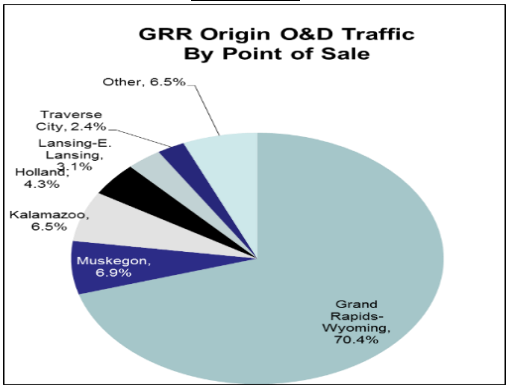
Source: Airlines Reporting Corporation (ARC) & Trillion Aviation analysis

More impressive might be the fact that of DTW's 4.8 million origin O&D passengers, only 3.55 million (74 percent) actually book their travel from the Detroit Metropolitan area. The other 26 percent are booking their travel from around the state. Some are relatively nearby (Ann Arbor), while others drive from across the state. The closer proximity airports are, the more likely to "leak" to DTW, although it is not uncommon for passengers to drive from across the state.

Even for Grand Rapids (GRR), approximately 30 percent of GRR's traffic is "leaking" from other metropolitan areas. The reason for this is that consumers will drive for better and lower cost air service.

While this fly-drive phenomena is not new (based upon responses from both Michigan and around the U.S.), it has been growing. Again, this is a function of reduced service at smaller airports around the U.S.

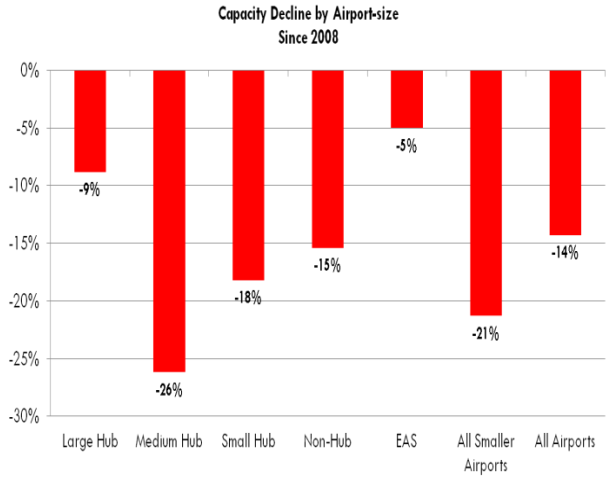
Exhibit 11



Category II Airports (and FNT)

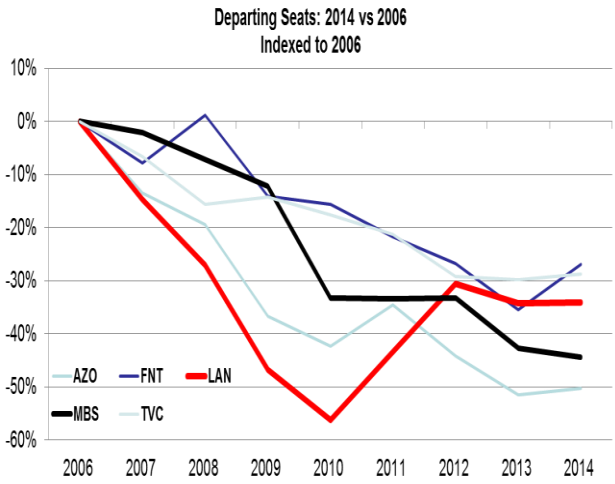
Smaller airports across the U.S. have been hit hard during the transformation of the airline industry that has taken place since 2007. This was illustrated in the earlier Industry section and is summarized by airport type below.

Exhibit 11



** Source: MIT ("Trends and Market Forces Small Community")*

Exhibit 12



** Source: US DOT (via Diio)*

As can be seen in Exhibit 12, all Category II Airports from Michigan have seen departing seats fall by at least 25 percent, with the average down about 35 percent since 2006. While similar-sized airports across the U.S. saw large declines, they were typically less severe than those in Michigan.

Exhibit 13

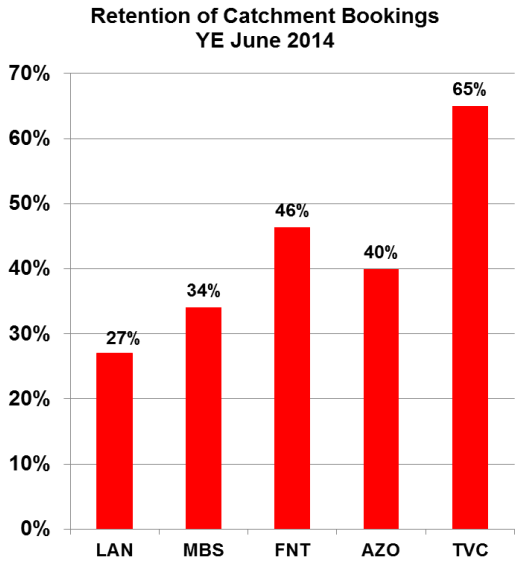


Exhibit 13 illustrates how much traffic is "leaking" from their primary catchment area. Lansing (LAN) might be in the most challenging air service situation in the U.S., being surrounded by low cost carrier service and one of the largest hubs in the country, all within a roughly 90-minute drive.

Both Saginaw (MBS) and Kalamazoo (AZO) are in similar predicaments. Although each has to primarily contend with only one airport (MBS with DTW and AZO primarily with GRR), DTW is also an issue. Traverse City (TVC) is better positioned, due to its relative isolation, particularly as compared to LAN, AZO, FNT and MBS.

Even Flint (FNT), with low cost carrier service of its own (Southwest) and generally good air service elsewhere, "leaks" over one-half of its natural traffic base. Again, this is due to the power of the Delta hub at DTW and the variety of air service options there (including plentiful ultra-low cost carrier service on Spirit Airlines). **Note:** Catchment area refers to the area that an airport typically draws passenger traffic from (where people drive from). A catchment area typically corresponds to a geographic area where the airport-in-question is the closest commercial airport.

Category III Airports

What will follow will be a brief review of the remainder of Michigan's commercially-served airports. These are Michigan's smallest airports and are generally EAS airports, with the exception of Marquette. They are Michigan's most vulnerable airports as it pertains to commercial air service, specifically EAS.

Exhibit 14

Scheduled Weekday Service Overview
October 2014

		Airline				
Market	Hub Served	Marketing	Operating	Flights	Seats	Aircraft
MKG	ORD	United	Skywest	2	100	CRJ
PLN*	DTW	Delta	Endeavor	2	100	CRJ
MQT	DTW	Delta	Skywest	2	100	CRJ
	ORD	American	Am. Eagle	1	50	ERJ
CMX	ORD	United	Skywest	2	100	CRJ
APN	DTW	Delta	Skywest	2	100	CRJ
ESC	DTW	Delta	Endeavor	2	100	CRJ
CIU	DTW	Delta	Skywest	2	100	CRJ
IMT	MSP**	Delta	Skywest	2	100	CRJ
IWD	ORD	Air Choice One	Air Choice One	3	24	Cessna
MBL	MDW	Public Charters	Public Charters	1	19	J31/32

**PLN is flown during peak season summer as many as 4x daily*

*** Served by 1 MSP nonstop & 1 1-stop over RHI*

Exhibit 14 shows the current air service in Michigan's Category III Airports. The vast majority of markets has two times daily regional jet service. The majority of these are to Delta's DTW hub, with ORD service on United Express or American Eagle sprinkled in. There is also alternate EAS service to Manistee-Ludington on Public Charters and Air Choice One (3E) service to Ironwood-Ashland.

Exhibit 15

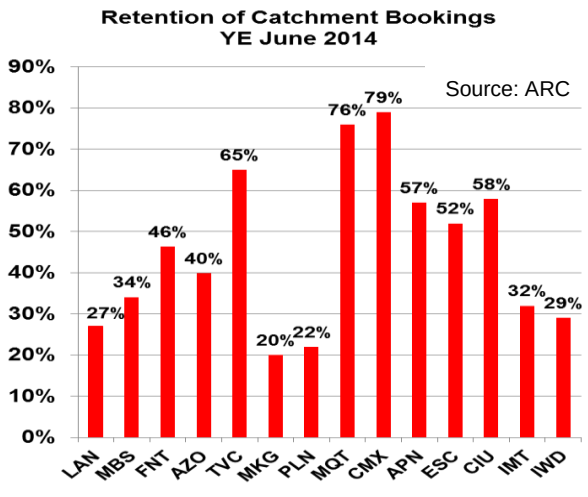


Exhibit 15 shows each airport's current retention rate of catchment area bookings. While a market's service no doubt affects this, almost equally of importance is a market's proximity to other airports. For example, despite having limited air service, a market similar to Hancock/Houghton (CMX) continues to retain almost 80 percent of its bookings. The same is true of Marquette (MQT). This is likely due to the geographic isolation of these markets. Even markets such as Escanaba (ESC) and Sault Ste. Marie (CIU) retain over 50 percent of their bookings. At the same time, better served markets such as FNT, AZO, MBS and LAN do not come close to these retention levels. This is due to their relative proximity to better serve markets with lower priced options, primarily at DTW.

The vast majority of Michigan's Category III airports are EAS airports. Exhibit 16 illustrates current EAS subsidies in Michigan's Category III airports. Subsidy levels have increased at a compounded annual growth rate (CAGR) of 25.1% since 2005. These increases have been driven by two factors: 1) the increase in the number of markets operating under EAS, and 2) the large subsidy increases in the four markets operating under EAS in 2005. Even since 2012, when a number of "larger" Michigan markets entered the EAS program, subsidies have increased by over $4 million annually or at an 8.7% CAGR.

In general, the smaller EAS markets have experienced relatively larger subsidy increases over time, as they (generally) struggled to fill increasingly larger regional aircraft. At the same time, some of the larger EAS markets have experienced smaller increases (or even declines). These larger markets include Pellston (PLN), Hancock-Houghton (CMX) and Sault Ste. Marie (CIU).

Exhibit 16

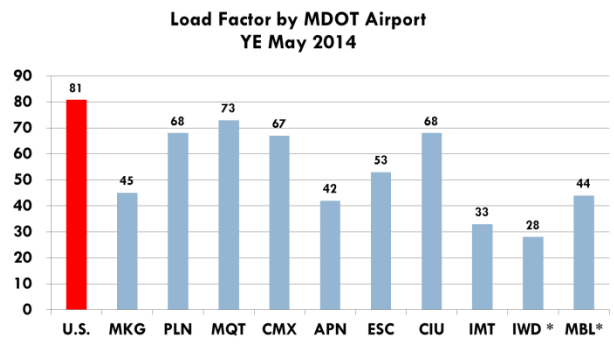
Annual EAS Subsidy, State of Michigan Airports: 2005-2015

	Annual EAS Subsidy				CAGR: Annual Subsidy			
	2005	2010	2012	2015	2005-15	2005-10	2010-12	2012-15
APN	-	-	$1,532,660	$2,168,995	-	-	na	12.3%
ESC	$290,952	$1,435,118	$2,833,558	$3,507,011	28.3%	37.6%	40.5%	7.4%
CMX	-	$1,404,714	$934,156	$690,976	-	na	-18.5%	-9.6%
IMT	$602,761	$1,435,118	$2,090,534	$2,970,122	17.3%	18.9%	20.7%	12.4%
IWD	$409,242	$1,492,865	$1,747,326	$3,563,394	24.2%	29.5%	8.2%	26.8%
MBL	$776,051	$1,799,395	$1,694,794	$2,328,104	11.6%	18.3%	-3.0%	11.2%
MKG	-	$660,720	$1,576,067	$1,389,952	-	na	54.4%	-4.1%
PLN	-	-	$1,055,322	$1,077,413	-	-	na	0.7%
CIU	-	-	$1,676,136	$1,765,393	-	-	na	1.7%
Total	$2,079,006	$8,227,930	$15,140,553	$19,461,360	25.1%	31.7%	35.7%	8.7%

Source: https://www.transportation.gov/office-policy/aviation-policy/essential-air-service-reports

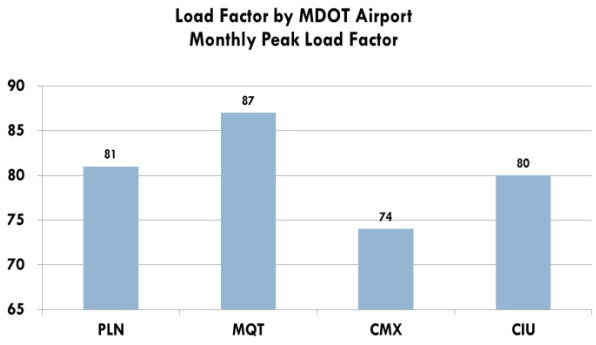
In general, Michigan's EAS markets struggle to fill their current capacity. As airlines have retired their smaller turboprop fleets of the 19-seat and then the 34-seat aircraft over the past few years, the remaining option was to generally increase to the next smallest aircraft, which is typically the 50-seat regional jet. Exhibit 17 shows current Load Factors (LFs) from Michigan's EAS markets and illustrates that these markets are not filling seats, as compared to the U.S. in general.

Exhibit 17



** Source: US DOT Report T100 (via Diio)*

Exhibit 18

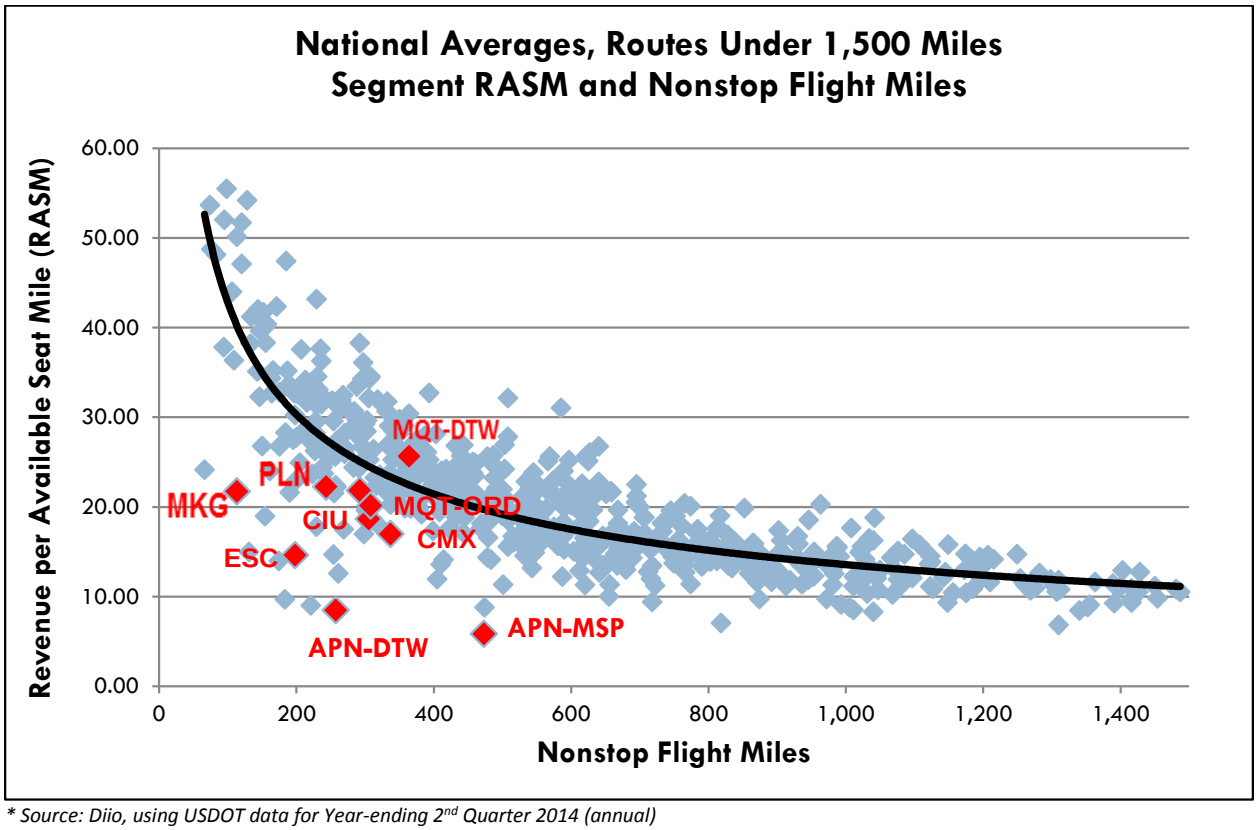


** Source: US DOT Report T100 (via Diio)*

Most markets above generate LFs at sub-optimal levels. It should be noted that shorter-haul markets typically generate relatively lower LFs, therefore, 81 percent (nation's average) is probably not a definitive measure for success/failure. It is not unusual for shorter-haul markets to be successful at LFs closer to 70 percent, dependent upon yields. Markets like PLN, MQT, CMX and CIU at first glance look like markets that may have potential beyond EAS. (MQT is not currently an EAS market.) When examining these markets seasonally (Exhibit 18), they look even stronger. This is typically the case for seasonally stronger markets in the upper most Midwest – Pellston (PLN) and Marquette (MQT) being the perfect examples.

LF is only one consideration when evaluating the strength of a community's air service. To understand how these markets compare on a profitability basis, the best gauge (from publicly available data) is to analyze a market's mileage adjusted Revenue per Available Seat Mile (RASM). See Exhibit 19 below. How to read Exhibit 19: The y-axis is the RASM. The x-axis is nonstop flight miles. The blue dots refer to all markets under 1,500 miles. The black trend line is an average RASM for any nonstop mileage. In other words, the black trend line is a gauge for average relative profitability. Anything above the line is "good," anything below is "bad."

Exhibit 19



** Source: Diio, using USDOT data for Year-ending 2nd Quarter 2014 (annual)*

As expected, EAS markets are below the trend line because these markets are subsidized through EAS. The only non-EAS Category III Airport is MQT. MQT-DTW appears to be a relatively profitable market, while MQT-ORD is a slight under-performer. Many markets, such as PLN, CIU and CMX are marginal under-performers. This is consistent with the LF data on the prior page. Most other markets are significant under-performers, at least on a year-round basis, and will likely always need a subsidy to retain service – again, at least on a year-round basis.

In summary, any plans pertaining to EAS going forward, will need to take into account the relative strength of the PLN, CMX and CIU markets. These markets are all relatively close to being breakeven markets outside of EAS. It will also have to take into account the relative strength and proximity of non-EAS market MQT. These markets could be part of any "EAS fix" as it pertains to Michigan. Michigan's air service market is significantly controlled by EAS. A policy plan must contemplate EAS as it exists and as it may be changed. Like any federal subsidy, it has a history worth reviewing.

Essential Air Service Review

EAS is a U.S. Government program enacted to guarantee that small communities maintain commercial service, even when their air service is not profitable for the airline serving it. EAS is controversial because it subsidizes (mostly) empty airplanes, in many cases serving airports that are a relatively short drive to larger airports. For many airports, EAS has been a worthy program allowing isolated communities access to the national air transportation system. This access allows these smaller, more isolated areas economic growth and social integration.

EAS' initial budget was $7 million in 1978. The 2015 budget is for $255 million, which equates to a 10.82 percent compound annual growth rate (CAGR) over 37 years. It has gone up about tenfold since 1997.

Today there are 159 EAS subsidized markets (43 from Alaska). This is up sharply since the late 1990s and comparable to peaks generated in the mid-1980s. Still, 90 markets have lost their EAS eligibility (service) since its inception in 1978.

Exhibit 20

Subsidy Trends: 2014 vs 1995 & 1999

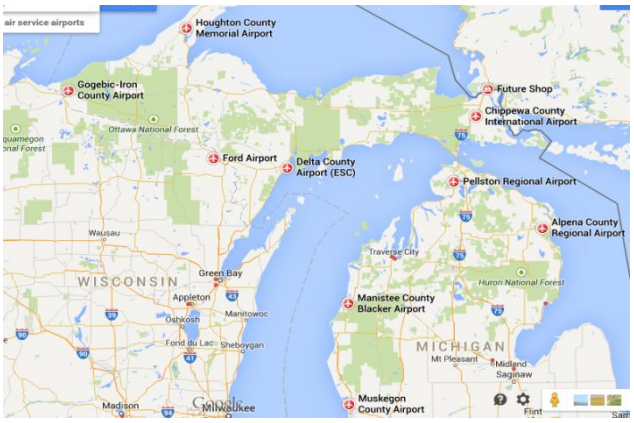
				CAGR vs 2014	
	1995	1999	2014	1995	1999
Subsidy per Community (000s)	$296	$463	$1,862	10.2%	9.7%
Subsidy per Passenger	$56	$82	$89	2.5%	0.6%

** Excludes Alaskan markets*

The current average subsidy/community (non-Alaska) is $1.8 million. This is up about fourfold versus 1999, although the subsidy per passenger is only up marginally. This is indicative of higher cost operations over time (fuel, aircraft size and commuter costs in general) and a mix of better performing markets, which has limited the increase in subsidy per passenger.

Still, many markets badly under-perform; 40 of 159 EAS markets perform at LFs under 40 percent. Almost all operate at LFs of less than 70 percent, which is the relatively low barometer that shorter-haul, feeder markets generally need to meet today.

Given the under-performance of EAS markets despite sharp increases in funding over the past eighteen years and the pressure to eliminate EAS, alternatives at least need to be considered.



History of EAS: Overview

In 1978, when the Airline Deregulation Act (ADA) was enacted, 746 (approximately 200 in Alaska) communities in the U.S. and its territories were listed on air carrier certificates. Before deregulation, air carriers were generally required to provide two daily round trips at each point on their certificates.

During the pre-ADA debates, many policy makers were afraid that without regulation, communities with relatively lower traffic levels

would lose service as carriers, shifting operations to larger more lucrative markets. The EAS Program was intended to prevent loss of commercial airline service to these rural communities.

Congress added Section 419 to the Federal Aviation Act establishing the EAS Program. Today, it is administered by the U.S. Department of Transportation (USDOT) to ensure that smaller communities would retain a link to the national air transportation system with federal subsidy where necessary (and almost always is).

In summary, EAS provides a federal (USDOT) subsidy to airlines to serve smaller markets that they otherwise would not find financially viable. Tied to the subsidy, USDOT determines the minimum level of service at each EAS community:

- A medium or large hub to link the community to the national air transportation network.
- A minimum of round-trips and available seats to the hub noted above.
- Certain characteristics of aircraft to be used.
- A maximum number of intermediate stops to the hub.

EAS Funding

Exhibits 21 and 22 illustrate EAS funding and subsidy trends since its inception in 1978.

Exhibit 21

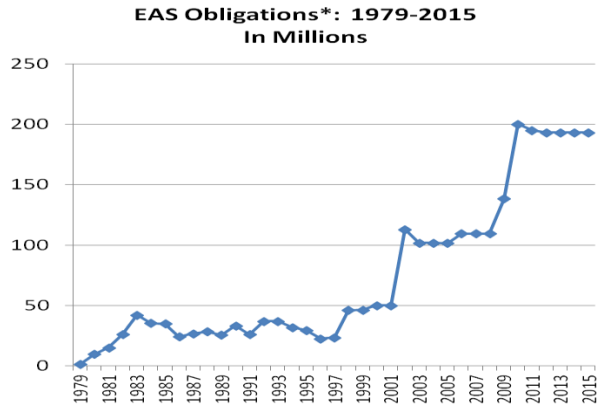
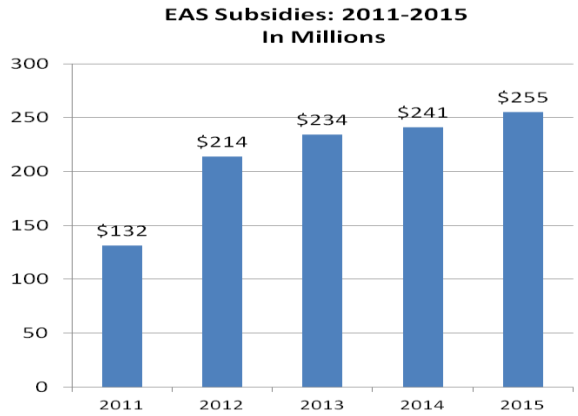


Exhibit 22



** EAS Obligations: Subsidies incurred from 1979-1999; from 2000-2015 refers to funds appropriated*
*** EAS Subsides (right hand graph), Source: EAS Reports for Subsidized Alaskan and Non-Alaskan U.S. Carriers*
*** Sources: U.S. GAO and DOT*

EAS was initially designed as a program with a ten-year transition period, ending in 1988. The budget for EAS at its inception was $7 million annually. The program was extended for another ten years in 1988, with the "sunset date" provision eventually being removed in 1998. Congress has extended the program 22 times. Today, the EAS Program is budgeted for $255 million in FY 2015. This is a CAGR of 10.82 percent over 37 years.

From program inception through 1991, EAS was funded from the General Fund of the U.S. Treasury. From 1992 through 1997, funding was provided from the Aviation Trust Fund. Since 1998 EAS funding has come from authorization of the FAA Budget. The EAS Program is currently funded through annual transfers of fees paid to FAA by foreign aircraft overflying the U.S. and supplemented by annual appropriations of varying size. For FY 2015, the total EAS authorization is for $193 million.

In analyzing the graphs above, EAS funding was relatively stable during the first 20 years of the program (1978-1997). During this time period, EAS funding only exceeded $40 million once and was typically in the $20-$30 million range. Since then, EAS funding increases have been driven by three separate events:

- 1998: EAS appropriations nearly doubled from about $25 to $50 million. This was a part of the 1998 Rural Air Service Act and was in response to a sharp increase in commuter carrier costs incurred after 1996, as a part of the Commuter Safety Initiative (discussed later).
- 2001: After 9/11, EAS appropriations were increased from $50 million to $113 million in 2002. This was due to increased security costs incurred by airlines tied to 9/11.
- 2010: EAS appropriations were increased to $200 million, where they roughly stand today. This was mostly in response to the 2008 recession and sharply higher fuel prices.

How EAS has Evolved Over Time

While EAS did not start until 1978, federal subsidization of flights actually began in 1944, when the Civil Aeronautics Board started a program to grow air service in smaller communities. This was an effort to strengthen the nation's transportation system and generate economic growth in these smaller markets. This program started with providing financial subsidies to 19 carriers. By 1972, the number of airlines had decreased to nine, although the program's service reached 450 communities and generated approximately 27 million passengers annually. In 1978, the air service subsidies for this program were $76 million.

Since its inception in 1978, EAS has undergone many modifications and has resulted in varying levels of communities being served under EAS over time. Exhibits 23 and 24 below illustrate the number of EAS eligible communities and EAS subsidized markets, since the program's launch in 1978.

Exhibit 23

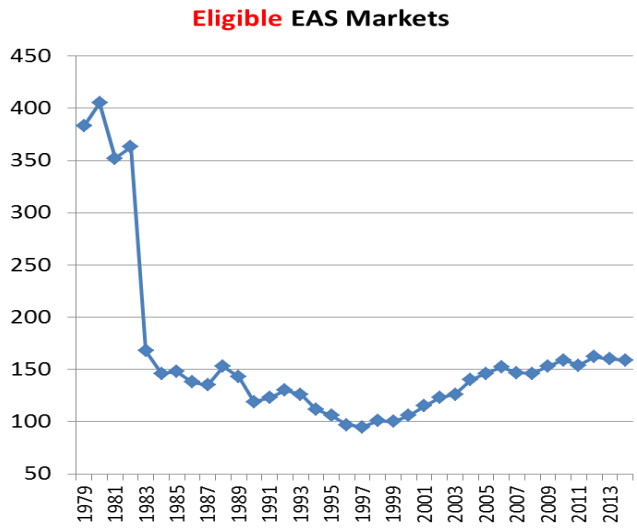
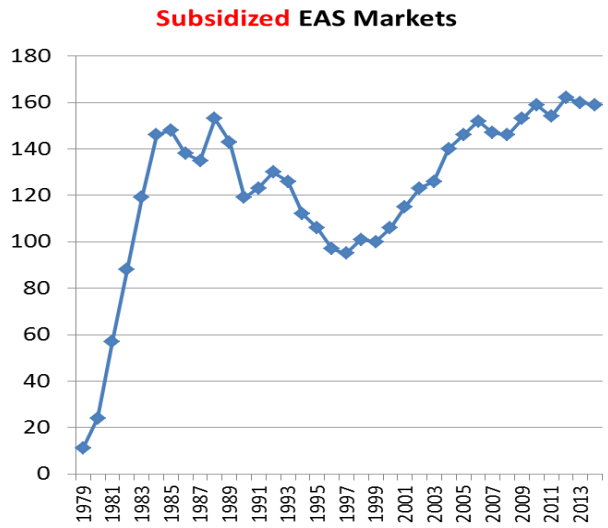


Exhibit 24



** Sources: General Accounting Office (GAO)*

The number of communities operating under EAS has varied over time, primarily due to eligibility requirement changes in the program. Key changes in the EAS Program are discussed below.

During the first ten years of the program (through 1987), no changes took place. The only requirement for operating under EAS through that time was that the airport be carrier certified as prior to deregulation. In 1987, at the time of EAS' initial ten-year extension, Congress increased the minimum level of "basic service" for any community receiving service prior to 1988:

- Service to a hub airport, defined as an FAA-designated medium- or large-hub airport.
- Service with no more than one intermediate stop to the hub.
- Service with aircraft having at least 15 passenger seats at communities that averaged more than 11 passenger enplanements a day in any calendar year from 1976-1986.
- Under certain circumstances, service with pressurized aircraft.
- Flights at reasonable times taking into account the needs of passengers with connecting flights.

In 1989, Congress added the first constraint on EAS eligibility, capping the per passenger subsidy at $200. This resulted in six communities losing EAS eligibility. In 1990, due primarily to the combination of increased operating costs (due to 1987 increased basic service) and a lack of funding, 20 cities lost EAS service. This included three in Michigan (Benton Harbor, Jackson and Battle Creek).
During 1993-94, additional criteria were put in place limiting EAS eligibility. This resulted in 16 additional cities losing their EAS eligibility. These additional criteria included the following major changes, some of which are still in place today:

- Prohibiting DOT from subsidizing service to communities less than 70 highway miles from the nearest medium- or large-hub airport.
- As before, per passenger subsidy could not exceed $200 per passenger.
- The $200 per passenger subsidy is waived for markets located more than 210 miles from the nearest medium- or large-hub community airport.

In 1996, FAA changed the air safety rules for commuter carriers to match safety standards for large air carriers. Collectively known as the "Commuter Safety Initiative", these rules imposed many new requirements on commuter air carriers that flew EAS aircraft (equipped with 10 seats or more). This change resulted in increasing carrier operating costs of roughly 8-10 percent.

Subsequently, for fiscal year 1996, Congress appropriated $22.6 million to fund the EAS Program. This represented a $10.8 million, or about one-third, reduction from the $33.4 million that had been appropriated for the program for fiscal years 1994 and 1995. This funding level was insufficient to maintain full EAS at fiscal year 1995 levels at all eligible points that were receiving subsidized service. Instead of cutting cities as before, subsidy reductions were made across the board. This was done by discontinuing subsidy support for weekend service, service to more than one hub, and service in excess of two round trips each weekday. This change remains in effect today. Even with this change, an additional seven cities eventually lost EAS eligibility (between 1996 and 2000).

Due to earlier noted legislation that increased carrier operating costs 8-10 percent, EAS funding was nearly doubled to $50 million beginning in 1998. Subsequent to 9/11, EAS funding more than doubled to $113 million in 2002. No other major changes took place until a funding increase in 2010 and subsequent eligibility changes in 2011-2012. Despite this, another 20 markets lost EAS eligibility between 2001 and 2010.

The next major change to EAS took place during 2011-12. During this time period, EAS funding roughly doubled versus prior period levels, and the eligibility requirements were made more demanding. Those requirements remain in effect today. EAS communities remain eligible if:

- They are located more than 70 miles from the nearest large or medium hub.
- They require a rate of subsidy per passenger of $200 or less, unless the community is more than 210 miles from the nearest hub airport.
- The average rate of subsidy per passenger is less than $1,000 during the most recent fiscal year at the end of each EAS contract, regardless of distance from hub airport.
- The communities have an average of ten or more enplanements per service day during the most recent fiscal year beginning after September 30, 2012, unless these locations are more than 175 driving miles from their nearest medium- or large-hub airport or if DOT is satisfied that any decline below 10 enplanements is temporary.

Subsequent to this most recent EAS eligibility change (above), another 13 markets were given notice of lost EAS eligibility on April 24, 2014.

In summary, the Michigan Department of Transportation (MDOT) needs to understand the history of EAS: Constant change should be expected and to be prepared.

EAS: Factors Needing Consideration Going Forward

For almost as long as the EAS Program has existed, there has been pressure to discontinue it. This has been particularly true during times of high U.S. Government budget deficits when Washington D.C. is looking for places to reduce spending. As the current budget deficit is near all-time highs (and expected to continue), the pressure to reduce federal spending is also likely to continue.

Given the pressure to discontinue the EAS Program, alternatives to EAS need to be considered going forward by public policy groups. MDOT has taken the proactive approach anticipating this.

With that in mind, various factors surrounding EAS need to be considered before moving to potential alternatives to today's EAS. This section will do that.

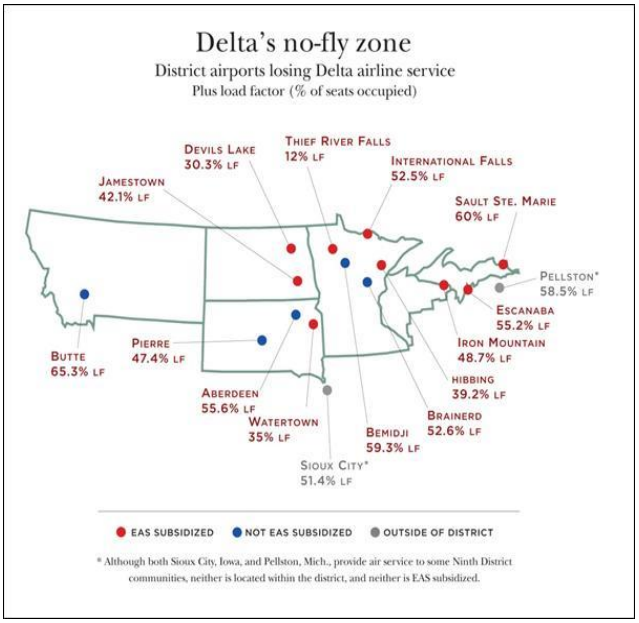
Airline Perspective

Major network airlines in general have been attempting to eliminate service from EAS markets. This has been due to a lack of economical aircraft to serve these routes. It also ties to the fact that subsidies in many cases don't cover the true cost of flying EAS service.

United Airlines has a policy of generally not applying to fly EAS (one exception for Sioux City, IA was made in 2013). United is not expected to change this policy going forward.

Delta Air Lines discontinued EAS service at 24 small airports in 2011. Despite EAS subsidies, Delta announced that they were still losing a total of $14 million annually in those markets. Going forward it is not expected that Delta will change direction concerning EAS flying.

Exhibit 25



American Airlines has recently been the exception to the rule. American has added selected new EAS flying over the past few years and has had some isolated successes to-date, including Manhattan, KS and Sioux City, IA. Still, it is far from certain that American will continue down this path, as profits elsewhere skyrocket and American exits the 50-seat regional jet market (more on this below).

The "big 3" above (American, United & Delta) are the primary network airlines in the U.S. These airlines can take a passenger pretty much between any two metropolitan areas in the U.S. These carriers can do this through direct mainline service or working with one of their many regional airline partners (such as SkyWest, Republic or many others).

After the "big 3", it gets much more difficult. Carriers that typically have an interest in EAS flying (Great Lakes, Silver, Cape Air and a variety of even smaller carriers) do not have agreements with the "big 3" for seamless connecting capabilities. They also, in many cases, do not have baggage agreements. In these cases, passengers are looking at more inconvenient traveling options.

Aircraft Issues

There is going to be limited 50-seat regional jet availability, as these aircraft are being retired. The remaining options will be 76-seat jets or very small turboprop aircraft, along the lines of 9-seat Cessnas. While there will be some 19- and 34-seat turboprop aircraft, it is highly questionable how many of these will be available.

It is doubtful that many 76-seat aircraft will be made available for EAS flying. First, these aircraft are extremely profitable and major airlines will be very reluctant to put them to use in EAS markets. Second, the flying of these aircraft is limited by pilot labor contracts (Scope Clauses). Third, EAS load factors are already extremely low. This would exacerbate an already bad problem.

This means that communities will be very reliant on smaller turboprop aircraft. There are also many problems with this scenario. First, there are approximately 230 daily EAS departures in the Continental U.S. and another 88 in Alaska. It is questionable whether there are enough turboprop aircraft to accommodate this level of capacity. Second, many of the potential turboprop aircraft available will be smaller aircraft, along the lines of 9-seat Cessnas flown by Cape Air. There would be a high consumer-avoidance factor of these aircraft from a customer-preference factor alone. Third, some of today's largest turboprop carriers have generated poor operational performance (on-time performance and cancellation rates), which has also resulted in high consumer avoidance. Fourth, most turboprop carriers do not have code-share, ticketing or baggage agreements with the major airlines. Hence, this would make connecting to larger mainline airlines problematic at best.

Pilot Shortage Issues

EAS providers (currently the two primary turboprop airlines, Great Lakes and Silver) are feeling the pinch today. Great Lakes had 304 pilots in February 2013, and today it has 78. In late 2014, Silver announced a $12,000 bonus for any new first officer that joins the company. It only makes sense that the lowest paid pilots leave for better career opportunities. This is playing out among the EAS carriers. Now, even the larger regional airlines are feeling the pinch. ExpressJet is suffering from a pilot shortfall. Republic Airways announced it would park 27 50-seat aircraft because of pilot shortage. American Eagle has struggled to fill training classes in order to compensate for the loss of its pilots to mainline carriers where pay and lifestyle are much better. Based on pilot retirements at the four largest U.S. carriers (American, Delta, Southwest and United), 14,000 aviators will be needed at those airlines by 2022 just to continue providing the same level of flying as today. Spirit and JetBlue are growing, and they will need to hire pilots as well. If the regional industry is to be the primary supply for pilot labor to the network carriers, there are only 18,000 pilots within the sector. If replacing retiring mainline pilots is first and foremost, then the regional industry will be but a fraction of itself by 2022. Of course, new pilots will be trained and will mitigate some of the concern, but hardly all.

"All of our members, large and small, are having trouble finding qualified 1,500-hour pilots," says Roger Cohen, President of the Regional Airline Association. "Every community, large and small, if you're not concerned about losing some or all of your air service, you should be."

Additionally, due to the supply-demand imbalance, pilot salaries are going higher and probably significantly higher. This will have implications for carrier cost structures and subsequently for the EAS Program.

Regulatory Environment

EAS has been impacted over time by a variety of new rules and regulations. Furthermore, the airline industry, in general, is one of the most regulated (and taxed) industries in the U.S. Any change in regulations that affect an airline's operating cost structure will have an effect upon the EAS Program as it is designed currently. In addition, the EAS Program has had its eligibility requirements change over time, with the most recent changes in 2012. This is likely to continue going forward. Just a few key regulatory changes affecting EAS are illustrated below.

The aforementioned pilot shortage issue is largely tied to regulatory changes over the past two years: Congress passed legislation in 2013 requiring the FAA to draw up new rules on pilot experience, training and rest, which mandated that co-pilots, as well as pilots, possess an ATP certificate requiring a minimum of 1,500 flight hours. This compared to 250 hours for co-pilots previously – a six fold increase. The ATP requirement alone will now require a pilot to invest well over $100,000 for a starting job of around $20,000 per year. It is questionable how many will now do that.

In 1996, FAA changed the air safety rules for commuter carriers to match operational, equipment, and performance safety standards required of large air carriers. This legislation had a major impact upon EAS and was discussed earlier on page 18.

In 1987, Congress increased the level of "basic EAS service" for any community receiving EAS service prior to 1988. Again, this legislation had a major effect upon EAS. The effect of this legislation was reviewed earlier on page 17.

EAS has undergone modifications throughout its existence. This includes changes in Eligibility requirements, which has occurred on three different occasions, with the most recent in 2012. These eligibility modifications have (partially) had the effect of reducing the number of EAS eligible markets. Going forward, it is safe to assume that as long as there is an EAS Program, that significant regulatory changes will be constant. While unknown, it is anticipated that changes to EAS will reduce the program and its service in future years, much like it has historically.

Cost of EAS Program

The cost of the EAS Program was studied earlier. To review, the initial budget for the program was $7 million in 1978. Today the cost of the program is $255 million, an increase of almost 11 percent compounded annually over the past 37 years.

Given expected upward cost pressures going forward (aircraft size, pilots salaries), it is likely the historically high rate of growth to fund the EAS Program will continue, if the program continues operating anything like it does currently.

Better Uses of Funds

Currently, funding for capital improvement programs is another area looking at budget cuts. This is despite the fact that the infrastructure in many of the country's airports needs work. The question has to be asked: Would the $255 million of FAA funds used for EAS be better utilized for Capital Improvement programs at some of the nation's airports?

Responsibility for Funding

The federal government has always taken the financial responsibility for subsidizing markets deemed too small to profitably support air service. Yet, many relatively larger markets today subsidize air service through a variety of methods, with the most aggressive form of subsidy being the Minimum Revenue Guarantee. This form of subsidy can run into millions of dollars (per year) and is reflective of a local community taking the financial responsibility/risk that the federal government undertakes collectively for smaller markets that are a part of EAS. Tied to this, the question has to be considered. Should communities and/or state governments take on the financial responsibility currently taken on through the federal government via EAS?

Lower Cost Transportation Alternatives

At some point, lower cost transportation alternatives as at least a partial alternative to EAS air travel will need to be considered. These alternatives could be used on relatively shorter haul routes to closer airports or on longer trips to medium-sized hubs, comparable to current EAS standards.

One study on this subject examined 38 markets in the lower 48 states that are within 150 miles of a medium- or large-hub airport. For the 38 communities included in the study, current EAS-subsidized flights carried 615,528 one-way passengers annually at a total cost of $131.5 million or at an average cost of $427 per passenger. For these routes, the annual subsidy was $60.8 million (or 46 percent of the cost). Alternative transportation on these routes would average $136 per passenger round-trip – this is on average 68 percent less than the cost on currently EAS-subsidized flights.

Potential Revisions and Alternatives to Current EAS Program

In the previous section, a variety of factors were reviewed that need consideration when evaluating the EAS Program and potential alternatives. When considering modifications to EAS, the changes fall into two broad categories: (1) Revisions to the current program; and (2) Major changes outside the current EAS Program. The following will review within those two frameworks. As a note, the 2015 Budget for the 2015 EAS Program is $255 million to serve 116 markets in the Continental U.S. and 43 markets in Alaska. To review, the current eligibility requirements are:

- 70 miles from nearest medium- to large-sized hub.
- Required rate of subsidy per passenger of $200 or less, unless the community is more than 210 miles from the nearest airport. The FAA has also recently come out with a strict enforcement policy going forward indicating that more markets could lose eligibility due to this requirement. (Historically, the director could waive this requirement.)
- The average rate of subsidy per passenger is less than $1,000, regardless of distance from a hub airport.
- A community's enplanements need to average more than ten per day, unless the airport is 175 miles from a hub airport. This has had the effect of recently eliminating a handful of airports.

Potential Revisions to Current EAS Program

Changing the current eligibility requirements is a starting point and is one that has been done frequently during the lifetime of the program.

(1) 70 Mile Requirement

The first and most obvious change to the current EAS Program would be to increase the 70 mile requirement from a medium- to large-sized hub. By increasing the mileage requirement to 90 miles, the EAS Program would save $19.4 million annually and eliminate ten markets from the program. This would also result in the loss of approximately 34,300 passengers (based upon 2011 figures). It should be noted that two of the eliminated markets under this scenario were recently announced to have fallen below eligibility requirements (Bradford, PA and Hagerstown, MD). No Michigan markets would be affected by this change.

By increasing the program requirement to 125 miles, the EAS Program would save an additional $38 million (a total of $57 million) and eliminate an additional 20 markets (for a total of thirty) from the program. It would also lose an additional 200,000 passengers, based upon 2011 figures. Although, reported traffic figures in these markets have dropped by about one-half for 2014. Again, no Michigan markets would be affected by this change.

> ***Pros:*** *Would save $19.7 million annually at 90 miles. All but one of eliminated markets operated at an estimated Load Factor of under 35 percent (most were under 20 percent) and generated only 34,300 passengers. At 125 miles and roughly a two-hour drive, the change would save about $57 million annually while eliminating a total of 30 markets, but at a cost of 234,000 passengers.*
>
> ***Cons:*** *At 125 mile requirement, 234,000 passengers would lose direct access to air service. Overall, LFs on most of these routes were very low.*

Conclusion: *At 125 miles and a reasonable two-hour drive time, would cut roughly 22 percent of current EAS funding requirements.*

Michigan Effect: *No Michigan airports were affected by increasing mileage requirement from 70 to 90 or 125 miles.*

(2) Maximum Subsidy Cap of $200 Per Passenger (210 Miles from Hub)

The recently announced strict enforcement of the $200 maximum subsidy would have a major impact. There are 19 markets that generate passenger subsidies in excess of $200 and that are less than 210 miles from a medium- to large-hub airport. There are none from Michigan. The elimination of these airports would save approximately $37 million annually.

By alone lowering the subsidy cap per passenger from $200 to $150, would save the program about $19 million annually and eliminate nine markets. This would result in the loss of about 57,000 passengers.

To lower the requirement further than this ($100), would result in elimination of over 70 percent of the current markets eligible for EAS subsidies. It is more likely that EAS is eliminated in its entirety before this would occur and is viewed as an unlikely eligibility requirement change.

Pros: *Would save up to $56 million annually if done in conjunction with the FAA's previously stated stricter enforcement policy.*

Cons: *In conjunction with stricter enforcement, would cut 28 EAS eligible markets.*

Conclusion: *FAA's stricter enforcement of $200 per passenger subsidy cap will have significant implications upon EAS by itself.*

Michigan Effect: *No Michigan markets would be affected by this change. While Ironwood, MI/Ashland WI has a per passenger subsidy greater than $200 ($258, based upon 2011 figures), it is also greater than 210 miles from a medium- to large-hub and would not be affected by these changes. The next highest subsidy per passenger markets are: Alpena at $126, Iron Mountain/Kingsford at $111 and Escanaba at $108.*

(3) Subsidy of $200 Per Passenger – Increasing Mileage Exception to 300 Miles

By leaving the $200 subsidy per passenger requirement, but increasing the mileage exception to 300 miles, would result in EAS savings of $23 million annually. In conjunction with stricter enforcement of the $200 per passenger subsidy, this change would result in EAS subsidies being cut by $60 million annually, and the elimination of 32 markets. This would result in the loss of 175,000 passengers. This incremental mileage increase would hit a lot of markets, particularly when done in conjunction with a stricter enforcement of the $200 per passenger subsidy requirement.

Pros: *Would save up to $60 million annually and the elimination of 32 markets.*

Cons: *300 miles is a long, possibly unreasonable drive to an alternative airport.*

Conclusion: *Increasing the mileage exception to 300 miles is probably not a viable alternative when considering the long drive times that would result.*

Michigan Effect: *Increasing the mileage exception to 300 miles would result in Ironwood, MI/Ashland WI losing their EAS eligibility.*

(4) Subsidy per passenger of $1,000 (No Mileage Exception)

Lowering the subsidy from $1,000 to $500 would result in savings of almost $19 million and twelve markets losing their EAS eligibility. Subsequently, 27,000 passengers would lose air service. This subsidy per passenger requirement differs from the previous requirement of $200, in that this requirement ($1000) does not have a mileage exception.

Pros: *Would save $19 million at a minimal passenger loss.*

Cons: *Many of these markets are 200+ miles from a medium-to-large hub.*

Conclusion: *Compared to the other alternatives, fewer passengers are affected. However, most affected markets are 200+ miles which results in excessive drive times.*

Michigan Effect: *No Michigan markets would be affected by this change.*

Exhibit 26

Effect of Selected changes to EAS Eligibility

Eligibility Change	Savings ($Mil.)	Markets Lost	Psgrs Lost
Increase Miles exception from 70 to 90 miles	$19	10	34,000
Increase Miles exception from 70 to 125 miles	$57	30	234,000
Stricter enforcement of Per Passenger $200 subsidy (< 210 miles)	$37	19	120,000
Stricter enforcement + lowering subsidy limit to $150/passenger	$56	28	177,000
Stricter enforcement of $200 subsidy + increasing miles to 300 miles	$60	32	175,000
Lowering maximum subsidy from $1000 per passenger to $500	$19	12	27,000

In summary, most reviewed viable revisions to EAS would have the effect of funding savings of approximately $20 million to $60 million per year. A summary of these findings is in Exhibit 26 above. In general, the most viable would appear to be increasing the mileage requirement from the current 70 miles to either 90 or 125 miles. This would have the effect of significant funding savings while increasing drive time a reasonable amount. No Michigan EAS airports would be affected.

Alternate EAS (AEAS)

This form of EAS is essentially as the name implies: An alternate to the traditional EAS Program. It can be used for a variety of purposes and is very flexible. This program provides the following alternatives:

- The use of smaller (aircraft) equipment. Such has been the case at Manistee/Ludington, MI.
- An air carrier to provide on-demand air taxi service to and from the eligible location.
- To a person or entity to provide scheduled or on-demand surface transportation to and from the eligible place and an airport in another place.
- In combination with other units of local government in the same region, and provide transportation services to and from all the eligible places in that region at an airport or other transportation center that can serve all the eligible places in that region.
- To purchase aircraft to provide transportation to and from the eligible place or to purchase a fractional share in an aircraft to provide such transportation after the effective date of a rule the Secretary issues relating to fractional ownership.
- To pay for other transportation or related services that the Secretary may permit

In summary, AEAS is a very flexible part of the Essential Air Service program that can be used in wide variety of ways to supplement air service. Surprisingly, its use has been limited.

Conclusion

Recognizing that quality air service is an important component of a community's infrastructure and is essential to fostering economic expansion, a coordinated state effort to promote and retain air service is in process. Leading this effort is the Michigan Aeronautics Commission (MAC) Commercial Air Service Committee (CASC). The CASC has begun moving forward to update policies and procedures under the state's Air Service Program and, to the best of its ability, is attempting to predict future air service needs and challenges.

This document was intended to be a first step in that process and will be used to assist policy makers as they attempt to predict the state's air service future. As part of that process, a detailed examination of the USDOT's Essential Air Service (EAS) program was conducted. As mentioned, herein, nine (9) of the state's eighteen (18) air carrier airports rely on the federal subsidy provided by the EAS program. The fact that Michigan is more dependent on EAS subsidy than any other state except Alaska requires careful consideration. Given this level of dependence, responsible policy-makers must evaluate any number of possible scenarios that may present a risk to this vital funding mechanism, however unlikely they may seem.

Ultimately the CASC should evaluate proactive measures that might be considered for communities threatened by a reduction or loss of the federal subsidy. This document attempts to predict such impacts, anticipate causal scenarios, and prepare alternatives that would maintain, at least, a basic level of access to the air transport system to meet the affected communities' travel needs. The report recognizes the challenges facing all of Michigan's air carrier airports, particularly those supported through EAS. While viable alternatives are limited, it is clear that this Air Service Program is the most effective tool at the state's disposal to address both facility and system deficiencies

Since its inception, the Michigan Air Service Program was intended to prevent the loss or decline of commercial air service at Michigan communities. That funding program has been effective in helping to stabilize and expand commercial air service by supporting activities that promote use of local airports. However, as the airline industry rapidly evolves, the State of Michigan must adapt to new opportunities and challenges presented by this dynamic industry. This study reaffirmed the development considerations and initiatives found in the 2001 Policy Plan for Michigan Air Service (PPMAS). The following objectives are the principles upon which the Air Service Program is based.

1. Assure the appropriate distribution of air service to support and promote economic development statewide.

2. Assure the appropriate distribution of air service to support quality of life for Michigan residents and visitors by providing access to the national air transportation system.

3. Match a community's air service to the level which it can profitably support.

In the context of these objectives, the Commission should consider the following policies in response to revising the Air Service Program Guidelines and meeting current air service needs:

1. *The 18 commercial air service airports include (1) large hub, (1) small hub, (7) non hub and (9) EAS facilities. These airports are geographically well situated and meet Michigan Service Needs within the service threshold of 60 minutes or less surface travel time without the need to add additional airports.*

2. *While meeting the needs of being geographically well situated, the EAS-Subsidized airports do not match the level of service that can be profitably supported without subsidy. Actions should focus on the most vulnerable facilities and, if possible, attempt to ensure the minimum number of enplaned passengers are maintained to receive federal primary entitlement funds under the airport improvement program.*

3. *MDOT should review and update the Air Service Program Guidelines to focus on efficiently maintaining service levels at all 18 air service airports with an emphasis on partnering to effectively leverage available resources and reduce vulnerabilities, particularly at EAS airports.*

Within this document, the CASC does not advocate for a cessation of EAS subsidy and/or a consolidation of regional air service. On the contrary, we hope to help each community maximize its connection to the national transportation system, grow its economy, maximize job creation, and enhance the quality of life for its residents.

Appendix I: Overview of Capacity and Traffic for Michigan Airports*

State of Michigan Commercially-served Category II & III Airports
Enplaned Passenger & Capacity Summary (CY 2014)

Airport	Code	Category	Daily Departures	Annual Onboard Psgrs	Load Factor	Airlines	Nonstop Markets	Aircraft	Seating Capacity
Kalamazoo	AZO	2	9.9	130,156	74%	Delta Connection (SkyWest)	DTW,MSP	CRJ	50
						Delta Connection (Endeavor)	MSP,ATL	CR9	76
						Delta Connection (Endeavor)	DTW	CRJ	50
						Delta Connection (Chautauqua)	DTW,MSP	CRJ	50
Lansing	LAN	2	11.8	196,722	72%	Delta Connection (Endeavor)	MSP,ATL	CR9	76
						Delta Connection (Chautauqua)	DTW	CRJ	50
						Delta Connection (ExpressJet)	ATL	CRJ	50
						Delta Connection (SkyWest)	MSP	CRJ	50
						United Express (ExpressJet)	ORD	ERJ	50
						Sun Country	CUN,DCA,MSP	73G	129
						Allegiant	SFB	MD88	164
Midland-Saginaw	MBS	2	9.0	119,972	72%	Delta Connection (Endeavor)	ATL,MSP	CRJ	50
						Delta Connection (Chautququa)	DTW	CRJ	50
						Delta Connection (ExpressJet)	ATL	CRJ	50
						United Express (SkyWest)	ORD	CRJ	50
						Delta Connection (Chautauqua)	MSP	CRJ	50
Traverse City	TVC	2	10.8	190,811	81%	American Eagle	ORD	ERJ	49
						American Eagle (Chautauqua)	ORD	ERJ	44
						Delta Connection (Endeavor)	MSP	CRJ	50
							LGA	CR9	76
						Delta Air Lines	MSP	319	126
						Delta Connection (ExpressJet)	ATL,LGA	CR7	64
						Delta Connection (SkyWest)	MSP	CRJ	50
						United Express (ExpressJet)	DEN,EWR,ORD	ERJ	50
						United Express (SkyWest)	ORD	CRJ	50
						United Express (GoJet)	ORD	CR7	70
Alpena	APN	3	1.7	12,439	40%	Delta Connection (SkyWest)	MSP,DTW	CRJ	50
Ste Sault Marie	CIU	3	1.7	20,853	69%	Delta Connection (SkyWest)	DTW	CRJ	50
						Delta Connection (Endeavor)	DTW	CRJ	50
Houghton/Hancock	CMX	3	1.8	22,560	70%	American Eagle (SkyWest)	ORD	ERJ	50
Escanoba	ESC	3	1.6	17,068	57%	Delta Connection (Endeavor)	DTW	CRJ	50
Iron Mountain	IMT	3	1.8	11,099	35%	Delta Connection (SkyWest)	MSP,RHI	CRJ	50
Ironwood	IWD	3	1.3	2,497	61%	Air Choice One	ORD	Cessna	8
Manistee	MBL	3	1.0	3,878	56%	Public Charters	MDW	J32	19
Muskegon	MKG	3	1.8	14,104	42%	United Express (SkyWest)	ORD	CRJ	50
Marquette	MQT	3	2.5	40,297	87%	Delta Connection (Endeavor)	DTW	CRJ	50
						American Eagle	ORD	ERJ	50
Pellston	PLN	3	2.1	27,765	71%	Delta Connection (Endeavor)	DTW	CRJ	50
						Delta Connection (SkyWest)	DTW	CRJ	50

*Category 2 and 3 airports only (excludes Detroit (DTW), Grand Rapids (GRR) and Flint (FNT)

**Source: USDOT via Diio; note: Daily Departures is what was flown, not scheduled (exception: Manistee (MBL))

Appendix II: Codes and Abbreviations

Airports

Code	City-Name
APN	Alpena, MI
ATL	Atlanta, GA
AZO	Kalamazoo, MI
CIU	Sault Ste. Marie, MI
CMX	Hancock/Houghton, MI
CUN	Cancun, Mexico
DCA	Washington D.C. - Reagan
DTW	Detroit, MI
ESC	Escanaba, MI
EWR	Newark, NJ
FNT	Flint, MI
GRR	Grand Rapids, MI
IMT	Iron Mountain, MI
IWD	Ironwood, MI
LAN	Lansing, MI
LGA	New York LaGuardia, NY
MBL	Manistee, MI
MBS	Midland-Saginaw-Bay City, MI
MDW	Chicago Midway
MKG	Muskegon, MI
MQT	Marquette, MI
MSP	Minneapolis-St. Paul, MN
ORD	Chicago O'Hare
PLN	Pellston, MI
RHI	Rhinelander, WI
SFB	Orlando-Sanford
TVC	Traverse City

General Aviation Terms

Name/Code	Description
Load Factor	% of seats flilled
ASMs	Available Seat Miles; industry metric for capacity
Yield	Revenue per passenger mile; metric for price
RASM	Revenue per Available Seat Mile or Unit Revenue; key revenue metric
GDP	Gross Domestic Product; metric for economic output
EAS	Essential Air Service
LCC	Low Cost Carrier
ULCC	Ultra Low Cost Carrier; ULCCs typically charge for all ancillary services
Catchment Area	Area from which an airport's customers typically come from
Leakage	When passengers from one catchment area drive to fly from another airport
CBSA	Metropolitan Area of a city
ARC	Airlines Reporting Corporation

Aircraft

Code	Seats	Name
CRJ	50	Canadair Regional Jet 200-series
ERJ	50	Embraer Regoinal Jet 200 series
CR7	64	Canadair Regional Jet 700 series
CR9	76	Canadair Regional Jet 900 series
73G	129	737-700*
MD88	164	McDonnell Douglass**
319	126	Airbus 319
J32	19	Jetstream 32

** 737-700 configuration for Sun Country Airlines; ** MD88 configuration for Allegiant Airlines*