



March 1994

AIRPORT COMPETITION

Essential Air Service Slots at O'Hare International Airport



**Resources, Community, and
Economic Development Division**

B-256330

March 4, 1994

Congressional Requesters

This fact sheet responds to your June 11, 1993, request that we provide you with information on the availability of air travel between small airports in the Midwest and Chicago's O'Hare International Airport. The Essential Air Service (EAS) program was established in 1978 to guarantee continued service from small airports following deregulation. The program maintains a link between small airports with insufficient enplanements to support service to hub airports,¹ guaranteeing residents of small communities access to the national air travel network.

Under the program, the U.S. Department of Transportation (DOT) is authorized to declare a community eligible for essential air service. DOT also specifies the frequency of service and the hub(s) to which service will be provided. Typically, a community is guaranteed two round-trip flights per day, 6 days per week, to a medium or large hub. If revenues from the service do not cover costs, the carriers providing the service can apply for a subsidy.

Subsidies are provided directly to carriers applying to DOT and agreeing to offer service to the designated communities. In fiscal year 1993, the program provided a total of \$38.6 million in subsidies. However, most essential air service operations are not subsidized. Of the 503 communities in the United States and Puerto Rico that were designated as eligible to receive essential air service in 1993, only 128 communities actually received federally subsidized commuter air service.

Some small communities in the Midwest contend that service to O'Hare is vital for attracting new industry and maintaining healthy local economies. Although the EAS program guarantees a certain minimum level of service from most small airports, these communities believe that maintaining frequent and convenient service to O'Hare has become increasingly difficult as the limited number of takeoff and landing slots at that airport have become controlled by a few large airlines.

Following discussions with representatives from your offices, we agreed to provide you with information on the following: (1) changes in service

¹A hub airport, as defined by the Federal Aviation Administration, enplanes at least 0.05 percent or more of the total enplaned passengers in the United States. A large hub airport accounts for 1 percent or more of the total domestic enplanements, and a medium hub airport accounts for 0.25 to 0.99 percent of the total domestic enplanements.

between small Midwestern communities and O'Hare since 1978 and since the 1987 amendment to section 419 of the Federal Aviation Act, which modified and extended the EAS program, (2) the level of concentration of commuter aviation services in the Midwest, (3) differences in fares between small communities in the Midwest and those in other regions, (4) trends in slot utilization and capacity at O'Hare, and (5) the impact of airport improvements on O'Hare's capacity.

In summary, we found the following:

- The number of both nonstop and direct flights available between the 41 Midwestern essential air service communities addressed in our analysis and O'Hare Airport has decreased since the start of the EAS program. However, 17 communities have actually gained service, while 24 have lost service or have seen their service remain unchanged. (See sec. 1.)
- Since the implementation of the buy-sell rule in 1986, commuter slot holdings at O'Hare Airport have become increasingly concentrated. Currently, all commuter slots are held by only three airlines. (See sec. 2.)
- While the concentration of slot holdings has increased, the average yield (revenues per passenger mile) for operating between small airports and O'Hare does not appear to be substantially above that at other major hub airports, and, in fact, the yield is roughly in the middle of the distribution of yields at major hubs. For example, the average yield adjusted for differences in the passenger miles traveled between essential air service airports and O'Hare is 52.42 cents per passenger mile; the average yields between essential air service airports and Atlanta is 73.09 cents and between essential air service airports and Boston is 35.21 cents per passenger mile. (See sec. 3.)
- Airport operators and airline representatives told us that O'Hare could accommodate more traffic through more efficient slot allocation. Data indicate some excess capacity among general aviation/military slots. However, Federal Aviation Administration (FAA) and O'Hare Airport officials believe that the number of additional slots in that category, if any are available, would be minimal. (See sec. 4.)
- Since 1983, improvements undertaken as part of the O'Hare Airport Development Plan have increased the airport's overall capacity. FAA is responding to the increases in O'Hare's capacity with a complete review of the regulations controlling the number of O'Hare slots and a program of air traffic and ground control improvement projects. (See sec. 5.)

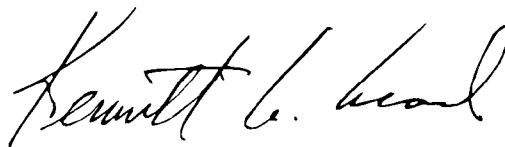
Scope and Methodology

We conducted our review from July to December 1993, focusing on 41 small airports in Illinois, Indiana, Iowa, Ohio, Michigan, and Wisconsin, each of which has had guaranteed service to O'Hare and/or other Midwestern hubs since 1978.²

To obtain information on the EAS program, we spoke with officials from FAA and DOT's Office of Aviation Analysis. We obtained information on flight availability from the "Official Airline Guide" covering the years 1978 to 1993. We interviewed managers of essential air service airports in the following communities to obtain information on their access to O'Hare: Danville and Coles County, Illinois; Terre Haute and Bloomington, Indiana; Oshkosh, Wisconsin; Dubuque, Iowa; and Manistee, Michigan. About 10.6 percent of the air service subsidy payments, approximately \$3.9 million, was paid to carriers serving communities in the six states addressed in our analysis. We spoke with airline representatives to find out about their experiences operating between small airports and O'Hare. The Office of the Chief Counsel, FAA, provided us with data on slot holdings and usage at O'Hare. Finally, to obtain further information on O'Hare's capacity, we interviewed officials at O'Hare Airport.

We are sending copies to the Secretary of Transportation and the Administrator, FAA. Copies are available to others on request.

Please contact me on (202) 512-6001 if you or your staff have any questions. Major contributors to this fact sheet are listed in appendix I.



Kenneth M. Mead
Director, Transportation Issues

²The DOT and Related Agencies Appropriation Act of 1994 contains restrictions that could affect service to 4 of the 41 communities: Galesburg, Illinois, and Terre Haute, Muncie/Anderson/New Castle, and Bloomington, Indiana. Nationwide, 11 essential air service airports are affected. The act prohibits the use of funds for airports in the contiguous 48 states within 70 highway miles of a hub airport or airports that receive passenger subsidies greater than \$200 per passenger and that are less than 210 miles from the nearest hub. While the act does not specifically remove EAS eligibility, the loss of subsidy could lead to a loss of the service for these communities.

List of Requesters

The Honorable Herb Kohl
The Honorable Russ Feingold
The Honorable Carl Levin
The Honorable Paul Simon
United States Senate

The Honorable Tom Petri
The Honorable Glenn Poshard
The Honorable Marcy Kaptur
The Honorable James L. Oberstar
The Honorable David Obey
The Honorable Steve Gunderson
House of Representatives

Contents

Letter		1
Section 1		8
Overall Service to O'Hare Has Declined, but Some Communities Have Experienced Increased Service	Nonstop Essential Air Service to O'Hare Direct Essential Air Service to O'Hare EAS Airport Managers' Comments on the Decline of O'Hare Service	8 9 11
Section 2		12
Commuter Aviation Services in the Midwest Are Becoming Increasingly Concentrated		
Chapter 3		14
Fares Between Small Midwestern Airports and O'Hare Generally Are Not Higher Than Those to Other Hubs		

Section 4	15
<hr/> Airport and Airline Officials Believe O'Hare Could Accommodate More Air Traffic Through More Efficient Slot Allocation	
Section 5	17
<hr/> Improvements at O'Hare Are Yielding Capacity Increases	
Appendix	18
<hr/> Appendix I: Major Contributors to This Fact Sheet	
Tables	8
<hr/> Table 1.1: Daily Nonstop Flights to O'Hare	
Table 1.2: Daily Direct Flights to O'Hare	
Table 2.1: Commuter Slot Concentration at Domestic Slot-Controlled Airports	
Table 3.1: 1992 Fare Yields Between EAS Airports and Hubs	
Figure	16
<hr/> Figure 4.1: Average Half-Hourly General Aviation/Military Slot Usage at O'Hare Airport, November 1993	

Abbreviations

ADP	Airport Development Plan
DOT	Department of Transportation
EAS	essential air service
FAA	Federal Aviation Administration
GAO	General Accounting Office
OAG	Official Airline Guide

Overall Service to O'Hare Has Declined, but Some Communities Have Experienced Increased Service

Our analysis of the "Official Airline Guide," which lists all scheduled flights, shows that the number of nonstop and direct flights available between the 41 Midwestern essential air service (EAS) communities and O'Hare International Airport has decreased since the start of the EAS program.¹ However, 17 communities have actually gained service, while 24 have lost service or their service has remained unchanged.

Nonstop Essential Air Service to O'Hare

By 1993, airports serving the 41 communities had lost over 19 percent of the nonstop service they had in 1978, declining from 125 daily flights in September 1978 to 104 in September 1993. However, while 6 airports have fewer nonstop flights to O'Hare and 7 airports have lost nonstop service altogether since 1978, 17 airports have gained some nonstop service; 1 airport has maintained the same number of nonstop flights; and 10 airports never had nonstop service. Table 1.1 compares daily nonstop flight availability from each of the 41 airports in September 1978, 1987, and 1993 to O'Hare Airport.

Table 1.1: Daily Nonstop Flights to O'Hare

Airport	September 1978	September 1987	September 1993
Akron/Canton, OH	4	5	3
Appleton, WI	15	7	5
Bloomington, IL	11	2	5
Bloomington, IN	5	1	0
Burlington, IA	3	1	4
Champaign, IL	5	6	6
Danville, IL	6	4	0
Decatur, IL	1	4	0
Dubuque, IA	4	7	5
Escanaba, MI	0	0	3
Flint, MI	2	1	3
Fort Dodge, IA	0	0	0
Galesburg, IL	7	3	0
Green Bay, WI	7	11	10
Hancock/Houghton, MI	0	0	0
Iron Mountain/Kingsford, MI	0	0	2
Ironwood, MI/Ashland, WI	0	0	0
Kalamazoo, MI	5	11	10
LaCrosse, WI	7	2	4

(continued)

¹A direct flight could include one or more stops but does not require a change of aircraft.

Section 1
Overall Service to O'Hare Has Declined, but
Some Communities Have Experienced
Increased Service

Airport	September 1978	September 1987	September 1993
Lafayette, IN	11	6	2
Manistee/Ludington, MI	0	0	1
Marinette/Menominee, WI	0	0	1
Marquette, MI	0	0	0
Mason City, IA	1	0	1
Mattoon, IL	0	0	0
Mount Vernon, IL	0	0	0
Muncie, IN	5	2	0
Muskegon, MI	2	5	4
Oshkosh, WI	3	2	0
Ottumwa, IA	0	0	0
Pellston, MI	0	0	0
Quincy, IL	0	0	0
Rhineland, WI	0	0	3
Rockford, IL	2	0	8
Springfield, IL	3	7	7
Sterling, IL	7	2	2
Terre Haute, IN	8	2	0
Traverse City, MI	0	4	3
Waterloo, IA	1	0	4
Wausau, WI	1	3	8
Youngstown, OH	3	0	0
Total	129	98	104
Average	3	2	3

Source: The "Official Airline Guide."

Direct Essential Air Service to O'Hare

By 1993, airports serving the 41 communities had lost over 25 percent of the direct service that they had in 1978. In September 1978, airlines serving these airports provided 211 direct flights daily to O'Hare. This number fell to 157 in September 1993.² Today, 21 communities have fewer direct flights to O'Hare than in 1978. However, 16 communities now have more frequent direct service, and 4 communities have the same number of flights as in 1978. Of the 21 communities that have less frequent direct service, 8 have lost service to O'Hare completely and now connect to the

²Daily flights refer to those available for a majority of weekdays. Flights available only on weekends were eliminated for this analysis.

**Section 1
Overall Service to O'Hare Has Declined, but
Some Communities Have Experienced
Increased Service**

national air travel network through other Midwestern hubs. Table 1.2 compares daily direct flight availability from each of the 41 airports in September 1978, 1987, and 1993.

Table 1.2: Daily Direct Flights to O'Hare

Airport	September 1978	September 1987	September 1993
Akron/Canton, OH	6	6	3
Appleton, WI	15	7	6
Bloomington, IL	11	6	5
Bloomington, IN	8	3	0
Burlington, IA	3	4	8
Champaign, IL	5	6	6
Danville, IL	6	4	0
Decatur, IL	6	6	3
Dubuque, IA	9	7	6
Escanaba, MI	0	2	8
Flint, MI	3	4	6
Fort Dodge, IA	1	2	2
Galesburg, IL	7	4	0
Green Bay, WI	13	13	10
Hancock/Houghton, MI	2	0	0
Iron Mountain/Kingsford, MI	3	2	4
Ironwood, MI/Ashland, WI	2	0	1
Kalamazoo, MI	8	11	10
LaCrosse, WI	12	5	5
Lafayette, IN	11	6	2
Manistee/Ludington, MI	1	2	2
Marquette/Menominee, WI	2	0	3
Marquette, MI	1	4	7
Mason City, IA	3	0	3
Mattoon, IL	2	4	0
Mount Vernon, IL	2	0	0
Muncie, IN	5	3	0
Muskegon, MI	6	5	4
Oshkosh, WI	7	3	2
Ottumwa, IA	2	2	2
Pellston, MI	2	4	2
Quincy, IL	3	3	3
Rhineland, WI	2	2	3

(continued)

Section 1
Overall Service to O'Hare Has Declined, but
Some Communities Have Experienced
Increased Service

Airport	September 1978	September 1987	September 1993
Rockford, IL	2	0	8
Springfield, IL	7	15	9
Sterling, IL	7	2	2
Terre Haute, IN	9	5	0
Traverse City, MI	2	9	4
Waterloo, IA	6	7	8
Wausau, WI	6	8	8
Youngstown, OH	3	2	2
Total	211	178	157
Average	5	4	4

Source: The "Official Airline Guide."

EAS Airport Managers' Comments on the Decline of O'Hare Service

Managers of EAS airports we talked with told us that service to O'Hare requires much effort to maintain. Changes in factors such as flight frequencies, numbers of available seats, and actual numbers of air carriers providing service to O'Hare make it difficult to achieve and maintain profitable enplanement levels, and that some carriers have discontinued even profitable service. Although the EAS program guarantees a certain minimum level of service, the managers told us that the program does not necessarily guarantee service of sufficient frequency or convenience to maintain adequate traffic levels.

Even though the EAS program has guaranteed that communities losing service to O'Hare are able to make connections through Midway Airport in Chicago and other Midwestern hubs, managers told us that other large airports, including Chicago's Midway, are not, in their opinion, adequate substitutes for O'Hare because they do not offer as many connecting opportunities. Therefore, the small airports have difficulty attracting passengers who require flights that connect through O'Hare.

This claim is consistent with our analysis of DOT data, which showed that of the 10 communities requiring subsidies in 1993, only 3 had flights to O'Hare, with 6 connecting to Midway and 1 connecting to St. Louis. Our analysis also showed that 84 percent of passengers flying between the 41 EAS airports and O'Hare are connecting to other destinations.

Commuter Aviation Services in the Midwest Are Becoming Increasingly Concentrated

Not only do fewer flights arrive at O'Hare from small Midwestern regional airports, but fewer commuter air carriers, the typical providers of essential air services, hold O'Hare slots.¹ Since implementation of the buy-sell rule in 1986, commuter slot holdings have become increasingly concentrated.

DOT has determined that, under the EAS program, service to O'Hare is to be maintained from each of the 41 essential air service airports. Service must be provided between the small airport and O'Hare or, in some cases, between the small airport, another Midwestern hub, and O'Hare. However, O'Hare is one of four airports in the United States subject to FAA's slot controls.² FAA restricts the number of takeoffs and landings O'Hare may accommodate to 155 per hour, with 25 per hour dedicated to commuter air carriers. In addition, in 1986 FAA promulgated the buy-sell rule, which allows airlines to buy and sell slots, in effect creating an asset for the airline that held the slots at that time.

As a result, slots have become a valuable commodity at O'Hare to any air carriers seeking to expand their operations. According to the airport operators we interviewed, the value of slots has increased significantly over the last few years. At present, slot prices at O'Hare are estimated to be as high as \$2 million.

In 1986, eight airlines held commuter slots at O'Hare. Currently, only three airlines hold commuter slots: American Airlines Eagle (65 percent), Air Wisconsin (27 percent), and Great Lakes Aviation (8 percent). Because Air Wisconsin and Great Lakes are United Express carriers, commuter slots are essentially controlled by the two dominant major airlines at O'Hare—American and United.

A comparison of the commuter slot holdings at each of the slot-controlled airports shows that O'Hare is the most concentrated. Table 2.1 lists the number of carriers and the percent of slots held by the leading slot holder at the four slot-controlled airports.

¹Each take-off and landing is considered to be a "slot."

²The four domestic slot-controlled airports are: Washington National, John F. Kennedy, La Guardia, and O'Hare.

**Section 2
Commuter Aviation Services in the Midwest
Are Becoming Increasingly Concentrated**

**Table 2.1: Commuter Slot
Concentration at Domestic
Slot-Controlled Airports**

Airport	Number of carriers	Percentage of slots held by carrier with most slots
O'Hare	3	65
Washington National	7	49
John F. Kennedy	5	49
La Guardia	6	47

Source: Federal Aviation Administration.

Fares Between Small Midwestern Airports and O'Hare Generally Are Not Higher Than Those to Other Hubs

While concentration has increased, yields (revenues per passenger mile) for operating between small airports and O'Hare generally are not higher than those for flights between small airports and other hubs. Yields are generally lower for flights from small airports to O'Hare, but part of the reason is that flights from small airports to O'Hare are somewhat longer than for most of the other hubs.¹ The average distance traveled between small airports and O'Hare, when adjusted for differences in traffic, is 229.7 miles. This is exceeded only by miles traveled between small airports and two other major hubs, Atlanta (320.2 miles) and Dallas/Fort Worth (262.4 miles).

Correspondingly, yields for operating between small airports and O'Hare are lower than at Atlanta and Dallas/Fort Worth, slightly above St. Paul, and higher than the four other hubs, Pittsburgh, St. Louis, Denver, and Boston. These findings are consistent with those from our earlier studies of fares at hub airports.² Table 3.1 lists 1992 fare yields between small airports served by the EAS program and their hubs.

Table 3.1: 1992 Fare Yields Between EAS Airports and Hubs

Cents per passenger mile		
Airport	Average Yield	Adjusted yield
Dallas/Fort Worth	33.36	59.88
O'Hare	41.59	52.42
Atlanta	41.59	73.09
Denver	44.42	40.76
Minneapolis/St. Paul	55.18	49.69
Pittsburgh	59.10	44.49
Boston	60.72	35.21
St. Louis	61.42	41.84

Source: U.S. Department of Transportation.

¹Yields tend to decline as distance increases and as costs are spread out over more miles. The yields calculated for this analysis are for flights from essential air service airports to hub cities that terminate at the hub cities. The yields do not include the fares for flights that connect at the hub with flights destined for points beyond the hub.

²Airline Competition: Higher Fares and Reduced Competition at Concentrated Airports (GAO/RCED-90-102, July 11, 1990); Airline Competition: Higher Fares and Less Competition Continue at Concentrated Airports (GAO/RCED-93-171, July 15, 1993).

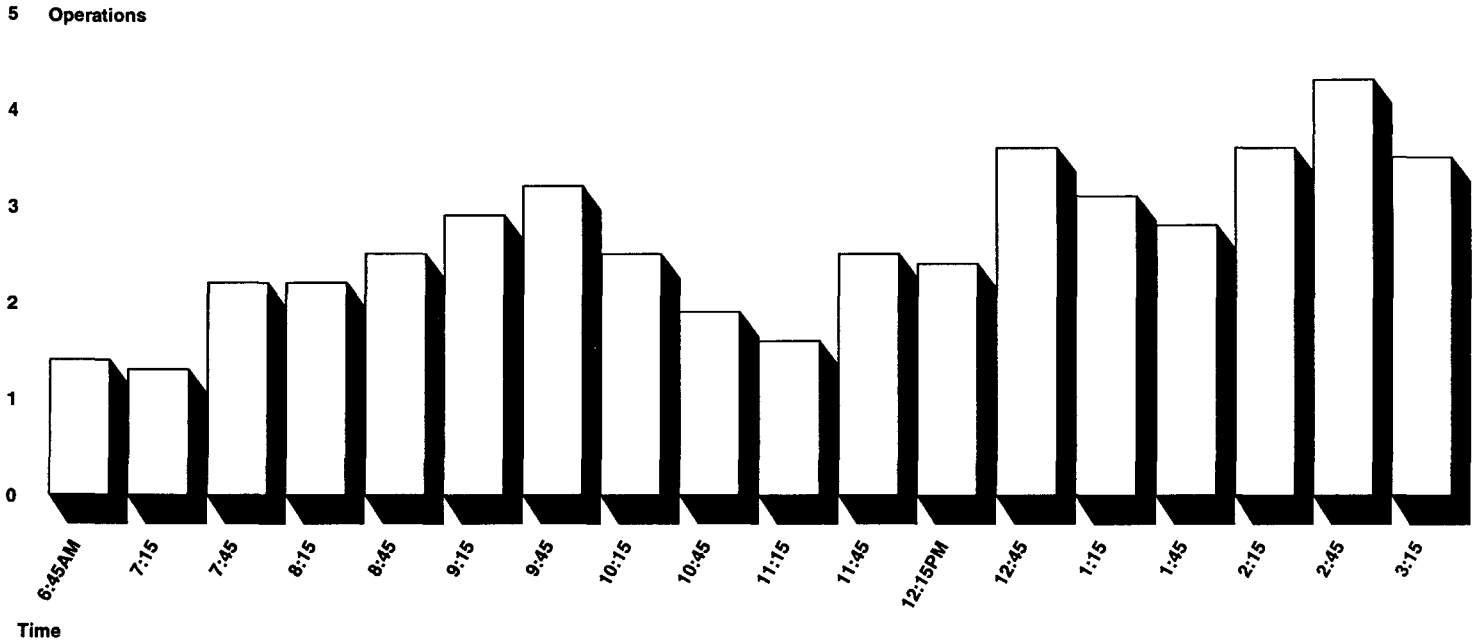
Airport and Airline Officials Believe O'Hare Could Accommodate More Air Traffic Through More Efficient Slot Allocation

Most of the airport operators and airline representatives we talked with said that O'Hare could accommodate more traffic. Some believe that, within current slot restrictions, the slots could be more efficiently allocated to handle more flights. Several operators and representatives mentioned improvements in procedures and facilities that have increased the airport's capacity.

According to FAA data on daily general aviation traffic, some excess capacity exists at O'Hare, although at certain times of the day most slot allocation to general aviation aircraft are used. Figure 4.1 shows that peak slot utilization occurs in the morning and the mid-afternoon hours. However, the critical factor for improving access to O'Hare through better slot utilization is the time of day that slots are not used. Unused slots are only useful if they occur at times EAS flights could use for making connections. Nevertheless, airport officials told us that service to EAS communities could be enhanced by adding slots and scheduling flights at the off-peak times.

**Section 4
 Airport and Airline Officials Believe O'Hare
 Could Accommodate More Air Traffic
 Through More Efficient Slot Allocation**

Figure 4.1: Average Half-Hourly General Aviation/Military Slot Usage at O'Hare Airport, November 1993



Notes: FAA regulations under instrument flight rules allow a maximum of five general aviation/military operations in each half-hour period. Operations each use one slot.

Operations are averaged over the daily instrument flight rules general aviation/military totals for the weekdays of November 1993, excluding operations over the Thanksgiving holiday.

Source: Federal Aviation Administration.

Although slots allocated to general aviation, which includes military, might be a source for additional EAS operations, an O'Hare Airport official told us that he believed that the number of slots available from that source would be minimal. He also pointed out that relatively few military air operations are conducted at O'Hare, and if military operations were to be eliminated completely, less than one slot per hour would be recovered.

Improvements at O'Hare Are Yielding Capacity Increases

Since 1983, improvements undertaken as part of the O'Hare Airport Development Plan (ADP) have increased the airport's overall capacity. Terminal capacity, for example, has been significantly expanded by 2 million square feet to approximately 3.6 million square feet of area, and 60 domestic gates have been added. A new 1.2 million-square-foot international terminal with 20 gates has also been added. Approximately \$139 million has been spent by the city of Chicago on taxiway and runway improvements, with an additional \$50 million raised through a 1992 bond issue for additional airfield capital projects.

In response to the ADP projects, FAA is planning a complete review of the High Density Rule, under which FAA controls O'Hare slots, to explore whether these capacity increases might affect the number of operators that O'Hare and the other slot-controlled airports can safely accommodate. This review is expected to be completed in 1994. FAA has also started or has plans to start air traffic and ground control projects that may also affect O'Hare's capacity. Construction has begun on a new control tower that would be more than twice the size of the present tower. A new ground control radar will be installed, and FAA has begun construction on a new \$91.5 million terminal radar approach control facility at Elgin, Illinois, replacing the current O'Hare terminal approach facility.

As part of an overall Aviation System Capacity Plan developed in 1991 and 1992, FAA has recommended additional improvements to O'Hare airfield operations which may also affect its capacity. These improvements include runway extensions and relocations, air traffic control improvements, and several new technology improvements that will result in maintaining safety while reducing a number of operating restrictions.

Major Contributors to This Fact Sheet

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