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Passenger Air Service in Michigan's Upper Peninsula: Overview and Analysis

Fred B. Kotler
fbk2@cornell.edu

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Passenger Air Service in Michigan's Upper Peninsula: Overview and Analysis

Abstract

[Excerpt] Rural America needs safe, efficient, reliable, and accessible passenger air service. Federal government subsidies have long been necessary to assure that residents in smaller, less profitable markets have access to the nation's transportation network. That access is necessary for a community's economic health, is arguably a right of all taxpayers and residents, and is in public interest. But market forces within the aviation industry are today driving a restructuring that may curtail or eliminate service to many communities in the nation. And the present political climate raises a serious question about the federal government's continued commitment to the nation's rural air transportation system.

This report focuses on the state of passenger air service in Michigan's Upper Peninsula [U.P.]. The U.P. is among the most geographically remote areas in the eastern half of the United States. The region's economic, social, and cultural institutions are increasingly related to a global marketplace. These depend, in varying degrees, on access to the national and global transportation network. Scheduled, commercial passenger air service is especially critical for this area too distant from passenger rail, without adequate commercial bus service, with few four-lane highways and very limited connection to the Interstate Highway system.

Keywords

rural air service, Michigan, Upper Peninsula, transportation

Comments

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Passenger Air Service in Michigan's Upper Peninsula: Overview and Analysis

Fred B. Kotler, J.D.
Policy Analyst

UPWard Initiative
2950 College Avenue
Escanaba, Michigan 49829

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Introduction

Rural America needs safe, efficient, reliable, and accessible passenger air service. Federal government subsidies have long been necessary to assure that residents in smaller, less profitable markets have access to the nation's transportation network. That access is necessary for a community's economic health, is arguably a right of all taxpayers and residents, and is in public interest. But market forces within the aviation industry are today driving a restructuring that may curtail or eliminate service to many communities in the nation. And the present political climate raises a serious question about the federal government's continued commitment to the nation's rural air transportation system.

This report focuses on the state of passenger air service in Michigan's Upper Peninsula [U.P.]. The U.P. is among the most geographically remote areas in the eastern half of the United States. The region's economic, social, and cultural institutions are increasingly related to a global marketplace. These depend, in varying degrees, on access to the national and global transportation network. Scheduled, commercial passenger air service is especially critical for this area too distant from passenger rail, without adequate commercial bus service, with few four-lane highways and very limited connection to the Interstate Highway system.

This study was prompted by *The UPWard Initiative* and its 2009 report, *An Economic Opportunity Study for the Michigan Upper Peninsula / Wisconsin Border Region*. The *UPWard Initiative* was a broad-based strategic process, funded by the U.S. Department of Labor, and conducted by the Upper Peninsula Economic Development Alliance [UPEDA], Michigan Works!, and the Small Business & Technology Development Center.

The *UPWard Initiative* identified specific steps and recommendations for seven key areas of economic life in the region: natural resources; education and workforce training; health care; tourism and seasonal residents; higher education; business growth and development; and infrastructure. One of four tactics identified within the Infrastructure strategy is: "*Develop a long-term air service strategy for the region.*" This report is intended to renew the conversation and advance that objective.

The report is organized into these six sections and an Appendix:

- Historical overview of small community passenger air service in the United States
- The Essential Air Service program and Michigan's Upper Peninsula
- Federal and state programs to support rural air service and airport infrastructure
- Upper Peninsula airports: activity measures
- Issues impacting passenger air service in the Upper Peninsula
- Concluding remarks, some questions and a recommendation
- Appendix: MDOT Community Benefits Assessment: U.P. Airports

“Ensuring equitable air service to remote population effectively and efficiently is a common concern to nations worldwide. In the present economy, the viability of a region is highly dependent on its accessibility, while economic development increasingly relies on air transportation, which sustains the movement of persons, goods, and tourism activity. This thus justifies Governmental attention to provide accessibility to all regions of their territory, to promote economic development, social equity and national cohesion.”¹

I. HISTORICAL OVERVIEW: SMALL COMMUNITY PASSENGER AIR SERVICE IN THE UNITED STATES

Commercial passenger air service in the United States, from the birth of the industry in the early 20th century, has developed with substantial oversight, coordination and funding by the federal government. Congress’ power to regulate interstate commerce is the constitutional basis for federal action in aviation as it is for transportation infrastructure generally including rail and highway systems.

The federal role in commercial aviation is properly viewed within two distinct periods divided by enactment of the Airline Deregulation Act of 1978.

It is worth highlighting that the federal government has sought during both the regulatory period [1938-1978] and deregulated era [1978-present] to accommodate two opposing policy objectives:

1) facilitating the development of a profitable commercial industry and 2) assuring access by small communities to the nation’s transportation system.

Policy debate and administrative action have focused, again during both periods, on the appropriate level of government subsidy to sustain air service in small, less profitable or unprofitable markets. The issues of service elimination and federal subsidies predate the deregulatory era. Following is a review of the key issues and actions of each period:

A. Regulatory Period: 1938-1978

The U.S. Congress enacted a series of regulatory mechanisms during the Great Depression of the 1930s to stabilize industries and bolster the national economy. The federal government, as early as 1925, facilitated the development of scheduled, commercial air service by setting standards for safety, mail handling, air traffic, and pilot licensing. The 1938 Civil Aeronautics Act raised the level of federal oversight with the creation of the Civil Aeronautics Authority [CAA]; this represents the beginning of broad, comprehensive federal oversight and coordination.

The CAA was reorganized into two agencies in 1940. The CAA retained responsibility for air traffic control, pilot and aircraft certification, and safety enforcement. A new agency, the Civil Aeronautics Board [CAB], assumed duties related to safety rulemaking, accident investigation, and economic regulation of the airlines.²

¹ Alda Metrass-Mendes and Richard de Neufville, “Air Transportation Policy for Small Communities: Lessons from the U.S. Experience,” Massachusetts Institute of Technology; paper delivered at the 14th Annual World Conference, Air Transport Research Society [ATRS], July 2010, Oporto, Portugal, available at: http://ardent.mit.edu/airports/ASP_papers/Alda_RDN_JATS_v00_includesfiguresandtables.pdf

² A *Brief History of the FAA*, available at: http://www.faa.gov/about/history/brief_history/.

The CAB regulated airline routes, fares, mergers and acquisitions, and subsidies. CAB authority did not extend to schedules or capacity. Airlines, upon receiving authorization to fly particular routes, could determine the frequency of flights and number of seats. The CAB provided airlines with “certificates of public convenience and necessity” to serve specific markets. Among the airlines receiving early certification were Delta, American, Northwest, and United.³ These major, national [and global] carriers continue to be labeled within the industry as “legacy” airlines.

To balance carrier profitability with the need for communities’ access to air service, the CAB awarded routes with a mix of more lucrative larger markets and less profitable smaller markets so that each legacy airline could cross-subsidize its operations. Then, in response to rising demand from small communities after the Second World War, the CAB created a new category of “local service airlines.” These local service airlines were authorized and subsidized to serve the “low-density,” less profitable routes and to make intermediate stops in smaller cities. The names of local service airlines would be familiar to regional travelers of the era and included: North Central, Frontier, Allegheny, Mohawk, Ozark, Central, and Lake Central.

To further develop small market access, the CAB, during the 1950s, created a third category of operators: fixed-based, on-demand air taxi providers. These companies, while not providing scheduled service on established routes, filled service gaps for underserved areas. Established legacy and local service carriers then began contracting more of the unprofitable routes to the air taxi operators. This led to the air taxi operators becoming “commuter airlines.”⁴ An example within this category is SkyWest Airlines, now an important carrier in Michigan’s Upper Peninsula, which began in 1972 as a Fixed Based Operator [FBO] providing air ambulance and air charter service.⁵

The legacy carriers were financially self-sufficient by the early 1960s in large part because responsibility for service to the less profitable small markets was largely shifted to the local service airlines and the emerging commuter airlines. Acquisition by the legacy airlines of larger and higher cost aircraft made service to small communities even less attractive.⁶ There followed a decline in small community service by the legacy carriers. The CAB permitted legacy carriers to end service at 211 small communities and substantially increased subsidies to local service airlines. These subsidies were as high as \$67 million by 1962 [approximately \$435 million in 2012 dollars].⁷

Pressure to reduce subsidies during the 1960s prompted the CAB to relax requirements that local carriers make certain intermediate stops or provide service to communities generating less than 5

³ A.R. Goetz and T.M. Vowles, “The Good, the Bad, and the Ugly: 30 Years of US Airlines Deregulation,” *Journal of Transport Geography* 17(4) (2009) at 253. The carriers noted are typically labeled as “legacy”, “trunk” or “mainline” carriers to distinguish them from “low cost” airlines such as Southwest and from regional operators.

⁴ By 1978, 26 of these commuter airlines replaced the service to 50 locations formerly provided by legacy and local service airlines and were doing so without federal subsidies. *Ibid.* at 7

⁵ <http://www.skywest.com/about-skywest-airlines/skywest-history/>

⁶ Celeste R. Gamache, “Air Service to Small Communities Since Deregulation,” *Transportation Law Journal*, 17 Transp. L.J. 345, at 345-6, 1982; retrieved on Lexis Nexis.

⁷ Silke Januszewski Forbes and Mara Lederman, “The Role of Regional Airlines in the U.S. Airline Industry” in Darin Lee, ed., *Advances in Airlines Economics, Vol. II, Elsevier*, 2007, at 5-6, available at: weber.ucsd.edu/~sjanusze/www/book_chapter_oct06.pdf.

passengers a day. Subsidy payments fell to \$34 million and service was cut to 108 small communities by the end of the decade.

The trend of service cuts continued during the 1970s: air service by legacy and local service carriers was eliminated to an additional 125 cities. By 1978, the service gap to 50 locations was filled by 26 of the commuter airlines who provided service without federal subsidies.⁸

Inefficiencies within the regulatory system led, by the late 1970s, to a political consensus that the industry should be deregulated. The momentum toward deregulation was prompted by CAB's control over both pricing and carriers' entry into and exit from markets. CAB did grant fare increases but carriers competed less on price than on quality of service. Analysts noted how unregulated, intrastate airlines in California and Texas were able to offer lower fares than those offered by regulated airlines.

Deregulation advocates, a broad political base that included Senator Edward Kennedy, reformer Ralph Nader, and "free market" economists, called for competitive pricing and permitting carriers to choose their own routes.

Small communities were vocal in their opposition. They argued that, as airlines shifted focus to large markets, increased competition over fares would reduce the funds available to cross-subsidize service and that small communities would then suffer a substantial loss of service.⁹

Despite these objections, the Airline Deregulation Act [ADA] was enacted by Congress and signed into law in October 1978.¹⁰ The Act removed the CAB's authority over fares, market entry and exit. Henceforth, any carrier "fit, willing, and able" would be permitted to set fares and determine routes.¹¹ Airlines were now free to determine which markets to serve and how much to charge for the service.

⁸ *Ibid.* at 7

⁹ Small communities were joined in their opposition by airline unions and, initially, by the legacy airlines. An important reason for the airlines' early opposition to deregulation was that the regulatory period, as discussed, provided financial stability and significant protection for the growth and profitability of major airlines. During that period "the US airline industry never experienced financial losses anywhere near the scale of those of the post-deregulation period." Airlines later became attracted to deregulation in part because of the increased power that deregulation offered to management for control of labor costs. Goetz and Vowles, at 261 and fn2 at 252.

¹⁰ P.L. 95-104

¹¹ A.R. Goetz, T.M. Vowles, "The Good, the Bad, and the Ugly: 30 Years of US Airlines Deregulation" at 253;

The deregulation of other industries within transportation soon followed the ADA. By 1982, rail, trucking, and buses were also deregulated. The decade of the 1990s saw deregulation extended to financial services and telecommunications.

The CAB was phased-out in 1984. Duties were shifted to the US Department of Transportation. For an interesting online overview of the history of federal regulation see: *U.S. Centennial of Flight Commission*, http://www.centennialofflight.gov/essay/Government_Role/Econ_Reg/POL16.htm

B. The Era of Deregulation: 1978 – present

“Airlines have become unregulated, monolithic companies providing inferior air transportation service at arbitrary prices. Their objective is to segment the market, not serve it. They force feed passengers through a patchwork of hub-and-spoke routes without regard to transportation efficiency or public convenience, not to mention national interest objectives such as the efficient utilization of public resources and the national defense.”¹²

The Airline Deregulation Act [ADA] led to significant and lasting changes in the structure of passenger air service including these related developments that have particular impact for small markets:

- Growth of commuter airlines;
- Emergence of “hub-and-spoke” routing systems;
- Expansion of “code-sharing” agreements between the legacy and commuter airlines; and
- Creation of the Essential Air Service [EAS] program.

Commuter airlines in the new, deregulated era, assumed a greater role for providing service to small communities. The Act gave further incentive and means for the legacy airlines to contract out or abandon higher cost, low volume routes to smaller airlines with lower operating, particularly lower labor costs.

The ADA removed government oversight from passenger fares and determination of routes. But it created a mechanism for connecting service by mandating that fares be prorated between carriers and by allowing commuter airlines to offer scheduled service of up to 30 [later 50] seats. “Code sharing” agreements between legacy and commuter airlines enabled coordination of flight schedules, ticketing, and baggage handling. This arrangement has since become the industry standard: ninety-nine percent of regional airline passengers in the US traveled on code-sharing regional airlines in 2010.¹³

These developments accompanied a major reorganization of routing: from a routing system defined more by direct service with intermediate stops to a “hub-and-spoke” system. With the new pattern, commuter [regional] airlines carry feeder traffic to larger, legacy airlines based in various hubs. The large airlines receive a flow of passengers from outlying regions for the more cost-effective long-haul flights.¹⁴

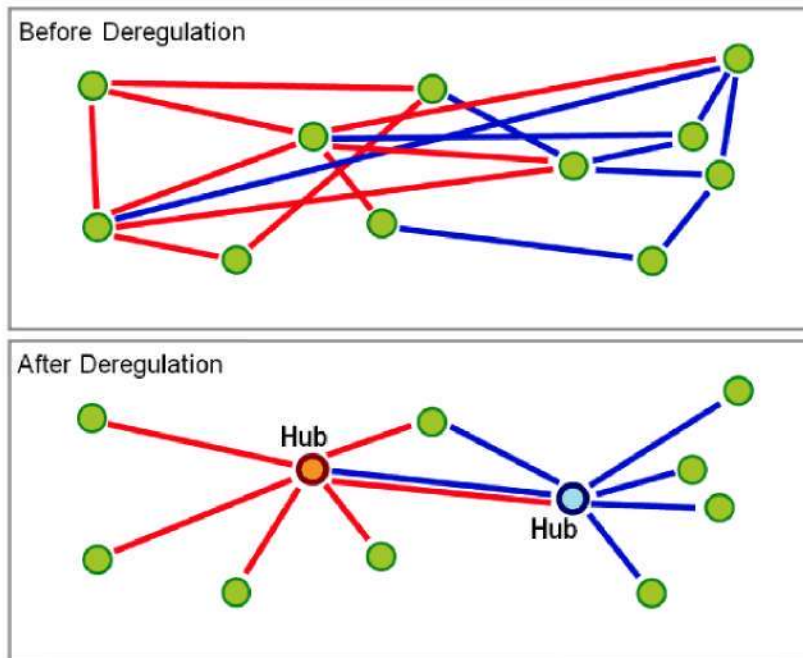
¹² Theodore P. Harris, “The Disaster of Deregulation,” *Transportation Law Journal*, 20 Transp. L.J. 87, 1991

¹³ “US Regional Airline Fact Sheet,” Regional Airline Association, www.raa.org

¹⁴ Forbes and Lederman, “The Role of Regional Airlines in the U.S. Airline Industry,” at 7-9, 12.

Airline hubs predate deregulation but the ADA’s removal of restrictions on routes, market entry and exit, and a relaxation of policy regarding mergers allowed large carriers to consolidate routing into hub and spoke networks.

“Low-cost” carriers such as Southwest developed their own adaptation of the hub-and-spoke system with a wider distribution of secondary hubs. Alda Metrass-Mendes and Richard de Neufville, “Air Transportation Policy for Small Communities: Lessons from the U.S. Experience,” at 7.



Airline Deregulation and Hub-and-Spoke Networks

Routes prior to deregulation often “hop-scotched” around the country. One might fly from Minneapolis to Detroit with intermediate stops in Houghton, Marquette, Traverse City, and Flint. Airline schedules, as late as the 1960s, resembled train schedules with arrival and departure times for intermediate stops noted with arrows that read up and down. A United Airlines schedule from 1963, for example, shows a single numbered flight [#461 / DC-6] originating at Detroit’s Willow Run Airport en route to Chicago with intermediate stops in Flint and Grand Rapids. The same flight then continued to Des Moines, Iowa.¹⁵

While the hub-and-spoke system created certain efficiencies for airlines, including higher plane loads, it has been criticized for yielding a higher volume of landings and takeoffs, increasing airport congestion and fuel consumption, and for eliminating direct connections from outlying communities to important destinations such as a state’s capital.

Deregulation and the new routing patterns contributed to airlines establishing near monopoly control, in the wake of industry mergers, over their respective hubs and regions.¹⁶ The domination of regional markets by a single large carrier has meant higher fares to less profitable destinations. The fares for travel to small cities are often substantially higher than fares for the same distance between hubs.¹⁷ The upper Midwest region has been identified in one study as a “pocket of pain”¹⁸ in which passengers

¹⁵ See examples air timetables from the era at: <http://www.timetableimages.com/ttimages/complete/ua63/ua63-04.jpg>.

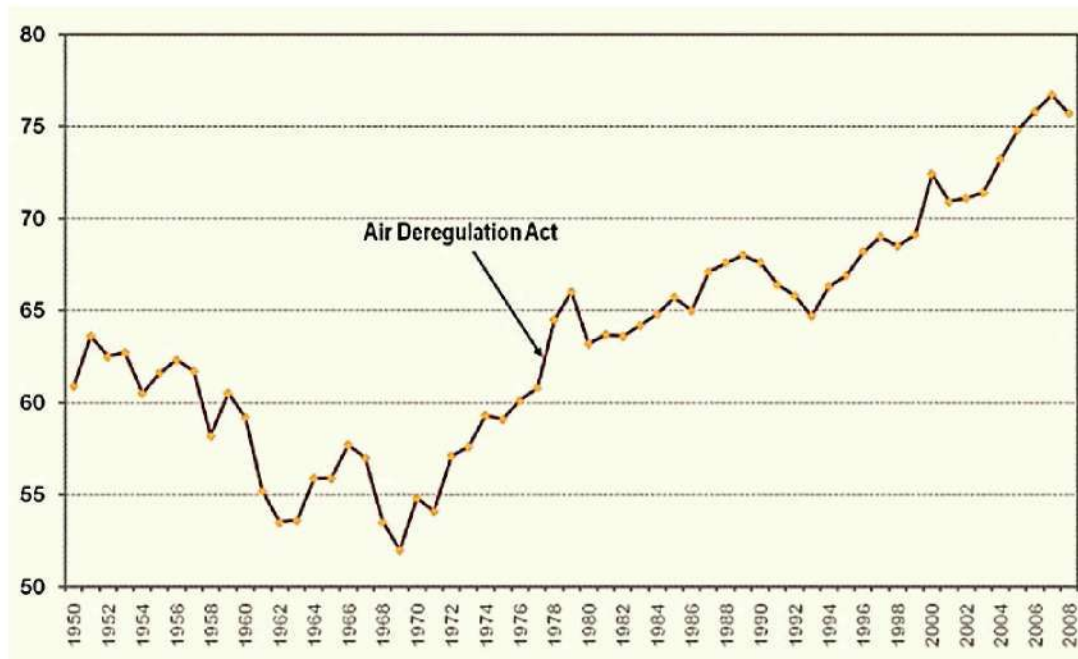
¹⁶ *THE GEOGRAPHY OF TRANSPORT SYSTEMS* at <http://people.hofstra.edu/geotrans/eng/ch3en/conc3en/planeloadfactor.html>

¹⁷ Harris, “The Disaster of Deregulation” at 89.

See also A.R. Goetz, T.M. Vowles, who summarize results from a 2006 U.S. Government Accounting Office study: “Travelers in concentrated markets subject to single-carrier domination with market shares of 60% or higher have tended to pay higher fares. Travelers have also experienced a decline in the quality of airline service, as measured by increased congestion and delays, longer travel times, and poorer customer service.” At 257-8.

¹⁸ A.R. Goetz, T.M. Vowles, at 252. Other “pockets of pain” are the southeast Piedmont area and parts of the Northeast.

are forced to pay “perennially higher fares” with inconvenient, limited schedules that increase travel time for connecting passengers.



Source: Air Transport Association.

Plane Load Factor, 1950-2008 (in %) The elaboration and consolidation of hub-and-spoke systems combined with fiercer competition have been among the factors propelling load factors (the percentage of seats filled) higher.¹⁹

¹⁹ <http://people.hofstra.edu/geotrans/eng/ch3en/conc3en/planeloadfactor.html>

C. The Essential Air Service Program

“...disruptions in air service can have an adverse impact on a small community’s economy. As one businessman noted, ‘when they cut you off from service...they cut you off from the rest of the world –and the rest of the world from you.’ If a community does not have accessible air transportation, eighty-eight percent of the top 500 firms in America would not locate their facilities in that area. Without adequate, convenient and reasonably priced air service, a community’s ability to retain existing industries or attract new ones is diminished.”²⁰

Congress enacted the Essential Air Service [EAS] program²¹ and integrated it into the Airline Deregulation Act in 1978 to ensure that small communities with air service prior to 1978 retained a link to the nation’s air transportation system. EAS would do this by mandating a minimum or “safety net” level of service, setting standards for frequency of service and equipment used, and providing subsidies when needed.²²

EAS subsidies may be provided to a carrier at an eligible EAS airport location when that carrier is 1) the sole provider of service to that location and 2) requires a subsidy to maintain operations.

Subsidies are provided through a bidding procedure described below. While community input is considered by DOT in its review of carrier bids and its final determination, it is worth highlighting that DOT subsidies are to carriers not communities.

Congress initially authorized the program for ten years as a temporary measure to cushion deregulation’s impact on small communities. The temporary status was removed in 1996 and the program has since been repeatedly reauthorized. The most recent reauthorization was in February, 2012.

Five of six Upper Peninsula airports and the airport at Rhinelander, Wisconsin are currently in the program. U.P. communities are:

- Sault Ste. Marie
- Escanaba
- Iron Mountain / Kingsford
- Houghton / Hancock
- Ironwood

²⁰ Gamache, “Air Service to Small Communities Since Deregulation,” *Transportation Law Journal*, 17 Transp. L.J. 345, at 351.

²¹ Section 419, Federal Aviation Act [1978] Effective June 1994, the Federal Aviation Act was recodified as subtitles II, III, and V-X of title 49, United States Code, “Transportation.” The former section 419 of the Federal Aviation Act is now 49 U.S.C. 41731–41742.

EAS was originally under jurisdiction of the Civil Aeronautics Board [CAB]. The CAB was phased-out in 1984. EAS has since been under jurisdiction of the US Department of Transportation.

²² “What is Essential Air Service?” Office of Aviation Analysis, US Department of Transportation, available at: <http://ostpxweb.dot.gov/aviation/rural/easwhat.pdf>. This document summarizes the EAS program’s legislative history.

The following section provides an overview of EAS requirements and operation²³:

EAS funding

The EAS budget has quadrupled since the 2001 budget year from \$50 million to over \$200 million today. The major downturn in passenger air travel immediately following the 9/11 attacks caused many carriers to abandon unsubsidized routes to small markets. There was a corresponding growth in demand for subsidies for service to an increased number of communities.²⁴

EAS is funded through a combination of mandatory Federal Aviation Administration [FAA] overflight fees and discretionary Congressional appropriations. Overflight fees are charged by the FAA to operators of aircraft who fly in US controlled airspace but who neither land nor take-off in the United States. Mandatory transfer of overflight fees is \$50 million annually. These fees represent a quarter of EAS' total \$200 million funding for fiscal year 2011.

The US Department of Transportation budget estimates for EAS in fiscal year 2013 total \$214 million comprised of \$114 million in discretionary funding with a doubling of the overflight fee mandate to \$100 million. The Department covers any shortfall with other funds available within the DOT.²⁵

The overall DOT funding proposal for FY 2013 totals just under \$74 billion. *EAS funding, including mandatory overflight fee payments, represents less than .3% of the DOT budget.* The proportionate difference is so great that it cannot legibly be reflected on either a pie or bar chart.

EAS communities: Eligibility for EAS status, subsidies to carriers

A total of 746 communities [50 states and territories] were eligible for EAS coverage when the program was launched in 1978.²⁶ These airports were able to receive service from a CAB certified carrier but were not required to be actively receiving service at that time.²⁷

Many communities otherwise eligible are not in the EAS program. There are currently 119 communities in the continental US and Puerto Rico in the program. [43 towns in Alaska are also within the EAS program but Alaska EAS is categorized separately in DOT documents due to Alaska's size and the extraordinary distances between many Alaska communities.]

Eligibility for EAS subsidies is based on distance to a large or medium hub airport: eligible communities must be not less than 70 miles from a large [e.g., Detroit, Minneapolis, and Chicago] or medium [e.g. Milwaukee] hub. Subsidies are capped at \$200 per passenger; communities located 210 miles from the nearest medium or large hub airport are exempt from the \$200 limit. A provision of the *Airport and*

²³ See Office of Aviation Analysis, Essential Air Service Program, US Department of Transportation at: http://ostpxweb.dot.gov/aviation/x-50%20role_files/essentialairservice.htm

²⁴ Andrew Taylor, "House Panel Boosts Rural Air Service Subsidies," Associated Press, June 19, 2012.

²⁵ Budget Estimates: Fiscal Year 2013, US Department of Transportation, Office of the Secretary of Transportation, page 1, available at: http://www.dot.gov/budget/2013/ost_fy_2013_budget_estimate.pdf

²⁶ All six U.P. airports and Rhinelander, WI were among the original 746 EAS eligible communities. *List of Eligible Points (As Defined by the Airline Deregulation Act of 1978)*, The Bureau of Pricing and Domestic Aviation, Civil Aeronautics Board, January 1979, available at: Office of Aviation Analysis, EAS, US DOT http://ostpxweb.dot.gov/aviation/x-50%20Role_files/essentialairservice.htm

²⁷ US Government Accounting Office, *National Transportation System: Options and Analytical Tools to Strengthen DOT's Approach to Supporting Communities Access to the System*, GAO-09-753, July 2009, fn4 at 3.

Airway Extension Act, Part IV in 2011 prohibits the DOT from granting EAS status to communities whose annual passenger subsidies are greater than \$1000 regardless of the distance to a hub airport.²⁸

The subsidy cap is among a series of legislated changes that have limited small community access to the program since the 1980s. Between 1989 and 2009, 61 communities lost EAS service because they failed to meet the per passenger subsidy requirement or were located within 70 miles of a medium or large hub.²⁹

Critics of the program have spotlighted EAS subsidies for sustained, politically motivated attacks in recent years resulting in further restrictions on communities' access to the program. The *FAA Modernization and Reform Act of 2012*³⁰, enacted February 2012, limits eligibility to locations that average 10 or more enplanements [boardings] per day that are within 175 miles of a large or medium hub airport [exceptions for Alaska and Hawaii]. The 10 enplanements minimum requirement does not apply to EAS airports in the U.P. because all are more than 175 miles from a medium or large hub airport.

EAS eligibility and Marquette's Sawyer International Airport

Another new program limitation directly impacts Marquette's Sawyer International Airport. The recent legislation freezes eligibility for subsidies to EAS locations that were within the program when the legislation was enacted [February 2012]; locations then outside the program, such as Sawyer, are and will remain ineligible even if they had been EAS locations in past years. Sawyer has service from two carriers and was not receiving an EAS subsidy when the EAS program was reauthorized in February 2012³¹. Sawyer will remain outside the program.

EAS required service levels

EAS subsidized carriers are required to meet these standards for service and equipment:

- Service to a FAA-defined medium or large hub airport;
- Two to four daily round trips, with three as the norm based on a 19-seat aircraft, 6 days a week, with not more than one intermediate stop to a hub;
- Flights at reasonable times taking into account the needs of passengers with connecting flights;
- Service in aircraft with at least two engines and using two pilots; and

²⁸ <http://www.dot.gov/policy/aviation-policy/small-community-rural-air-service/essential-air-service>

²⁹ US GAO, *National Transportation System*, at 7. GAO notes that "DOT periodically reviews carriers' enplanement data for EAS routes carriers serve, to determine whether the carriers' per passenger subsidy exceeds the statutory cap of \$200. Because DOT's subsidy payments to carriers are based on the number of flights completed, regardless of the number of passengers on board, an EAS route with few passengers has a higher per-passenger subsidy than it would have with more passengers. When DOT does find that a carrier's subsidy does exceed \$200 for an EAS route, the agency warns the community of its tentative decision to terminate the route subsidy and allows the community 20 days to object if the community finds that DOT has made a mistake in its calculations."

³⁰ *FAA Modernization and Reform Act of 2012*, Public Law 112-95, 112th Congress, February 14, 2012, Title IV Air Service Improvements, Subtitle B Essential Air Service, Sections 421-2, available at: [http://www.faa.gov/regulations_policies/reauthorization/media/PLAW-112publ95\[1\].pdf](http://www.faa.gov/regulations_policies/reauthorization/media/PLAW-112publ95[1].pdf).

³¹ *Ibid.* *FAA Modernization and Reform Act of 2012*,

- Service with pressurized aircraft when service is provided by aircraft that will regularly fly above 8,000 feet.³²
- DOT formerly required service in an aircraft with an effective capacity of at least 15 passengers unless the community agrees in writing to use of smaller aircraft; that requirement was recently waived in the *Consolidated and Further Continuing Appropriations Act of 2012*.³³

Selection and payment of carriers

The process for EAS selection of carriers is as follows:

- DOT issues a Request for Proposals [RFPs] to all scheduled carriers. Carriers are advised to submit “best and final” sealed bids that describe the appropriate level of service and subsidy given a community’s location and traffic history.
- Bids are reviewed and awarded by DOT based on four criteria:
 - Service reliability
 - Contractual and marketing arrangements with a larger carrier at the hub
 - Interline arrangements with a larger carrier at a hub
 - Community views on carriers and proposed service options
- Following DOT’s receipt of community input, DOT issues a decision that specifies routing, frequency of service, type of aircraft, annual subsidy rate and effective period for the rate.
 - DOT then executes a contract with the carrier that typically runs for two years.

Carriers are paid in arrears on a per-flight completed basis as well as for flights cancelled due to weather per monthly invoices sent to DOT. The subsidy will be paid for other cancellations, due, for example, to a runway closure, beyond the carrier’s control.

EAS “hold-in” authority

EAS has a procedure to intervene when an EAS-subsidized carrier seeks to discontinue service to a community.

- The carrier must first file a notice 90 days prior to the date that it intends to suspend service.
- DOT will then attempt within the 90-day period to secure the services of another carrier per the procedure outlined above.
 - The petitioning carrier is “held-in” or prohibited from discontinuing service during the 90 day period.
 - If DOT successfully secures service from a replacement carrier within the 90 days, the first or incumbent carrier is released.
 - If DOT is not successful in securing a replacement carrier within the 90 days, the incumbent carrier is held-in and continues to receive the same subsidy rate for six months.

³² US Government Accounting Office, *National Transportation System: Options and Analytical Tools to Strengthen DOT’s Approach to Supporting Communities’ Access to the System*, GAO-09-753, at 5-6. [Hereinafter: GAO 2009]. Suggestions appear in this and other GAO reports for more flexibility in aircraft size to better fit the demands of particular markets.

³³ <http://www.dot.gov/policy/aviation-policy/small-community-rural-air-service/essential-air-service>

- After six months, the incumbent can seek to negotiate a subsidy rate increase.
 - The six-month period is intended to discourage carriers from submitting below-cost bids, be awarded the service then soon go back to DOT for a rate increase.³⁴
- An airline will not be “held-in” if it goes out of business or files for bankruptcy. There can then be lapses in service to a community with attendant disruptions.
 - Subsidies guarantee neither a carrier’s profitability nor lower fares for passengers.

EAS program trends / concerns

The US Government Accounting Office conducted a comprehensive study of the Essential Air Service program in 2009. One section measures trends in EAS demand and pressure to increase funding against a declining base of service providers:

- The trend is EAS support for more communities with an overall increase in carrier subsidies per community and with fewer carriers providing service:
 - The number of EAS communities increased during the past decade from 87 in 2003 to 102 in 2008.
 - The growth in EAS participation was outpaced by an increase in subsidies. During that same five-year period, the average EAS subsidy increased by 35%, from \$883,000 [June 2003] to \$1,371,000 [November 2008].³⁵
 - In the twelve-month period between November 2007 and 2008, DOT renewed or awarded contracts to carriers serving 57 communities; the total annual subsidy for service to those communities increased by 65 percent.³⁶
 - The number of carriers providing EAS service declined from 34 in February 1987 to 10 in 2009.
 - This has been accompanied by concentration within the market: in 1987, the four carriers servicing the most routes accounted for 33 percent of all EAS routes; in 2009, the four leading carriers served 85 percent of routes with one carrier servicing nearly half.³⁷

GAO analysts expressed a concern that demand for EAS support might outstrip the industry’s capacity to meet that demand:

DOT faces a potential rise in the number of communities requiring subsidized air service should their single unsubsidized carrier end operations. Should additional EAS carriers withdraw from the program or be

³⁴ GAO tracked the pattern of carrier withdrawals from the program in its 2009 report. It noted that, apparently despite these procedures, 36 communities were temporarily left without air service for up to 10 months. *GAO 2009* at 13

³⁵ *Ibid.* at 9

³⁶ *Ibid.*

³⁷ *Ibid.* at 14

financially unable to serve additional communities seeking EAS service – the remaining carriers may not have enough capacity to provide EAS service to all communities that qualify.³⁸

Some factors influencing carrier demands for EAS subsidies

A variety of factors can influence the demand for EAS subsidies. Recent experience in the U.P. illustrates this. The economic downturn of 2008, higher fuel prices, and the merger of Northwest with Delta Airlines combined to trigger subsidies for airports at Houghton, Iron Mountain, Escanaba, and, recently, at Rhinelander, Wisconsin.

A carrier's intentions and interaction with a community are factors that can influence the size and, possibly, the duration of subsidies. Some carriers might approach subsidies as a shorter-term necessity to build its market and, if possible, later operate without a subsidy. Others will seek subsidies to cover operating costs, part of a continuing revenue stream, but without the commitment to service and market development. In the first instance, a carrier will enter a market and work with the community to build passenger volume with reasonable fares, good connections, and reliable service. As Houghton airport manager Dennis Hext sees it,

... if you have an airline that wants to work with the community and the DOT and provide good service you have a better chance of growing a market and getting off of subsidies or greatly reducing subsidies, this greatly benefits the program. If you have an airline that doesn't want to serve or grow the market and just wants to collect the subsidies the community will always be an EAS station with little hope of achieving independence from the program. Worse if EAS goes away some communities could lose air service without realization of their potential because of poor service by a EAS carrier.³⁹

How carriers track profitability can also come into play. Delta's drive for profitability and the way it measures profitability have, for example, factored into its requests for DOT subsidies in the Upper Midwest and elsewhere. The former Northwest Airlines looked at profit on an annual basis; Delta measures profit on a quarterly basis. Northwest may have had one or two less profitable quarters but a good year overall. Delta may be more likely to file for EAS subsidies after weak showings on a quarterly basis.⁴⁰

³⁸ *Ibid.*

³⁹ Houghton County Memorial Airport Manager Dennis Hext, interview and follow-up comments [July and October 2012]

⁴⁰ *Ibid.*

Passenger revenue is not unrelated to scheduling: schedules with connections that are inconvenient for business travelers, especially when accompanied by high fares, can drive passengers to seek other options.

Hext comments that carriers may use the EAS program to assure profitability or use EAS subsidies as seed money to test and develop markets. He adds that "the motivation behind an airlines reason for bidding on an EAS market can make or break air service within the community." He points out that the subsidy at Houghton dropped "significantly from the first two-year contract [with Delta] to the next two year contract [with Sky West]."

D. Alternative Essential Air Service Program [AEAS]

The Alternative Essential Air Service program [AEAS], recently instituted by DOT, provides options for EAS eligible communities that are not otherwise available to those communities within the EAS program.

The Alternative Essential Air Service [AEAS] program provides grant funding directly to communities in lieu of a subsidy to a selected carrier. The community then assumes responsibility for determining how those funds will be used to meet its needs for access to the nation's transportation network.

Communities, under AEAS, can choose from among several options such as: purchasing an aircraft; contracting for charter or on-demand air taxi service; securing more frequent scheduled service with smaller aircraft; or scheduling on-demand surface transportation.

A community that opts for AEAS is then outside the EAS program and without EAS protections for continued service. It may, however, protect itself by negotiating a provision reserving the right to return to EAS.⁴¹ AEAS offers attractive options that may be appropriate or desirable for certain communities.

The first AEAS grant in the nation was awarded in March 2012 to Manistee County Blacker Airport. An application for AEAS funding was submitted in January 2012 by Airport Manager Barry Lind with support from the Airport Authority, Manistee County Board of Commissioners, Manistee Area Chamber of Commerce, Manistee County Visitors Bureau and office of US Senator Carl Levin. The US DOT grant is for two years and totals \$4.156 million.⁴²

Community leaders felt that EAS carriers had not put adequate resources into marketing and sales. This reflects a criticism of the EAS program: that there is no particular incentive for EAS carriers to invest in marketing. Bid competition, pressure to contain costs, particularly rising fuel costs, may reinforce a reluctance to divert resources to marketing a community's airport; the carrier will receive its subsidy anyway.

By pursuing AEAS support, the airport management and community assumed greater responsibility for marketing and ticket sales. When the community was awarded the AEAS grant, the airport contracted with Public Charters, Inc. for regularly scheduled charter service and it successfully negotiated terms setting fare and performance standards.

The Manistee-Public Charters agreement calls for at least 1,019 nonstop one-way flights annually, for two years, between Manistee and Chicago's Midway Airport. Service is provided for by a two-pilot, twin-engine, 30 seat turboprop aircraft for the first six months and by a 19-seat aircraft for the remaining 18 months.⁴³

⁴¹ This was done by Manistee County Blacker Airport Manager Barry Lind.

⁴² News release, office of US Senator Carl Levin, "Senator Levin Applauds Obama Administration Decision to Provide a First-of-Its-Kind Alternate Essential Air Service Grant to Manistee", March 16, 2012.

⁴³ Interview with Manistee County Blacker Airport Manager Barry Lind, May 1, 2012.

Communities are advised to consider passenger preferences when evaluating a move toward AEAS.⁴⁴ The switch to charter service, for example, means that the code share agreements between major and regional carriers will not apply. With code sharing, a regional or commuter [SkyWest] providing service under auspices of the major carrier [United] will be able to offer the same services or benefits available to customers of the major airline. A passenger making connections can typically book reservations on the major's website, easily access connecting flights, and have checked baggage moved between aircraft. The credit a passenger may receive within a major airline frequent flyer program is an additional, and often large, consideration.

Manistee is the only community in the nation at this time to have opted for AEAS. Locations with a higher passenger volume than Manistee and with more potential for growth are working to increase demand by replacing turboprop aircraft with regional jets. Smaller communities that may yet consider AEAS are, for the moment, relying on continued support through the EAS program.⁴⁵

⁴⁴ Per interviews with several U.P. airport managers

⁴⁵ Interview with Michael Mooney, Air Service Strategy and Development Consultant, Sixel Consulting Group, Inc., September 25, 2012

II. THE ESSENTIAL AIR SERVICE PROGRAM AND MICHIGAN'S UPPER PENINSULA: Proximity to Alternative Transportation Modes

The *Legislative History of the Airline Deregulation Act of 1978*⁴⁶ identifies two objectives for the Essential Air Service program:

- Connectivity to the nation's air transportation system, and
- Economic development of the communities served.

The Upper Peninsula of Michigan is among the most remote regions of the eastern United States with limited transportation options. Economic development depends, in no small measure, on the ability of its businesses, government entities, and non-profit enterprises to reasonably and conveniently access national and global markets through the nation's transportation system.

The Upper Peninsula [U.P.] is comprised of the 15 northernmost counties of the state, geographically distinct from the Lower Peninsula; the two peninsulas are separated by the five-mile Mackinaw Straits and connected by I-75 [Mackinac Bridge].

The U.P. land area is 16,452 square miles, representing about one-third of Michigan's land mass, with a population of 355,597 or 3% of the state's total population. The population is predicted to be stable through at least 2018.⁴⁷

Primary north-south highways are: I-75 at the extreme east end; US 41 near the center; and US 141 and US 45 in the west. Primary east-west highways are US 2 across the south; and Michigan Route 28 across the central/northern section. These are predominately two-lane highways with occasional four-lane and passing-lane sections. Road surfaces vary widely in quality. And all travel in the region is impacted by potentially severe winter weather.

Distances between population centers within the U.P. – and between U.P. communities and metropolitan areas in Michigan, Wisconsin, Illinois, and Minnesota - are significant.

There is no passenger rail service and scheduled commercial bus service is limited and inconvenient.

The region is particularly dependent on commercial scheduled air service and vulnerable to a reduction or loss of that service.

To illustrate the point, the following section applies the geospatial analytical tools used by the U.S. Government Accountability Office in its 2009 study of EAS.⁴⁸ These measure the relative distance or remoteness of EAS airport locations from the nation's transportation system. The analysis supports the necessity and appropriateness of EAS subsidies for U.P. airports based on the region's geography.

⁴⁶ *Legislative History of the Airline Deregulation Act of 1978* [1979] and the record of *Hearings before the Subcommittee on Aviation of the Committee on Public Works and Transportation, US House of Representatives*, August 16, 1983, and January 31 to February 1, 1984, cited within *GAO 2009* at 37.

⁴⁷ North Star Economics, Inc., *An Economic Opportunity Study for the Michigan Upper Peninsula/Wisconsin Border Region*, September 2009, at 19.

⁴⁸ Appendix IV Geographic Information System Analysis of Small Community Transportation Access, *GAO National Transportation Systems*, at 58-67.

**A. Measuring Small Community Transportation Access:
U.S. Government Accounting Office Geographic Information Systems [GIS] Analysis**

GAO's methodology

GAO measured and compared the access of 727 US [non-Alaska] communities with populations between 10,000 and 500,000 to three transportation modes: 1) medium or large hub airports; 2) Interstate Highways; and 3) passenger rail –Amtrak. The 727 communities are all at least 90 miles from medium or large hub airport.

GAO averaged the distances to each of these three modes and used that number as a denominator. It then determined the actual distance for each community to the particular mode and used that number as a numerator. GAO created its value index by multiplying that fraction by 100.

Highway index values:

Distance for community to on ramp of an interstate highway x 100
Average distance across communities to an interstate highway [33 miles]

Aviation index values:

Distance for community to a medium or large hub airport x100
Average distance across communities to a medium or large hub airport [173 miles]

Passenger rail index values:

Distance for community to an Amtrak station x100
Average distance across communities to an interstate highway [not stated]

- An index value of 100 = community's distance is the national [non-Alaska] average
- An index value <100 = community's distance is less than the national average
- An index value >100 = community's distance is greater than the national average

GAO did not provide an average distance to an Amtrak station. Comments below note the inaccessibility of Amtrak for U.P. residents.

Index values on all tables are rounded up or down to the nearest whole number.

Highway index: Distance to Interstate Highways

- Three sets of data are shown:
 - Distance to I-75 [relatively nearer for locations in the central and eastern U.P.]
 - Distance to I-35 [relatively nearer for locations in the western U.P.]
 - Distance to I-43 [relatively nearer for locations central U.P.]
- Index values are included for Marquette [non-EAS] for reference and comparison.
- Mileage is measured in driving distance from the city or town center not the airport.
- Distances are calculated using *mapquest.com* and may be approximate
 - Where more than one route was suggested, the shortest route was selected

With the lone exception of Sault Ste. Marie, MI to Interstate 75, indices of distance to all regional interstate highways for all U.P. communities are extremely high and well above the national average:

Highway index: I-75:

Note: This Interstate Highway section runs north-south at the far eastern end of the Upper Peninsula between Sault Ste. Marie and St. Ignace, Michigan

Community	Driving distance / time	GAO Index value
Sault Ste. Marie	.82 miles / 2 minutes	2
Marquette	162 miles / 3 hours 10 minutes ⁴⁹	491
Escanaba	141 miles / 2 hours 47 minutes	427
Iron Mountain/Kingsford	193 miles / 3 hours 51 minutes	585
Houghton /Hancock	261 miles / 5 hours 10 minutes	791
Ironwood	314 miles / 6 hours 13 minutes	952

Table 1(a)

Highway index: I-35:

Note: Runs north-south between Duluth and Minneapolis-St. Paul, Minnesota

Community	Driving distance / time	GAO Index value
Sault Ste. Marie	416 miles / 8 hours 17 minutes	1260
Marquette	252 miles / 5 hours 7 minutes	764
Escanaba	280 miles / 5 hours 40 minutes	848
Iron Mountain/Kingsford	234 miles / 4 hours 50 minutes	709
Houghton /Hancock	217 miles / 4 hours 29 minutes	658
Ironwood	109 miles / 2 hours 19 minutes	330

Table 1(b)

Highway index: I-43:

Note: Runs north-south between Green Bay and Milwaukee, Wisconsin

Community	Driving distance / time	GAO Index value
Sault Ste. Marie	284 miles / 5 hours 33 minutes	861
Marquette	178 miles / 3 hours 33 minutes	539
Escanaba	212 miles / 1 hour 11 minutes	642
Iron Mountain/Kingsford	100 miles / 2 hours	303
Houghton /Hancock	213 miles / 4 hours 13 minutes	645
Ironwood	219 miles / 4 hours 3 minutes	664

Table 1(c)

⁴⁹ Distance calculated to St. Ignace, MI: M-28 > US 2

Aviation index: Distance to medium or large hub airports

- Three sets of data are shown. All are driving distances /time:
 - Distance /time to Milwaukee Mitchell Airport [MKE]
 - Distance / time to Detroit Metro Airport [DTW]
 - Distance / time to Minneapolis-St. Paul International Airport [MSP]
- Mileage is measured in driving distance from the city or town center not the airport.
- Distances are calculated using mapquest.com and may be approximate
 - Where more than one route was suggested, the shortest route was selected

Without exception, indices for distance to medium or large hub airports for all U.P. communities are high and well above the national average:

Aviation index: Milwaukee Mitchell Airport [MKE]:

Community	Driving distance / time	GAO Index value
Sault Ste. Marie	317 miles / 5 hours 43 minutes	183
Marquette	302 miles / 5 hours 37 minutes	175
Escanaba	235 miles / 4 hours 15 minutes	136
Iron Mountain/Kingsford	224 miles / 4 hours 3 minutes	129
Houghton /Hancock	337 miles / 6 hours 22 minutes	195
Ironwood	317 miles / 5 hours 43 minutes	183

Table 2(a)

Aviation index: Detroit Metro Airport [DTW]:

Community	Driving distance / time	GAO Index value
Sault Ste. Marie	353 miles / 5 hours 26 minutes	204
Marquette	464 miles / 7 hours 47 minutes	268
Escanaba	442 miles / 7 hours 22 minutes	255
Iron Mountain/Kingsford	494 miles / 8 hours 27 minutes	285
Houghton /Hancock	562 miles / 8 hours 46 minutes	325
Ironwood	607 miles / 10 hours 37 minutes	351

Table 2(b)

Aviation index: Minneapolis-St. Paul International Airport [MSP]:

Community	Driving distance / time	GAO Index value
Sault Ste. Marie	554 miles / 10 hours	320
Marquette	406 miles / 7 hours 26 minutes	235
Escanaba	368 miles / 7 hours 14 minutes	212
Iron Mountain/Kingsford	324 miles / 5 hours 51 minutes	187
Houghton /Hancock	370 miles / 6 hours 54 minutes	214
Ironwood	220 miles / 4 hours 43 minutes	127

Table 2(c)

- To put U.P. distances into context:
 - The mileage from Detroit, MI to Washington DC is 525 miles. For many U.P. locations, Detroit is more than half the distance to Washington.
 - The distance from the largest community in the U.P., Marquette, to the nearest city over 500,000, Milwaukee, is nearly 300 miles.

A multi-modal approach hardly works for U.P. communities. Passenger rail service is too distant and commercial bus service provides no realistic alternative to air service.

Passenger rail access

Many Upper Peninsula communities were served by commercial passenger rail through the 1960s. Passenger rail access is today distant and inconvenient. Rail service is wholly inadequate to meet the needs of business or vacation travel and is not a viable alternative to air travel.

- There is a daily bus connection from Marquette, Escanaba, Sault Ste. Marie, and Houghton to Amtrak.
- The nearest Amtrak Station to Marquette is nearly 300 miles distant [Milwaukee].
 - The bus is scheduled to depart Marquette at 2:25AM ET and arrive at Milwaukee at 9:15AM CT.
 - Duration: 7 hours 50 minutes.
- There is no bus connection to Amtrak from Iron Mountain or Ironwood.
- There is no rail connection between the Upper and Lower Peninsulas of Michigan.

Commercial bus service access

As with bus-rail connections, commercial bus service in the U.P. is extremely limited, inconvenient and impractical for business or vacation travel. Following are examples of scheduled service provided by two companies:

- Greyhound: Marquette to Chicago [several intermediate stops]
 - Daily departs Marquette at 2:25am ET
 - Arrives Chicago: 1:30pm CT
 - Travel time: 12 hours, 5 minutes [includes a one-hour layover in Escanaba]
 - One-way [standard] fare: \$102.00 / \$115.00 refundable
- Indian Trails: Houghton to Chicago [several intermediate stops]
 - Daily departs Houghton at 11:50pm ET
 - Arrives Chicago: 1:31pm CT
 - Website information unavailable at time of request
 - One-way fare: \$127 / \$98 [14 day advance purchase]

Comments on access to state capital [Lansing] by air and bus

- By air:
 - No direct flights: travelers must connect at – or find alternative transportation from – the Detroit Metro hub.
- By bus:
 - Example of bus itinerary: Marquette to Lansing:
 - Greyhound departs Marquette [2:25am], transfer at Escanaba [3:55am], to Sault Ste. Marie [7:35am], transfer at St. Ignace [8:35am], after 12 intermediate stops, arrives at Lansing [3:00pm]
 - Duration: 12 hours 35 minutes
 - Fare: \$81.90

Transportation access and remote communities: US DOT report

The situation for Upper Peninsula residents is not unlike that for other remote regions but it is arguably more pronounced. A 2011 U.S. DOT report⁵⁰ shows that rural areas of the nation are losing access to the transportation system. The DOT's Bureau of Transportation Statistics [BTS] conducted the study and defined access as

- Living within 25 miles from a non- or small-hub airport, bus station, ferry terminal, or rail station providing intercity service, and as 75 miles from a medium- or large-hub airport.⁵¹

BTS found that:

- As many as 3.5 million rural residents lost access to scheduled intercity transportation between 2005 and 2010, dropping the percent of rural residents with access to intercity air, bus, ferry, or rail transportation to 89 percent – down from 93 percent in 2005
- In 2010 8.9 million rural residents lacked access to intercity transportation – down from 5.4 million in 2005
- Of the 71.7 million rural residents retaining access in 2010, 3.7 million lost access to more than one intercity transportation mode during 2005-2010.
- Air service access was unchanged at 72% and rail access declined slightly from 42 to 40%
- The largest decline was in access to intercity bus service – from 89% to 78%⁵²

The report concludes with this observation:

Significant changes in intercity transportation access in rural America occurred between 2005 and 2010. These changes present challenges to the mobility of rural residents and their access to intercity transportation. More significant challenges may be present when considering the service levels and connections that travelers can make to other modes...⁵³

Given the limited transportation modes available, passenger air service in Michigan's Upper Peninsula assumes even greater importance as the means to maintain the region's connection to the nation.

There is no proactive national policy initiative to effectively address the increasing isolation of America's rural communities. More concerning is that, in the present political environment, significant pressure is being applied against the Essential Air Service program – pressure that threatens to eliminate present minimal standards for rural transportation access.

⁵⁰ US Department of Transportation, Bureau of Transportation Statistics, *The U.S. Rural Population and Scheduled Intercity Transportation in 2010: A Five-Year Decline in Transportation Access*, available at: http://www.bts.gov/publications/scheduled_intercity_transportation_and_the_us_rural_population/2010/pdf/entire.pdf

⁵¹ http://www.bts.gov/press_releases/2011/bts010_11/pdf/bts010_11.pdf

⁵² *The U.S. Rural Population and Scheduled Intercity Transportation in 2010* at 7-11

⁵³ *Ibid.* at 12

B. The Political Controversy Over EAS Subsidies and Upper Peninsula Airports

EAS subsidies are the most controversial aspect of program, the issue most often highlighted by critics and a focus of persistent efforts in Congress to eliminate the program.

Were it not ideologically driven, the criticism might appear curious given three considerations:

- 1) the relatively modest expenditures represent .3% of DOT's overall budget⁵⁴ and about 11% of the appropriation for Amtrak;⁵⁵
- 2) nearly half of EAS funding is not discretionary but derives from mandatory transfers of overflight fees; and
- 3) the benefits of assuring air service to small communities so arguably outweigh the cost.

Government support through subsidies has, as discussed earlier, long been recognized as necessary to support local economies throughout rural America. The EAS program was created in 1978 as a buffer against deregulated market forces the operation of which, without government intervention, might eliminate air services to hundreds of communities and whole regions of the nation.

The volume of calls to "scrap the EAS"⁵⁶ program as "a waste of taxpayer dollars" and a "boondoggle" – a term first used to attack New Deal programs in the 1930s – have increased in the current budget-cutting political environment. EAS has been targeted for cuts by House Transportation and Infrastructure Committee Chair John Mica, R-Florida. The issue was at the center of a debate that caused a partial shutdown of the FAA in July 2011; the shutdown cost the government over \$400 million in uncollected airline ticket taxes, an amount nearly double the annual EAS subsidy.⁵⁷

The US House of Representatives, by a vote of 238-164 in June 2012, rejected a bid by Representative Tom McClintock, R-California, to eliminate the EAS program but the months-long debate did lead to the restrictions described earlier: the 10 passenger daily minimum on all EAS subsidized routes and the block on additional communities from entering the program.⁵⁸ Bipartisan support in Congress did assure the program's survival until September 30, 2015 but it is reasonable to expect continued attacks that will at least impact the scope and availability of EAS support.

⁵⁴ EAS subsidies of \$214 million represent about two-thirds – or roughly 18 hours - of the estimated *daily cost* [\$300 million] of the Afghanistan war. For daily cost of the war, see: Secretary of Defense Gates announcement on Department of Defense budget, February 14, 2011. AFP, <http://www.google.com/hostednews/afp/article/ALeqM5gNQ3JbWwd6t-PzkuEckRjvsAINka>

⁵⁵ "House Votes to Boost Subsidies for Flights to Rural Areas," June 29, 2012, Bloomberg News at: <http://www.bloomberg.com/news/2012-06-29/house-votes-to-boost-subsidies-for-flights-to-rural-areas.html>

⁵⁶ See Dale McFeatters, "Scrap the Essential Air Service," Newsday, May 23, 2012. <http://www.newsday.com/opinion/oped/mcfeatters-scrap-the-essential-air-service-1.3737136>

Among groups actively opposing EAS are Taxpayers for Common Sense [taxpayers.org] and The Cato Institute [www.cato.org]. See Cato's webpage criticizing Tea Party advocate Representative Mike Kelly, R-Pennsylvania for voting against an amendment that would have terminated the EAS subsidy program, "Ranting Against Big Government – But Voting for It," at <http://www.downsizinggovernment.org/ranting-against-big-government-voting-it>

⁵⁷ Joan Lowy, "Senate Ends Partial Shutdown of FAA," Associated Press, August 5, 2011, reported at: http://www.msnbc.msn.com/id/44023626/ns/politics-capitol_hill/t/senate-ends-partial-shutdown-faa/#.UFYHV12PX4I

⁵⁸ Andrew Taylor, "House Rejects Bid to Slash Rural Airline Subsidies," June 27, 2012, ABC News.

Much of the criticism takes aim at per passenger subsidies and the distances between EAS and hub airports. A New York *Newsday* opinion article by Don McFeatters, May 2012, for example, focuses on a Nevada route, Ely to Las Vegas, in Senate Majority Leader Harry Reid’s home state, as “the nation’s most heavily subsidized, coming out to about \$3,700 per passenger.” The same article describes a passenger-less flight on the subsidized route from Hagerstown, Maryland to the hub at Baltimore about 75 miles away.

The examples provided by this and similar articles are highly-selective and unrepresentative of the program as a whole. They are certainly unrepresentative of the EAS program in the U.P. of Michigan.

The *Newsday* article was correct in stating that the highest per passenger subsidy in 2010 was \$3719.89 [Ely, Nevada /Great Lakes]. The second highest per passenger subsidy for the same year [2010] was \$1,827.43 [Jonesboro, Arkansas /Air Choice]. The highest per passenger subsidy for 2011 was \$1,997.28 [Owensboro, KY / Cape Air]

These amounts stand in contrast to all but a handful of locations:

- The average EAS subsidy per passenger in the lower 48 states for 2010 was \$329.10.
- The average for 2011 was \$260.96⁵⁹

Subsidy rates per passenger are based on the overall number of passengers served and the distance between a community and its hub airport rather than on ticket price.⁶⁰

Per passenger subsidies for U.P. airports are generally low when ranked against all 119 EAS airports in the lower 48 states.

Table 3 shows how U.P. airports are ranked⁶¹; the higher the number, the lower the subsidy compared to other U.S. locations. The subsidy per passenger rank for both Houghton and Sault Ste. Marie is among the lowest in the nation:

EAS Community	Subsidy per passenger: US rank
Escanaba	81
Houghton	115
Iron Mountain	87
Ironwood	21
Sault Ste. Marie	104

Table 3 Ranking of U.P. airport subsidy per passenger among the 119 EAS locations in the lower 48 states [12/31/11]

⁵⁹ Averages are based on data for all [48 state] EAS locations [YE 12/31/11] provided to the author by the Essential Air Service Program, US Department of Transportation in August 2012.

⁶⁰ Timothy C. Matisziw Chieh-Lung Lee, Tony H. Grubestic, “An Analysis of Essential Air Service Structure and Performance,” *Journal of Transport Management* 18 (2012) at 5-6.

⁶¹ Essential Air Service Program, US Department of Transportation [per Swanson]

Table 4 includes subsidy rates and subsidy per passenger as of 12/31/2011.

EAS	Subsidy Rates	EAS	EAS	When	Effective	YE 12/31/11	YE 12/31/11
<u>Community</u>	<u>@ July 1, 2012</u>	<u>Carrier</u>	<u>Docket</u>	<u>Rate Ends</u>	<u>Rate Order</u>	<u>Pax Total</u>	<u>Subsidy/Pax</u>
Escanaba	\$2,833,558	Delta	03-15128	Aug 31-12	2012-4-10	26,273	\$ 107.85
Iron Mountain/Kingsford	\$2,090,534	Mesaba	99-5175	Aug 31-12	2010-6-4	22,583	\$ 92.57
Ironwood/Ashland	\$1,747,326	Great Lakes	96-1266	Apr 30-13	2012-3-5	4,738	\$ 368.79
Hancock/Houghton	\$934,156	SkyWest	09-0302	Dec 31-13	2012-1-24	45,632	\$ 20.47
Sault Ste. Marie	\$1,676,136	Delta	09-0303	Jan 31-14	2012-4-10	36,999	\$ 45.30

Table 4⁶²

⁶² Essential Air Service Program, US Department of Transportation [Swanson]

III. FEDERAL AND STATE GRANT PROGRAMS TO SUPPORT RURAL AIR SERVICE AND AIRPORT INFRASTRUCTURE

A. Small Community Air Service Development Program [SCASD]

Other US DOT programs, in addition to EAS, provide useful but limited support for rural air service and small airport infrastructure development. These include the Small Community Air Service Development Program [SCASD] and the Airport Improvement Program [AIP]. State programs, administered by the Michigan Department of Transportation's Office of Aeronautics, may provide additional funding.

The Small Community Air Service Development Program [SCASD], established by Congress in 2001, awards up to 40 grants each year to communities with non- or small-hub airports that have higher fares or demonstrated need to enhance air service.

Grants are used to pursue different strategies including offering subsidies or revenue guarantees to airlines, marketing, hiring personnel and for studies to measure service deficiencies or traffic loss

Individual communities or a consortium of communities may submit a single grant application. Consortium applications relate to proposed regionalization or consolidation of services into a regional airport.

The SCASD program was originally intended to "provide temporary help to small communities to achieve sustainable air service; thereby avoiding the need for ongoing Federal subsidies."⁶³ But appropriations, \$14 million for fiscal year 2012, and grants, ranging in past years from \$20,000 to \$1.6 million,⁶⁴ while helpful for other purposes, are clearly too modest to achieve that goal.

The scope of support through the SCASD program is narrow. Since only 40 grant awards are made each year, competition for available funds is high. No more than 4 communities or consortia of communities from any one state in any one fiscal year can receive funding. And grant support to EAS airports is limited to marketing and promotion:

Small communities that meet the basic SCASDP criteria and currently receive subsidized air service under the Essential Air Service (EAS) program are eligible to apply for SCASDP funds. However, grant awards to EAS-subsidized communities are limited to marketing or promotion projects that support existing or newly subsidized EAS. Grant funds will not be authorized for EAS-subsidized communities to support any new competing air service. Furthermore, no funds will be authorized to support additional flights by EAS carriers or changes to those carriers' existing schedules. These restrictions are necessary to avoid conflicts with the EAS program.⁶⁵

⁶³ US DOT memorandum, Office of the Inspector General, *Report on the Audit of the Small Community Air Service Development Program Office of Aviation Analysis Report No: CR-2008-051*, May 13, 2008, available at: [http://ostpxweb.dot.gov/aviation/X-50%20Role files/OIG Report May 2008.pdf](http://ostpxweb.dot.gov/aviation/X-50%20Role%20files/OIG%20Report%20May%202008.pdf)

⁶⁴ *Office of Aviation Analysis, Small Community Air Service Development Program* at: [http://ostpxweb.dot.gov/aviation/X-50%20Role files/smallcommunity.htm](http://ostpxweb.dot.gov/aviation/X-50%20Role%20files/smallcommunity.htm)

⁶⁵ Small Community Air Service Development Program, grants.gov:<http://www07.grants.gov/search/search.do?oppld=170433&mode=VIEW>

B. Airport Improvement Program [AIP]

This federal program has since 1982 provided funds to the nation's airports – including large and medium hub airports - for such capital projects as runway, ramp and taxiway improvements.⁶⁶ Funds for the AIP are drawn from the Airport and Airway Trust fund supported by user fees and fuel taxes and are not used to cover an airport's operations costs.

Users of the nation's air transportation system are the source of AIP funds. Small airports are dependent on these funds for capital improvements that maintain airport infrastructure and impact public safety.

A four-year \$3.35 billion reauthorization of the program was included within the *FAA Modernization and Reform Act of 2012*. Congress reduced funding by \$15 million from the previous authorization. The 2012 law changes the federal contribution for these projects at small airports from 95 percent to 90 percent thereby shifting part of the cost for these projects to state and local governments already burdened by budget constraints.

EAS communities also determined to be within an Economically Depressed Area [EDA] are exempted from the funding formula change and still qualify for the 95 percent federal share. An area may be determining to be an EDA if its per capita income is 80 percent or less of the national average. Another measure is a high unemployment rate – at least 1 percent above the national average.

The amount of funding potentially available depends on passenger volume. This is a factor closely observed by the U.P.'s airport managers: non-hub airports with at least 10,000 annual enplanements are eligible for a minimum annual grant of \$1 million. Those enplaning less than the annual 10,000 threshold are eligible for a maximum grant of \$150,000, an amount, in the opinion of one airport manager, too small for an airport to grow.⁶⁷

C. Michigan Air Service Program⁶⁸

The State of Michigan as early as 1987 recognized the need for state assistance “to address the loss and decline of commercial air service at many Michigan airports.”⁶⁹ The Michigan Air Service Program funds airport-specific projects in three areas identified as:

- Capital improvement and equipment
- Carrier recruitment and retention
- Airport awareness

⁶⁶ See US DOT's website for AIP at: <http://www.faa.gov/airports/aip/>. Also see the FAA's 2012 slide presentation, “Funding A Project” February, 2012, at: http://www.faa.gov/airports/great_lakes/about_airports/msp_ado/msp_ado_web/media/workshop/4-Funding-a-Project.pdf

⁶⁷ Interview with Manistee / Blacker County Airport Manager Barry Lind, May 1, 2012.

⁶⁸ This section summarizes material presented in *Michigan Air Service Program Guidelines*, Michigan Department of Transportation, Office of Aeronautics, January 2012, available at: http://www.michigan.gov/documents/aero/Air_Service_Program_Guidelines_377697_7.pdf

⁶⁹ *Michigan Air Service Program Guidelines* at 1

Capital improvement and equipment: The program is intended to fill a gap in federal or state funding that is not otherwise provided for such improvements as terminal remodeling, cargo handling, and, of particular importance in recent years, security equipment. Funding in this category is limited to \$80,000 per award.

The funding formula favors small airports defined as having annual enplanements under 100,000: 90 percent state / 10 percent local funding. Funding eligibility extends to Cargo Service Airports that do not have scheduled passenger service.

The State of Michigan recently enacted legislation to fund airport maintenance and infrastructure improvements through the Michigan Department of Transportation Office of Aeronautics. The measure dedicates a share of tax revenue from the sale of fuel and other aviation products.⁷⁰ But it is in effect for one year only.

Carrier recruitment and retention: This category is intended to advance community economic development by enabling small airports to recruit and retain carriers. The category identifies three areas for funding: 1) feasibility studies; 2) risk sharing; and 3) incentives.

Feasibility studies are undertaken to support efforts to recruit a carrier, establish or expand existing service. The funding formula is 70 percent state / 30 percent local.

Risk sharing provides funds to carriers for a limited duration [2-3 years] to reduce a carrier's financial risk for providing service. The state/local funding formula is at the state's discretion and is related to the term of the proposed funding.

Incentives are "other inducements to recruit or preserve service" that can enable airports to waive landing fees and cover other, necessary operating costs. This involves an 80 percent state/ 20 percent local split.

Airport awareness: This is funding for education, outreach, and media relations and is intended to raise community awareness of the airport and its role for economic development. Annual grants of up to \$25,000 are available to small airports on a 90 percent state/ 10 percent local basis. U.P. airport executives report that marketing funds have not recently been available and that grants are "vulnerable to the Office of Aeronautics budget."

⁷⁰ Act No. 226, Public Acts of 2012, June 29, 2012, available at: <http://www.legislature.mi.gov/documents/2011-2012/publicact/pdf/2012-PA-0226.pdf>; Summary at: Aircraft Owners and Pilots Association, <http://www.aopa.org/advocacy/articles/2012/120614aviation-funding-bill-passes-in-michigan.html>; a list of state supported projects out for bid as of July 16, 2012 is available on the MDOT Aeronautics website at: http://www.michigan.gov/documents/aero/WWW12_380335_7.pdf

IV. UPPER PENINSULA AIRPORTS: ACTIVITY MEASURES

A. Passenger Volume

The following two tables [Tables 5 and 6] show passenger volume at U.P. airports since 1993 at three year intervals. Data for the first half of 2012 are included.

Table 5 shows Enplanements. These figures indicate the total number of passenger boarding outgoing aircraft at the respective airport in a given year. Enplanements are tracked by the Federal Aviation Administration [US DOT] and within the industry as an obvious measure of passenger activity; US DOT uses these figures to determine the level of grant support available for airport infrastructure development [discussed in a later section].

Table 6 shows Total Passenger Volume – both enplanements and deplanements [number of incoming or arriving passengers]. Due to the frequency of round-trip travel, the total volume is about double the number for enplanements.

For comparison, additional data is provided on both tables for Marquette [non-EAS] as well as for the considerably larger airports at Grand Rapids and Lansing. Data for Manistee is included as an FYI item due to that location having recently obtained grant funding under the Alternative EAS program.

Totals are consistently provided for the U.P., all commercial airports in Michigan and the United States.

2012: Ten year low in North American air travel:

To put recent U.P. figures in a broader context, there is currently a lull in North American air travel. The data-reporting firm OAG issued a statement in August 2012 that scheduled flights in the U.S. and Canada are at the lowest level in 10 years. There were 21,401 fewer flights in August 2012 than during the previous August.

OAG notes decreases of two percent in flights and one percent in seating capacity for the first eight months of 2012 compared to the same period in 2011. The firm also reported a three percent drop in capacity at Chicago's O'Hare International Airport.⁷¹

⁷¹ "OAG: August's North American air traffic at lowest level in 10 years," *Airline Industry Information*, August 9, 2012, retrieved from Lexis.com.

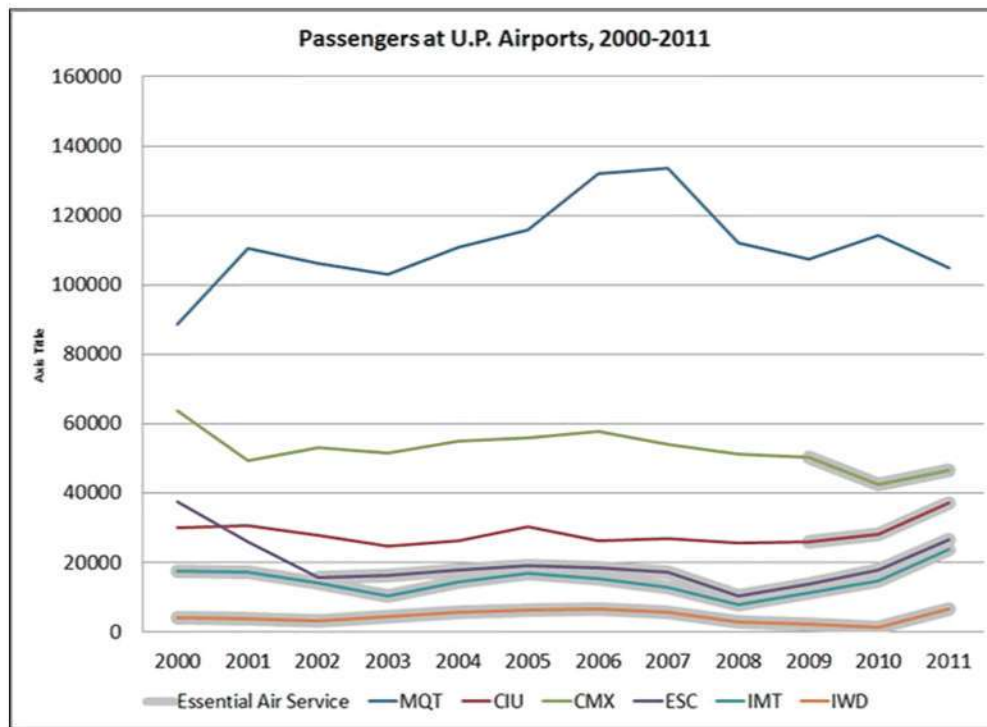
Airport Location	1993	1996	1999	2002	2005	2008	2011	2012 > June
Escanaba	15,163	21,549	20,751	8,035	9,596	5,066	13,838	6,080
Houghton	18,917	22,885	28,903	27,115	28,417	25,424	23,471	11,890
Iron Mountain	11,724	9,870	9,184	6,967	8,425	3,990	12,023	4,217
Ironwood	4,870	2,670	1,862	1,556	3,288	1,487	3,319	1,123
Marquette	n/s	n/s	10,775	54,325	59,370	56,212	52,544	18,915
Sault Ste. Marie	9,139	8,821	14,873	14,366	15,325	13,145	18,803	9,361
UP Total	59,813	65,795	86,348	112,364	124,421	105,324	123,998	51,586
MI Total	13,411,126	16,680,481	19,207,476	17,946,175	20,449,627	19,554,633	18,648,610	9,001,587
US Total		522,219,000	573,057,000	551,898,000	657,261,000	651,709,000	638,231,000	259,140,000
								<i>US = Jan-May</i>
<u>U.P. share vs. US</u>								
Escanaba / US		0.0041%	0.0036%	0.0015%	0.0015%	0.0008%	0.0022%	0.0023%
Houghton / US		0.0044%	0.0050%	0.0049%	0.0043%	0.0039%	0.0037%	0.0046%
Iron Mountain / US		0.0019%	0.0016%	0.0013%	0.0013%	0.0006%	0.0019%	0.0016%
Ironwood / US		0.0005%	0.0003%	0.0003%	0.0005%	0.0002%	0.0005%	0.0004%
Marquette / US				0.0098%	0.0090%	0.0086%	0.0082%	0.0073%
Sault Ste. Marie / US		0.0017%	0.0026%	0.0026%	0.0023%	0.0020%	0.0029%	0.0036%
<u>U.P. share vs. MI</u>								
Escanaba / MI	0.1292%	0.1080%	0.0448%	0.0469%	0.0259%	0.0742%	0.0675%	0.0448%
Houghton / MI	0.1372%	0.1505%	0.1511%	0.1390%	0.1300%	0.1259%	0.1321%	0.1511%
Iron Mountain / MI	0.0592%	0.0478%	0.0388%	0.0412%	0.0204%	0.0645%	0.0468%	0.0388%
Ironwood / MI	0.0363%	0.0160%	0.0097%	0.0087%	0.0161%	0.0076%	0.0178%	0.0087%
Marquette / MI				0.3027%	0.2903%	0.2875%	0.2818%	0.3027%
Sault Ste. Marie / MI	0.0681%	0.0529%	0.0774%	0.0801%	0.0749%	0.0672%	0.1008%	0.0801%
<u>U.P. only</u>								
Escanaba / UP	25.35%	32.75%	24.03%	7.15%	7.71%	4.81%	11.16%	11.79%
Houghton / UP	31.63%	34.78%	33.47%	24.13%	22.84%	24.14%	18.93%	23.05%
Iron Mountain / UP	19.60%	15.00%	10.64%	6.20%	6.77%	3.79%	9.70%	8.17%
Ironwood / UP	8.14%	4.06%	2.16%	1.38%	2.64%	1.41%	2.68%	2.18%
Marquette / UP				48.35%	47.72%	53.37%	42.37%	36.67%
Sault Ste. Marie / UP	15.28%	13.41%	17.22%	12.79%	12.32%	12.48%	15.16%	18.15%

Table 5 Annual total enplanements: scheduled passengers: [Outbound]⁷²

⁷² MDOT – Airport Statistics – Report / Measures of Michigan Air Carrier Demand
<http://mdotwas1.mdot.state.mi.us/public/planning/airportstats/srchpic.cfm>

Airport Location	1993	1996	1999	2002	2005	2008	2011	2012 > June
Escanaba	29,986	42,131	40,829	15,809	19,029	10,277	26,555	12,284
Houghton	37,888	45,468	56,910	53,039	55,850	51,187	46,642	22,944
Iron Mountain	23,396	19,686	18,462	14,141	16,860	8,042	23,971	8,528
Ironwood	9,727	5,341	3,747	3,155	6,405	2,905	6,683	2,263
Marquette	n/s	n/s	22,150	106,153	115,699	112,072	104,985	37,802
Sault Ste. Marie	18,099	17,409	28,999	27,856	30,387	25,698	37,139	19,102
U.P. Total	119,096	130,035	171,097	220,153	244,230	210,181	245,965	103,903
Statewide Total	26,837,330	33,375,337	38,464,116	35,880,515	40,911,061	39,338,257	37,272,817	18,082,360
Market Share UP								
Escanaba	25.18%	32.40%	23.86%	7.18%	7.79%	4.89%	10.80%	11.82%
Houghton	31.81%	34.97%	33.26%	24.09%	22.87%	24.35%	18.96%	22.08%
Iron Mountain	19.64%	15.14%	10.79%	6.42%	6.90%	3.83%	9.75%	8.21%
Ironwood	8.17%	4.11%	2.19%	1.43%	2.62%	1.38%	2.72%	2.18%
Marquette				48.22%	47.37%	53.32%	42.68%	36.38%
Sault Ste. Marie	15.20%	13.39%	16.95%	12.65%	12.44%	12.23%	15.10%	18.38%

Table 6 Air passenger volume: Annual total scheduled passengers: Outbound/Inbound: [Enplanements/Deplanements]⁷³



Source: Chart created by Marquette County Planner Eric Anderson based on OST [Office of the Secretary / US DOT] Filings and Notices data provided by Cheryl Cox, Development and Marketing Assistant, Sawyer International Airport..

⁷³ Source: MDOT – Airport Statistics – Report / Measures of Michigan Air Carrier Demand <http://mdotwas1.mdot.state.mi.us/public/planning/airportstats/srchipic.cfm>

Comment on U.P. enplanements

Although experiencing declines in 2011/2012 from 2008 levels, both Marquette and Houghton have annual enplanements over 20,000 – considered a strong marker for non-hub airports.

Escanaba has shown a notable growth in enplanements in 2011 and 2012 from 2008 figures. Iron Mountain enplanements grew significantly during 2008 – 2011 but may be seeing reductions as high as 40% by the end of 2012. It will be worth watching how the new routing to Rhinelander and Minneapolis, beginning December 15, 2012, will impact enplanements in 2013.

Sault Ste. Marie experienced a 30% increase from 2010 to 2011. Delta had considered withdrawing service but a re-evaluation of the market led to a decision for service continuation. Airport Manager Kathy Noel noted that the strength of the local market is largely due to the airport’s high use from Ontario residents – who represent 75-80% of enplanements. Noel cites several reasons for the airport’s popularity with Canadians:

- Avoiding the congestion, including customs delays, at Toronto’s airport
- Clearing customs instead at the SSM border
- Save on Canadian air travel taxes
- The SSM Michigan airport may be closer for many SSM Ontario resident than their own airport

Passenger volume at Sawyer

The following tables [7(a)-(c)] show passenger volume at Sawyer International Airport through June 2012 by carrier.⁷⁴ Data for 2012 are compared with data for the same period in 2011.

The decline in passenger volume at Sawyer can in part be attributed to the elimination of flights from the schedules of both carriers.

Sawyer International Airport Passenger Volume: January-June, 2011 and 2012: Delta Airlines

YTD	Enplanements	Deplanements	Total	Percent
2012	12,641	13,048	25,689	
2011	16,317	16,271	32,588	
Change	-3,676	3,223	6,899	-21.00

Table 7(a)

Sawyer International Airport Passenger Volume: January-June, 2011 and 2012: American Eagle Airlines

YTD	Enplanements	Deplanements	Total	Percent
2012	6,274	5,839	12,113	
2011	7,418	8,383	15,801	
Change	1,144	2,544	3,688	-23%

Table 7(b)

Sawyer International Airport Passenger Volume: January-June, 2011 and 2012: Both carriers

YTD [>6/30]	Enplanements	Deplanements	Total	Percent
2012	18,915	18,887	37,802	
2011	23,735	24,654	48,389	
Change	-5,420	-5,767	-10,587	-21.88

Table 7(c)

⁷⁴ Inter-department Memorandum, Cheryl Cox, Marketing and Development Assistant to Scott Erbsich, County Administrator re: Sawyer Update YTD 2012 Summary, July 23, 2012

Market share analysis for U.P. airports: January – June: 2011/2012

Airport	Jan. – June 2011	Jan. – June 2012
Sawyer [MQT]	43.66	36.38
Houghton [CMX]	18.84	23.04
Sault Ste. Marie [CIU]	15.00	18.38
Escanaba [ESC]	10.59	11.82
Iron Mountain [IMT]	9.57	8.21
Ironwood [IWD]	2.35	2.18

Table 8

B. Load Factor

Load factor [LF] is an industry measure of capacity: how much of an airplane’s seating capacity is used by paying passengers. It is used by carriers to indicate market demand as well as the profitability or potential profitability of a route. Load Factor comes into play during the route bidding process. To determine Load Factor for an individual flight, the number of paying passengers on board is divided by the number of seats on the plane. 35 passengers on a 50-seat aircraft = 70% LF for that flight.

Load factor is not conclusive for profitability or profit potential because ticket price, mileage, fuel and other operating costs are also considered. Load factors for EAS subsidized routes nationally are considerably lower than load factors for unsubsidized routes generally. The average load factor was 37 percent for all EAS flights during [federal] fiscal year 2008. That compares with a load factor of about 80 percent during the same period for unsubsidized commercial flights nationwide.⁷⁵ Table 9 shows that the load factors for U.P. locations [EAS and non-EAS] during the period April 2011 – March 2012⁷⁶ were generally higher than the earlier reported national average:

Origination	Destination	Load Factor
Escanaba	Detroit [DTW]	57.72%
Escanaba	Minneapolis [MSP]	35.26%
Escanaba	Chicago [ORD]	n/s ⁷⁷
Houghton	Minneapolis [MSP]	n/s
Houghton	Chicago [ORD]	67.33%
Iron Mountain	Detroit [DTW]	49.95%
Iron Mountain	Minneapolis [MSP]	55.64%
Ironwood	Minneapolis [MSP]	8.33%
Ironwood	Rhineland [RHI]	11.90%
Marquette	Detroit [DTW]	77.71%
Marquette	Minneapolis [MSP]	78.06%
Marquette	Chicago [ORD]	70.00%
Sault Ste. Marie	Detroit [DTW]	57.70%
Total		65.02%

Table 9 Load factors for U.P. airports

⁷⁵ GAO-09-753, *National Transportation System*, at 19

⁷⁶ 11 Market T-100 Combined Time Series / Passenger Data Related Variables per Michael Mooney, Sixel Consulting Group, Inc.

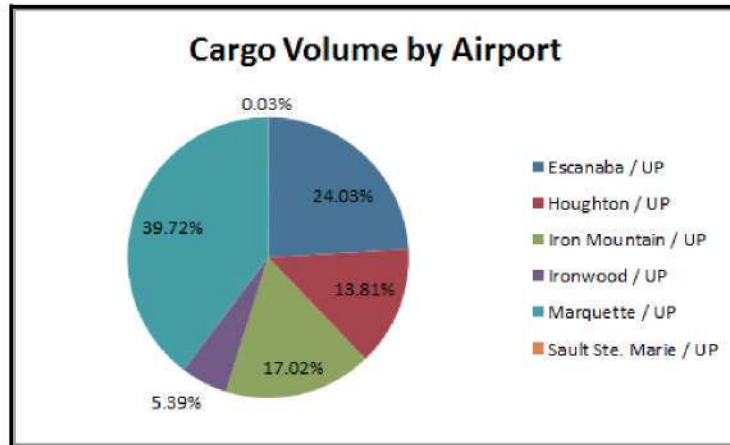
⁷⁷ n/s = No statistics reported

C. Cargo

Table 10 is included to show the volume of cargo moved through the various U.P. airports. The data indicate which airports are relatively important cargo depots for the movement of goods in the region:

Airport Location	1993	1996	1999	2002	2005	2008	2011
Escanaba	1,542,412	898,797	1,527,280	1,215,156	1,193,097	1,090,021	1,226,923
Houghton	328,483	548,061	1,015,986	931,758	989,081	977,928	704,857
Iron Mountain	1,621,985	2,040,446	3,395,205	2,772,615	2,546,872	1,307,707	869,048
Ironwood	189,522	304,226	433,928	396,292	402,297	414,941	275,035
Marquette	n/s	n/s	14,004	29,000	32,222	42,153	2,027,671
Sault Ste. Marie	4,731	2,987	3,868	5,301	1,850	2,226	1,470
UP Total	3,687,133	3,789,517	6,390,271	4,840,969	5,165,419	3,834,976	5,105,004
Michigan Total	518,386,071	659,098,904	682,218,070	572,846,728	658,709,013	547,277,142	584,709,453
Market Share UP							
Escanaba / UP	41.83%	23.72%	23.90%	25.10%	23.10%	28.42%	24.03%
Houghton / UP	8.91%	14.46%	15.90%	19.25%	19.15%	25.50%	13.81%
Iron Mountain / UP	43.99%	53.84%	53.13%	57.27%	49.31%	34.10%	17.02%
Ironwood / UP	5.14%	8.03%	6.79%	8.19%	7.79%	10.82%	5.39%
Marquette / UP			0.22%	0.60%	0.62%	1.10%	39.72%
Sault Ste. Marie / UP	0.13%	0.08%	0.06%	0.11%	0.04%	0.06%	0.03%

Table 10 Cargo volume at U.P. airports



- Escanaba has consistently high cargo volume [over 1 million pounds] as do Iron Mountain and Marquette. Marquette has only recently been reporting UPS and Fed Ex activity to MDOT; this accounts for the recorded sharp increase in volume [2011] from previous years.

Cargo operators have a stake in an airport's passenger volume. If an airport's enplanements drop below 10,000 / year, the amount of available AIP funding for necessary infrastructure improvements decreases from a minimum \$1 million to a maximum of \$150,000.

V. ISSUES IMPACTING PASSENGER AIR SERVICE IN THE UPPER PENINSULA

A. Airfares, Schedules, Aircraft, and Passenger Leakage

Airfares, aircraft and schedules influence consumer choices and impact passenger volume at a given airport. One consumer choice is departure location. Some travelers elect, based on any or all of the four factors, to not use the local airport but instead drive to a medium or large hub – an occurrence labeled within the industry as passenger “leakage.” These factors are discussed in this section.

1. Airfares

The federal government regulated airfares prior to the enactment of the *Airline Deregulation Act* in 1978. It has not done so in the deregulation era. Industry growth, increased competition and the expansion of low-cost carriers such as Southwest have all impacted airfares. Analysts disagree about whether or to what extent the flying public has benefited from lower airfares due specifically to deregulation.⁷⁸ The benefits of lower fares have mostly gone, as might be expected, to consumers in the larger, high-density markets. Industry executives and analysts agree that small communities are experiencing higher fares.⁷⁹ The Government Accounting Office reported in 2009 that “fares for EAS routes tend to be considerably higher – on average about 50 percent higher – than fares for similarly distanced non-EAS routes.”⁸⁰

This highlights one of the weaknesses of the EAS program: EAS standards, consistent with deregulation, do not include regulation of airfares by carriers receiving EAS subsidies. EAS provides subsidies to carriers to attract and provide an incentive for carriers to serve small markets that might otherwise not receive any air service. The subsidies offset a carrier’s operating costs and, presumably, help its bottom line. But the author has not seen studies that conclusively show that the EAS subsidies translate to lower airfares either generally or for particular routes.⁸¹

Survey of fares [US DOT historical]

*Table 11: A review of fares from 1993 – 2012 [fourth quarter fares] for the six U.P. airports, Lansing, Detroit, Grand Rapids, and Rhinelander, Wisconsin shows generally higher fares at U.P. airports but the differences are less dramatic than might be expected.*⁸² The data do not account for EAS status:

⁷⁸ Darin Lee, “Concentration and Price Trends in the US Domestic Airline Industry: 1990-2000,” *Journal of Air Transport Management* 9 (2003) at 91-101; A.R. Goetz, T.M. Vowles, “The Good, the Bad, and the Ugly: 30 Years of US Airlines Deregulation” at 254-5.

⁷⁹ Susan Stellin, “Small Airports, Left Behind,” *The New York Times*, February 28, 2011 available at: <http://www.nytimes.com/2011/03/01/business/01airports.html>

⁸⁰ GAO-09-753, *National Transportation System*, at 22

⁸¹ Subsidies are one of many varying factors influencing pricing. Others include a company’s financial strength, position in the market, market demand, as well as a range of operating costs including labor and fuel costs.

⁸² Source: Bureau of Transportation Statistics, Airline Origin & Destination Survey (10% Sample), DB1B_Ticket where bulk fare equals zero, itinerary fare is greater than or equal to fifty dollars (\$50) and itinerary yield is less than or equal to three dollars (\$3).

Itinerary Fare: Average fares are based on domestic itinerary fares, round-trip or one-way for which no return is purchased. Fares are based on the total ticket value which consists of the price charged by the airlines plus any additional taxes and fees levied by an outside entity at the time of purchase. Fares include only the price paid at the time of the ticket purchase and do not include other fees, such as baggage fees, paid at the airport or onboard the aircraft. Averages do not include frequent-flyer or ‘zero fares’ or a few abnormally high reported fares. Airports* ranked by U.S. originating domestic passengers in 2011.

whether a particular airport was within the EAS program at a particular time. Houghton County Memorial Airport, for example, was a non-subsidized location until 2010.

Airport Location	1993	2012 \$	1996	2012 \$	1999	2012 \$	2002	2012 \$	2005	2012 \$	2008	2012 \$	2011	2012 \$
Detroit	325.32	518	318.50	467.1	304.6	420.64	324.94	415.59	328.2	386.62	334.11	357.05	386.6	395.42
Grand Rapids	376.98	600.26	378.63	525.2	397.1	548.45	332.54	425.31	400.5	471.87	457.67	489.09	417.9	427.43
Lansing	335.19	533.72	332.64	487.8	332.3	458.93	352.55	450.9	357.5	421.17	405.46	433.3	455.5	465.91
Marquette	342.40	545.2	375.95	551.3	358.9	495.7	358.24	458.17	390.1	459.62	439.29	469.45	497.2	508.57
Hancock/Houghton	407.48	648.82	375.95	617.3	390.2	538.95	400.37	512.06	462.3	544.62	517.85	553.4	286	292.49
Sault Ste. Marie	422.27	672.37	489.06	717.2	373.6	515.95	377.95	483.38	460.4	542.34	596.47	637.42	567.5	580.46
Rhineland	358.14	570.26	382.52	560.9	430.6	594.69	396.88	507.59	418.1	492.51	443.98	474.46	332.6	340.23
Escanaba	355.42	565.93	378.05	554.4	373.2	515.4	308.57	394.65	377.8	445.1	393.97	421.02	n/s	
Iron Mountain/Kingsfd	448.00	713.34	450.35	660.4	418.2	577.51	510.7	653.12	341.3	402.04	436.84	466.83	483.5	494.52
Ironwood	397.36	632.71	424.83	623	419.8	579.74	470.75	602.07	375.3	442.12	445	475.55	336.4	344.04
U.S. average	315	499.435	407.67	595	318	437	309	395.2	315	371.1	345	368.69	368	376.42

Table 11 Survey of fourth quarter fares over 30 years: intervals of three years: converted to 2012 dollars

Fare comparison: six weeks in advance of travel: from U.P. airports

A web search conducted by the author provides anecdotal evidence for recent fares from U.P. locations. The particular search, results of which appear within the following table, was conducted on September 4, 2012 for a putative two-day business trip scheduled for six-weeks later – October 15-17. Six weeks might be considered a reasonable advance time for business travel; in many cases, business trips need to be scheduled with much less time.

Table 12 is intended to serve as an illustration only. It is not stating average fares measured over time to various size markets in the U.S.

Both one-way and round trip fares are shown for travel from all U.P. airports to three major U.S. hubs on airlines serving those hubs: Chicago, Detroit and Atlanta. The Ironwood route to Minneapolis is also included:

	[DTW]- Rd Trip	Detroit - 1-way	Chicago [ORD] RT	Chicago - 1-way	Minneapolis [MSP] RT	Minneapolis 1-way	Atlanta [ATL] RT	Atlanta - 1-way
Escanaba	\$646.000	\$473.00					\$881.60	\$440.80
Iron Mountain	\$713.50	\$354.50					\$877.10	\$436.30
Marquette	\$967.60	\$483.80	\$1,359.60	\$679.80			\$963.20	\$426.60
Sault Ste. Marie	\$526.00	\$263.00					\$455.60	\$277.80
Houghton			\$252.00	\$136.00				
Ironwood					\$145.00	\$61.00		
Delta Airlines: Escanaba, Iron Mountain, Marquette, Sault Ste. Marie to Detroit and Atlanta								
American Airlines: Marquette to Chicago								
Sky West dba United Express: Houghton to Chicago								
Great Lakes Airline: Ironwood to Minneapolis								
Online reservation search conducted 9/4/12 for travel 10/15/12 - 10/17/12								
Lowest / non-refundable fare selected								

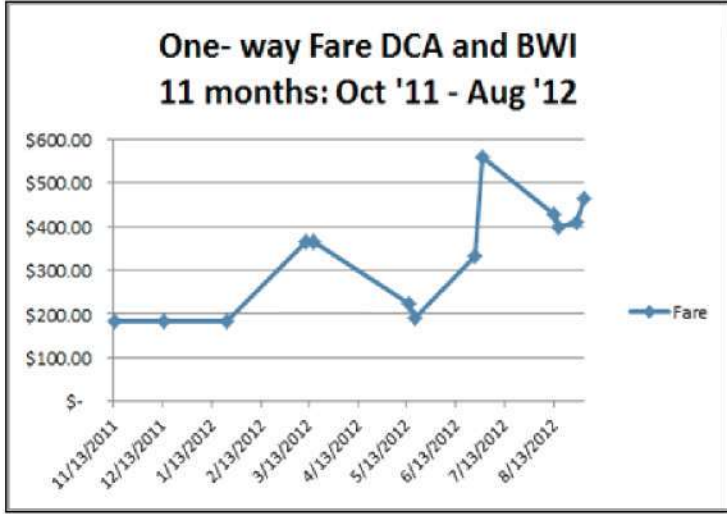
Table 12 Fares six weeks in advance of travel

One-way fares: Marquette to Baltimore-Washington market: October 2011-June 2012:

The author reviewed airfares for his travel from Marquette to the Baltimore-Washington area during an eight month period, from October 2011 to June 2012. *Table 13* shows the fares, destinations, dates of travel and booking. These are one-way fares reflecting a scheduling preference; no significant differences were noted at the time of booking travel between one-way and round-trip fares. This illustrates generally rising airfares in recent months as experienced by one business traveler:

Origin	Destination	Purchase date	Travel date	Fare	Carrier
MQT	DCA	10/22/2011	11/13/2011	\$ 181.40	AA
MQT	DCA	10/31/2011	12/14/2011	\$ 181.40	AA
MQT	BWI	11/15/2011	2/12/2012	\$ 161.86	AA
MQT	DCA	12/10/2011	1/22/2012	\$ 181.40	AA
BWI	MQT	2/16/2012	3/16/2012	\$ 366.51	Delta
MQT	BWi	2/16/2012	3/11/2012	\$ 366.51	AA
DCA	MQT	4/12/2012	5/18/2012	\$ 188.84	Delta
MQT	DCA	4/12/2012	5/14/2012	\$ 223.26	AA
MQT	BWi	5/17/2012	6/24/2012	\$ 333.02	AA
DCA	MQT	5/17/2012	6/29/2012	\$ 558.14	Delta
MQT	BWI	6/16/2012	8/12/2012	\$ 427.91	AA
BWI	MQT	6/18/2012	8/15/2012	\$ 400.00	Delta
MQT	BWi	6/25/2012	8/26/2012	\$ 409.30	AA
BWI	MQT	6/25/2012	8/31/2012	\$ 465.12	Delta

Table 13



2. Schedules

Determination of schedules, the frequency of flights, and choice of aircraft are at the carriers' discretion but for the minimal requirements of the EAS program. Those private-sector decisions affect the level and quality of service to a community and can impact passenger volume in a major way. Inconvenient schedules, the hub served, or poor connections – connections that are either too long or too short – can lead travelers to choose or avoid a particular airport.

EAS airports

Table 14 shows that all EAS airports in the U.P. currently have two weekday round trips. Also noted are the aircraft, seating capacity, carrier, and hub. The data in the table were provided by EAS / US DOT in July 2012; an update is that Iron Mountain is currently served by the CRJ-200 with flights to Detroit only with an intermediate stop at Escanaba until December 15, 2012.

Community	Carrier	Hub	Aircraft	Seats	RTs/ M-F
Escanaba	Delta	DTW	CRJ-200	50	2
IM/Kingsford	Mesaba	DTW/MSP	SAAB 340	34	2
Ironwood/Ashland	Great Lakes	MKE	B-1900	19	2
Hancock/Houghton	SkyWest	ORD	CRJ-200	50	2
Sault Ste. Marie	Delta	DTW	CRJ-200	50	2

Table 14 EAS data on carrier, hub, aircraft and number of round trip flights: U.P. airports: as of 12/31/11.⁸³

Escanaba

For Escanaba the conversion from turboprop to regional jet aircraft by Delta Airlines in recent years has resulted in fewer flights but little or no change in seating capacity.⁸⁴ Jet service has proven popular and has brought a significant increase in enplanements. Although recent service included both the Minneapolis and Detroit hubs, the service is now exclusively to Detroit. Escanaba service has also been paired with Iron Mountain; that arrangement will soon end with Escanaba flights solely to and from Detroit.

Escanaba / Iron Mountain

- Current [9/12] weekday schedule:
 - Iron Mountain – Escanaba – Detroit: Arrive 7:40am / Depart 8:05am
 - Detroit – Escanaba – Iron Mountain: Arrive 1:16pm / Depart 1:42pm
 - Iron Mountain—Escanaba--Detroit: Arrive 3:23pm / Depart 3:48pm
 - Detroit – Escanaba--Iron Mountain: Arrive 8:54pm /Depart 9:21pm
- Saturday / Sunday schedule:
 - Iron Mountain – Escanaba-- Detroit: Arrive 7:40am / Depart 8:05am
 - Detroit – Escanaba—Iron Mountain: Arrive 8:54pm / Depart 9:21pm

This schedule changes on December 15, 2012 when Iron Mountain service to Escanaba and Detroit will be replaced by service from Iron Mountain to Rhinelander and Minneapolis. Sky West Airlines was

⁸³ Per EAS, US DOT, Brian Swanson [July 2012]

⁸⁴ Per Connie Ness, Delta County Airport Manager, September 18, 2012.

recently approved by US DOT for the EAS subsidy on this route⁸⁵ and has emerged as the regional carrier for Delta [as Delta Connection] replacing service formerly provided by Mesaba and Pinnacle Airlines.

Houghton

- Current schedule: Arrivals at 1:42pm and 11:33pm / Departures at 5:46am and 2:06pm

Houghton has strong enplanements despite having experienced a gradual decline in the number of flights in recent years. The flight reductions are in part related to the 2008 merger of Northwest and Delta Airlines. Northwest's commitment to small communities was greater than Delta's. Delta inherited Northwest routes and has since moved to shed many of them.⁸⁶

Seven daily round-trip flights were provided by Northwest [Mesaba] as recently as 2000. By 2009, the number of flights declined to three daily flights provided by Delta to Minneapolis. In 2010, two daily round-trips began with United/SkyWest [to Chicago]. Throughout the decade, Houghton's passenger volume remained relatively constant at 20,000-27,000 annual enplanements.

The two flights currently provided are, in the opinion of Houghton County Memorial Airport Manager Dennis Hext, adequate to support the current level of passenger volume but Hext observes that more flights are needed for the community's economic development. He favors an increase to up to 4 daily round trip flights that should include the important Detroit hub. To Hext, an "increase in flights as possible only if the airline and the community work together..."⁸⁷

- Dennis Hext reports that SkyWest announced [early October 2012] that it will add a third flight for June, July, and August, 2013. Hext credits community support and an increase in boardings related to SkyWest's "reasonable fares and great connections..."⁸⁷

Houghton is located in a remote area of a remote region and there is a strong incentive for cooperation between the community and carriers to expand air service. Houghton has a significant technological sector and is home to Michigan Technological University. For Houghton, access to the nation's transportation network is critically important.

The present schedule of two daily flights poses particular challenges for business travelers. This was noted in an interview with Jim Baker, Executive Director, Innovation & Technology Engagement at Michigan Tech. Baker's program is "the transactional interface between private industry and the university." While "grateful to have service," Baker pointed out that just two flights going through Chicago's O'Hare can be a problem with delays and cancellations. He "almost expect(s) to lose a day" when flying. And "with so many people looking for a seat," a cancellation can mean a 2-3 day delay for a flight home. His solution for that situation is a one-way car rental and 9+ hour trip.

⁸⁵ Per Tim Howen, Ford / Iron Mountain-Kingsford Airport Manager, September 26, 2012

⁸⁶ Interviews with Houghton County Airport Manager Dennis Hext, July 19, 2012 and Mike Mooney, Air Service Strategy and Development Consultant, Sixel Consulting Group, Inc., August 10, 2012.

⁸⁷ Hext interview July 19, 2012 and follow-up correspondence, October 2012

Baker agrees with Hext that at least one more flight would “make a big difference” and, with important contacts in southeast Michigan, would also welcome flights to Detroit.⁸⁸

More than a matter of convenience, Baker sees good air service to Houghton as essential for recruitment and retention of people in technology industries.

Ironwood

Great Lakes Airlines earlier provided 14 flights per week; now providing 13:

- Service to Minneapolis on Beechcraft 1900 [19-seat] turboprop
 - Departures at 9:45am [except Sundays] and 4:30pm / Arrivals at 9:30am [except Sundays] and 4:15pm

Gogebic-Ironwood Airport Manager Duane Duray would like to see a schedule adjustment with an earlier flight available for easier morning connections at the Minneapolis hub.

Sault Ste. Marie

As with other Delta Connection cities, at Sault Ste. Marie, the SAAB 30-seat turboprop was replaced by the CRJ 50-seat regional jet. These aircraft now provide two round trips daily or 14 a week – a recent increase from 12 per week. Flights are to the Delta hub at Detroit.

Arrivals are at 1:34pm and 9:05pm / Departures at 6am and 2pm.

The airport may lose one Saturday arrival and one Saturday departure for the winter season beginning in December.⁸⁹

Non-EAS airport

Sawyer International / Marquette

The schedule for the non-EAS Sawyer International Airport at Marquette includes service by two carriers: Delta and American Eagle.

There are currently two rounds trips on Delta with the hub at Detroit:

- Departures at 6:20am [Daily] and 5:18pm [Sunday-Friday]
- Arrivals at 4:52pm [Daily] and 9:15pm [Sunday-Friday]

There is currently one round trip on American Eagle with the hub at Chicago / O’Hare:

- Departure at 7:40am [Sunday-Friday]
- Arrival at 8:35pm [Sunday-Friday]

Marquette’s Sawyer Airport has, within the past two years, experienced a reduction in service by both American Eagle and Delta and the elimination of service to the Minneapolis hub. Prior to the introduction of jet service, Delta’s schedule included five flights daily. As recently as April 2011, Delta

⁸⁸ Interview with Jim Baker, Executive Director, Innovation & Industry Engagement, Michigan Technological University, Houghton, Michigan, July 30, 2012.

⁸⁹ Per interview with Kathy Noel, Chippewa County Airport Manager, September 5, 2012

was providing seasonal service to Minneapolis and American Eagle three daily flights to Chicago’s O’Hare Airport.⁹⁰

Aircraft are present in Marquette and Houghton at the beginning of each day; that provides some assurance to departing passengers. But only Ironwood has a morning arrival from a hub airport and the earliest arrival at Marquette is at 4:52pm. Without morning arrivals, a business traveler is often forced to lose an entire work day.⁹¹ The problem is compounded by weather-related or mechanical-based delays or cancellations at either the hub or U.P. airport. Passengers who miss tight connections or whose flights are cancelled may not be able to access a seat on an alternate flight on the same day or for the following one or two days.

3. Passenger leakage

Higher-than-average fares and limited or inconvenient schedules at small airports can negatively impact passenger volume. Business and leisure travelers may choose to drive to a hub airport instead of departing from their local airport.⁹² The hub is typically served by a greater choice of carriers, often including a low-cost carrier such as Southwest, by better schedules, and more favorable fares. The option may be especially attractive when two or more persons travel together: driving may be shared and there is a particular incentive to keep the overall airfare costs lower.

Table 15 provides a comparison of airfares among Delta and, where possible, Southwest flights from four locations within the region to a major national hub, Atlanta. Fares are the lowest quoted [10/5/12] on the respective airline’s website 18 days in advance of intended travel [Tuesday 10/23 – Thursday 10/25]. All fares are the lowest available online, for round-trip travel, and include taxes and fees:

Airport	Delta	Southwest
Marquette	\$963.20	
Escanaba	\$881.60	
Green Bay	\$567.20	
Milwaukee	\$318.10	\$341.00

Table 15. Round trip fares to Atlanta; online quotes: lowest fares, 18 days in advance

It is, of course, necessary to look not just at airfare differences but also the costs of driving to more distant airports. Table 16 shows round-trip driving distances between airports and the cost at \$0.55 / mile, a common reimbursable rate for business travel:

Airport	Green Bay	\$0.55	Milwaukee	\$0.55
Marquette	346	\$190.30	588	\$323.40
Escanaba	222	\$122.10	464	\$255.20

Table 16. Round-trip driving distances between airports at reimbursable rate

⁹⁰ Upper Peninsula Airports Market Share Analysis, October 18, 2011, per Sawyer International Airport

⁹¹ Interview with Peter Didyk, Director of Sales and Marketing; Bob Beck, Vice President, Sales Operations-US Spine; and Adam Paltzer, VP, Engineering, Pioneer Surgical Inc., Marquette, Michigan, July 12, 2012. The author has experienced the same problem.

⁹² See Amy Clickner, “Loss of Sawyer traffic troubling,” *The Mining Journal* [Marquette, Michigan], September 3, 2012, available at: <http://www.miningjournal.net/page/content.detail/id/579362.html>

Parking rates at Green Bay's Austin Straubel Airport are \$7.00 / day for the Long-Term parking lot and \$16.00 / day for the Short-Term lot. Rates at Milwaukee's Mitchell Airport range from \$6 – 12 /day.⁹³

The diversion of passenger traffic is described within the aviation industry as “passenger leakage” and it is a potentially serious problem for small airports. A loss in passenger volume makes it harder for airports to attract and retain carriers and this can lead to counter-productive outcomes: upward pressure on fares as compensation for declining revenue and a further erosion of service.

To the extent that leakage means a decline in enplanements, carriers may be inclined to reduce or eliminate service to those small airports most impacted. Lost fare revenues could prompt carrier withdrawals or demands for higher subsidies at EAS locations during a period when the federal government's commitment to maintaining those subsidies lingers as an open political question. DOT would have more difficulty securing replacement carriers. DOT's hold-in authority is not absolute: under certain circumstances, such as carrier bankruptcy, communities could temporarily lose air service and suffer economic harm.

While DOT has limited ability to avoid service disruptions at EAS locations, the non-hub, non-EAS airports such as Sawyer are arguably at greater risk without any potential help to hold-in carriers. Sawyer is not immune from leakage even though the closest medium hub offering service from a low-cost carrier [Southwest] is nearly 300 miles and five hours drive-time distant.

Sawyer, as noted above, has experienced a significant decline in enplanements and market share during the past year. Should the trend continue, there is a heightened threat that Sawyer will lose one or both carriers without prompt recourse to the US DOT and without the ability, because of recent legislation, to re-enter the EAS program. The partial or complete loss of service at Sawyer would clearly have a negative impact for the region.

Traverse City, Michigan commissioned a study by industry consultant The Boyd Group International to identify reasons for and propose options to address “leakage” from the Cherry Capital Airport. Boyd's report, *Traffic Capture and Leakage Analysis: Cherry Capital Airport*, issued in May 2011, noted among its findings that the airport “is currently losing approximately 59.4% of the traffic generated in the TVC [Traverse City] primary service area.”

Boyd identified three “drivers” of lost traffic: 1) “Absolute fare levels and fare differences between TVC and other area airports”; 2) “Limited capacity in the market keeps fares high and availability low”; and 3) “Presence of low fare carrier service at Grand Rapids (GRR), Flint (FNT), and Detroit (DTW).”

The Boyd report notes that the problem is also related to the loss of potential consumers who choose not to fly:

The total traffic lost in the TVC service area does not simply consist of passengers driving to other airports, but also latent demand that is not currently flying due to high fares and/or limited capacity at TVC.

Boyd adds that limited capacity will not easily be solved because “Potential new service options are limited, as there are fewer airlines available to work with.”⁹⁴

⁹³ <http://www.mitchellairport.com/parking/>; <http://www.ifly.com/austin-straubel-international-airport/Austin-Straubel-GRB-Airport-Parking>

B. Industry trends that may impact small community service

1. Toward more fuel-efficient aircraft

Passenger leakage is only one trend impacting small community air service. Others include rising fuel costs and manufacturers shift toward production of more fuel efficient aircraft.

Recent fuel cost increases and the forecast of sustained, long-term high fuel costs are driving a restructuring of Delta's regional service network. Delta announced on July 29, 2012 that it is ending operations at its Cincinnati-based Comair regional subsidiary. Comair provides service to several Michigan cities in the Lower Peninsula including Detroit, Flint, Saginaw, and Kalamazoo. Delta spokesman claimed "no significant adjustments" to schedules and service with "very little impact" for these communities as arrangements are made for service through other airline partners.⁹⁵

The closure of Comair is part of a larger strategy to phase-out the 50-seat regional jets. Quoting here from a July 30, 2012 article from *Airline Industry Information*,

In a memo issued to the officers and directors of Delta Air Lines, Don Bornhorst, senior vice president of Delta Connection, said "While regional flying has and will remain a key component of Delta's network, customer expectations and the unit costs of regional flying have evolved. In response, Delta recently announced its plans to reduce the total number of regional jets in its network while adding more mainline flying.

"This includes reducing the number of 50-seat regional jets from nearly 350 aircraft to 125 or fewer in the upcoming years. As a result of this reduction and changes to its customer-focused business strategy, Delta has made the difficult decision to cease Comair's operations."

Delta recently announced its intent to reduce the overall number of 50-seat regional jets in its network from nearly 350 to 125 or fewer in light of the significant changes in the economic and competitive conditions in the airline industry.⁹⁶

The Comair announcement came one year after Delta's notice to the US DOT that it was adjusting service to 24 small market locations – a step related to Delta's earlier retirement of the SAAB-340 turboprop aircraft and higher operating costs the airline was realizing for regional jets.⁹⁷

Delta Air Lines, through its regional affiliate structure, brand-name Delta Connection, is the only airline to have completely retired its turboprop fleet in favor of all-jet service. Delta is the largest carrier in Michigan and Delta Connection flights serve U.P. airports at Marquette, Escanaba, Iron Mountain, and Sault Ste. Marie. The aircraft providing service to all four U.P. locations is the 50-seat CRJ-200

⁹⁴ Boyd Group International, *Traffic Capture and Leakage Analysis: Cherry Capital Airport*, May 2011 at 4. This report was provided through the courtesy of Cherry Capital Airport Manager Kevin Kline who was also interviewed by the author.

⁹⁵ Michael Martinez, "Delta to shut down regional carrier Comair, with 'little impact'", The Detroit News, July 28, 2012, available at: <http://www.detroitnews.com/article/20120728/BIZ/207280317>.

⁹⁶ "Delta Air Lines: Comair to Cease Operation," *Airline Industry Information*, July 30, 2012, retrieved from Lexis.com.

⁹⁷ "Delta to adjust service to smaller, underperforming markets," *World Airline News*, July 15, 2011 at <http://worldairlinenews.com/2011/07/15/delta-to-adjust-service-to-smaller-underperforming-markets/>

manufactured by Bombardier, Inc., a Canadian corporation and one of the two principal manufacturers of regional jet aircraft.⁹⁸

Bombardier's *Commercial Aircraft Market Forecast 2012-2031* offers a long-range view of industry trends for aircraft production that includes a phase out of 20-59 seat jets in favor of a new generation of turboprop aircraft and larger jet aircraft for regional routes.

The key driver is fuel cost. Bombardier notes that fuel "represents airlines' largest single expense, now amounting to 34% of operating costs on average..." It looks at recent sharp increases – a 25% increase from 2010-2011 from \$109 per barrel to \$126 per barrel - and a 20-year forecast of sustained prices above 2012 to a possible high of \$150 per barrel." And the company sees this as "major determinants of the size and other make-up of the commercial airfleet of the future."⁹⁹

Bombardier stopped production of the CRJ in 2004. It predicts increasing demand for "highly fuel-efficient, high-productivity solutions, such as modern turboprop aircraft." And it sees this, in conjunction with a phase-out of the higher cost, less fuel-efficient 50-seat jets, as a "right-sizing" of aircraft to market needs.¹⁰⁰

But the modern turboprop Bombardier describes is a 70-seat aircraft and its production plan, likely reflected in plans of competitor Embraer, is based on a predicted substantial reduction in demand for 20-to-59-seat aircraft.¹⁰¹ It sees regional airlines

...gradually anchoring their business models around large regional aircraft in the 60-to-99-seat segment, both turboprops and jets. With increasing capacity, lower per-seat operating costs ... large regional aircraft connect route networks by adding new city pairs. This service provides connections not only between major airports but also linking secondary and tertiary airports.¹⁰²

⁹⁸ The other principal manufacturer is Brazil's Embraer whose 50-seat ERJ-145 is the aircraft used by American Eagle at Sawyer.

⁹⁹ Bombardier Commercial Aircraft Market Forecast 2012-2031, at 14; available at: http://www2.bombardier.com/en/3_0/3_8/market_forecast/index.html

For an analysis of rising fuel costs and the impacts on the aviation industry, see Theresa Firestone and Jenny Guarino, *A Decade of Change in Fuel Prices and U.S. Domestic Passenger Aviation Operations*, Bureau of Transportation Statistics, U.S. Department of Transportation, March 2012, available at: http://www.bts.gov/publications/special_reports_and_issue_briefs/special_report/2012_03_33/

Industry consultant The Boyd Group compares the operating costs of various aircraft in one of its presentations:

- Beechcraft 1900C - \$750/hour [19-seat turboprop]
- SF-340 - \$950/hour [34-seat turboprop]
- CRJ/ERJ-\$4,500-\$4,700/hour [50-seat regional jets]

Boyd Group International, *Air Service Challenges & Opportunities For US Airports – Time To Face Realities – And, Yes, They Are Tough*, 2012, available at: <http://www.aviationplanning.com/Images/AirServiceRealitiesFromBoydGroupInternational.pdf>

¹⁰⁰ Some of the regional jets appear headed for the charter market. One company, Aerodynamics, Inc., announced October 2011 that it was adding three Embraer 145 50-seat aircraft to its large aircraft charter fleet. *Airline Industry Information*, October 11, 2011; retrieved from Lexis.com.

¹⁰¹ "Advanced turboprops will continue to play an integral role in the regional airline marketplace as carriers confront the dual pressures of rising fuel costs and increasingly restrictive environmental regulations. The comparatively lower fuel burn of turboprops, compared to regional jets of similar size, will enable carriers to maintain capacity and shrink the overall environmental footprint. Modern 70-passenger [emphasis added] turboprop aircraft represent a cost-effective replacement on routes previously served by 50-passenger jets, which are no longer in production." *Ibid.* at 22

¹⁰² *Ibid.* at 6

And it predicts that the 60-to-99 seat market segment “will experience the largest fleet growth over the next 20 years.”¹⁰³



Bombardier CRJ 200 [Delta]



Saab 340 [Delta]

World	2011 Fleet	Deliveries	Retirements	2031 Fleet
20-to-59 seat	3,600	300	2,700	1,200
60-to-99 seat	2,500	5,600	1,300	6,800
100-to-149 seat	5,100	6,900	3,000	9,000

Table 17 Bombardier 20-year fleet forecast

¹⁰³ *Ibid.*

2. What impact for small community air service?

One industry consultant, The Boyd Group, predicts that the combination a shift by carriers to larger, more cost effective and profitable aircraft will drive the industry away from servicing small, low-density passenger markets and forcing a regionalization of airports. Another firm, the Sixel Consulting Group, views the situation quite differently.

Boyd's analysis is summarized as follows:

- The types of aircraft that are now serving many communities are going away – no question
- There are no aircraft breakthroughs that will result in replacement for “regional” jets. The 50-seat era is over.
- There are no new airlines coming to the rescue – and the LCC [low-cost carrier] growth era is over. [Expect] measured growth – and not in rural areas
- ... at least 100 airports will lose scheduled service ... including many that today have over 100,000 O&D [origin and destination traffic]¹⁰⁴
- The cost of flying airplanes... has eclipsed the ability to support it at many communities
- The same economics are causing major airlines to re-structure
- Air service is no longer a matter of flights at the local airport
- It's whether whole regions have access to and from the rest of the world –
- Access and Regionalization are the trends of the future...
- ...Access is not necessarily at the local airport, anymore... [and] access has been declining in rural America...
 - Sheer costs are outrunning ability of markets to support air service locally, so...
The concentration of service IS gravitating to being regionalized.

Boyd's advice: “Communities must start making contingency plans to assure air service access – and that may mean regional cooperation.”

The Sixel Group takes more nuanced approach and Sixel consultant Michael Mooney sees Boyd's position as “extreme.” Mooney's company predicts that the fleet of 1000 50-seat regional jets now in service will diminish in size but continue to operate to those communities able to generate a mass of passenger volume.

Sixel consultant Michael Mooney acknowledges that much depends on the price of fuel but sees shifts in aircraft ownership as enabling cities, such as Marquette and Houghton, that can maintain 20,000 or more annual enplanements as likely to retain 50-seat regional jet service.¹⁰⁵

¹⁰⁴ Boyd Group International, *Air Service Challenges & Opportunities For US Airports – Time To Face Realities – And, Yes, They Are Tough*, 2012, available at: <http://www.aviationplanning.com/Images/AirServiceRealitiesFromBoydGroupInternational.pdf>

Just how many 50-seat regional jets remain in service depends on fuel cost. Mooney considers Boyd's position as "extreme." As Mooney sees it, if fuel prices stabilize, through an increase in supply or development of biofuels, more 50-seat RJs will be available. If fuel costs continue to rise, the number of RJs will correspondingly decline but not disappear.

Mooney describes an increase in purchases by smaller companies as earlier lease agreements expire and reduce ownership costs. These smaller companies with lower overall operating costs will, in his view, then be able to then maintain regional jet service to cities with sufficient passenger volume. For mid-tier cities, those with between 10,000 to 20,000 annual enplanements -- Escanaba, Iron Mountain, and Sault Ste. Marie -- the issue is not the end of air service but which planes will be providing that service. Mooney expresses concern for those communities in the low tier of enplanements, such as Ironwood, that must meet the new EAS standard of 10 daily enplanements.

¹⁰⁵ Michael Mooney, Air Service Strategy and Development Consultant, Sixel Consulting Group. Comments based on two telephone interviews conducted August 10 and September 25, 2012.

VI. CONCLUDING REMARKS, SOME QUESTIONS AND A RECOMMENDATION

Whoever turns out to be the more accurate prognosticator of industry and service trends, it is reasonable and timely for communities to engage in a strategic assessment and planning process. There are simply too many variables, too much beyond communities' control, and so much at stake for economic health and the potential for economic development.

The EAS program may survive political challenges but incorporate more qualifications that limit its scope, level and breadth of assistance. Municipal, county, and state governments, already burdened financially, may be called upon to increase support for small communities' air service.

Bombardier's prediction of sustained high and rising fuel costs may prove accurate with significant impact for all, but particularly for the more isolated, regions of the nation.

All U.P. airports provide important, quantifiable benefits for their respective communities. Preservation of commercial service at all locations should be the top priority. And there is a strong rationale, as demonstrated here, for continued support of U.P. airports through the EAS program. But several questions are worth consideration by U.P. planners and policymakers. Among these are:

- What long-term strategies can be developed to maintain and improve commercial air service at all U.P. locations?
- Does it make sense to work toward a comprehensive plan for passenger air service in the U.P.?
 - Might a comprehensive plan lead to more efficient use of public resources and offer advantages for economic development, marketing, and carrier recruitment and retention? Might it provide leverage to improve service frequency and lower fares?
- What level and kind of support might local and state governments be able to provide to maintain what level of service?
- What would regionalization of airports mean for various U.P. communities? Is there some middle ground between consolidation to one regional hub and the structure we have now? What costs and what benefits?
 - What would be the impact for certain U.P. communities if their airports lose commercial service and become General Aviation airports?
 - What distances might business and leisure travelers have to drive in order to reach commercial air service? And what would this mean for economic activity and development?
- What potential carriers might be attracted to this market? What can communities do to attract those carriers?
- Might commercial air service continue at certain locations with smaller aircraft? How suitable an alternative is on-demand taxi or charter service for many airports? How feasible is charter or scheduled service to Lansing?
- Might commercial bus service be improved to supplement passenger air service? Is there sufficient demand?

These and other questions can effectively be addressed through a strategic planning process with the advice and assistance of an industry consultant. The planning process might be conducted by a special Task Force whose members are drawn from economic development organizations, airport administration and local and state government.

The objective: develop a long-term, comprehensive plan for U.P. air service that better positions communities to recruit and retain carriers, market airports, increase demand, and effectively respond to industry trends and shifts in public policy.

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- Tim Howen, Manager, Ford Airport, Iron Mountain-Kingsford
- Keith Kaspari, former Manager, Sawyer International Airport; Deputy Dir., Capital Region Airport Authority
- Kevin Kline, Manager, Cherry Capital Airport
- Vikki Kulju, Spokesperson/Management Team, Upper Michigan Green Aviation Coalition
- Gavin Leach, Vice President, Finance and Administration, Northern Michigan University
- Barry Lind, Manager, Manistee Blacker County Airport
- Michael Mooney, Air Service Strategy and Development Consultant, Sixel Consulting Group
- Connie Ness, Manager, Delta County Airport
- Kathy Noel, Manager, Chippewa County Airport
- Adam Paltzer, Vice President, Engineering, Pioneer Surgical, Inc.
- Michelle Rathbun, Community Benefits Analyst, Michigan Department of Transportation
- Gabe Schneider, Regional Representative, U.S. Senator Carl Levin
- Kelly Smith, Assistant Manager, Delta County Airport
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- Joel Schultz, Director, Upper Peninsula Region, Michigan Small Business Technology & Development Center
- Holly Peoples, Director of Business Services, Michigan Works!

About the author

Fred B. Kotler, J.D., is a policy analyst and training specialist. He is currently Research Associate, School of Industrial and Labor Relations at Cornell University and formerly served as Director, Cornell /New York State AFL-CIO Union Leadership Institute; Associate Director, Cornell Construction Industry Program; and Director, Labor Education Program, Northern Michigan University.

Fred is author of several public policy reports and training materials related to the construction and rail industries. He developed and taught a course at Cornell University on the role of public infrastructure projects for U.S. economic development.

He attended Harvard University, the University of California, Berkeley, and received his law degree from the University of San Francisco School of Law.

Fred now lives in Marquette, Michigan and can be reached at fred.kotler@gmail.com / (906) 273-0715.

APPENDIX

Michigan Department of Transportation

Community Benefits Assessment

Summary Results Data¹⁰⁶

Upper Peninsula Airports

¹⁰⁶ Michelle Rathbun, Community Benefits Analyst, Michigan Department of Transportation

The data are preceded by an *Interpreting the Summary Results Sheet* to help readers evaluate and use the information. It is worth noting that results vary among locations; circumstances are different among the airports and there is no uniform procedure for gathering the data.

Airport Role in the Economy Report *“Interpreting the Summary Results Sheet”*

The Summary Results Sheet reflects a balanced set of information about your airport for a recent year of activity. This information reflects key aspects of the airport’s economic impact, as well as its transportation value.

In order to make the most of this report, it is important to know what questions it will help you answer depending on your audience, and also to know what aspects are currently not part of the assessment for MDOT’s desired “ease of use” for the analysis system and its results. Exhibit 1 defines the various job, income and sales results (*directly tied to aviation activity and supplier and income re-spending effects or “ripple effect”*) using the items numbered in the “On-going Contribution to the County Economy” section of the report.

Exhibit 1 Navigating the Economic Contribution Results

Result Combinations	What Does this Provide?
Item 1	<i>Jobs, wages & sales at the airport involved in airport-related activities (excludes non-aviation, non-concession entities).</i>
Item 2	<i>Jobs, wages & sales of other businesses on the airport premises <u>not</u> involved in aviation or traveler services.</i>
Item 3	<i>Jobs, wages & sales of businesses outside of the airport that receive visitor spending.</i>
Item 4	<i>Jobs, wages & sales of businesses outside of the airport involved with freight, catering activities, or having shipping/travel reliance.</i>
Item 5	<i>Economic ripple effect of item 1 in terms of additional jobs, wages, & sales.</i>
Item 6	<i>Economic ripple effect of item 3 in terms of additional jobs, wages, & sales.</i>
Item 7	<i>Economic ripple effect of item 4 in terms of additional jobs, wages, & sales.</i>
Item 8	<i>The “total” of airport associated impact, sums items 1 through 7.</i>

While item 8 provides the broadest measure of economic impact associated with airport activity, the results can be combined to reflect *airport premises activity only* (items 1 and 2), *airport premises activity solely involved with aviation and passenger services* (item 1), *airport premises activity solely involved with aviation and passenger services and its economic ripple effect* (items 1 and 5), for example. There are clearly numerous ways of combining the results.

It is important to note that the jobs, income and sales evaluated for items 1 through 4 on the report are the same regardless of whether we consider the direct impact from the *local*

or the *state* perspective. This is because the airport's location (a given county) is the fixed *locus* where these events take place or travel-shipping needs are fulfilled. It is not until you consider the broader boundaries tied to subsequent supplier transactions for the airport, for visitor serving businesses, area manufacturers with part of their business contingent on air service availability, or airport (and other business) wages being re-spent that the *local* impacts differ from the *state* impacts.

Pertaining to visitor spending activity and its subsequent economic *ripple effects*, this is determined by three input form components: the number of passengers using the airport, the proportion of those passengers that are visitors (with multiple trip purposes considered), and off-airport average trip spending for a visitor associated with the airport. The analysis of the airport implicitly has an average trip length associated with the average trip spending per visitor.

In addition to the above combinations of impacts at your disposal, the report reflects the annual capital spending information you provided. While this information reflects just the spending and no subsequent economic *ripple effect*, the source of capital funding may demonstrate the ability of the airport to attract dollars from outside local and state coffers.

While an airport generates a number of revenues from landing, fuel, storage, tie-down fees, concession rents, and based aircraft imply state-level registration fees, MDOT did not want to encumber the data input requirements/results of this analysis. In the area of tax revenue generation, we calculate benefits flowing to the state from income and sale taxes shown in items 9 and 10 on the report. The *at-airport* tax generation values are derived from the income and sales impacts of items 1, 2, and 5 (*state value used*), whereas the *off-site* tax generation values are derived from impacts associated with items 3, 4, and 6 (*state value used*).

The *Transportation Value* information available for those airports rated in the MASP 2000 is provided as a context to understand why an airport without as large an economic impact as other airports in the state is ear-marked for future investment to bring it up to a specific MASP design standard.

CBA Community Benefits Assessment

Airport Role in Economy

Airport: Delta County
 City: Escanaba
 County: Delta
 Ownership: Public
 Scenario: Current
 Service Area: Delta
 Run Date: 8/8/2012 8:24:34 AM

	Current	MASP Ultimate
Airport Class	D-III	C-II
Airport Features		
Runway Type	Paved	Paved
Primary Runway Length	6,501	5,000
Primary Runway Width	150	100
Lighting System	HIRL	MIRL
All Weather Access	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Snow Removal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fuel Service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
REIL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Rotating Beacon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Seg Crcl	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lighted Wind Indicator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Instrument Approach	Precision	Precision

Evaluated for Year: 2012

Activity Data	
Total Operations:	9,089
Total Aircraft:	32
Total Passengers:	43,864
Total Cargo Tons:	625

On-going Contribution to the County Economy

	Jobs		Income (\$)		Output (\$)	
	Local	State	Local	State	Local	State
Direct Effect						
1. Airport (incl. FBO and air related tenants)	33	33	\$1,633,953	\$1,633,953	\$2,796,853	\$2,796,853
2. Airport Tenants: non-air related	1	1	\$46,105	\$46,105	\$0	\$0
3. Off-Site: Supported by Visitor Spending	18	18	\$273,660	\$273,660	\$811,600	\$811,600
4. Off-Site: Staff or Cargo Reliant	3	3	\$94,403	\$94,403	\$199,362	\$199,362
Supplier and income re-spending effects*						
5. -due to Airport and Related Activities**	15	27	\$464,148	\$521,159	\$1,556,756	\$2,495,865
6. -due to Visitor Spending	4	7	\$127,362	\$206,977	\$394,467	\$666,702
7. -due to Reliance on Air Transport	1	2	\$32,349	\$37,527	\$114,152	\$144,005
8. Total Impact from Airport Activities	75	91	\$2,671,980	\$2,813,784	\$5,873,190	\$7,114,387

Tax Generated by Aviation-Related Activity

	At-Airport	Off-Site
9. State Income Tax	\$56,571	\$14,779
10. State Sales Tax	\$317,563	\$100,660

Annual Capital Expenditures (if known)

	Total	Federal \$	State \$	Local \$
2012 Budget:	0	0	0	0

Transportation Value

MASP 2000 System Goals

Serve Significant Population Centers (C-II)	tier 1
Serve Significant Business Centers (C-II)	tier 1
Serve Significant Tourism/Convention Centers (B-II)	tier 1
Provide Access to the General Population (B-II)	tier 1
Provide Adequate Land Area Coverage (B-I)	tier 1
Preserve Regional Capacity (B-I)	tier 1
Serve Seasonally Isolated Areas (B-I)	-

* on the Service-area economy as defined by the user

** Supplier and income re-spending effects pertain only to air-related and air support activities

CBA Community Benefits Assessment

Airport Role in Economy

Airport: Ford
 City: Iron Mountain
 County: Dickinson
 Ownership: Public
 Scenario: Current
 Service Area: Dickinson
 Run Date: 8/2/2012 9:55:47 AM

	Current	MASP Ultimate
Airport Class	D-III	D-III
Airport Features		
Runway Type	Paved	Paved
Primary Runway Length	6,000	6,000
Primary Runway Width	150	150
Lighting System	HIRL	HIRL
All Weather Access	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Snow Removal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fuel Service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
REIL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Rotating Beacon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Seg Crcl	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lighted Wind Indicator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Instrument Approach	Precision	Precision

Evaluated for Year: 2012

Activity Data	
Total Operations:	1,400
Total Aircraft:	30
Total Passengers:	3,200
Total Cargo Tons:	480

On-going Contribution to the County Economy

	Jobs		Income (\$)		Output (\$)	
	Local	State	Local	State	Local	State
Direct Effect						
1. Airport (incl. FBO and air related tenants)	58	58	\$2,812,015	\$2,812,015	\$8,981,072	\$8,981,072
2. Airport Tenants: non-air related	4	4	\$193,784	\$193,784	\$398,384	\$398,384
3. Off-Site: Supported by Visitor Spending	0	0	\$0	\$0	\$22,500	\$22,500
4. Off-Site: Staff or Cargo Reliant	6	6	\$194,498	\$194,498	\$513,576	\$513,576
Supplier and income re-spending effects*						
5. -due to Airport and Related Activities**	55	85	\$1,566,486	\$2,132,379	\$4,217,370	\$8,256,106
6. -due to Visitor Spending	0	0	\$0	\$0	\$9,980	\$18,483
7. -due to Reliance on Air Transport	1	2	\$38,357	\$60,433	\$111,122	\$181,265
8. Total Impact from Airport Activities	124	155	\$4,805,140	\$5,393,109	\$14,254,004	\$18,371,386

Tax Generated by Aviation-Related Activity

	At-Airport	Off-Site
9. State Income Tax	\$132,051	\$4,999
10. State Sales Tax	\$1,058,134	\$33,274

Annual Capital Expenditures (if known)

	Total	Federal \$	State \$	Local \$
2012 Budget:	0	0	0	0

Transportation Value

MASP 2000 System Goals

Serve Significant Population Centers (C-II)	tier 1
Serve Significant Business Centers (C-II)	tier 2
Serve Significant Tourism/Convention Centers (B-II)	tier 1
Provide Access to the General Population (B-II)	tier 1
Provide Adequate Land Area Coverage (B-I)	tier 1
Preserve Regional Capacity (B-I)	tier 1
Serve Seasonally Isolated Areas (B-I)	-

* on the Service-area economy as defined by the user

** Supplier and income re-spending effects pertain only to air-related and air support activities

CBA Community Benefits Assessment

Airport Role in Economy

Airport: Gogebic County
 City: Ironwood
 County: Gogebic
 Ownership: Public
 Scenario: Current
 Service Area: Gogebic
 Run Date: 8/2/2012 10:23:25 AM

	Current	MASP Ultimate
Airport Class	D-III	D-III
Airport Features		
Runway Type	Paved	Paved
Primary Runway Length	6,000	6,000
Primary Runway Width	150	150
Lighting System	HIRL	HIRL
All Weather Access	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Snow Removal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fuel Service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
REIL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Rotating Beacon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Seg Crcl	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lighted Wind Indicator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Instrument Approach	Precision	Precision

Evaluated for Year: 2012

Activity Data	
Total Operations:	15,297
Total Aircraft:	12
Total Passengers:	58,526
Total Cargo Tons:	70

On-going Contribution to the County Economy

	Jobs		Income (\$)		Output (\$)	
	Local	State	Local	State	Local	State
Direct Effect						
1. Airport (incl. FBO and air related tenants)	53	53	\$2,420,153	\$2,420,153	\$4,017,410	\$4,017,410
2. Airport Tenants: non-air related	2	2	\$102,132	\$102,132	\$208,264	\$208,264
3. Off-Site: Supported by Visitor Spending	5	5	\$74,835	\$74,835	\$233,300	\$233,300
4. Off-Site: Staff or Cargo Reliant	0	0	\$0	\$0	\$0	\$0
Supplier and income re-spending effects*						
5. -due to Airport and Related Activities**	28	38	\$884,588	\$989,799	\$2,663,268	\$3,391,943
6. -due to Visitor Spending	2	2	\$48,742	\$56,600	\$141,175	\$191,648
7. -due to Reliance on Air Transport	0	0	\$0	\$0	\$0	\$0
8. Total Impact from Airport Activities	90	100	\$3,530,449	\$3,643,519	\$7,263,417	\$8,042,565

Tax Generated by Aviation-Related Activity

	At-Airport	Off-Site
9. State Income Tax	\$90,261	\$3,378
10. State Sales Tax	\$457,057	\$25,497

Annual Capital Expenditures (if known)

	Total	Federal \$	State \$	Local \$
2012 Budget:	0	0	0	0

Transportation Value

MASP 2000 System Goals

Serve Significant Population Centers (C-II)	tier 1
Serve Significant Business Centers (C-II)	tier 2
Serve Significant Tourism/Convention Centers (B-II)	tier 1
Provide Access to the General Population (B-II)	tier 1
Provide Adequate Land Area Coverage (B-I)	tier 1
Preserve Regional Capacity (B-I)	-
Serve Seasonally Isolated Areas (B-I)	-

* on the Service-area economy as defined by the user

** Supplier and income re-spending effects pertain only to air-related and air support activities

CBA Community Benefits Assessment

Airport Role in Economy

Airport: Sawyer International
 City: Marquette
 County: Marquette
 Ownership: Public
 Scenario: Current
 Service Area: Marquette
 Run Date: 8/14/2012 9:11:27 AM

	Current	MASP Ultimate
Airport Class	D-III	C-III
Airport Features		
Runway Type	Paved	Paved
Primary Runway Length	5,000	5,000
Primary Runway Width	100	100
Lighting System	HIRL	HIRL
All Weather Access	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Snow Removal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fuel Service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
REIL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Rotating Beacon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Seg Crcl	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lighted Wind Indicator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Instrument Approach	Precision	Precision

Evaluated for Year: 2012

Activity Data	
Total Operations:	19,997
Total Aircraft:	38
Total Passengers:	161,744
Total Cargo Tons:	944

On-going Contribution to the County Economy

	Jobs		Income (\$)		Output (\$)	
	Local	State	Local	State	Local	State
Direct Effect						
1. Airport (incl. FBO and air related tenants)	325	325	\$24,205,790	\$24,205,790	\$69,951,802	\$69,951,802
2. Airport Tenants: non-air related	206	206	\$10,924,868	\$10,924,868	\$31,741,444	\$31,741,444
3. Off-Site: Supported by Visitor Spending	11	11	\$177,008	\$177,008	\$515,950	\$515,950
4. Off-Site: Staff or Cargo Reliant	0	0	\$0	\$0	\$0	\$0
Supplier and income re-spending effects*						
5. -due to Airport and Related Activities**	445	522	\$14,925,875	\$23,350,232	\$44,671,497	\$62,343,212
6. -due to Visitor Spending	3	4	\$105,493	\$133,877	\$298,454	\$423,836
7. -due to Reliance on Air Transport	0	0	\$0	\$0	\$0	\$0
8. Total Impact from Airport Activities	990	1,068	\$50,339,034	\$58,791,775	\$147,179,147	\$164,976,244

Tax Generated by Aviation-Related Activity

	At-Airport	Off-Site
9. State Income Tax	\$1,502,959	\$7,990
10. State Sales Tax	\$9,842,188	\$56,387

Annual Capital Expenditures (if known)

	Total	Federal \$	State \$	Local \$
2012 Budget:	0	0	0	0

Transportation Value

MASP 2000 System Goals

Serve Significant Population Centers (C-II)	tier 1
Serve Significant Business Centers (C-II)	tier 1
Serve Significant Tourism/Convention Centers (B-II)	tier 1
Provide Access to the General Population (B-II)	tier 1
Provide Adequate Land Area Coverage (B-I)	tier 1
Preserve Regional Capacity (B-I)	tier 1
Serve Seasonally Isolated Areas (B-I)	-

* on the Service-area economy as defined by the user

** Supplier and income re-spending effects pertain only to air-related and air support activities

CBA Community Benefits Assessment

Airport Role in Economy

Airport: Chippewa Co. Int'l
 City: Sault Ste. Marie
 County: Chippewa
 Ownership: Public
 Scenario: Current
 Service Area: Chippewa
 Run Date: 8/8/2012 8:33:24 AM

	Current	MASP Ultimate
Airport Class	D-III	C-II
Airport Features		
Runway Type	Paved	Paved
Primary Runway Length	7,201	5,000
Primary Runway Width	200	100
Lighting System	HIRL	MIRL
All Weather Access	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Snow Removal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fuel Service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
REIL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Rotating Beacon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Seg Crcl	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lighted Wind Indicator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Instrument Approach	Precision	Precision

Evaluated for Year: 2012

Activity Data	
Total Operations:	2,360
Total Aircraft:	11
Total Passengers:	44,920
Total Cargo Tons:	1,095

On-going Contribution to the County Economy

	Jobs		Income (\$)		Output (\$)	
	Local	State	Local	State	Local	State
Direct Effect						
1. Airport (incl. FBO and air related tenants)	41	41	\$1,645,845	\$1,645,845	\$3,771,560	\$3,771,560
2. Airport Tenants: non-air related	170	170	\$8,150,650	\$8,150,650	\$25,922,226	\$25,922,226
3. Off-Site: Supported by Visitor Spending	8	8	\$141,824	\$141,824	\$424,875	\$424,875
4. Off-Site: Staff or Cargo Reliant	10	10	\$339,260	\$339,260	\$1,046,320	\$1,046,320
Supplier and income re-spending effects*						
5. -due to Airport and Related Activities**	26	43	\$854,313	\$959,126	\$2,409,199	\$4,161,951
6. -due to Visitor Spending	2	3	\$69,904	\$107,266	\$195,760	\$349,021
7. -due to Reliance on Air Transport	0	0	\$0	\$0	\$0	\$0
8. Total Impact from Airport Activities	257	275	\$11,201,796	\$11,343,970	\$33,769,940	\$35,675,952

Tax Generated by Aviation-Related Activity

	At-Airport	Off-Site
9. State Income Tax	\$276,419	\$15,121
10. State Sales Tax	\$2,031,344	\$109,213

Annual Capital Expenditures (if known)

	Total	Federal \$	State \$	Local \$
2012 Budget:	0	0	0	0

Transportation Value

MASP 2000 System Goals

Serve Significant Population Centers (C-II)	tier 1
Serve Significant Business Centers (C-II)	-
Serve Significant Tourism/Convention Centers (B-II)	tier 1
Provide Access to the General Population (B-II)	tier 1
Provide Adequate Land Area Coverage (B-I)	tier 1
Preserve Regional Capacity (B-I)	tier 1
Serve Seasonally Isolated Areas (B-I)	-

* on the Service-area economy as defined by the user

** Supplier and income re-spending effects pertain only to air-related and air support activities

CBA Community Benefits Assessment

Airport Role in Economy

Airport: Houghton Co. Mem.
 City: Hancock
 County: Houghton
 Ownership: Public
 Scenario: Current
 Service Area: Houghton
 Run Date: 11/7/2012 8:26:46 AM

	Current	MASP Ultimate
Airport Class	D-III	C-II
Airport Features		
Runway Type	Paved	Paved
Primary Runway Length	6,501	5,000
Primary Runway Width	150	100
Lighting System	HIRL	MIRL
All Weather Access	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Snow Removal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fuel Service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
REIL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Rotating Beacon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Seg Crcl	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lighted Wind Indicator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Instrument Approach	Precision	Precision

Evaluated for Year: 2012

Activity Data	
Total Operations:	7,190
Total Aircraft:	27
Total Passengers:	36,520
Total Cargo Tons:	535,600

On-going Contribution to the County Economy

	Jobs		Income (\$)		Output (\$)	
	Local	State	Local	State	Local	State
Direct Effect						
1. Airport (incl. FBO and air related tenants)	43	43	\$2,220,938	\$2,220,938	\$3,799,070	\$3,799,070
2. Airport Tenants: non-air related	7	7	\$339,461	\$339,461	\$489,110	\$489,110
3. Off-Site: Supported by Visitor Spending	18	18	\$277,566	\$277,566	\$838,000	\$838,000
4. Off-Site: Staff or Cargo Reliant	15	15	\$739,515	\$739,515	\$1,467,330	\$1,467,330
Supplier and income re-spending effects*						
5. -due to Airport and Related Activities**	22	30	\$696,334	\$999,334	\$2,304,722	\$3,340,509
6. -due to Visitor Spending	5	7	\$152,868	\$209,931	\$460,506	\$688,389
7. -due to Reliance on Air Transport	12	17	\$337,288	\$461,247	\$1,029,856	\$1,335,270
8. Total Impact from Airport Activities	122	137	\$4,763,970	\$5,247,993	\$10,388,594	\$11,957,678

Tax Generated by Aviation-Related Activity

	At-Airport	Off-Site
9. State Income Tax	\$91,485	\$31,534
10. State Sales Tax	\$457,721	\$179,623

Annual Capital Expenditures (if known)

	Total	Federal \$	State \$	Local \$
2012 Budget:	0	0	0	0

Transportation Value

MASP 2000 System Goals

Serve Significant Population Centers (C-II)	tier 1
Serve Significant Business Centers (C-II)	tier 1
Serve Significant Tourism/Convention Centers (B-II)	tier 1
Provide Access to the General Population (B-II)	tier 1
Provide Adequate Land Area Coverage (B-I)	tier 1
Preserve Regional Capacity (B-I)	tier 1
Serve Seasonally Isolated Areas (B-I)	-

* on the Service-area economy as defined by the user

** Supplier and income re-spending effects pertain only to air-related and air support activities